Applied Behavior Analysis

Date of Origin: 03/2011 **Last Review Date: 9/2021** **Effective Date: 10/1/2021**

Dates Reviewed: 05/2012, 09/2012, 05/2013, 05/2014, 10/2014, 05/2015, 07/2016, 07/2017, 07/2018, 07/2019, 10/2020, 9/2021

Developed By: Medical Necessity Criteria Committee

I. Description

"Applied Behavior Analysis" (ABA) refers to a variety of psychosocial interventions that use behavioral principles to shape an individual's behavior. Examples include Lovaas therapy, Discrete Trial Training, Early Intensive Behavior Intervention, Pivotal Response Training, and Responsive Education and Prelinguistic Milieu Therapy. These services are commonly provided to children with Autism Spectrum Disorder.

ABA treatment goals include improving daily living skills, decreasing harmful behaviors, improving social functioning and play skills, improving communication skills, and developing skills that result in greater independence. It is important for treatment to focus on how learned skills can be generalized and family involvement is crucial in this regard. Similarly, collaboration among professionals and educators is critical to ensure consistency in interventions across settings (Kelly and Tincani, 2013).

ABA interventions are commonly provided by paraprofessionals working under the supervision of individuals trained and certified as Board Certified Behavior Analyst (BCBA) or Board Certified Assistant Behavior Analyst (BCaBA). Oregon has established a Behavior Analysis Regulatory Board to license Behavior Analysts and Assistant Behavior Analysts and register Behavior Analysis Interventionists.

Telehealth may be an effective and cost-effective tool in delivering parent education. There is evidence that telehealth can be an effective way to achieve positive outcomes and quicker results. The Behavior Analyst Certification Board supports telehealth as a way to provide ABA services.

A comprehensive review of treatments for Autism Spectrum Disorders by the Oregon Health Resources Commission (HERC, 2008) found insufficient evidence to demonstrate the effectiveness of ABA services. An updated review in 2014 found:

> Applied behavior analysis (ABA), including early intensive behavioral intervention (EIBI), is recommended for coverage for treatment of autism spectrum disorder (*strong recommendation*).
>
> Rationale: This strength of recommendation was based on sufficient (moderate quality) evidence and expert input, including testimony on parent/caregiver values and preferences. The evidence

does not lead to a direct determination of optimal intensity. Studies of EIBI ranged from 15-40 hours per week. There is no evidence that increasing intensity of therapy yields improved outcomes. Studies for these interventions had a duration from less than one year up to 3 years. (Health Evidence Review Commission, 2014, p. 18).

The 2014 HERC report drew heavily from an Agency for Healthcare Research and Quality (AHRQ) review which studied the treatments for children ages 2- 12 (Effective Healthcare Program, 2014). The 2014 AHRQ report found evidence for the effectiveness of ABA but did not show effectiveness of intensive ABA in children over the age of 7. Older children requiring ABA treatment may be more impaired and ABA may be most effective with these individuals by targeting specific needs rather than broad deficits.

The American Academy of Pediatrics (2007 and reaffirmed in December 2010) found that ABA was effective in producing "sustained gains in IQ, language, academic performance, and adaptive behavior as well as some measures of social behavior" (p. 1164). A review of twenty-six outcomes studies found evidence of effectiveness of ABA in preschool children and some evidence of effectiveness of ABA in children up to 7 years of age at intake (Eikeseth, 2009). A review of individual-level data from 16 studies of young children found that high intensity treatment was superior to low intensity (Elevik, et al, 2010). A randomized, controlled study of the Early Start Denver Model (2010) showed positive effects for children receiving two years of therapy beginning at age 18 to 30 months.

The Behavior Analysis Certification Board (BACB) has issued guidelines for "Funders and Managers" (2014) and a set of clarifications (2019). The guidelines set forth a number of recommendations and standards. Among other recommendations, they find that more intensive treatment is generally more effective than less intensive treatment; that supervision should generally be provided at a rate of at least 2 hours for every 10 hours of direct treatment; that caregiver training is an important component of treatment; and that ***"all aspects of ABA interventions must be customized to the strengths, needs, preferences, and environmental circumstances of each individual client and their caregivers, and must be flexible so as to accommodate changes that occur over the course of treatment"*** (emphasis in the original)***.***

The Individuals with Disabilities Education Act (IDEA) requires states and school districts to provide early intervention, special education, and related services appropriate to the needs of children with disabilities including Autism Spectrum Disorder. This requirement specifically includes services for children from birth to age 3 (Part C) as well as for older children (Part B).

The following criteria are intended as a guide for establishing medical necessity for the requested level of care. They are not a substitute for clinical judgment and should be applied by appropriately trained clinicians giving consideration to the unique circumstances of each patient, including co-morbidities, safety and supportiveness of the patient's environment, and the unique needs and vulnerabilities of children and adolescents.

II. Criteria: CWQI: BHC-0002

A. Criteria for Authorization of Initial Assessment of ABA Services:

Authorization of the initial assessment and development of the treatment plan for ABA services is indicated by **ALL** of the following:

1. Diagnosis of Autism Spectrum Disorder has been made or confirmed by a provider meeting **Any** of the following qualifications:
   a. Behavioral Pediatrician
   b. Child Psychiatrist
   c. Child Clinical Psychologist with training in Autism Spectrum Disorder
   d. Pediatric Neurologist

2. Patient shows clinically significant impairment consistent with the diagnosis of Autism Spectrum Disorder.

B. Criteria for Initial Authorization of ABA Services:

Authorization for initial ABA services upon completion of initial assessment and treatment plan is indicated by **ALL** of the following:

1. The treatment plan includes ALL of the following elements:

   a. Developed by a Masters or Doctoral Level Behavior Analyst with certification and/or licensure appropriate to the state in which the Behavior Analyst practices.
   b. Face-to-face treatment with an appropriately registered, certified, or licensed interventionist or clinician
   c. Frequency and intensity of treatment: number of hours per week of direct services to the patient and family
   d. Planned interventions consistent with ABA techniques
   e. Assessment of the patient's strengths and weaknesses
   f. Description of how the patient's strengths and weaknesses are addressed in the individualized treatment plan
   g. Target behaviors and achievable goals in quantifiable terms including mastery criteria
   h. Achievable goals appropriate to the patient's symptoms, resources, and functioning.
   i. Parental Involvement: description of participation of family in patient's treatment including interventions being employed with family, family education, training, and plan for transferring effective interventions to the family.
   j. Promotes the family's ability to foster the child's development and independently manage symptoms.
   k. Appropriate schedule for supervision by a certified/licensed Behavior Analyst,
   l. Plan for reassessment and treatment plan modification

2. Patient shows clinically significant impairment consistent with the diagnosis of Autism Spectrum Disorder.

3. Parent training planned for a minimum of 1 hour per 5-10 hours of direct treatment
    a. In some cases, parent training may be provided by observing technicians' work with the patient.
    b. Implementation of parent training may be delayed if it is necessary to achieve stabilization of severe behaviors first.
    c. When treatment is otherwise medically necessary and parents are unable to participate in the appropriate amount of training, treatment will not be denied solely on this basis.
4. Evidence of coordination of care with other service and educational providers including which providers are involved and frequency of contact.
5. Treatment is appropriate to the patient's age and individual clinical need.
6. Treatment is expected to produce clinically significant results including ANY of the following:
    a. Measurable improvement in functioning that would not be expected in the absence of treatment
    b. Prevention of regression which would be expected in the absence of treatment
7. Number of hours of ABA per week should be based on patient's specific needs and not general program structure as evidenced by **ALL** of the following:
    a. Treatment is provided at the lowest level of intensity appropriate to the patient's clinical needs and goals.
    b. Detailed description of problems, goals and interventions supports the need for the requested intensity of treatment.
    c. Number of hours requested reflects actual number of hours intended to be provided.
8. Treatment plan takes into account the child's and family's ability to tolerate and make use of interventions. Treatment plan also takes into account the amount of treatment hours that the child and family are realistically able to participate in.
9. Functional analysis has been completed when clinically indicated.
10. For treatment in an educational setting, **ALL** of the following criteria must be met:
    a. Treatment goals and interventions target symptoms that appear in the specific context of the educational setting and cannot be adequately treated in another setting.
    b. Treatment interventions are expected to ameliorate the targeted symptoms resulting in clinically meaningful improvement in adaptive functioning.
    c. Clinical staff do not supplant the role of educational staff in providing appropriate educational supports, accommodations and interventions to the student.
    d. Treatment goals should not be educational in nature nor overlap IEP goals. If goals seem to be educational in nature, they should be clearly tied to how they will improve the child's daily functioning.
    e. The treatment plan includes a realistic plan for promoting the school's ability to independently manage the student's behaviors without ongoing support from clinical staff.
    f. Clinical staff regularly review clinical goals, interventions and outcomes with educational staff.

C. **Criteria for Continued Authorization of ABA Services:**

Continued authorization for ABA is indicated by **ALL** of the following:

1. The treatment plan continues to meet the standards established by BACB.
2. Parent(s) are actively involved in the patient's treatment and parent training, to assist in generalizing skills to the natural environment. Parent progress in implementing skills is documented. (Presence alone does not constitute active participation.)
3. Documentation describes coordination of care with other service and educational providers including which providers are involved and frequency of contact.
4. Parents are not yet able to independently provide effective interventions without the ongoing support of ABA providers.
5. The treatment plan includes a realistic plan for termination and promotes the patient's and family's ability to independently continue treatment gains.

Plus **1 or more** of the following:

6. Continued measurable improvements in symptoms and/or functioning.
7. Continued progress toward the ability to independently maintain treatment gains.
8. Treatment plan revision expected to resolve a lack of progress.

D. Termination Criteria:

Termination of continued authorization is indicated by **1 or more** of the following:

1. Patient has achieved a stable level of functioning and further treatment is not expected to produce significant improvement.
2. The patient's behaviors and symptoms are being exacerbated by treatment interventions.
3. Parents are not engaging appropriately in treatment.
4. Parents are able to independently provide effective interventions without the ongoing support of ABA providers.

III. Information Required with the Prior Authorization Request:

1. For initial assessment:
   i. Evidence of adequate diagnosis of Autism Spectrum Disorder by an appropriately licensed and trained clinician.
   ii. Description of symptoms and functional impairments related to ASD
2. For treatment:
   i. Items in (a) above and:
   ii. Assessment and treatment plan completed by Behavior Analyst

IV. Annual Review History

Review Date	Revisions	Effective Date
05/2013	Annual Review. Added table with review date, revisions, and effective date. Refined criteria for intensive ABA.	05/2013
05/2014	Annual Review. Added description of state mandates.	05/2014
10/2014	Update to reflect new HERC and AHRQ reports and Oregon and Washington regulatory changes.	10/2014
05/2015	Annual Review. Simplified reference to state mandates. Included additional literature. Clarified requirements regarding ABA in educational settings.	05/2015
07/2016	Annual Review. Added one continued treatment criterion and two discharge criteria.	07/2016
07/2017	Annual Review. Added telehealth. Added references. Added criteria related to parental involvement.	09/2017
07/2018	Annual Review.	09/2018
07/2019	Annual Review. Re-organized criteria. Modified guidelines regarding intensity of treatment. Added detail regarding treatment plan requirements.	09/2019
10/2020	Annual review. Added additional emphasis and reference related to coordination of care. Other minor wording changes.	11/2020
9/2021	Annual review. Added clarifications regarding parent training.	10/2021

IV. References

1. 77th Oregon Legislative Assembly. Senate Bill 365, enrolled. 2013. Available at https://olis.leg.state.or.us/liz/2013r1/Downloads/MeasureDocument/SB365
2. Baretto, A., Wacker, D.P., Harding, J., Lee, J., & Berg, W.K. Using Telemedicine to Conduct Behavioral Assessments. Journal of Applied Behavior Analysis 2006: 39 (3), 333-340.
3. Behavior Analyst Certification Board. Applied Behavior Analysis Treatment of Autism Spectrum Disorder: Practice Guidelines for Healthcare Funders and Managers. 2014. Accessed online on May 25, 2015 at http://bacb.com/Downloadfiles/ABA_Guidelines_for_ASD.pdf.
4. Boisvert, M., Lang, R., Andrianopoulos, M., & Boscardin, M.L. Telepractice in the Assessment and Treatment of Individuals with Autism Spectrum Disorders: A Systematic Review. Developmental Neurorehabilitation 2010: 13 (6), 423-432.
5. California Department of Developmental Services. Autism Spectrum Disorders—Best Practice Guidelines for Screening, Diagnosis and Assessment. 2002.
6. California Health and Safety Code, Section 1374.73. Available at http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0901-0950/sb_946_bill_20111009_chaptered.html.
7. Dawson G *et. al*.. Randomized, Controlled Trial of an Intervention for Toddlers with Autism: The Early Start Denver Model. *Pediatrics* 2010;125; e17; originally published online November 30, 2009.
8. Dixon, D.R., Linstead, E., Granpeesheh, D., Novack, M.N., French, R., Stevens, E., Stevens, L., Powell, A. (2016, Jun 9) An Evaluation of the Impact of Supervision Intensity, Supervisor Qualifications, and

Caseload on Outcomes in the Treatment of Autism Spectrum Disorder. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/27920965.

9. Eikeseth, S. Outcome of comprehensive psycho-educational interventions for young children with autism. *Research in Developmental Disabilities,* 30(1). 2009. Available at http://www.o4rl.com/Clients/Eikeseth,%202008%20outcome.pdf.
10. Effective Health Care Program. 2014. Comparative Effectiveness Review Number 137: Therapies for Children with Autism Spectrum Disorder: Behavioral Interventions Update. Accessed 10/25/14 at http://www.effectivehealthcare.ahrq.gov/ehc/products/544/1946/autism-update-executive-140806.pdf.
11. Eldevik, S., et. al... Using Participant Data to Extend the Evidence Base for Intensive Behavioral Intervention for Children with Autism. *American Journal on Intellectual and Developmental Disabilities.* 115(5), 381-405. 2010.
12. Health Evidence Review Commission (HERC). Evaluation of Evidence: Applied Behavior Analysis for Autism Spectrum Disorders. 8/14/2014. Accessed 10/25/14 at http://www.oregon.gov/oha/herc/EvidenceEvaluation/EvidenceRvw-ABA-final.pdf
13. Health Resources Commission. Evidence for Effectiveness of Treatments for Autism Spectrum Disorders in Children and Adolescents. 2008.
14. Howard, J, Sparkman C, Cohen H, Green G, Stanislaw H. A comparison of intensive behavior analytic and eclectic treatments for young children with autism. 2005. Research in Developmental Disabilities, 26, 359-383.
15. Individuals with Disabilities Education Improvement Act of 2004 (IDEA). Public Law 108-446. Available at http://idea.ed.gov/download/statute.html
16. Johnson CP, Myers S. Identification and evaluation of children with autism spectrum disorders. Pediatrics. 2007 Oct;120;1183-1215. DOI: 10.1542/peds.2007-2361.
17. Kelly, A., & Tincani, M. (2013). Collaborative training and practice among applied behavior analysts who support individuals with autism spectrum disorder. Education and Training in Autism and Developmental Disabilities, 120-131.
18. Lai MC, Lombardo MV, Baron-Cohen S. Autism. Lancet 2014; 383:896.
19. Laws of Alaska. AS 21.42.397. 2012. Available at http://www.legis.state.ak.us/PDF/27/Bills/SB0074Z.PDF
20. Lindgren, S., Wacker, D., Suess, A., Schieltz, K., Pelzel, K., Kopelman, T., et al. Telehealth and Autism: Treating Challenging Behavior at Lower Cost. Pediatrics 2016: 137 (Supplement 2), S167-175.
21. Maglione MA, Gans D, Das L, et al. Nonmedical interventions for children with ASD: recommended guidelines and further research needs. Pediatrics 2012; 130 Suppl 2: S169-78.
22. Myers S, Johnson CP. Management of children with autism spectrum disorders. Pediatrics. 2007 Oct; 120;1162-1182. DOI: 10.1542/peds.2007-2362.
23. Ospina MB, Krebs Seida J, Clark B, Karkhaneh M, Hartling L, Tjosvold L, e al. (2008) Behavioural and Developmental Interventions for Autism Spectrum Disorder: A Clinical Systematic Review. PLoS ONE 3 (11): e3755. Doi 10.1371/journal.pone.0003755
24. Papatola, K., Lustig, S.L. (2016, Jun) Navigating a Managed Care Peer Review: Guidance for Clinicians Using Applied Behavior Analysis in the Treatment of Children on the Autism Spectrum. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4893036/
25. Rogers, S and Vismara, L. Evidence-based comprehensive treatments for early autism. *J Clin Child Adolesc Psychol*, 37(1). 2008. Available at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2943764/

26. Supreme Court, Washington State. No. 88940-6. October 9, 2014. Accessed 10/25/14 at http://www.courts.wa.gov/opinions/pdf/889406.pdf
27. Volkmar F et al. Practice parameter for the assessment and treatment of children and adolescents with autism spectrum disorder. *J Am Acad Child Adolesc Psychiatry*. 2014 Feb;53(2):237-57.
28. Wong, C., Odom, S. L., Hume, K., Cox, A. W., Fettig, A., Kucharczyk, S. et al. (2013). Evidence-based practices for recipient, youth, and young adults with autism spectrum disorder. Chapel Hill, NC: The University of North Carolina, Frank Porter Graham Recipient Development Institute, Autism Evidence-Based Practice Review Group.
29. World Health Organization. Disorders of psychological development (F80-F89). Available at URL address: http://who.int/classifications/apps/icd/icd10online/gf80.htm. Accessed on June 12, 2008.
30. Behavior Analyst Certification Board (2019). Clarifications Regarding Applied Behavior Analysis Treatment of Autism Spectrum Disorder: Practice Guidelines for Healthcare Funders and Managers (2nd ed.). Accessed at https://www.bacb.com/wp-content/uploads/Clarifications_ASD_Practice_Guidelines_2nd_ed.pdf, on June 28, 2019.