Medicaid Autism Spectrum Disorder
Screening, Evaluation and Treatment Recommendation
Best Practice Guidelines

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Introduction

The Michigan Department of Health and Human Services manages Medicaid-funded Autism Services for children and youth through the Behavioral and Physical Health and Aging Services Administration and Bureau of Children's Coordinated Health Policy and Supports. The Michigan Medicaid System is comprised of Medicaid Health Plans (MHP), Prepaid Inpatient Health Plans (PIHP), and Community Mental Health Service Programs (CMHSP) to provide Medicaid Autism Services.

The Behavioral and Physical Health and Aging Services Administration manages the Michigan Medicaid Health Plans, which provide the medical and physical evaluations, screenings, as well as medically necessary speech and language, occupational and physical therapies. It also manages the contracts with PIHPs and CMHSP, while the Bureau of Children's Coordinated Health Policy and Supports to provides the management and services of diagnostic evaluations, behavioral health treatment plans, Applied Behavior Analysis Services (ABA), family trainings and developmental disability services.

The Michigan Medicaid Autism Screening, Evaluation and Treatment Recommendation Guidelines were developed to improve the statewide standardization of Autism Services for children and youth. The Guidelines are the result of the recommendation from the Medicaid Autism Services – Legislative Workgroup Recommendations Report (FY2019 Appropriations Act – Public Act 207 of 2018) Section 959 published March 1, 2019.

The Guidelines align with the [Michigan Medicaid Policy, Provider Manual](#) and Codes and Michigan licensing requirements to provide in-depth guidance for health care providers, administrators, families and service agencies. MDHHS strives to provide equitable and quality health care services to all children and families.

Chapter 1. Understanding and Screening for Autism Spectrum Disorder

Autism Spectrum Disorder: An Overview

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by impairment in reciprocal social interaction skills and communication as well as the presence of restricted, repetitive, and/or stereotyped patterns of behavior, interests, and activities. These features result in marked impairment in social interaction, language used in social communication, and symbolic or imaginative play. Features of the disorder are present early in development. Sensorimotor differences are detectible as early as six months of age, particularly for those with severe ASD (Teitelbaum et al., 1998). Presentation of ASD symptoms changes over the course of development, and a person's development is affected by having ASD.

The term ASD refers to a broad range of conditions as the presentation of symptoms may vary from one person to the next with contribution of a combination of genetic and environmental factors. Etiology of ASD is not yet fully understood, but research suggests several genetic and environmental influences that increase risk that a child will develop ASD. Autism tends to run in families with several genes associated with increased risk for ASD (Bailey et al., 1995; Folstein & Rosen-Sheidley, 2001; Skuse, 2000). Additionally, certain environmental factors may further increase the risk for individuals who are genetically predisposed to ASD. Increased risk has been linked to advanced parental age, pregnancy and birth complications (including exposure to certain medications in-utero, extreme prematurity, multiple pregnancies), and male gender (Durkin et al., 2008; Lee et al., 2015; Mahoney et al., 2013; Moore et al., 2000; Rasalam et al., 2005; Williams & Hersh, 1997; Williams et al., 2001). While etiological factors are not yet fully understood, prevalence is increasing over time. Males are four times more likely to develop ASD. Additionally, ASD affects individuals of all racial, ethnic, and socioeconomic groups.

Research has demonstrated considerable impact on families for a person diagnosed with ASD, including higher rates of health concerns as well as financial strain (Bekhet et al., 2012; Saunders et al., 2015).

> Interventions for individuals with ASD should incorporate the needs of the family as a whole with a partnership established between family members and service providers.

Individuals with ASD often require a multidisciplinary approach to intervention, as several conditions are commonly comorbid with an ASD diagnosis, including intellectual disability and language delays. When an ASD diagnosis is established, the clinician should specify with or without intellectual impairment as well as with or without language impairment. For further information regarding commonly comorbid conditions, see the "Comorbid and Differential Diagnosis" section of Chapter 3.

Diagnostic and Statistical Manual, Fifth Edition (DSM-5)

Diagnostic classification for ASD has changed with the most recent publication of the Diagnostic and Statistical Manual, Fifth Edition (DSM-5) (APA, 2013). Establishment of an ASD diagnosis and use of the DSM-5 requires specialized training (for more detail, see Chapter 2 on evaluator credentials). Diagnostic criteria for ASD, as listed in the DSM-5, is as follows:

A. Persistent deficits in social communication and social interaction across multiple contexts, as manifested by all of the following, currently or by history (examples are illustrative, not exhaustive):

    1. Deficits in social-emotional reciprocity ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation, to reduced sharing of interests, emotions, or affect, to failure to initiate or respond to social interactions.

    2. Deficits in nonverbal communicative behaviors used for social interaction ranging, for example, from poorly integrated verbal and nonverbal communication, to abnormalities in eye contact and body language or deficits in understanding and use of gestures, to a total lack of facial expressions and nonverbal communication.

    3. Deficits in developing, maintaining, and understanding relationships ranging, for example, from difficulties adjusting behavior to suit various social contexts, to difficulties in sharing imaginative play or in making friends, to absence of interest in peers.

B. Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least 2 of the following, currently or by history (examples are illustrative, not exhaustive):

    1. Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypes, lining up toys or flipping objects, echolalia, and/or idiosyncratic phrases).

    2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, and/or need to take same route or eat the same food every day).

    3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects and/or excessively circumscribed or perseverative interest).

    4. Hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of the environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, and/or visual fascination with lights or movement).

C. Symptoms must be present in the early developmental period (but may not fully manifest until social demands exceed limited capacities, or may be masked by learned strategies later in life).

D. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning.

E. These disturbances are not better explained by intellectual disability or global developmental delay. Intellectual disability and ASD frequently co-occur; to make comorbid diagnoses, social communication should be below that expected for general developmental level.

Applied Behavior Analysis

Applied Behavior Analysis (ABA) is the most evidence-based treatment for individuals with ASD (Cohen, Amerine-Dickens & Smith, 2006; Sallows & Graupner, 2005; Warren et al., 2011). ABA is a therapeutic approach based on principles of learning and behavior that involves identifying connections between an individual's behavior and antecedents and consequences of that behavior. This approach heavily utilizes positive reinforcement, which is the provision of something valued by an individual (a reward) immediately after the individual engages in a desired behavior. Behaviors that are consistently reinforced subsequently occur more often. Complex skills can be broken down into small steps and taught in a hierarchical fashion or gradually shaped by reinforcing successive approximations of the final behavioral goal. When treating problematic behavior, ABA focuses on understanding the function of the problem behavior when developing effective interventions. Although many of these principles of learning can be applied successfully outside of the context of ABA, this therapeutic approach must be practiced by professionals (in collaboration with family members) with appropriate clinical training.

ABA uses observation and measurement of behavior, including factors such as how often a particular behavior occurs, how long the behavior lasts, the antecedents that precede the behavior, and the consequences that follow the behavior. ABA services are provided by licensed board-certified behavior analysts (BCBAs), as well as behavior technicians (BTs), some of whom may be registered behavior technicians (RBTs), board-certified assistant behavior analysts (BCaBAs), and Qualified Behavioral Health Professionals (QBHPs) who work under the supervision of the BCBA to implement the treatment plans written by the BCBA to meet established therapeutic goals. The ABA team collects data on behavior for the BCBA who modifies treatment plans, as needed. The BCBA also has weekly face to face time with the child being treated. Routine data collection and refinement of intervention plans based on the data are hallmarks of ABA.

> Working with families, evaluators determine medical necessity for ABA and provide recommendations on high-level treatment targets.

ABA services may be provided in-home, clinic, or the community with emphasis on practice and reinforcement of newly learned skills. The location of ABA services should be based on 1) the best means for addressing the child's needs and 2) family preference. ABA intensity (i.e., number of hours) should be determined by the treating ABA team with information from the diagnostic evaluation. The amount of ABA a child receives should directly relate to the needs of the child and the skills and behaviors being targeted; this is evaluated in the behavioral assessment conducted by the BCBA in coordination with family need and input. All hours of ABA are intended to be goal-focused, and data is gathered to demonstrate if the intervention is resulting in progress toward the goal. Successful treatment typically includes modeling for parents and direct teaching provided for behavioral management and skill-building. The intellectual functioning of the child should not preclude participation in ABA, whether severe intellectual disability or well above average intelligence; medical

necessity should be based on whether ABA would be expected to address the specific behaviors of concern for that child. Collaboration with other providers involved in treatment, including supports coordinators within the PIHP systems and school officials (when applicable and with consent provided by the parent/guardian) is also important. ABA approaches are also often crucial in school settings, and ABA teams may help to shape a child's individualized education program (IEP) or behavior management plan in school.

ABA providers are tasked with the goal of improving socially significant behaviors, including communication, social skills, and adaptive living skills (e.g., independence with daily living skills, academic and work skills). There are many ways that ABA can be applied, including:

- Comprehensive Behavioral Intervention (an intensive behavioral intervention approach that emphasizes individual instruction for skill-building of communication, social interaction, and pre-academic skills)
- Focused skill-building (e.g., focusing on a specific goal such as toilet training, independence with self-care, use of community resources)
- Social skill building (in individual and group settings)
- Parent skills training (an evidence-based behavioral training approach that provides skill-building for management of child behavior)
- Problem behaviors

Examples of problematic behaviors that can be addressed with ABA include but are not limited to:

- Externalizing behaviors (aggression, self-injurious behavior)
- Sensory behaviors (head banging, motion-seeking, avoidance of toothbrushing/haircuts)
- Demand avoidance (elopement, task refusals)
- Adaptive skills (toileting, hygiene, independence, restricted diet)
- Difficulty engaging in social interactions (play, sibling and/or peer interactions)
- Functional communication (requests, answering questions)

> ABA can improve the quality of life for the individual with ASD as well as their family.

Of note, information in this manual is not intended to serve as guidelines for the practice of Applied Behavioral Analysis (ABA). Information on ABA in this document is provided for the understanding of administrators and evaluators.

Policy for Screening for ASD

The Medicaid Provider Manual provided by Michigan Department of Health and Human Services (MDHHS) provides information regarding the policy for screening for ASD. The Centers for Disease Control and Prevention (CDC) shows approximately one in six children between the ages of 3 and 17 meet criteria for a developmental or behavioral disorder (CDC, 2019). The American Academy of Pediatrics (AAP) recommends that a standardized screening tool be used to assess general development at 9, 18, and 30 months of age (AAP, 2006). Additionally, AAP recommends all children receive developmental surveillance and screening for possible ASD at 18 and 24 months of age (Armstrong, 2008). Early entry into intervention is associated with improved treatment outcomes (Zwaigenbaum et al., 2015). The screening process is intended to identify children who show

developmental concerns warranting an evaluation for possible ASD in order to link individuals with evidence-based treatment programs to promote optimal outcomes.

Roles and Responsibilities for Medicaid Health Plans and Primary Care Providers

Screening for developmental disorders including ASD is typically completed during a well child visit with a child's primary care provider (PCP). Information gathered by PCPs should include birth and developmental history. Assessment of medical factors common in children with developmental delays (including seizures, hearing problems, sleep difficulties, diet, and self-injurious behaviors), as well as documentation of history of brain injury are also important. PCPs should also review educational history and previous intervention services provided as well as family history of ASD or other developmental concerns. If concerns about development are raised through developmental surveillance or information gathered, it is important to make immediate referrals for further assessment. Early identification and intervention are essential for favorable outcomes.

See Figure 1.1 for further information regarding some important clinical signs, or red flags, when conducting early childhood screening for ASD. More information on ASD red flags can be found at www.nationalautismcenter.org/autism/early-signs/ and www.firstsigns.org.

Figure 1.1. Some notable early ASD red flags

Some of the Red Flags in Identifying Children with ASD
• Lack of back-and-forth babbling
• Delay in smiles, failure to make eye contact
• Not turning when parents say the child's name
• Not looking when parents point saying, "Look at..."
• Not pointing across a room to show parents an interesting object or event
• Lack of sharing interest or enjoyment in interaction

The Council on Children with Disabilities lists five components of developmental surveillance that are important for routine care (AAP, 2006):
1. Asking parents about their concerns
2. Obtaining and documenting developmental history as well as tracking progress for age-based expectations
3. Observing the child's development and using reliable standardized measures
4. Identify risk and protective factors
5. Documenting and sharing an accurate record of the findings

Considerations for Screening of ASD

Several validated and accessible measures exist for screening of ASD. Measures are easily administered, are completed by parents/guardians, and are not time-intensive. Some measures serve as a screening for general developmental progress, whereas other measures are ASD-specific. Clinicians should select a validated screening measure most appropriate for the child's age and clinical need. The following are some recommended screening measures to consider; however, the list below is not intended to provide a comprehensive list of all available or recommended measures. For further information regarding available screening measures, please see the American Academy of Pediatrics Clinical Report (Lipkin et al., 2020) for support with developmental screening.

Some ASD-Specific Measures

- *Modified Checklist for Autism in Toddlers, Revised, with Follow-Up (M-CHAT-R/F) – ages 16 to 30 months (Robins et al., 2009)*

  The M-CHAT-R/F includes 20 items in yes/no format that screen for ASD symptoms. The measure is free to access, can be quickly and easily scored, and may be completed online or in paper/pencil format. Parents complete the questionnaire, and if a child screens positive based on parent responses, select follow-up interview items are administered. A flowsheet of interview items is available with pass/fail criteria established. A child is screened as positive on the interview if he or she fail any two items on the follow-up. If screened as positive, a child is considered at-risk for a developmental disorder and should be referred for evaluation as soon as possible. Of note, this measure is available for use in several languages. For a list of available translations please see the following website: https://mchatscreen.com/mchat-rf/translations/

- *Autism Screening Instrument for Educational Planning – Third Edition (ASIEP-3): Autism Behavior Checklist (ABC) – ages 2 years to 13 years, 11 months (Krug, Arick & Almond, 2008)*

  The ABC is a 47-item checklist of behaviors associated with ASD, as part of the ASIEP-3. The ASIEP-3 also includes measures of vocal behavior, spontaneous social interaction, functional educational skills, and learning rate.

- *Social Communication Questionnaire (SCQ) – ages 4+ (Rutter, Bailey & Lord, 2003)*

  The SCQ is a parent questionnaire with 40 items in yes/no format. The questionnaire is relatively quick to complete and easily scored. The SCQ is also available in Spanish and numerous other languages.

  Of note, the SCQ sensitivity and specificity estimates vary by age from what was seen in the initial validation studies (Barnard-Brak et al., 2016). The manual suggests a screening cutoff of $\geq$ 15, though more recent research suggests that the measure optimizes sensitivity with preschool and younger school-aged children (Barnard-Brak et al., 2016). Nevertheless, even with improved cutoff points on the SCQ, the measure may continue to have inadequate sensitivity, especially with young children, those with other intellectual or developmental

disabilities, or those from rural or low socioeconomic status (Moody et al., 2017; Suren et al., 2019).

Some General Developmental Measures

- *Ages and Stages Questionnaires, Third Edition (ASQ-3) – ages 1 month to 5 ½ years (Squires et al., 2009)*

  The ASQ-3 may be distributed online or in paper format for parents to complete. The questionnaire is available in several languages. Parents answer questions related to general developmental progress by selecting "yes," "sometimes," or "not yet" to items. Of note, an Ages and Stages Questionnaires: Social-Emotional, Second Edition (ASQ: SE-2) is also available for use.

- *Child Development Inventory (CDI) – ages 15 months to 6 years (Ireton, 1992)*

  The CDI is completed by parents to assess development in eight areas of functioning: social, self-help, gross motor, fine motor, expressive language, language comprehension, letters, and numbers.

Referral Process for ASD Evaluation

There are multiple means for a child to be referred for an ASD screening and comprehensive evaluation[1], including, but not limited to:

- Family self-referral (parent, guardian, other family member)
- Treatment providers (speech pathologist, occupational therapist, mental health therapist)
- Medical providers (PCP, specialists)
- Early On or school personnel

> Family concerns should be taken seriously. Caregivers are an essential part of the developmental/ASD referral process!

Pediatricians often hear developmental concerns from caregivers in early childhood care visits. If concerns for ASD are observed or reported in pediatric visits, PCPs should immediately refer the child for further diagnostic evaluation. However, alternate means for referral should be available to families, including family self-referral, and **physicians should not be seen as the "gate-keeper" for access to further ASD screening or evaluation**. A positive screening should result in a referral for evaluation as soon as possible, given the importance of early intervention. The PCP should call the local Pre-paid Inpatient Health Plan (PIHP) and/or Community Mental Health Service Provider (CMHSP) in the geographic service area for Medicaid beneficiaries to make the referral directly. **This may also include**

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[1] *Current Medicaid policy requires that "[a] full medical and physical examination must be performed before the child is referred for further evaluation" with the purpose of this medical and physical evaluation being "…to rule out medical or behavioral conditions other than ASD, and include those conditions that may have behavioral implications and/or may co-occur with ASD." Medicaid policy also appears to require that a full medical and physical examination, which may take place during a well child visit at a PCP, occur prior to the comprehensive diagnostic evaluation.*

PCP staff assisting the family while in the office in contacting the PIHP directly to arrange for evaluation. Each PIHP will identify a specific point of access for children who have been screened and are being referred for a diagnostic evaluation and behavioral assessment of ASD. PIHPs are then responsible for contacting, scheduling, and arranging the comprehensive diagnostic evaluation with the appropriate evaluator or evaluation team.

Contact information for PIHPs by region can be found on the State of Michigan Autism Program website at https://www.michigan.gov/autism/0,4848,7-294-77675---,00.html.

Individuals with ASD commonly present with one or more comorbid medical and/or psychiatric diagnoses (Lugnegard et al., 2011; Matson & Nebel-Schwalm, 2007; Simonoff et al., 2008). If the PCP determines that a child is also in need of consultation with other medical specialties or services, a referral should be made directly.

Common referrals necessary for children with ASD or suspected developmental delay include but are not limited to:

- Neurology
- Genetics
- Sleep specialist
- Developmental Behavioral Pediatrics

- Audiology
- Vision screening
- Psychiatry
- Speech/Language therapy

- Occupational therapy
- Gastroenterology
- Feeding program
- Physical Medicine & Rehabilitation

As noted, referrals for evaluation of possible ASD may also come from direct family self-referral and other sources including schools, Early On, or other involved clinicians. Families referred to their local PIHP will undergo screening to determine if evaluation for ASD is needed. Clinicians conducting ASD screenings via the PIHP or CMHSP should utilize an appropriate screening measure to determine if a more comprehensive evaluation appears warranted. Clinicians should be welcoming and assist caregivers in describing their concerns for their child or loved one.

The screening clinicians must be familiar enough with the clinical content of the screening questions to help the caregiver understand what is being asked by the items. The screening process is the first step in the family seeking help, and a supportive and welcoming attitude helps the family on the path to receiving the care needed. Clinicians should provide encouragement and emphasize the importance of early intervention for progress in services, given that early intensive behavioral intervention is associated with gains in developmental and cognitive skills (Eldevik, 2009; Howlin et al., 2009).

If a screening is positive (suggesting concerns about possible ASD), the child will be referred to a local qualified licensed provider (QLP) for a comprehensive diagnostic evaluation. In cases that are deemed questionable or unclear (e.g., children presenting with borderline range symptoms but interference in home or school functioning, cases including trauma history or complicating factors, children whose clinical presentation does not appear to match parental responses on screening measures), PIHPs should err on the side of caution and refer for more comprehensive evaluation.

For those children referred for further evaluation, families should have a *choice of evaluators* and be allowed to indicate preference for an evaluating agency or clinician, when available. Families who indicate preference for a particular agency or clinician should be permitted to make a selection that best fits the needs of their family, provided the referral falls within the scope of practice of the selected clinician or agency.

> It is essential that clinicians support families throughout the screening process and remember that some family members may have comprehension difficulties. Failure to complete a screening measure adequately or for the child to screen positive on a measure should not preclude a child's access to an evaluation if the evaluation otherwise appears clinically warranted based on information from the referral source (e.g., family, pediatrician, other treatment provider). It is best practice to err on the side of referral for further evaluation when ASD concerns are present.

Of note, some caregivers will have difficulty completing screening measures accurately due to comprehension challenges, cognitive limitations, learning difficulties, language barriers, or denial of child deficits. While screening measures are often a useful tool for identifying children who require more comprehensive assessment, caution should be exercised when parents show comprehension difficulties. Additionally, screening measures may have been created for different purposes (e.g., developmental screening, research study qualification), which can impact the balance of sensitivity and specificity; thus, the referral for ASD evaluation should not be solely based on a positive screening tool.

Importantly, referrals made by PCPs should be sent directly for comprehensive evaluation. Results of a screening measure should not rule out a referral or preclude a child's access to an evaluation if that evaluation is deemed clinically justified by the PCP. See Table 2.3 for further guidance regarding appropriate steps when concern with possible ASD is raised.

Table 1.2. Steps in the Referral and Screening Process for ASD Evaluations
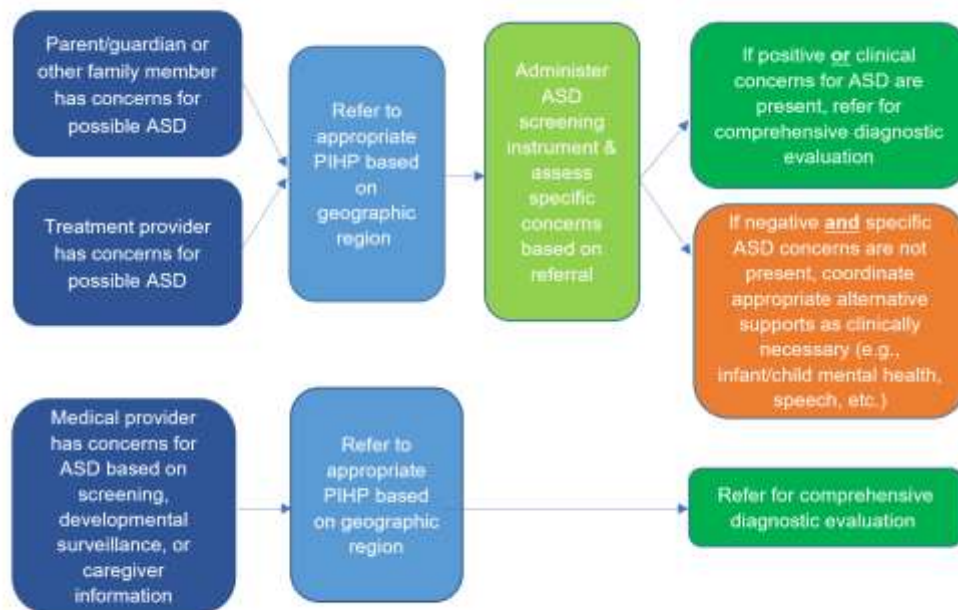
Clinical directors within each PIHP serve in the role of triaging referrals (i.e., organizing and directing referrals based on needs of the child) to appropriate providers for evaluation. Each PIHP has a list of evaluators within the region and must be familiar with available agencies and evaluators, including skill set and experience. The evaluation process is independent from the treatment process; while evaluations can occur at possible receiving ABA treatment agencies, this should not be emphasized or mandated.

Administrator Tip:
Complex or difficult evaluations should be directed to highly experienced, specialized evaluators competent in providing a full assessment of developmental/cognitive skills and differential diagnosis in the region to ensure an appropriate level of care. Quality of the evaluation is key.

Additionally, if a child is in foster care or has medical or psychiatric comorbidities or complications that may impact the evaluation, the referral should be made to a highly experienced evaluator given the complexity of the case. It is not necessary that the child is referred to the same agency for both the initial evaluation and ABA, though that may occur.

The following should be considered complexities, and referral to a highly skilled evaluator who can conduct full psychological evaluation should be strongly considered whenever possible:

- Very young child (under age 3)
- Child in foster care or new caregiving situation
- Experience of known trauma
- Sensory impairment (hearing or vision)
- Mobility impairment (not yet walking, physical condition impacting ambulation)
- Medical conditions (e.g., extreme prematurity, seizure disorder, traumatic brain injury, known genetic condition, etc.)
- Psychiatric conditions known or highly suspected
- Suspected intellectual disability

Administrator Tip:
It is especially important for cases with complexities that clinical directors within each PIHP refer families to well-trained, highly experienced evaluators for comprehensive assessment.

Chapter 2. Evaluator Credentials, Supervision, & Professional Development

For full policy information, please reference the MDHHS Medicaid Provider Manual;
https://www.mdch.state.mi.us/dch-medicaid/manuals/MedicaidProviderManual.pdf

Evaluator Credentials

Accurate and useful evaluation of ASD and associated conditions takes a combination of reliable and valid tool use, a review of robust history and presenting symptoms and needs, and clinician experience with the full range of ASD and associated conditions (Huerta & Lord, 2012). Minimally, clinicians completing evaluations for Michigan Medicaid Autism Services are required to meet Qualified Licensed Practitioner (QLP) evaluation criteria.

The diagnostic evaluations are performed by a qualified licensed practitioner working within their scope of practice and who is qualified and experienced in diagnosing ASD. A provider's licensure and clinical experience, in accordance with ethical guidelines, determines competency and scope of practice. Examiners must have the right and capacity to determine when a referral is outside of their scope of practice. It is the responsibility of each PIHP/CMHSP to ensure access to appropriate clinical care, including in instances when a particular region may not have a local provider with appropriate expertise. If a PIHP/CMHSP does not have an appropriately skilled provider locally to complete an evaluation, the child should then be referred to an appropriate provider elsewhere.

Attendance at the ADOS-2 two-day training workshop is not sufficient for evaluators to be properly trained on the ADOS-2 or for ASD evaluation. Additional training and supervision are required.

QLPs should review how their ASD clinical experience fits the best practice guidelines outlined in this document. Further, QLPs whose clinical experience is not consistent with best practice standards should seek supervision for conducting evaluations. Supervision *must* be performed by a clinician with ASD clinical evaluation expertise, regardless of licensure type.

The following should be considered for QLPs *before* conducting ASD evaluations:

- Do I meet the policy defined QLP criteria?
- Do I have the proper clinical experience with the full age and range of ASD seen for Michigan Medicaid Autism Services?
- Am I able to evaluate for common differential and comorbid neurodevelopmental conditions?
- If, by degree or training, I am limited in the range of tools I can utilize in my evaluations, do I have access to team members to whom I can refer to complete those portions of the evaluation when needed?

Scope of practice is defined as the procedures, actions, and processes an individual is permitted to perform based on professional licensure, training experiences, supervision, and demonstrated competence. Know your skill set and scope of practice! It is professional, respectable and the right clinical decision to refer to another clinician if the referral is out of your scope of competence.

Successful ASD evaluators must show mastery of:

- **Normal development ranging from birth through young adulthood**
- Full range of ASD evaluations and treatment planning
- Comorbid and differential diagnosis of ASD (be a well-rounded clinician)
- When to seek consultation or support for difficult and/or unclear cases
- The ability to work with other professionals who can provide other necessary components (neurology, psychiatry, BCBA, speech/language or occupational therapy providers)

Referral Screening & Follow-up Consultation Considerations

PIHPs or regional CMHSPs will refer cases to QLPs for an ASD evaluation. Evaluators receiving referrals should ensure they are able to able to provide the needed assessment for that individual. Every case is unique and may require specific skills for an accurate and appropriate evaluation. Evaluators may need to request support or refer back to the PIHP/ CMHSPs when they are not able to accept the referral. To avoid possible bias and conflict of interest, QLPs should not conduct evaluations and provide treatment for the same individual. This does not mean that evaluations cannot be conducted by non-treating staff in the receiving or treating ABA agency. However, families should have choice of ABA providers following the evaluation. Further, the PIHP is responsible for reviewing the evaluations and determination of medical necessity to monitor for appropriateness of determination and recommendations.

Figure 3.1. The following flow chart should be considered by evaluators when receiving a referral:

Referral Review Process for Evaluators

Conduct caregiver interview of developmental, medical, behavioral & family history. Are the presenting issues within your scope of expertise/practice?

If yes

Conduct comprehensive ASD evaluation. Is your obtained data sufficient to determine clinical impressions & treatment recommendations?

If no

Summarize referral complexities & contact PIHP for case reassignment. Do not administer ADOS-2/ADI-R.

If yes

If no

Refer to team member or PIHP for completion of additional evaluation components.

Review & integrate all data. Conduct feedback session & share your report (or have the supplemental evaluator do so).

DO Work within your scope of practice!

DON'T Accept referrals outside your expertise!

DO Rely on the network of MDHHS ASD providers.

No one is all knowing!

Evaluator Supervision Requirements

Evaluators are required to follow supervision guidelines outlined by their Michigan professional licensing board (see Appendix C for the Michigan rules for LLPs and TLLPs). Evaluators are also required to meet experience and supervision requirements for proper ASD diagnostic tool use. **Attendance at a two-day training workshop is not sufficient for new evaluators to perform evaluations without supervision from an experienced ASD evaluator.**

> Evaluators are responsible for seeking appropriate supervision based on 1) ASD evaluation skill needs and 2) licensure requirements. Most clinicians new to ASD evaluation and the use of ASD evaluation tools will benefit from supervision from an ASD specialist, including clinicians who do not need supervision based on their licensure status.

Appropriate clinical supervision is defined as an active process whereby a more senior or expert member of the same profession provides intervention to ensure appropriate practice, clinical care, and clinical skill building of a junior member or colleague (Bernard & Goodyear, 2009). Supervisors providing support for evaluators seeing individuals for Michigan Medicaid Autism Services must have experience in ASD evaluation such that they are able to adequately provide clinical guidance to the evaluator. Notably, clinical supervision should be seen as distinct from agency or clinic related administrative supervision. In some regions or clinics, this may mean evaluators will need to have supervision with individuals outside of their agency/clinic. The use of telemedicine for supervision is allowed.

> **Administrators need to be aware that adequate clinical supervision by a professional with ASD experience is required and allow for this support for their evaluator(s). Administrators and evaluators should contact the local PIHP and the PIHP can contact other regions for the expertise needed for the child. MDHHS will only be contacted when the PIHP has not found a clinician within Michigan. The PIHP may also do a sole source contract with a clinician outside the PIHP system. *It is not acceptable for a child to not get a thorough evaluation due to a PIHP having a lack of expertise within the system.***

> Supervisors should have ASD training and expertise; supervision should be an active process, not simply co-signing reports. Supervisors should be thoroughly discussing all cases with evaluators in which they are signing off on reports.

Evaluator Ongoing Training & Professional Development

To provide useful ASD evaluations, evaluators need to stay up-to-date with information regarding ASD evaluation, treatment, and management. Evaluators are encouraged to attend local, state, and national trainings, especially those related to best practice ASD evaluation. Given the shared features of ASD with several disorders and the high rates of comorbidity with other developmental and mental health conditions for children with ASD (Hartley et al, 2008; Stadnick, et al., 2015), training in differential and comorbid diagnosis is strongly recommended. Evaluators are also strongly encouraged to attend booster trainings on ASD tool use (e.g., ADI-R and ADOS-2) to ensure that these standardized instruments are being used appropriately. Even well trained and highly experienced evaluators show drift in psychological assessment tool usage without recalibration (Groth-Marnat, 2009); as such, this

recommendation for ongoing training should be seen as relevant to all evaluators, even those with extensive training and experience. Additionally, professional development and consultation with other ASD evaluators enhances the skill set of the entire network. The MDHHS Autism Services team sends newsletter emails regarding upcoming ASD related trainings. **Evaluators for Michigan Medicaid Autism Services are strongly encouraged to attend supported trainings in ASD evaluation. Ask your PIHP autism coordinator to add you to the MDHHS Autism GovDelivery newsletter and outreach communication.**

Chapter 3. Comprehensive Diagnostic ASD Evaluations

Policy for Michigan Medicaid Autism Services Evaluations

It is the intent of Michigan Medicaid Autism Services policy to provide a comprehensive, best practice evaluation for ASD. The goal of the evaluation process is to assist in determining the range of needs for the child being assessed. Simply determining a diagnosis of ASD does not provide information about what that child may or may not need for appropriate care and management. Access to Applied Behavior Analysis (ABA) treatment is only one component of a comprehensive evaluation and should not be seen as the single intent for the assessment. Further, the evaluation diagnostic and needs assessment is intended to occur regardless of whether the child receives an ASD diagnosis. The goal is for the evaluation process to set the path to appropriate care and management for all individuals assessed.

A full range of CPT codes have been approved for evaluator usage to cover comprehensive assessment through Michigan Medicaid Autism Services and allow evaluators to be adequately compensated for their time. Evaluator credentials for CPT code usage must meet statewide license and billing guidelines within their scope of practice.

Medical Necessity Criteria for ASD

To meet medical necessity criteria for Michigan Medicaid Autism Services, the individual must demonstrate substantial functional impairment in social communication, patterns of behavior, and social interaction. Functional impairment may be defined by "the negative aspects of the interaction between an individual and that individual's environmental and personal context" (WHO, 2010). Substantial impact could be observed in the individual's adaptive skills, such as social, educational/occupational, and physical functioning. These deficits are evidenced by meeting criteria A and B (listed below):

> The Medical Necessity Criteria for ASD are the DSM-5 ASD Symptoms

For review, DSM-5 Symptoms of ASD (APA, 2013):

A. The child currently demonstrates substantial functional impairment in social communication and social interaction across multiple contexts, and is manifested by all of the following:

  1. Deficits in social-emotional reciprocity ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation, to reduced sharing of interests, emotions, or affect, to failure to initiate or respond to social interactions.

  2. Deficits in nonverbal communicative behaviors used for social interaction ranging, for example, from poorly integrated verbal and nonverbal communication, to abnormalities in eye contact and body language or deficits in understanding and use of gestures, to a total lack of facial expressions and nonverbal communication.

  3. Deficits in developing, maintaining, and understanding relationships ranging, for example, from difficulties adjusting behavior to suit various social contexts, to

difficulties in sharing imaginative play or in making friends, to absence of interest in peers.

B. The child currently demonstrates substantial restricted, repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least two of the following:

1. Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypes, lining up toys or flipping objects, echolalia, and/or idiosyncratic phrases).

2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, and/or need to take same route or eat the same food every day).

3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects and/or excessively circumscribed or perseverative interest).

4. Hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of the environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, and/or visual fascination with lights or movement).

Per the MDDHS Medicaid Provider Manual, the following requirements must also be met in order to enroll an individual in BHT/ABA services through the Michigan Medicaid Autism Services:

- Child is under 21 years of age.
- Child received a diagnosis of ASD from a QLP utilizing valid evaluation tools.
- Child is medically able to benefit from BHT/ABA treatment.
- Treatment outcomes are expected to result in a generalization of adaptive behaviors across different settings to maintain the BHT interventions and that they can be demonstrated beyond the treatment sessions. Measurable variables may include increased social-communication, interactive play/age-appropriate leisure skills, reciprocal communication, etc.
- Coordination with the school and/or early intervention program is critical. Collaboration between school and community providers is needed to coordinate treatment and to prevent duplication of services. This collaboration may take the form of phone calls, written communication logs, participation in team meetings (i.e., Individualized Education Plan/Individualized Family Service Plan [IEP/IFSP], Individual Plan of Service [IPOS], etc.).
- Services are able to be provided in the child's home and community, including centers/clinics.
- Symptoms are present in the early developmental period (symptoms may not fully manifest until social demands exceed limited capacities, or may be masked by learned strategies later in life).
- Symptoms cause clinically significant impairment in social, occupational, and/or other important areas of current functioning that are fundamental to maintain health, social inclusion, and increased independence.
- A qualified licensed practitioner recommends BHT services and the services are medically necessary for the child.

- Services must be based on the individual child and the parent's/guardian's needs and must consider the child's age, school attendance requirements, and other daily activities as documented in the IPOS. Families of minor children are expected to provide a minimum of eight hours of care per day on average throughout the month.

Essential Components of a Comprehensive ASD Evaluation

Before considering the essential components of the ASD evaluation, it is important to highlight the goals of the evaluation process. In the context of Michigan Medicaid Autism Services evaluations, the goals generally include:

- Determination of accurate clinical diagnosis or diagnoses
- Guiding treatment plans with all treatment recommendations based on results
- Proof of medical necessity for access to care (e.g., ABA & other treatments and services)
- And, most importantly, to help the individual & family!

> The most important goal of the ASD evaluation is to help the individual and family! Spend time with the child and with caregivers. Consider asking the caregiver questions, such as, "What would make life easier for you and your child?" and "What are you hoping will change for your child or family?"

> **The first step in the assessment process being helpful is creating a team approach in which the family feels at the center in all aspects of the evaluation process, from the initial interview to the feedback session.**

The differential diagnosis of ASD and related conditions requires multimodal assessment and integration of clinical information. This is a complex assessment procedure in which clinicians must integrate data from caregiver report, records (e.g., medical, school, other evaluations), collateral reports (e.g., teachers, other treatment providers), data gathered from utilization of standardized psychological tools (e.g., developmental, cognitive, adaptive assessment), and the observational assessment to determine diagnostic and clinical impressions. The utilization of multiple data modes and sources improves the reliability of ASD diagnosis (Huerta & Lord, 2012). No one piece of data determines the ASD diagnosis, and evaluators should consider the accuracy of data and confounding factors that may impact data obtained (e.g., parent who seems to be overly negative about the child, child who was intensely shy during observational assessment).

> The ADOS-2 and ADI-R alone are not sufficient for a comprehensive evaluation of ASD for Michigan Medicaid Autism Services.

Developmental, cognitive, adaptive, and language levels are needed to properly code and interpret data from the ADOS-2 and ADI-R. Specifically, many of the items must be interpreted based on the child's nonverbal mental age (spatial and fluid reasoning skills) or expressive language level. Knowing these skill levels generally requires direct assessment of skills (Gotham, et al., 2011). Testing, such as developmental or intellectual assessment, should be completed. It is difficult, if not impossible, for

even highly experienced evaluators to guess or estimate the nonverbal mental age of a child without data. Per the ADOS-2 manual (Lord et al., 2012; p. 6):

> *Additionally, information about an individual's cognitive and language abilities are necessary to interpret communications and social behaviors for the purpose of making a clinical diagnosis of ASD.*

Moreover, the psychometric properties of ASD diagnostic instruments (e.g., ADOS-2 & ADI-R) are based on tool use by evaluators with a high level of ASD experience and expertise who have obtained research level reliability with the measure (Lord, et al., 2012). While the tools are still useful with clinicians not reaching research reliability, especially in ASD and developmental assessment clinics, community-based utilization of these tools very likely results in less reliable administration, coding, and instrument classification based on the experience of the clinician (Kamp-Becker, et al., 2018). Thus, it is essential that evaluators take the time necessary with the caregivers and individual being assessed to form clinical judgments and use the tools properly, but not solely, to gain the data needed to make reasonable diagnostic impressions.

Administrator Tip: Evaluators should be spending at an absolute minimum two hours, but more routinely up to six hours of direct face-to-face time with the family and child being assessed. Face to face time can be conducted in clinic or via video telehealth. Following direct time, evaluators need several hours for scoring, record review, data interpretation, and report writing. This indirect time is essential for diagnostic accuracy and making the evaluation helpful to the family.

At a minimum, evaluators should have at least two hours of face-to-face time (in clinic or telehealth) with the caregiver and child being assessed, including some time outside of ADOS-2 and ASD symptom history interview/ADI-R administration to allow for additional observation and clinical information gathering.

The use of a team approach with multiple evaluators having direct observation of the child being assessed may be useful and improve diagnostic reliability, especially for less experienced evaluators (Stadnick, et al., 2015, Daniels, et al., 2011). The evaluation team can be multidisciplinary. The evaluation team should be led by a highly experienced physician or licensed psychologist.

In some clinics, evaluation teams work on components of ASD evaluations simultaneously to reduce the time in clinic for families and to allow for multiple observers to assess the child. Other clinics have different evaluators who meet with families at separate appointment times, such as the ADOS-2 with one evaluator one day and speech and language assessment on another day. There are many excellent approaches to team evaluations for ASD.

Below is one possible example of a team assessment approach:

Evaluator #1	Evaluator #2
• Review referral, screening measure, and available medical & educational records • Discuss proposed evaluation battery	
With caregiver(s): • Clinical interview • Interview of ASD symptoms or ADI-R • Adaptive behavior interview	With child referred for ASD evaluation: • Developmental or cognitive evaluation • Observations during direct testing • Informal play observations
• Both evaluators discuss appropriate ADOS-2 module based on data gathered • One evaluator administers the ADOS-2 while the other evaluator observes • ADOS-2 coded • Both evaluators review all data and discuss clinical impressions and recommendations	
• Follows up on any needed records or information • Writes report • Conducts feedback session with caregiver(s)	• Provides written behavioral observations for inclusion in clinical report

ASD evaluations are demanding and time-intensive. Evaluators should not be expected to complete multiple ASD evaluations per day, or the error rate in diagnosis will very likely increase.

Evaluators should consider conducting assessments at a developmentally appropriate time of day. For example, young children should not be assessed during routine nap times, and school-aged children may be fatigued following a full day of school. The data obtained from the assessment should be compared to what is reported to be typical for that child. Broad impressions should not be made on data that is not considered typical for the individual based on feedback by caregivers who know the child well.

There are many downsides of doing the bare minimum for diagnostic evaluations: over diagnosis, missed diagnosis, lack of response to treatment due to missed comorbidities, and poorly defined recommendations.

The following reflects the essential components to be covered:

Essential Components of ASD Evaluation for Michigan Medicaid Autism Services	
Caregiver Interview	- Developmental & medical history - Emotional and behavioral functioning - Family & trauma/ACES history - ASD symptom history/ Autism Diagnostic Interview- Revised
Record Review & Collateral Input	- Medical providers - Other treatment providers - School/teachers
Developmental/Cognitive & Adaptive Behavior Assessment	- Developmental Disabilities- Children's Global Assessment Scale - Vineland Adaptive Behavior Scales or similar adaptive measure - Appropriate cognitive measure based on child's age and developmental level
Observational Assessment	- Autism Diagnostic Observation Schedule- 2nd Ed. - Clinical observations

↓

Integration of Clinical Information	- Caregiver report - Records + collateral report - Developmental/cognitive & adaptive behavior assessment - Observational assessment

↓

Diagnostic Conclusions & Recommendations	
Caregiver Feedback	- Face to face feedback session (in clinic or video telehealth) - Clinical report with high priority recommendations
Clinical Report	- Clinical report with diagnostic impression(s) & justification - High priority recommendations - Referrals - Resources

The Clinical Interview & Caregiver Report of ASD Developmental Symptom History

Interviews are used to gather caregiver reports on the child's current and past functioning. A clinical interview in addition to ASD specific interviewing is essential for differential and comorbid diagnosis of ASD, as well as for proper treatment planning. A clinical interview and interview of ASD symptom history (e.g., ADI-R or equivalent) are required for Michigan Medicaid Autism Services. *Evaluators should be aware that the ADI-R (or SCQ) used in isolation does not meet this requirement.*

Clinical Interview
The clinical interview is the foundation of assessment in all disciplines of mental health and allows clinicians to gather a great deal of historical and current information regarding a range of potential presenting and associated concerns (Gorgens, 2011; Somers-Flanagan, et al., 2015). For the purpose of ASD evaluations, domains related to emotional-behavioral, medical, and family functioning should be covered in the clinical interview.

> It is impossible to conduct differential and comorbid ASD evaluation without a thorough clinical interview.

Domains to be covered in the clinical interview for ASD evaluations:

- Medical history (birth history, health status, medication use, seizures, head injury)
- Systems, including sleeping, eating, and toileting
- Developmental milestones and progress
- Previous & current evaluations/treatment
- Educational history & services
- Emotional & behavioral functioning
- Temperament
- Individual & family strengths (Sabapathy, et al., 2017)
- Caregiving situation (support, custody, neglect, abuse, estrangement, etc.)
- Individual/family stress & difficulties (Adverse Childhood Experiences, trauma, parental stress)
- Family psychiatric history

ASD Symptom History Interview
The caregiver ASD interview can be completed by 1) semi-structured tool use (e.g., ADI-R or other) or 2) by equivalent interviewing of current and ASD historical symptoms. Both methods are acceptable in combination with a clinical interview for Michigan Medicaid Autism Services evaluation. Given that ASD is a developmental disorder and a requirement for diagnosis includes that symptoms, though not necessarily impairment, presented during the early developmental period, it is essential to obtain both current and historical information regarding ASD symptoms (APA, 2013; Shattuck, 2007). This means that evaluators will be interviewing caregivers about the child's social-behavioral presentation at the individual's present age *and* as a young child. Notably, a child's early presentation may be similar or quite different than their current presentation, so both time periods should be assessed in the interview.

Autism Diagnostic Interview-Revised (ADI-R)

The ADI-R is a semi-structured interview designed to aid in the diagnosis of ASD. The tool is administered to caregivers of children suspected of having ASD. Use of the tool assumes the caregiver

has robust knowledge of the child's current and past behavioral presentation and requires a mental age of around 18 months (Lord, et al., 1994). The evaluator must have experience with interviewing and working with children with ASD to be effective. The tool developers recommend users receive training or use the video training package prior to using the ADI-R clinically. Further, the tool should never be used in isolation for the diagnosis of ASD, but rather data from the ADI-R must be integrated with other clinical and observational data.

Done properly, the ADI-R generally takes around two hours to administer by experienced examiners (Lecouteur et al., 2003). The tool was developed to aid researchers in consistency in ASD diagnostic interview methods across research settings but has been successfully applied in clinical use (Lord et al., 1994; Zander et al., 2017). The tool has sound psychometric properties and interrater agreement when used by trained examiners (de Bilt et al., 2015; Lord et al., 1994). However, some studies suggest the tool may over-identify individuals who are severely and profoundly impaired (Nordin & Gillberg, 1998) and may be less accurate with very young children (de Bilt et al., 2015; Gray et al., 2008). The use of the ADI-R can be helpful in standardizing ASD interviewing, which may be particularly useful for less experienced evaluators, but proper use takes substantial time and may limit the time available for other data gathering during the ASD evaluation.

Interview of ASD Developmental Symptom History

Please see the ASD Developmental Symptom History Interview handout, which covers the domains to address in the ASD interview in Appendix A and by hyperlink (https://www.michigan.gov/documents/autism/Developmental_Symptom_History_Interview_Best_Practice_638467_7.pdf).

General limitations of interview data

Caregivers often provide a wealth of information on the child being assessed. However, as with all assessment modes, there are limitations to caregiver interview data whether collected by a semi-structured tool or an open interview. There are several potential limitations to interview data for ASD diagnosis, such as the caregiver having insufficient information on the child (this is addressed in the section on factors that complicate ASD evaluation), caregiver comprehension deficits (e.g., caregiver with intellectual disability), and caregiver reporting bias. Successful interviews with caregivers with intellectual disability are possible with appropriate considerations and techniques (Hollomotz, 2017).

Tips for interviewing caregivers with Intellectual Disability:

- Be patient and allow adequate time for the interview
- Allow time for processing and do not seem rushed or hurried
- Treat the caregiver respectfully (age-appropriately) and not in a child-like manner
- Keep language simple and clear
- Avoid using technical jargon (this tip applies for all families!)
- Assess for comprehension of questions
- Avoid using multi-part questions
- Know that the caregiver may be more susceptible to recency effects in responding
- Ask the caregiver to share stories that may help to elicit information regarding the behaviors being investigated (e.g., what does [child's name] do when at the park?)

- Be cautious of caregivers who may be overly agreeable or wish to please the examiner by answering yes to many questions
- Be aware the caregiver may be sensitive to answering questions that they perceive as showing parenting behaviors in a negative light due to fear of the child being taken away; this is a real fear, as parents with ID disproportionately have children removed despite supports that are effective at addressing caregiving concerns (Booth et al., 2005; Tarleton et al., 2006)

Caregiver bias in reporting is a common difficulty encountered by ASD evaluators. Caregivers can over-report or under-report ASD symptoms, both of which cause challenges in data interpretation and the assessment process. It is often useful in both circumstances to start with broad open-ended questions and then use more symptom specific questions as needed. Additionally, when it is clear that there may be caregiver reporting bias, it can be helpful to partner with the caregiver to determine and clarify the goal of the evaluation and how the data you are gathering will help to meet that goal.

As noted, interview data should never be used in isolation in making an ASD diagnosis. Supporting this point, there is robust data showing that the combination of ASD interview and observational data results in better ASD diagnostic accuracy and should be the standard of care; further, of the two assessment methods, the observational assessment for ASD demonstrates better diagnostic accuracy than interview data (Zander et al., 2014) and is less susceptible to parental concern (Havdahl et al., 2017).

Collateral Input & Record Review

It is important for examiners to gather input and relevant records from school, medical, and other ancillary treatment providers. Collateral input and review of records helps to ensure that no major information that could impact clinical impressions and recommendations will be missed. Further, record review provides additional input about the child in different contexts and/or by other reporters who know the child. It is particularly important to obtain teacher input (e.g., interview, rating scales, written observations) for school-aged children as this provides information about behavior in the peer social context. If the individual is receiving ABA services, review ABA assessments, progress, and response to treatment; ideally, the BCBA should partner with the evaluation team to provide collaborative input.

Records and collateral information should be obtained before diagnostic and treatment recommendations are formulated.

> Collateral reports from teachers and other treatment providers are particularly important when interview and observational data differ.

Observational Assessment

Observational assessment is a core component and should always be included in the evaluation of ASD (Gotham et al., 2011; Zander et al., 2014). It is important to note that observational assessment is essential even when the ADOS-2 cannot be used for coding or classification (some of these instances are reviewed under factors that complicate ASD evaluation).

ASD is a heterogeneous condition with a wide range of presentations; thus, evaluators must be familiar with the full range of ASD presentations from highly verbal, socially interested individuals to those who are nonverbal and lack social responsivity.

> The value of the observational assessment is based on the evaluator's ability to detect the full range of ASD signs and symptoms; this takes a great deal of practice and experience. New evaluators who have only been through the two-day workshop on the ADOS-2 will require additional practice, training, and supervision to use the tool properly and ethically.

Unstructured (Informal) Observations
A range of observations in different contexts and situational demands is useful for ASD evaluation. Evaluators are encouraged to incorporate clinical observations, including those seen outside of the semi-structured observational assessment, into the overall clinical formulation. Observations without structure or probes provide a useful sample of typical behaviors and interests and should be included in addition to the semi-structured observational assessment (Goldstein & Ozonoff, 2018). Unstructured observations can be gathered at any time, including the waiting room, walking to the testing room, break time during testing, down time between the individual and caregiver, etc. Further, some caregivers may wish to share home videos depicting notable behaviors. All of these observations are helpful for the overall clinical impression.

Autism Diagnostic Observation Schedule- Second Edition (ADOS-2)
An observational assessment, such as the ADOS-2, is a required component of the ASD evaluation for Michigan Medicaid Autism Services and should be utilized when clinically appropriate (notable exceptions are discussed in the differential and special populations sections of this guidelines manual). While highly useful data, this is intended to be only one component of the comprehensive ASD evaluation and should never be used in isolation, but rather utilized as part of an integrated assessment with multiple domains and sources (ADOS-2 manual; Lord et al., 2012). Of note, whenever possible, the ADOS-2 should be used as it was standardized *in a clinic-based setting* and not at the family's home. While home-based or video observations can be a useful component of ASD evaluation in some cases, the clinical tools should be administered following standardized administration practices whenever possible. Components of the tool can be conducted via remote telehealth assessment, though this (and utilization of PPE in clinic) are considered nonstandard administrations and as such the formal algorithm score cannot be used (see Considerations for Telehealth, Hybrid & Modified Evaluations).

> Use of the ADOS-2 alone is not sufficient for a comprehensive evaluation and should never be used without multiple other assessment components.

Moreover, ADOS-2 algorithm cutoffs determine instrument classification and not diagnosis; diagnosis should always be based on integrated clinical judgment and not the score on a measure or even a combination of measures (Gotham et al., 2011).

As noted in the ADOS-2 manual (Lord et al., 2012; p. 5-6) and by the test publishers (WPS ADOS-2 FAQ website; please see https://www.wpspublish.com/app/OtherServices/FAQs.aspx#FAQ=0), the ADOS-2 should be used by evaluators who:

- have prior experience with individualized testing,
- "extensive exposure to ASD,"

- received proper workshop and/or video package training on administration and coding of the ADOS-2 and have studied the ADOS-2 manual,
- had additional exposure to tool use outside of formal diagnostic evaluations and the ADOS-2 workshop to allow for "complete familiarity with the assessment activities and complete confidence that they can apply the coding categories accurately;"
- had additional practice exposure outside of diagnostic evaluations as defined by "as few as 10 practice sessions (2 per module)" for evaluators with "considerable experience in formal behavioral observation and individual test administration; for those with less experience, evaluators "may need considerably more practice to obtain competence in administering and coding the ADOS-2;" and
- are using the tool within their experience, scope of practice, and professional credentials.

> According to the ADOS-2 publisher and test developers, the two-day workshop on the ADOS-2 is intended to provide basic training and familiarity on administration and scoring of the tool for those with prior extensive experience with ASD. The ADOS-2 workshop is specific to tool use and is not intended to be a comprehensive training in clinical ASD evaluation.

One challenge of the ADOS-2 can be proper module selection. Module selection should be based on:

- First, the child's expressive language level, and
- Secondarily, the child's age.

Evaluators should use obtained language data from direct language evaluation or the adaptive behavior measure to have an initial determination of the correct module; please see page 12 of the ADOS-2 manual for suggested expressive language level equivalent age cut suggestions. However, evaluators are reminded to base module selection on the language uttered during the course of the ADOS-2 administration, even if language levels differed at other times (coding of item A1). *Notably, using the incorrect module results in a substantially higher rate of misclassification (*Lord et al., 2012*).*

Although a valuable component of ASD evaluations, the ADOS-2 has some limitations of which evaluators should be aware. First, there are notable populations for which the tool cannot be utilized based on lack of inclusion in the standardization sample. This includes individuals with mobility issues (must be ambulatory) and sensory (vision and hearing) impairments. The tool has not yet been validated for use with PPE or via telehealth. Additionally, there are some clinical presentations that may impact the individual's performance and presentation in the ADOS-2, such as children with severe anxiety or selective mutism who have variable social presentations, young children with severe trauma and attachment histories, and children with extreme behavioral conduct. Other individual variable factors, such as illness and lack of sleep, may impact performance in an observational assessment. There is also some data that the ADOS-2 may not allow for adequate expressions of RRBs, especially in Modules 3 and 4 (Kuhfeld & Sturm, 2018). Finally, it is important to note that the ADOS-2 has adequate psychometric properties, but, as with all assessment measures, results in both false positive and false negative classifications, even when the tool is used by highly experienced (i.e., research reliable) evaluators. These factors again highlight the need to use the obtained observational data in combination with multiple modes and sources of information.

> The ADOS-2 cannot be used in a standardized manner or scored for individuals who are non-ambulatory or who have vision or hearing impairment.

Assessment of Developmental, Cognitive & Language Functioning

Given that ASD is a neurodevelopmental disorder, it is essential to understand the developmental, cognitive, and language functioning of the child to properly interpret the social communication and interaction behaviors exhibited during the evaluation. Further, this information guides programming, intervention decisions, and future planning. Direct assessment of developmental, cognitive, and language skills is strongly recommended. Language assessment can be conducted as part of the evaluation process, including language components embedded in developmental and cognitive measures and/or through formal measures of speech and language skills. Comprehensive speech and language evaluation can also be suggested as part of the evaluation recommendations when not completed, but clinically warranted.

> Knowledge of the child's nonverbal mental status and expressive language level is necessary for proper coding of the ADOS-2.

Cognitive skills are more variable in individuals with ASD than in the general population (Courchesne et al., 2018; Joseph et al., 2002; Mandy et al., 2015; Oliveras-Rentas et al., 2012). Determination of cognitive ability requires ongoing evaluation of cognitive skills until multiple assessments suggest consistency in the child's cognitive profile. Despite a high portion of individuals with ASD presenting with language impairments, many individuals have intact nonverbal intellectual skills (Fombonne, 2005). Therefore, cognitive skills should be assessed by domain and not only globally. Further, there is some evidence that commonly used tools, such as the Wechsler intelligence scales, may underestimate intelligence for children with ASD (Nadar et al., 2014). Evaluators should have experience with a range of cognitive measures for children with ASD, including assessment for those who are nonverbal, if accepting such referrals.

Young children are often more difficult to assess than older children, teens, and adults. Assessment can be particularly challenging for young children suspected of having ASD. Experience with standardized assessment of young children is essential for ASD evaluators. The use of positive behavioral management skills (e.g., when to use praise, active ignoring, etc.) and a flexible approach (e.g., use of breaks, seating modifications, etc.) within the bounds of the standardized instrument are helpful skills for evaluators to have and use when evaluating young children (Courchesne et al., 2018). Despite some challenges, there is great value in having baseline developmental/cognitive information and completing tracking or ongoing assessment of developmental skills. Firstly, both expressive language level and nonverbal IQ are strong predictors of response to early intensive behavioral intervention. Secondly, early intensive behavioral intervention is associated with gains in developmental and cognitive skills (Eldevik, 2009; Howlin et al., 2009); assessment of these skills in a standardized manner documents treatment gains. Given the variability in skills and potential for improvement in response to intervention, baseline assessments of young children should not be used for long-term intervention planning.

Cognitive or developmental evaluation should be strongly considered in the following circumstances:

- The child has never had cognitive testing completed
- The child has not had recent (within the last year) cognitive testing
- The child has not shown consistency in cognitive skills in two previous assessments
- The child's cognitive skills have been variable across previous assessments
- One or more of the following conditions are suspected:

- o   Developmental delay
- o   Intellectual disability
- o   Language disorder
- o   Learning disorder
- o   Giftedness
- o   Other comorbid conditions requiring further assessment

Adaptive Functioning

Adaptive functioning refers to an individual's day-to-day use of skills across a range of domains for personal and social self-sufficiency in life. Children with ASD often struggle with using their skills to function adaptively in life. Discrepancy between cognitive skills and adaptive behaviors are evident from toddlerhood through adulthood in individuals with ASD and often become more pronounced with age (Jacobson & Ackerman, 1990). Adaptive behavior deficits are seen in individuals with ASD who have intact intellectual skills (Kenworthy et al., 2010). The most pronounced deficits for individuals with ASD are typically seen in the communication and socialization domains (Ray-Subramanian et al., 2011; Ventola et al., 2007). Understanding the child's adaptive behavior profile is helpful in differential diagnosis (Mossman Steiner et al., 2012) and often crucial to effective intervention planning. Thus, adaptive behavior assessment is a key element in autism evaluation.

> Assessment of adaptive functioning helps to determine the "substantial functional impairment" requirement for medical necessity.

Caregiver Report of Adaptive Behavior
There are many tools developed to assess adaptive behavior (please see Table 4.1 for a review of adaptive behavior assessment tools). Tools that allow for semi-structured caregiver interviewing, such as the Vineland Adaptive Behavior Scales (Sparrow et al., 2016) may be seen as the gold standard for adaptive behavior assessment (Mossman Steiner et al., 2012). Interview methods should always be used to obtain adaptive behavior when there are concerns regarding caregiver over- or under-reporting, caregiver comprehension, and/or caregiver reading ability.

Clinician Assessment of Adaptive Behavior
Additionally, the Developmental Disabilities Children's Global Assessment Scale (DD-CGAS; Wagner et al., 2007) is a tool that provides clinician assessment of the individual's overall adaptive behavior and is anchored to domains that are often weak for children with ASD. On the DD-CGAS, clinicians are asked to rate the level of functional interference for the following domains: a) self-care, b) communication, c) social behavior, and d) school/academic performance and then to select the descriptive category and score that best reflects the summary of the child's current functioning. The DD-CGAS can be a useful measure to capture gains in adaptive behavior through intervention when assessing over time.

Table 3.1. Measures for assessing caregiver report of adaptive behavior in individuals with ASD.

Measure	Age Range	Format/Time	Skill Domains Assessed
Vineland Adaptive Behavior Scales (VABS-3; Sparrow et al., 2016)	Birth to 90 years	Interview or parent rating form 20 to 90 minutes	• Communication • Daily living • Socialization • Motor
Scales of Independent Behavior-Revised (SIB-R; Bruininks et al., 1996)	Birth to 80+ years	Interview or parent rating form 15 to 60 minutes	• Social interaction & communication • Personal living • Community living • Motor
Adaptive Behavior Assessment System (ABAS-3; Harrison & Oakland, 2015)	Birth to 89 years	Parent, teacher & caregiver rating forms 15 to 20 minutes	• Conceptual • Social • Practical
Diagnostic Adaptive Behavior Scale (DABS; Tasse et al., 2017)	4 to 21 years	Interview 30 minutes	• Conceptual • Social • Practical

Medical Assessment & Referral

Medical assessment of children with suspected ASD and related conditions is considered a component of best practice evaluation. Ongoing routine pediatric care is essential; this includes well child visit assessments, lead screening, vision and hearing evaluation, and following the AAP and CDC recommended vaccination schedule. As ASD specialists, evaluators are responsible for debunking commonly held misconceptions regarding ASD and vaccinations for the benefit of the child and public health. Based on a large body of research and determination by multiple medical organizations, it is known and accepted by the medical community that there is no connection between ASD and vaccination (CDC, 2015; DeStefano et al., 2004; Jain et al., 2015; Taylor e al., 2014).

While full medical assessment is often outside the scope of evaluations completed for determining medical necessity, referral for assessment by medical specialty providers is strongly recommended based on information obtained in the clinical interview. Given the increased rates of a range of medical conditions for children with ASD and associated conditions, including epilepsy/ seizure disorders, gastrointestinal problems, allergy and immune system anomalies, and sleep problems (Amaral et al., 2011), the following should be considered for medical specialty referral as clinically indicated based on the child's presenting signs and symptoms:

- Neurology
- Genetics
- Gastroenterology
- Allergy/immunology

Finally, individuals with ASD have increased rates of other mental health comorbidities; while there is no medication that targets the core features of ASD, individuals may require medical management of mental health comorbidities and/or associated aggression and agitation. In such cases, referral for psychiatric evaluation by a provider with expertise in the management of ASD and other neurodevelopmental conditions is warranted.

Considerations for Telehealth, Hybrid & Modified Evaluations

Telehealth and hybrid evaluation may be necessary or preferred for a host of reasons, including but not limited to:

- Ongoing or newly emerging infectious diseases impacting safety of face-to-face evaluations,
- Family stated preference and family safety variables (e.g., extremely immunocompromised or mobility challenged individual),
- When additional data is needed for the child's presentation in the home environment,
- Access to care for those in rural settings,
- Access to highly experienced evaluators in situations of referral complexity who may not be available in the community in which the family resides, and
- Logistical issues, such as easing the burden of multiple visits to the clinic, transportation barriers, and travel related issues, such as inclement weather.

While the Covid-19 pandemic brought many challenges, the approval and implementation of effective telehealth practices reflects one ray of light in access to care that should continue post-pandemic.

Many parents have questions about the impact of the lack of social interaction outside of the family and increased stress during Covid 19 on child development. While there are undoubtedly stress-related variables to consider, caregiver interactions at home are sufficient for developing typical social and communication skills.

Presented below are considerations for best practice in telehealth, hybrid, and modified assessment.

Access to Quality Care

Use of telehealth assessment practices may be particularly important for increasing access to care in rural areas. Children living in rural communities continue to receive ASD diagnosis later than children living in urban environments (Antezana, et al., 2017; Johnson, 2007). While increasing capacity of skilled clinicians in rural and underserved communities remains a key public health priority, telehealth modality can increase access to timely, quality care. This can be completed entirely over telehealth or in combination with a local provider, such as a primary care pediatrician or a local clinician. Telehealth assessment can also improve the quality of remote supervision provided to clinicians in rural communities, giving the supervisor a mechanism to observe the child and the evaluation process.

Similarly, use of telehealth methods can allow families access to highly experienced evaluators for referrals with increased complexities, as denoted in the differential and special populations sections of this document.

Safety Modifications Associated with Infectious Disease(s)

On March 11, 2020, the World Health Organization (WHO) designated COVID-19 as a global pandemic. COVID-19, which is the infection caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has led to millions of illnesses, hospitalizations, and deaths worldwide since the beginning of 2020. In Michigan and throughout the U.S., there have been widespread effects of the pandemic on the economy, including high rates of unemployment and impacts on day-to-day operations across various job sectors. Due to the need for mitigation efforts to prevent the spread of COVID-19, Michigan and other states initially implemented stay-at-home orders and other public health orders, including limiting in-person interactions as much as possible, social distancing, wearing masks, and closing schools and other businesses. COVID-19 has also had a significant impact on the delivery of health and mental health services. Due to stay-at-home orders and heightened safety practices, many health and mental health providers shifted to increased use of telemedicine practices, which serve to increase access to services while limiting physical contact.

MDHHS expanded the use of telehealth services to allow for greater access to behavioral health services throughout the state.

Conducting diagnostic evaluations for Autism Spectrum Disorder (ASD) presented a unique challenge in the time of COVID-19, and similar challenges will likely be present if other infectious diseases emerge. Best practices for ASD evaluations include direct observation of the child, typically in a face-to-face interaction with the evaluator in close physical proximity. Mitigation practices that are essential to preventing the spread of infectious disease limit the use of in-person observational assessment tools (such as the ADOS-2), resulting in the need for significant modification in standard evaluation practices. The following includes recommendations for alternative approaches to traditional evaluation practices, which may be needed to maintain services during infectious disease outbreaks (such as COVID-19, flu season, etc.), in cases of a child or family with a compromised immune system, and for expanding care to under-served populations, including rural communities and families with significant barriers to attending in-person appointments.

Impact of Safety Precautions on ASD Evaluations

Observational assessment is a core component and should always be included in the evaluation of ASD (see for example, Gotham et al., 2011; Zander et al., 2015). For this reason, MDHHS policy has included an observational tool, the Autism Diagnostic Observation Schedule- Second Edition (ADOS-2), as a component of ASD evaluations. However, the ADOS-2 was designed and validated to be used with in-person, face-to-face interactions between the child and evaluator to allow for social presses and observations of the child's social behavior.

The publisher of the ADOS-2, Western Psychological Services (WPS), has issued position statements on the use of this tool during the COVID-19 pandemic (see https://pages.wpspublish.com/telepractice-101). Regarding remote ADOS-2 administration, the publisher states, "It is not possible to validly administer this assessment remotely," citing that the observational tool was developed and designed for in-person interactions with close contact between the examiner and individual being assessed. Similarly, the test publisher advises that in-person administrations of the ADOS-2 are considered nonstandard given the need for personal protective equipment (PPE), physical distancing, and other modifications to standard administration. Notably, the use of clear face masks or face shields are still considered nonstandard administration.

These modifications significantly affect the quality of the social interaction and interfere with the observations of language use and facial expressions. These position statements clearly caution against the use of the ADOS-2 scoring and algorithms through telemedicine platforms or through in-person administration with PPE and other safety practices. When utilizing the ADOS-2 or any other standardized assessment tool, evaluators should always follow standardized practices as recommended by the test publisher. Modifications to standardized administration will limit the usefulness of an instrument and should be considered in the interpretation of the test results. Evaluators should consult with the test publisher as needed to obtain current guidelines on test administration and be up to date on research associated with the test administration and interpretation.

> *Per WPS, nonstandard administrations of the ADOS-2 can be used for qualitative purposes; however, scoring and interpreting the algorithm are not recommended in these administrations.*

Best Practices for Conducting ASD Evaluations

Although the ADOS-2 or similar standardized and validated observational assessment should always be used as one component of a comprehensive ASD evaluation, many evaluators heavily rely on the ADOS-2 and the algorithm score in determining the child's diagnosis and eligibility for behavioral health services. When using modified procedures due to health and safety practices (such as wearing masks), the ADOS-2 cannot be administered or interpreted as designed, and as such, the measure cannot be scored (no score can be reported) and the algorithm ***should not be interpreted***.

Instead, components of and specific activities from the ADOS-2 can be modified to accommodate telehealth evaluations or in-person evaluations using PPE. These tasks can be utilized during highly structured observations to aid in the diagnosis of ASD. There are also alternative observational methods and assessment tools that can be used in the diagnostic evaluation. Multiple observational methods can be helpful when standardized tests cannot be used as validated during in-person assessments or through telemedicine platforms.

Several studies of telehealth ASD evaluation methods show reasonable effectiveness and acceptability by both evaluators and caregivers of children (Alfuraydan et al., 2020, Ludwig et al., 2021, Matthews et al., 2021), though clinical caveats should always be noted. As an example, published case samples show that some children with ADHD display better social behaviors in clinic than over videoconferencing (Ludwig et al., 2021).

The following are general guidelines for conducting comprehensive ASD evaluations in the time of COVID-19 and other infectious diseases impacting community safety:

- Diagnostic evaluations should be completed by highly qualified ASD evaluators with expertise in multiple assessment methods (beyond just the ADOS-2 and ADI-R)
- Telehealth observational methods may be used to maximize the health and safety of the child and examiner, as well as to ensure access to ASD evaluations and behavioral health services; however, not all children referred will be appropriate candidates for tele-assessment. The age of the child, the family's access to technology, the family's preferences, the complexity of the

referral, and the evaluator's experience in tele-assessment should all be considered when determining whether a telehealth evaluation is appropriate.

- **Multiple methods of assessment should be included in all diagnostic evaluations, including *at minimum:* 1) a comprehensive clinical interview, 2) Clinical and ASD symptom interview, 3) record review and/or collateral reports from teachers, pediatrician, speech pathologists, and/or other professionals familiar with the child, 3) assessment (or estimate) of child's developmental, language levels, and adaptive skills, and 4) an observational assessment of social behaviors.**

- All evaluations (regardless of the format) should also include a feedback session with the family (video conference, phone, or face-to-face)

- Reports should include a clear description of any modifications to standard assessment practices and any effects these modifications had on the evaluation results (e.g., technology difficulties, use of masks preventing observation of facial expressions, etc.)

- When conducting evaluations in person, it is essential that health and safety practices are adhered to (as recommended by the CDC and MDHHS), including safety practices for both staff and children/families, minimizing close physical contact whenever possible, wearing masks, and frequent handwashing and sanitizing of surfaces and materials. **MDHHS does not advise conducting face-to-face evaluations without PPE during the COVID-19 pandemic or other outbreaks of infectious disease.** Health and safety practices should be followed during ASD evaluations as in other health and mental health settings.

- Evaluations should still be comprehensive and helpful to the family!

Alternative Options for ASD Evaluations

- Tele-assessment model
    - o Child and family at home
    - o Observations completed through a secure, HIPAA-compliant video conferencing platform
- Hybrid model
    - o Some portions of evaluation completed via telehealth or in the clinic with evaluator and child/family in different rooms, with other components completed with modified face-to-face procedures
    - o One readily effective method may be to offer feedback sessions via video telehealth to minimize the burden of the family to physically return to the clinic
- Modified in-person evaluation
    - o Evaluation completed in person with PPE following distancing guidelines
    - o Can involve in room and multiple room (examiner in one room, examinee in another room using a telehealth platform to communicate) assessment methods
    - o May still complete feedback session or other portions of the evaluation (such as a follow up interview or rating scales) via telehealth methods

Table 3.2. Tele-Assessment

Possible Use of Full Tele-Assessment	When Tele-Assessment Should be Done with Caution or May Not Be Appropriate
- ASD re-evaluations or consultations - Very young children - Children with previous comprehensive evaluations and/or well-established ASD diagnosis - Possibly uncomplicated cases for older children (caveat for telehealth cognitive assessment) - When child or family has particular health and safety concerns that would prevent in-person visits - When child, family member, or evaluator have had recent exposure to an infectious disease or are currently showing possible symptoms such as a high fever, respiratory symptoms, extreme fatigue, etc. (may also wait to complete evaluation) - When child or family is severely immunocompromised - To increase access to care for individuals in rural areas or for families with significant barriers (e.g., transportation, work schedules) - To allow for referrals to more experienced evaluators in other regions	- Complex Cases - Complex medical presentations - Complex differential diagnosis or comorbidity (such as severe ADHD, anxiety, intellectual disability, trauma, etc.) - Older child/teenager who has not previously been evaluated for ASD - Significant developmental delays - Caregivers with limited knowledge of the child (such as foster parent) - Language barriers - Lack of access to technology or internet - Lack of space or home environment has too many distractions (e.g., multiple-family home; numerous siblings) - Families with unsafe or unstable living environments (e.g., current shelter placement) - Family or evaluator not comfortable with tele-assessment (family choice should be respected) - For evaluator or clinic convenience only (should be clinical justification for tele-assessment, and family should be offered options for appointment)

Given that tele-assessment is not appropriate for every referral, a screening process to triage referrals is highly recommended. This screening may include a review of records and an intake call or video conference with the family to discuss the benefits and risks of tele-assessment, review the space and technology needed for the evaluation, and to determine the appropriateness of the referral.

Tele-assessment should always be a family choice when appropriate and not a mandated format!
Other options for completing the ASD evaluation should be provided to the family whenever possible (including delaying the evaluation until it is safe to complete in person if that is the preference of the family). Families must consent and be made aware that tele-assessment may not provide answers to the referral question or access to desired care and that follow up appointments in person may be necessary. Families should also be aware of the nature of the evaluation and the demands that will be placed on them (e.g., multiple appointments in some situations, need to reduce distractions in the home, needed

materials for observational assessment). The child's parent/guardian should complete a special consent form that outlines the risks and benefits of telehealth practices.

Following the ASD tele-assessment, the family should be provided with detailed feedback and recommendations; this information should be presented in the report and discussed at the feedback session. The evaluator should discuss confidence in the diagnostic results and make clear recommendations for additional assessments and services that may be needed for the child, once these services are safe and available. In particular, a more thorough evaluation may be needed to assess for suspected comorbid or differential diagnoses, such as ADHD, an intellectual disability, or a medical condition. Additional evaluations and services may include cognitive, academic, or language testing, medical follow-up, and/or ASD re-evaluation in person. It is crucial that families are made aware of the need for these follow-up services, and that service providers allow access to all needed services and evaluations, once in-person services are safe and available.

Practical Tips for Tele-Assessment:

- Ensure the family has access to adequate video technology (e.g., phone, tablet, computer with internet access).
- Audio only phone calls (without video) are not recommended for ASD evaluation, as this does not allow for proper observational assessment. It can be helpful to do a practice run with the technology before the evaluation appointment, particularly given home-to-home and device-to-device variation in internet speed and stability and clarity of video connection. Evaluators should be familiar with several troubleshooting strategies for their specific HIPPA compliant video platform to increase likelihood that video observation will be successful.
- Help the caregiver problem-solve ways to limit distractions and select the best space for video observation.
- Assist the caregiver with selecting appropriate toys and materials for home observation. Do not ask families to purchase any materials for the assessment.

See other tip sheets in the Telehealth Resources appendix.

Benefits and Disadvantages of Tele-Assessment:

Evaluators and families should carefully consider the benefits and possible disadvantages of tele-assessment for ASD. Benefits included increased access to care for rural populations and families with transportation barriers, reduced risk of transmission of disease, especially for medically vulnerable populations, and reduced delays in access to services. However, there are also potential disadvantages to consider, such as:

- Time: Although tele-assessment practices reduce transportation burdens and offer the greatest protection in mitigation of infection transmission, these evaluations are often not easier or faster than traditional in-person appointments. There is increased time and administrative burden on evaluation agencies in coordinating with families, triaging cases, and addressing logistical issues related to technology and setting up the evaluation appointment remotely. In some cases, multiple appointments will be needed to complete the evaluation. The family will

often take additional time setting up their home environment, accessing technology, and collecting records, video samples, and other collateral information.

- Complexity of referrals: Not every referral question may be addressed through tele-assessment. Individuals with more severe clinical presentations, who have greater attentional or social motivation difficulties, and/or present with possible comorbid or differential conditions (Ludwig et al., 2021) may not be able to adequately participate in tele-assessments. Prior to completing the evaluation, the evaluator should consider the referral question and the child's background to determine whether tele-assessment tools will be able to answer the referral question and best help the child and family.
- Access to technology: Families may not have adequate or reliable internet or devices for tele-assessment. In addition, some families may not be comfortable with technology tools, such as video conferencing applications.
- Evaluator experience: Evaluators need to be experienced in ASD assessment and need to be trained specifically in tele-assessment tools prior to completing ASD evaluations using telehealth methods. In addition to competence in ASD diagnostic evaluations and tele-assessment, evaluators need to have the ability to establish rapport and engagement with families via remote video conferencing technology.
- Validity of assessment tools: Although there are options for observational assessment using remote or telehealth tools, these instruments do not have the same level of established research as other standardized tools such as the ADOS-2. In addition, assessment tools such as the CARS-2 or other observational rating scales were not validated in remote assessment settings.

The following are suggested models for tele-assessment of ASD, including alternatives to the ADOS-2 for the observational assessment:

For Younger Children:

1. Record review
2. Collateral input from teachers, child's pediatrician, speech or occupational therapy providers, outpatient therapists, and/or others who are familiar with the child
3. Caregiver interview (Clinical and ASD symptom history, such as ADI-R)
4. Observational assessment:
   o Vanderbilt ASD-TELE-PEDS (14 months to 3 years)
   o Brief Observation of Symptoms of Autism (BOSA) using ADOS-2 Coding (WPS and UCLA CART)
   o Informal observation of caregiver and child in coached play activities and completion of the CARS-2 for children with phrase speech
   o Caregiver provided video samples
5. Adaptive assessment (Vineland-3, ABAS-3, DD-CGAS)
6. Rating scales (BASC-3, SRS-2, Conners Early Childhood, ASQ)
7. Statement of level of certainty in our clinical impressions given telehealth modifications
8. Recommended follow-up (if any), including in-person assessments or re-evaluations

For School-Aged Children and Adolescents:

1. Record review, collateral input (ABA treatment providers, medical providers, teachers, and other school personnel, etc.)
2. Caregiver interview (Clinical and ASD symptom history, such as ADI-R)
3. Adaptive assessment (Vineland-3, ABAS-3, DD-CGAS)
4. Observational assessment of the child through video telehealth
   - Modified observation for older children with selected activities of the ADOS-2, plus other observational data, and completion of the CARS-2
   - BOSA using ADOS-2 Coding (WPS and UCLA CART)
   - Caregiver provided video samples
5. Rating scales as needed for the referral question
6. Cognitive assessment when needed (e.g., administration of select subtests of WISC-V)
7. Statement of level of certainty in our clinical impressions given telehealth modifications
8. Recommended follow-up (if any)

Hybrid Model:

A hybrid model for ASD evaluations includes a combination of various in-person and remote tele-assessment options. For families with compromised immune systems or when there is a high transmission rate of infectious disease, consideration should be given to narrowing the scope of questions that must be addressed in person to reduce the risk of infection spread (e.g., less focus on comorbid conditions; less direct testing of a child's skills). Options for hybrid models for ASD evaluations include:

- Comprehensive interview and adaptive assessment measure (e.g., Vineland-3) completed prior to evaluation through video or phone intake session; child completes direct testing and observational assessment in clinic with PPE; feedback session is completed via telehealth
- Tele-assessment of child is attempted (including interview and observational assessment) but results are inconclusive; child comes to clinic for additional in-person observation
- Child and parent/guardian complete evaluation at clinic, but one-way mirror or video conferencing are used to minimize face-to-face contact with evaluator
- Has the advantage of still using standardized physical materials
- May be helpful for families who lack access to the appropriate technology or when home setting is not conducive to tele-assessment
- Feedback sessions may be completed via telehealth methods even when the evaluation is completed in person to minimize face-to-face contact and additional demands on family (e.g., childcare, transportation, possible risk of infection in public setting)

Modified In-Person Evaluations:

In-person evaluations allow for the use of a wider range of clinical tools as well as a more natural social environment for the child. However, in-person evaluations present a <u>much higher level of risk</u> of infection transmission to the child, parent/guardian, and evaluator. *During infectious disease outbreaks and times of high transmission, as well as for medically vulnerable populations, it is essential that modifications be made to standard clinic procedures and assessment methods to ensure the health and safety of all individuals.* ASD evaluations present a number of risks to the child, family, and evaluator, including close proximity in shared room space for longer durations (i.e., more than 15 minutes), including in small rooms that may have limited airflow. In addition, children referred for ASD evaluations are often young and/or have limited verbal skills, leading to potentially unsafe behaviors such as mouthing, biting, or licking items and tactile exploration of materials, surfaces, and other people. *It is also important to consider that individuals with developmental disabilities are at greater risk for infection and severe complications associated with COVID-19* (White paper "Risk Factors for COVID-19 Mortality among Privately Insured Patients," November 2020; Hüls et al., 2021).

Organizations and evaluators should always follow good hygiene practices in evaluations. When working with medically vulnerable populations and in times of high transmission, it may be necessary to increase precautions and mitigation strategies. The following are recommended strategies to reduce spread of infection for in-person evaluations:

Organizational Strategies:

- o Follow safety recommendations outlined by MDHHS and CDC
- o Screening procedures for staff and clients
- o Encourage sick employees to stay home
- o Encourage all staff to be up to date with vaccinations
- o Minimize contact with office staff and other clients
- o Have families wait in their vehicles until their appointment time
- o Spaced seating in the lobby
- o Reduce number of family members in clinic for child's appointment
- o Increased cleaning and sanitizing of shared spaces, assessment rooms, and staff offices

Cleaning and Sanitization:

Cleaning and sanitary procedures are always necessary when assessing children. All routine sanitation procedures should be followed in addition to that below

- o Ensure that surfaces (door handles, tables, light switches) and all test materials are properly cleaned and sanitized before and after each child
    - o Ensure that cleaning products that are utilized are effective at killing the infectious agent and not watered down below the effectiveness level needed
    - o Only use test materials that can be cleaned or discarded
    - o Note: Cleaning and sanitizing are always essential when assessing children!
- o Have access to hand sanitizer in assessment rooms and public areas

o   Good ventilation in room and office (e.g., in room or whole organization air purifier, improved HVAC filtration systems, open window, etc.)

Access to PPE:

o   High quality masks and face shields available for staff
o   High quality masks available for parents and children (including child-sized masks)
o   Consider use of easily cleanable or protective clothing (scrubs, smocks, etc.) if high risk of droplets or prolonged exposure
o   *Discuss PPE use with the family before the visit to make sure the caregivers and child are prepared. Try to make the child and caregivers as comfortable as possible while also being safe.*

During the Evaluation:

o   Discuss possible risks associated with in-person evaluation with family
o   Minimize face-to-face contact in confined room as much as possible
o   Use distancing with furniture placement, plexiglass barriers (when appropriate)
o   Wash your own hands often and use hand sanitizer
o   Avoid handshakes and other close physical contact
o   Eliminate or limit shared touch surfaces
o   Sanitize items as often as is needed and following the appointment
o   Clearly communicate expectations for safe practices to child and family

Table 3.3 Summary of Options for ASD Evaluations when community safety precautions are necessary:

Assessment Option	Benefits	Disadvantages
Tele-Assessment (interview, observational assessment, and any direct testing are completed remotely)	Improves access to evaluation and services for child Maximum safety for child, family, and evaluator Emerging evidence for tele-assessment tools for ASD evaluations, especially for young children	Not recommended for complex referrals (e.g., medical complexity, complex differential and/or comorbid diagnosis) Family needs to have adequate technology device and strong internet connection Distractions in home may affect validity of assessment (e.g., noise level, other children, pets) Lack of access to physical materials; limited family resources (e.g., developmentally appropriate toys) may affect observations

		Takes additional time for family and evaluator (e.g., may require multiple appointments)
Hybrid model (a combination of in-person and tele-health assessment)	Allows for in-person methods to be used when needed

Technology use (e.g., video monitoring) and distancing methods in clinic (e.g., 1-way mirror) help mitigate risk of infection spread

Allows for flexibility in choosing appropriate assessment tools that best answer referral question and fit with family's needs and preferences | Family will likely still need access to technology and appropriate space at home (for remote components)

Scheduling appointments is more confusing and complex (may require multiple appointments; may include both in-person and remote appointments)

Takes additional time for family and evaluator (e.g., may require multiple appointments) |
| **Modified in-person evaluations (evaluation completed in clinic with PPE and other safety measures)** | Allows more opportunity for direct assessment and modified administration of ADOS-2 or other observational tools (due to access to standardized materials)

Allows for more natural social interaction between child and evaluator

Improves rapport and communication between evaluator and family (e.g., lack of technology lags or poor sound quality) | Increased risk of infection for child, parent/guardian, and evaluator

Need for enhanced cleaning and screening procedures for clinic, as well as access to PPE (increased cost to agency)

Takes additional time for evaluator (due to need for cleaning and sanitizing items)

Space needs in clinic: need additional rooms and space in lobby for increased social distancing

ADOS-2 algorithm score still cannot be interpreted (due to PPE and other modifications) |

Other Technology Applications for ASD Screening and Assessment

Importantly, all formats of ASD evaluations, with documented acceptability and effectiveness, including use of technology-based assessment tools, involve, at least some, real-time, face-to-face connection with the caregiver and child and multiple methodologies of assessment.

In contrast, Artificial Intelligence (AI) methodologies that utilize screening via questionnaire and video analysis have recently received public attention. To date, there are no peer-reviewed studies on assessment methods using AI technology, and the outcomes are not adequate for diagnostic

determination in the majority of referrals. For example, data released from Cognoa program developers show that over two-thirds of cases were deemed "indeterminate" via the recently FDA approved Cognoa Canvas Dx app based on the company's internal data shared at a poster presentation (https://canvasdx.com/; Taraman et al. (2021). Poster presentation at: PAS 2021 Virtual Meeting. #684.). Over 90% of the "indeterminate" cases were children with other developmental conditions; most children seen for clinical ASD evaluation have some developmental delay that prompts the referral. Notably, the nearly 70% of "indeterminate" cases were glaringly excluded from negative predictive value (NPV) and positive predictive value (PPV) data shown on the website.

Nevertheless, AI based technologies may be useful in screening and triaging of cases, but the utility of these programs must be based on feasibility for families with technology and literacy/comprehension barriers, as well as compared to standard care (e.g., is utility shown above current screening practices in pediatric offices, such as M-CHAT and pediatric assessment?). The use of such technology must also be weighed against the burden placed on the family who may assume that the app-based evaluation is equivalent to a comprehensive best practice evaluation, leading the family to be reluctant to participate in yet another evaluation. Moreover, caregiver rating scales and selection of uploaded videos may reflect caregiver expectancy biases, as reviewed in the caregiver interview section of this document. Additionally, the evaluating clinician plays a key role in engaging the family in discussions about acceptable and appropriate care plans and helping to support the family in care seeking following the evaluation. Privacy issues must also be considered when families are directed to complete scales and upload videos to a third party for analysis and data storage. If needed to increase access to care or to reduce wait times for comprehensive ASD evaluations, PIHPs are encouraged to explore other options for ASD evaluations, such as hybrid or tele-assessment evaluations or contracting with evaluators outside of the region rather than adopting AI based technologies that are not currently empirically supported.

> A comprehensive assessment is required per the Medicaid policy for autism evaluation and standalone AI based technology would not meet current policy requirements. The utility of such practices should be strongly considered before implementation.

Assessment Considerations by Age & Development

Autism Spectrum Disorder is a neurodevelopmental condition. As such, ASD impacts development, and development impacts the expression of ASD (Amaral et al., 2011; Xiao et al., 2014). This means that developmental considerations are a central tenet of ASD evaluation. The developmental status, age, and functional level of the child should guide the evaluator in proper tool selection and use. Particular attention should be given to:

- Obtaining data that determines what the child can do (strengths-based approach), not just deficits
- Utilizing tools that have lower language demands for children with language impairment

Please review the handout on ASD Assessment by Age Best Practice for suggested batteries and considerations by age and functional status; see Appendix B & hyperlink www.michigan.gov/documents/autism/ASD_Assessment_by_Age_Best_Practice_638466_7.pdf.

Comorbid & Differential Diagnosis

The presentations of individuals referred for ASD evaluations in the community mental health setting are highly variable with a range of conditions that should be considered for differential and comorbid diagnosis. ASD shares a high number of features with other conditions, and individuals with ASD have increased rates of comorbidity with other neurodevelopmental and mental health conditions (Hartley, et al., 2008; Simonoff et al., 2008; Stadnick, et al., 2015). Differential and comorbid assessment is essential for accurate diagnosis and intervention planning, with particularly unique needs for those on the autism spectrum (Brookman-Frazee, et al., 2012).

The following are frequent differential and comorbid conditions with ASD:

- Language Disorder
- Developmental Delay
- Intellectual Disability
- Attention Deficit/Hyperactivity Disorder
- Anxiety Disorders
- Depressive Disorders
- Trauma & Attachment Disorders
- Psychotic Disorders
- Visual & Auditory Sensory Impairments

Children with neurodevelopmental disorders often show disruptions in language, play skills, and peer relationships (e.g., due to not having the language or ability to play in the same way). An ASD diagnosis should encompass more than just social delay and consider the child's overall presentation.

Language Disorder

Language disorder is characterized by difficulties with language comprehension and/or production (APA, 2013). Language disorders can affect children socially (e.g., communication deficits can hinder peer interactions), academically (e.g., understanding of directions and use of language in the classroom and in written work), and adaptively (e.g., functional use of language for day-to-day life). Language disorder is a common co-occurring condition with ASD. Language disorder is also a common differential condition, especially in early childhood ASD evaluation, and developmental language disorder is often seen for children failing the M-CHAT but not ultimately receiving a diagnosis of ASD (Eaves et al., 2006; Ventola, 2007).

Young children with language disorder share common characteristics of young children with ASD, including some social impairment with peers (usually consistent with language level) and

sensory/restricted and repetitive behaviors (Lord et al., 1993), though generally not to the same degree of impairment level of children with ASD (Rogers et al., 2003).

Children with ASD often have a discrepancy between obtained language skills and adaptive communication use. Further, nonverbal communication deficits, such as weak gesture use, are characteristic of ASD, but not of Language Disorder (Mitchell et al., 2006). Children with ASD are also more likely to display echolalia and stereotyped language use (Landry et al., 1988) and less likely to initiate or respond to spoken communication than children with language disorder (Lord et al., 1994).

Assessment considerations for Language Disorder

- Assess receptive and expressive language skills and speech articulation or refer for a comprehensive speech and language evaluation
- Assess social use of language
- Look for nonverbal compensation for language deficits (e.g., gestures, pointing, etc.)
- Compare social behaviors relative to developmental/language level

Not all children with speech/language delays will meet criteria for ASD. The hallmark of ASD is primary social deficits, not simply social deficits that occur secondary to a language delay or impairment. Language impairment alone does not warrant an ASD diagnosis.

Developmental Delay

Developmental delay is defined by lag in expected skill development in any to all of the domains of motor, cognitive, communication, social or emotional development, and adaptive development. Generally, the DD designation is used to capture delays in early childhood development, such as children under the age of 5 (APA, 2013). Autism falls in the continuum of developmental delay, and young children with ASD can present with focal or global delays in development.

There is a high rate of shared features in young children with ASD and those without ASD who present with developmental delays (Ventola et al., 2007). Many children with developmental delay have *some* of the characteristic social deficits seen in children with ASD (Charman et al., 1998). Further, many young children with developmental delay present with sensory and/or restricted and repetitive behaviors; however, children with ASD tend to have higher levels of and more impairment from these behaviors (Boyd et al., 2010). These shared features can result in children with DD failing ASD screening instruments (Ventola et al., 2007), as well as difficulty with differential diagnosis, especially in the absence of developmental and adaptive assessment data with which to make comparative developmental references. Nevertheless, DD can be reliably distinguished from early childhood ASD, with the most notable differences being in the gap between the child's developmental status and social development, with children with ASD generally showing a larger gap between their general developmental status and social development. In particular, children with ASD tend to demonstrate flat or declining social trajectories, more impairment in shared gaze, expression, and enjoyment (Mitchell et al., 2011) and joint attention behaviors (Ventola et al., 2007) relative to children with global DD.

Most young children who have a positive screen for ASD symptoms and are referred for an autism evaluation will show some developmental or language delay. Evaluators should assess and recommend appropriate early intervention for children without ASD who present with developmental delays.

- Developmental evaluation (e.g., Mullen Scales of Early Learning, Bayley Scales of Infant Development, 4th edition)
- Adaptive behavior assessment
- Compare social behaviors relative to developmental level
- Examine joint attention behaviors and shared enjoyment

Intellectual Disability

The diagnosis of Intellectual Disability (ID) requires deficits in cognitive skills and adaptive behaviors that are present during the developmental period (APA, 2013). Approximately 25 to 50% of individuals with ASD also have Intellectual Disability (CDC, 2018; CDC, 2012). Adaptive deficits are hallmarks of both ID and ASD, including individuals with ASD without ID. Children with ID have deficits in social behaviors and communication skills, as also seen in ASD; however, the deficits in these domains are generally commensurate with the child's cognitive or developmental level for ID, whereas there is often a marked discrepancy for ASD between the child's cognitive or developmental level and social and communicative behaviors. For example, a 10-year-old child with an intellectual disability who is functioning at a 4-year-old developmental level should show social and play behaviors typical of that seen for children around the age of 4. Further, individuals with ID show sensory and restricted and repetitive behaviors, especially as the severity of the ID increases (Hattier et al., 2011; Oliver et al., 2011), though with less impairment than is typically seen for individuals with ASD. Additionally, individuals with ASD have substantially higher rates of comorbid mental health conditions, which should be taken into consideration in the evaluation process (Brereton et al., 2006).

The differential diagnosis of ID and ASD can be complex and requires cognitive assessment to determine the level of intellectual impairment for comparison with social behaviors. The use of interview and observational assessment is effective at differentiating ASD from ID at mild and moderate levels (de Bilt, 2004; Sappok et al., 2013) when the level of cognitive impairment is taken into consideration. However, the ADOS-2 has less specificity (more false positives) with severe and profound ID (Berument, 2005; de Bilt, 2004; Sappok et al., 2013).

Assessment considerations for ID

- Intellectual evaluation
- Adaptive behavior assessment
- Compare social behaviors relative to cognitive level
- Utilize interview information and unstructured observations regarding social behaviors
- Attend to social interest and sharing

Attention Deficit/Hyperactivity Disorder

Attention Deficit/Hyperactivity Disorder (ADHD) is a common childhood disorder, impacting up to 8% of children (American Academy of Pediatrics, 2011) and is comprised of deficits with focus, activity level, and impulsivity that impact day to day functioning (APA, 2013). It is widely accepted that ADHD and ASD co-occur with high frequency, with up to 40 to 60% of individuals with ASD also meeting criteria for ADHD (Goldstein, 2004; Lee, 2006; Sikora, 2011). The comorbid diagnosis of ADHD and ASD should

be made only when the ADHD-related deficits exceed that of the comparable developmental level of the child (APA, 2013). For example, if an 8-year-old child is functioning at the cognitive level of a 4-year- old, the ADHD symptoms should exceed those that are typical for a 4-year-old child.

Given that children with ADHD have variable attention and sometimes demonstrate sensory processing and social deficits, the differential diagnosis of ASD and ADHD can be difficult. Many children with both ASD and ADHD are first diagnosed with ADHD with a resulting delay of up to three years in the comorbid ASD diagnosis; as such, the presence of ADHD can overshadow the ASD features, especially in early childhood (Miodovnik, 2015). Thus, given the high rate of comorbidity, evaluators should ensure to fully investigate ASD even in the presence of evident early childhood ADHD. Importantly, though children diagnosed with ADHD without ASD display social deficits, the nature of these deficits is generally due to executive and impulse regulation difficulties (social performance deficit) as compared to the core social skill deficits seen in children diagnosed with ASD.

> 40 to 60% of individuals with ASD also have ADHD.

Assessment considerations for ADHD

- Obtain collateral parent and teacher reports of ADHD symptoms (interview, rating scales)
- Examine the impact of attention and impulse control deficits in a developmental context relative to the child's mental age
- Assess for skill versus performance deficits in social behaviors
- Attend to social sharing and enjoyment

Anxiety Disorders

Anxiety disorders are generally defined by combined features of persistent and excessive fear, worry, and avoidance behaviors (APA, 2013). Anxiety disorders, especially those with social anxiety features, such as selective mutism, can be challenging to differentiate in the observational assessment due to the inherent social demands of the situation. In these situations, it is essential to rely on caregiver and other informant reports to determine the variability of social presentations for the child in multiple settings. While children with anxiety exhibit better social behaviors in comfortable situations with familiar others, children with ASD will exhibit social difficulties persistently across settings.

However, it is essential to highlight that Anxiety and ASD frequently co-occur, with up to 40% of individuals with ASD presenting with a comorbid anxiety disorder (Simonoff et al., 2008) with notable increases in anxiety seen for adolescents on the spectrum (Bellini, 2006). Self-report of anxiety can be complicated in individuals with ASD due to difficulty with introspection (Capps, 1992; Gillott, 2001). Further, children and teens with ASD and clinical anxiety may not show age-typical anxiety symptoms (greater behavioral presentation); the use of multiple reporters and methods (e.g., rating scales, interview, observation) is recommended to offset reporting difficulties and variance in anxiety presentation (White et al., 2009).

> 40% of individuals with ASD also have anxiety, with very high rates of anxiety in individuals with ASD who have intact intellectual skills.

- Obtain self and collateral parent and teacher reports of anxiety, social behaviors, and ASD symptoms
- Attend to social sharing and enjoyment in comfortable situations and with comfortable others
- Be aware of the high co-occurrence of ASD and anxiety disorders
- Use multiple informants and methods to assess anxiety in individuals with ASD

> Children with anxiety and/or depression may appear withdrawn or may not play with other children due to mood disruption or fears. Children with internalizing symptoms may also be overly irritable and reactive. Any of these behaviors can interfere with social functioning and peer relationships.

Depressive Disorders

Depression in children and teens is exhibited by multiple symptoms, including sadness, irritability, changes in sleeping and eating habits, and feelings of inadequacy, guilt, and hopelessness (APA, 2013). There are some symptom features shared by ASD and depression; depression can result in lack of social enjoyment and responsiveness, social withdrawal, as well as muted affect. The differential diagnosis of depression versus ASD requires a thorough developmental history, multiple informant reports, and examination of symptom onset and trajectory. While mood symptoms can wax and wane, ASD is a chronic neurodevelopmental condition; thus, assessment of the onset and trajectory of symptoms may be useful in this regard. Further, sleeping and eating issues are common for individuals with ASD so the focus for differential and comorbid assessment should be on change in these behaviors rather than the presence of such difficulties.

Depression rates for children with and without ASD are reported to be broadly similar, impacting about 2 to 4% of children (Ghandour et al., 2018; Magnuson & Constantino, 2011). However, the rates of depression in adolescents with ASD are substantially higher (8% in teens without ASD compared to up to 20% of teens with ASD), especially among teens with intact intellectual skills and medical comorbidities (Greenlee et al., 2016; Magnuson & Constantino, 2011).

> It is important to assess for depression in teens and adults with ASD.

One complication in the assessment of depression in children and teens with ASD is difficulty with self-reporting emotional states. Some studies have suggested reasonable reporting of depressive symptoms in verbal teens and adults with ASD (Gotham et al., 2015), though other studies note older children and teens with ASD may under-report depressive symptoms (Mazefsky et al., 2011). Nevertheless, parents often struggle to report on the internal emotional states of children and teens (Messman & Koot, 2000; Moretti et al., 1985), and this difficulty may be especially marked in higher functioning teens with ASD (Hurtig et al., 2009). Presently, there is no data to suggest that informant reports are better measures of emotional functioning in children and teens with ASD (Gotham et al., 2015).

When there is concern about depression in an individual with ASD, self-report of emotional functioning should be obtained. However, self-reports should be interpreted with caution due to possible under-

reporting when there is discrepancy with other assessment methods and informant reports suggesting depressive symptoms.

<u>Assessment considerations for Depressive Disorders</u>

- Obtain self, parent, and teacher reports of mood, social behaviors, and ASD symptoms
- Use interviews in addition to self-report scales
- Pay careful attention to symptom onset and trajectory
- Be aware of the high co-occurrence of ASD and depression for teens with ASD and intact intellectual skills
- Know that under-reporting of depression may occur for individuals with ASD and/or parents may not be aware of or report internalizing conditions in their children and teens with ASD

Trauma & Attachment Disorder

Children with ASD are 1.5 to 3 times more likely to experience traumatic events than typically developing peers and are more likely to present with trauma sequelae (Kerns et al., 2015; Haruvi-Lamdan et al., 2018). Trauma experiences can be related to maltreatment, death and separation from loved ones, exposure to home or community violence, bullying/peer victimization, disasters, and painful medical interventions (National Child Traumatic Stress Network, 2012). Trauma symptoms, particularly in early childhood, share some symptom overlap with ASD symptoms. Both conditions can result in delayed development, dysregulated social behaviors, avoidance/fears, repetitive play, and emotional and behavioral symptoms. The differential diagnosis of ASD and early childhood trauma can be complex. Factors to consider include the experience of traumatic events, consistency of observed deficits, and the onset and trajectory of symptoms.

> Young children who cannot verbally express trauma symptoms, experiences, and feelings may present with many shared symptoms of ASD—this should be considered strongly in the evaluation process.

The following figure may be useful in understanding where symptoms converge and diverge for ASD and trauma/PTSD (Stavropoulos et al., 2018):

Figure 3.1. ASD and Trauma Symptom Overlap
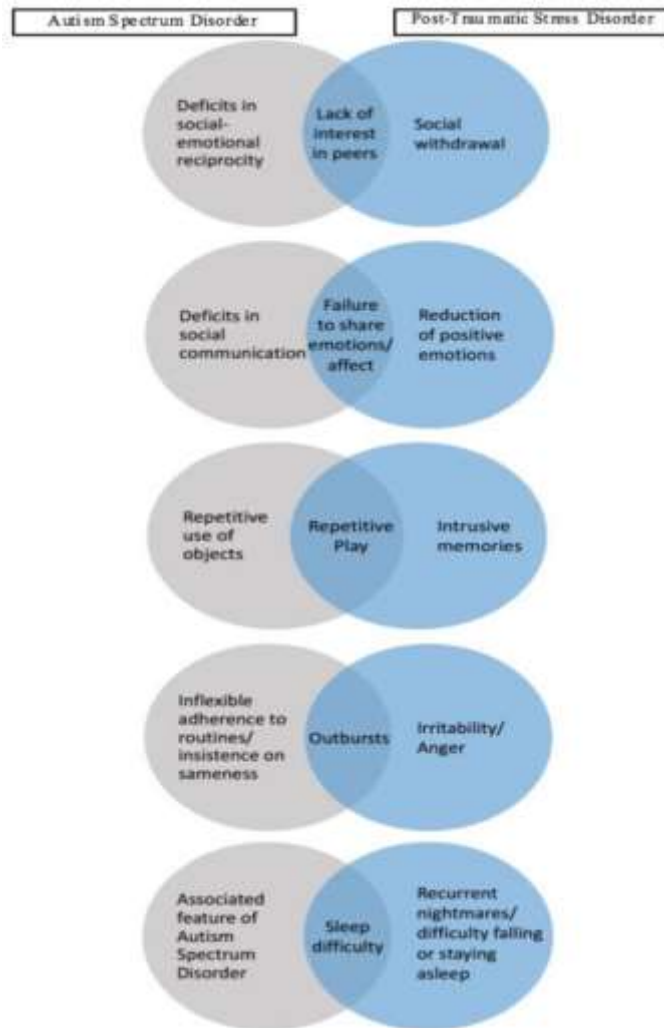
Children with ASD may be especially prone to the experience of peer and caregiver maltreatment and may be more prone to show trauma symptoms following such experiences (Hoover, 2015). The presentation of trauma symptoms in children with ASD may vary from classic PTSD presentations. The following are suggested hallmarks of trauma symptoms in a child with ASD:

- Increased emotional reactivity
- Worsening of behavioral symptoms
- Worsening of ASD symptoms and social avoidance
- May be less likely to report, seek help, or talk about the trauma

Relatedly, Reactive Attachment Disorders (RAD) are used to characterize the presentation of children who develop deviant attachment behaviors related to inadequate, unstable, or abusive caregiving (APA, 2013). There are two subtypes of presentations of attachment disorders: emotionally withdrawn inhibited type and indiscriminately social/disinhibited type. Most of the available research examines

what is now called Disinhibited Social Engagement Disorder (previously called RAD Disinhibited Type prior to the DSM-5), in which the symptoms include disinhibited social interactions and indiscriminate sociability. There are common shared features of Disinhibited Social Engagement Disorder and ASD, as well as differences in presentations (Davidson et al., 2015), which are depicted in Table X. Given that children with ASD may be more likely to experience caregiver maltreatment and disruption, the comorbid presentation of ASD and Disinhibited Social Engagement Disorder can exist (Mayes et al., 2017) and should also be considered.

Table 3.4. Possible similarities and differences between Disinhibited Social Engagement Disorder and ASD.

Possible Similarities	Possible Differences
• Inconsistent social behavior • Inappropriate social behaviors • Poor social boundaries • Weak eye contact • Pragmatic language deficits • Emotional reactivity • Perseveration	• Early childhood history • Trajectory of symptoms • Indiscriminate sociability/affection (RAD) • Stereotyped language (ASD) • Quality of social behavior (RAD > ASD) • Directed enjoyment (RAD > ASD) • > Attention seeking (RAD) • > Reciprocal communication & conversational skills (RAD)

Assessment considerations for Trauma & Attachment Disorders

- Interview caregivers and individuals about the experience of trauma and expression of traumatic stress
- Pay careful attention to symptom onset and trajectory
- Know the differences in expression of attachment disorders and ASD that may occur in an observational assessment
- Be aware that ASD and attachment disorders can co-occur
- Evaluators seeing young children referred for ASD evaluations who have experienced caregiving disruptions and/or trauma should be highly experienced in the evaluation of both conditions

Psychotic Disorders

Psychotic Disorders comprise a mix of affective (e.g., bipolar disorder, schizoaffective disorder) and non-affective (e.g., schizophrenia, transient psychotic disorder) thought disorders. Symptoms of psychosis include delusions, hallucinations, disorganized speech, disorganized or catatonic behavior, and negative symptoms (APA, 2013).

The differential between ASD and psychosis is complicated by shared symptoms, especially in the social affective and cognitive domains (Couture et al., 2010) and genetic etiology (De Lacy & King, 2013). Further complicating differential diagnosis of ASD and psychosis, the ADOS-2 was not able to reliably distinguish ASD from psychosis in adults using the WPS or revised algorithms, with 30 to 50% of

individuals with psychosis classified as ASD (de Bildt et al., 2016; Maddox et al., 2017). Differential assessment is best focused on the onset and trajectory of symptoms, necessitating a thorough developmental interview and record review, especially for adults not previously diagnosed with ASD. Autism symptoms are evident in the early childhood years in contrast to psychotic disorders, which generally emerge during later adolescence and adulthood. Additionally, individuals with non-ASD psychotic disorders have substantially lower rates of stereotyped and restricted and repetitive behaviors. Evaluators are reminded that the incidence of psychosis in children is extremely rare, with ASD and pervasive developmental disorders preceding childhood schizophrenia onset 30 to 50% of the time (Rapoport et al., 2009).

Similar to many other psychiatric conditions, individuals with ASD show higher incidence of psychotic disorders, including schizophrenia spectrum disorders and bipolar disorders, than that observed in the typical population (Marin et al., 2018; Selten et al., 2015; Zheng et al., 2018). There are documented differences in the presentation of psychosis in individuals with ASD. Most notably, the duration of psychosis reported by individuals with ASD rarely meets full criteria for symptoms or duration of schizophrenic symptoms (minimum of 6 months' disturbance with 1 month of active symptoms); this suggests an atypical more acute, transient psychotic course than that seen in the general population (Larson et al., 2017; Lugnegard et al., 2011). Further, it may be useful to investigate and interpret psychotic symptoms in individuals with ASD as related to the experience of prolonged social (e.g., bullying) or environmental stress (Keller et al., 2015).

<u>Assessment considerations for Psychotic Disorders</u>

- Obtain self and collateral reports of psychotic symptoms, social behaviors, and ASD symptoms
- Conduct a thorough interview of developmental history of symptoms
- Obtain and review records from childhood
- Pay careful attention to symptom onset and trajectory
- Be aware of the higher co-occurrence of ASD and psychotic disorders in older teens and adults

Visual & Auditory Sensory Impairments

Rates of ASD are increased in individuals with sensory impairment. Evaluators conducting ASD evaluations for individuals with sensory impairment should be highly experienced ASD evaluators familiar with the range of presentation for both conditions.

Blindness or Visual Impairment

Vision should be assessed in all children referred for ASD evaluation. There are commonalities in symptoms observed in individuals with ASD and individuals with blindness/visual impairment (VI) who do not have ASD (Butchart, 2017). Individuals with blindness or VI have substantially increased incidence of ASD, with some studies suggesting up to one-third of totally blind children have substantial symptoms of ASD (Cass, 1998). However, ASD symptoms are often overlooked, as observed impairments are attributed to the sensory impairment (Jure, 2016). Further, the common ASD evaluation tools, including the ADOS-2, were not standardized on individuals with sensory impairments and may not be scored for individuals who are blind or VI (Lord, et al., 2012). Evaluators conducting evaluations for individuals who are blind/VI should be highly experienced with ASD evaluation and developmental presentations of VI (Jure, 2016).

<u>Assessment considerations for Blindness or Visual Impairment</u>

- Obtain vision evaluation
- Attend to social sharing, interest, and enjoyment
- Attend to verbal social communication
- Evaluators conducting ASD evaluations for individuals diagnosed blind or VI should be highly experienced ASD evaluators familiar with the range of presentation for both conditions

Deaf or Hard of Hearing

Hearing issues can range from mild hearing loss to profound deafness that can be temporary (e.g., due to illness) or permanent (WHO, 1991). There are early childhood symptom similarities for those who are deaf or hard of hearing and young children with ASD, including delayed babbling and language development, response to name, and poor or inconsistent social responsiveness that may result in referral for ASD evaluation. These symptoms are related to hearing and attending for children who are deaf or hard of hearing in contrast to the core deficits in social atypicality and interest for children with ASD. Moreover, there is a higher incidence of hearing impairment in individuals with ASD (Rosenhall et al., 1999), and there may be a higher incidence of ASD in children with profound hearing loss (Szymanski et al., 2012). Further, many caregivers report that they thought their child could not hear at an early age due to lack of response to name or social awareness. Based on the higher incidence of hearing loss and symptom similarities in early childhood, hearing evaluation is strongly recommended for children who have screened positive for ASD.

Similar to individuals who are blind/VI, assessment for individuals diagnosed deaf or hard of hearing is complicated by lack of standardized tools for this population (Szymanski et al., 2014). Specifically, the standardization sample of the ADOS-2 excluded children with sensory impairments and as such, the tool may not be scored for individuals who are deaf or hard of hearing (Lord, et al., 2012). This requires increased demands on evaluator clinical judgment and expertise, necessitating evaluators who are highly experienced with ASD evaluation and developmental presentations of deafness (Szymanski et al., 2014).

<u>Assessment considerations for Deafness or Hard of Hearing</u>

- Obtain hearing evaluation
- Attend to visual social sharing, interest, and enjoyment
- Attend to nonverbal communication, such as facial expression and gesture use
- Evaluators conducting ASD evaluations for individuals diagnosed deaf or hard hearing should be familiar with the range of presentation for both conditions

Special Population Considerations

Evaluation of Very Young Children

The goal is for early identification of ASD, and referrals are often made for children under 3 years old. Assessment before age 3 is achievable, though there are some important points to consider. Many young children with developmental delays present with some ASD features. Delayed young children

without ASD generally have social behaviors consistent with their developmental status or mental age; therefore, assessment of developmental skills is strongly recommended for very young children.

The presentation of ASD varies in early development. There are marked differences in ASD symptom presentation from infancy to age 2, age 2 to age 3, and 3 and beyond, when a more "typical" ASD presentation tends to be present (Volkmar et al., 2005). This requires evaluator awareness of and sensitivity to developmental changes in symptom presentation. Children under age 2 with ASD may not exhibit restricted and repetitive behaviors in multiple domains or at the level seen for older children (Lord, 1995). In contrast, the social and expressive language deficits may be more evident for very young children (Stone, et al., 1999). Scores on the ADOS-2 tend to be more stable than scores on the ADI-R for very young children (Kleinman, 2007). Younger children tend to show greater variability in their developmental scores at follow-up, suggesting that ongoing developmental/cognitive monitoring is essential (Klin et al., 2004). Additionally, there is less stability in ASD diagnosis before age 2, though children younger than 2 with ASD symptoms can clearly benefit from early intervention. Further, there is emerging evidence that ASD diagnosis at 14 to 16 months shows meaningful stability such that a child diagnosed by 14 months is likely to continue to present as ASD in formal evaluation at age three (Pierce et al., 2019). Stability of confirming or ruling out ASD, especially at young ages, is enhanced by the use of highly experienced clinicians (Klin et al., 2000; Stone et al., 1999).

> Evaluators seeing children under the age of 3 should be highly experienced clinicians with expertise in both early childhood and ASD.

Evaluators seeing very young children with ASD should:

- Be highly trained in the pattern of developmental presentations of ASD at young ages and the need for clinical judgment when the child is not meeting full diagnostic criteria, especially lack of sufficient restricted and repetitive behaviors
- Be aware that restricted and repetitive behaviors are not always present or as evident at this age (emerge later than the social and language deficits) and that RRBs can be exhibited by typically developing toddlers
- Consider family history of ASD as the rates of ASD are higher in a child with a sibling diagnosed with ASD
- Use direct observation, including interactions with the parent and examiner
- Complete developmental assessment at baseline and follow-up evaluations
- Use standardized developmental and ASD tools and the DSM-5 criteria for ASD combined with clinical judgment to make clinical decisions and recommendations
- Know that presentations prior to age 2 fluctuate with greater frequency, necessitating routine re-evaluation and intervention planning

> *Evaluators seeing very young children should not delay diagnosis and early intervention due to possible diagnostic uncertainty for a young child with prominent ASD symptoms. Early intervention with routine follow-up evaluation is recommended. Consider bringing the child back for evaluation in six months following treatment to update clinical status, progress, and response to intervention.*

First time Evaluation of Teens and Adults

Most individuals are referred for ASD evaluations in the early childhood or formal school-age periods. However, there are also times when a teen or adult present for an initial ASD evaluation. This may be due to a) mild symptoms only showing impairment in the adolescent or adult years, b) poor access to mental health care, or c) shared symptoms of ASD with other psychiatric differential and comorbid diagnoses. Notably, adults with ASD have a higher rate of psychiatric comorbidities, especially depression, than other clinically referred adults (Ghaziuddin & Zafar, 2008; Joshi et al., 2013). As such, the presence of other psychiatric conditions should not preclude the diagnosis of ASD in adults referred for ASD evaluation.

When completing initial diagnostic evaluations for older teens and adults, evaluators should:

- Obtain a strong developmental history of ASD symptoms from available caregivers
- Obtain current symptom presentation, including adaptive deficits
- Thoroughly review relevant past and current medical and school records
- Conduct a thorough evaluation of differential and comorbid conditions

Cultural Issues in ASD evaluation

Cultural Diversity in Perceptions & Beliefs

While ASD symptoms are similar across all cultures, the cultural background of the family influences help-seeking behavior, beliefs about diagnosis and disability, and acceptance of and preferred treatment interventions (Bernier et al., 2009). Evaluators must be culturally aware and sensitive to cultural issues, especially the stigma regarding ASD in certain cultures, when completing ASD evaluations. However, there is robust evidence that early identification (diagnosis) and intervention with evidence-based treatments is the best means for any child with ASD to make gains and to improve their quality of life no matter the cultural group. Culture may impact the treatments sought with cultural beliefs that are more accepting of delays or that ASD will be outgrown, potentially leading to delays in seeking help (Tincani et al., 2009); cultural beliefs that the ASD can be "cured" may lead to seeking alternative therapies that state curing ASD as the goal (Ennis-Cole et al., 2013). African American families may be more likely to provide "protective care" that involves promoting independence skills and ensuring trustworthy supports, which has many benefits, but may also delay diagnosis and professional care for children with special needs (Burkett et al., 2015).

Evaluators should be knowledgeable of cultural and diversity issues and sensitive to families' preferences and beliefs. Evaluators should use strong active listening skills when discussing these issues with families and should consider family needs and goals when making recommendations regarding the available evidence-based interventions for ASD.

Linguistically Diverse & Limited English Proficiency

> Whenever there are language differences in the evaluation process, the limitations in interpretation of standardized data and tool use must be strongly considered.

Providers of Michigan Medicaid Autism Services must ensure that all eligible families have access to timely and quality evaluation and treatment, including families who speak a language other than

English. Providers are required by Medicaid policy to provide professional interpretation services when needed and requested by the family. Evaluators must be aware of the impact of language barriers on the evaluation process and data obtained from direct assessment for families and children of limited English proficiency or English as a Second Language (ESL) status. Ideally, direct assessment of skills should be completed in the child's primary language by an evaluator competent in that language. However, having an evaluator who speaks the primary language of the family may not always be possible so an interpreter is utilized. When it is not feasible to conduct direct assessments in the primary language of the family, limitations of the standardized data obtained should be highlighted in the clinical report.

The ADOS-2 and ADI-R standardization samples did not include utilization of interpretation services or linguistically diverse populations (Harris et al., 2014), though the tools have been translated and validly used in many languages (Lord, 1994). Sometimes the child being assessed speaks English while the caregiver speaks another primary language. Caregivers who primarily speak a language different than their child may under-report communication deficits on the ADI-R (Vanegas et al., 2016). Additionally, there may be some variability in severity ratings on the ADI-R, such as for Hispanic children (Overton et al., 2007). For the caregiver interview, the translated version of the ADI-R should be utilized rather than having a professional interpreter translate the items for families with a non-English primary language.

The ADOS-2 should be used with caution with linguistically diverse populations, including individuals who are administered the ADOS-2 in their non-primary language. The ADOS-2 developers note that examinee comfort in the evaluation process is likely more important for the observational assessment than the language in which the tool was administered (see WPS FAQ website for more information on ADOS-2 use with linguistically diverse individuals; https://www.wpspublish.com/app/OtherServices/FAQs.aspx#FAQ=0). The ADOS-2 Toddler Module and Module 1 are largely based on nonverbal skills and, as such, there should be lower impact from language diversity, with Modules 3 and 4 likely showing the most impact. For individuals of ESL status whose parents have limited English proficiency, the tool can be used, but interpreted with caution depending on the individual's comfort in the language utilized in the assessment. Given that there is no available data to support scoring the ADOS-2 when an interpreter is utilized for the child being assessed, the measure should not be scored or interpreted with extreme caution when the interpreter was required for administration of the majority of the assessment.

Finally, evaluators should be aware that there are no data to support that bilingualism impacts language development for children with ASD or other developmental disabilities (Drysdale et al., 2014). As such, bilingual and non-English speaking families with bilingually exposed children (e.g., primary non-English language at home and English through school) should not be encouraged to adopt one language for their child. It is important for children in intervention services to continue to communicate with their family of origin, and English bias should not be present.

> Medicaid PIHP covers the cost of professional interpretation services.

Assessment considerations for culturally and linguistically diverse families:

- Take into account the impact of cultural beliefs and perceptions in ASD symptom reporting and treatment preferences

- Complete direct assessments in the child's primary language whenever possible
- Focus on completing robust interview of symptoms and observational assessment, even if diagnostic tools cannot be formally scored
- Note limitations of data obtained with linguistic barriers (e.g., ESL)
- Use available formal tool translations whenever possible rather than having interpreters translate clinical items
- Be aware that caregivers who are language discordant with their child may under-report communication deficits

Caregivers who have Limited Historical or Current Knowledge

Given that the ASD evaluation requires thorough evaluation of the developmental trajectory of symptoms beginning in early childhood, evaluations are complicated when the presenting caregiver has limited current or historical information on the child being assessed. This is often seen for children in foster care or who have had a change in their caregiving situation (e.g., recently adopted, with the other parent or family member). Although not having a solid developmental history can impact our certainty in the diagnostic process, evaluators should support medical necessity for care that is needed for the child based on the current symptom presentation. *There should not be systematic bias against children in foster care or new caregiving situations.*

> **Evaluator Tip**: Obtain as much collateral data (e.g., records, teacher reports) and observational information as possible when caregivers have limited current or historical information.

When the presenting caregiver has limited knowledge of the child, the following are recommended:

- Obtain as much symptom history information as possible through record review. Nearly all children have some pediatric medical record. Any child who has been in school will have some information on file, such as report cards, attendance, and state mandated standard educational assessments. Often children may have had contact with Early On or another early childhood intervention. For foster care situations, ensure the child's case worker attends the evaluation to provide any known information and to sign release forms allowing you to collect records.
- When allowed and consent provided, reach out to others who have information about the child. This may include teachers, day care workers, or family members.
- Conduct a thorough observational assessment *in addition to the ADOS-2*.
- Conduct developmental or cognitive assessment. This provides information on the child's mental age, which allows you to interpret your social observations.
- Be mindful of the shared variance in symptoms between ASD and traumatic stress for children with changes in primary caregivers.
- Draw preliminary or provisional diagnostic conclusions and treatment recommendations based on the data you obtained.
- Monitor the child's presentation and response to intervention.
- Reassess as needed and obtain as much information possible from intervention providers for re-evaluations.

Considerations for Utilization of a Provisional Diagnosis

Diagnostic status for children who require clinical care is sometimes uncertain, especially with complicating circumstances. The *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (DSM-5) provides the option of denoting the diagnosis as "provisional" when the clinician thinks a particular disorder is present, but recognizes that more information is required to be confident of a specific diagnosis. Per the DSM-5 (p. 23):

> The specifier "provisional" can be used when there is a strong presumption that the full criteria will ultimately be met for a disorder but not enough information is available to make a firm diagnosis. The clinician can indicate the diagnostic uncertainty by recording "(provisional)" following the diagnosis. For example, this diagnosis might be used when an individual who appears to have a major depressive disorder is unable to give an adequate history, and thus it cannot be established that the full criteria are met. Another use of the term provisional is for those situations in which differential diagnosis depends exclusively on the duration of illness. For example, a diagnosis of schizophreniform disorder requires a duration of less than 6 months but of at least 1 month and can only be given provisionally if assigned before remission has occurred.

Given that ASD requires sufficient evidence of developmental presence of symptoms in the early childhood years, there may be times in which this cannot be confirmed, such as evaluation when children are in foster care placement, with adoptive caregiver(s), or caregivers are not strong historical reporters.

Possible factors that may necessitate a provisional diagnosis:

- Early detection
- Lack of sufficient evidence of RRBs, especially in children under age two
- Caregivers with limited information
- Lack of sufficient developmental records or information
- Confounding clinical variables (e.g., separation from primary caregiver and other early childhood traumatic stressors)
- Assessment of medical status (waiting for medical information)
- Sufficient history and presentation per caregiver and collateral reports with observational assessment confounded by shut down behavior or extremely challenging behaviors that impacted assessment participation

When a provisional diagnosis is given the evaluator indicates that sufficient symptoms are present, but that a higher degree of monitoring is necessary to document the developmental profile, trajectory of symptoms, and/or response to intervention. As an example, a very young child may show a full range of social communication and interaction deficits but does not yet exhibit the full threshold of RRBs (Lord, 1995). In this circumstance based on the documented literature demonstrating that RRBs may emerge later for some children with ASD, it would be clinically appropriate to indicate the present diagnosis as ASD provisional rather than Social Pragmatic Communication Disorder (SPCD), which does not require the presence of RRBs (Ozonoff, 2012). The provisional diagnosis of ASD allows the child access to medically necessary care, whereas the SPCD diagnosis may not allow the child access to the full range of care or early intervention deemed medically necessary (Brunker-Wertman, et al., 2016).

This enhanced monitoring inherently necessitates re-evaluation and obtaining collateral information from those involved in the child's care to confirm or rule-out the provisionally determined ASD diagnosis.

When a provisional ASD diagnosis is given:

- *The child should be deemed eligible for all medically necessary care outlined in the initial evaluation report, including ABA.*
- *The re-evaluation should be conducted at the time frame specified by the initial evaluator in the clinical evaluation report when a provisional diagnosis is given.*
- *Preference should be given to returning to the initial evaluator or evaluation team for continuity of care when feasible and with caregiver agreement.*

Lack of clinician experience is not a sufficient reason to give a provisional diagnosis. In circumstances in which the evaluator lacks sufficient knowledge for challenging differential or comorbid diagnoses, the child should be referred to a highly experienced evaluator with expertise in the clinical presentation(s) complicating the referral. Ideally, these complicating variables will be assessed in the intake process with appropriate triaging of complex referrals to highly experienced evaluators or evaluation teams.

The re-evaluation when a provisional diagnosis is given should not be seen as a replication of the initial evaluation, but rather a focal process for the evaluator to update the factors that complicated the full non-provisional diagnosis (for more information see the re-evaluation section in Chapter 6).

Considerations when Individuals were Previously Diagnosed with ASD

Evaluators will, on occasion, receive referrals for children who had a recent ASD evaluation completed by another evaluator. Children will also present who have had evaluations of specific skills, such as a recent school evaluation including speech or intellectual assessment. When feasible and deemed valid, data of these recent evaluations should be utilized. One notable exception: if the caregiver is specifically requesting a second opinion evaluation, the evaluation should be conducted as a full, initial evaluation; please review the second opinion evaluation section of this document.

In cases of transfer between PIHPs or CMHSPs for individuals who were deemed to meet medical necessity criteria for ABA, the initial evaluation from the transferring region should be deemed valid and accepted unless there are clearly extenuating and clinically relevant circumstances (e.g., caregiver or provider recommending/seeking re-evaluation). An individual's eligibility of services should remain the same when moving to another county in Michigan.

In situations when the caregiver is not requesting a second opinion, but is seeking services, such as ABA, it is up to the evaluator to review the previous report to determine what evaluation components were completed and the quality of the evaluation. It is cost and time effective to use data already obtained when possible to avoid redundancy. However, evaluators are reminded that completion of the medical necessity form is based on the evaluator's credential as a QLP and that the evaluator is certifying medical necessity (or lack thereof). Thus, the evaluator should minimally conduct an interview with the presenting caregiver regarding current needs and gather some observations of the child, even when data from previous evaluations is available.

If the caregiver is not specifically asking for a second opinion evaluation, use reliable components from the recent ASD evaluation to support medical necessity, including the necessary components:

- Observational assessment (e.g., ADOS-2 and descriptive observations)
- Caregiver interview with information needed for proof of medical necessity criteria (DSM-5 symptoms) and enough information to make a clinical determination on the need for ABA
- Information on developmental, emotional-behavioral, and adaptive functioning

Any necessary components not previously completed or not completed to the extent necessary to justify the clinical conclusions and recommendations in the previous evaluation should be conducted by the evaluator. Further, any additional components the evaluator deems necessary to support the diagnosis, treatment recommendations, and medical necessity should be completed.

> Without compelling evidence that questions the validity of a previous evaluation, a comprehensive evaluation using standardized tools, even if different than those typically used by the reviewing clinician, from a qualified, competent evaluator or evaluation team should be considered valid for eligibility qualification to avoid additional strain for the family and unnecessary cost to the system. This should be determined by the QLP reviewing the previous evaluation report.

Chapter 4. Evaluation Results, Feedback, Recommendations for Management & Behavioral Health Service Eligibility

After completing initial comprehensive ASD evaluations and re-evaluations for Michigan Medicaid Autism Services (Michigan Medicaid Autism Services), the primary evaluator (and other members of the evaluation team when applicable) is responsible for drawing conclusions based on the data, including determining if a child meets criteria for a diagnosis of ASD and meets medical necessity criteria for BHT/ABA services. Caregivers are then presented with the results through a face-to-face feedback session, with the option of including the case holder (e.g., supports coordinator), assigned clinician, other professionals (e.g., parent support partner), and/or friends or family in the session. In addition, the evaluation results, conclusions, and recommendations are communicated to the family, case holder, and other providers through a written evaluation report. Evaluators and supervisors may find the ASD Evaluation Quality Checklist helpful for ensuring that best practice in ASD evaluation has been followed (see Appendix C).

This chapter includes:
- Providing feedback to caregivers
- Writing and organizing the evaluation report
- Developing high-priority recommendations
- Communicating results when the child does not present with ASD

Feedback on Comprehensive ASD Evaluations

Providing feedback to the child's family is an essential role of the evaluator. Per the APA Ethical Principles of Psychologists and Code of Conduct (2017), psychologists are required to "take reasonable steps to ensure that explanations of results" are provided to the individual or individual's designated representative, such as the child's parent or guardian (9.10 Explaining Assessment Results). Caregivers seek a comprehensive ASD evaluation to answer questions about the child's functioning, address concerns about developmental delays, and identify the appropriate services and supports for their child. As such, the evaluator needs to clearly communicate results and recommendations to the child's caregivers. Face-to-face feedback sessions (in person or by video conferencing) are strongly recommended by MDHHS and are considered best practice for ASD evaluations (Nissenbaum et al., 2002; Saulnier & Ventola, 2012). Providing feedback via a letter or notice of adverse benefit determination is not sufficient to address the clinical needs of the child and to adequately communicate the results to the child's caregivers. Caregivers also lack the ability to ask questions and determine collaboratively the next steps to best help the child. These methods should only be used when necessary due to special circumstances, such as when the child's caregivers are not able to be reached by phone or letter to schedule the feedback conference, the family has missed previous feedback session appointments, or the family cannot attend due to extreme personal barriers (e.g., chronic medical condition, transportation).

> Policy Note: Face-to-face feedback sessions with the caregiver are strongly recommended for all initial comprehensive diagnostic evaluations and re-evaluations.

Scheduling of the Feedback Session

Many families have experienced delays in obtaining the initial evaluation and accessing services, such as having concerns dismissed by the child's medical providers (Ahern, 2000; Goin-Kochel et al., 2006) and waiting to schedule the evaluation. Further, caregivers are generally more satisfied with the ASD evaluation process when there is less time waiting for a diagnosis and there are fewer professionals who have been involved in the process (Goin-Kochel et al., 2006). Evaluators are strongly recommended to schedule the face-to-face feedback session as quickly as possible following the initial diagnostic evaluation. It is often helpful to discuss scheduling this session immediately following the evaluation appointment and to provide families with reminders, such as letters, phone calls, or other electronic messages (text, email, through a client portal, etc.). Depending on the family's preference, the feedback session may be scheduled in-person at the clinic or through a HIPAA-compliant online video conferencing platform. Telehealth formats offer increased convenience for the family and reduce transportation demands in returning to the clinic on a different day. Whenever possible, the feedback session should be completed face-to-face using video technology rather than a phone call. The setting of the feedback session should be quiet, free of distractions, and as private as possible. When in person, having comfortable chairs and a set-up of furniture that encourages collaboration and communication can also help facilitate the session (Nissenbaum et al., 2002; Shea, 1993).

Feedback sessions should be scheduled for an adequate amount of time (e.g., 45 to 60 minutes) to allow for a thorough discussion of the results, review of the recommendations, and the opportunity to answer any questions the caregiver and others in attendance may have. The feedback session should be scheduled at a time that is convenient for families and that gives the evaluator adequate time to seek needed or required supervision, integrate the data and observations obtained during the evaluation, and to make thorough recommendations. When supervision or additional information is needed, it may not be possible or advisable to give feedback the same day of the evaluation. Caregivers should be informed of the purpose of the session (to discuss the child's functioning and diagnosis; to discuss recommendations for treatment). It is important that evaluators connect with the family throughout the evaluation process and show compassion; this rapport will also help the family feel supported at the feedback session. When scheduling the feedback session, caregivers should be encouraged to invite other family members or friends for support. Depending on the family's preferences, the case holder (e.g., supports coordinator), referral source (e.g., clinician), and/or other professionals should be included in the feedback session. When possible, it is typically preferable to complete feedback sessions with adult caregivers only to maximize the caregivers' attention and participation. The use of video conferencing for feedback sessions is often convenient for inviting outside professionals and family members.

Feedback to the Child

If a family would like the child to be included in the session and/or if a child/adolescent requests to participate, evaluators will need to develop a plan with the family about how to set up the session and how to communicate the results in an effective manner. With older children and adolescents, direct presentation of the feedback may be beneficial when presented in a developmentally appropriate manner, typically in a separate feedback meeting following the caregiver feedback.

Re-Evaluation Feedback

Feedback sessions should also be completed whenever conducting re-evaluations and will be especially important when updated evaluations include significant changes to the child's diagnosis or recommendations to decrease or discontinue services, such as intensive ABA. Families often develop positive relationships with behavioral providers and depend on the intensive treatment to address many of their concerns about their child. It is natural that caregivers will experience significant anxiety and stress if it is recommended that these services are discontinued, particularly as there may be a lapse before other services and supports (e.g., outpatient therapy, CLS, respite) are initiated. In these cases, it is often beneficial to include the child's case holder and/or current ABA provider in the feedback session to support the family and to ensure collaboration among providers. Evaluators should discuss specific recommendations for other services, including (less intensive) modes of treatment that will meet the child's needs. Coordination of care is essential; when appropriate, referrals to medical specialists or other agencies for treatment should be reviewed with the family and case holder to ensure the child transitions to an appropriate level of care.

> **The feedback process is especially crucial when the evaluator determines the child no longer meets medical necessity criteria for BHT/ABA services.**

In the feedback session and clinical report, it is also important for the evaluator to clarify whether the child still is diagnosed with ASD but no longer requires ABA services OR whether the ASD diagnosis is being ruled out completely. When the evaluation no longer supports an ASD diagnosis, the evaluator needs to take particular care to explain why the diagnosis is not being given, why the child may have previously met criteria for the diagnosis, and provide possible differential diagnoses, as well as recommendations for other services that are appropriate for the child's current needs. During the feedback session, the evaluator should also be sure to inform caregivers of their right to seek a second opinion on the diagnosis and/or determination of medical necessity for BHT/ABA services.

Completing the Feedback Session

Evaluators should present feedback on the results, diagnostic impressions, and recommendations to caregivers in a warm and empathic manner. Evaluators need to be knowledgeable about ASD and associated difficulties, as well as differential diagnoses when the evaluation results do not support an ASD diagnosis. Evaluators also should be familiar with the full range of services in their region.

It will often be helpful to structure the feedback session by first reviewing the reason for referral and the caregiver's concerns. Throughout the evaluation process, examiners should determine what the caregiver's expectations are in completing the evaluation and how ready the caregiver is to receive a particular diagnosis (Osbourne & Reed, 2008). Some families may not be expecting an ASD diagnosis, even though they sought the evaluation. In contrast, other families may express a sense of relief when being informed of the diagnosis because their concerns have been validated, and as such, may welcome the feedback (Nissenbaum et al., 2002).

Table 4.1 summarizes recommendations for completing feedback sessions. Evaluators are also encouraged to review the resource, "A clinician's guide to providing effective feedback to families affected by autism" (Austin et al., 2006), which is available through Autism Speaks

(https://www.autismspeaks.org/tool-kit/atnair-p-guide-providing-feedback-families-affected-autism).
There are also videos available on the website to accompany this manual and a quality checklist for
feedback sessions; these resources may be particularly helpful for trainees and less experienced
evaluators.

Table 4.1. Recommendations for Conducting Feedback Sessions With Caregivers

General Strategies for Feedback:
• Be well-organized and prepared prior to the session, including familiarizing yourself with the test results, specific observations of the child, and recommendations, and having any needed forms (e.g., release of information, consent to exchange) available to complete with the family
• Use good communication skills, including reflective listening and nonverbal communication strategies
• Speak slowly and clearly, with frequent pauses to allow for questions and reflections from caregivers
• Develop a small list (3-4) of key points to review prior to the session; summarize key points (take-home messages) at the end of the session
• Express high levels of warmth and empathy
• Monitor your own emotional reactions, even when faced with intense emotions from parents
• Allow time for questions
• Include other family members and sources of support for the family
• Use an interpreter when needed with families from non-English speaking backgrounds
Strategies for Feedback When Child is Diagnosed with ASD:
• Be knowledgeable about the ASD diagnosis and treatment options, including BHT/ABA services
• Discuss next steps for obtaining services and needed supports
• Support the family's preferences for treatment and other services
• Offer hope to the family while also being open, honest, and realistic about the ASD diagnosis and the child's functioning level
• Be prepared for a range of parental reactions and strong emotions
• Emphasize child and family strengths
Strategies for Feedback When Child is Not Diagnosed with ASD:
• Explain the process of the evaluation and why the child does not meet criteria for ASD based on an integration of the data (i.e., not just ADOS-2 score)
• Provide the family with a clear case formulation, including a diagnosis when appropriate (there usually is a reason the child was referred for the evaluation)
• Discuss recommendations for other needed services and referrals
• Inform family of the right to seek a second opinion on the diagnosis

Sharing Diagnostic Information and Recommendations

During the feedback session with families, evaluators should discuss the importance of sharing the evaluation results and coordination of care with other professionals involved in the child's treatment. In particular, evaluators are encouraged to communicate findings and coordinate care with the child's primary care provider and any other referral sources (e.g., clinician, supports coordinator). It is also important to emphasize to families that sharing the report conclusions and recommendations will assist with collaboration among different service agencies and providers to best help their child.

Evaluators should explain to caregivers the process of obtaining a copy of the final clinical report for their own records. This process varies among different organizations so evaluators will need to be familiar with their own agency procedures. The evaluator should also discuss with families the process for completing a signed release when needed to send the written report and/or give verbal feedback to external providers. It is important that the consent to exchange and release information be clearly explained to caregivers so they understand their rights in sharing (or choosing not to share) the report and diagnostic information with others. When providing verbal or written results and information to other providers, evaluators should take care to provide the minimum needed information and to protect the privacy of the family and child privacy as much as is possible.

Evaluators are responsible for completing the *Consent to Share Behavioral Health Information* (form MDHHS-5515) when sharing information between different providers. Per the [Michigan Medicaid Manual](#) (1.8.A., STANDARD CONSENT FORM), this form is required by MDHHS to allow for health care providers to share behavioral health and substance use disorder information. The consent is required to be accepted, honored, and used for all Fee for Service (FFS), Managed Care and Prepaid Inpatient Health Plan (PIHP) beneficiaries both from and to any of those providers or entities. This form was developed to ease communication among providers and different organizations, as well as to be compliant with state and federal privacy laws.

Clinical Report

The purpose of the clinical report is to communicate the results of the data collected in the comprehensive diagnostic evaluation, summarize the conclusions of the evaluation, and provide recommendations to the family. The report often serves to grant the individual access to needed services, including BHT/ABA services, other services authorized through the child's treatment plan (IPOS), and school special education. Another function of evaluation reports is to serve as evidence of the service provided, and as such, it is often necessary to describe the evaluation procedures, tests administered, and the results of assessment measures. However, this does not mean reports need to be technical and emotionless, simply a list of scores and checkboxes next to behaviors and symptoms (Schneider et al., 2018). Well-written evaluation reports provide a summary of the information gathered that is understandable to the family and others reading the report, include observations and details that are *specific* to the child and family, and clearly support the diagnosis and recommendations. *Reports should be useful to other clinical providers but also written in a manner that is understandable to the family and other non-professionals.*

The use of templates is a common practice among evaluators and often an excellent strategy to improve efficiency. However, reports that overly rely on boilerplate language may be deemed as insufficient to support the conclusions in the report. Further, long sections of clearly templated language will likely be skimmed by the reader, thus failing to communicate the results effectively (Schneider et al., 2018). It is

also essential that evaluators consider how the report may be received and interpreted by the family. Errors in the child's name, basic demographic characteristics, details about the assessment process, and unclear conclusions will not be helpful to the family and are not tolerated in the Medicaid system. In addition, errors in details about the child and family will undermine the conclusions in the report and the family's confidence in the evaluator and the assessment process. This leads to overall dissatisfaction with the evaluation process and may drive families to seek a second opinion on the diagnosis and determination of medical necessity for BHT/ABA services.

> **Evaluator Tip:**
> When using a report template, make sure to include details that are *specific* to the child. At minimum, include:
> - Review of background information obtained (e.g., developmental and medical history, academic history, history of intervention provided, family history)
> - Caregiver report of the child's ASD symptoms and emotional/behavioral functioning
> - Behavioral observations
> - Summary of the child's behavior
> - A formulation that includes:
>   - clear reasons for the determination (or rule out) of the ASD diagnosis,
>   - discussion of differential or comorbid diagnoses, and
>   - a description of child's strengths
> - Clear and necessary recommendations based on evaluation results

Reports should be well-organized, with the organization of the report serving to support the conclusions and recommendations. There are many variations of style and formatting that are acceptable for reports; many agencies also have a preferred style and organization. Reduce typos and grammatical errors as much as is possible to improve the readability of the report. In general, reports should answer the referral question and to communicate the data clearly. Evaluators should be mindful that overly detailed and lengthy reports may reduce the usefulness of the report, particularly if the report includes irrelevant information, recommendations that are not needed for the child, or excessive "filler" from templates that is not specific to the child. Evaluators should strive to be precise in their wording choices and to organize information in a clear, readable, and concise manner as much as is possible. Table 4.2 summarizes general guidelines for evaluation reports.

Table 4.2. Report Writing Guidelines.

Do:
- Write clearly and as concisely as possible
- Proofread carefully
- Clearly state the reason for referral and make sure to address referral question(s) in the formulation and conclusions
- Use person-first language (e.g., "child diagnosed with Autism Spectrum Disorder" rather than "autistic child")
- Make the report specific to the child
- Make recommendations that are tailored to the child's needs
- Include targets for intervention
- Describe strengths of the child and family
- Be sensitive to the family's cultural background, preferences, and needs

- Overreliance on template/boilerplate language
- Using the wrong child's name (upsetting to families and a HIPAA violation)
- Including other incorrect details (wrong pronouns, incorrect description of child's appearance or behavior, referring to mother when child lives with grandparents, etc.)
- Including recommendations that are not applicable to the child or family (e.g., including recommendation for ABA for a child who is not diagnosed with ASD)
- Use of checkboxes of symptoms or ADOS-2 items (long and confusing to read; are not specific to child; limited integration of data)
- Extensive use of jargon, technical terminology, or abbreviations that may not be easily understood by caregivers or professionals from other disciplines

Report Components

The following is an overview of the various sections included in the clinical report. The heading labels and organization of sections will vary depending on the template used and evaluator preference. Regardless of the exact order and style, the report should be comprehensive, include integration of the data collected, and ultimately, help the child and family. Appendix J includes several sample report templates that can be adapted to help evaluators organize the evaluation data and communicate the results clearly.

Note for Administrators and Supervisors:
The process of a comprehensive ASD evaluation requires time for evaluators to score and interpret test data, collect needed collateral records and information about the child's functioning in other settings, draw conclusions based on all gathered information, develop specific recommendations, and complete an organized and well-written report. Consider interpretation and writing time when assigning responsibilities to your evaluators and give your staff a manageable workload of evaluations per week. **When evaluation load is too high, increased errors in diagnosis are more likely to occur. Quality and accuracy of evaluation should be emphasized over speed or quantity.**

Reason for Referral
The reason for referral should include brief information about why the child's caregivers sought the evaluation. This should be tailored to each child and include specific concerns from the caregivers. Further, concerns from other referral sources (e.g., child's pediatrician, school personnel, assigned clinician) should be described. The reason for referral should serve as a context for the remainder of the report, with the goal of answering the questions raised in the referral in a clear and understandable manner. It is often helpful to summarize the referral question(s) again in the summary/case formulation section in order to organize the findings and to make the report as helpful as possible.

Background/History
In this section, evaluators summarize details about the child collected from a variety of sources, including the caregiver interview, medical records, concerns from referral sources, previous psychological, speech and language, or occupational therapy evaluations, and information from schools (e.g., IEPs, teacher observations, prior assessments, etc.). The most challenging aspect of writing the background section is to summarize the relevant information in a succinct manner. Less experienced evaluators tend to have more difficulty deciding what to include and how to organize information. Use

of section headings (family information, medical history, developmental history, school information, etc.) can be a helpful way to organize information, both easing the writing process and making the report clear and easy to follow. Chief clinical officers and supervisors should provide feedback to evaluators to assist in improving their clinical skills and report writing. See Appendix J for examples of how to organize the history section in the clinical report.

Review of ASD symptoms/ADI-R

Information about ASD symptoms, including an individual's verbal and nonverbal communication, social interaction skills, and restricted, repetitive, and sensory-related interests and behaviors is obtained through an interview with the child's caregiver (ADI-R or equivalent interview). Details about possible ASD symptoms can be included in the background section or in a specific section summarizing ASD symptoms/ADI-R results. Evaluators should include specific details about the child's functioning, including both strengths and weaknesses in communication and social skills. Examples of the child's behavior in different settings (e.g., home, playground, school, child care center, etc.) is also helpful to explain behaviors in context. This is often especially important when summarizing interview information when a diagnosis of ASD is not supported by the overall data.

It is often confusing to parents and other professionals to review a lengthy list of ASD symptoms based on the caregiver's report, only then to have the evaluator conclude later that the child does not have ASD. Providing specific examples and drawing contrast of the child's behavior between different contexts will help support the conclusions and more accurately describe the child. Further, using a template with an extensive list of possible ASD symptoms that are checked off by evaluators is not recommended; this seems impersonal and does not result in a report that is specific to a child.

> **Evaluator Tip:**
> When using the ADI-R, be cautious in interpreting the algorithm recommendations as ruling in or ruling out an ASD diagnosis. Caregivers may over- or under-report symptoms for a variety of reasons. Further, evaluators should never rely on only one piece of information to make a diagnosis.

Behavioral Observations

As outlined in Chapter 3, best practice diagnostic evaluations include observations of the child in both a semi-structured observational assessment and during other portions of the evaluation (i.e., developmental or cognitive testing). Behavioral observations serve to put the standardized test results in context and highlight personal details of the child. These sections often include description of the child's social presentation (including ease of establishing rapport), level of communication, attention, motivation and effort, behavioral control, response to feedback, and any unusual behaviors or reactions. Evaluators should ensure that the observations are relevant to the child's developmental level, clinical presentation, and the referral question. Further, it is often useful to summarize how difficulties in instructional control, attention, and communication may have affected the overall results.

> **Evaluator Tip:**
> Young children are often difficult to assess due to developmental delays, separation anxiety, inattention and hyperactivity, and weak expressive and receptive language. When working with young children, emphasize that test results should be interpreted cautiously and only reflect a child's current functioning level.

Cognitive/Developmental Testing
As emphasized in Chapter 3, assessment of an individual's developmental, cognitive, and language levels is needed to code and interpret data from the ADOS-2 and ADI-R and to appropriately consider potential differential diagnoses. Evaluators should include a review of the overall test findings, explain test scores (such as standardized scores and percentiles), and provide clear interpretation of the data. Highlighting strengths and weaknesses, as well as potential areas for intervention, is also useful when summarizing developmental/cognitive test results.

Adaptive Behavior Assessment
Adaptive behavior assessment (e.g., Vineland-3, ABAS-3) is also a key component in understanding a child's current functioning level and identifying targets for intervention. Evaluators are encouraged to summarize test scores and findings of adaptive behavior assessment, including describing relevant strengths and weaknesses. Given issues with accurate reporting from caregivers, as well as the impact of possible differential and/or comorbid diagnoses, evaluators need to provide interpretation of the findings and note possible explanations of the adaptive behavior skills reported by the caregiver.

Evaluators may choose to utilize the DD-CGAS (Wagner et al., 2007) in diagnostic evaluations and re-evaluations. It is important to note that information summarized in the overall DD-CGAS score should be obtained from a variety of sources, including standardized test data, informal observations, caregiver report (including clinical interview and completion of an adaptive behavior measure), and other collateral data when available (e.g., school records). The DD-CGAS is not considered or intended to be a test in itself; rather, it is a tool for describing the child's overall functioning and to aid in tracking outcomes of interventions.

Observational Assessment of ASD Symptoms
Observational assessment is a required component of initial ASD diagnostic evaluations and re-evaluations through Michigan Medicaid Autism Services. The ADOS-2 often serves as primary evidence for supporting or ruling out an ASD diagnosis. However, the ADOS-2, as with all assessment instruments, should never be used in isolation to determine a diagnosis. Given that many factors can affect a child's social and behavioral presentation during the ADOS-2 (e.g., extreme shyness, oppositional behavior, etc.), the written summary needs to provide a thorough description of the child's behavior, including explaining possible indicators of ASD symptoms in the context of the assessment, rather than simply a list of the algorithm items. Evaluators should include specific examples of the child's behavior, provide interpretation of behaviors and possible symptoms, and emphasize both strengths and weaknesses of the child. A checklist of the ADOS-2 algorithm items is typically not sufficient.

Summary/Case Formulation
The summary provides an overview of the results, integration of the data, and conclusions about the individual's diagnosis and current clinical presentation. If reports are well-organized, the conclusions and diagnostic impressions should flow easily and be clearly supported by the data presented in earlier sections. Summary and recommendations sections may be the only parts of reports that are read by others. As such, it is essential to write clear, specific conclusions, diagnosis or diagnoses, and recommendations that are supported by the data. Summaries should be as succinct as possible while also including the necessary information to support the diagnosis and conclusions. Only include diagnoses that are a) within the evaluator's scope of practice to diagnose and b) are included in the ICD-10 and DSM-5. Table 4.3 summarizes guidelines and strategies for writing a clear case formulation and summary.

Table 4.3. Strategies for Writing Clinical Summaries and Diagnostic Impressions.

- Structure the summary section by briefly describing and integrating information from the referral question, child's background and history, interview data, behavioral observations, and test data and interpretations
- Briefly describe and reference specific test results and background information rather than repeating the exact wording from previous sections
- All information in the summary should be from previous sections in the report; do not introduce new information or data
- Clearly explain why a diagnosis is being made based on integration of data; do not state a diagnosis is made based on only one piece of information (e.g., ADOS-2 score)
- Write as concisely as possible
- Be direct and clear when stating a diagnosis or diagnoses
- Describe the individual's strengths and weaknesses

Evaluator Tip:
Be mindful about including *rule-out* diagnoses. Understandably, it is not possible to assess for every potential symptom or understand every aspect of a child's presentation based on a single evaluation. In addition, some diagnoses need to be considered in the context of a child's developmental level and thusly need to be deferred pending intervention and maturation. However, including a long list of all possible rule-out diagnoses that were not assessed for (e.g., ADHD, intellectual disability, language disorder, oppositional defiant disorder, specific learning disorder) is not helpful to the child or family. All rule-out or provisional diagnoses should have a clear justification for their inclusion. Further, the evaluator should include specific recommendations for further evaluation and monitoring that is needed to assess for possible rule-out diagnoses.

Recommendations

The ultimate goal of initial comprehensive diagnostic and re-evaluations is to determine the appropriate services for a child, including enrolling in BHT services/ABA when deemed medically necessary. Recommendations should present an overview of high-priority services, supports, treatment targets, and accommodations for the child. The recommendations should be consistent with the child's history and current presentation, integration of test results, and diagnostic impressions included earlier in the report. The number and scope of recommendations should be realistic and manageable for the family. It is also helpful to keep recommendations time-limited, focusing on interventions and services relevant for the child's current level of development (Saulnier & Ventola, 2012). It is essential that recommendations are tailored to the child and family. This means that evaluators should strive to include personal details and clear justifications for specific recommendations whenever possible, even when working from a report template (Schneider et al., 2018).

Recommendations sections should be well-organized, including organization by specific domains (e.g., medical, educational, family resources, etc.). Evaluators should work within their level of expertise when making recommendations for professionals in other disciplines. For example, it is appropriate to recommend additional medical evaluation, such as referral to a neurologist, genetic specialist, psychiatrist, or other medical providers. However, evaluators without the necessary medical training

should not make recommendations for specific medications, other medical treatments, or tests or procedures. Table 4.4 summarizes key points in writing recommendations for the child and family.

Table 4.4. Key Points for Recommendations.

- Make recommendations *specific* to child, including child's age, developmental level, diagnosis, and family needs
- Include justification for recommended services, supports, and accommodations
- Consider all available services within your PIHP and region, including BHT services/ABA, outpatient therapy services, family support, educational services, auxiliary services such as speech and occupational therapy, and other services (e.g., CLS, respite)
- Think of recommendations as a "to do" list for families:
    o Keep the number of recommendations manageable and realistic
    o All recommendations should be *necessary* for child and family
    o Recommendations should focus primarily on services and strategies that are relevant to the child's current developmental level
- Organize recommendations by domain (e.g., treatment/clinical services, medical, educational, family, additional resources, etc.)
- Put high-priority recommendations near the top of the list
- Include referrals for outside providers and other evaluations when needed
- Be specific about timelines for re-evaluation and recommended monitoring

Summary of Report Writing and Organization

The clinical report serves as documentation of the ASD evaluation process and the need for services and supports for the child. Reports remain part of the child's medical record and are often shared with many professionals from different disciplines, including BHT/ABA providers, supports coordinators, health professionals, and school personnel. As such, evaluators are responsible for communicating results clearly and supporting the diagnostic impressions and recommendations made based on the data collected in the evaluation. Supervisors and administrators need to provide appropriate support to evaluators to allow for appropriate management of data and writing time to formulate reports that are specific, clear, and helpful to the child and family.

The following are key points about evaluation reports:

o Reports should be well-organized, carefully edited, and as clear and concise as possible
o Reports should include specific information about the child's background, behavioral presentation, and social behavior observed during the ADOS-2 and other portions of the assessment
o The case formulation and diagnosis should be supported by integration of clinical data; a single data point should *never* be used in isolation to rule in or rule out a diagnosis
o Recommendations should be specific to the needs of the child and family, address the range of services the child may need, and be realistic for the family

Evaluator Tip: With caregiver consent, evaluation reports should be sent to the primary care provider/pediatrician, treatment providers, and supports coordinator. Obtain consents for sharing the report for coordination of care.

Recommendations, Referrals, and Treatment Considerations

As emphasized throughout this manual, the diagnostic evaluation process through Michigan Medicaid Autism Services is more than simply determining eligibility for BHT services/ABA, as the primary goal is to help the child and family. Yet, determining medical necessity for BHT services/ABA is an essential role of the evaluator. The evaluator is also responsible for making recommendations for other appropriate services and supports for the child and family, including referrals to medical providers and specialists, family and community supports, and educational services. Further, the examiner is responsible for making necessary and appropriate recommendations and referrals for individuals who do *not* qualify for a diagnosis of Autism Spectrum Disorder or for whom ABA is not determined to be medically necessary. The following section summarizes various domains and interventions to be considered in recommendations for individuals who are diagnosed with Autism Spectrum Disorder. Evaluators may find the handouts developed by the Michigan Autism Council helpful, including the provider guide for referral for young children with ASD and after identification of ASD guide for parents.

Behavioral Health Treatment/Applied Behavior Analysis (ABA)

Evaluators should determine the child's diagnosis, recommend general ASD treatment interventions, and refer the child for a behavior assessment provided or supervised by a BCBA to recommend more specific ASD treatment interventions. Treatment targets and interventions are determined collaboratively with the family, BCBA, and case holder (e.g., supports coordinator). Evaluators (through the initial diagnostic evaluation and any needed re-evaluations) should also provide input regarding the individual's overall functioning and recommended targets for intervention. Increased intensity and duration generally result in greater gains from ABA, especially for mastery of skill objectives (Linstead, Dixon, & French, et al., 2017) and for building communication and early learning skills in young children with ASD, where no specific level of diminishing returns is observed (Granpeesheh et al., 2009; Linstead, Dixon, & Hong, et al., 2017). There is no specific minimum or cap on hours for ABA intervention for Michigan Medicaid Autism Services. Having rigid requirements for minimum number of hours for ABA participation may preclude some families from receiving care and result in treatment disparities for families who cannot, for a range of possible reasons, access a certain hour intensity level at the recommended dose (Pellecchia et al., 2019).

> There is not a specific minimum or maximum hours of ABA for Michigan Medicaid Autism Services. Treatment intensity and duration should be based on the specific goals for the child taking into account child and family factors and other therapies and service provision. Greater dosage (intensity and duration) is often associated with improved outcomes. Nevertheless, inability to participate at a specific dosage should not preclude children from participating in ABA treatment.

The BCBA should coordinate with other service providers, such as the child's psychiatrist, neurologist, primary care physician, school, multidisciplinary team, speech pathologist, or occupational therapist, as needed. At minimum, BCBAs should share bi-annual reports when assessments/re-assessments are completed with services providers. BCBAs also should document and share findings as needed when new goals are developed or when significant progress has been made by the child.

ABA can vary in the following domains:
- Location: Home, community, or center-based
- Intensity (number of hours per week)

- Treatment targets and interventions

Treatment targets for children, adolescents, and young adults diagnosed with ASD may include one or more of the following domains:

- **Communication**
  - Improving nonverbal communication skills, such as eye contact and pointing
  - Expanding child's use of words for requesting, labeling, answering questions, and/or participating in conversations
  - Use of nonverbal communication systems (such as Picture Exchange Communication System: PECS)
  - Improve child's understanding of instructions, prompts, and questions

- **Social interaction skills**
  - Improving child's ability to attend to others and surroundings
  - Learn how to engage in reciprocal play with peers and adults
  - Practice social initiations and greetings
  - Learn how to maintain interactions
  - Improve child's interest in others' preferences and interests
  - Practice sharing and taking turns in play and conversations
  - Learn developmentally appropriate play and social interaction skills
  - Improve interpersonal boundaries; reduce physical overtures such as grabbing, pulling, or using another person's hand as a tool

- **Reduce challenging behaviors**
  - Extreme outbursts/meltdowns
  - Aggression toward others (biting, kicking, hitting)
  - Self-injurious behaviors (head-banging, eating of non-edible objects, biting/scratching self)
  - Elopement (particularly in public)
  - Verbal aggression/threats

- **Improve adaptive behavior skills**
  - Implement a toilet training program
  - Expand child's food repertoire and eating habits (often in conjunction with multidisciplinary feeding clinic or individual providers such as occupational therapist, primary care provider, nutritionist, GI specialist, etc.)
  - Improve child's safety awareness (e.g., ability to understand simple instructions, recognize stop signs or other symbols)
  - Improve child's ability to brush teeth, dress self, or complete other self-care tasks

> **Policy Note:**
> The use of punitive, restrictive, or intrusive interventions is prohibited during ABA. The use of restraints, seclusion, and aversive techniques are prohibited by MDDHS in all community settings.

Evaluators should refer to the Medicaid manual for updated information on current medical necessity criteria, discharge criteria, and documentation requirements for BHT/ABA services. When conducting a diagnostic evaluation, evaluators need to carefully determine, based on the comprehensive evaluation results and the level of current impairment, whether an individual meets medical necessity criteria for

BHT/ABA services. Functional impairment is more than just an ADOS-2 score or diagnosis of ASD; rather, it must be demonstrated that the current impairments associated with the child's ASD diagnosis are best addressed with ABA services. Although ABA treatment will likely be helpful for a range of individuals, not every child diagnosed with ASD is in need of these services. Evaluators need to be familiar with the range of services and supports available for individuals with ASD through the local PIHP/CMHSP so they can recommend the most appropriate level of care for the child. Recommendations for services should be based on the child's current functioning level and need for intensive behavioral intervention, rather than on single data points (such as the ADOS-2 score), family preferences, or recommendations from other providers (such as supports coordinators, school personnel, BCBAs, etc.).

It is also important that evaluators (when conducting both initial diagnostic evaluations and re-evaluations) make decisions for medical necessity independently based on the data and are not unduly influenced by the agency providing ABA services or members of the child's behavioral health team. The evaluator and service provider must be free of conflict; the assigned ABA provider should not be completing the initial diagnostic evaluation or the re-evaluation.

Evaluators should consider the following questions when determining medical necessity for BHT/ABA services:

- Are symptoms of ASD currently affecting the child's functioning in one or more domains (e.g., communication, social behavior, adaptive skills), which could be addressed by ABA?
- What will ABA "look like" for the child? What specific skills will be targeted by BHT/ABA interventions?
- If child will be receiving home-based ABA, is it possible for the service to be provided in the home given the family's preferences and current living situation?
- Is there are a lower level of care through the local PIHP/CMHSP that will meet the child's current needs (e.g., outpatient therapy, CLS)?
- Are current impairments related primarily to comorbid diagnoses (e.g., severe intellectual disability, ADHD, trauma symptoms) that may be more appropriately addressed with treatment interventions other than ABA?

Once the evaluator has completed the initial diagnostic evaluation and determined the child meets criteria for an ASD diagnosis and medical necessity for BHT/ABA services, the evaluator is responsible for providing feedback to the family, as well as the case holder and/or referral source (see *Feedback on Comprehensive ASD Evaluations* section). During the feedback session, the evaluator should discuss the recommendation for BHT/ABA services. If the family is interested in pursuing ABA, the child will then be enrolled in services through Michigan Medicaid Autism Services. The next step will be the scheduling of the initial assessment by the BCBA, which will include assessment tools such as the Verbal Behavior-Milestones Assessment and Placement Program (VB-MAPP), Assessment of Basic Language and Learning Skills- Revised (ABLLS-R), Assessment of Functional Living Skills (AFLS), and/or Autism Curriculum Encyclopedia (ACE) Core Skills Assessment.

Policy Note:
Not all individuals diagnosed with ASD require ABA services; the evaluator is responsible for determining medical necessity and the appropriate services based on the child's current level of impairment and needs, as well as completion of documentation required for that region.

The parent/guardian also has the option of declining services BHT/ABA services through Michigan Medicaid Autism Services. This may occur when families do not have the resources to participate in this more intensive treatment due to other responsibilities, barriers, and/or family stressors. Some families may also prefer their current treatment provider, such as an outpatient therapy clinician, and feel that this is an appropriate level of care for the child. In other situations, families may seek the initial diagnostic evaluation solely for the purpose of better understanding their child, including obtaining a diagnosis. There may be situations in which it is reasonable and/or necessary to refer to a community provider for diagnostic assessment when unrelated to ASD service provision for highly specific situations (e.g., custody dispute, forensic evaluation, SSI/SSD). Evaluators should advise families of their choice in participating in BHT/ABA services, choosing an ABA provider, and withdrawing the child from Michigan Medicaid Autism Services at a later time if desired. Figure 6.1 summarizes the different outcomes that may occur following an initial ASD evaluation:

Figure 4.1. Outcomes and Determining Medical Necessity Criteria for BHT/ABA Services
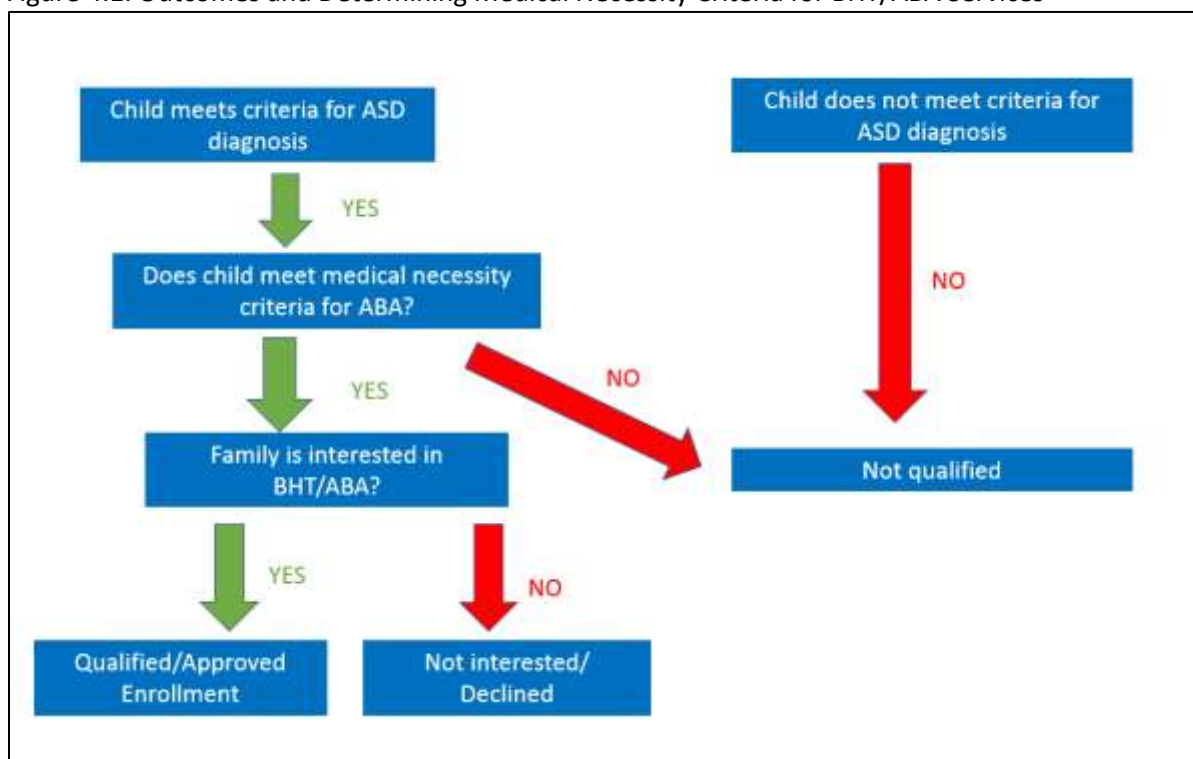
Discharge Planning

Evaluators may be involved in decisions to discharge an individual from ABA services, particularly when the determination is made based on the results of a re-evaluation. Discharge planning should be reviewed with the family, behavioral treatment team, and case holder at regular intervals (e.g., review of treatment plan, updated ABA assessment results, etc.). Services may be discontinued prior to the timeframe recommended for re-evaluation. The family should be noticed in advance of the service termination (i.e., through a notice of adverse benefit determination). Families may also choose to withdraw from BHT/ABA services or change ABA treatment providers at any time. If individuals are leaving ABA services for any reason, it may be beneficial to conduct a re-evaluation to make recommendations for alternate care and services. These re-evaluations should be requested at any

relevant time needed by the family, behavioral treatment team, case holder, or other medical professional. The PIHP should provide authorization for re-evaluations as needed.

Table 4.5 Responsibilities of Evaluator in Determining Medical Necessity for BHT/ABA services

- Determine whether child meets criteria for ASD diagnosis
- Determine whether child meets medical necessity criteria for BHT/ABA services
- Provide feedback to parent/caregiver regarding child's diagnosis and treatment recommendations
- If recommending ABA:
  - Clearly explain to family what ABA is, the steps for receiving this intervention, and the reason ABA is recommended (including potential treatment targets)
  - Provide parent with information about ABA providers in the area (including the options of center- or home-based providers)
  - Determine the family's interest in ABA therapy and preference for ABA provider
  - Ensure the caregiver understands the nature of ABA and the responsibilities and demands involved (e.g., several hours per week, parent involvement in training sessions, allowing provider to come to home if receiving home-based services, etc.)
- If not recommending ABA:
  - Clearly explain to parent why ABA is not medically necessary at this time
  - Provide recommendations for other treatment interventions and services
- Complete any necessary documentation for the region

Other Evidence-Based Therapy Services for ASD

When determining whether a child meets medical necessity criteria for BHT/ABA services, evaluators will need to consider whether intensive ABA is the appropriate level of care to address current symptoms and deficits. If ABA services are not deemed medically necessary given the individual's current presentation or if the family is not currently interested in these services through Michigan Medicaid Autism Services, other clinical services, such as individual or family therapy, social skills groups, and/or parent management training, may be warranted. These services may also be appropriate when individuals are stepping down from intensive ABA to outpatient therapy. Evaluators should include specific recommendations for other clinical services when needed and discuss the range of options in the feedback session. Particular consideration should be given to necessary therapeutic interventions considering the child's functioning level and any comorbid diagnoses. Therapy services may be home- or clinic-based (outpatient) and may range from 1 to 2 sessions a month to several times a week, depending on the child's diagnosis and level of impairment.

Clinical services may include but are not limited to:

- **Behavioral therapy**, including principles from Applied Behavioral Analysis, conducted in the outpatient setting. Consultation with a BCBA/BCaBA/QBHP, psychologist, or other qualified professional within the community mental health setting may also be needed to conduct a **functional behavior analysis (FBA)** to develop a positive behavior support plan that can be implemented in home or community settings.

- **Parent management training** (e.g., PCIT, PMTO, Incredible Years) is also often needed for children with ASD to address behavioral issues at home, particularly when children are also diagnosed with ADHD, oppositional defiant disorder, or conduct disorder.

- **Social skills interventions** are also often beneficial and can be conducted in individual or group settings. These interventions focus on targeted skill-building of social interaction skills, such as developing peer relationships, improving conversational skills, and building cooperative play skills.

- Skill-building on **emotional regulation** is also often helpful to children and youth with ASD to improve positive coping skills and understanding of one's emotional states.

- Particularly for older children and teens with mild ASD, individual or family therapy that includes approaches from **cognitive-behavioral therapy (CBT)** and/or **acceptance and commitment therapy (ACT)** may be helpful to build positive coping skills, address comorbid anxiety or mood symptoms, and/or target trauma-related symptoms.

Medical Services and Referrals

Individuals diagnosed with ASD often are medically complex and require medical care coordinated with behavioral therapy and other services. It is essential that evaluators include appropriate recommendations and referrals for needed medical assessment and treatment in clinical reports and discuss these referrals with caregivers during the feedback session. Evaluators need to be knowledgeable about medical conditions that commonly co-occur with ASD, such as seizures, sleep difficulties, feeding problems, and gastrointestinal conditions (Bauman, 2010). Further, evaluators need to be familiar with the types of specialists to refer children to for various medical evaluations and treatments.

The following include possible medical recommendations for individuals diagnosed with ASD:

- **General pediatric care and monitoring:** All children and youth diagnosed with ASD should continue routine pediatric monitoring, including well child visits, screenings, and following the recommended vaccination schedule (see Appendix G for details about recommended vaccinations by age group). The child's primary care physician/pediatrician also can determine whether referrals to other specialists or additional laboratory tests/procedures are needed for the child.

- **Other Medical Specialists:** Referrals to other specialists may be warranted based on a child's medical history, current symptoms, and/or to rule out possible medical explanations for the child's ASD diagnosis and associated developmental delays. These specialists may include:
  - Neurology
  - Genetics
  - Gastroenterology
  - Allergy/immunology

- **Psychotropic medication:** Although there are no medications that target ASD symptoms specifically, medications may be helpful in targeting symptoms associated with comorbid conditions (e.g., ADHD, anxiety) and in management of irritability and agitation associated with

ASD. Evaluators should recommend a referral for psychiatric evaluation when needed to clarify the child's diagnosis and determine the need for pharmacological intervention. Evaluators should also be knowledgeable about the current evidence-based practices regarding the use of psychotropic medication in children and youth in order to guide families and to make well-informed recommendations (see, for example, the review by Ji & Findling, 2015).

- **Management of sleep problems:** Sleep difficulties, including problems falling asleep, frequent awakenings at night, bedwetting (enuresis), and snoring, commonly occur in individuals with ASD. Medical evaluation, such as consultation with the child's pediatrician or a neurological evaluation, is often helpful to better understand possible medical causes to sleep difficulties. A referral to a behavioral sleep specialist may also be helpful.

- **Hearing and vision screening:** Particularly when working with young children with ASD, evaluators should ensure that children have had recent screenings of their hearing and vision. Hearing and vision difficulties may be harder to identify in young children with ASD given these individuals may be nonverbal and have other developmental delays. Further, hearing issues may be contributing to speech and language delays and social interaction difficulties.

Ancillary Services and Supports

Evaluators should be familiar with the full range of services and supports available through their PIHP/ CMHSP and recommend appropriate services to meet the child's needs. Eligibility for these services varies based on the child's functioning level and family needs. As such, the assigned case holder (e.g., supports coordinator) should work closely with the evaluation team, assigned BCBA, and family to determine the necessary supports and services for the child and assist with authorizing needed services in the IPOS. Further, when children are in foster care, it will be important for evaluators to consider the range of services available within MDHHS and coordinate with the child's foster care caseworker when making recommendations for services.

Given that language delays and communication deficits are commonly associated with ASD, evaluators are encouraged to recommend **speech and language therapy** to address difficulties in receptive language, verbal expression, pragmatic language skills (e.g., conversational skills), and/or articulation. **Occupational therapy** is also often recommended for individuals with ASD to build functional fine motor skills, such as grasping and manipulating small items, expanding adaptive behavior skills (e.g., dressing self, eating with utensils, etc.), and addressing sensory integration issues (including feeding difficulties). For children with coordination and motor difficulties, as well as medical conditions associated with motor impairments (e.g., cerebral palsy), **physical therapy** and/or consultation with a physical medicine and rehabilitation (PM&R) specialist may be recommended. Speech, occupational, and physical therapy services will typically require a prescription from the child's primary care provider.

Children with ASD and their families often benefit from supports in the home and community in addition to behavioral treatment and/or other therapeutic interventions. The following are common ancillary support services that should be considered for necessity:

- **Community living supports (CLS) services** are provided in home or community settings to help increase an individual's development of independence skills, support progress toward goals, and promote inclusion in the community through skills training and personal assistance. When

recommending CLS services, evaluators are encouraged to describe key domains for functional skills training and targets for interventions.

- **Respite services** provide a break to the child's caregivers by having a paid adult (through a local agency or a friend/family member) care for the child for short periods. Respite services may be beneficial for many families of children and youth diagnosed with ASD given the additional stress and demands of caring for this population. Evaluators should provide families information about respite care when appropriate; the guide, "Relax. Take a Break: A Family Guide to Respite for Children in Michigan" is a helpful resource (https://www.michigan.gov/documents/A_Family_Guide_to_Respite_139866_7.pdf).

When describing CLS and/or respite services in reports or feedback sessions, evaluators should be mindful that services cannot overlap for a child and that the amount of intervention and service hours must be medically necessary.

Educational Services

School participation and appropriate educational services, supports, and accommodations are essential for school-aged children and youth. Educational services support a child's progress toward academic goals as well as address communication, motor, self-care, behavioral, and social-emotional needs when applicable. Further, the school is often one of the primary settings for social development and exposure, such as participating in cooperative play and group activities and developing peer relationships. For very young and preschool-aged children, educational services are often beneficial to allow a child access to needed services through the local school district (e.g., speech therapy). Enrollment in an early childhood/preschool program is also often helpful to prepare children who are diagnosed with ASD for formal schooling, provide opportunities for social development, and build early learning skills.

Caregivers are often confused about the distinction between a medical diagnosis of Autism Spectrum Disorder and the certification under the Autism Spectrum Disorder category in the Individual Family Service Plan (IFSP; for children under 3) or Individualized Education Program (IEP). Evaluators should explain the differences between ASD evaluations conducted through Michigan Medicaid Autism Services and school-based evaluations, as well as the distinction between a medical diagnosis and educational eligibility of ASD. Evaluators are encouraged to recommend educational services and supports through the local school district. Recommendations can also include specific services and accommodations that may be needed through an IFSP/IEP or 504 plan. Recommendations for services and accommodations should be specific to the child and justified by the data. Recommendations for school services should also address academic, cognitive, language, and/or behavioral needs that may be associated with comorbid diagnoses, such as intellectual disabilities, learning disorders, language disorders, ADHD, and anxiety.

Per the Michigan ASD State Plan, effective coordination and collaboration between agencies and service providers, including BHT/ABA services, educational services, and medical care, is considered a critical component in supporting individuals with ASD and their families. In some cases, it may be warranted to have a modified school schedule to allow for ABA services; however, this should not be based on convenience for scheduling through the ABA agency. It is essential that providers are following current MDHHS regulations, and collaboration of care between BHT and school providers is essential. Evaluators are encouraged to refer to the guide, "IFSP and IEP Considerations for Students with ASD Receiving

Insurance-based Treatment/Intervention, available through the MDHHS website:
https://www.michigan.gov/autism/0,4848,7-294-73929---,00.html.

Parent/Family Support and Community Resources

> **Administrator Tip:**
> It is crucial that supports coordinators read evaluation reports to develop the IPOS and have discussion with families to determine next steps, evaluations, and appointments for the family.

The goal of the initial diagnostic evaluation and behavioral treatment is to help the child be successful in home, community, and school settings. Further, it is often highly stressful for families to have a child diagnosed with ASD (in some cases, multiple children). Evaluators should consider the needs of the family and make recommendations for appropriate services and additional resources. Services through the community mental health setting may include a **parent support partner (PSP)**, which is a service authorized through the child's IPOS that provides peer-to-peer support to parents/caregivers. The PSP is a trained parent with first-hand experience navigating public systems and raising a child with behavioral or emotional difficulties associated with a mental health disorder or developmental disability. Community mental health agencies may also offer parent support groups, educational activities, or recreational programs that can be beneficial to the family.

Evaluators should also direct families to well-supported local, state, and national resources, including advocacy organizations, websites, training programs, and books. The child's supports coordinator is also available to help link the family with services and resources in the area, such as recreational programs, as well as address financial needs and barriers for the family, such as in housing or transportation.

Alternative Treatments

Evaluators should be familiar with the range of treatments available and should guide families to intervention methods with strong evidence support. In particular, evaluators should advise parents against treatment methods that have been identified as harmful to children (e.g., hyperbaric oxygen, micronutrient deficiency lab tests/supplements, chelation, bleach treatment). Evaluators should also discuss the potential risks associated with other alternative treatments with limited empirical support; these risks may include lack of progress, high financial costs, and a waste of time and energy for the child and family. The Association for Science in Autism Treatment (ASAT; www.asatonline.org) and the National Autism Center's National Standards Project (www.nationalautismcenter.org/national-standards-project/) provide ongoing updates on various psychological, educational, therapeutic, and biomedical interventions, current research findings, and information about whether an intervention is currently supported by research.

Table 4.6 Summary of Recommendations for Comprehensive ASD Evaluations

- Clinical Services/Treatment
  - BHT services/ABA
  - Other behavioral therapy
  - Parent skills training and psychoeducation
  - Individual/family therapy (outpatient or home-based)
  - Social skills group

- Medical Recommendations
  - General pediatric monitoring
  - Neurology/genetics
  - Psychiatric referral
  - Evaluation and treatment to address eating or sleep difficulties
  - Vision/hearing screening

- Educational Recommendations
  - Early On/Early Intervention services through an IFSP (for children under 3)
  - IEP evaluation and development of IEP
  - School speech, occupational therapy
  - School social work services/behavioral consultation
  - Smaller classroom placement (particularly if associated intellectual delays, adaptive deficits, and/or severe challenging behaviors)
  - Supports to address cognitive and learning delays
  - 504 plan to address symptoms of ASD, ADHD, anxiety, etc.

- Ancillary Services and Community Supports
  - Speech therapy
  - Occupational therapy
  - Physical therapy
  - Community Living Services (CLS)
  - Respite
  - Parent support partner
  - Addressing barriers for family and linking to community-based programs and assistance (e.g., financial, housing, transportation)
  - Recreational opportunities in the community and through local organizations

- Additional Resources and Supports for the Family
  - Resources and education through local, state, and national organizations
  - Parent support groups and networking opportunities (in person and online)

Recommendations and Treatment Considerations when Child Does Not Qualify for an ASD Diagnosis

As emphasized in Chapter 3, evaluators are responsible for determining the appropriate services and supports for a child regardless of whether the child qualifies for an ASD diagnosis and meets medical necessity criteria for BHT/ABA services. When an individual does not qualify for a particular service (such as ABA), specific recommendations are even more essential to address the family's concerns and help the individual improve in needed areas (Schneider et al., 2018). Even if BHT/ABA services are not warranted, evaluators are still in a strong position to help the child and family and to recommended needed services and supports.

Evaluators must be familiar with the range of services and supports available in their region to address possible differential diagnoses and areas of difficulty, such as developmental delays, language disorders, intellectual disabilities, behavioral or emotional disorders, and/or environmental stressors/trauma. If evaluators do not have the appropriate knowledge or skills needed to assess for differential diagnoses and make appropriate recommendations for these issues, they should refer the child to another qualified provider *prior* to completing the evaluation (see Chapter 3). Additionally, evaluators are strongly encouraged to seek consultation with supervisors or colleagues when faced with less familiar diagnostic presentations (e.g., trauma, psychosis) to aid in assessing for possible differential diagnoses and making appropriate recommendations.

Chapter 5. Re-evaluations and Second Opinion Evaluations

Re-evaluations

Re-evaluations by a qualified licensed practitioner (QLP) are advised based on clinical need, as recommended by the examiner, to assess a child's current symptoms, and to guide treatment planning, such as continued ABA services, outpatient therapy, and ancillary services and supports[2]. Re-evaluations may be requested by the family and/or when determined medically necessary by another provider involved in the child's care. Re-evaluations are intended to be helpful updates regarding the individual's functioning and needs and can provide a broad perspective of the child's current strengths, weaknesses, emerging comorbid conditions, and need for services.

When completing the initial diagnostic evaluation, the evaluator is responsible for recommending the timeline for the re-evaluation. Evaluators should determine the recommended timeframe for an individual's re-evaluation, which should be stated clearly in the clinical report. Determining the re-evaluation period should be based on the comprehensive diagnostic evaluation and may be influenced by numerous factors, such as the child's age at the time of diagnosis, the evaluator's confidence in the diagnosis, the presence of possible comorbid conditions that require further monitoring, and the level of ASD symptoms.

In cases of a ***provisional diagnosis* of Autism Spectrum Disorder**, the diagnosing evaluator should indicate that the re-evaluation should be completed within one year of the initial diagnostic evaluation and enrollment in ABA services or when clinically relevant. Provisional diagnoses are given when the child meets criteria for an ASD diagnosis and BHT/ABA services are considered medically necessary, but the evaluator is less confident in the diagnosis or would like further information before making a definitive diagnosis. In these cases, tracking the child's progress in response to behavioral intervention is essential.

For children with an established and stable ASD diagnosis over time, there are multiple reasons for clinical need for a re-evaluation. Re-evaluations are not solely nor necessarily for the purpose of ABA qualification. Re-evaluations should provide an updated perspective on the child's overall functioning and presenting symptoms, as well as guide appropriate treatment planning. In general practice, re-evaluation is often recommended every three to five years to reflect changes in developmental stages and school transitions (e.g., elementary to middle school).

The following are possible reasons for a child requiring a re-evaluation sooner (e.g., one year) than typically clinically recommended (e.g., three to five years) after the initial diagnosis:

- Child was given a provisional diagnosis of Autism Spectrum Disorder at the time of the diagnostic evaluation

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[2] *Currently the Medicaid Provider Manual policy indicates that, "Comprehensive diagnostic re-evaluations are required no more than once every three years, unless determined medically necessary more frequently by a physician or other licensed practitioner working within their scope of practice." MDHHS is aware of this inconsistency and will be working towards reconciling Medicaid policy with Michigan statute.*

- The evaluator recommended a shorter re-evaluation timeline based on child's age (e.g., very young child where monitoring of the child's developmental status is key), functioning level, or confidence in the diagnostic evaluation
- The initial evaluation was completed in a hybrid or telehealth model rather than in-person
- The family or treatment team are requesting an update on the child's ASD symptoms and current functioning level
- The family or BHT/ABA treatment team would like to determine continued eligibility for BHT/ABA services or to determine whether other services are appropriate to best meet the child's needs
- There are concerns with possible comorbid conditions not well understood or previously assessed, or that require ongoing management and monitoring
- The child is approaching adulthood and needs support in transition planning, such as navigating guardianship and/or power of attorney needs

A referral to an appropriate provider should be made any time that a family requests an updated evaluation. A family should have the right to request a particular provider, or to return for follow-up with a provider who completed a previous evaluation, if the need for the re-evaluation is within that provider's scope of practice. *It is generally accepted as best practice for the child to follow with the initial evaluator or evaluation team for re-evaluations when desired by the family.* Referrals may also be made when clinically needed by other providers involved in the child's care, including but not limited to:

- Pediatricians or other physicians/health care providers
- ABA Providers
- Supports coordinators
- Other treatment providers (e.g., speech/language pathologists, occupational therapists, psychologists, social workers, etc.)

The case holder (supports coordinator) and BHT/ABA treatment team should request the re-evaluation based on the timeline recommended by the diagnostic evaluator (or sooner if clinically necessary). When receiving a request for a re-evaluation, the supports coordinator will be responsible for updating the IPOS and obtaining the needed authorizations for the re-evaluation. PIHPs should approve authorization requests for a re-evaluation when there is clinical need as recommended by the treatment team or other health professional.

The re-evaluation does not require any specific tools or instruments. Rather, it is up to the evaluator to determine what assessments and procedures will be most helpful to determine differential or comorbid diagnosis, update the child's functioning level, and to determine medical necessity for continued BHT/ABA services.

The ADOS-2 is not required for re-evaluations but may be included when clinically appropriate. It is not recommended to administer the ADOS-2 as a standalone tool in re-evaluations.

- Caregiver interview of current needs and symptoms
- Review of treatment progress, including relevant and applicable input from the ABA team, school staff, and other treatment providers (e.g., goals and progress in treatment; review results

of VB-MAPP/ABLLS-R/AFLS; review three-month reviews of progress; discuss treatment progress with the BCBA/BCaBA, etc.)

- Assessment of the child's current developmental/cognitive ability and adaptive functioning, or review of data in this domain if recently completed at school or by another provider
- Direct observation of the child (including tools such as the ADOS-2, BOSA, CARS-2, etc. and/or informal observation)
- Assessment of co-occurring conditions

Re-evaluations should be thorough, similar to initial diagnostic evaluations, and review current symptoms, needs, and progress to determine service clinical impressions and recommendations.

Most importantly, just like in initial diagnostic evaluations, the diagnosis of ASD and determination for medical necessity criteria in re-evaluations should *never* be based on one piece of information, such as the ADOS-2 score. As described in Chapter 3, the ADOS-2 requires an estimate of the child's language and intellectual level in order to select the appropriate module and to score the algorithm items. The ADOS-2 is not intended to be used in isolation to make a diagnosis or decisions about services. Further, the ADOS-2 was designed for diagnostic stability and was not intended to be used for treatment monitoring purposes (Lord et al., 2012). When conducting re-evaluations, evaluators need additional information about the child's current functioning, including response to ABA services and current functioning across home, school, and community settings.

Please see Appendix D for a sample re-evaluation report template.

Administrator Tip:

Feedback sessions are essential for re-evaluations and should be completed as clinically needed to update the child's care plan and supported by the PIHP/regions.

Second Opinion Evaluations

As is emphasized throughout this manual, conducting diagnostic evaluations for ASD is a complex process that requires a strong training background and examiner expertise. The expanse of age groups (ranging from very young toddlers to young adults) and complex symptom presentations of individuals referred for evaluations and services through Michigan Medicaid Autism Services further complicates the process of diagnosing ASD and making appropriate recommendations for services. Even the most skilled evaluators will be uncertain of the appropriate diagnosis at times and must make the best decision possible based on the information available, the child's developmental level, and their clinical judgment. Research findings have shown there is significant variability among different professionals in making an ASD diagnosis (Williams et al., 2009). In particular, there is disagreement in the diagnosis of ASD when practitioners do not use assessment tools with strong evidence base. Inconsistencies among professionals in diagnosing ASD in children from non-English-speaking backgrounds have also been identified (Williams et al., 2009). In addition, well-established tools such as the ADOS-2 and ADI-R may yield inaccurate data with certain symptom presentations, such as ADHD (Grzadzinski et al., 2016).

Given the variability in opinions regarding diagnoses and the complexity of the evaluation process, there will inevitably be situations in which a second opinion evaluation is warranted. Historically, second

opinion evaluations (i.e., second opinion requests that are initiated by the patient/client) have been more common in medical settings than in the mental health field (Heuss et al., 2018). The second opinion process has the benefit of ensuring optimal care for the individual and increasing trust with treatment providers (Heuss et al., 2018). Given the level of services associated with intensive ABA, many families will understandably be highly motivated to receive these services, especially since ABA can typically only be accessed when an individual has a diagnosis of ASD. Caregivers may be upset and frustrated when they feel their child is in need of BHT/ABA services and the evaluator determines the child does not qualify. In particular, discontinuing ABA services or ruling out a previous ASD diagnosis based on a re-evaluation is often unexpected and distressing for families.

Other factors that may contribute to the seeking of a second opinion include:
- Evaluations that are too short,
- Evaluations that do not include information about a child's functioning outside of the observational assessment,
- Insufficient evaluation of possible comorbid or differential diagnoses,
- Lack of explanation between parent report and clinician observation,
- Poor rapport between the examiner and caregiver, and
- Insufficient communication to the family during the feedback session and/or clinical report.

Families are allowed to request second opinion evaluations per MDHHS policy. Information about how to request a second opinion should be provided to families following the initial evaluation.

Even when evaluators follow best practices for completing evaluations and feedback sessions, families may be dissatisfied with the evaluation process or the decisions made based on the evaluation. Per Medicaid guidelines, if the beneficiary requests, the PIHP must provide for a second opinion from a qualified health care professional within the network or arrange for the beneficiary to obtain one outside the network, at no cost to the beneficiary. Evaluators, as well as the IPOS case holder, should ensure they advise caregivers of their rights in seeking a second opinion and to appeal any decision to deny or change the amount, duration, or scope of a particular service.

Conducting Second Opinion Evaluations

Per Medicaid guidelines, the PIHP must assure that any decision to deny a service authorization request or to authorize a service in an amount, duration, or scope that is less than requested, must be made by a health care professional who has appropriate clinical expertise in treating the beneficiary's condition. As such, it is essential that evaluators have the appropriate qualifications and are working within their scope of practice when conducting initial diagnostic evaluations and re-evaluations (see Chapter 2).

Further, the PIHP must identify qualified professionals within the network (or outside of the network when needed) who can conduct second opinion evaluations. These individuals should have a high level of expertise and experience in conducting comprehensive ASD evaluations, including strong knowledge of differential and comorbid diagnoses. If evaluators receive a referral for a second opinion evaluation, they should refer the family to a different provider if they do not have the appropriate expertise needed to complete the evaluation or if they have a conflict of interest related to the family (e.g., the evaluator is also the direct treatment provider).

When conducting a second opinion evaluation, the guidelines for conducting best practice evaluations for initial diagnostic evaluations should also be followed (see Chapter 3). Regardless of whether the family requested the second opinion evaluation after an initial diagnostic evaluation or based on discontinuation of ABA services following the re-evaluation, the second evaluation needs to be comprehensive. Simply conducting portions of the evaluation, such as the ADOS-2, or relying primarily on the opinions and conclusions of the previous evaluator, is *not* recommended. The evaluator will typically review the results of the previous evaluation(s) and the individuals' treatment records in the process of the evaluation, meaning the evaluator will be aware of the previous diagnosis and recommendations. The evaluator still needs to reach an independent decision based on the data collected through the second opinion process. The evaluator should be aware of the test re-administration rules and use alternate measures for assessing cognition and other domains. The feedback session and written report should clearly explain the supporting data for the diagnosis (or rule out of the diagnosis) as well as justification for the recommendations for treatment.

> **Best Practice Tip:**
>
> When conducting a second opinion evaluation, determine what questions the caregivers have and what outcome they are seeking. Families are typically seeking clear answers about their child's diagnosis and functioning level, as well as specific recommendations, rather than simply seeking an ASD diagnosis and enrollment into BHT services/ABA.

Chapter 6. Michigan Medicaid Autism Services: Frequently Asked Questions (FAQs)

The following is a collection of common questions regarding the Michigan Medicaid Autism Services:

Is there a requirement that ASD evaluations must be completed within 14 days of a request?

- Evaluations should occur in a timely manner
- The 14 day mandate relates to initial contact with the family/individual, which could include intake, supports coordination, development of the IPOS, etc.

    See Michigan Medicaid Autism Services policy: Michigan Medicaid Policy, Provider Manual

Are the evaluations only to be used for diagnosis of ASD and recommending ABA services? Should other diagnoses and/or treatment recommendations be considered?

- Diagnosing clinicians should work within their expertise, but we encourage you to consider other appropriate diagnoses and make recommendations about follow-up care as appropriate.
- Remember that youth/families have concerns and are looking for help as much as, or more than a diagnostic label.

    See Chapter 3: Comorbid & Differential Diagnoses and Chapter 4: Recommendations, Referrals, and Treatment Considerations

Is ABA eligibility determination made based on ADOS-2 and ADI-R scores?

- Clinical diagnosis of ASD, including administration and interpretation of ADOS-2, and clinical recommendation of ASD is required.
- Tools are part of the assessment, but tools do not make the ASD diagnosis, QLPs do.

    See Chapter 3: Comorbid & Differential Diagnoses and Chapter 4: Recommendations, Referrals, and Treatment Considerations

Will Medicaid cover additional assessment practices (such as cognitive/ developmental, adaptive behavior, and/or symptom monitoring), or is there is a capped rate of reimbursement for evaluations?

- Clinicians should work closely with their CMHSPs agencies and regional entities to determine allowable services and rates
- Comprehensive evaluation, including assessment of intellectual and adaptive functioning, has always been allowed

- Clinicians are encouraged to use tools within their expertise that help answer important questions about the youth being served and help plan appropriate treatments
- If not in scope, REFER before making determination

  See Chapter 3: Essential components of a comprehensive ASD evaluation

Can a provider use results from a recent outside evaluation in eligibility determination?

- Data from recent previous evaluations can and should be used when feasible and deemed reliable and valid.
- Unnecessary replication of tests is a burden on the family and wasteful.

  See Chapter 3: Considerations when individuals were previously diagnosed with ASD

What should I do if I get a case outside of my expertise or scope of practice?

- Nobody is all-knowing! Your region can help connect you with more experienced or specialized clinicians for special or unclear cases outside your comfort level
- We routinely share results with the family physician / pediatrician to recommend medical follow-ups, which they can usually coordinate
- Sometimes a flexible approach may be needed, e.g., we may provisionally diagnose autism, but recommend a hearing evaluation or other workup. Your CMHSPs agency and region can work with you to authorize a re-assessment or change in the treatment plan when needed

  See figure 3.1

Can physicians provide ASD diagnostic evaluations and/or write prescriptions for ABA?

- Evaluations are performed by a qualified licensed practitioner working within their scope of practice and who is qualified and experienced in diagnosing ASD
- Qualified licensed practitioner include: physicians, psychologists, advanced practice registered nurses, physician assistants, or clinical social workers with training, experience, or expertise in ASD and/or behavioral health
- Physicians must follow the same evaluation procedures and use of tools; a prescription does not equal proof of medical necessity

  See Chapter 3: Essential components of a comprehensive ASD evaluation

Are ASD re-evaluations still necessary?

- While not required for continued eligibility for BHT/ABA services, there are a host of situations in which re-evaluations are best practice and useful to the child and family

  See Chapter 5: Re-evaluations

Are re-evaluations completed for the purpose of re-diagnosing ASD?

- Autism is usually a lifelong condition (although somewhat less than 10% of children who are credibly diagnosed with autism do seem to "grow out of" meeting autism criteria)
- The purpose of re-evaluation is usually not to see if the child "still" has ASD but to make sure that intensive interventions such as ABA are sufficient and/or still most appropriate, if any additional treatments are needed, assess for comorbidities, etc.
- Diagnosing clinicians can also be valuable in helping the family integrate the ABA part of their treatment plan with larger life goals and medical goals for their child

See Chapter 5: Re-evaluations

Is there is a specific (e.g., 7, 14, 30 day) timeline requirement for the evaluation report to be completed and uploaded?

- There is no specific timeline for the evaluation report to be uploaded. The report should be completed in a timely manner with all data from the evaluation incorporated in the clinical impressions and recommendations.
- There should not be long delays for reports to be completed and uploaded.

See Michigan Medicaid Autism Services policy: [Michigan Medicaid Policy, Provider Manual](#)

Is the speed of scheduling and completion of evaluations a priority over quality and thoroughness of evaluations?

- It is imperative that evaluations are done in a comprehensive manner with the most diagnostic certainty possible.
- Quality and thoroughness are essential.

See Chapter 3: Essential components of a comprehensive evaluation

How many evaluations should a provider be able to complete in one day and/or per week?

- ASD evaluations are complicated and require integration of multiple sources and modes of data, as well as interpretation of qualitative observations. This necessitates time for the evaluator to organize the data, score measures, and write a clear and useful report. Evaluators will need time to do so; without this time, it is likely that more diagnostic errors will occur.
- For individual providers, conducting more than one evaluation per day and/or more than five evaluations per week is not recommended.

See Chapter 3: Essential components of a comprehensive evaluation

Is ABA always appropriate for a child diagnosed with ASD?

- ABA is the most effective therapy form that produces the most benefit in the largest number of children with ASD. *However, it is not the only effective tool nor is it the best tool for every specific child.*
- Children who are doing very well in the community might need much more targeted ABA help or might be better served through the school system and with other community supports rather than ABA. Some youth with ASD whose primary problems are associated anxiety/depression might be better off in psychotherapy or children's case management.
- Recommend ABA when it is a good fit for the child's needs and at an intensity that is appropriate to the problem.

  See Chapter 4: Recommendations, Referrals, and Treatment Considerations

Is there a minimum number of hours or a cap for ABA hours?

- ABA can be applied many ways and treatment intensity should be based on child needs and child/family factors:
  - Early Intensive Behavioral Intervention (EIBI) shows best success with increased dosage (>20 hours), though gains are made with more modest dosage
  - Modified ABA to meet developmental needs of very young children (e.g., Early Start Denver Model)
  - ABA hours as needed for skill building
  - ABA hours as needed for problem behaviors
  - Social skills group
  - Parent training models
  - Consultative ABA to inform current care plans

- Hours should be based on:
  - Medical necessity of dose
  - Goals for skill building/behavior targets
  - Family choice and child capacity to participate
  - Hours are determined by the family, ABA treatment team, and supports coordinator

  See Chapter 4: Applied Behavioral Analysis

What do all of the different terms and acronyms mean in this document?

Here are some common terms and acronyms used in this manual:

Terms and Acronyms	Definition
Applied Behavior Analysis (ABA)	A process of systematically applying a variety of evidence- based practices to improve socially significant behavior (e.g. those important for successful functioning in a variety of

	environments). ABA is founded in the scientific principles of behavior and learning and includes, but is not limited to, functional communication training, discrete trial training, reinforcement, prompting, incidental teaching, schedules, naturalistic teaching, shaping, and pivotal response training.
Autism Diagnostic Interview – Revised (ADI-R)	A structured interview tool that may be used to diagnose Autism Spectrum Disorder (ASD), plan treatment, and distinguish autism from other developmental disorders.
Autism Diagnostic Observation Schedule (ADOS-2)	An observational assessment measure that may be used in the diagnostic and assessment process for Autism Spectrum Disorder.
Board Certified Assistant Behavior Analyst (BCaBA)	A bachelor level certification for a person who may provide behavioral assessment, behavioral intervention, and behavioral observation and direction under the supervision of a BCBA
Board Certified Behavior Analyst-Doctoral (BCBA-D)	A doctoral level certification for a person who may provide behavioral assessment, behavioral intervention, and behavioral observation and direction.
Board Certified Behavior Analyst (BCBA)	A master's level certification for a person who may provide behavioral assessment, behavioral intervention, and behavioral observation and direction.
Behavioral Health Treatment (BHT)	The "umbrella" of behavioral interventions, including Applied Behavior Analysis (ABA), which have been identified as evidence-based by nationally recognized research reviews and/or other nationally recognized substantial scientific and clinical evidence.
Community Mental Health Services Program (CMHSP)	A government contracted entity that manages mental health services for people enrolled in Medicaid.
Early and Periodic Screening, Diagnostic, and Treatment Benefit (EPSDT)	A benefit that provides comprehensive and preventive health care services for children under the age of 21 who also are enrolled in Medicaid.
Functional Behavior Assessment (FBA)	An assessment used to identify the function of certain behaviors of an individual with a developmental disability.
Individualized Education Program (IEP)	A plan developed by a team, for eligible students with disabilities under state and federal special education law, that describes the offer of free appropriate public education in the least restrictive environment, including special education, and/or related services and/or supplementary aids and services.
Individual Plan of Service (IPOS)	Developed through the Person-Centered Planning (PCP) process, the IPOS includes information about the individual, goals and outcomes, and the services needed to achieve those goals and outcomes.
Michigan Department of Health and Human Services (MDHHS)	The department responsible for health policy and management of the state's health, mental health, and substance use care system.
Personal Protective Equipment (PPE)	Clothing or equipment designed to minimize hazards and protect a person from injury or infection (e.g., face masks, shields, gloves)
Prepaid Inpatient Health Plan (PIHP)	The entity responsible for managing behavioral health services for individuals enrolled in Medicaid.

Restricted and repetitive behaviors (RRBs)	Restricted and repetitive behaviors assessed for as part of the diagnostic criteria for Autism Spectrum Disorder, including stereotyped motor movements and language, restricted interests, repetitive or ritualized patterns of behavior, and hyper- or hyposensitivities
Qualified Behavioral Health Professional (QBHP)	Professional who meets MDHHS requirements for providing behavioral health treatment
Qualified Licensed Practitioner (QLP)	Professional who meets MDHHS requirements for conducting diagnostic ASD evaluations. Based on the evaluation, the qualified licensed practitioner (QLP) determines the child's diagnosis, recommends general ASD treatment interventions, and refers the child for a behavior assessment.
Telehealth	Delivery of healthcare remotely by means of telecommunications technology. Tele-assessment refers to assessment completed remotely using technology (video and audio communication)

Additional questions?

Reach out to the MDHHS ASD program staff if you have any MMAS clinical or policy questions or problems. https://www.michigan.gov/autism/0,4848,7-294-63683---,00.html

References

Ahern, K. (2000). Something is wrong with my child: A phenomenological account of a search for a diagnosis. *Early Education and Development 11*, 187–200.

Alfuraydan, M., Croxall, J., Hurt, L., Kerr, M., & Brophy, S. (2020). Use of telehealth for facilitating the diagnostic assessment of Autism Spectrum Disorder (ASD): A scoping review. *PloS one*, *15*(7), e0236415. https://doi.org/10.1371/journal.pone.0236415

Amaral, D., Geschwind, D., & Dawson, G. (2011). *Autism Spectrum Disorders*. Oxford University Press.

American Academy of Pediatrics. (2011). ADHD: Clinical practice guideline for the diagnosis, evaluation, and treatment of attention-deficit/hyperactivity disorder in children and adolescents. *Pediatrics, 128*(5), 1007-1002. doi:10.1542/peds.2011-2654

American Academy of Pediatrics. (2006). Identifying infants and young children with developmental disorders in the medical home: An algorithm for developmental surveillance and screening. *Pediatrics, 118*(1), 405-420.

American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.).American Psychiatric Association.

American Psychological Association. (2017). Ethical principles of psychologists and code of conduct (2002, Amended June 1, 2010 and January 1, 2017). Retrieved from http://www.apa.org/ethics/code/index.aspx

American Psychological Association. (2001). *Publication manual of the American Psychological Association* (6th ed.). American Psychological Association.

Antezana, L., Scarpa, A., Valdespino, A., Albright, J., & Richey, J. A. (2017). Rural Trends in Diagnosis and Services for Autism Spectrum Disorder. *Frontiers in psychology*, *8*, 590. https://doi.org/10.3389/fpsyg.2017.00590

Armstrong, C. (2008). AAP releases guideline on identification of children with autism spectrum disorders. *American Family Physician, 78*(11), 1301-1305.

Austin, A., Katz, T., & Reyes, J.P. (2006). A clinician's guide to providing feedback to families affected by autism. Retrieved from https://www.autismspeaks.org/tool-kit/atnair-p-guide-providing-feedback-families-affected-autism.

Bailey, A., Le Couteur, A., Gottesman, I., Bolton, P., Simonoff, E., Yuzda, E., & Rutter, M. (1995). Autism as a strongly genetic disorder: Evidence from a British twin study. *Psychological Medicine, 25*(1), 63-77.

Barnard-Brak, L., Brewer, A., Chesnut, S., Richman, D., & Schaeffer, A. M. (2016). The sensitivity and specificity of the social communication questionnaire for autism spectrum with respect to age. *Autism Research*, *9*(8), 838–845. https://doi.org/10.1002/aur.1584

Bauman, M.L. (2010). Medical comorbidities in autism: Challenges to diagnosis and treatment. *Neurotherapeutics, 7*(3), 320-327.

Bekhet, A.K., Johnson, N.L., & Zauszniewski, J.A. (2012). Resilience in family members of persons with autism spectrum disorder: A review of the literature. *Issues in Mental Health Nursing, 33*(10), 650-656.

Bellini, S. (2006). The development of social anxiety in adolescents with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities*, *21*(3), 138–145.

Bernard, J. M. & Goodyear, R.K. (2009). *Fundamentals of Clinical Supervision* (6th ed.). Pearson.

Bernier, R., Mao, A., & Yen, J. (2010). Psychopathology, families, and culture: Autism. *Child and Adolescent Psychiatric Clinics, 19*(4), 855-867.

Berument, S. K., Starr, E., Pickles, A., Tomlins, M., Papanikolauou, K., Lord, C., et al. (2005). Pre-linguistic Autism Diagnostic Observation Schedule adapted for older individuals with severe to profound mental retardation: A pilot study. *Journal of Autism and Developmental Disorders, 35*, 821–829.

Booth, T., Booth, W., & McConnell, D. (2005a). The prevalence and outcomes of care proceedings involving parents with learning difficulties in the Family Courts. *Journal of Applied Research in Intellectual Disabilities, 18,* 7-17.

Boyd, B.A. et al. (2010). Sensory features and repetitive behaviors in children with autism and developmental delays. *Autism Research: The official the International Society for Autism Research, 3*(2), 78-87.

Brereton, A., Tonge, B. & Einfeld, S. J. (2006). Psychopathology in children and adolescents with autism compared to young people with intellectual disability. *Journal of Autism and Developmental Disorders, 36*(7), 863-870.

Brookman-Frazee, L.I., Drahota, A., & Stadnick, N. (2012). Training community mental health therapists to deliver a package of evidence-based practice strategies for school-age children with Autism Spectrum Disorder: A pilot study. *Journal of Autism and Developmental Disorders, 42*(8), 1651-1661.

Bruininks, R., Woodcock, R., Weatherman, R, & Hill, B. (1996). *Scales of Independent Behavior-Revised*. Riverside Publishing.

Brukner-Wertman, Y., Laor, N., & Golan, O. (2016). Social (Pragmatic) Communication disorder and its relation to the Autism Spectrum: Dilemmas arising From the DSM-5 classification. *Journal of autism and developmental disorders*, *46*(8), 2821–2829. https://doi.org/10.1007/s10803-016-2814-5

Burkett, K. et al. (2015). African American families on autism diagnosis and treatment: The influence of culture. *Journal of Autism and Developmental Disorders, 45*(10) 3244-3254.

Butchart, M. et al. (2017). Autism and visual Impairment: A review of the literature. *Review Journal of Autism and Developmental Disorders, 4*(2), 118-131.

Capps, L ., Yirmiya, N. & Sigman, M. (1992). Understanding of simple and complex emotions in non-retarded children with autism. *Journal of Child Psychology and Psychiatry 33*, 1169–82

Cass, H. (1998). Visual impairment and autism: Current questions and future research. *Autism, 2*(2), 117-138.

Centers for Disease Control and Prevention. (2015). Vaccines do not cause Autism. Retrieved from https://www.cdc.gov/vaccinesafety/concerns/autism.html

Centers for Disease Control and Prevention (2018). Community Report on Autism. Retrieved from https://www.cdc.gov/ncbddd/autism/addm-community-report/documents/addm-community-report-2018-h.pdf

Centers for Disease Control and Prevention. (2012). Prevalence of autism spectrum disorders: Autism and developmental disabilities monitoring network, 14 Sites, United States, 2008. *Morbidity and Mortality Weekly Report, 61*(SS03), 1-19.

Centers for Disease Control and Prevention. (2019). Developmental monitoring and screening. Retrieved from https://www.cdc.gov/ncbddd/childdevelopment/screening.html.

Charman, T., Swettenham, J., Baron Cohen, S., Cox, A., Baird, G., & Drew, A. (1998). An experimental investigation of social-cognitive abilities in infants with autism: Clinical implications. *Infant Mental Health Journal, 19*(2), 260–275.

Cohen, H., Amerine-Dickens, T., & Smith, T. (2006). Early intensive behavioral treatment: Replication of the UCLA model in a community setting. *Journal of Developmental and Behavioral Pediatrics, 27*(2), 145-155.

Corsello, C. et al. (2007). Between a ROC and a hard place: decision making and making decisions about using the SCQ. *Journal of Child Psychology and Psychiatry*, 48(9), 932-940.

Courchesne, V., Girard, D., Jacques, C., & Soulieres, I. (2019). Assessing intelligence at autism diagnosis: Mission impossible? Testability and cognitive profile of autistic preschoolers. *Journal of Autism and Developmental Disorders, 49*(3), 845-856.

Couture, S. M., Penn, D. L., Losh, M., Adolphs, R., Hurley, R., & Piven, J. (2010). Comparison of social cognitive functioning in schizophrenia and high functioning autism: More convergence than divergence. *Psychological Medicine, 40*(4), 569–579.

Daniels, A.M., Rosenberg, R.E., Law, J.K., Lord, C., Kaufmann, W.E., & Law, P.A. (2011). Stability of initial autism spectrum disorder in community setting. *Journal of Autism and Developmental Disorders, 41*(1), 110-121.

Davidson, C., O'Hare, A., Mactaggart, F., Green, J., Young, D., Gillberg, C., & Minnis, H. (2015). Social relationship difficulties in autism and reactive attachment disorder: Improving diagnostic validity through structured assessment. *Research in Developmental Disabilities*, *40*, 63–72.

de Bildt, A. et al. (2015). Autism Diagnostic Interview-Revised (ADI-R) Algorithms for Toddlers and Young Preschoolers: Applications in a Non-US Sample of 1,104 Children. *Journal of Autism and Developmental Disorders*, 45, 2076-2091.

de Bildt, A. et al. (2004). Interrelationship between Autism Diagnostic Observation Schedule-Generic (ADOS-G), Autism Diagnostic Interview-Revised (ADI-R), and the Diagnostic and Statistical

Manual of Mental Disorders (DSM-IV-TR) classification in children and adolescents with mental retardation. *Journal of Autism and Developmental Disorders, 34*(2), 129-137.

de Bildt, A., Sytema, S., Meffert, H., & Bastiaansen, J.A. (2016). The Autism Diagnostic Observation Schedule, Module 4: Application of the revised algorithms in an independent, well-defined, Dutch sample (n = 93). *Journal of Autism and Developmental Disorders*, *46*, 21–30.

De Lacy, N., & King, B.H. (2013). Revisiting the relationship between autism and schizophrenia: Toward an integrated neurobiology. *Annual Review Clinical Psychology, 9*, 555-587.

DeStefano, F., Bhasin, T.K., Thompson, W.W., Yeargin-Allsopp, M., & Boyle, C. (2004). Age at first measles-mumps-rubella vaccination in children with autism and school-matched control subjects: A population-based study in metropolitan Atlanta. *Pediatrics, 113*(2), 1-5.

Drysdale, H., Van Der Meer, L., & Kagohara, D. (2015). Children with autism spectrum disorder for bilingual families: A systematic review. *Review of Autism and Developmental Disorders, 2*(1), 26-38.

Durkin, M.S. et al. (2008). Advanced parental age and the risk of autism spectrum disorder. *American Journal of Epidemiology, 168*(11), 1268-1276.

Eaves, L.C., Wingert, H., & Ho, H.H. (2006). Screening for autism: Agreement with diagnosis. *The National Autistic Society, 10*(3), 229-242.

Eldevik, S., Hastings, R.P., Hughes, J.C., Jahr, E., Eikeseth, S., & Cross, S. (2009). Meta-Analysis of early intensive behavioral intervention for children with autism. *Journal of Clinical Child & Adolescent Psychology, 38*(3), 439-450.

Ennis-Cole, D., Durodoye, B.A., & Harris, H.L. (2013). The Impact of culture on autism diagnosis and treatment: Considerations for counselors and other professionals. *The Family Journal: Counseling and Therapy for Couples and Families, 21*(3). 279-287.

FAIR Health White Paper (2020). Risk factors for COVID-19 mortality among privately insured patients: A claims data analysis [White paper]. https://www.fairhealth.org/publications/whitepapers

Folstein, S.E., & Rosen- Sheidley, B. (2001). Genetics of autism: complex aetiology for a heterogeneous disorder. *Nature Reviews Genetics, 2*, 943-955.

Fombonne, E. (2005). The changing epidemiology of autism. *Journal of Applied Research in Intellectual Disabilities*, *18*, 281-294.

Ghandour, R.M. et al. (2018). Prevalence and treatment of depression, anxiety and conduct problems in US children. *Journal of Pediatrics, 206*, 256-267.

Ghaziuddin, M., & Zafar, S. (2008). Psychiatric comorbidity of adults with autism spectrum disorders. *Clinical Neuropsychiatry, 5*(1), 9-12.

Gillott, A., Furniss, F., & Walter, A. (2001). Anxiety in high-functioning children with autism. *Autism*, *5*(3), 277–286.

Goin-Kochel, R. P., Mackintosh, V. H., & Myers, B. J. (2006). How many doctors does it take to make an autism spectrum diagnosis? *Autism, 10*(5), 439-451. doi:10.1177/1362361306066601

Goldstein, S., & Ozonoff, S. (2018). *Assessment of autism spectrum disorders.* Guilford Press.

Goldstein, S., & Schwebach, A.J. (2004). The comorbidity of Pervasive Developmental Disorder and Attention Deficit Hyperactivity Disorder: Results of a retrospective chart review. *Journal of Autism and developmental Disorders*, *34*(3), 329-339.

Gorgens, K.A. (2011) Clinical Interview. In J.S. Kreutzer, J. DeLuca, & B. Caplan (Eds.), *Encyclopedia of Clinical Neuropsychology*. New York, NY: Springer.

Gotham, K., Bishop, S.L., & Lord, C. (2011). Diagnosis of Autism Spectrum Disorders. In D. Amaral, D. Geschwind, & G. Dawson (Eds.), *Autism Spectrum Disorders* (30-43). Oxford University Press.

Gotham, K., Unruh, K., & Lord, C. (2015). Depression and its measurement in verbal adolescents and adults with autism spectrum disorder. *Autism: The International Journal of Research and Practice*, *19*(4), 491–504.

Gray, K.M., Tonge, B.J., & Sweeney, D.J. (2008). Using the Autism Diagnostic Interview-Revised and the Autism Diagnostic Observation Schedule with young children with developmental delay: Evaluating diagnostic reliability. *Journal of Autism and Developmental Disorders, 38*(4), 657-667.

Granpeesheh, D., Dixon, D., Tarbox, J., Kaplan, A., & Wilke, A. (2009). The effects of age and treatment intensity on
behavioral intervention outcomes for children with autism spectrum disorders. *Research in Autism Spectrum Disorders*, *3*(4), 1014-1022.

Greenlee, J.L. et al. (2016). Medical and behavioral correlates of depression history in children and adolescents with autism spectrum disorder. *Pediatrics, 137*(2), S105-S114.

Groth-Marnat, G. (2009). *Handbook of Psychological Assessment*. Wiley & Sons Publishing.

Grzadzinski, R., Dick, C., Lord, C. & Bishop, S. (2016). Parent-reported and clinician-observed autism spectrum disorder (ASD) symptoms in children with attention deficit/hyperactivity disorder (ADHD): Implications for practice under DSM-5. *Molecular Autism, 7*(1), 7.

Harris, B., Barton, E., & Albert, C. (2014). Evaluating autism diagnostic and screening tools for cultural and linguistic responsiveness. *Journal of Autism and Developmental Disorders 44*(6), 1275-1287.

Harrison, P. L., & Oakland, T. (2015). *Adaptive Behavior Assessment System* (3rd ed.). Western Psychological Services.

Hartley, S. L., Sikora, D. M., & McCoy, R. (2008). Prevalence and risk factors of maladaptive behaviour in young children with Autistic Disorder. *Journal of Intellectual Disability Research*, *52*(10), 819–829.

Haruvi-Lamdan, N., Horesh, D., & Golan, O. (2018). PTSD and autism spectrum disorder: Co-morbidity, gaps in research, and potential shared mechanisms. *Psychological Trauma: Theory, Research, Practice and Policy, 10*(3), 290-299.

Hattier, M,A., Matson, J.L., Tureck, K., & Horovitz, M. (2011). The effects of gender and age on repetitive and/or restrictive behaviors and interests in adults with autism spectrum disorders and developmental disabilities. *Research in Developmental Disabilities, 32*(6), 2346-2351.

Havdahl, K.A. et al. (2017). The influence of parental concern on the utility of autism diagnostic instruments. *Autism Research, 10*(10), 1672-1686.

Heuss, S.C., Schwartz, B.J., Schneeberger, A.R. (2018). Second opinions in psychiatry: A review. *Journal of Psychiatric Practice*, *24*(6), 434-442.

Hollomotz, A. (2018). Successful interviews with people with intellectual disability. *Qualitative Research, 18*(2), 153–170.

Hoover, D.W. (2015). The effects of psychological trauma on children with autism spectrum disorders: A research review. *Review Journal of Autism and Developmental Disorders, 2*(3), 287-299.

Howlin, P., Magiati, I., & Charman, T. (2009). Systematic review of early intensive behavioral interventions for children with autism. *American Journal on Intellectual and Developmental Disabilities, 114*(1), 23-41.

Huerta, M., & Lord, C. (2012). Diagnostic evaluations of autism spectrum disorders. *Pediatric Clinics of North America, 59*(1), 103-111.

Hüls et al. (2021). Medical vulnerability of individuals with Down syndrome to severe COVID-19—Data from the Trisomy 21 Research Society and the UK ISARIC4C survey. *EClinicalMedicine, 33*. https://doi.org/10.1016/j.eclinm.2021.100769

Hurtig, T. et al. (2009). Multi-informant reports of psychiatric symptoms among high-functioning adolescents with Asperger syndrome or autism. *Autism: The International Journal of Research and Practice, 13*(6), 583-598.

Ireton, H. (1992). *Child development inventory manual.* Behavior Science Systems, Inc.

Jacobsen, J.W., & Ackerman, L.J. (1990). Differences in adaptive functioning among people with autism or mental retardation. *Journal of Autism and Developmental Disorders, 20*(2), 205-219.

Jain, A., Marshall, J., Buikema, A., Bancroft, T., Kelly, J.P., & Newschaffer, C.J. (2015). Autism occurrence by MMR vaccine status among US children with older siblings with and without autism. *Journal of American Medical Association, 313*(15), 1534-1540.

Ji, N. Y., & Findling, R. L. (2015). An update on pharmacotherapy for autism spectrum disorder in children and adolescents. *Current Opinion in Psychiatry*, *28*(2), 91-101.

Johnson, C. P., Myers, S. M., & American Academy of Pediatrics Council on Children With Disabilities (2007). Identification and evaluation of children with autism spectrum disorders. *Pediatrics*, *120*(5), 1183–1215. https://doi.org/10.1542/peds.2007-2361

Joseph, R.M., Tager-Flusberg, H., & Lord, C. (2002). Cognitive profiles and social communicative functioning in children with autism spectrum disorder. *The Journal of Child Psychology and Psychiatry, 43*(6), 807-821.

Joshi, G., Wozniak, J., Petty, C. et al. (2013). Psychiatric comorbidity and functioning in a clinically referred population of adults with autism spectrum disorders: A comparative study. *Journal of Autism & Developmental Disorders, 43* (6), 1314-1325. https://doi.org/10.1007/s10803-012-1679-5

Jure, R., Pogonza, R., & Rapin, I. (2016). Autism Spectrum Disorders (ASD) in blind children: Very high prevalence, potentially better outlook. *Journal of Autism and Developmental Disorders, 46*(3), 749-759.

Kamp-Becker, I., Albertowski, K., Becker, J. et al. (2018). Diagnostic accuracy of the ADOS and ADOS-2 in clinical practice. *European Child & Adolescent Psychiatry 27*(9), 1193-1207.

Keller, R. et al. (2015). Diagnostic characteristics of psychosis and autism spectrum disorder in adolescence and adulthood: A case series. *Autism Open Access, 6*(1), 1-4.

Kenworthy, L., Case, L., Harms, M.B., Martin, A., & Wallace, G.L. (2010). Adaptive behavior ratings correlate with symptomology and IQ among individuals with high functioning autism spectrum disorder. *Journal of Autism and Developmental Disorders, 40*(4), 416-423.

Kerns, C.S., Newschaffer, C.J., & Berkowitz, S.J. (2015). Traumatic childhood events and autism spectrum disorder. *Journal of Autism and Developmental Disorders, 45*(11), 3475-3486.

Kleinman, J.M. et al. (2007). Diagnostic stability in very young children with autism spectrum disorders. *Journal of Autism and Developmental Disorders, 38*(4), 606-615.

Klin A, Chawarska K, Rubin E, Volkmar F. (2004). Clinical assessment of young children at risk for autism. In R. Del Carmen-Wiggins, A. Cater (Eds.), *Handbook of infant, toddler, and preschool mental health assessment* (311–336). Oxford University Press.

Klin, A., Lang, J., Cicchetti ,D.V., & Volkmar, F.R. (2000). Brief report: Interrater reliability of clinical diagnosis and DSM-IV criteria for autistic disorder: Results of the DSM-IV autism field trial. *Journal of Autism and Developmental Disorders, 30*, 163–167

Krug, D., Arick, J., & Almond, P. (2008). *Autism screening instrument for educational planning*. Pro-ed.

Kuhfeld, M., & Sturm, A. (2018). An examination of the precision of the Autism Diagnostic Observation Schedule using item response theory. *Psychological Assessment, 30*(5), 656-668.

Landry, S. H., & Loveland, K. A. (1988). Communication behaviors in autism and developmental language delay. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 29*(5), 621–634.

Larson, F. V., Wagner, A. P., Jones, P. B., Tantam, D., Lai, M. C., Baron-Cohen, S., & Holland, A. J. (2017). Psychosis in autism: Comparison of the features of both conditions in a dually affected cohort. *The British journal of psychiatry: the journal of mental science*, *210*(4), 269–275.

Le Couteur, A., Lord, C., & Rutter, M. (2003). *Autism diagnostic interview-revised*. Western Psychological Services.

Lee, B.K. et al. (2015). Maternal hospitalization with infection during pregnancy and risk of autism spectrum disorders. *Brain, Behavior and Immunity, 44*, 100-105.

Lee, D.O., & Ousley, O.Y. (2006). Attention-deficit hyperactivity disorder symptoms in a clinic sample of children and adolescents with pervasive developmental disorders. *Journal of Child Adolescent Psychopharmacology*, *16*(6), 737-746.

Linstead, E., Dixon, D. R., French, R., Granpeesheh, D., Adams, H., German, R., Powell, A., Stevens, E., Tarbox, J., & Kornack, J. (2017). Intensity and Learning Outcomes in the Treatment of Children With Autism Spectrum Disorder. *Behavior modification*, *41*(2), 229–252. https://doi.org/10.1177/0145445516667059

Linstead, E., Dixon, D. R., Hong, E., Burns, C. O., French, R., Novack, M. N., & Granpeesheh, D. (2017). An evaluation of the effects of intensity and duration on outcomes across treatment domains for children with autism spectrum disorder. *Translational psychiatry*, *7*(9), e1234. https://doi.org/10.1038/tp.2017.207

Lipkin, P. H., Macias, M. M., & Council on Children with Disabilities, Section on Developmental and Behavioral Pediatrics. (2020). Promoting Optimal Development: Identifying Infants and Young Children With Developmental Disorders Through Developmental Surveillance and Screening. *Pediatrics*, *145*(1), e20193449. https://doi.org/10.1542/peds.2019-3449

Lord, C. (2005). Follow-up of two-Year-olds referred for possible autism. *The Journal of Child Psychology and Psychiatry, 36*(8), 1365-1382.

Lord, C., Rutter, M., DiLavore, P.C., Risi, S., Gotham, K., & Bishop, S.L. (2012). *Autism diagnostic observation schedule (2nd ed.)* [Manual]. Western Psychological Services.

Lord, C., Rutter, M., & Le Couteur, A. (1994). Autism Diagnostic Interview-Revised: A revised version of a diagnostic interview for caregivers of individuals with possible pervasive developmental disorders. *Journal of Autism and Developmental Disorders, 24*(5), 659-685.

Lord, C., Storoschuk, S., Rutter, M., & Pickles, A. (1993). Using the ADI-R to diagnose autism in preschool children. *Infant Mental Health Journal, 14*(3), 234–252.

Ludwig, N. N., Child, A. E., Jashar, D. T., Mostow, A. J., & Wodka, E. L. (2021). Telehealth diagnosis of autism spectrum disorder through clinical cases. *The Clinical neuropsychologist*, 1–21.

Lugnegård, T., Hallerbäck, M.U., & Gillberg , C. (2011). Psychiatric comorbidity in young adults with a clinical diagnosis of Asperger syndrome. *Research in Developmental Disabilities, 32*, 1910–1917.

Maddox, B. B., Brodkin, E. S., Calkins, M. E., Shea, K., Mullan, K., Hostager, J., Mandell, D., & Miller, J. S. (2017). The accuracy of the ADOS-2 in identifying autism among adults with complex psychiatric conditions. *Journal of autism and developmental disorders*, *47*(9), 2703–2709. doi:10.1007/s10803-017-3188-z.

Magnuson, K.M., & Constantino, J.N. (2011). Characterization of depression in children with autism spectrum disorders. *Journal of Developmental and Behavioral Pediatrics*, *32*(4), 332–340.

Mahoney, A.D. et al. (2013). Autism spectrum disorders and prematurity: A review across gestational age subgroups. *Advances in Neonatal Care, 13*(4), 247-251.

Mandy, W., Murin, M., & Skuse, D. (2015). The cognitive profile in Autism Spectrum Disorders. Leboyer, M. & Chaste, P. (eds): Autism Spectrum Disorders. Phenotypes, Mechanisms and Treatments. Key Issues in Mental Health. Basel, Karger, 2015, vol 180, pp 34-45.

Marin, L. et al. (2018). Prevalence of schizophrenia spectrum disorder in average-IQ adults with autism spectrum disorders: A meta-analysis. *Journal of Autism and Developmental Disorders, 48*(1), 239-250.

Matson, J.L., & Nebel-Schwalm, M.S. (2007). Comorbid psychopathology with autism spectrum disorder in children: An overview. *Research in Developmental Disabilities, 28*(4), 341-352.

Matthews, N. L., Skepnek, E., Mammen, M. A., James, J. S., Malligo, A., Lyon, A., Mitchell, M., Kiefer, S. L., & Smith, C. J. (2021). Feasibility and acceptability of a telehealth model for autism diagnostic evaluations in children, adolescents, and adults. *Autism Research: Official Journal of the International Society for Autism Research*, *14*(12), 2564–2579. https://doi.org/10.1002/aur.2591

Mayes, S. D., Calhoun, S. L., Waschbusch, D. A., & Baweja, R. (2017). Autism and reactive attachment/disinhibited social engagement disorders: Co-occurrence and differentiation. *Clinical Child Psychology and Psychiatry*, *22*(4), 620–631.

Mazefsky, C. A., Kao, J., & Oswald, D. P. (2011). Preliminary evidence suggesting caution in the use of psychiatric self-report measures with adolescents with high-functioning autism spectrum disorders. *Research in autism spectrum disorders*, *5*(1), 164–174.

Mesman, J. & Koot, H.M. (2000). Child-reported depression and anxiety in preadolescents: Associations with parent- and teacher-reported problems. *Journal of the American Academy of Child and Adolescent Psychiatry, 39*(11), 1371- 1378.

Miodovnik, A., Harstad, E., Sideridis, G., & Huntington, N. (2015). Timing of the diagnosis of attention deficit/ hyperactivity disorder and autism spectrum disorder. *Pediatrics, 136*(4), e830-e837.

Mitchell, S. et al. (2006). Early language and communication development of infants later diagnosed with autism spectrum disorder. *Developmental and Behavioral Pediatrics, 27*(2), 69-78.

Mitchell, S., Cardy, J.O., & Zwaigenbaum, L. (2011). Differentiating autism spectrum disorders from other developmental delays in the first two years of life. *Developmental Disabilities Research Reviews, 17*(2), 130-140.

Moody, E. J., Reyes, N., Ledbetter, C., Wiggins, L., DiGuiseppi, C., Alexander, A., Jackson, S., Lee, L. C., Levy, S. E., & Rosenberg, S. A. (2017). Screening for Autism with the SRS and SCQ: Variations across Demographic, Developmental and Behavioral Factors in Preschool Children. *Journal of Autism and Developmental Disorders*, *47*(11), 3550–3561. https://doi.org/10.1007/s10803-017-3255-5

Moore, S.J. et al. (2000). A clinical study of 57 children with fetal anticonvulsant syndromes. *Journal of Medical Genetics, 37(*7), 489–497.

Moretti, M. M., Fine, S., Haley, G., & Marriage, K. (1985). Childhood and adolescent depression: Child-report versus parent-report information. *Journal of the American Academy of Child Psychiatry, 24*(3), 298-302.

Mossman Steiner, A., Goldsmith, T.A., Snow, A.V., & Chawarska, K. (2012). Practitioner's guide to assessment of autism spectrum disorders in infants and toddlers. *Journal of Autism and Developmental Disorders, 42*(6), 1183-1196.

Nader, A.M., & Courchesne, V., Dawson, M., & Soulieres, I. (2014). Does WISC-IV underestimate the intelligence of autistic children?. *Journal of Autism and Developmental Disorders, 46*(5), 1582-1589.

National Child Traumatic Stress Network. (2012). The 12 core concepts: Concepts for understanding traumatic stress responses in children and families. doi:10.1037/e501392013-001

Nissenbaum, M. S., Tollefson N., & Reese, R. M. (2002). The interpretive conference: Sharing a diagnosis of autism with families. *Focus on Autism & Other Developmental Disabilities, 17*(1), 30-43.

Nordin, V., & Gilberg, C. (1994). The long-term course of autistic disorders: Updates on follow-up studies. Acta Psychiactrica Scandinavica, 97(2), 99-108.

Oliveras-Rentas, R. E., Kenworthy, L., Roberson, R. B., Martin, A., & Wallace, G. L. (2012). WISC-IV profile in high-functioning autism spectrum disorders: Impaired processing speed is associated with increased autism communication symptoms and decreased adaptive communication abilities. *Journal of Autism and Developmental Disorders*, *42*(5), 655–664.

Oliver, C., Petty, J., Ruddick, L., & Bacarese-Hamilton, M. (2012). The association between repetitive, self-injurious and aggressive behavior in children with severe intellectual disability. *Journal of Autism and Developmental Disorders, 42*(6), 910-919.

Osbourne, L. A. & Reed, P. (2008). Parents' perceptions of communication with diagnosticians during diagnosis of autism. *Autism, 12*(3), 309–324. doi:10.1177/1362361307089517

Overton, T., Fielding, C., & Garcia de Alba, R. (2007). Differential diagnosis of Hispanic children referred for autism spectrum disorders: Complex issues. *Journal of Autism and Developmental Disorders, 37*, 1996-2007.

Ozonoff, S. (2012). DSM-5 and autism spectrum disorders: Two decades of perspectives from the JCPP. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *53*(9), e4–e6.

Pellecchia, M., Iadarola, S., & Stahmer, A. C. (2019). How meaningful is more? Considerations regarding intensity in early intensive behavioral intervention. *Autism*, *23*(5), 1075–1078.

Pierce K, Gazestani VH, Bacon E, Carter Barnes, C., Cha, D., Nalabolu, S., Lopez, L., Moore, A., Pence-Stophaeros, S., & Courchesne, E. (2017). Evaluation of the diagnostic stability of the early autism spectrum disorder phenotype in the general population starting at 12 months. *JAMA Pediatrics,* 173(6), 578–587.

Rapoport, J., Chavez, A., Greenstein, D., Addington, A., & Gogtay, N. (2009). Autism spectrum disorders and childhood-onset schizophrenia: Clinical and biological contributions to a relation revisited. *Journal of the American Academy of Child and Adolescent Psychiatry*, *48*(1), 10–18.

Rasalam A.D. et al. (2005). Characteristics of fetal anticonvulsant syndrome associated autistic disorder. *Developmental Medicine and Child Neurology, 47*(8), 551–555.

Ray-Subramanian, C.E., Huai, N., & Ellis-Weismer, S. (2011). Brief report: Adaptive behavior and cognitive skills for toddlers on the autism spectrum. *Journal of Autism and Developmental Disorders, 41*(5), 679-684.

Robins, D.L. et al. (2009). Modified Checklist for Autism in Toddlers, Revised, with Follow-Up (M-CHART-R/F). Retrieved from https://mchatscreen.com/mchat-rf/

Rogers, S. J., Hepburn, S., Stackhouse, T., & Wehner, E. (2003). Parent reports of sensory symptoms in toddlers with autism and those with other developmental disorders. *Journal of Autism and Developmental Disorders, 33*(6), 631–642.

Rosenberg, S. A., Moody, E. J., Lee, L. C., DiGuiseppi, C., Windham, G. C., Wiggins, L. D., Schieve, L. A., Ledbetter, C. M., Levy, S. E., Blaskey, L., Young, L., Bernal, P., Rosenberg, C. R., & Fallin, M. D. (2018). Influence of family demographic factors on social communication questionnaire scores. *Autism research : official journal of the International Society for Autism Research*, *11*(5), 695–706. https://doi.org/10.1002/aur.1935

Rosenhall, U., Nordin, V., Sandstrom, M., Ahlsen, G., & Gillberg, C. (1999). Autism and hearing loss. *Journal of Autism and Developmental Disorders, 29*(5), 349-357.

Rutter, M., Bailey, A., & Lord, C. (2003). *SCQ: The social communication questionnaire.* Western Psychological Services.

Rutter, M., Lecouteur, A., & Lord, C. (2003). *Autism diagnostic interview: Revised.* Western Psychological Services.

Sabapathy, T., Madduri, N., Deavenport-Saman, A., Zamora, I., Schrager, S.M., &Vanderbilt, D.L. (2017). Parent reported strengths in children with autism spectrum disorder as the time of an interdisciplinary diagnostic evaluation. *Journal of Developmental and Behavioral Pediatrics, 38*(3), 181-186.

Sallows, G.O., & Graupner, T.D. (2005). Intensive behavioral treatment for children with autism: Four-year outcome and predictors. *American Journal of Mental Retardation, 110*(6), 417-438.

Sappok, T. et al. (2013). Diagnosing autism in a clinical sample of adults with intellectual disabilities: How useful are the ADOS and ADI-R? *Research in Developmental Disabilities, 34*(5), 1642-1655.

Saulnier, C.A., & Ventola, P.E. (2012). *Essentials of Autism Spectrum Disorder Evaluation and Assessment.* Wiley.

Saunders, B.S. et al. (2015). The financial and employment impact of intellectual disability on families of children with autism. *Family, Systems & Health, 33*(1), 36-45.

Schneider, J. et al. (2018). *Essentials of Assessment Report Writing* (2nd ed.). Wiley.

Selten, J. P., Lundberg, M., Rai, D., & Magnusson, C. (2015). Risks for nonaffective psychotic disorder and bipolar disorder in young people with autism spectrum disorder: A population based study. *JAMA Psychiatry, 72*(5), 483–489.

Shattuck, P. T.et al. (2007). Change in autism symptoms and maladaptive behaviors in adolescents and adults with an autism spectrum disorder. *Journal of Autism and Developmental Disorders, 37*, 1735–1747. Shea, V. (1993). Interpreting results to parents of preschool children. In Schopler, M. Van Bourgondien, & M. Bristol (Eds.), *Preschool issues in autism* (185-198). Plenum Press.

Sikora, D.M., Vora ,P., Coury, D.L., & Rosenberg, D. (2012). Attention-deficit/hyperactivity disorder symptoms, adaptive functioning and quality of life in children with autism spectrum disorder. *Pediatrics*,130, S91-S197.

Simonoff, E. et al. (2008). Psychiatric disorders in children with autism spectrum disorders: Prevalence, comorbidity, and associated factors in a population-derived sample. *Journal of the American Academy of Child and Adolescent Psychiatry, 47*(8), 921-929.

Skuse, D.H. (2000). Imprinting, the X-chromosome, and the male brain: Explaining sex differences in the liability to autism. *Pediatric Research, 1*(47), 9.

Sommers-Flanagan, J., Abeje Zeleke, W. and Hood, M. H. (2015). Clinical Interview. In R. L. Cautin and S. O. Lilienfeld (Eds.), *The encyclopedia of clinicalpPsychology*. John Wiley & Sons.

Sparrow, S.S., Ciccheti, D.V., & Saulnier, C.A. (2016). *Vineland adaptive behavior scales – third edition* [Manual]. Pearson.

Squires, J. et al. (2009). *Ages & Stages Questionnaires* (3rd ed.). Brooks Publishing.

Stadnick, N., Brookman-Frazee, L., Williams, K. N., Cerda, G., & Akshoomoff, N. (2015). A pilot study examining the use of the Autism Diagnostic Observation Schedule in community-based mental health clinics. *Research in Autism Spectrum Disorders*, *20*, 39–46.

Stadnick, N.A., Stahmer, A., & Brookman-Frazee, L. (2015). Preliminary effectiveness of Project ImPACT: A parent mediated intervention for children with autism spectrum disorder delivered in a community program. *Journal of Autism and Developmental Disorders, 45*(7), 2092-2104.

Stavropoulos, K.K-M., Bolourian, Y., & Blacher, J. (2018). Differential diagnosis of autism spectrum disorder and post traumatic stress disorder: Two clinical cases. *Journal of Clinical Medicine,* 7(4), 71.

Stone, W.L. et al. (1999). Can autism be diagnosed accurately in children under three years? *Journal of Child Psychology and Psychiatry, 40*, 219–226.

Szymanski, C.A., Brice, P.J., Lam, K.H., & Hotto, S.A. (2012). Deaf children with autism spectrum disorders. *Journal of Autism and Developmental Disorders, 42*, 2027-2037.

Szymanski, C.A, Flynn, S., Clark, T. (2014). Dually diagnosed: A retrospective study of the process of diagnosing autism spectrum disorders in children who are deaf and hard of hearing. *Seminars In Speech and Language, 35*(4), 301-308.

Tarleton, B., Ward, L. & Howarth, J. (2006). *Finding the right support? A review of issues and positive practice in supporting parents with learning difficulties and their children.* Baring Foundation.

Tasse´, M. J., Schalock, R. L., Balboni, G., Bersani, H., Borthwick-Duffy, S. A., Spreat, S. Thissen, D., Widaman, K., & Zhang, D. (2017). *Diagnostic adaptive behavior scale: User's manual*. American Association on Intellectual and Developmental Disabilities.

Taylor, L.E., Swerdfeger, A.L., & Eslick, G.D. (2014). Vaccines are not associated with autism: An evidence-based meta-analysis of case-control and cohort studies. *Vaccine, 32*(29), 3623-3629.

Teitelbaum, P., Teitelbaum, O., Nye, J., Fryman, J., & Maurer, R. G. (1998). Movement analysis in infancy may be useful for early diagnosis of autism. *Proceedings of the National Academy of Sciences of the United States of America*, *95*(23), 13982–13987. doi:10.1073/pnas.95.23.13982

Thomeer, M. L., Lopata, C., Volker, M. A., Toomey, J. A., Lee, G. K., Smerbeck, A. M., Rodgers, J. D., McDonald, C. A., & Smith, R. A. (2012). Randomized clinical trial replication of a psychosocial treatment for children with high-functioning autism spectrum disorders. *Psychology in the Schools, 49*(10), 942-954.

Tincani, M., Travers, J., & Boutot, A. (2009). Race, culture, and autism spectrum disorder: Understanding the role of diversity in successful educational interventions. *Research & Practice for Persons with Severe Disabilities, 34*(4), 81-90.

Üstün, T.B.et al. (2010). *Measuring Health and Disability: Manual for WHO Disability Assessment Schedule (WHODAS 2.0)*. World Health Organization.

Vanegas, S. B., Magaña, S., Morales, M., & McNamara, E. (2016). Clinical Validity of the ADI-R in a US-Based Latino Population. *Journal of Autism and Developmental Disorders*, *46*(5), 1623–1635.

Ventola, P. et al. (2007). Differentiating between autism spectrum disorders and other developmental disabilities in children who failed a screening instrument for ASD. *Journal of Autism and Developmental Disorders, 37*(3), 425-436.

Volkmar, F., Chawarska, K., & Klin, A. (2005). Autism in infancy and early childhood. *Annual Review of Psychology, 56*, 315-336.

Warren, Z. et al. (2011). A systematic review of early intensive intervention for autism spectrum disorders. *Pediatrics, 127*(5), 1303-1311.

Wagner, A., Lecavalier, L., Arnold, L.E., Aman, M.G., Scahill, L., Stigler, K.A., Johnson, C., McDougle, C.J., Vitiello, B. (2007). Developmental disabilities modification of Children's Global Assessment Scale (DD-CGAS). *Biological Psychiatry*, 61, 504-511.

White, S. W., Oswald, D., Ollendick, T., & Scahill, L. (2009). Anxiety in children and adolescents with autism spectrum disorders. *Clinical psychology review*, *29*(3), 216–229.

Williams, P.G., & Hersh, J.H. (1997). A male with fetal valproate syndrome and autism. *Developmental Medicine and Child Neurology, 39(*9), 632–634.

 Williams, G., King, J., Cunningham, M., Stephan, M., Kerr, B., & Hersh, J.H. (2001).Fetal valproate syndrome and autism: Additional evidence of an association. *Developmental Medicine and Child Neurology, 43*(3), 202–206.

World Health Organization (1991) *Report of the informal working group on prevention of deafness and hearing impairment programme planning.*

Williams, M.E., Atkins, M., & Soles, T. J. (2009). Assessment of Autism in Community Settings: Discrepancies in Classification. *Journal of Autism and Developmental Disorders, 39*(4), 660–669.

Xiao, Z. et al. (2014). Autism spectrum disorder as early neurodevelopmental disorder: Evidence from brain imaging abnormalities in 2-3 year old toddlers. *Journal of Autism and Developmental Disorders, 44*(7), 1633-1640.

Zander, E., Sturm, H., & Bölte, S. (2015). The added value of the combined use of the Autism Diagnostic Interview–Revised and the Autism Diagnostic Observation Schedule: Diagnostic validity in a clinical Swedish sample of toddlers and young preschoolers. *Autism*, *19*(2), 187–199.

Zander, E. et al. (2017). The interrater reliability of the Autism Diagnostic Interview-Revised (ADI-R) in clinical settings. *Psychopathology, 50*(3), 219-227.

Zheng, Z., Zheng, P., & Zou, X. (2018). Association between schizophrenia and autism spectrum disorder: A systematic review and meta-analysis. *Autism Research, 11*(8), 1110-1119.

Zwaigenbaum, L. et al. (2015). Early intervention for children with autism spectrum disorder under 3 years of age: Recommendations for practice and research. *Pediatrics, 136*(Suppl 1), S60-S81.

Appendix A

ASD Developmental Symptom History Interview

Domains to be Covered in a
Developmental Symptom History Interview for ASD

General Points to Remember When
Conducting a Diagnostic ASD Interview

1) Use good general clinical interviewing skills. To that end, complete a full clinical interview and not just ASD specific questions. Open ended questions that allow the parent/ caregiver to teach you about the child are much more fruitful than pointed yes or no questions. Additionally, open ended questions help to protect against reporting bias.

2) Remember typical development! This is always the best benchmark in understanding what is abnormal.

3) ASD involves symptoms from both the social communication/affective domain and restricted repertoire domain; need to have deficits / symptoms in both areas to make an ASD diagnosis.

4) ASD symptoms should be present in the early developmental years, though impairment may not be evident until the social demands exceed the child's capacities. ASD is a neurodevelopmental disorder, if initial symptom onset is in late childhood or adolescence, it is not ASD. However, remember that impairment is different than symptoms.

5) ASD is not a disorder that varies significantly by environment: you cannot turn it off and turn it on. If symptoms are only present in one environment, it is not ASD. However, there may be fewer demands placed on kids in one setting (home/with family, school) so symptoms may be more apparent or severe in more demanding situations.

The symptoms below are not to be viewed as appropriate for all kids of all ages—chose the items that best reflect the child's current functioning, and if you ask about symptoms from an earlier developmental stage, make sure the parent or caregiver is responding from that vantage point. For example, you could say, "Think back to your child's second birthday…"

Social Affective/Communication Skills

Remember the focus is on the social use of communication skills given the child's language level

- Verbal communication skills
  - Level of language skills (single words, phrase speech, fluent sentences)

- o Directed language use (for requesting, social chatting)
- o Conversational skills
- o Topical perseveration
- o Lack of reciprocity
- o Literal interpretation of language/poor sense of humor
- o Weak language pragmatics
- Nonverbal communication skills
  - o Eye contact
  - o Pointing (age of emergence of protoimperative and protodeclarative pointing)
  - o Gesture use (instrumental, emotional, descriptive)
  - o Joint attention skills (initiation and response)
  - o Awareness of nonverbal communication of others
  - o Facial expressions utilized for communicative purposes (can you tell how child feels by looking at his/her face, does child use facial expressions to communicate a range of affective experiences)
- Social interest / motivation
  - o Engagement with peers
  - o Interest in making friends
  - o Prefers to be alone vs. with others
- Social awareness
  - o Awareness / understanding of emotions of others (response to distress)
  - o Orienting toward others
  - o Social referencing
- Social responsiveness (quality, consistency by environment, frequency)
  - o Response to name
  - o Social games (peek-a-boo, duck-duck-goose)
  - o Highly motivating situations (preferred activities)
  - o Less motivating situations (less preferred activities)
- Social initiation (quality, frequency, related only to strong interests)
  - o Requesting*
  - o Play based
  - o Surrounding specific topics
  - o Sharing
  - o Showing
  - o Starting conversation
- Poor theory of mind / perspective taking / social prediction skills
- Odd / unusual social behaviors

Remember that requesting behaviors for the purpose of assistance with no social intention are not deemed highly social

Restricted Repertoire/Stereotyped Behaviors

- Strong interests
  - Odd or unusual interests
  - Consuming by intensity even if developmentally normal interest
  - Topical perseveration
  - Fixation on parts of objects
  - Odd object attachment
  - Level of distress when access to interest area is blocked or removed
- Inflexibility / Repetitive behaviors
  - Difficulty with transitions
  - Rituals
  - Intolerance of change in routines
- Unusual fears / no fear
- Stereotyped language use
  - Delayed echolalia (context congruent and incongruent)
  - Repetitive language
  - Odd intonation
- Hand / body mannerisms (flapping, finger waving, rocking, spinning)
- Aberrant sensory behaviors (hypo- or hyper-sensory response / interest)
- Self-injurious behaviors / severe aggression

Play Behaviors

- Functional play skills
- Nonfunctional play (lining up objects, hoarding)
- Creative/ imaginative play skills
- Parallel play
- Reciprocal play
- Range and flexibility in play

Review of Systems/Associated Symptoms

- Prenatal history (in utero exposure to prescription medication or substances, etc.)
- Birth history (prematurity, anoxic episode, etc.)
- Developmental milestones / uneven development
  - Gross motor / Fine motor

- o Receptive language / Expressive language
- Sleep patterns (difficulty initiating or maintaining sleep)
- Eating habits (picky, restricted, repetitive, pica)
- Behavior & mood (compliance, aggression, mood, anxiety)
- Executive skills (attention, impulsivity, activity level, flexibility)
- Toileting skills
- Medical conditions
    - o Seizure disorders
    - o Allergies / Immune dysfunction
    - o Gastrointestinal disorders
    - o Motor problems (fine motor, apraxia)
    - o Genetic syndromes associated with ASD characteristics

Around 20% of kids will have an identifiable genetic condition associated with ASD characteristics; refer to neurology and genetics

High Frequency Rule-Outs

- Early childhood deprivation (sometimes seen in kids adopted from orphanages and with <u>severe</u> neglect during infancy)
- Trauma / Abuse / Attachment issues
- Sensory impairment (deafness, blindness) *always suggest vision / hearing test if not completed*
- Language disorder especially when with comorbid anxiety / ADHD
- Severe to profound intellectual disability
- Selective mutism
- Severe social anxiety / OCD
- ADHD (especially with oppositional features)
- Psychosis/prodromal psychosis (negative symptoms, unusual thought patterns, delusional thinking)
- Major depression
- Severe lead poisoning
- FASD

Always remember that children with ASD frequently present with comorbidities

Appendix B
ASD Assessment by Age Best Practice

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

General ASD 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. Notably, the ADOS-2 provides an instrument classification and <u>not</u> an ASD diagnosis. 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 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 <u>not</u> 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-3 or similar measure)
- Observational assessment of social behaviors (ADOS-2 & informal)
    - Toddler module: children under 31 months (not yet phrase speakers)
    - Module 1: children 31 months & older speaking primarily single words
    - Module 2: children of *any* age who are 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, on-going 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 [MSEL; Note: Mullen norms only go through age 5:5], Wechsler Preschool and Primary Scale of Intelligence, Fourth Ed

[WPPSI-IV], Differential Ability Scales, Second Ed [DAS-II] Early Years Battery, Stanford-Binet, Fifth Ed [SB-5])
unless testing has already been conducted to give an estimate of the child's verbal and nonverbal intellectual status
- Adaptive skills (Vineland-3 or similar measure)
- Observational assessment of social behaviors (ADOS-2 & informal)

Other Considerations for this Population

The MSEL and 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), DAS-II, or other nonverbal measure (e.g., Leiter-3, UNIT-2) 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. 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 language sample in the ADOS-2, 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.*

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])

- Intellectual evaluation (Wechsler Intelligence Scale for Children, Fifth Ed [WISC-V], Differential Ability Scales- Second Ed [DAS-II], Stanford-Binet, Fifth Ed [SB-5], Wechsler Adult Intelligence Scale, Fourth Ed [WAIS-IV])

  unless testing has already been conducted to give an estimate of the individual's verbal and nonverbal intellectual status

- Adaptive skills (Vineland-3 or similar)

- Observational assessment of social behaviors (ADOS-2 & informal)

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-5 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
- 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-V, SB-5, WAIS-IV)
  unless testing has already been conducted to give an estimate of the individual's verbal and nonverbal intellectual status

- Adaptive skills (Vineland-3)

- Observational assessment of social behaviors (ADOS-2 & informal)

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, is essential.

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-V and WAIS-IV.

Specific nonverbal assessment measures, such as the Leiter-3 or UNIT-2 could be considered for individuals without spoken language.

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. Note that the materials from any module can be used when administering the ADOS-2.

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.

A special thanks to Kara Brooklier, Ph.D., Pediatric Neuropsychologist, for her work on developing this best-practice guidance document.

Appendix C

Quality Checklist for Initial Diagnostic Evaluations and Reports

Quality Checklist for Initial Diagnostic Evaluations and Reports

The following checklists summarize the requirements from Michigan Medicaid Autism Services and the recommendations for best practice ASD evaluations described in this clinical guideline manual. These checklists may be used for evaluators to monitor their adherence to policy guidelines and best practices. Supervisors and administrators are also encouraged to use these tools to maintain consistency and quality in diagnostic evaluations and reports.

Checklist for Initial ASD Evaluations:

Components of Evaluation Process	Check when Completed
Prior to Evaluation:	
Evaluators determine they have the necessary expertise and are working within their scope of practice based on the evaluation referral	
Review referral and child's records	
Completing the Evaluation:	
Records and collateral information have been reviewed, including obtaining releases/consent to exchange information when needed	
Clinical interview with caregiver	
ASD-specific interview with caregiver	
Cognitive/developmental testing; language or other assessment measures when needed	
Adaptive behavior assessment	
Observational assessment/ADOS-2	
Other observational data is obtained (e.g., clinical observations during testing)	
Feedback is scheduled with the family	
After the Evaluation	
Evaluator (or evaluation team) scores and interprets measures	
Obtains additional information about child, such as teacher reports, input from the treating providers (e.g., ABA team, speech, OT) or observations in other settings, when needed	
Evaluator discusses evaluation data with supervisor/consults with colleagues or other diagnostic team members	
Evaluator forms diagnostic impressions based on integration of all data collected	
Evaluator determines whether child meets medical necessity criteria for ABA and other services and determines high-priority recommendations for services	
Face-to-face feedback session is completed with caregiver(s), as well as others invited by the family and/or supports coordinator/case manager	
Required documentation is completed and submitted	
Comprehensive report is written and uploaded	
Report sent to caregivers	

Checklist for ASD Evaluation Reports:

Quality Indicators and Components of Report	Check when included in report
Overall Report Quality	
Report is specific to child and referral question, including child's age and developmental level	
Report is well-written and has minimal errors in grammar, spelling, and style	
Report does not include major errors in content (e.g., wrong name, incorrect ADOS-2 score or module, incorrect details about the family)	
Components of Report	
Referral question is clearly stated and is specific to child	
Background section includes relevant information about child's family composition/home environment, developmental and medical history, previous evaluations, services and progress in services, social behavior, and school information	
ASD interview data is summarized, including information about early developmental period and current functioning	
Test results (e.g., developmental/cognitive testing, adaptive behavior assessment) are clearly presented	
Observational data of child throughout the assessment is described	
Observational assessment/ADOS-2 includes the module administered and a clear description of the child's behavior during the assessment	
Clinical formulation/summary includes a summary of the data and diagnostic impressions based on an integration of all data	
Recommendations include interventions for the child, including ABA, referrals to medical specialists, other recommended services for the child (e.g., speech, OT), school services and accommodations, supports for the family (e.g., CLS, respite, parent support partner), and additional resources for the family (websites, books, etc.)	
Report is signed by evaluator with correct credentials; supervisor reviews content, provides feedback, and co-signs when needed	

Appendix D
Sample Evaluation Report Templates

<u>**Example 1:**</u> **Initial Diagnostic Evaluation Report Template**

Confidential Neuropsychological Evaluation

Date of Evaluation: **Name:**
Referred By: **DOB:**
Examiner: **Case #**

Referral Question: r/o Autism Spectrum Disorder (ASD).

Background Information/Record Review:

This could include the following when relevant: Family history, Birth history, Medical history, Eating/Nutrition, Sleep info, Therapy history, Self-help skills, School, Social skills, Parental Concerns, Strengths

Behavioral Observations:
This could include the following when relevant: Physical appearance, Motor/gait, Behavior and affect, Speech/language skills, Personal goals/wishes, Response to test structure, etc.

Test Results:

Diagnostic Impression:

Formal Diagnoses:

Recommendations:

Follow-up:
CPT Codes/Billing info
CC:

            ************* **NEUROPSYCHOLOGICAL TEST SCORES ADDENDUM*************

<u>**Example 2:**</u> **Initial Diagnostic Evaluation Report Template**

<u>CONFIDENTIAL PSYCHOLOGICAL EVALUATION</u>

Name: CHILD Lastname   **Date of Birth:**
Age: **Date of Evaluation:**
Examiner: **Case #:**

<u>Reason for Referral and Relevant Background Information</u>
CHILD Lastname is a [age] boy/girl who was referred to [agency name] for a comprehensive psychological evaluation in order to assess for symptoms of Autism Spectrum Disorder (ASD). [Describe reason for referral and referral source] The interview and observational assessment were completed with CHILD's mother/parent/guardian.

Family Information:
Medical History:
Developmental History:
Previous Evaluations and Treatment: Very briefly summarize
Educational Information:

<u>Procedures</u>
[Describe tests administered, as well as other procedures such as record review, clinical interview with parent, etc.]

<u>Test Results</u>
[Description of test scores/ranges (standard scores, t-scores, etc.)]

Behavioral Observations During Testing

Developmental Skill Levels/Cognitive Ability
Developmental or cognitive testing results

Adaptive Functioning
Results of adaptive behavior assessment completed by caregiver (e.g., Vineland-3, ABAS-3)

<u>ASD & Behavioral Symptoms</u>

Parent Interview

Social Communication
- Bullet concerns here

Restricted & Repetitive Behaviors
- Bullet concerns here

Associated Behaviors & Emotional Symptoms
- Bullet concerns here [may include sleep difficulties, feeding issues, hyperactivity, anxiety, etc.]

[Summary statement about caregiver report on ASD symptoms)

Observational Assessment of ASD Symptoms
CHILD was administered the ADOS-2 (Module X) to assess his social and communicative behaviors. Results of the semi-structured play observation revealed deficits in his social, communication, and behavioral skills. These deficits were at a level suggestive of Autism (total score =).

[Summarize ADOS-2…make sure this sounds like the child, not just a list of scored items]

Overall, CHILD presented with significant social communication deficits and restricted interests and repetitive behaviors. Classification on the ADOS-2 placed him in the Autism range (total score =).

Global Assessment of Functioning
The Developmental Disabilities- Children's Global Assessment Scale (DD-CGAS) is a measure for assessing the severity of symptoms and behaviors in children who are identified as having a developmental disability. Functioning in four domains is considered: Self Care, Communication, Social Behavior, and School/Academic. Overall, CHILD's DD-CGAS is currently X, which reflects….

Clinical Summary and Recommendations
CHILD Lastname is a [age] boy/girl who [summarize referral question].

[Summary of evaluation findings and diagnoses]

Diagnostic Summary:

DSM-5 Diagnosis:	DSM-5 Code	ICD-10 Code

The following goals should be addressed in CHILD's behavioral treatment plan:

- Put in 3-4 behavioral targets for child based on his/her current functioning level and needs

Based on this evaluation, the following recommendations are advised:

Clinical and Medical Recommendations:

Educational Recommendations:

Additional Recommendations for the Family:

Evaluation results and recommendations were discussed with [Caregiver, anyone else in attendance] in a feedback session on [Date]. Any questions regarding this consultation should be directed to the undersigned.

[Your signature and supervisor signature if needed]

**********************Appendix: Test Scores Tables**********************

Appendix E
Telehealth Resources

Telehealth Resources

- For updated information regarding MDHHS guidelines and updates from the Behavioral Health and Developmental Disabilities Administration (BHDDA): https://www.michigan.gov/mdhhs/0,5885,7-339-71550_2941-146590--,00.html
- State of Michigan COVID-19 Information: https://www.michigan.gov/coronavirus
- CDC: Re-Opening Guidance: https://www.cdc.gov/coronavirus/2019-ncov/community/workplaces-businesses/index.html
- IOPC: Models of Care During the Novel Coronavirus Pandemic: https://iopc.squarespace.com/safely-reopening-practice-as-state-restrictions-lift
- APA: COVID-19 Resources: https://www.apa.org/topics/covid-19
- APA: Telehealth Testing with Children: https://www.apaservices.org/practice/legal/technology/telehealth-testing-children-covid-19
- Vanderbilt TRIAD TELE-ASD-PEDS: https://vkc.vumc.org/vkc/triad/tele-asd-peds
- UCLA CART (2020). Brief Observation of Symptoms of Autism (BOSA) Training: https://www.semel.ucla.edu/autism/bosa-training