



Speech and Language Assessment Resources:

Transforming Communication and Empowering Lives



Empowerment Through Communication: Harnessing the Power of Speech—Language Pathology

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The [National Institute on Deafness and Other Communication Disorders](#) reports that 7.7% of children in the U.S. experienced a voice, speech, language, or swallowing disorder in the past year. That's around 1 in every 12 children. Among adults, the numbers are similar: 7.6% say they had a voice problem in the last year, and around a million American adults have aphasia.

The American Speech-Language-Hearing Association (ASHA) released the results of a [2023 survey](#) showing a sharp uptick in referrals for speech–language services. Here's a glimpse of the data:

- 84% of SLPs say they're seeing more children for emotional and behavioral difficulties.
- 79% of SLPs say they're seeing more children with difficulties in social communication.
- 34% of audiologists say they're seeing more children with a later diagnosis of hearing loss.

Numbers don't complete the picture, though. When people have trouble communicating, the effects on their lives can be devastating. For example, young children with persistent speech disorders often have lower scores in English, math, and science ([Wren et al., 2021](#)). Studies also show that adults with developmental language disorder (DLD) tend to leave education earlier than their peers. They may face extra barriers as they enter their careers ([Conti-Ramsden et al., 2018](#)). Among older adults, communication disorders have been linked to loneliness and depression ([Palmer et al., 2019](#)).

Here's the good news. Working with a speech–language pathologist can make a powerful difference in the life of a person with a communication disorder. Validated assessments, early detection, and evidence-based interventions can improve many language, speech, and communication disorders, leading to greater well-being and better functioning.

► **Research and Resources:**

Assessments

WPS Assessment Consultants work with SLPs around the world to select tests and interventions, and to train practitioners to use them effectively. Because hearing, speech, and language difficulties can affect so many skill areas and stem from so many conditions, you may need a broad array of assessments to complete an evaluation.

Here's a look at some of the assessments you may find useful in a comprehensive evaluation strategy.

Speech–Language

- Clinical Assessment of Pragmatics (CAPs™).
- Arizona Articulation and Phonology Scale, Fourth Revision (Arizona™-4).
- Oral and Written Language Scales, Second Edition (OWLS™-II).
- Comprehensive Assessment of Spoken Language, Second Edition (CASL®-2).
- Oral Passage Understanding Scale (OPUS™).

Early Literacy and Reading Readiness

- Tests of Dyslexia (TOD™)—Now Available
- Phonological and Print Awareness Scale (PPA Scale™).
- Comprehensive Test of Phonological Processing, Second Edition (CTOPP-2).

- Test of Early Reading Ability, Fourth Edition (TERA-4).

Comprehensive Reading Assessments

- Gray Oral Reading Test, Fifth Edition (GORT-5).
- Test of Reading Comprehension, Fourth Edition (TORC-4).

Reading Fluency

- Test of Word Reading Efficiency, Second Edition (TOWRE-2).
- Test of Silent Contextual Reading Fluency, Second Edition (TOSCRF-2).

Autism

- Autism Diagnostic Observation Schedule, Second Edition (ADOS®-2).
- Monteiro Interview Guidelines for Diagnosing the Autism Spectrum, Second Edition (MIGDAS™-2).
- Autism Spectrum Rating Scales (ASRS®).
- Childhood Autism Rating Scale, Second Edition (CARS™2-ST and CARS™2-HF).
- Gilliam Autism Rating Scale, Third Edition (GARS-3).
- Social Responsiveness Scale, Second Edition (SRS™-2).
- Autism Diagnostic Interview—Revised (ADI®-R).

ADHD

- Conners Fourth Edition™ (Conners 4).
- Conners' Adult ADHD Rating Scales (CAARS).
- Behavior Rating Inventory of Executive Function, Second Edition (BRIEF2).
- Behavior Rating Inventory of Executive Function—Preschool Version (BRIEF-P).

Additional Measures

- Developmental Profile™ 4 (DP-4)
- Adaptive Behavior Assessment System, Third Edition (ABAS®-3)
- Revised Children's Manifest Anxiety Scale, Second Edition (RCMAS™-2)
- Children's Depression Inventory, Second Edition (CDI 2)

[Download the Infographic: Pragmatics: 6 Constructs of Formal Assessment](#)

Typical Language Development



Language development is unique and individual, yet it still follows a very basic timeline. When that sequence is disrupted or delayed, it may indicate a larger developmental issue. For example, differences in the development of sound processing could be related to autism. Researchers have recently used auditory brainstem responses—a data point in infant hearing screenings—to identify early autism biomarkers. Some infants with certain “microvariations” in sound processing abilities later go on to receive an autism diagnosis (Torres et al., 2023).

Hearing and communicating involve many interrelated abilities. Some are linguistic and others involve motor systems. For speech and language to develop in typical ways, linguistic and motor abilities must both develop, and they must interact.

Here's a quick look at the basic developmental timeline of these two skillsets during a baby's first year:

Hearing

Birth to 3 months:

- Reacts to loud noises
- Becomes quiet or smiles when a parent speaks
- Recognizes caregiver's voice

4 to 6 months:

- Directs eyes toward sound
- Responds differently to changes in caregiver's tone of voice
- Attends to music

7 months to 1 year:

- Looks or turns toward sounds
- Looks where a caregiver points
- Responds when a caregiver calls their name
- Understands a few words
- Responds to some simple questions and instructions
- Plays simple interactive games
- Pays attention to songs and stories

Speaking

Birth to 3 months:

- Coos
- Changes tone of crying to express different needs
- Smiles at caregivers and other people

4 to 6 months:

- Coos and babbles whether alone or with caregiver
- Makes sounds that resemble words like "ma" and "pa"
- Uses sound to convey feelings

7 months to 1 year:

- Makes longer speech-like sounds
- Gestures and makes sounds to get someone's attention or to communicate
- Points to things
- Imitates noises and speech sounds
- Uses one or more simple words, such as "uh oh"

For a checklist to track speech development from birth to 5 years, visit the [National Institute on Deafness and Other Communication Disorders](#).

To see how speech and language milestones are integrated with other aspects of early child development, you may want to explore [CDC's Developmental Milestones](#) site.

Read more: [What to Know About the CDC's Developmental Checklists](#)

Or download this infographic: [Early Childhood Development and Beyond](#)

► **Research and Resources:**

Early Childhood

Speech and language differences are among the easiest developmental delays for parents to spot. Sometimes parents notice a delay because one child's development differs from another child's. Sometimes parents are tracking milestones and notice progress isn't happening as expected. And sometimes a parent just has a "gut feeling" that something is amiss.

Parent concerns are sometimes validated by health and education professionals—and sometimes they're dismissed or minimized (Scherr et al., 2020). Ideally, an SLP is there to support families and to help caregivers make sense of what they're experiencing.

In a 2020 [study](#), parents said early interventionists helped them:

- identify developmental delays and disorders;
- understand causes;
- become involved in helpful therapies and interventions;
- form expectations about timelines and outcomes; and
- cope with their emotional response to a delay.



Even for experienced SLPs, it can be hard to tell the difference between a delay in speech–language development and a speech or language disorder. There are at least two reasons why:

- Many speech and language assessments do not distinguish between a delay and a disorder.
- A child with a language delay may outgrow it, whereas a child with a disorder often shows delays in early childhood.
- The authors of the *Diagnostic and Statistical Manual of Mental Disorders, 5th Edition, Text Revision (DSM-5-TR)* note that "[L]anguage disorder diagnosed in children age 4 years and older is likely to be stable over time and typically persists into adulthood, although the particular profile of language strengths and deficits is likely to change over the course of development" (American Psychiatric Association, 2023).

Screening

More research needs to be done to clarify the benefits and risks of screening for speech and language delays and disorders in early childhood. At present, the U.S. Preventive Services Task Force (USPSTF) is reviewing evidence before updating its recommendations regarding screening for speech and language disorders. Its 2023 Draft Evidence Review "did not find direct evidence on the benefits and harms of screening" (USPSTF, 2023).

The task force is investigating research questions like these:

- Does screening lead to better speech–language outcomes, better academic success, or better quality of life?
- How accurate are the available screening tools?
- Do available interventions lead to better speech–language outcomes, school success, or quality of life?
- Could screening or interventions actually harm children?
- What disparities exist in the prevalence, identification, and treatment of speech–language disorders in different populations?

By contrast, the American Speech-Language-Hearing Association (ASHA) clearly recommends screening and early intervention for communication and hearing development difficulties. The focus of early intervention is to identify causes and provide services to infants and toddlers with conditions likely to cause a developmental delay, including:

- Hearing loss
- Autism
- Cerebral palsy
- Down syndrome
- Fetal alcohol syndrome
- Brain injuries
- Maltreatment
- Trauma

Best Practices for Early Childhood Screening

These guidelines have been consolidated from the recommendations of ASHA and IDEA. They're intended to help you and your colleagues create the clearest possible picture of the child in your care.

1. **Know the procedures, regulations, and timelines for early intervention in IDEA and in your state.** Some states regularly update requirements, so it's a good idea to review the information annually.



2. **Identify risk and protective factors.** Risk factors for early speech–language delays include male sex, family history of speech–language or reading problems, hearing loss, prolonged thumb-sucking or pacifier use, extensive screen time, and differences in oropharyngeal structure ([Kumar et al., 2022](#)).



3. **Screen, assess, and evaluate in the language that is most likely to give you a true picture of the child's abilities.** For some children, that's the language spoken in their homes—their “native language,” as specified by IDEA.
4. **Assess broadly.** To understand a person's strengths and needs, you'll need to see how they function in different domains and settings. You'll need medical and family histories. And you'll need the perspectives of family members, health professionals, and educators.
5. **Prioritize the concerns of those who know the child best.** For an intervention plan to be effective, caregivers and family members will need to be supportive and involved. Understanding what matters to them and planning with their resources in mind can help you build trust.

6. **Work as a team.** SLPs can coordinate care with audiologists, occupational therapists, physical therapists, psychologists, social workers, teachers, registered dietitians, and other health professionals to be sure a full range of diagnostics and interventions are included in the child's evaluation. A multidisciplinary team can help you anticipate the downstream effects of a speech, hearing, or language delay—and to plan for them now.
7. **Distinguish between a language difference and a delay or disorder.** For children whose primary language is not English, it's especially important to determine whether a delay is related to limited English or to a developmental disorder, health condition, or learning disability.
8. **Engage families and caregivers, whether sessions take place in person or online.** In a [2022 study](#), a group of early interventionists ranked 64 behaviors they felt were most effective in engaging families in telehealth settings. The behaviors with the most consensus were:
 - demonstrating empathy,
 - establishing the child's and parent's expectations, interacting
 - respectfully and warmly,
 - responding to the child's attempts to interact, and responding to
 - parents' feedback (Retamal-Walter et al., 2022).

Working with Families in Early Intervention

In early intervention, SLPs often aim to involve families because their participation makes the process so much more fulfilling and effective. Of course, each family is unique, but research shows that when SLPs take the time to build a trusting relationship and set up open, two-way communication, families are more likely to feel “empowered to take an active role in their child's intervention, both inside and outside intervention sessions” ([Melvin et al., 2020](#)).

In interviews published by Melvin et al. in 2022, SLPs said they fostered greater family involvement by:

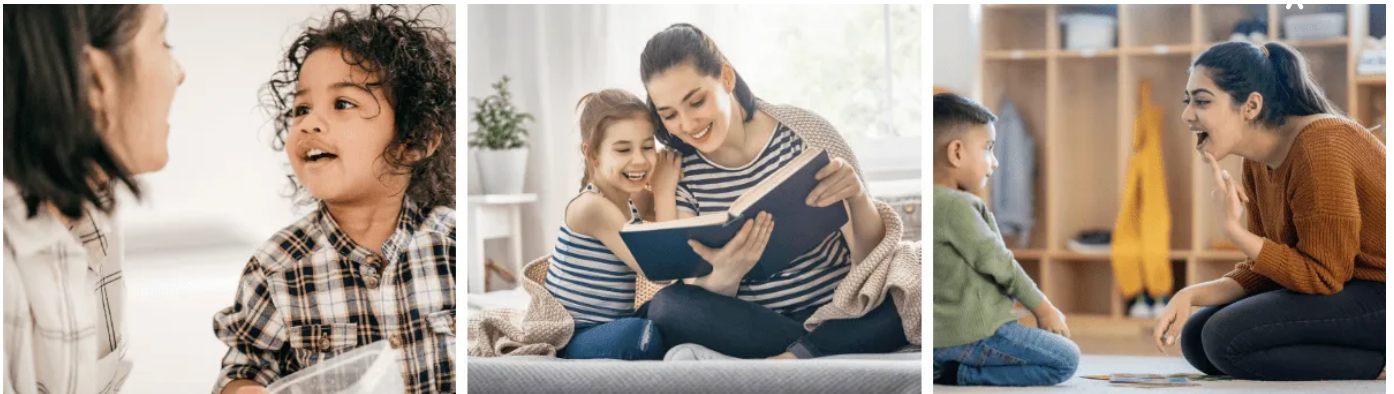
- including families in planning;
- communicating expectations clearly;
- modeling how to carry out an intervention;
- inviting families to practice interventions during sessions;
- providing feedback and resources;
- involving extended family in interventions; and
- collaborating with families when problem-solving.

Parents and caregivers may need extra support if they don't bring a lot of confidence to the process. Researchers say families tend to be more engaged when the SLP reassures them about the importance of their role and ability to help their child ([Levickis et al., 2020](#)).

Learn more: [How to Communicate with Families to Build Trust, Connection, and Engagement](#)

► **Research and Resources:**

Childhood Speech and Language Conditions



When a parent, health professional, or educator expresses concern about the development of speech or language, consulting with an SLP can be a logical next step. An SLP's assessment can reveal the nature of the delay or disorder. Aligning assessment data with information gathered from other sources, SLPs use their clinical judgment to determine:

- which speech and language difficulties interfere most with someone's daily functioning;
- which activities are most important to the people involved;
- which personal strengths and assets can be tapped to achieve gains; and
- which functional goals should be prioritized in an intervention plan.

The *DSM 5-TR* describes the following conditions under the umbrella term “Communication Disorders.”

Developmental Language Disorder (DLD)

As children grow, difficulties sometimes emerge with learning, understanding, or using spoken, written, or sign language. As an SLP, you may notice that a child with language disorder:

- uses or understands fewer words than expected;
- does not build words or sentences according to generally accepted rules; or
- has trouble describing or recounting events or maintaining a conversation.

Researchers report that nearly 75% of children with language disorders don’t get the diagnostic and intervention care they need. Without treatment, studies show, there can be lifelong consequences. For example, some teens and young adults with a history of language disorders have a hard time with the kind of reading needed to function well in adulthood ([Botting, 2020](#)). Others may face some challenges with their employability, especially in professional occupations ([Conti-Ramsden et al., 2018](#)).

The far-reaching impacts of DLD make it all the more important to work toward early identification and effective interventions.

Classification in ICD-11

The International Classification of Diseases for Mortality and Morbidity Statistics, 11th Revision provides a distinct classification for DLD with impairment of mainly pragmatic language, noting that it may be considered synonymous with social communication disorder (SCD).

Challenges in Assessing DLD

When assessing for DLD, it’s important to rule out other possible causes of impaired language. For example, hearing loss, intellectual disability, and motor conditions can all change how people use language in ways that can look like DLD.

Ruling out other explanations is a key part of the evaluation process. An analysis of electronic health records ([Nitin et al., 2022](#)) shows that DLD can co-occur with other neurodevelopmental and health conditions, including:

- Learning disorders
- Conduct disorders
- ADHD
- Motor and coordination disorders
- Developmental delays

Selective non-speaking (selective mutism) is an anxiety-related disorder in which a child speaks in some settings but not others. Some children with this condition also have speech and language delays and disorders (Muris & Ollendick, 2021).

Learn more: [Do Gender Myths Make it Harder to Identify DLD?](#)

Camouflaging in DLD

It's also important to consider the ways children mask or compensate for language difficulties. In a 2023 study, [Hobson & Lee](#) delved into the experiences of several SLPs working with children who were eventually diagnosed with DLD. They reported that children used these common camouflaging strategies:

- Copying other people's language patterns and behaviors
- Developing their own "scripts" to guide conversation
- Closing down conversations with comments like, "I'm just tired today."
- Pausing so others will fill in words for them
- Avoiding activities or settings where language demands are higher
- Using prosocial behaviors such as smiling and being funny to keep others from noticing language difficulties
- Behaving in disruptive ways to avoid or change conversations
- Observing visual cues around them to solve a language problem
- Pointing or gesturing to ask for or explain things

When students camouflage language difficulties, it can sometimes make their daily lives a little easier—but at a steep cost. As is true with other neurodevelopmental differences like autism and ADHD, camouflaging can lead to personality changes, exhaustion, meltdowns, and a higher risk for anxiety and depression. Effective camouflaging can also delay referrals, early identification, and interventions for DLD (Hobson & Lee 2023).

Speech Sound Disorder

Communication disorders are the most common developmental differences in children—and among communication disorders, speech sound disorders (SSD) are the most prevalent. The [National Institute on Deafness and Other Communication Disorders \(NIDCD\)](#) reports that 8%-9% of young children have an articulation or phonological disorder. That percentage drops to 5% by the time children reach first grade (NIDCD, 2016).

Speech sound disorders are often categorized according to their causes. They can arise because of a difference in:

- motor abilities or neurology (difficulty planning or making a sound);
- structure (an oral or facial difference); or
- sense or perception (such as hearing loss).

In some cases, the cause of a speech sound disorder isn't known. Conditions of this type are known as functional speech sound disorders.

SSDs may also be classified as either articulation or phonology disorders. An articulation disorder causes a child to have trouble forming speech sounds correctly. A phonology disorder causes a child to use speech sounds in ways that aren't correct, even if the child can execute the sounds properly.

It's important to note that it isn't always easy to pinpoint the precise origin or nature of a speech sound problem. That's partly because linguistic, processing, perception, and motor systems interact—and they change again and again as children grow.

In a [tutorial](#) published in a 2019 issue of *Perspectives of the ASHA Special Interest Groups*, Fabiano-Smith et al. recommended a 10-step speech assessment protocol, including these procedures:

1. Take a thorough case history to shed light on risk factors, relevant cultural factors, and language proficiencies.
2. Examine motor function, hearing, and cranial nerve function.
3. Collect single-word and connected speech samples in each language the child speaks. It's important to phonetically transcribe the single-word speech sample.

4. Create a phonetic inventory of sounds the child can produce, using the speech samples you've collected.
5. Calculate the accuracy of the child's consonant production using the speech samples you've collected.
6. Determine which sounds the child may be avoiding by substituting another sound. It's important not to count it as an error when a multilingual child substitutes a sound used in one language as a substitute in another language.
7. Analyze patterns of phonological errors in each language.
8. Measure the whole-word proximity of a child's production by comparing it to the adult form of the target word to determine how close the two are.
9. Perform stimulability testing to find out how well a child can imitate modeled sounds.
10. Evaluate the intelligibility of the child's speech. Consider using multiple measures to create the clearest picture of the child's abilities.

Reliable, validated assessments can help you with many of these tasks. [WPS Assessment Consultants](#) can help you identify which assessments are appropriate for the students you're evaluating.

Learn more about [assessing students with hearing loss](#).

Best Practices for Assessing SSD

A comprehensive evaluation, which integrates standardized measures with other sources of information, is the best approach to understanding how a child speaks and communicates. A single assessment should not be the basis for a diagnosis ([Fabiano-Smith, 2019](#)).

To ensure that an SSD evaluation is comprehensive, you may want to keep these considerations in mind:

- Some studies have shown that single-word measures may give you more reliable information about intelligibility, speech accuracy, and phonemic inventory than connected speech samples ([Yeh & Liu, 2021](#)).
- It's a good idea to assess early literacy and reading, too. Recent studies have shown that children with SSD have difficulty with many aspects of [phonological processing](#). These difficulties raise the risk for reading problems later ([Tambyraja et al., 2023](#)).
- Assessing and supporting the mental health of students with SSD is vital. Children with SSD may have some difficulty with social relationships in school ([Wren et al, 2023](#)). By some estimates, students who had SSD at 8 years old are twice as likely to self-harm with suicidal

intent during their teen years as teens without SSD ([McAllister et al., 2023](#)). Note that this study did not find a link between SSD and self-harm *without* suicidal intent.

When designing interventions, you may want to recommend extra support in reading, math, and science. There's evidence that children with persistent SSD score below target levels in elementary and middle school ([Wren et al. 2021](#)).

Learn more: [How to Assess the 5 Components of Reading This Year](#)

► **Research and Resources:**

Social Communication Disorder



Social communication disorder (SCD) is a relatively new disorder category in the *Diagnostic and Statistical Manual, 5th Edition, Text Revision (DSM-5-TR)*. Practically speaking, that means more research is needed to fully understand this disorder. Even so, research related to social communication can shed light on the condition.

Social communication is an umbrella term that includes:

- pragmatics, or purpose-oriented language used in social settings;
- social interaction, or conversations between two or more people;
- social cognition, or the ability to evaluate and understand emotional states even when they are not explicitly described, and to adjust behavior to suit the situation; and

- language processing, or the ability to express ideas and understand the communication of others.

Screening for, diagnosing, and treating SCD is within the scope of practice for SLPs. In fact, the expertise and training of SLPs can be especially helpful in distinguishing SCD from similar-looking traits and conditions.

When a child has long-term difficulty communicating verbally or non-verbally for social purposes, it can hamper their ability to maintain relationships and to thrive in school. For example, someone with social communication disorder might have trouble adapting their speech or language patterns to different environments. Or they might have difficulty inferring or understanding figurative language.

The World Health Organization (WHO) and ASHA recommend that SLPs maintain a “person-centered focus on function” when identifying SCD and planning interventions. The International Classification of Functioning, Disability, and Health can be a useful framework. Working within this framework, SLPs:

- gather data on body functions and structures;
- observe the child’s participation in social activities;
- document any relevant environmental and personal factors;
- prioritize goals that the child, family, and practitioner have identified together; and
- focus on the interventions that address the specific functions important to the child and family.

In a survey of SLPs published in *Perspectives*, SLPs reported that they used a combination of interviews, naturalistic observation, language sampling, parent/teacher reports, and formal assessments to identify SCD (Izaryk et al., 2021).

Learn more: [Pragmatics—Six Constructs of Formal Assessment](#)

Challenges in Assessing for SCD

Communication abilities, skills, and habits vary from one person to the next. That’s what makes social communication so dynamic, and even fun! It’s also what makes assessing for SCD a complicated endeavor.

Here’s a brief overview of some of the challenges SLPs may encounter.

Cultural Differences

Cultural influences and social norms can affect the way people communicate socially. For example, non-verbal communication signals in one culture, such as facial expressions, gesturing, and making eye contact, can differ from those of another culture.

Just like people, assessments reflect culture. While many modern assessments are normed with broadly representative groups (or with international samples), some test items may not be easily understood by a person from another culture. When that's the case, the item may not be measuring a communication skill so much as it's measuring cultural understanding.

The more you know about someone's background—and the assessment you're going to give—the better the experience will be. Gathering this information will help you assess more effectively and interpret responses more accurately. It will also help you report the results more sensitively, enabling students and families to feel safer and more satisfied with the care they're receiving ([Taylan & Weber, 2023](#)).

ASHA offers a [Cultural Competence Checklist](#) that allows you to reflect on your own cultural and linguistic awareness.

Learn more about [cross-cultural frameworks](#) that can guide you when your culture is different from your student's or patient's.

Prolonged Psychosocial Deprivation and Other Trauma

What happens in childhood can alter social communication and interaction abilities for a long time afterward. Researchers have found, for example, that children who were raised in institutionalized settings often have long-lasting impairments in social communication ([Wade et al., 2020](#)). Another example: Children who have experienced abuse may develop responses to non-verbal social signals, such as facial expressions and tone of voice, that interfere with their ability to build relationships ([Pfaltz et al., 2022](#)).

It isn't good practice to ask children to recount their trauma histories in the context of an evaluation. Some research suggests that it could even re-traumatize children ([Temkin et al., 2019](#))—or that it could lead to “the tyranny of low expectations” in school settings ([Anda et al., 2020](#)). Still, gleaning as much information as you can from records and other sources may help you distinguish between SCD and the effects of childhood abuse and neglect.

Co-occurring Conditions and Overlapping Symptoms

Many other conditions affect speech and language in ways that can look like SCD. For example, in studies, children with traumatic brain injuries often have lower scores on tasks involving social cognition, especially Theory of Mind, which is the ability to correctly identify someone else's

motives, beliefs, or emotional state ([Genova et al., 2019](#)).

In addition, SCD shares symptoms with other neurodevelopmental and health conditions, making it a challenge to determine whether SCD exists on its own or alongside another condition. For instance, many children with ADHD have trouble with social interactions. Inattention can cause children to overlook social communication cues, while impulsivity can cause a child to interrupt in discourse ([Topal et al., 2018](#)).

One way to reduce the risk of misdiagnosis is to conduct a comprehensive evaluation in which the SLP collaborates with the child, family, and other health and education professionals.

Learn more: [Unraveling the Complexities of Pragmatics](#)

► **Research and Resources:**

Childhood-Onset Fluency Disorder

Stuttering, or childhood-onset fluency disorder, is any disruption in the flow of speech that is atypical for a child's age. The condition usually develops by age 6, and for some, it can worsen over time. Stuttering can sound like:

- breaks or pauses in a word;
- blocked speech (whether blocked by a sound or by silence);
- repeated sounds or words;
- prolonged sounds;
- word substitutions (to avoid words that are hard to say); or
- tense speech.

For some children, motor tics and anxiety are also part of the condition. It's worth noting that, according to the DMS-5-TR, 65%-85% of children with childhood-onset fluency disorder outgrow it or recover in time ([American Psychiatric Association, 2022](#)).

Challenges in Assessing for Childhood-Onset Fluency Disorder

In an evaluation where this condition is a possible diagnosis, it's important to rule out other conditions and factors that can disrupt speech in similar ways, including:

- Hearing loss
- Delays or disorders related to motor functioning
- Oral reading difficulties
- Dysfluency stemming from learning a new language
- Medication side effects
- Tourette's

For some children, these difficulties go hand in hand with other neurodevelopmental conditions. In some studies, as many as half the participants with fluency disorders also had symptoms of ADHD ([Druker et al, 2019](#)). And close to 8% of those who stutter are also autistic ([Preston et al., 2022](#)).

It can also be difficult to discern between the symptoms of this disorder and the natural repetitions, pauses, and fluency issues that very young children can have as they learn to speak.

Best Practices for Assessment

A 2021 [report](#) prepared by a group of 12 experienced clinicians ([Brundage et al., 2021](#)) recommended that stuttering evaluations include these components:

- Gathering information from the child and family about their experiences, concerns, and goals
- Assessing speech, language, and temperament development
- Obtaining speech samples involving different tasks and settings to understand stuttering behaviors
- Finding out how the child feels about the condition and which strategies help
- Learning how those in the child's environment feel about the condition and which interventions have been tried
- Exploring how stuttering has impacted the child's functioning in various settings



The DSM-5 also recognizes other communication disorders that are unspecified in nature.

► **Research and Resources:**

Co-occurring Conditions and Overlapping Symptoms

Some neurodevelopmental differences and health conditions can affect the way people communicate. With these conditions, speech or language may be delayed; speech and language difficulties may be long-lasting. These overlapping symptoms and co-occurring conditions can make diagnosis and intervention planning more complicated.

Autism

Language delays are often the concern that gives rise to an [autism evaluation](#). Even so, there's enormous variability in speech and language abilities in autistic individuals.

Studies have shown that 3 in 4 autistic children have language differences that are apparent as early as kindergarten. Difficulties can be present in any subsystem of speech or language. Researchers estimate, for example, that 12%–33% of autistic 3- to 9-year-olds have speech sound disorder—a percentage much higher than in the general population ([Aravamudhan et al., 2019](#)).

On the other hand, many autistic people have extremely well-developed speech and language skills. Some researchers have said 25% of autistic children have “typical or even exceptional language abilities by 5 years old” ([Vogindroukas et al., 2022](#)).

When speech and language difficulties do exist, they aren't always related to autism. That's because autism can co-occur with speech and language conditions or with other health conditions that affect speech and language.

Researchers often describe three broad categories of autistic language ability:

- Autistic people who are verbal and have no language difficulties
- Autistic people who are verbal and have language difficulties
- Minimally verbal autistic people

The World Health Organization's International Classification of Disease, 11th Edition (ICD-11) recognizes the variations in language abilities, and it integrates qualifiers into its autism classifications:

- Autism with disorder of intellectual development and with impaired functional language
- Autism with disorder of intellectual development and with absence of functional language
- Autism without disorder of intellectual development and with mild or no impairment of functional language
- Autism with disorder of intellectual development and with mild or no impairment of functional language
- Autism without disorder of intellectual development and with impaired functional language.

Within each category are many individual differences. Those differences may be related to speech and language delays or disorders, to other skills such as executive function or reasoning abilities, or to autism characteristics.

Learn more: [Lived Experiences of Autistic Girls and Women](#)

Language Differences in Pre-verbal or Minimally Verbal Children

Many researchers use the criteria in Module 1 of the Autism Diagnostic Observation Schedule, Second Edition (ADOS-2) as a reliable definition of “minimally verbal.” Module 1 includes a range of abilities from *no speech* to *simple phrases, used inconsistently*.

When researchers evaluated the language of pre-verbal or minimally verbal autistic children, they noticed:

- More verbs and food words than typically developing children use
- Less frequent use of “mommy” and “daddy” ([Haebig et al., 2021](#))
- Communicative gestures that augment minimal speech ([LaValle et al., 2021](#))
- More utterances and greater word use during parent-child free play
- More scripted, repetitive speech (sometimes called echolalic speech)
- Less intelligible speech ([LaValle et al., 2021](#))

Language Differences in Verbal Individuals

Social communication is one area of difference for many autistic individuals. Even so, pragmatic language—the language people use in social encounters—can vary widely among autistic individuals.

For some autistic people, other language differences are also possible, including:

- Not recognizing irony or humor
- Understanding literal language better than figurative language
- Using pronouns in varied ways
- Building simpler sentences ([Peristeri et al., 2017](#))
- Having trouble correctly explaining people’s intentions, beliefs, motivations, and mental or emotional states ([Schwartz-Offek & Segal, 2022](#))

► **Research and Resources:**

Dyslexia and Other Specific Learning Disorders

Like DLD and autism, dyslexia is a neurodevelopmental condition. Differences in the ability to process sounds often appear in early childhood. These sound processing differences can lead to difficulties decoding written words later on. In fact, children with early language delays of various kinds have a higher risk of word-reading difficulties in school ([Price et al., 2022](#)).

Learn more: [WPS In-Depth Guide to Dyslexia](#)

SLPs can be instrumental in helping to identify dyslexia and pinpoint the specific areas of need for a child who is having trouble with language, early literacy, or reading. Yet as many as 40% of SLPs say they don’t feel confident assessing and intervening when students have reading and writing difficulties ([Bridges & Kelly, 2023](#)).

Phonology

The ability to recognize and work with the sounds in spoken words (sometimes called phonological awareness) can be disrupted by certain speech and language disorders. For example, some phonological processing abilities such as verbal working memory, may be disrupted in children with speech sound disorder ([Tambyraja et al., 2023](#)). Another example: students with DLD + dyslexia have wide-ranging deficits in multiple word-learning domains, especially those that rely on phonological awareness ([Alt et al., 2019](#)).

Assessing phonological awareness, phonological processing, and phonological skills can help you determine exactly where deficits exist so that you can precisely target interventions for each child.

Learn more: [Dyslexia Symptoms at Different Ages](#)

Morphology

The ability to recognize and work with word parts, such as prefixes and suffixes, can also be affected by language disorders. For example, people with DLD make more frequent errors when producing past-tense verb endings and plural endings than children with typical development do ([Moraleda-Sepulveda & Lopez-Resa, 2022](#)).

For that reason, it's vital that SLPs build their confidence in classifying spoken and written morphological errors and correcting them ([Brimo et al., 2020](#)).

It is well within the SLP's scope of practice to offer intensive dyslexia interventions such as these:

- Providing explicit instruction and intervention in spelling and transcription skills to improve writing ([Hebert et al., 2018](#))
- Modeling, scaffolding, and supporting independent practice of decoding skills such as mastering letter-sound correspondence
- Addressing vocabulary, pragmatics, listening, and reading comprehension skills ([Al Otaiba, et al., 2018](#))

To find out more about evidence-based dyslexia interventions supported by the Science of Reading, you can explore the resources provided by the [National Council on Intensive Interventions](#) and the [What Works Clearinghouse](#).

Learn more about the comorbidities of dyslexia.

► **Research and Resources:**

ADHD

Attention-deficit/hyperactivity disorder is a neurodevelopmental condition that affects how people move, focus, manage their emotions, interact with others, and handle impulses.

School-based and clinical SLPs can provide meaningful care to those with ADHD. SLPs can help with social, academic, and organizational skills to reduce the impacts of ADHD. And they can diagnose and plan treatments for speech and language conditions that often co-occur with ADHD.

Symptom Similarities

Language disorders can cause symptoms that look like ADHD characteristics. People with a language disorder can experience symptoms like these:

- Restlessness
- Difficulty following instructions
- Trouble finishing projects or assignments
- Social communication differences
- Anxiety, depression, and other internalizing symptoms

Overlapping Symptoms

In addition, people can have ADHD and speech or language disorders at the same time. Distinguishing between ADHD symptoms and the symptoms of speech or language disorder can be challenging.

Researchers estimate that ADHD and DLD co-occur in 22% of cases, and ADHD and SLI co-occur in 16.9% of cases (Redmond et al., 2020). Other factors can also complicate symptom profiles. For example, in a small study involving children with auditory processing disorder, around 55% also had difficulties with sleep disturbance, which led to more impulsivity and inattention symptoms (Ahmmed, 2020).

Differentiating Strategies

To help you tell the difference between ADHD and speech or language disorders, researchers recommend these strategies:

1. Explore the reason for social communication difficulties. For example, are missed social cues the result of inattention? Does difficulty with conversational turn-taking stem from overarching impulsivity? Do communication skills improve with ADHD medication? (Topol et al., 2018)
2. To account for both receptive and expressive abilities, you may want to use composite linguistic scores rather than measures of single domains.
3. Be aware of items on ADHD rating scales that could also apply to language deficits.
4. Include language sample analysis in your evaluation. Research shows that language samples collected during play may allow for variations in attention and activity levels.

► **Research and Resources:**

Mental Health Conditions

In recent years, depression and anxiety have been affecting children and teens at rates much higher than in the past. For SLPs, this surge in mental health symptoms has some practical implications. That's because of the bi-directional relationship between speech and language conditions and mental health.

On one hand, mental health conditions can affect speech and language. Mental health can also impact how people perform on assessments of speech and language. On the other hand, speech and language disorders can affect mental health.

Language Effects of Depression and Anxiety

Researchers have long understood that depression affects how people speak. Depression can change speed, prosody, tone, and word choice, among other speech features ([Weintraub et al., 2023](#)). In a 2020 study, for example, researchers found that people with depression took longer to respond, paused longer, and spoke more slowly than people without depression ([Yamamoto et al., 2020](#)). Other studies suggest that depression can make speech less intense and more monotonous ([Gumus et al., 2023](#)).

Similarly, anxiety changes people's speech and language. In studies, anxiety affected how many and what kinds of words people used, how long they spoke, and when and how often they paused. Certain speech patterns have even helped researchers predict who did and did not have generalized anxiety disorder ([Teferra et al., 2023](#)).

By the same token, having a speech or language disorder raises the risk of experiencing depression or an anxiety disorder ([Lee et al., 2020](#)). For that reason, assessing mental health should be part of any comprehensive speech and language evaluation.

Learn more about [assessing for anxiety and depression](#).

► **Research and Resources:**

Assessing the Need for Augmentative and Alternative Communication (AAC)

Making decisions about augmentative and alternative communication (AAC) can be complicated. Questions like these often arise:

- What are the student's communication needs?
- Is the student interested in using the tool?
- How much planning and preparation will it take to use the tool regularly?
- Will the student need help to use the tool?

- How can practitioners boost the student's motivation to use the tool?
- In what setting will this tool be used?
- Who requests AACs for students?
- What capabilities and features should this tool have?
- Have the student's teachers, parents, and caregivers been trained how to use the tool?
- How do the various stakeholders feel about using this tool?
- How will practitioners measure how well the tool is working?

SLPs and other practitioners often use the Student, Environment, Tasks, Tools (SETT) framework to help in AAC decision-making. The [SETT framework](#), developed by Joy Zabala, Ed.D. asks evaluators to consider each category before deciding on AAC tools.

Another framework for choosing and using assistive communication technologies is Quality Indicators for Assistive Technology Services (QIAT). [QIAT guidelines](#) ask decision-makers to take these steps:

- Make sure practitioners in your organization understand the procedures for starting, planning, and carrying out an assessment for AAC, including how to track results and solve problems that could arise.
- Form a knowledgeable team to conduct the AAC assessment, with the student and family playing active roles on the team.
- Find out how the AAC functions in each of the student's important environments, including classroom, recreation areas, **home, workplace, and community**.
- Follow a reasonable timeline, keeping state and federal requirements in mind.
- Base your AAC recommendations on data you collect about the student's needs and abilities, the environment, tasks, and objectives. It's important to ensure that data comes from observation, records review, and interviews with stakeholders.
- Document your recommendations and results.
- Reassess your recommendations when the student's needs or abilities change, or when task and environments change (QIAT, 2023).

It's important to understand some of the issues other educators have when implementing AAC interventions. In a [2019 survey](#) of special educators carried out by Andzek et al., teachers pointed out several common barriers to effective use of AAC in the classroom:

- Many teachers receive little or no training on how to use AAC tools.
- When teachers do receive training, they may have to use personal time or funds for the training.
- Some teachers want to collaborate with SLPs more often than they currently do.
- Data on AAC use isn't always used to guide decisions about continuing or changing AAC tools.
- Teachers often prepare communication materials in the same limited amount of time that they do all other class planning.
- Low expectations for student success can keep some educators from using AAC tools consistently.

You can collaborate with other SLPs to make AAC better and more useful at [PrAACtical AAC](#).

AACs in Early Intervention

In recent years, researchers have increasingly recommended AACs during early intervention for speech and language issues. For a growing number of SLPs, it makes sense to use AAC with children who have lower expressive language abilities—especially if the child isn't yet using any words at all. More SLPs select sign language or aids such as pictures and graphic symbols rather than speech-generating devices ([Lorang et al., 2023](#)).

When deciding which AACs to use in early intervention, SLPs most often consider factors like these:

- the child's expressive and receptive language abilities
- the child's diagnosis
- the child's cognitive skills and learning abilities
- the child's enthusiasm about communicating with AAC

SLPs also consider the child's physical abilities, support systems, and the properties of different AAC devices or methods, though these factors have less impact on decision-making.

Learn more: [Early Childhood Development Stages and Beyond](#)

Disparities in AAC

SLPs can help shrink existing gaps in who has access to AAC interventions. Studies show that Black children receive less AAC intervention than White students. Roughly 75% of Black students with disabilities have less than an hour of AAC use each week; only 28% of White students face the same limited access. That short amount of time is not enough to make a meaningful difference, researchers say. ([Pope et al., 2022](#)).

In part, less AAC access is a natural consequence of disparities in diagnosis. In one study involving 7,950 children, those who were Black or Asian, were uninsured, or spoke a language other than English were less likely to be diagnosed with a developmental disability. That study also showed that Black and Latinx children didn't receive services as often as other children ([Gallegos et al., 2021](#)).

Want to make AAC access more equitable where you are? Pope et al. offer these recommendations:

- Center the family and offer culturally responsive AAC services.
- Reflect on your racial, cultural, and linguistic background and perspectives.
- Audit your caseload to be sure your AAC decisions are equitable.
- Identify possible causes for any inequities you find.
- Work with teachers, families, and other professionals to close the gaps.

► Research and Resources:

Best Practices for Assessing Multilingual Speakers

With language diversity on the rise in U.S. schools, SLPs are increasingly asked to identify speech and language disorders in children who speak multiple languages. SLPs are specially trained to distinguish between language differences that stem from linguistic or culture factors and those that are linked to speech-language delays and disorders.

It can be a challenge to differentiate between the two. Being familiar with developmental patterns in the student's home language can lead to more accurate diagnoses (Dam et al., 2020). These other research-based strategies may also be helpful.

Consider a “converging evidence” model.

This model gathers information from multiple sources, including:

- Parent, practitioner, and educator concerns
- Descriptions of communication behaviors
- Detailed history of a student's language development and experience
- History of speech disorders in family members
- Information on risk factors such as hearing loss
- Analysis of single-word and narrative speech samples in the student's languages
- Validated speech and language assessments appropriate for English learners (in both languages if possible)

Some researchers recommend a pretest-teach-retest strategy known as dynamic assessment (Castilla-Earls et al., 2020). This method allows you to track how a student responds to instruction. It can also help you determine how much support a student needs to make gains.

A converging evidence model bases a diagnostic or eligibility decision on what most of the evidence indicates, rather than using a single measure.

Consider adding language samples to your evaluation.

Language sample analysis may not be ideal in every evaluation, but it is considered by some researchers to be a “naturalistic and unbiased indicator of linguistic development in preschool-age bilingual children” (Gulberson, 2020).

Transcribing language samples and analyzing them can be time-consuming, and it's best carried out by bilingual SLPs. Despite these drawbacks, it can be a useful tool in a comprehensive evaluation. Many SLPs develop their own methods of gathering samples during their interactions with a child (Gulberson, 2020).

Consider using ASHA’s phonemic inventories and cultural/linguistic information resources.

To understand how the speech sounds inherent in one language can influence the way sounds are produced in another language, you may want to learn more about the phonemic system of your student’s first language. [ASHA’s phonemic inventories](#) can be a good starting place. The inventories can help you identify sounds unique to each language, along with those that are common to both languages. This database also provides insights into cultural considerations for speakers of each language.

Consider the information already on hand.

If you’re a school-based SLP, you may want to evaluate the student’s academic writing. You may also want to observe how the student uses language in classroom, which can give you insight into a student’s:

- verbal and non-verbal communication;
- response to instructions;
- ability to ask and answer questions;
- self-advocacy communication skills; and
- capacity for interacting with others.

Consider including non-word repetition tasks in the evaluation.

Asking students to repeat non-word sounds can be an effective way to distinguish between those who have speech/language conditions and those who are typically developing language learners, studies show (Schwob et al., 2020). It’s important to consider whether nonsense words contain speech sounds that don’t exist in the student’s primary language. In addition, varying the complexity of the non-word sounds and including sound patterns that are not similar to words can be especially useful (Taha et al., 2021).

Consider using morphosyntax as an indicator.

Some practitioners find a “disorder within diversity” approach useful in evaluating speech and language disorders among English language learners (Oetter, 2018). One of the promising methods often used with this framework is morphosyntax assessment.

Studies suggest that morphological markers may differ in bilingual students with language disorders. Researchers have found that clitics and verbs were particularly useful in distinguishing between Spanish-speaking students with and without developmental language disorder (Castilla-

Earls et al., 2020; Jacobson et al., 2019). Verb error patterns have also been linked to phonological impairment in dual language speakers (Hasselaar et al., 2020).

Consider collaborating with an interpreter.

A trained, experienced interpreter can assist with assessment. An interpreter may also be able to provide cultural insights that help you better serve the student and family. An interpreter can report on intelligibility and may be able to share how a student compares with other children the same age (Jasso & Potratz, 2020).

▶ **Research and Resources:**