

The Importance of Multimodal Communication

Yarely Ramirez, M.S., CCC-SLP

Disclosures

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 - **Relevant Financial Relationship:** Yarely is receiving monetary compensation for this presentation. She is a Clinical Lead at a private practice in Houston, TX.
 - **Relevant Non-Financial Relationship:** Yarely does not have relevant non-financial relationships to disclose.
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Learning Outcomes

After this course, participants will be able to:

1. Define the term Multimodal Communication
2. Identify the different ways to model using Multimodal Communication
3. Structure an activity for parent coaching on Multimodal Communication

Agenda

- What is Multimodal Communication?
- Modeling Multimodal Communication
- Goal writing and data collection for Multimodal Communication
- Parent coaching on Multimodal Communication
- Case Study
- Summary
- Q&A

New to AAC?

If you are new to the AAC world or about to embark into this AAC learning journey and are afraid of mistakes, do not forget that mistakes are our teachers and they help us grow as therapists and humans beings.

“You build on failure. You use it as a stepping stone. Close the door on the past. You don't try to forget the mistakes, but you don't dwell on it. You don't let it have any of your energy, or any of your time, or any of your space.”

- Johnny Cash

What is Multimodal Communication?

What is Multimodal Communication?

- Using multiple modes of communication (unaided and aided) to convey a single message.
 - Unaided: Vocalizations, Natural Speech, Gestures and Manual Sign Systems
 - Aided: Nonelectronic (low-tech) or Electronic (high-tech)
- “One is never enough” (Williams, Krezman & McNauton, 2008)
 - It is not about choosing a single modality, but considering a range of modalities to maximize communication



(Life Print, n.d.)

SIGNS
“MORE”

+



(Flaticon, 2021)

SELECTS ICON
“JUICE”

+



(Flaticon, 2020)

SAYS
“PLEASE”

= “MORE JUICE PLEASE”

What is Multimodal Communication?

Is this different than Total Communication?

- According to Beukelman & Light (2020), Total Communication is the simultaneous use of signs and speech
 - It is also known as Simultaneous Communication
- Type of educational program used for Deaf individuals
 - Oral Communication Programs vs. Total Communication Programs
 - Connor et al, 2000
 - Geers, & Moog, 1992
 - Geers, Spehar, & Sedey, 2002

What is Multimodal Communication?

Does this only assist with expressive language skills?

- Manual signs combined with speech improve comprehension (Wendt, 2009)
- Aided communication (low- or high-tech) combined with speech enhances comprehension (Millar, Light, & Schlosser, 2006; Allen, Schlosser, Brock, & Shane, 2017; O'Neill, Light, & Pope, 2018)
- Children learn language by hearing words, while seeing, touching, and doing things with others
 - Language development: interactive multimodal process that involves different channels of communicative expression (Vigliocco, Permiss, & Vinson, 2014)

What is Multimodal Communication?

This method can be utilized for:

- Individuals with intellectual disabilities
- Individuals with developmental disabilities
- Individuals with genetic conditions
- Individuals with language delays
- Individuals with poor intelligibility of speech

Modeling Multimodal Communication

Modeling Multimodal Communication

What is modeling?

- Communication partner uses unaided and/or aided AAC in conjunction with spoken input
 - Example: Parent or therapists says “Do you want to play?” while simultaneously signing the words “want” and “play”
 - Example: Parent or therapists says “I like red” while simultaneously selecting icons “like” and “red”
- It requires repeated exposure to target structures (Binger, & Light 2007)
- We are constantly using signs, gestures, and/or icons to promote language without any expectation of the child responding and/or imitating.

Modeling Multimodal Communication

How do we communicate with babies?

- Repeated vocabulary
- Use of short phrases
- Plenty of wait time given between utterances
- Use of gestures to add meaning
- No expectations for the baby to say it back

It is similar to what we do with modeling; now we are adding multiple modes so the message can be understood and eventually reciprocated.

Modeling Multimodal Communication

Do we have to use every single mode of communication at once?

This is a learning curve. It can be overwhelming attempting to do all modes at once. Start gradually. Once comfortability increases, you can combine and use all.

- Start by using gestures and spoken language simultaneously during the first couple of sessions
 - As humans, we already do this
 - Pointing to a toy on a high shelf and saying “up” simultaneously
- Signs can be then incorporated and used simultaneously
 - You more likely already do that as a therapist
 - Signing “more” and saying “more” and/or icons to promote language without any expectation
- Last, icons can be introduced (light-tech or high-tech) and used simultaneously
 - Getting to know the light-tech or high-tech can be tricky if you are new to the system
 - Saying “my” while gesturing and pointing/pressing icon “turn”

Modeling Multimodal Communication

Techniques that aid modeling:

- Picking core words for an activity and saying/signing/pointing to the respective icon throughout the activity
 - Core words: words that have a high frequency (e.g., I, you, want, go, get, in)
 - For example: using core words “my” and “turn” when taking turns during play
- Picking a word that is meaningful for the patient and saying/signing/pointing to the respective icon throughout the session
 - For example: using the word “stop” & “bite” when playing with a shark puppet
- Asking less questions and commenting more on what’s happening via words/signs/pointing
 - “Tell me, what do you want? Red or blue ball? Tell me. What do you want? The red ball or the blue ball? What do you want?”
 - “Look! Red ball. It bounces. Blue ball! It’s round. You’re playing with red ball. Bounce, bounce, bounce. My turn. I got blue ball! Kick blue ball.”

Goal Writing

Goal Writing

It all sounds good in theory, but how can we create goals to include/accept any & all forms of communication? Is it possible to do so?

- Create LTGs and STGs that **state** the patient can use a form of Multimodal Communication
 - Describe the parameters for Multimodal Communication
 - Gestures, signs, and icons
 - Words, gestures, signs, and icons
 - Words, signs, and icons
 - Word approximations, signs, and icons
 - Intelligible words and icons
- The goals can be targeted during structured and/or unstructured activities
 - Example of structured activities: identifying objects in pictures
 - Example of unstructured activities: identifying objects during play

Goal Writing

What would a Multimodal Communication approach goal look like based on SMART criteria? Here is an example!

LTG: In X months, PATIENT will utilize multimodal communication (words, approximations, gestures, pictures, and/or SGD) to advocate for themselves (e.g., stating they need a break, state of need (bathroom/food/drink), utilize negatives, wants attention, change in environment, indicate independence or need for assistance, stating purpose of device) in ## opportunities given LEVEL assistance, in order to be able to communicate to and be understood by safety officials and frequent communication partners in the event of an emergency.

Goal Writing

LTG: In X months, PATIENT will utilize multimodal communication to advocate for themselves (e.g., stating they need a break, state of need (bathroom/food/drink), utilize negatives, wants attention, change in environment, indicate independence or need for assistance, stating purpose of device) in ## opportunities given LEVEL assistance, in order to be able to communicate to and be understood by safety officials and frequent communication partners in the event of an emergency.

Short Term Goals

- PATIENT will utilize multimodal communication (words, approximations, gestures, pictures, and/or SGD) to indicate they need a break in ## trials given LEVEL assistance across 3 data collection sessions.
- PATIENT will utilize multimodal communication (words, approximations, gestures, pictures, and/or SGD) to indicate dislike or refusal (i.e., “no”, “I don’t want”, “turn it off,” etc.) in ## opportunities given LEVEL assistance across 3 data collection sessions.
- PATIENT will indicate via multimodal communication (words, approximations, gestures, pictures, and/or SGD) need for assistance ## opportunities given LEVEL assistance over 3 data collection sessions.

Data Collection

Data Collection

Okay, goal writing has been established. However, how can we collect data on the goal? Isn't it too broad?

- If the goal includes the word Multimodal Communication and has the parameters of what it constitutes (words, approximations, gestures, pictures, and/or SGD), then you collect data based on those parameters.
- You take data every time the patient uses words, approximations, gestures, pictures, and/or SGD

Data Collection

Example: Jimmy is an 8-year-old. He has DS. He is able to communicate using word approximations; however, he has a low receptive and expressive vocabulary, is highly unintelligible, and cannot request basic wants/needs.

He has the following STG:

- Jimmy will utilize multimodal communication (approximations, gestures, and/or SGD) to indicate dislikes (e.g., "I don't like", "turn it off," etc.) during a an unstructured activity in 2 out of 3 opportunities given maximum assistance across 3 data collection sessions.

During pretend play with a vegetable chopping set, Jimmy points to a tomato. He then selects an the icon "no" on his SGD, and says "wike."

- Would this count toward the goal?

Data Collection

Let's dissect the utterance and compare it with the goal:

STG: Jimmy will utilize multimodal communication (**approximations**, **gestures**, and/or **SGD**) to indicate dislikes (e.g., "I don't like", "turn it off," etc.) during a an **unstructured activity** in 2 out of 3 opportunities given maximum assistance across 3 data collection sessions.

During pretend play with a vegetable chopping set, Jimmy **points** to a tomato. He then selects an the icon "no" in his **SGD**, and **says "wike."**

The answer is: **Yes**. He produced an utterance within the parameters of the definition of multimodal communication and it was during an unstructured activity.

After SLP prompted 2 different questions regarding his dislikes. Maximum cues were provided; however, Jimmy did not answer. Therefore, he communicated his dislikes 1 out of 3 opportunities with maximum assistance during this treatment session!

Parent Coaching on Multimodal Communication

Parent Coaching

Parent buy-in is crucial and essential in order for a Multimodal Communication to be utilized across several environments. If the child is only using it in therapy, then carryover will not be successful.

- A mismatch between the technology and the priorities of the family will likely result in an abandonment (O'Neil, & Wilkinson, 2020, Johnson, Inglebret, Jones, & Ray, 2006; Parette, Brotherson, & Blake Huer, 2000)

Parent Coaching

How can we have parent buy-in?

- Invite the parent to the treatment session
 - Have them direct the activity
 - Example of some activities:
 - Shared-book activities
 - Pretend-food toys
 - Cars
 - Play-doh
 - Show them which core words they can utilize and how many to use at once
 - Talk them through the activity
- It can be overwhelming to use multiple modes at once. Introduce parent to each mode one session at a time. Once you see the parent being more comfortable, you can show them how to combine them all.

Parent Coaching

Example of pretend-play activity:

Session 1:

- Parent and child come back for the treatment session
- Child picks up a pizza toy
- Therapist tells parent to narrate what the child just did
 - “You got pizza!”
- Therapist also tells parent to comment, point, and gesture as the child plays with parent
 - Comment: “Yummy pizza”
 - Point: Points to different slices
 - Gesture: Pretends to eat pizza

Parent Coaching

Example of pretend-play activity:

Session 2:

- Parent and child come back for the treatment session
- Child picks up a pizza toy again
- Therapist introduces parent to core word “eat” and shows the appropriate sign
- Therapist encourages parent to sign word “eat” as they interact with child during play
 - Parent now is saying “eat pepperoni” while simultaneously signing only “eat”
 - Parent now is saying “you eat” while simultaneously signing only “eat” and pretend feeding child
 - Parent is now saying “I eat” while simultaneously signing only “eat” and pretend feeding themselves

Parent Coaching

Example of pretend-play activity:

Session 3:

- Parent and child come back for the treatment session
- Child picks up a pizza toy again
- Therapist introduces icon “put” on a light-tech board
- Therapist encourages parent to use icon during play
 - Parent asks “Could you show me how?”
- Therapist joins play and models
 - Therapist now is saying “put pepperoni” while simultaneously pointing to icon only “put”
 - Therapist puts pepperoni on the pretend pizza
 - Parent now is saying “put peppers” while simultaneously pointing to icon only “put”
 - Parent puts peppers on the pretend pizza

Parent Coaching

Example of pretend-play activity:

Session 4:

- Parent and child come back for the treatment session
- Child picks up a pizza toy again
- Therapist now tells parent to try and use any mode during play to comment
 - Parent now is saying “put mushrooms” while simultaneously pointing to icon only “put”
 - Parent puts mushrooms on the pretend pizza
 - Parent now is saying “put pizza in” while simultaneously pointing to icon only “put”
 - Parent puts pretend pizza in the toy oven
 - Parent now is saying “take pizza out”
 - Parent takes pretend pizza out of the toy oven
 - Parent now is saying “eat mushroom pizza” while simultaneously signing “eat”
 - Parent pretends to eat pretend pizza

Parent Coaching

Example of pretend-play activity:

Session 4:

- Therapist then introduces sign and icon “more”
 - Parent asks “Do I have to say, sign, and point to the word?”
 - Therapist informs parent they can if they would like to. However, it is not required. They can do what feels right during the situation
 - Parent now is saying “I want more” while simultaneously signing “more”
 - Parent gets another slice of pretend pizza
 - Parent now is saying “put pepperoni” while simultaneously pointing to icon only “put”
 - Parent puts pepperoni on the pretend pizza
 - Parent now is saying “put more pepperoni” while simultaneously pointing to icon “put” and “more”
 - Parent puts more pepperoni on the pretend pizza

Parent Coaching

In just 4 sessions:

- Parent modeled spoken language with *low-* and high-frequency words
 - Words: you, got, *pizza*, *yummy*, *pepperoni*, *I*, *peppers*, *mushroom*, in, want, take, out
- Parent modeled signs with high-frequency words
 - Signs: eat, more
- Parent modeled access to icons of high-frequency words
 - Icons: put, more

Total of words modeled and used: 16

Parent Coaching

Challenges parents have expressed with SGD and possible solutions using the Multimodal Communication approach:

- Morning and bedtime care routines
 - Focus on using signs, gestures, spoken language, and/or visual schedules
 - Pointing to a picture of a book to request a story before going to sleep while SGD is charging
- Social situations
 - Use signs, gestures, spoken language and/or a light tech core board
 - Saying/approximating to “Hi”/“Bye” when encountering a friend
- Outdoor and physical activity
 - Use signs, gestures, spoken language and/or a light tech core board
 - Signing “go” when horseback riding
- Weather
 - Use signs, gestures, spoken language and/or a light tech core board
 - Pointing to swing to request during a sunny day at the playground

Case Study

Case Study

Initial Evaluation: 2021

- Patient: Mason
- Age: 4-years, 1-month
- Parent Interview: Mother reported Mason has words in his vocabulary that he will use to sing, however he will not ask questions or respond to questions. Mason is reported to repeat what he hears from others and from the TV. Mason will gesture more often than using words to communicate his wants/needs. He will also guide his mother's hands to what he wants and needs. Mason is reported to have more than 50 words in his vocabulary.

Case Study

Goals from 2021

- Receptive Language Short-Term Goals:
 - follow routine directions
 - transition from preferred to non preferred activities
 - identify food items
 - identify common animals
- Expressive Language Short-Term Goals:
 - label animals
 - point to request
 - use total communication to request recurrence

Case Study

2021-2022

- After 3-months into treatment, treating CF requested a trial device
 - Since Mason began his trial, he began to orally vocalize and produce one word phrases. Family and regular treating therapists have noted production of words such as "mom," "more," "want," "stop," "carrot," "cucumber," and "one."
 - Trial was successful, Mason was able to utilize a high-tech SGD with 1-hit sequences
 - CF requested a permanent device after 90 day trial period was over (6-months into treatment now)
- Goals were modified to reflect multimodal communication (8-months into treatment)
 - Why? CF was unaware that a progress note could be done earlier
 - You live and you learn through mistakes
 - Data was collected reflecting sign and spoken language; which increased after introduction of the high-tech SGD
- Permanent SGD device arrived 12 months after the request! (18-months into treatment)

Case Study

2021-2022

It took 12 months to get a permanent SGD

- Treating therapist used her personal SGD during treatment sessions until Mason got his permanent device
- Parent was encouraged to continue using sign and spoken language when modeling at home
- Mason displayed carry over of skills in both environments
 - Started school in the fall.
 - He is able to take his SGD with him and utilizes it in the classroom per teacher report to parent

Case Study

2023

Parent interview from most recent re-eval

- Mother reported Mason vocalizing more utterances since he received his permanent AAC/SGD. She states that Mason is using his device functionally at home to express wants/needs/comment.
 - Request meals and snacks
 - Get different toys
 - Count
 - Say the alphabet
 - Protest
 - Joke

Case Study

Currently utilizing the following core words in therapy, school, and at home:	Currently focusing/working on the following core words:
<ul style="list-style-type: none"> ● Yes ● My ● Like ● Put ● Want ● More ● Help ● Stop ● In 	<ul style="list-style-type: none"> ● No ● Hi ● Bye ● Get ● Your

Case Study

- Using language for different pragmatic functions:
 - Request
 - Protest
 - State likes
 - Label
- Observed to formulate up to 3 word phrases using vocalizations & icons to request (i.e., do want more)
- Observed to formulate up to 3 word phrases using vocalizations & icons to state likes/dislikes (i.e., I like ABCs)
- Observed to count with and without device

Summary

Summary

- Children learn language through hearing words, while seeing, touching, and doing things with others. Thus, they should also have the opportunity to express themselves using multiple modes of communication.
- If so, start slowly. Multimodal Communication will not only show how to use language, but it will also facilitate comprehension of the message being conveyed.
- Modeling Multimodal Communication can be introduced gradually or all at once. Read the room and judge whether the patient or parent are overwhelmed. Will this affect the buy-in?
- Having the parent in every or every other session will show the parent how and when to use different modes of communication.

Q&A

More questions?

E-mail: yarely.ramirez.gonzalez@hotmail.com

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