Clinical Policy: Applied Behavioral Analysis

Reference Number: CP.MP.104 Coding Implications
Last Review Date: 01/18 Revision Log

See Important Reminder at the end of this policy for important regulatory and legal information.

Description

Applied Behavioral Analysis (ABA) is the application of behavioral principles to everyday situations, intended to increase or decrease targeted behaviors. ABA has been used to improve areas such as language, self-help, and play skills, as well as decrease behaviors such as aggression, self-stimulatory behaviors, and self-injury. For children with Autism Spectrum Disorder (ASD), therapy can range from 25 to 40 hours per week and requires active parent/guardian involvement to increase the potential for behavior improvement. ABA can also be referred to as Lovaas therapy and intensive behavioral intervention (IBI).

Policy/Criteria

I. When ABA is a **covered benefit**, the *initiation of services* is considered **medically necessary** for members meeting all of the following criteria:

A. Age < 21 years;

B. Diagnosis by age eight confirmed by one of the following diagnosis specific tests/screening tools:

1. Checklist for Autism in Toddlers (CHAT);
2. Modified Checklist for Autism in Toddlers (M-CHAT);
3. Screening Tool for Autism in Two-Year Olds (STAT);
4. Social Communication Questionnaire (SCQ) (recommended for children ≥ four-years);
5. Autism Spectrum Screening Questionnaire (ASSQ);
6. Childhood Asperger's Syndrome Test (CAST);
7. Krug Asperger's Disorder Index (KADI);
8. Autism Diagnostic Observation Schedule (ADOS);
9. Autism Diagnostic Interview Revised (ADI-R);
10. Childhood Autism Rating Scale (CARS);
11. Gilliam Autism Rating Scale (GARS);

C. An appropriate diagnostician has ruled out all of the following as a sole explanation for symptoms of ASD:

1. Neurological disorder (by an MD);
2. Lead poisoning (by an MD);
3. Primary speech disorder;
4. Primary hearing disorder;

D. A licensed child psychologist, psychiatrist, neurologist, or developmental pediatrician has evaluated the member within the last 6 months for current validation of the ASD diagnosis using one of the following:

1. Autism Diagnostic Observation Schedule (ADOS);
2. Autism Diagnostic Interview- Revised (ADI-R);
3. Childhood Autism Rating Scale (CARS);

4. A DSM-IV Diagnostic Criteria result that validates a diagnosis of autistic disorder, Asperger syndrome, or pervasive developmental disorder- not otherwise specified;
5. A DSM-5 Diagnostic Criteria result that validates a diagnosis of ASD;

E. Member exhibits severe behavior that presents a clinically significant health or safety risk to self or others (such as self-injury, aggression toward others, destruction of property, elopement, severe disruptive behavior or significant interference with basic home or community activities of daily living);
F. Less-intensive behavior treatment or other therapy of 60 – 90 days in duration has not been sufficient to reduce interfering behaviors, to increase pro-social behaviors, or to maintain desired behaviors;
G. The member is medically stable and does not require 24-hour medical/nursing monitoring or procedures provided in a hospital level of care;
H. A qualified, treating health care professional who has completed an initial evaluation of the member, has a reasonable expectation that the individual's behavior will improve significantly with ABA therapy provided by, or supervised by, a participating ABA provider;
I. The treatment plan is built upon individualized goals and projected time to achieve those goals. Objectives are measurable and tailored to the patient;
J. Parent or caregiver training and support is incorporated into the treatment plan and takes place on a regular basis;
K. Interventions emphasize generalization of skills and focus on the development of spontaneous social communication, adaptive skills, and appropriate behaviors;
L. Interventions are consistent with ABA techniques;
M. The number of service hours necessary to effectively address the challenging behaviors is listed in the treatment plan.

II. The *continuation of ABA services* is considered **medically necessary** when all of the following criteria are met. Requests for continuation of therapy must be accompanied by documentation maintained by the provider that outlines actual services received and a graphic representation documenting the progress made by the member.

A. Continues to meet the criteria in section I.E through I.M.;
B. There is reasonable expectation that the member will benefit from the continuation of ABA therapy, as evidenced by mastery of skills defined in initial plan, or a change of treatment approach from the initial plan;
C. The treatment plan is updated on a monthly basis;
D. The treatment plan is submitted for review every 12 months, or as state-mandated;
E. Measurable progress is documented and submitted every 12 months with the treatment plan. Continued progress is determined based on improvement in goals, as outlined in the provider treatment plan, and will focus on improvements in verbal skills, social functioning, and IQ (for children under 4 years);
F. Treatment is not making the symptoms worse;
G. There is a reasonable expectation, based on the member's clinical history that withdrawal of treatment will result in decompensation/loss of progress made, or recurrence of signs and symptoms.

III. Exclusion criteria: ABA treatment will not be authorized for any of the following purposes:

A. Speech therapy;
B. Occupational therapy;
C. Vocational rehabilitation;
D. Supportive respite care;
E. Recreational therapy;
F. Orientation and mobility;
G. ABA services provided in the school setting.

Background

A number of scientific studies have been conducted evaluating the effectiveness of ABA. The original and long-term follow-up study conducted by O. Ivar Lovaas included 38 children who were non-randomly assigned to ABA therapy or minimal therapy. Outcomes were compared to data from 21 children in another facility that had similar characteristics. Lovaas reported improvements in cognitive function and behavior that were sustained for at least 5 years. Almost half of the ABA group passed normal first grade and had an IQ score that was at least average. The flaws in this study included: small sample size, non-randomization of patients to treatment groups, potential selection bias, and endpoints that may not meet current standards (Hayes Medical Directory). More recent studies have reported effectiveness in some autistic children, especially in relatively high-functioning children, but none have replicated the results from the Lovaas study.

Multiple systematic reviews with meta-analyses have been conducted on ABA studies for ASD, with conflicting results. Ospina and colleagues (2008) systematically reviewed studies comparing behavioral and developmental interventions for ASD. The four randomized control trials (RCTs) reviewed that compared ABA to Developmental Individual-difference relationship-based intervention (DIR) or Integrative/Discrete trial combined with Treatment and Education of Autistic and related Communication Handicapped Children (TEACCH) found no significant difference in outcomes (Ospina et al., p. 4). Seven out of eight studies that reported significant improvements were not RCTs and have significant methodological limitations (Ospina et al., 2008, p. 5). Results from a meta-analysis of controlled clinical trials demonstrated that Lovaas is superior to special education for a variety of outcomes; however, there is no definitive evidence suggesting superiority of Lovaas over other active interventions (Ospina et al. 2008, p. 26). Additionally, five other systematic reviews found that ABA was an effective intervention for ASD, but still noted the substantial limitations of included studies, which could affect meta-analysis results and the expected efficacy of ABA (Eldevik 2009; Reichow 2009; Makrygianni 2010; Virues-Ortega 2010; Warren et al. 2011).

Furthermore, Reichow and others (2014) conducted a systematic review of the RCTs, quasi-RCTs, and controlled clinical trials in the ABA literature, commenting that these were not of optimal design. Reichow and others (2014) concluded that the evidence suggests ABA can lead to improvements in IQ, adaptive behavior, socialization, communication and daily living skills. However, they strongly caution that given the limited amount of reliable evidence, decisions about using ABA as an intervention for ASD should be made on a case by case basis (Reichow et al. 2014, p. 33). In contrast, Spreckley and Boyd (2009) state in their systematic review that children receiving high intensity ABA did not show significant improvement in cognitive functioning (IQ), receptive and expressive language, and adaptive behavior compared to lesser

interventions including parenting training, parent- applied behavior intervention supervised weekly by a therapist, or interventions in the kindergarten.

Further research needs to be done to determine the effectiveness of ABA at improving IQ, language skills, social skills, and adaptive behaviors, especially compared to other interventions. In addition, rigorous studies should examine which subgroups of children or adolescents with ASD benefit the most from ABA.

Coding Implications

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2018, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

ICD-10-CM Code	Description
F84.0	Autistic disorder
F84.2	Rett's syndrome
F84.3	Other childhood disintegrative disorder
F84.5	Asperger's syndrome
F84.8	Other pervasive developmental disorders
F84.9	Pervasive developmental disorder, unspecified

Reviews, Revisions, and Approvals	Date	Approval Date
Initial approval		08/09
Updated policy to "Applied Behavioral Analysis" and description Split criteria into initial and continuation and removed authorization protocols Combined diagnostic specific screening tools into one section and removed Confirmation of diagnosis by specialist type in II.B Add DSM-5 to list in II.D Added length of failure for less intensive treatments Changed treatment provided by requirements to a credentialed provider In continuation criteria, added reasonable expectations of therapy points	12/14	01/15
Updated template Updated background with recent studies Changed policy reference number from CP.BH.02 to CP.MP.103 Specialist reviewed	01/16	01/16
Reviewed and updated references. Added ICD-10 codes.	12/16	01/17
Added language to further define ABA therapy to the section- Description.	01/18	01/18

Reviews, Revisions, and Approvals	Date	Approval Date
Revised I. C.2 to state that lead poisoning rather than heavy metal poisoning has been ruled out per American Academy of Neurology recommendation.		
Specified which DSM-IV and DSM-5 diagnoses apply, and broke these into separate criteria points. Added pediatric psychiatrist, neurologist, or developmental pediatrician as clinicians that can validate the ASD diagnosis.	05/18	05/18

References

1. Autism Treatments: Description and Research Summaries. Association for Science in Autism Treatment. https://www.asatonline.org/for-parents/learn-more-about-specific-treatments/.
2. Behavior Analysis Certification Board. Health plan coverage of applied behavior analysis treatment for autism spectrum disorder. Nov. 2012. .
3. Eldevik S, Hastings RP, Hughes JC, Jahr E, Eikeseth S, Cross S. Meta-analysis of Early Intensive Behavioral Intervention for children with autism. *J Clin Child Adolesc Psychol.* May 2009; 38(3): 439-50. doi: 10.1080/15374410902851739
4. Hayes Medical Technology Directory: Applied Behavior Analysis-Based Interventions for Autism Spectrum Disorder. Published December 9, 2014. Annual Review November 14, 2017. Accessed December 5, 2016. Accessed January 12, 2018
5. Makrygianni MK, Reed P. A meta-analytic review of the effectiveness of behavioural early intervention programs for children with Autistic Spectrum Disorders. *Res Autism Spectr Disord.* 2010; 4: 577-593. doi:10.1016/j.rasd.2010.01.014
6. Myers SM, Johnson CP and the Council on Children with Disabilities (2009). Management of children with autism spectrum disorders. *Pediatrics.* 2007; 120:1162-1182. Reaffirmed 2014.
7. Ospina, MB et al. Behavioural and developmental interventions for autism spectrum disorder: a clinical systematic review. PLoSONE. 2008; 3(11): e3755. http://www.plosone.org/article/info:doi%2F10.1371%2Fjournal.pone.0003755
8. Reichow B, Wolery M. Comprehensive synthesis of early intensive behavioral interventions for young children with autism based on the UCLA Young Autism Project model. *Journal of Autism and Developmental Disorders.* 2009; 39(1): 23–41.
9. Reichow B, Barton EE, Boyd BA, Hume K. Early Intensive Behavioral Intervention (EIBI) for Young Children with Autism Spectrum Disorders (ASD): A Systematic Review. Campbell Systematic Reviews. 2014; 9. doi: 10.4073/csr.2014.9
10. Sallows GO, Graupner TD. Intensive behavioral treatment for children with autism: four-year outcome and predictors. *American Journal of Mental Retardation.* Nov. 2005; 110(6):417-438. http://www.asatonline.org/pdf/Sallows-Graupner2005.pdf
11. Spreckley, MS, and R Boyd. Efficacy of Applied Behavior Intervention in Preschool Children with Autism for Improving Cognitive, Language, and Adaptive Behavior: A Systematic Review and Meta-analysis. *Pediatrics.* 2009*;* 154:338-44.
12. Virués-Ortega J. Applied behavior analytic intervention for autism in early childhood: meta-analysis, meta-regression and dose-response meta-analysis of multiple outcomes. *Clin Psychol Rev.* Jun 2010; 30(4): 387-99. doi: 10.1016/j.cpr.2010.01.008

13. Volkmar F, Paul R, Klin A, Cohen D, (Eds) Handbook of autism and pervasive developmental disorders. Volumes 1 and 2, Third Edition. Cambridge University Press. 2007.
14. Volkmar F, Siegel M, et al. Practice parameter for the assessment and treatment of children and adolescents with autism spectrum disorder. *Journal of the American Academy of child & Adolescent Psychiatry*. Feb 2014; 53(2): 237-257.
15. Warren Z, McPheeters ML, Sathe N, et al. . A systematic review of early intensive intervention for autism spectrum disorders. *Pediatrics.* May 2011; 127(5): e1303-11. doi: 10.1542/peds.2011-0426.
16. Behavior Analysis Certification Board. Applied Behavior Analysis Treatment of Autism Spectrum Disorder: Practice Guidelines for Healthcare Funders and Managers. 2014. Accessed January 12, 2018. Accessed at: https://www.bacb.com/wp-content/uploads/2017/09/ABA_Guidelines_for_ASD.pdf
17. Augustyn M. Autism spectrum disorder: Diagnosis. In: UpToDate, Waltham, MA. Accessed January 12, 2018
18. Bridgemohan C. Autism spectrum disorder: Screening tools. In: UpToDate, Waltham, MA. Accessed January 12, 2018
19. Weissman L, Bridgemohan C. Autism spectrum disorder in children and adolescents: Behavioral and educational interventions. In: UpToDate, Waltham, MA. Accessed January 12, 2018

Important reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. "Health Plan" means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan's affiliates, as applicable.

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Note: For Medicaid members, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at http://www.cms.gov for additional information.