

Supplemental Material S3. Rating definitions.**Reliability of expert diagnosis of apraxia of speech in children.
Rating definitions sheet.**

Feature category	Subordinate features (if selected as present)	Definitions	Rating
Inconsistency	Inconsistent substitutions or distortions of consonants and/or vowels across repeated productions of a word/phrase	Perceptibly different consonants and/or vowels across repeated words or phrases	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Variable productions of consonants or vowels across a variety of words	Consonants and vowels change from word to word or phrase to phrase	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
Lengthened and disrupted coarticulatory transitions	Difficulty achieving initial articulatory configuration/ speech groping	Visible effort (e.g., groping) before or at onset of word/phrase.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Syllable segregation (inappropriate within-word pauses)	Pauses or gaps within a multisyllabic word. Gaps are longer than would be expected for a typical stop consonant.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Inappropriate pauses between words	Pauses or gaps between words in connected speech that are not appropriate (e.g., due to syntactic boundaries).	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Increasing difficulty with longer/ more complex words	Segmental and suprasegmental errors increase as word or phrasal complexity (e.g., number of syllables) increases.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Articulatory errors or sequencing errors on DDK	Assessing only the DDK task: Consonants/vowels/syllables produced in the wrong order and/or difficulty producing or maintaining a fully correct multisyllable sequence over repeated trials.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Slow / effortful DDK	Assessing only the DDK task: Increased duration of syllables and/or pauses between syllables in relation to the child's age.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
Respiration, voice or resonance errors	Respiration problems	For example and not limited to: inappropriate breathing depth, rhythm, effort, loudness, spacing (e.g., mid-word), timing (e.g. breathing too frequently).	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Hoarse, harsh and/or breathy voice	Perceived roughness, raspiness, breathiness in voice quality.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Age-inappropriate pitch	Pitch too high or too low for age.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Age-inappropriate loudness	Too loud or too soft for age, not attributable to emotional content such as excitement.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Pitch breaks	Sudden shift (up or down) in pitch.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Hypernasal (consistent)	Hypernasality (too much nasal airflow) occurs consistently and persists across all consonants and vowels. Includes nasal emission.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Hypernasal (intermittent)	Hypernasality (too much nasal airflow) is present occasionally or intermittently on Cs and/or Vs, but is not persistent. Includes nasal emission.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity

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Respiration, voice or resonance errors (continued)	Hyponasal (consistent)	Hyponasality (too little nasal airflow) occurs consistently and persists across all consonants and vowels.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Hyponasal (intermittent)	Hypernasality is present occasionally or intermittently on Cs and/or Vs, but is not persistent.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Cul-de-sac resonance	Too little airflow out of the mouth and nose perceptually sounding muffled and like sounds are trapped in a person's throat.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
Inappropriate lexical stress	Excess stress or <i>consistent</i> equal stress	Weak syllables are lengthened, louder or higher so that they are equal to strong syllables and/or syllables are lengthened, louder or higher than appropriate (excess).	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	<i>Inconsistent</i> equal stress	Intermittently having no relative difference between weak and strong syllables (i.e. weak syllables produced longer, louder or higher to match strong syllables.) NOTE: does not include weak syllable deletion. This is included in structural errors.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Other stress errors	A stress error that does not fit in the other categories - e.g. producing strong syllables as a weak syllable.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
Inappropriate phrasal stress and intonation	Atypical intonation	Intonation inappropriate for content of phrase/sentence. NOTE: Doesn't include emphatic stress.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Too little emphatic stress	"Flat" intonation contour.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Too much emphatic stress	Emphasized words overly stressed within phrase/sentence.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
Structural errors	Weak syllable deletion	Unstressed syllables omitted.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Added syllables/sounds	Syllables/sounds epenthesized inappropriately (not dialectal).	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Onset deletion	Initial consonant or all members of a cluster are omitted.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Final Consonant / Coda Deletion	Final consonant or coda omitted (not dialect-appropriate)	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Cluster reduction	Consonant omitted from sequence of 2-3 consonants	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Metathesis/Migration	Consonants or vowels in inappropriate order	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
Segmental errors	Limited consonant inventory	Fewer consonants in repertoire than expected for age (regardless of appropriateness of which consonants the child has)	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Typical consonant substitution patterns	Substitution errors consistent with typical development, but delayed.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity

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Segmental errors (continued)	Atypical consonant substitution patterns	Substitutions do not typically occur earlier in development among TD children	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Consistent distortions of later-developing sounds	Distortions of sibilants, liquids, palatals (e.g. [r], [s], [tʃ])	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Vowel substitution errors	Substituting one or more vowels with another vowel (e.g. saying [ʒ] as [ɔ]) or diphthongs as a monophong.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Distortion vowel errors	Distortion of monothongs or diphthongs. PLEASE NOTE: lengthening errors are not included here and instead would affect lexical stress.	2 = frequently present, 1 = infrequently present, 0 = not present, 9 = no opportunity
	Sound acquisition out of order re: typical development	Consonant and/or vowel repertoire inappropriate for the child's age in (e.g. child has acquired [tʃ] but not [t]).	2 = frequently present, 1 = infrequently present, 0 = not present, 9 = no opportunity
Language issues	Semantic deficits and/or word-finding problems (e.g., mazes, fillers)	Less specific vocabulary than expected for their age and/or use of mazes and fillers.	2 = frequently present, 1 = infrequently present, 0 = not present, 9 = no opportunity
	Morphosyntax difficulties	Grammatical errors (including omissions, misorderings) of any type relative to the child's age.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Pragmatic difficulties	Inappropriate social interactions relative to the child's age.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
Dysfluency	False starts / restarts	Sentences abandoned then restarted.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Repetitions (sounds, syllables or words)	Repeating sounds (b-b-b-bottle), syllables (bo-bo-bo-ttle) or words (bottle bottle bottle)	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Blocks	Appears to get "stuck" on certain sounds and the person cannot move past it voluntarily.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity
	Prolongations	The first sound or syllable of a word is sustained and the person cannot move past it voluntarily.	2 = of significant clinical concern, 1 = of mild clinical concern, 0 = of no clinical concern, 9 = no opportunity