

Where to Start: Nonverbal Children

Carrie Clark, CCC-SLP
The Speech Therapy Solution
www.SpeechandLanguageKids.com

What Causes a Child to be Nonverbal?

- ▶ Autism
- ▶ Childhood Apraxia of Speech
- ▶ Motor Problems
- ▶ Late Talker
- ▶ Developmental Delay (Expressive & Receptive)
- ▶ Selective Mutism
- ▶ Combination of Multiple

Autism

- ▶ Trouble initiating interactions and responding to initiations
- ▶ Abnormalities in eye contact or body language
- ▶ Lack of facial expressions
- ▶ Lack of imaginary/pretend play
- ▶ Restricted, repetitive patterns of behavior, interests, or activities
- ▶ Hyper- or hyporeactivity to sensory input

<https://www.autismspeaks.org/what-autism/diagnosis/dsm-5-diagnostic-criteria>

Childhood Apraxia of Speech

- ❖ Diagnosis CANNOT be made in nonverbal children!
- ▶ Did not coo or babble as an infant
- ▶ Only a few different consonant and vowel sounds
- ▶ Problems combining sounds; may show long pauses between sounds
- ▶ Inconsistent errors
- ▶ Common with some genetic conditions like DS or with neurological disorders/injuries

<http://www.asha.org/public/speech/disorders/ChildhoodApraxia/>

Motor Problems

- ▶ Child has motor or neurological impairments which make it impossible or very difficult for the child to produce speech
- ▶ General muscle weakness
- ▶ Respiratory Problems
- ▶ Severe Dysarthria (caused by damage to brain)
- ▶ Cerebral Palsy

Late Talker

- ▶ Between 18–30 months of age
- ▶ Good receptive understanding of language
- ▶ Typically developing play skills, motor skills, thinking skills, social skills
- ▶ Only expressive vocabulary is delayed
- ▶ Possibly have older sibling talking for them or no need to communicate at home
- ▶ Can use gestures or body language to communicate his wants/needs

<http://www.hanen.org/Helpful-Info/Articles/How-to-Tell-if-Your-Child-is-a-Late-Talker-%E2%80%93-and-W.aspx>

Developmental Delay

- ▶ Problems with receptive and expressive language
- ▶ May have delays in other areas
- ▶ Does not follow directions or understand as well as age-matched peers
- ▶ Difficulty communicating basic wants and needs in any way, including nonverbally
- ▶ May be due to a genetic problem or birth complication or may have no known etiology or cause of problems

Selective Mutism

- ▶ Child is nonverbal at school or in public but has at least one setting and/or communication partner that the child will speak with
- ▶ May also have: excessive shyness, anxiety disorder, social isolation/withdrawal
- ▶ May see anxiety when talking expectations are placed
- ▶ Not truly nonverbal as they will speak in some setting. Not addressed today

Multiple Causes

- ▶ Some children have multiple disabilities which result in nonverbal
- ▶ Common concomitant disorders:
 - Down Syndrome and Apraxia
 - Autism and Apraxia
 - Down Syndrome and Developmental Delay
 - Autism and Developmental Delay
 - Motor Problems and Apraxia

Evaluation

- ▶ Hearing/Medical Cleared
- ▶ Parent/Caregiver/Teacher Interview
- ▶ Observation/Criterion-Referenced Measures

Hearing/Medical Clearance

- ▶ Before evaluating, make sure:
 - Hearing has been checked recently
 - Vision has been checked recently
 - Review existing medical information if relevant medical problems exist
 - Research how medical conditions may impact communication

Interview

- ▶ Conduct with parent/caregiver as well as one with teacher if applicable
- ▶ Ask about:
 - How the child understands language
 - How the child communicates (behavior, gestures, language?)
 - The typical day in the life of the child
 - The most challenging times of the day for the child and/or family/classroom
 - Parent/caregiver/teacher expectations of evaluation and therapy

Observation/Criterion Referenced

- ▶ Standardized tests likely will not work for this population
- ▶ Use criterion-referenced measures and observation instead
- ▶ Analyze these areas:
 - Communicative Intent and Gestural Analysis
 - Vocalizations (if any)
 - Play analysis
 - Behavior analysis

Assessing Communicative Intent

- ▶ Have parent/teacher fill out communication matrix online:

www.communicationmatrix.org

atrix

	A1	A2					A3												
	Expresses Intention	Expresses Content					Expresses Interest in Other People												
I The Intentional Behavior																			
II Intentional Behavior	B1 Protests	B2 Continues an Action	B3 Obtains More of Something				B4 Attracts Attention												
III Unconventional Communication	C1 Repeats or Imitates Something	C2 Repeats More of an Action	C3 Repeats a New Action	C4 Repeats More of an Object	C5 Makes Choices	C6 Repeats a New Object	C8 Repeats Attention	C9 Shows Affection											
IV Conventional Communication									C10 Shows Affection	C11 Greets People	C12 Offers Things or Shows	C13 Offers Things or Shows	C14 Directs Your Attention to Something	C15 Uses Points, Social Forms, Answers "Yes" and "No"					
V Conventional Communication						C7 Repeats or Imitates Something												C16 Answers "Yes" and "No"	C17 Asks Questions
VI Abstract Symbols																			
VII Language																			

Key:

- Surpassed
- Not Used
- Emerging
- Mastered

How/Why Matrix

Truman State University Speech and Hearing Clinic
Early Communication Matrix

WHY HOW	To protest	To request action/object	To respond to others	To request social routines e.g., Peek a-boo	To call for attention	To request comfort	To show off	To draw attention to objects, people	To label	To ask for information
Cries, fusses										
Smiles										
Makes vowel-like sounds										
Changes pitch, loudness of voice										
Body movements										
Changes facial expressions										
Laughs										
Makes a variety of consonant and vowel sounds										
Reaches/moves towards										
Looks at person to make eye contact										
Points										
Gestures e.g., waves, shakes head										
Pantomimes (acts out what s/he wants to say)										
Combines pointing, eye contact and making sounds										
Makes sounds that have special meaning										
Single words/signs										

Adapted from Weitzman (1992) and Dore (1974)

How to Use Info about Intent and Gestures

- ▶ Understand what the child is using communication for currently
 - Provide the language necessary to communicate those things
- ▶ See which communicative intents the child should target next
- ▶ See what types of communication the child is currently using
 - Know where to start and what modality to work on next
 - Build off of what the child is currently doing (shaping)

Assessing Vocalizations

- ▶ **Phonetic Inventory**
 - Know what sounds they are currently able to make
 - Target words with sounds you know they can make
 - Know which sounds to target next for stimulability
- ▶ **Identify Syllable Shapes Used**
 - Know which syllable structures to start with and target next (CV, VC, CVC, CVCV, CCVC, CVCC...)
- ▶ **Identify Real Words Used**
 - See if there are any words that the child is currently saying, even if incorrectly produced
 - Know which words to encourage in carry-over and choose similar words for next targets

Play Analysis

- ▶ Play mirrors cognitive skills up through 3 years of age
- ▶ Assess play to see if underlying cognitive deficits and for language readiness
- ▶ If play skills are age-appropriate but still nonverbal, less likely to be an overall delay with a cognitive component

http://sociallyspeakingllc.com/my-mission-for-socially/free-pdfs/play_and_language_developme.pdf

Behavior Analysis

- ▶ All behaviors communicate something to us about the child
- ▶ Find the function of the behavior so you can provide better communication methods to get those needs met
- ▶ Fixing challenging behaviors will make the most change for the child

Function of Behaviors

It's all fun and games until someone figures out the function of your behavior.



someecards
user card

5 Functions of Behaviors

1. Attention-Seeking
2. Access to Preferred Items/Tangibles
3. Escape
4. Avoidance
5. Automatic Reinforcement (the activity itself is reinforcing, like sensory stimulation)

How to Determine Which Function

- ▶ Observe behaviors in natural environment/setting
- ▶ Write down antecedents (what happened right before incident)
- ▶ Write down exactly what the child did during the behavior (including looking at adults, running away, etc.)
- ▶ Write down how that behavior changed the environment/others' actions
- ▶ Write down what happens after the event

How to Determine Function

- ▶ Collect many incidents like this and look for patterns
- ▶ Look at what the functional outcome of the behavior was, did the adult give in? Did the child get attention from all of the other students? Did the activity end so he didn't have to do it?
- ▶ Identify which function best described each behavior (keep in mind each behavior may have a different function)

How to Use Behavior Functions

- ▶ Once you know what the child is trying to achieve, find appropriate ways to get that need met using language (if possible)
- ▶ Adapt the methods you choose to meet the level of the child
- ▶ Replace the behavior with a new target skill
- ▶ Teach the new skill to the child
- ▶ Make it so the replacement behavior meets that child's need better than the old behavior

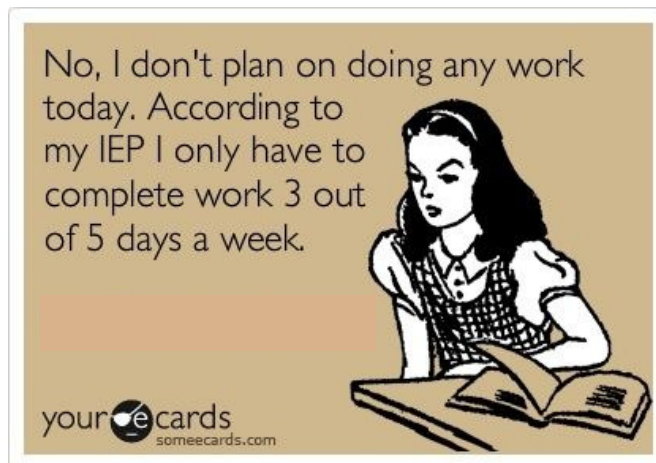
Choosing Goals for Nonverbal Children

- ▶ Identify areas to target and preferred communication modality
- ▶ Identify the biggest challenges
- ▶ Find replacement behaviors

Identify Areas to Target

- ▶ **Speech Sounds**
 - If the child is able to produce some speech (imitation or spont), write goals to imitate or produce more complex utterances
- ▶ **Functional Communication**
 - Write goals for how you want the child to communicate some basic wants and needs
- ▶ **Communication Modality**
 - If a new modality is introduced, such as AAC, do you need goals for teaching the modality?

Goal Writing



Goal Writing for Speech Sounds

- ▶ If motor or speech problems, write goals to increase the complexity of what the child is able to say
- ▶ Ideas for Goals
 - Imitation of new speech sounds in isolation
 - Produce words that start with a sound the child already says
 - Imitation of a new syllable structure (CVC if the child can only do CV and VC)

Goal Writing for Functional Communication

- ▶ Increase number of different intents that the child uses (greetings, requests, responses, etc.)
Ex: Child will use greetings in the classroom...
- ▶ Increase complexity of the way the child communicates (go from gestures to sign)
- ▶ Provide replacement behaviors for inappropriate communication attempts

*Whenever possible, write goals with multiple communication modalities as options (sign, spoken, etc.) so you are not limited if the child starts using another method

Examples of Replacement Behaviors

1. **Attention-Seeking:** Child raises hand, asks for a hug, gives the adult a picture that asks for attention
2. **Access to Items:** Child uses speech to request, child uses sign language or a talker to request, child leads adult by hand
3. **Escape:** Child is allowed to ask for break (verbally, picture, sign) whenever needed. At first, break is always granted and then work on fading to a small amount of wait time

Examples of Replacements

- ▶ **Avoidance:** Child is allowed to say “not right now” (verbally, picture, sign) whenever wanted. At first, child is always allowed out of activity until inappropriate behavior is extinguished. Then, fade to child doing one small part of task before being done.
- ▶ **Automatic Reinforcement:** May not be easily replaced with language. Try having the child ask for the sensory input he needs, like a hug or a trip to the sensory room

Goal Writing for a New Communication Modality

- ▶ If you are sure the child will be using a specific communication system, you may want to write a goal about the child’s ability to use it
- ▶ Example: If an AAC device is used, you may want a goal for the child to navigate between pages or to push the “clear” button when a mistake is made.
- ▶ Make sure you know the child will be using this method for the foreseeable future

Example Goals for Nonverbal Children

- ▶ Johnny will respond to social greetings in the classroom by waving, saying hi, or using an alternative communication device on 4 of 5 observed opportunities.
- ▶ Johnny will use language to protest (using sign language, spoken language, or an AAC device) while refraining from screaming and/or throwing things on 4 of 5 observed opportunities.
- ▶ Johnny will isolate one finger to push a button on his AAC device on 4 of 5 observed opportunities (attempting to use the device) with no more than one reminder per activity as needed.

Let's Get to Therapy!

- ▶ Step One: Stay Calm. Don't Stress.



Therapy Activities for Nonverbal Children

- ▶ Establish joint attention and engagement
- ▶ Introduce alternative communication means
- ▶ Improve imitation skills
- ▶ Replace maladaptive behaviors
- ▶ Parent/teacher training if possible

Establishing Joint Attention and Engagement

- ▶ Reinforcer Probe:
<http://www.speechandlanguagekids.com/find-motivators-establish-joint-attention/> (12 min)
- ▶ Find highly motivating items and use those as incentive
- ▶ Work in the classroom and use what the child is already engaged in
- ▶ Wait until the child initiates something (like an inappropriate behavior) and shape that into the target skill

Introducing Alternative Communication Means

- ▶ Until speech catches up, need alternative way to teach the child to get wants and needs met
- ▶ Use different types of AAC around and with the child and see which one he responds to:
 - Gestures (if not using them yet)
 - Sign language
 - Picture board (pointing to pictures)
 - Picture exchange (like PECS)
 - Voice-output device
 - Dynamic-screen, voice-output device

How to Teach AAC

- ▶ Wait until the child initiates something (like reaching for food) and then physically help the child use the AAC to communicate that message
- ▶ Keep doing this (along with modeling how to use it) for a while
- ▶ Once the child has done it several times, start fading off the level of help you're giving him
- ▶ Model using that AAC throughout the child's day

Improving Imitation Skills

- ▶ If the child can imitate some sounds, start with those and work toward more complex sounds and sound combinations
- ▶ If the child cannot imitate sounds, start with having the child imitate gross motor actions
 - Say “do this” and then do an action. Physically help the child do the action. Fade off how much prompting you are giving.
- ▶ Gradually move the imitated actions closer and closer to the mouth
- ▶ Try adding speech sounds to an action he’s already imitating
- ▶ Try adding a speech imitation to the end of a series of imitated actions

Replacing Maladaptive Behaviors

- ▶ Choose a replacement that will meet the same purpose that isn’t very hard for the child to do
- ▶ Teach the replacement behavior
- ▶ When the child does the maladaptive behavior, physically help him do the replacement behavior instead and immediately grant him what he wanted

Extinguishing Old Behaviors

- ▶ Do not (UNDER ANY CIRCUMSTANCES) allow the old behavior to get the need met. Make it so the old behavior doesn't get him his way but the replacement behavior does.
- ▶ Always give the child what he wants when he does the replacement behavior, even if it's not a good time for it (example: let him leave the activity if he asks for a break appropriately)
- ▶ Once the child no longer uses the old behavior, then you can fade back how effective the replacement behavior is (like saying you have to stay 30 more seconds before you can have a break)

Parent/Teacher Training

- ▶ All adults in the child's life must respond the same way if change is to occur
- ▶ If possible, analyze parent and teacher interactions with the child to see if any interactions are enabling the nonverbal behavior or prohibiting verbal development
- ▶ Observe normal interactions and then suggest strategies that the parent/teacher is not already doing

Interaction Strategies to Look for and Teach

- ▶ Encouraging child communication by looking expectantly
- ▶ Responding to communication by reinforcing it with action and utterance
- ▶ Talking at child's eye level
- ▶ Interpreting child's communication attempts
- ▶ Creating communicative opportunities by using sabotage or pause time
- ▶ Not anticipating child's needs ahead of time

Interaction Strategies to Look for and Teach

- ▶ Reducing sentence length
- ▶ Reducing sentence complexity
- ▶ Repeating utterances often
- ▶ Paraphrasing utterances
- ▶ Using exaggerated intonation patterns
- ▶ Place stress on important words
- ▶ Use concrete high-frequency words
- ▶ Not using excessive questions or commands
- ▶ Using a slower speech rate

Interaction Strategies to Look for and Teach

▶ Using Teaching Techniques

- Self Talk: talk about what you are doing/feeling
- Parallel Talk: talk about what the child is doing/feeling
- Expansion: Repeat back child's utterances and add one word, or say a word that represents the child's gestures or communication attempts
- Build Up/Break Down Sequences: "Ball. Mommy ball. Mommy throw ball. Throw ball. Ball."
- Recast Sentences: Rewording what was said