Autism Spectrum Disorder Assessment:
Considerations for Age and Functional Skill Level

October 2018

Step One:
Establishing the Autism Spectrum Disorder Diagnosis

General Autism Spectrum Disorder Evaluation Points to Remember

Assessment of Autism Spectrum Disorder (ASD) should be based on multiple data points (direct observation, caregiver interview, test data). The Autism Diagnosis Observation Schedule, Second Edition (ADOS-2) is a very helpful tool in ASD assessment; however, diagnosis of any condition should never be based on one test. The Autism Diagnostic Interview-Revised (ADI-R) is a standardized tool to assess for caregiver report of current and past ASD symptoms; again, this is a very helpful tool in ASD assessment. However, the ADI-R does not provide coverage for a full clinical interview, which is a necessary component of any ASD evaluation. Ultimately, it is the clinician’s expertise with the integration of test, interview, and observational data that yields an accurate diagnosis of ASD.

It is important that the examiner has a strong understanding of the child’s developmental/intellectual and language status to both select the correct module of the ADOS-2, as well as to take into account developmental/intellectual functioning when making the clinical diagnosis (ASD or not ASD). The ADOS-2 module selection is based on the expressive language level of the child; scoring of the items is based on consideration of the child’s nonverbal mental age. Utilizing a module lower than the child’s expressive language level may result in higher rates of false negatives (saying not ASD when the child has ASD) and using a module with higher expressive language demands than what the child exhibits may result in higher rates of false positives (saying ASD when the child does not have ASD). Therefore, it is essential that a clinician has accurate information about the child’s developmental/intellectual profile prior to administering and scoring the ADOS-2.

Administering developmental/intellectual and social observational tests to children with ASD can be challenging. Examiners must:

- Have a minimum of one year of experience working with and assessing children with ASD
- Understand psychometric data
- Be very knowledgeable and comfortable with the appropriate test administration procedures and rules for all tests administered
• Know how to utilize positive reinforcement and differential attending to motivate/shape best testing behaviors during developmental/intellectual assessment
• Most importantly, be able to create a fun, safe, and interesting social environment for the child to show his/her best skills

It is the expectation that the examiner set the battery that is needed to address the question of ASD, as well as to provide some meaningful information for the family irrespective of the individual’s ASD status. Compare this to going to the pediatrician with a concern that the child has strep throat and the doctor telling the parent that it is not strep throat and sending the family on their way without feedback or recommendations to manage the child’s current symptoms. It can be difficult for parents/caregivers to learn that their individual has been diagnosed with ASD. Similarly, for a parent/caregiver that has been searching for answers, it can be equally difficult to learn that the individual is NOT diagnosed with ASD; in this circumstance, it is often helpful to have some information to share with the caregiver about the individual’s functioning and some guidance for next steps. Evaluations should be helpful to both the family and clinical treatment team. Aside from diagnosis, evaluations should result in meaningful recommendations for the individual’s caregivers.

Very Young Children (age 3 and younger)

Developmental functioning is an essential component of ASD evaluation at this age as the symptoms are based on what the child is developmentally capable of exhibiting. Therefore, conducting some manner of developmental and/or adaptive assessment is necessary unless such assessment has already been recently completed and the results are available. Adaptive/developmental assessment should be completed prior to the ADOS-2.

The following battery is recommended:
• Clinical interview, including thorough assessment of developmental symptom history (medical, behavioral, and social history [ADI-R or clinical equivalent])
• Developmental evaluation (Mullen Scales of Early Learning, Bayley Scales of Infant Development- Third Edition)
  *unless testing has already been conducted to give an estimate of the child’s developmental skill levels, including expressive language, receptive language, and nonverbal skills
• Adaptive skills (Vineland-II)
• Observational assessment of social behaviors (ADOS-2)
  o Toddler module children through 30 months who are not yet flexible phrase speakers
Module 1 for children 31 months and older speaking primarily single words
Module 2 for children of ANY age who are primarily fluent, flexible phrase speakers

Other Considerations for this Population

Completing standardized testing with very young children can be difficult. Developmental measures (unlike most intellectual assessment measures) allow for multiple repetition of directions and items unless specifically noted in the manual. Young kids are inconsistent with displaying skills, so patience is necessary. If the child shows significant separation anxiety, which is normative at 12-24 months, the child may perform best with the caregiver in the room.

The ADOS-2 does a good job of differentiating children with Intellectual or Developmental Disability (I/DD) from kids with ASD; however, this relies on the examiner’s ability to correctly interpret items within the appropriate developmental context, including verbal and nonverbal skills. For young children with mild to moderate global delay or intellectual disability, research has supported that the lack of use of joint attention behaviors and a flat or declining social and communication trajectory are more often seen in children ASD as compared to kids with I/DD without ASD. Remember that children with intellectual and developmental disabilities have high rates of sensory and repetitive behaviors, so these behaviors in the absence of social affective deficits should not be used to diagnose ASD, though the frequency of motoric symptoms may be higher in kids with ASD. The ADOS-2 is not a good differentiator for children with severe to profound intellectual disability.

Children in this age range have a good opportunity for a positive response to intervention. Therefore, while treatment of current symptoms is necessary, ongoing assessment of symptoms and developmental status is important as the current deficits should not be viewed as the child’s long-term status or used for long-term planning.
Young Children (~ ages 4 to 6)

The following battery is recommended:

- Clinical interview, including thorough assessment of developmental symptom history (medical, behavioral, and social history [ADI-R or clinical equivalent])
- Intellectual/Developmental evaluation (Mullen Scales of Early Learning [Note: Mullen norms only go through age 5:5], Wechsler Preschool and Primary Scale of Intelligence, Fourth Edition [WPPSI-IV], Differential Ability Scales, Second Edition [DAS-II] Early Years Battery)
  
  *unless testing has already been conducted to give an estimate of the child’s verbal and nonverbal intellectual status
- Adaptive skills (Vineland-II)
- Observational assessment of social behaviors (ADOS-2)

Other Considerations for this Population

The Mullen Scales of Early Learning and Differential Ability Scales, Second Edition (DAS-II) Early Years Battery effectively delineate receptive and expressive language skills, as well as provide a solid nonverbal intellectual score. Aside from the one-word receptive language subtest, the Wechsler Preschool and Primary Scale of Intelligence, Fourth Edition (WPPSI-IV) requires verbal responses for an estimate of verbal reasoning skills. Therefore, a Mullen (if not over age 5:5) or DAS-II may be the best choice for assessment of children with known limited language output.

It can be difficult to select the most appropriate ADOS-2 module for this age range. The following points should be considered when selecting the ADOS-2 module:

- Remember phrase speech must be spontaneous and not only echolalic (immediate or delayed) for the child to be best assessed using module 2.
- Some children in this age range are best assessed using module 3 for fluent sentence speakers; sentences should be complex and communicatively meaningful for the child to receive this ADOS-2 module. Many children begin speaking in basic sentences (“I want a cookie.”) with every now and then uttering a complex sentence (“I went to the store with my mommy.”) before they are truly verbally fluent speakers.
- Further, some children with ASD may be capable of speaking at a level higher than what they typically utilize; however, the selection of the module should be based on the typical expressive output of the child, rather than on the best circumstance; developmental/intellectual assessment often helps to guide this decision. For example, if the child is able to say phrases, but does not do so routinely and instead communicates in single words most of the time, the child would be administered module 1.
• As clearly noted in the ADOS-2 manual, if it is unclear what module the child should receive, go with the module with lower language expectations.

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**School Aged Children/Teens/Young Adults of Suspected Intact Intellectual Skills**

The following battery is recommended:

- Clinical interview (caregiver and teen/young adult), including thorough assessment of developmental symptom history (medical, behavioral, and social history [ADI-R or clinical equivalent])
  *unless testing has already been conducted to give an estimate of the individual’s verbal and nonverbal intellectual status*
- Adaptive skills (Vineland-II)
  *only if the individual has clear adaptive limitations noted during the clinical interview*
- Observational assessment of social behaviors (ADOS-2)

Neuropsychological evaluation (comprehensive and/or targeted) can be helpful in guiding interventions but is not typically necessary for diagnosis of ASD. Individuals with medical complications such as seizure disorders, brain trauma, or extreme prematurity show variable cognitive skills and as such, more comprehensive testing is often helpful.

**Other Considerations for this Population**

The onset and developmental history of symptoms is often a helpful key differentiator. As noted in the DSM-V criteria, “Symptoms must be present in the early developmental period but may not become fully manifest until social demands exceed limited capacities or may be masked by learned strategies in later life.”

For intellectually intact individuals, the assessment is often differentiating ASD from psychiatric conditions, as well as with other psychiatric conditions. Notably, teens and young adults with high-functioning ASD show increased rates of comorbid internalizing disorders.
Common Comorbid and Differential Diagnostic Conditions

- Learning Disability/variable Neurocognitive Skills
- Language disorder especially when with comorbid anxiety/ADHD
- Social (Pragmatic) Communication Disorder
- Anxiety: Social anxiety/Generalized Anxiety/OCD/Selective Mutism
- Major Depression/Persistent
- ADHD (especially with oppositional features)/ODD/Conduct Disorder
- Psychosis/Prodromal Psychosis (negative symptoms, unusual thought patterns)
- Status Post-Traumatic Brain Injury
- Early childhood deprivation/severe abuse/Reactive Attachment Disorder

Older Kids/Teens/Young Adults of Suspected Low Intellectual Functioning

The following battery is recommended:

- Clinical interview, including thorough assessment of developmental symptom history (medical, behavioral, and social history [ADI-R or clinical equivalent])
- Intellectual evaluation (DAS-II, WISC-IV / WISC-V, WAIS-IV) *unless testing has already been conducted to give an estimate of the individual’s verbal and nonverbal intellectual status
- Adaptive skills (Vineland-II)
- Observational assessment of social behaviors (ADOS-2)

Other Considerations for this Population

For those 18 and over who could potentially self-present for the evaluation, it is important to have caregiver report of the individual’s developmental symptom history whenever possible. If not available, review of educational records, including IEPs and school psychoeducational evaluations, can be helpful.

The DAS-II has extended norms available that allow for assessment with the early years and/or school aged battery. Age equivalents are given for subtests and a standardized global clinical composite can be generated. For low functioning individuals, the DAS-II is an excellent assessment measure to truly understand the individual’s intellectual functioning as the individual may show a floor effect on the WISC-IV/WISC-V and WAIS-IV.

The ADOS-2 module should be based on language level irrespective of the individual’s chronological age; module 1 or 2 could potentially be the most appropriate module for very low functioning individuals. See the ADOS-2 manual.
for further information of administering a lower level module to older children, teens, and young adults.

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**Step Two:**

**Establishing the Medical Necessity of Applied Behavior Analysis for an Individual with Autism Spectrum Disorder**

Following establishment of the diagnosis of ASD, the clinician next must determine the medical necessity of Applied Behavior Analysis (ABA) based on a full understanding of the child’s symptom profile.

Not all individuals with ASD require ABA intervention. In fact, for some, an ABA treatment approach may not target the symptoms most interfering with the child’s functioning.

The evaluation must support the clinical decision that ABA therapy will achieve functional gains beyond those expected as a result of less intensive or other evidence-based intervention or general growth and maturation. There is clear evidence that the symptoms of the ASD are current and resulting in substantial impairment in daily functioning.

ABA may be best utilized for individuals with ASD when:

- Behaviors, social interaction, social communication, adaptive difficulties (toileting, feeding) significantly interfere with home or community activities.
- Behaviors present a health or safety risk to self or others (such as self-injury, aggression toward others, destruction of property, stereotyped/repetitive behaviors, elopement, severe disruptive behavior, etc.).
- Specific targeted behaviors can be defined for improvement, along with measurable, achievable, and realistic goals for improving those behaviors.
- There is evidence from the evaluation that suggests the individual is capable of making behavioral and cognitive gains.
- Less intensive behavior treatment or other evidence-based therapy has been seriously considered or has been applied and has not proven sufficient to reduce interfering behaviors, to increase prosocial behaviors, or to maintain desired behaviors.

Additionally, ABA is expected to be most effective with caregiver involvement. Caregivers should be available and committed to full participation in the program as defined by the person-centered treatment plan. Caregivers should be meaningfully
engaged in training and follow through on treatment recommendations beyond that provided by the BCBA or similarly qualified professional who is providing clinical oversight of ABA services of the individual. If caregivers are not willing or able to effectively participate in treatment and ABA is recommended as medically necessary by the evaluator, the clinical evaluation should clearly support the rationale behind the expectation of efficacy of this recommendation.

Recommendation of ABA services should not be made on the basis of comfort or convenience of the child or family in the absence of clinical data to support the recommendation. The child and family should receive intervention methods and settings that are the least intensive based on need and the most appropriate for meeting the defined goals.

As noted in the MDHHS Medicaid Provider Manual, it is the responsibility of the clinician and the clinician’s signing clinical doctoral supervisor, if/when applicable, to validate the medical necessity of ABA. If your clinical evaluation suggests that ABA treatment is not likely to effectively address the problematic behaviors, ABA should not be recommended. However, in this situation, the justification for the denial of ABA should be clearly supported in the clinical evaluation report.

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