



Family Support and Early Intervention Division
FAMILY INFANT TODDLER (FIT) PROGRAM



**Early Childhood Evaluation Program – Technical Assistance & Consultation
Continuing Education series for NM FIT Providers**

Recognizing Typical and Atypical Speech and Language in Children

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Objectives

- 1.** Recognize age-related and atypical variations in speech and language.
- 2.** Understand factors that influence language development.
- 3.** Identify when to refer for speech and language concerns.



Definitions

Language:

Communication system

Semantics: The meaning of words/signs.

Morphology: Meaningful portions of words/signs.

Syntax: Sentence structure.

Pragmatics: Social use of words/signs.

Speech:

Verbal means of communication

Articulation: How speech sounds are made.

Voice: Air moving through vocal folds to produce sound.

Fluency: The rhythm of speech.

Disorders

Language:

Acquired or developmental

Receptive language:
Understanding language

Expressive language: Using language

Speech:

Acquired or developmental

Articulation: Pronouncing sounds incorrectly

Voice: Vocal fold dysfunction

Fluency: Stuttering and cluttering (excessive breaks, disorganized speech planning)

Delay vs. Disorder

Delay

Skills developing in a typical sequence but not as quickly as other children.

Disorder

Unusual errors or atypical sequence of acquisition of skills.

Language Development

Skinner: behavioral reinforcement

Chomsky: innate, biological (universal grammar)

Piaget: one stage must be acquired before the next (schemas, assimilation & accommodation)

Vygotsky: social interaction, zone of proximal development

[https://www.youtube.com/watch?v= JmA2CIUvUY](https://www.youtube.com/watch?v=JmA2CIUvUY)

<https://youtu.be/0laNR8YGdow>

Typical Errors in Early Language Development

Overextension: “dog” for all animals with four legs

Underextension: “flower” only means a rose

Repeating a word in the wrong context: “thank you” to ask for something

Word order errors: “Baby milk” or “Daddy bye”

Over-regularization: “I goed fast” or “tooths”

Children referred to EI due to language delays:

Age	Receptive	Expressive
12 months		Does not babble, point, or gesture
15 months	Does not understand the words for 5-10 objects	Does not use at least three words
18 months	Does not follow one-step direction	Does not say "mama" or "dada"
24 months	Does not point to pictures or body parts when named	Does not use at least 25 words
30 months	Does not respond to questions	Does not use two-word phrases
3 years	Does not understand prepositions or action words or two-step directions	Does not ask for things by name
At any age		Regression or loss of previously acquired skills



Adapted from Schum RL. Language screening in the pediatric office setting. *Pediatr Clin North Am.* 2007;54(3):432.

New CDC Milestone Guidelines

<https://www.cdc.gov/ncbddd/actearly/milestones/index.html>

<https://publications.aap.org/pediatrics/article/doi/10.1542/peds.2021-052138/184748/Evidence-Informed-Milestones-for-Developmental>



Why Should We Refer?

Between 10% and 13% of infants and toddlers experience developmental delays (Rosenberg, Zhang, & Robinson, 2008).

Developmental delays in young children can impact their life course and are linked to poor health, low educational attainment, and lower income (Kavanagh, Gerdes, Sell, Jimenez, Guevara, 2012).

Early intervention (EI) for children with disabilities or at risk for developmental delay positively impacts child development and improves the ability of families to meet their child's needs.

High quality early intervention programs can reduce future problems in children's learning, behavior, and health status (Kavanagh, et al., 2012).

Notes on Children Learning More than One Language

60,361,574 people speak a language other than English at home

When assessing language skills, combine both languages (Does a child have a total of 50 words in both English and Spanish?).

Cognitive benefits early and later life

- Executive functioning
- Protection for Alzheimer's Disease
- Increased grey matter
- Better recovery after a stroke

Bilingual Assessment is Complex

- **Overidentification** occurs when a bilingual child is inappropriately diagnosed with a language impairment and receives unnecessary services.
- **Underidentification** occurs when a bilingual child has a language impairment, but it goes undiagnosed because it is assumed that the child's poor performance is the result of learning two languages
- **Language Dominance** is the language of *greater exposure and proficiency*
- Bilingual Speech Language Pathologists are very limited
- Standardized measures are very limited.
- COVID-19 precautions mean very limited standardized testing

Myths about Bilingualism

Bilingualism causes language delay →

FALSE

When children mix their languages, it means they are confused and having trouble becoming bilingual →

FALSE

Parents should adopt the “one parent-one language” approach when exposing their child to two languages →

FALSE

Children With Language Impairment Can Learn Two Languages

“There is no evidence for thinking that dual language learning is a risk factor for children with language delay or impairment and, in turn, there is no basis in evidence for counseling parents to switch to one language at home or to not place their children in immersion education” (Paradis....p.208)



Handbook on Bilingualism and Second Dual Language Development and Disorders: Language Learning, Second Edition
by Johanne Paradis, Fred Genesee and Martha B. Crago

What about Code Switching?

- Code switching is when a child uses elements from two languages in the same utterance or in one specific part of a conversation
- Is seen naturally in almost all children who are bilingual
- Research has proven that code switching does NOT confuse a child



Speech Development – Articulation

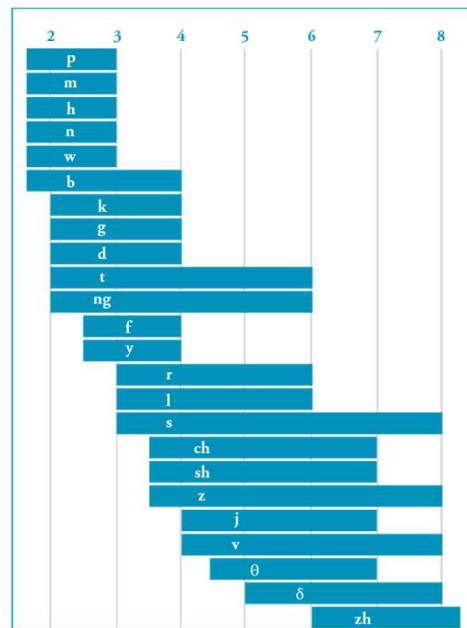
Intelligibility: How well an unfamiliar listener understands a child

Based on language level:

By 18 months a child's speech is 25% intelligible

By 24 months a child's speech is 50 -75% intelligible

By 36 months a child's speech is 75-100% intelligible



Phonological Process	Example	Gone by Approximately
Pre-vocalic voicing	Pig = big	3 years
Word final de-voicing	Pig = pick	3 years
Final consonant deletion	Comb = co	3 years; 3 months
Fronting	Car = tar	3 years; 6 months
Consonant harmony	Mine = mime Kittycat = tittytat	3 years; 9 months
Weak syllable deletion	Elephant = efant	4 years
Cluster reduction	Spoon = poon	4 years
Gliding of liquids	Run = one	5 years
Stopping	Fish = tish Chair = tare	3 years /f, s/ – 5 years /th, ch/

Adapted from <https://www.speech-language-therapy.com>

Spanish-Influenced Phonology to English

- ch for sh as in **chop** for **shop**
- s for z as in **sue** for **zoo**
- t for th as in **tink** or **think**
- d for th as in **den** for **then**
- b for v as in **base** for **vase**
- n for “ng” as in **sin** for **sing**
- n for m before t as **syntom** for **symptom**

- A syllable cannot begin with /s/ followed by one or two consonants (e.g., **slip**, **smile**, **snail**, **sport**, **screen**, **strawberry**)

When to Refer for Articulation

Phonological processes continue past when they are usually gone.

Sound distortions past usual acquisition.

Primarily using vowels past 1 year.

Glottal stops.

Intelligibility not keeping up with language development.

Childhood Apraxia of Speech (CAS)

Neurological childhood disorder.

Deficits in planning, precision, and consistency of sequencing speech sounds.

Not caused by oral muscle tone or strength.

(ASHA, 2007b, Definitions of CAS section, para. 1).

Diagnosing CAS

Currently, there are no validated diagnostic features that differentiate CAS from other childhood speech sound disorders. Features consistent with a deficit in the planning and programming of movements for speech have gained some consensus among those investigating CAS:

- Inconsistent speech sound errors.
- Difficulty transitioning between sounds in a word.
- Errors in stressing of words.

Challenges in diagnosing children under 3

- CAS symptoms (e.g., word inconsistency, a predominant error pattern of omission, etc.) are similar to emerging speech in typically developing children
- Lack of a single, validated list of diagnostic features that differentiates CAS from other types of childhood speech sound disorders
- Small speech sample size for making a differential diagnosis

What to do if you suspect CAS

Refer to SLP

CAS-specific interventions may help *without* the diagnosis

- Music
- Rhythm
- Combining movement with vocalizing
- Work on pacing
- Sound play
- Tactile and visual cues for sounds in a play context for early childhood.

Tongue ties



Functional impacts:

- Breastfeeding
- Lifting tongue
- Sticking tongue out (heart-shaped)
- Moving tongue from side-to-side
- Licking lips/sweeping food debris from teeth

tongue ties rarely impact speech development

Surgical intervention is rarely recommended for articulation

“This study provides preliminary evidence of no difference between tongue mobility and speech outcomes in young children with or without intervention for tongue-tie during infancy.”

Salt H, Claessen M, Johnston T, Smart S. (2020) Speech production in young children with tongue-tie. *Int J Pediatr Otorhinolaryngol.*

“There are no significant data to suggest a causative association between ankyloglossia and speech articulation problems.”

Webb AN, Hao W, Hong P. (2013) The effect of tongue-tie division on breastfeeding and speech articulation: A systematic review. *Int J Pediatr Otorhinolaryngol.*

When to Refer for Voice

- Chronically hoarse, harsh, breathy or raspy voice quality.
- An inappropriate vocal pitch for child’s age or sex.
- Frequent pitch breaks.
- A voice that is consistently too soft.
- Hypernasality.
- Chronic vocal fry.

Speech and Language Disorders

Primary

Language delay
Receptive language disorder
Expressive language disorder
Mixed receptive/expressive language disorder
Articulation disorder
Phonological disorder

Secondary (attributable to another condition)

Autism Spectrum Disorder
Cerebral Palsy
Childhood Apraxia of Speech
Dysarthria
Hearing loss
Intellectual disability
Cleft lip and palate
Selective mutism

Any Questions?

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