



OFFICE OF THE UNDER SECRETARY OF DEFENSE

4000 DEFENSE PENTAGON  
WASHINGTON, D.C. 20301-4000

PERSONNEL AND  
READINESS

The Honorable Roger F. Wicker  
Chairman  
Committee on Armed Services  
United States Senate  
Washington, DC 20510

AUG 19 2025

Dear Mr. Chairman:

The Department's response to Senate Report 114-49, pages 157-158, accompanying S. 1376, the National Defense Authorization Act for Fiscal Year (FY) 2016, "Annual Report on Autism Care Demonstration Program," is enclosed.

The Autism Care Demonstration (ACD) offers Applied Behavior Analysis (ABA) services for all TRICARE-eligible beneficiaries diagnosed with autism spectrum disorder. ABA services are not limited by the beneficiary's age, dollar amount spent, or number of services provided. The ACD began July 25, 2014, and was originally set to expire on December 31, 2018. The Department extended the demonstration until December 31, 2028, to determine the appropriate characterization of ABA services as a medical treatment or other modality under the TRICARE program's coverage requirements.

In FY 2023, ACD participation and total cost continued to increase (16,747 total beneficiaries; \$434.6 million). The 2024 analysis noted similar findings to the 2023 data analysis in that more beneficiaries had made improvements, although still small, after receiving clinically appropriate ABA. As with the previous year's findings, regression analysis found that adherence to treatment hours, parental stress, and baseline functioning were significant predictors of clinical outcomes. These findings represent analyses regarding ACD program oversight rather than the efficacy of the ABA services.

Thank you for your continued strong support for our Service members and their families. I am sending a similar letter to the Committee on Armed Services of the House of Representatives.

Sincerely,

Meilyn Carson, MD  
Performing the Duties of the Deputy Under  
Secretary of Defense for Personnel and  
Readiness

Enclosure:  
As stated

cc:  
The Honorable Jack Reed  
Ranking Member



OFFICE OF THE UNDER SECRETARY OF DEFENSE  
4000 DEFENSE PENTAGON  
WASHINGTON, D.C. 20301-4000

PERSONNEL AND  
READINESS

The Honorable Mike D. Rogers  
Chairman  
Committee on Armed Services  
U.S. House of Representatives  
Washington, DC 20515

AUG 19 2025

Dear Mr. Chairman:

The Department's response to Senate Report 114-49, pages 157-158, accompanying S. 1376, the National Defense Authorization Act for Fiscal Year (FY) 2016, "Annual Report on Autism Care Demonstration Program," is enclosed.

The Autism Care Demonstration (ACD) offers Applied Behavior Analysis (ABA) services for all TRICARE-eligible beneficiaries diagnosed with autism spectrum disorder. ABA services are not limited by the beneficiary's age, dollar amount spent, or number of services provided. The ACD began July 25, 2014, and was originally set to expire on December 31, 2018. The Department extended the demonstration until December 31, 2028, to determine the appropriate characterization of ABA services as a medical treatment or other modality under the TRICARE program's coverage requirements.

In FY 2023, ACD participation and total cost continued to increase (16,747 total beneficiaries; \$434.6 million). The 2024 analysis noted similar findings to the 2023 data analysis in that more beneficiaries had made improvements, although still small, after receiving clinically appropriate ABA. As with the previous year's findings, regression analysis found that adherence to treatment hours, parental stress, and baseline functioning were significant predictors of clinical outcomes. These findings represent analyses regarding ACD program oversight rather than the efficacy of the ABA services.

Thank you for your continued strong support for our Service members and their families. I am sending a similar letter to the Committee on Armed Services of the Senate.

Sincerely,

Merlynn Carson, MD  
Performing the Duties of the Deputy Under  
Secretary of Defense for Personnel and  
Readiness

Enclosure:  
As stated

cc:  
The Honorable Adam Smith  
Ranking Member

# **Report to the Committees on Armed Services of the Senate and the House of Representatives**



## **Annual Report on Autism Care Demonstration Program**

**August 2025**

The estimated cost of this report or study for the Department of Defense is approximately \$20,000 in Fiscal Year 2024. This includes \$0 in expenses and \$20,000 in DoD labor.

Generated on 2024Oct27      RefID: 3-EC40455

---

## Table of Contents

---

|   |    |
|---|----|
| INTRODUCTION .....  | 2  |
| BACKGROUND .....  | 2  |
| DESCRIPTION OF THE ACD .....  | 2  |
| UTILIZATION TRENDS.....   | 3  |
| TRICARE ACD Program Participants and Expenditures Per FY .....  | 3  |
| Annual Expenditure Ranges in FY 2023 .....  | 5  |
| Age Distribution of ACD Program Participants for FY 2023 .....  | 5  |
| Utilization Trends of One-on-One ABA Services Hours Per Week for FY 2023.....   | 5  |
| Utilization of Family Treatment Guidance Services under the ACD.....  | 6  |
| Expenditures for Additional Services Utilized by ACD Users.....   | 7  |
| DISCUSSION OF THE EVIDENCE REGARDING CLINICAL IMPROVEMENT OF<br>CHILDREN DIAGNOSED WITH ASD RECEIVING ABA SERVICES..... | 7  |
| ACD Outcome Measures – Discussion of Current Findings (FY 2023) .....   | 8  |
| Measure-Specific Outcome Findings.....  | 10 |
| ACD 2023 Analysis Limitations.....  | 11 |
| LESSONS LEARNED.....  | 11 |
| CONCLUSION.....   | 12 |

---

## List of Tables

---

|  |   |
|--|---|
| Table 1 – TRICARE ADFM/NADFM ACD Program Participants and Expenditures per FY .....  | 4 |
| Table 2 – ACD Government Expenditures per Participant in FY 2023 by Quartile .....   | 5 |
| Table 3 – Number of ACD Participants by Annual Expenditure Ranges in FY 2023 .....   | 5 |
| Table 4 – FY 2023 Average Hours of Family Treatment Guidance (CPT Code 97156) for ACD<br>Patients by Quartile for Different Age Groups ..... | 7 |
| Table 5 – Government Expenditures for PT/OT/SLP and Prescription Medication for TRICARE<br>ADFM/NADFM ACD Program Participants .....         | 7 |

## **INTRODUCTION**

This report is in response to Senate Report 114–49, pages 157-158, accompanying S. 1376, the National Defense Authorization Act for Fiscal Year (FY) 2016, which requests a report on the results of the Comprehensive Autism Care Demonstration (ACD). This report is based on FY 2022-2023 claims data and is the ninth of these annual reports.

The annual report should include a discussion of the evidence regarding clinical improvement of children with [Autism Spectrum Disorder (ASD)] receiving [Applied Behavior Analysis (ABA)] therapy and a description of lessons learned to improve administration of the demonstration program. In the report, the Department should also identify any new legislative authorities required to improve the provision of autism services to beneficiaries with ASD.

## **BACKGROUND**

TRICARE covers multiple services for beneficiaries diagnosed with ASD. ABA services are covered under the ACD, but other services under the TRICARE benefit include, but are not limited to: speech and language pathology (SLP); occupational therapy (OT); physical therapy (PT); medication management; psychological testing; and psychotherapy. ABA services authorized under the ACD that address the core symptoms of ASD are not limited by the beneficiary’s age, dollar amount spent, number of years of services received, or number of sessions provided; however, ABA services must be driven by clinical necessity. Non-clinical ABA services, or ABA services not targeting the core symptoms of ASD, are not authorized under the ACD. All ABA services continue to be provided through the private sector.

The ACD, which began July 25, 2014, consolidated three previous programs<sup>1</sup> and is currently authorized through December 31, 2028. Through the ACD, the Defense Health Agency (DHA) attempts to strike a balance between maximizing access to care while ensuring the highest level of quality and appropriateness of services for beneficiaries. The ACD ensures consistent ABA service coverage for all TRICARE-eligible beneficiaries, including active duty family members (ADFM) and non-active duty family members (NADFM) diagnosed with ASD. The Department is obtaining additional information about which services TRICARE beneficiaries are receiving under the ACD and how to target services providing the most benefit. The Department is collecting more comprehensive outcomes data to gain greater insight and understanding of the diagnosis of ASD in the TRICARE population.

## **DESCRIPTION OF THE ACD**

The ACD offers only ABA services for all TRICARE-eligible beneficiaries diagnosed with ASD by an approved provider. ABA services under the ACD are authorized for the purpose of ameliorating the core symptoms of ASD (deficits in social communication and restrictive, repetitive behaviors). Under the ACD, a Board Certified Behavior Analyst (BCBA), BCBA-Doctorate, or other TRICARE-authorized provider who practices within the scope of his

---

<sup>1</sup> Notice. “Comprehensive Autism Care Demonstration.” *Federal Register* 79, no. 115 (June 16, 2014) 34291-34296. [www.govinfo.gov/content/pkg/FR-2014-06-16/pdf/2014-14023.pdf](http://www.govinfo.gov/content/pkg/FR-2014-06-16/pdf/2014-14023.pdf).

or her State licensure or State certification, referred to as an “authorized ABA supervisor,” plans, delivers, and supervises an ABA program. The authorized ABA supervisor can deliver ABA services under either the sole provider or tiered-delivery model.

The TRICARE Operations Manual (TOM) Chapter 18, Section 4, “Department of Defense (DoD) Comprehensive Autism Care Demonstration (ACD),” provides guidance to all TRICARE Managed Care Support Contractors (MCSCs) on how to execute the benefit under the demonstration authority. The TOM describes: beneficiary eligibility, referral, and authorization requirements; provider eligibility requirements; outcome measure requirements; covered services and reimbursement rates; documentation requirements; exclusions; and MCSC responsibilities.

DHA published a comprehensive revision to the demonstration on March 23, 2021. The revision focused on providing enhanced beneficiary and family support, incorporating all appropriate services and resources into a comprehensive plan, improving outcomes, encouraging parental involvement, and improving utilization management controls. This update also included a dedicated point of contact, known as the Autism Services Navigator, for each newly enrolled beneficiary in order to assist the family with navigating the benefit, accessing appropriate services, and assisting in medical transition of care needs. These revisions focus on improving the quality of, and access to, care and services, and management and accountability of the TRICARE contractors and the ABA providers.

## **UTILIZATION TRENDS**

The following information was generated using TRICARE private sector care claims data from the last nine FYs (FY 2015 – FY 2023) for which full year data is available for the ACD. All claims data examined in this report were extracted from the Military Health System Data Repository (MDR) on August 15, 2024, and the results are based upon data entered into the MDR by that date. Updated historical data reflects additional claims filed following the data abstraction point. The following tables report data from FY 2019 – FY 2023. Historical data for previous FYs are available in previous annual reports.

### **TRICARE ACD Program Participants and Expenditures Per FY**

At the end of FY 2023, there were 16,747 beneficiaries with a diagnosis of ASD participating in the ACD: 12,437 ADFMs and 4,310 NADFM (Table 1). This number reflects a 46 percent increase in total participants from the FY 2015 level (11,461); a 36 percent increase for ADFMs (9,178) and an 89 percent increase for NADFM (2,283). Each FY total number of participants does not represent cumulative participation. Rather, each FY represents the total number of unique beneficiaries who had a claim filed during that year.

Total Government costs for the ACD increased 182 percent from FY 2015 to FY 2021 (\$161.5 million (M) in FY 2015 and \$455.23M in FY 2021) and then decreased by 14 percent in FY 2022 from FY 2021 (Table 1). In FY 2023, total Government costs increased by 9.8 percent. The average cost per participant has increased a total of 84 percent from FY 2015 to FY 2023. The average cost per ACD participant (Table 1) increased from \$14,091.00 in FY 2015 to

\$27,278.00 in FY 2021, but then decreased to \$24,190 in FY 2022. In FY 2023, the average cost per ACD participant increased by 7.3 percent.

While the average paid cost per ACD participant was \$25,948 in FY23, this explains little regarding the distribution of paid claims. Across all beneficiary types, the 25th percentile of the paid amount per participant was only 18 percent of the average amount at \$4,655. The median amount was 61 percent of the average amount at \$15,727. The 75th percentile amount was \$35,933, and the highest amount observed was \$272,688. The 25th percentile of the ADFM paid amounts were 35 percent higher than NADFM paid amounts, and this difference shrinks to 16 percent for the 75th percentile (see Table 2).

**Table 1. TRICARE ADFM/NADFM ACD Program Participants and Expenditures per FY**

| Year                                   | Number of Participants | % Growth in Participants from Prior FY | Dollars in Millions | % Growth in Dollars from Prior FY | Dollars per Participant | % Growth in Dollars from Prior FY |
|--|------------------------|--|---------------------|-----------------------------------|-------------------------|-----------------------------------|
| <b>ADFM Participants</b>               |                        |  |                     |                                   |                         |                                   |
| FY 2019                                | 11,965                 | -                                      | \$288.90            | -                                 | \$24,143                | -                                 |
| FY 2020                                | 12,148                 | 1.5%                                   | \$306.70            | 6.2%                              | \$25,248                | 4.6%                              |
| FY 2021                                | 12,415                 | 2.2%                                   | \$347.50            | 13.3%                             | \$27,987                | 10.8%                             |
| FY 2022                                | 12,134                 | -2.3%                                  | \$301.50            | -13.2%                            | \$24,850                | -11.2%                            |
| FY 2023                                | 12,437                 | 2.5%                                   | \$332.3             | 10.2%                             | \$26,721                | 7.5%                              |
| <b>NADFM Participants</b>              |                        |  |                     |                                   |                         |                                   |
| FY 2019                                | 4,039                  | -                                      | \$87.00             | -                                 | \$21,536                | -                                 |
| FY 2020                                | 4,165                  | 3.1%                                   | \$92.80             | 6.6%                              | \$22,273                | 3.4%                              |
| FY 2021                                | 4,274                  | 2.6%                                   | \$107.80            | 16.2%                             | \$25,220                | 13.2%                             |
| FY 2022                                | 4,226                  | -1.1%                                  | \$94.20             | -12.6%                            | \$22,295                | -11.6%                            |
| FY 2023                                | 4,310                  | 2.0%                                   | \$102.2             | 8.5%                              | \$23,719                | 6.4%                              |
| <b>Total Participants</b>              |                        |  |                     |                                   |                         |                                   |
| FY 2019                                | 16,004                 | -                                      | \$375.90            | -                                 | \$23,485                | -                                 |
| FY 2020                                | 16,313                 | 1.9%                                   | \$399.50            | 6.3%                              | \$24,488                | 4.3%                              |
| FY 2021                                | 16,689                 | 2.3%                                   | \$455.20            | 14.0%                             | \$27,278                | 11.4%                             |
| FY 2022                                | 16,360                 | -2.0%                                  | \$395.70            | -13.1%                            | \$24,190                | -11.3%                            |
| FY 2023                                | 16,747                 | 2.4%                                   | \$434.60            | 9.8%                              | \$25,948                | 7.3%                              |
| Source: MDR Data as of August 15, 2024 |                        |  |                     |                                   |                         |                                   |

**Table 2. ACD Government Expenditures per Participant in FY 2023 by Quartile**

| Beneficiary Category | 25 <sup>th</sup> Percentile | 50 <sup>th</sup> Percentile | 75 <sup>th</sup> Percentile | Maximum Amount | Average  |
|----------------------|-----------------------------|-----------------------------|-----------------------------|----------------|----------|
| ADFM                 | \$5,082                     | \$16,663                    | \$37,239                    | \$272,688      | \$26,721 |
| NADFM                | \$3,772                     | \$13,181                    | \$32,001                    | \$243,457      | \$23,719 |
| Total                | \$4,655                     | \$15,727                    | \$35,933                    | \$272,688      | \$25,948 |

**Annual Expenditure Ranges in FY 2023**

In the past, there was interest in the percentage of ACD participants using ABA services who were exceeding the historical \$36,000 FY cap on expenditures. While the ACD no longer has annual expenditure limits, the \$36,000 cap can serve as a historical benchmark to evaluate the distribution of annual expenditures by ACD program beneficiaries.

In FY 2023, 25 percent of ACD participants (4,180 of 16,747) had expenditures exceeding \$36,000, including 26.1 percent of ADFMs (3,241 of 12,437 participants) and 21.8 percent of NADFM (939 of 4,310 users) (see Table 3). Total paid amounts for participants with expenditures exceeding \$36,000 annually amounted to \$283.6 million in FY 2023 and this represented 65.3 percent of total ACD paid expenditures (but only 25.0 percent of ACD participants).

**Table 3. Number of ACD Participants by Annual Expenditure Ranges in FY 2023**

| Beneficiary Category | <\$30K | \$30-34.99K | \$35-35.99K | \$36.01-\$99.99K | \$100K+ | Total  |
|----------------------|--------|-------------|-------------|------------------|---------|--------|
| ADFM                 | 8,492  | 591         | 113         | 2,826            | 415     | 12,437 |
| NADFM                | 3,143  | 193         | 35          | 802              | 137     | 4,310  |
| Total                | 11,635 | 784         | 148         | 3,628            | 552     | 16,747 |

**Age Distribution of ACD Program Participants for FY 2023**

The distribution by beneficiary age and category (ADFM and NADFM) using TRICARE ACD services during FY 2023 is generally consistent with previous years for beneficiary participation. Across both beneficiary categories, 98.8 percent of ACD beneficiaries are younger than age 21, and 88.3 percent are age 13 and younger; 93.3 percent of ADFMs and 73.9 percent of NADFM are age 13 or younger. The median participant age is 7 years; the average age is 7.8 years; and the most common age (mode) of participating beneficiaries is 4 years. Roughly 4 out of 5 beneficiaries diagnosed with ASD participating in the ACD are male. ADFM beneficiaries tend to be younger than NADFM, with a median age of 6 years (mean of 7) versus 9 years (mean of 10.2) for NADFM.

**Utilization Trends of One-on-One ABA Services Hours Per Week for FY 2023**

To undertake an analysis of one-on-one hours per week of ABA services, the Current Procedural Terminology (CPT) code of 97153 (15-minute service unit) was multiplied by four to determine ABA service hours for each patient during FY 2023. The MDR data was made available by month during FY 2023. Total ABA hours were divided by the number of months

that a particular patient had claims filed for ABA services to calculate service hours per month for each patient. To calculate hours per week, service hours per month were divided by 4.345 (365/12/7). Average weekly hours of one-on-one services were then calculated by age categories and contract region.

For both regions, the highest weekly average utilization rates occurred in the age 4 category with an average of 9.9 hours per week of CPT code 97153. Average service hours per week for 5-year olds were only slightly lower with 9.5 hours per week. Average hours per week dropped consistently for those older than age 5. For those ages 13 and older, hours per week dropped to the lowest average to 5.1 hours per week.

### **Utilization of Family Treatment Guidance Services under the ACD**

A total of 13,886 of 16,747 ACD participants (82.9 percent) had parents or guardians who used family treatment guidance services (CPT code 97156) during FY 2023 with 27.1 percent of parents or guardians who had no claims filed for family treatment guidance services. The use rate was only slightly higher for ADFMs at 83 percent (10,326 of 12,437 participants) versus 82.6 percent for NADFMs (3,560 of 4,310 participants). Average family treatment guidance services use rates did not vary substantially across age categories but nonetheless were the lowest for parents or guardians of children aged 3 and younger (71.2 percent), increased to the highest level at age 6-7 (86 percent), and then declined to 83.7 percent for children ages 8-9. Family treatment guidance services represented 3.9 percent of total ACD expenditures. The age group 13 and older had the highest percentage (5.8 percent) and age group 5 had the lowest percentage (2.7 percent) of total expenditures.

Average hours of services per month for the 13,886 patients receiving family treatment guidance averaged 1.1 hours during the months in which the patients received any services in the ACD. There were only minor deviations from this amount by beneficiary and age categories. Average treatment hours per month were as low as 0.9 for NADFM's age 5 and as high as 1.3 hours per month for NADFM's ages 13 and older.

Family treatment guidance treatment hours per month are fairly similar by quartile across age groups. At the 25th percentile, average treatment hours per month are 0.4 across all age categories. At the 50th percentile, average family guidance treatment hours per month vary between 0.7 and 0.8 per month, while at the 75th percentile average treatment hours per month vary between 1.1 and 1.4 hours per month. Maximum amounts are quite large varying between 10.9 hours per month (age 5) and 45.2 hours per month (ages 8-9) as indicated in Table 4.

**Table 4. FY 2023 Average Hours of Family Treatment Guidance (CPT Code 97156) for ACD Patients by Quartile for Different Age Groups**

| Age          | 25 <sup>th</sup> Percentile | 50 <sup>th</sup> Percentile | 75 <sup>th</sup> Percentile | Maximum Amount | Average Hours |
|--------------|-----------------------------|-----------------------------|-----------------------------|----------------|---------------|
| 3 or Younger | 0.4                         | 0.7                         | 1.1                         | 17.3           | 1.0           |
| 4            | 0.4                         | 0.8                         | 1.2                         | 21.9           | 1.1           |
| 5            | 0.4                         | 0.7                         | 1.1                         | 10.9           | 1.0           |
| 6-7          | 0.4                         | 0.7                         | 1.2                         | 32.2           | 1.0           |
| 8-9          | 0.4                         | 0.7                         | 1.2                         | 45.2           | 1.1           |
| 10-12        | 0.4                         | 0.7                         | 1.3                         | 22.5           | 1.1           |
| 13+          | 0.4                         | 0.8                         | 1.4                         | 34.7           | 1.3           |
| Grand Total  | 0.4                         | 0.7                         | 1.2                         | 45.2           | 1.1           |

**Expenditures for Additional Services Utilized by ACD Users**

In addition to the \$434.6M in FY 2023 expenditures for ABA services, beneficiaries diagnosed with ASD participating in the demonstration also utilized relatively large amounts of TRICARE medical services for PT, SLP, and OT in both the private sector and the direct care system. Further, beneficiaries diagnosed with ASD in the ACD also used the retail pharmacy, TRICARE Mail Order Pharmacy, and direct care pharmacy for prescription medications to treat behaviors affecting the symptoms of ASD, Attention Deficit Hyperactivity Disorder, and related mental health conditions. Of the 16,747 TRICARE beneficiaries who participated in the ACD during FY 2023, 56.2 percent also utilized \$53.3M in PT, SLP, and OT services (private sector care paid amounts and direct care full cost amounts) and 64.8 percent used \$29.1M in prescription medications.

**Table 5. Government Expenditures for PT/OT/SLP and Prescription Medication for TRICARE ADFM/NADFM ACD Program Participants**

| Year                                   | PT/SLP/OT Services | Prescription Medications | Total        |
|--|--------------------|--------------------------|--------------|
| <b>Total Participant Expenditures</b>  |                    |                          |              |
| FY 2019                                | \$51,307,581       | \$16,420,784             | \$67,728,365 |
| FY 2020                                | \$51,337,206       | \$20,408,875             | \$71,746,081 |
| FY 2021                                | \$58,943,928       | \$17,518,502             | \$76,462,430 |
| FY 2022                                | \$53,603,947       | \$22,766,334             | \$76,370,281 |
| FY 2023                                | \$53,281,307       | \$29,060,517             | \$82,341,824 |
| Source: MDR Data as of August 15, 2024 |                    |                          |              |

**DISCUSSION OF THE EVIDENCE REGARDING CLINICAL IMPROVEMENT OF CHILDREN DIAGNOSED WITH ASD RECEIVING ABA SERVICES**

Previous annual reports have discussed the status of the research literature regarding ABA services. While DHA continues to monitor the literature, there have been no significant advances in ABA research with regards to defining dose-response (including intensity, frequency, or duration), or determining for whom ABA is most effective and what clinical

outcomes could be expected as a result of ABA interventions. As of now, ABA services do not meet the TRICARE hierarchy of reliable evidence standard for proven medical care.<sup>2</sup>

The ACD requires the administration and reporting of three norm-referenced, valid, and reliable outcome measures: the Vineland Adaptive Behavior Scale – Third Edition (Vineland-3), which is a measure of adaptive behavior functioning; the Social Responsiveness Scale, Second Edition (SRS-2), which is a measure of social impairment associated with ASD; and the Pervasive Developmental Disorder Behavior Inventory (PDDBI), which is a measure designed to assist in the assessment of various domains related to ASD. Additionally, the PDDBI is a measure designed to assess the impact of treatments for children with pervasive developmental disorders, including ASD, in terms of response to interventions.

For the ACD, all measures are administered, scored, and interpreted by the rendering provider who has purchased the measure under their license or credential. Neither the TRICARE MCSCs nor DHA administers, scores, or interprets the data. The following is a summary of observations of the data collected from these outcome measures that were submitted to the MCSCs per the requirements of the TOM. As DHA is not conducting research, no determinations of the effectiveness of any intervention can be made. Rather, these findings provide information about participating beneficiaries, clinical presentation over time based on parent report, and the best way to manage and oversee clinical care for the diagnosis of ASD. Summaries of past observations can be found in previous annual reports.

### **ACD Outcome Measures – Discussion of Current Findings (FY 2023)**

As a result of the March 2021 policy update, several improvements were made to data collection and reporting including identifying a range of patient-centered demographic variables. From these variables, independent effects of each of these factors on beneficiary outcomes could be identified. These variables include beneficiary age, gender, beneficiary category, region, sponsor service, sponsor rank, enrollment type, presence of other health insurance, and whether the patient disenrolled from the program during FY 2022 or FY 2023. This data set also allowed the ability to identify a host of experimental variables to determine their independent effects on beneficiary outcomes. These variables included: different groupings of baseline measure levels, form type (e.g., extended or standard), provider model type (tiered or sole), ABA service utilization, and changes in parent stress levels.

The current analysis is an update to the FY 2022 analysis. This report is an analysis of participants enrolling in the ACD program and receiving ABA services in FY 2022-2023. Because of this longer analysis period, two additional outcome measures previously unavailable in the previous report due to a limited sample size of those completing baseline and follow-up tests were included: the Vineland-3 Adaptive Behavior Composite (ABC) score and the SRS-2 total score. In addition to the PDDBI, these tools are considered reliable measures of responsiveness to ABA services. Therefore, agreement of all three measures on the direction and significance of ABA services on patients enrolled in the ACD program would potentially present a stronger argument for the effectiveness of the demonstration than the results as measured by the PDDBI alone.

---

<sup>2</sup> Title 32, Code of Federal Regulations, Part 199.2(b), Definition of “Reliable Evidence”.

The dependent variable in these analyses is the changes in the parent measured total PDDBI, Vineland-3 ABC, and SRS-2 total scores. As with the FY 2022 analysis, the dependent variables were measured in two ways. First, consistent with past DHA analyses, the percentage change in the dependent variable was examined. Second, the absolute change in the dependent variable was analyzed.

A data set was created of patients who had joined the ACD for the first time in FY 2022-FY 2023 and had sufficient experience during the review period to have an initial and follow-up administrations of the respective measures following exposure to ABA services. Vineland-3 and SRS-2 cohorts were created as subsets of the PDDBI cohort where at least two of each respective measure were completed and submitted during this timeframe. The original dataset submitted by the MCSCs included an initial population of 25,565 unique patients in the ACD program, 65 percent of whom had enrolled in the ACD prior to FY22 or had blank enrollment dates. Of the entire sample, 9,030 had enrolled during FY 2022-2023. The dataset was filtered to a population of 2,674 unique patients who enrolled (for the first time) in the ACD in FY 2022-2023, who were between the ages of 1.5 to 18.5 years, had at least two completed PDDBI administrations during FY 2022-2023, and were authorized for ABA services for at least 120 days before the final PDDBI administration. From this population, cohorts for the PDDBI (n=2,619), SRS-2 (n=888), and Vineland-3 (n=962) were created.

A comparison of the characteristics of the final PDDBI, Vineland-3, and SRS-2 samples of ACD patients with the 6,858 patients who enrolled during FY 2022-2023 and who had at least one PDDBI administration noted that higher percents of those in the final PDDBI (64.3 percent), Vineland (70.4 percent), and SRS (71.4 percent) cohorts were enrolled in the East region than in the sample of all patients enrolling in FY 2022-2023 (59.6 percent). Additionally, a slightly higher percent of the PDDBI (70.2 percent), Vineland-3 (74.2 percent), and SRS-2 (69.4 percent) cohorts were under the age of 6 than in the entire sample of 6,858 patients (64.5 percent). All other characteristics of both populations were very similar.

A multi-variate linear regression model approach was used to evaluate the reported outcomes of these three measures. The dependent variable in these regressions was the change in outcome measure scores from baseline intake to the last score found for each ACD participant. One model evaluated the percentage change in scores and the other model evaluated the absolute score change for each patient receiving ABA services. The independent regression variables were a series of policy/experimental and demographic (age, gender, region, etc.) variables. The most notable independent policy variable analyzed was adherence to authorized care (actual treatment hours utilized as a percentage of authorized treatment hours). Overall sample adherence rates were 43.2 percent for the PDDBI cohort, 45.9 percent for the Vineland cohort, and 48.0 percent for the SRS cohort. The most notable experimental variable examined was the change in parental stress measured through the Parenting Stress Index (PSI).

The data analysis found that overall average scores improved for all three measures from baseline to the last administration for all patients included in the analysis. Most remarkably, the analysis found that after controlling for all observed policy/experimental and demographic factors using regression analysis, both greater adherence to the provision of authorized ABA

services and greater reductions in family stress were associated with improved scores at statistically significant levels.

### **Measure-Specific Outcome Findings**

PDDBI. There was a 4.0 percent reduction in PDDBI scores without controlling for independent variables indicating improvement. This 4.0 percent improvement is equal to an average 3.14 point reduction in PDDBI scores. While enrollment in the previous FY 2022 analysis was not a significant predictor of outcomes in the PDDBI regression, the 359 patient cohort who met criteria for and were included in the previous FY 2022 analysis and continued care into FY 2023 (referred to as the previous FY 2022 cohort throughout this report) experienced greater improvements in PDDBI scores compared to the 2,260 patient cohort that was not included in the FY 2022 analysis (5.7 percent improvement versus 3.7 percent improvement). Based upon statistical analysis using linear regression models, six factors were significantly related to changes in PDDBI scores: adherence to treatment, change in the PSI score, average baseline PDDBI score, gender, region, and sponsor rank. A 10 percent increase in adherence rates was estimated to result in a 4.2 to 5.2 percent improvement in PDDBI test outcomes.

Vineland-3. For the Vineland-3 cohort, there was a 5.5 percent increase in Vineland-3 ABC scores without controlling for independent variables indicating improvement. This 5.5 percent improvement is equal to an average 3.22 point increase in Vineland-3 ABC scores. Six factors were significantly related to changes in Vineland-3 scores: adherence to treatment, change in PSI score, baseline Vineland score, age, gender, and disenrollment status. A 10 percent increase in adherence rates was estimated to result in a 2.6 to 4.0 percent improvement in Vineland-3 outcomes.

SRS-2. For the SRS-2 cohort, there was a 1.7 percent reduction in SRS-2 total scores without controlling for independent variables, which indicates improvement. This 1.7 percent improvement is equal to an average 1.93 point reduction in SRS-2 total scores. Seven factors were significantly related to changes in SRS-2 scores: adherence to treatment, change in PSI score, whether the same respondent completed both SRS-2 examinations, baseline SRS-2 scores, age, disenrollment status, and sponsor rank. A 10 percent increase in adherence rates was estimated to result in an 8.4 to 10.8 percent improvement in SRS outcomes.

The results of all three measures are consistent: adherence to treatment plans for ABA services and reductions in household stress levels resulted in changes in outcome measure scores. These findings represent an observational analysis only. While these observations are statistically significant, it is unclear if any of these observations are clinically significant. This evaluation does not have a comparison group (control group) to determine whether PDDBI, Vineland-3, and SRS-2 score changes are associated with ABA services, placebo, non-ABA treatments or other associated factors that could not be included in the analysis. It is also unclear whether these results for first time users are generalizable to the overall ACD population or outside of the ACD.

## ACD 2023 Analysis Limitations

While this current analysis attempts to correct for many of the shortcomings of prior DHA analyses, the analysis also has limitations. Three of these limitations are:

First, the primary dependent variable measured is the change in total PDDBI, Vineland-3, or SRS-2 score. All PDDBI and Vineland-3 administrations, as well as some SRS-2 administrations, were parent-completed. In general, parents are not professional ABA service providers who can objectively provide an outside measure of a patient's current state or progress. While this analysis attempts to partially control for factors inside of the home (changes in stress level), it is unclear how much bias is introduced by using parent evaluated PDDBI scores compared with scores from professionals. DHA could analyze changes in the "teacher" evaluated PDDBI scores; however, baseline scores are not collected therefore limiting the type of analysis that could be completed.

Second, the data set includes cases where the same respondent did not make both the baseline and final PDDBI, Vineland-3, or SRS-2 evaluation. In 15.7 percent of the cases (412 cases), a different respondent was listed on the final PDDBI. For the Vineland-3 and SRS-2 cohorts, 17.1 and 15.8 percent did not have the same respondent for baseline and final tests, respectively. Different respondents can have different evaluations of the same child at different points in time. While it would be ideal for the same respondent to make both evaluations, a dummy variable was created to control for cases where different respondents made PDDBI, Vineland-3, or SRS-2 evaluations at baseline and later.

Third, the gold standard for program evaluations is a randomized controlled trial because it allows one to evaluate the independent effects of the experimental question. In the present analysis, there is no comparison group (control group) to determine whether PDDBI, Vineland-3, or SRS-2 score changes are associated with ABA services, placebo, non-ABA treatments or other associated factors that could not be controlled. As noted earlier, DHA is not conducting research under the ACD and therefore is not able to rectify this limitation.

## LESSONS LEARNED

DHA is committed to ensuring all TRICARE-eligible beneficiaries diagnosed with ASD reach their maximum potential, and that all TRICARE-authorized treatment and services provided support this goal. Since the beginning of the ACD, DHA has made significant improvements to the program, such as increased access, implementation of recommendations in response to the DoD Office of Inspector General (OIG) reports<sup>3,4</sup>, and collection and evaluation of outcomes measures. The comprehensive update of the ACD, published March 23, 2021, evolves the program to a more beneficiary- and family-centric model. These revisions focus not

---

<sup>3</sup> DoD OIG Report: The Defense Health Agency Improperly Paid for Autism-Related Services to Selected Companies in the TRICARE South Region (Report No. DODIG-2017-064); Published: 10 MAR 2017; <https://media.defense.gov/2017/Dec/19/2001858335/-1/-1/1/DODIG-2017-064.PDF>.

<sup>4</sup> DoD OIG Report: TRICARE North Region Payments for Applied Behavior Analysis Services for the Treatment of Autism Spectrum Disorder (Report No. DODIG-2018-084); Published: 16 MAR 2018; <https://media.defense.gov/2018/Mar/22/2001893494/-1/-1/1/DODIG-2018-084.PDF>.

only on improving the quality, value, and access to care and services for beneficiaries diagnosed with ASD and their families, but also on improving the management and accountability of the MCSCs, diagnosing providers, and ABA providers.

As part of ongoing monitoring of the impact of these revisions and improved data collection, several observations regarding provider compliance, access to care, and MCSC oversight are available following full policy implementation.

As a critical element of contract oversight, ensuring all approved treatment plans target the core symptoms of ASD is addressed with the 100 percent treatment plan clinical necessity reviews. These reviews not only ensure compliance with the ACD policy (administrative reviews), but also ensure that beneficiary goals and progress, or lack thereof, are appropriately addressed in the respective goals and clinical recommendations (clinical reviews). After the first year of implementation of this requirement, DHA analyzed the pass rate of first-time treatment plan submissions. In FY 2022, only 30 percent of treatment plans were compliant at first submission. In FY 2023, both regions reported improvements in first submission pass rates (54 percent in the East Region and 38 percent in the West Region). Common areas of treatment plan failures include: recommendations for excluded goals that are outside of the scope of the ACD, unsupported CPT code unit requests, and missing beneficiary or provider information. Improved oversight allows the MCSCs to provide immediate feedback and educate individual providers on requirements for clinical necessity and treatment plan compliance.

Another area of interest for this review period focused on issues related to access to care. DHA received feedback from individual families and other stakeholders of concerns regarding timely access to an ABA provider. The March 2021 policy update added an MCSC requirement called “active provider placement” where the MCSCs are required to find an available provider within the access to care standard for outpatient specialty care (28 days). DHA found that approximately 44 percent of families chose to waive access to care standards, meaning they were offered an available provider but declined to prioritize family preferences (e.g., specific providers, specific locations, or specific times of day). Despite these findings, access to care is met in most States where the MCSCs have identified a provider who has agreed to accept the beneficiary within 28 days.

## **CONCLUSION**

While the ACD provides the authority to reimburse for demonstration-authorized ABA services delivered to TRICARE-eligible beneficiaries diagnosed with ASD, the ACD is focused on providing comprehensive services to each beneficiary so that each participant reaches their maximum potential. The March 2021 ACD policy update centered around the individual child and their family, and their unique needs by providing a dedicated point of contact to help navigate what can sometimes be an overwhelming system. This individualized focus offers the families a way to respond to the dynamic needs of the beneficiary throughout their participation in the ACD. Families can tap into the health care services and resources they need and can be connected to other community and non-clinical resources, as well.

At the end of FY 2023, there were a total of 16,747 beneficiaries with a diagnosis of ASD participating in the ACD with a cost of \$434.6M who also used an additional \$83M in other

medical services. ACD participation by beneficiary demographics reveal that 88.3 percent of ACD participants are age 13 years and younger, that the median age is 7 years, and that roughly 4 out of 5 ACD participants are male.

Considering the literature states that parental involvement in ABA services is critical to the long-term outcomes, DHA continues to monitor parent engagement trends. In FY 2021, 76 percent of ACD beneficiaries had parents or guardians who received family treatment guidance services with an average of 9.9 hours over the FY. In FY 2022, rates of parent or guardian receipt of family treatment guidance rose to 83 percent; however, the average number of hours decreased to 8.1. In FY 2023, rates of parent or guardian receipt of family treatment guidance was consistent with the previous FY at 83 percent. However, the average number of hours per year increased to 13.2. As noted in previous reports, parental engagement is critical as the beneficiary's needs evolve and transitions from one service to another occur. As parents learn and apply the principles of behavior analysis to new skills and settings, generalization and skill maintenance can endure. In the absence of consistently implementing techniques and principles, beneficiaries miss critical opportunities to expand on the learning and skill growth developed during the administration of ABA services.

The FY 2023 outcomes analysis continues to elevate the understanding of utilized services and the clinical impact on ASD symptom presentation. Based on this analysis, it appears that more beneficiaries made progress, on average, than all previous reports. With the enhanced attention on ensuring beneficiaries are receiving clinically necessary and appropriate services that target the core symptoms of ASD (through the clinical necessity reviews) as well as enhanced oversight and monitoring of clinical improvement, it may be that the 2021 ACD policy update has in fact begun to move the needle to address the comprehensive needs of the beneficiary and their family. However, it remains to be seen if these improvements endure.

This analysis updated its review of treatment adherence. While reasonable to expect that all beneficiaries would use 100 percent of their authorized hours, this analysis found that on average, TRICARE beneficiaries are receiving approximately 43 percent of their authorized care. This is an improvement from last year's analysis. Several factors may be impacting the receipt of more hours, but more information is needed to understand the reasons or barriers to treatment engagement. As the analysis found that treatment adherence was significant for predicting clinical outcomes, additional analyses are required to understand the long-term impact of ABA service receipt (e.g., does better adherence for a shorter period of time lead to better and longer lasting improvements).

The Department continues to improve and expand the programmatic oversight and analysis of the ACD. While the Department fully supports the continued research on the nature, scope, and effectiveness of ABA services, ASD requires a broader reach for lifetime management. Focusing on only one type of intervention may lead to missed opportunities for developmental growth for the individual and the family. The 2021 ACD policy update focused on addressing the specific needs of the individual beneficiary, either through identifying the appropriate medical and clinical services for the beneficiary or connecting families to the vast array of other programs and non-clinical resources when they are recommended. While TRICARE is leading the Nation in developing an effective ASD program model, more analysis is required to address the full scope of services throughout the lifespan of the program.