AAC ACROSS THE LIFESPAN

WSLHA SPRING WORKSHOP, APRIL 15, 2017

PRESENTERS

- **Carmel Caga-anan, M.S., CCC-SLP**
  - Speech-language pathologist at UW Medical Center, and UWMC Outpatient MDA clinic, where she works exclusively with patients with ALS (pALS)
- **Cassandra ("Casey") Stafford, M.S., CCC-SLP/L, ATP**
  - Speech-language pathologist and a RESNA certified Assistive Technology Professional with her private practice, Vlinder Communication Therapies
- **Tanna Neufeld, M.S., CCC-SLP**
  - Speech-language pathologist & AAC consultant for Seattle AAC and president of the Northwest Augmentative Communication Society (NWACS)

DISCLOSURES

- **Carmel Caga-anan, M.S., CCC-SLP**
  - I have no financial disclosures. A large portion of my AAC caseload consists of pALS, which may present a bias toward the use of AAC with individuals in my care.
- **Cassandra ("Casey") Stafford, M.S., CCC-SLP/L, ATP**
  - I have no financial disclosures. I am on the board of the Northwest Augmentative Communication Society. Also, a large portion of my private practice is providing evaluations, therapy, and consultations related to AAC.
- **Tanna Neufeld, M.S., CCC-SLP**
  - I have no financial disclosures. I am the president of the Northwest Augmentative Communication Society. I also own my own private practice providing direct intervention and consultation related to AAC.

WHAT BRINGS YOU HERE?

GOALS FOR TODAY

- The "case" for AAC across the lifespan
- Basic principles for AAC assessment as part of a comprehensive communication assessment
- Guidelines for choosing AAC systems for trial & long-term use
- Basic strategies for successful intervention with AAC for pediatric and adult populations
- Community resources for ongoing support and learning

WORKSHOP SCHEDULE

9:00-10:30 - AAC Basics, Terms, and Assessment

10:30-10:45 – Break

10:45-12:00 - Feature Matching across the Communication Continuum

12:00-1:00 – LUNCH

1:00-2:00 - Interventions across the Communication Continuum

2:00-2:15 – Break

2:15-3:15 - More Interventions

3:15-4:00 - Panel Discussion

AAC

TERMS & CONCEPTS REVIEW

NO TECH OPTIONS

- These options involve no technology of any kind, but rather rely solely on the human body
  - Gestures
  - Attention-getting signals (e.g., tongue clicks, vocalizations)
  - Facial expressions
  - Pointing
  - Finger spelling
  - Personalized gestures or codes
  - Other symbolic gestures
  - Signing

LOW TECH OPTIONS

- Picture boards
- Communication/letter boards
- Communication notebooks
- Writing and drawing (pen & paper, Boogie Board)
- Alphabet supplementation
- Eye gaze/ETRAN boards
- Switches
- Recordable VOCA's like
  BIGmack
- Communication Builder
- Tech/Speak
- PECs books

HIGH TECH OPTIONS

- Mobile devices/apps
  - Windows, Android, and/or iOS – sometimes the operating system counts!
- Dedicated speech generating devices (SGDs)
  - Tobii Dynavox
  - Prentke Romich Company (PRC)
  - Ablenet
- Voice/message banking
- Text-to-Speech (TTS) or other eReader programs for computers/laptops
  - NaturalReader

AAC IS…

- No tech, low tech, and/or high tech
- An individual may have more than one type of tech as part of their AAC system
- Even if an individual has a voice output device, all AAC users should have a low tech version as a supplement/back-up plan
- A strong ("smart") communication partner can be a great substitute for a voice output device
- Multiple modalities are key!

MAKING THE CASE

FOR AAC ACROSS THE LIFESPAN

WHO NEEDS AAC?

- Non-verbal
- Limited verbal
- Reduced intelligibility
- Restricted communication functions
- Poor receptive language skills
- Prominent use of echolalia
- Challenging behaviors

Who else

WHY AAC?

- Takes fleeting auditory information and makes it "stand still"
- Sets the context for communication
- Supports literacy development
- Assists with word retrieval
- Provides an additional model for verbal imitation
- Repairs communication breakdowns
- Provides a "voice" that can be received by a wide range of partners
- **Why not – you have nothing to lose!**

GOALS OF AAC

AAC is the means, not the end. It is a TOOL for:

- Providing access to language and communication
  - Receptive, expressive, pragmatic
- Reducing or eliminating challenging behaviors
- Working toward communicative **independence**
  - across topics
  - across contexts
  - across partners
  - across the lifespan

"the ability to communicate anything on any topic to anyone"

~ Patricia Dowden, PhD, CCC-SLP, University of Washington

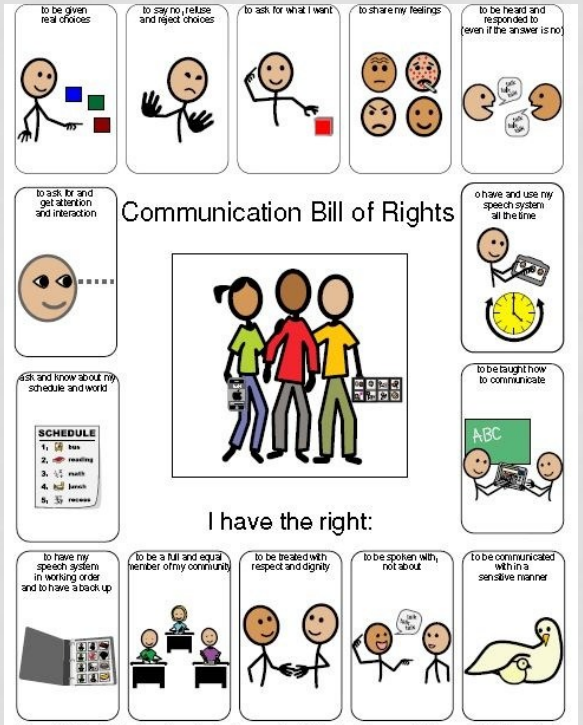
WHERE DO YOU START?

Use what you know about **normal language development** as your guide, regardless of the individual's age

- "Normal Language Development, Generative Language, and AAC" ~Gail Van Tatenhove, SLP
- "The Importance Of Merging A Normal Language Development Model with AAC Service Provision" ~collection by Jennifer Kent-Walsh PhD, SLP & Cathy Binger PhD, SLP (www.communicationmatrix.org)

YOU START WITHIN YOUR COMMUNICATION ASSESSMENT

- Incorporate AAC assessment principles into your communication evaluation protocol
  - From the start
  - As a second phase of assessment
- Gather additional information to form a long-term "vision"



From the National Joint Committee for the Communicative Needs of Persons with Severe Disabilities. (1992). for meeting the communication needs of persons with severe disabilities. Asha, 34(Suppl. 7), 2-3. adapted by K. A

AAC ASSESSMENT

PART 1

GOALS OF ASSESSMENT

- To obtain information about current strengths and challenges in communication and related skills
- To compare to the normative AND functional needs of the individual
- To determine how an AAC system could bridge this gap
  - **And if so, what modalities will be best to trial?**

WHAT DO WE ALREADY DO?

TYPICAL COMMUNICATION ASSESSMENT

- Background
- Hearing/Vision
- Oral Motor
- Speech/Voice
- Receptive & Expressive Language
- Pragmatics
- Cognitive communication
- Interpretation
- Goals
- Plan of Care
- Recommendations

WE USE TOOLS…

- Review of records
- Standardized speech & language assessments
  - We attempt always
  - Perhaps just for receptive
  - Utilize informally as guide if scores cannot be obtained
- Informal speech & language assessment protocols
- Interview
- Questionnaires
- Observation
- Language sampling

PPVT 4
Peabody Picture Vocabulary Test, Fourth Edition

EVT 2
Expressive Vocabulary Test, Second Edition

OWLS II
Oral and Written Language Scales
Second Edition

WE DISCOVER…

- An individual's present levels
  - What can he do?
  - What can he no longer do?
  - What is he not yet able to do?
- Where the individual is compared to normative expectations
- A communication diagnosis, severity, and prognosis

AND…

- Whether an individual is eligible for services or not
- The individual's supports and facilitators
- Goals to target in treatment
- Areas that require further assessment
- Referrals to consider for additional support

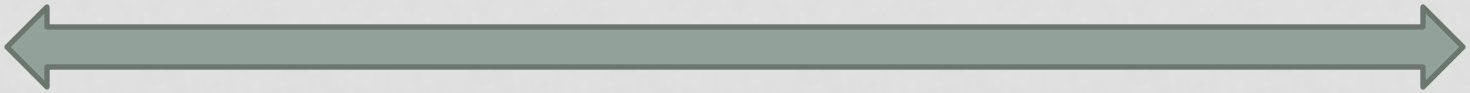
WE ALSO WANT TO ASK…

WHAT TYPE OF COMMUNICATOR IS THIS INDIVIDUAL?

Continuum of Communication Independence

(based on work by Patricia Dowden, PhD, CCC-SLP, University of Washington)

Emerging Context-Dependent Independent



No reliable means of active, symbolic communication

Able to convey anything to anyone in any context

ARE THEY USING SYMBOLIC COMMUNICATION?

Non-Symbolic Communication

- "pre-symbolic communication"
- Does not use symbols (words or signs)
  - Does not have a shared meaning for others
- Not assumed to co-exist ONLY with pre-intentionality
- Gestures, vocalizations, intonation, facial expressions, body movements/proximity, eye gaze, "behavior"
- Can range from **unconventional** to **conventional**

Symbolic Communication

- Uses symbols
  - Manual sign, spoken or written words, pictures, objects
- Involves a **shared meaning** between the sender and the receiver
- Dependent upon intentionality

ARE THEY USING CONVENTIONAL MEANS?

Unconventional

- Not commonly used by larger culture
  - Often idiosyncratic
- Less obvious meaning
- Less "socially acceptable"
- Likely non-symbolic
  - Challenging behavior, body movements, closing eyes or "looking up" to signal a “no"

Conventional

- Commonly used by others in the individual's culture
- Obvious/clear meaning
- Socially acceptable
- Usually symbolic, but can also be non-symbolic
  - Common gestures, facial expressions

EMERGING COMMUNICATOR

Patricia Dowden, PhD, CCC-SLP, University of Washington)

- Defined as: an individual who does *not* have a RELIABLE method of EXPRESSIVE communication through SYMBOLIC language
- This is an individual who:
  - Relies on **non-symbolic** communication
  - Is limited to familiar partners
  - Is limited to topics in the "here and now"
  - Might be trialing AAC, but performance is inconsistent
- Communication **IS** happening and **IS** intentional, we just need to be detectives and smart partners
- **NOT** a reflection of the individual's cognitive ability, receptive language, or potential

CONTEXT-DEPENDENT COMMUNICATOR

(Patricia Dowden, PhD, CCC-SLP, University of Washington)

- Defined as: an individual who has SYMBOLIC communication that is RELIABLE, but *is limited* to specific CONTEXTS or PARTNERS
- This is an individual who is limited:
  - In terms of vocabulary,
  - To certain contexts, and/or
  - To familiar partners
- NOT a reflection of the individual's cognitive ability, receptive language, or potential

INDEPENDENT COMMUNICATOR

(Patricia Dowden, PhD, CCC-SLP, University of Washington)

- Defined as: an individual who can communicate about any topic, in any context, with any partner
- This is an individual who can
  - Generate novel messages
  - Spell novel words "well enough"
  - Use a variety of communication modes
  - Use rate-enhancement strategies
- Some independent communicators may depend on familiar partners at times

THE TAKE AWAY

Use the individual's "communication category" (communication stage) rather than age or perceived cognition to drive additional assessment and intervention with AAC

Our intervention planning will move to shape each communicator toward:

MORE conventional forms

MORE symbolic forms

MORE communicative independence

WHAT CLUES WOULD LEAD YOU TO INCLUDE AAC IN YOUR ASSESSMENT?

(FROM THE START)

"RED FLAG" INDICATORS FOR AAC

- Diagnosis and background/history
- Gaps in receptive and expressive abilities
- Challenging behaviors
- Of a certain age and not communicating effectively, nonverbal, limited verbal, etc.
- Reliance on communication partners
- *Functional speech changes in adults for which other interventions are not appropriate
- What else?

Don't use a wait and see approach!

ASSESSING THE AAC NEEDS

PART 2: THE EVALUATION CONTINUES

1. ADDITIONAL ASSESSMENT COMPONENTS

Additional interview questions and observations for:

- Functional communication behavior analysis
- Vocabulary needs
  - Based on the behaviors, functions, and motivators
- More in depth consideration of vision and visual processing, hearing and auditory processing, motor/access
  - We must provide appropriate AAC interventions in spite of significant motor/access challenges

(*See resources*)

FUNCTIONAL COMMUNICATION BEHAVIOR ANALYSIS

WHAT IS IT?

- Identifying the communication functions that are present and the ways in which they are being expressed

PURPOSE:

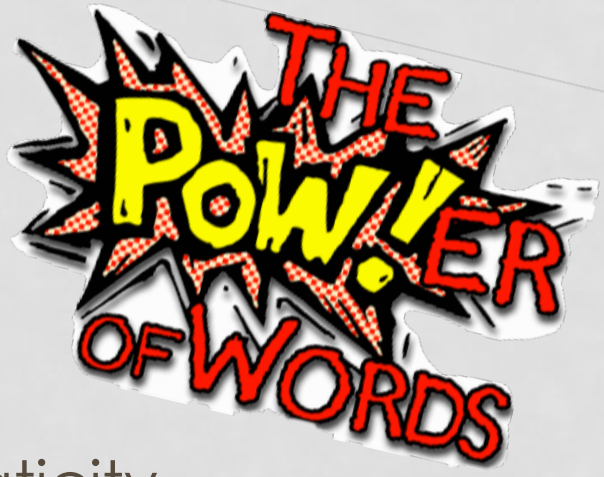
- To create a communication dictionary
- To identify communicative behaviors that can be shaped
  - From non-conventional to conventional
  - From non-symbolic to symbolic
- To "code" the behavior to serve a new communication function

(See resources)

2. FEATURE MATCHING PROCESS

- For low tech and high tech
  - SETT Framework (**S**tudent, **E**nvironments, **T**asks, and **T**ools) ~Joy Zabala, EdD
- General "features"
  - individual's request/interest/need, potential for literacy, sensory limitations, motor skills, speech/language skills, financial
- Specific "features"
  - vocabulary/symbol set, access/input, output, customization
- We should be considering a **robust system** in **most*** cases

WHAT IS A ROBUST SYSTEM?



- A lot of vocabulary!
  - Core (general and personal)
  - Fringe
- Arranged systematically
- Considers motor-planning/automaticity
- Considers more than the skills present now
  - words needed for modeling
- Has the capacity to grow with the individual
- Has a literacy component

A system that provides...

"THE ABILITY TO COMMUNICATE ANYTHING ON ANY TOPIC TO ANYONE IN ANY CONTEXT"

~PATRICIA DOWDEN, PHD, CCC-SLP

BUT WAIT…

When **might** you not *initially* use a **robust system?**

- Individuals who have **CVI or other vision issues**
- Individuals who have **significant motor challenges**
- Individuals who need to develop **an appropriate way to initiate communication**

VISION CHALLENGES

WHY a possible exception?

- Too many symbols
- Symbols too close together
- May not be ready for two dimensional presentation
- Small screen size
- Saliency of symbol set

BUT...there are ways to provide access to a robust system while also supporting vision needs *(see resources)*

MOTOR CHALLENGES

WHY a possible exception?

- Too many symbols
- Symbols too close together
- Small screen size
- Touchscreens are tricky
- Response effort
- Working on learning to control their body (one challenging thing at a time)

BUT...there are ways to provide access to a robust system while also supporting motor needs (see *resources*)

LEARNING TO INITIATE APPROPRIATELY

WHY a possible exception?

- Need to establish engagement and motivation first
  - Difficulties maintaining & shifting attention
- Need the individual's "buy-in"
- Significant behavioral challenges/dysregulation
- Might have higher priority medical needs to address first

(See resources)

THE CAVEATS

If you decide to wait to introduce a robust system, the goal is **still** to get to a robust system **as soon as possible**.

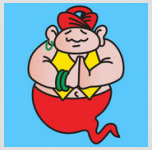
You might discover that you can introduce a robust system some of the time in addition to their other ("less robust") system.

Your goals need to reflect the need to **build skills** to bridge them up to a more robust system.

Despite your best efforts... the individual might choose against a more robust system.

TOOLS FOR FEATURE MATCHING

- AAC Evaluation Genie app ~Hump software



- Test of Aided Communication Symbol Performance (TASP) ~Joan Bruno

- Informal feature match checklists/ questionnaires
  - PrAACtical AAC's app rubric
  - ALS Functional Communication Scale
  - Aphasia Needs Assessment
  - Dr. Patricia Dowden's Clinical Considerations for Small Tech in AAC Checklist

(See resources)

FEATURE MATCHING FOR EMERGING COMMUNICATORS

- Vocabulary Selection
  - Choose a **variety** of words that are **motivating** and **interesting** to the individual
    - Likes & dislikes, nouns, verbs, modifiers
  - **Single word** expression
- Access
  - Vision & Motor
  - Response effort
- Output
  - Voice output
  - Partner needs
  - Visual output (e.g., message window, symbols or text only)
- Physical features of the system
  - Size, durability, portability, vanity/social acceptance

SYSTEMS TO TRY WITH EMERGING COMMUNICATORS

- PECS
  - You MUST follow the protocol for PECS to work
  - You might transition the individual to a more robust AAC system before completing the final steps of the PECS protocol
  - PECS can be used in tandem with other, more robust systems for modeling language
  - Also has an app
- PODD
  - Compass PODD app
- Core and fringe communication books (Pixon)
- A high-tech options that allows: the vocabulary needed, in the arrangement needed for vision and motor access
  - *(see list of some of our favorite apps under context-dependent)*

COMMUNICATION BOARDS

- Teachers Pay Teachers
- Seattle AAC
- Pixon Project (for purchase)
- Assistiveware and other communication app developers have materials for purchase or for free
- PrAACtical AAC Blog
- Project Core
- Boardmaker Share
- DIY – make your own *(see resources)*

(See our examples at the front of the room)

FEATURE MATCHING FOR CONTEXT-DEPENDENT COMMUNICATORS

- Vocabulary Selection
  - More vocabulary – even more robust
  - Conducive to word combinations
  - A system that allows you to keep up with vocabulary needs quickly
- Literacy feature
- Access
  - Vision & Motor
  - Response effort
  - Does increased use of the system by the individual warrant reconsidering access needs?

F.M. FOR C-D COMMUNICATORS CONTINUED

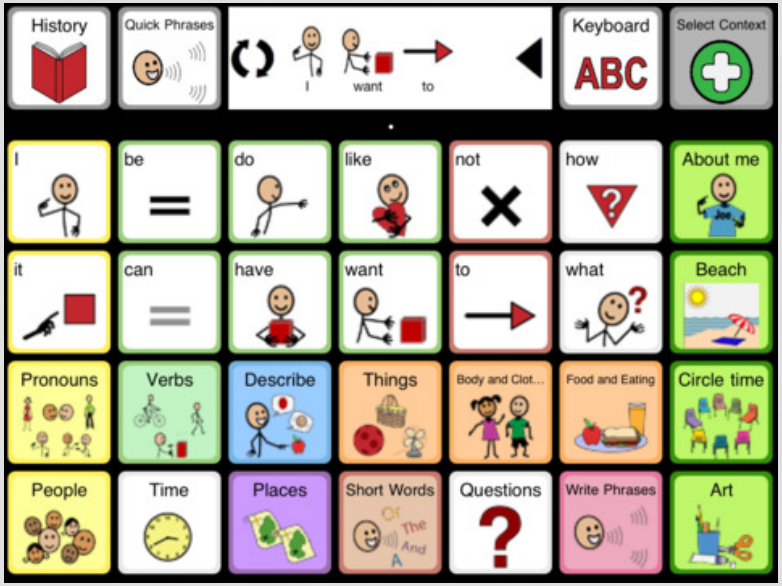
- Output
  - Voice output – might emerge as a more important consideration now
  - Partner needs
  - Visual output (e.g., message window, symbols or text only)
- Physical features of the system
  - Size, durability, portability, vanity/social acceptance
  - This individual is moving into more independence – does the weight and size impact ability to be independent with the device?

SYSTEMS TO TRY WITH CONTEXT-DEPENDENT COMMUNICATORS

- Make the leap!
- Give them all the words
- PODD
- Core and fringe communication boards and books with even more vocabulary and literacy options
- Any high tech system that provides the vocabulary needed, in the arrangement needed, with literacy features, output features needed, etc.

VOICE OUTPUT OPTIONS

- Dedicated Communication Devices
  - PRC, Tobii Dynavox, Saltillo
- Communication apps **for iPad**
  - TouchChat HD AAC With Word Power
  - Speak for Yourself
  - Sonoflex
  - COMPASS
  - LAMP
  - Proloquo2Go



FEATURE MATCHING FOR INDEPENDENT COMMUNICATORS

The individual is **integral** in this decision!

The independent communicator decides among the options we identify, and we offer information on the pros/cons

Steve Gleason, source: https://news.microsoft.com/stories/people/steve-gleason.html

FEATURE MATCHING FOR INDEPENDENT COMMUNICATORS

- Vocabulary selection
  - Rate enhancement
  - Fatigue reduction
- Access
  - Physical capabilities
  - Response effort
  - Direct selection
  - Indirect selection
  - See resources for alternative access
- Message composition
  - Must provide means to spell!
  - Activation feedback (visual, auditory, tactile)
  - Rate enhancement features (prediction, pre-programmed utterances, encoding)

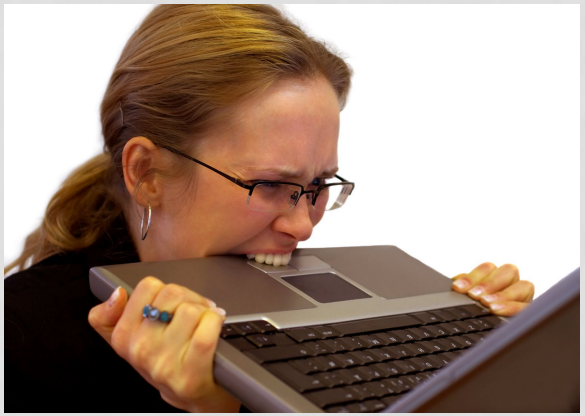
FEATURE MATCHING FOR INDEPENDENT COMMUNICATORS

- Output
  - Visual displays
  - Auditory/speech types (digitized, TTS)
  - Partner needs
  - Electronic (***not covered by insurance!***)

- Physical features of the system
  - Size, durability, portability, vanity/social acceptance
  - Mobility/ambulation

OTHER CONSIDERATIONS FOR INDEPENDENT COMMUNICATORS

- Communication contexts/environments
- Time frame (acute vs. chronic)
- Disease progression
  - Stable vs. progressive
  - Pattern of degeneration
- Tech competency

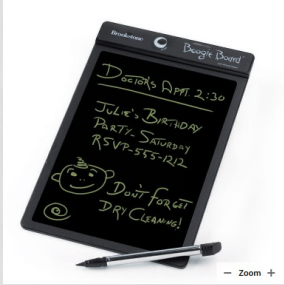


SYSTEMS TO TRY WITH INDEPENDENT COMMUNICATORS

- So many!! But you ***must*** provide spelling!
- Communication boards and books with even more vocabulary and literacy options
- Any high tech system that provides the vocabulary you need, in the arrangement needed, with literacy features, output features, etc.
- For individuals with motor control deficits, a facilitator must be identified to help with programming and customization
  - We as SLPs are NOT programmers or tech support
  - What is the facilitator's tech competency?

COMMUNICATION BOARDS/BOOKS

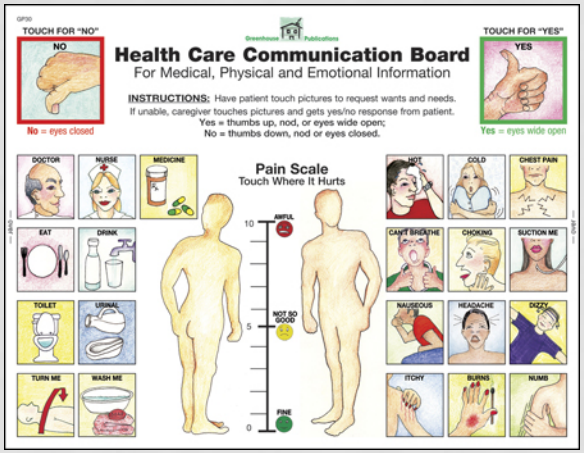
- Writing tools/systems
  - Pen and notepad
  - Dry erase boards
  - Boogie Boards



A	B	C	D		
E	F	G	H		
I	J	K	L	M	N
O	P	Q	R	S	T
U	V	W	X	Y	Z
Space		Oops		end	

- Letter boards
  - ABC
  - QWERTY
  - Vowel-based

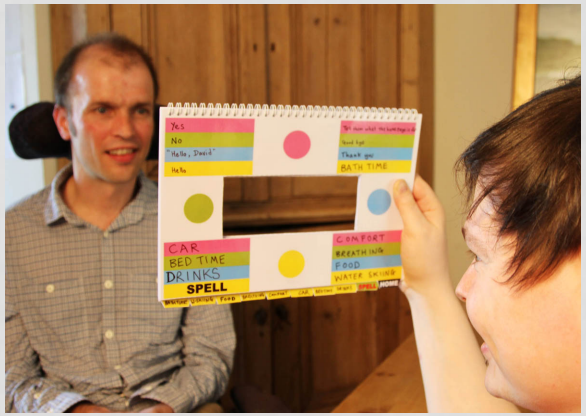
- Phrase boards
  - Topic- or situation-based



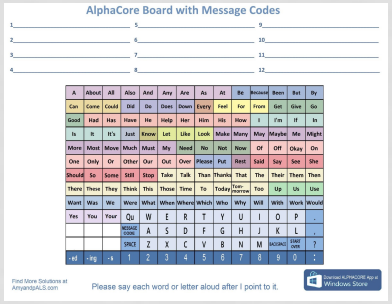
- Wallet communication cards

MORE BOARDS & BOOKS

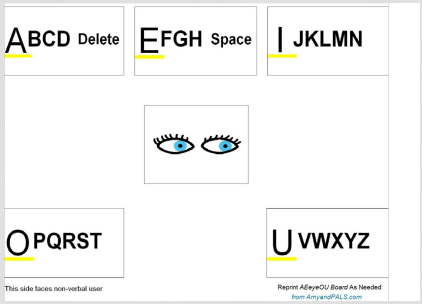
- Communication Flip Books
- SpeakBooks
- Alphacore boards
- Eyegaze boards
  - ETRAN
  - AEeyeOU boards



Source: Speakbook.org



Source: AmyandpALS.com



VOICE OUTPUT OPTIONS

- Voice banking
  - ModelTalker
  - VocalID

- Message banking
  - Legacy messages
  - ***Pets!***
  - Tobii Dynavox message bank
  - iOS: Voice Record Pro, Audacity
  - Windows: Audacity, Message Banking app

tobii dynavox

MORE VOICE OUTPUT OPTIONS

- TTS/speech generating apps
  - iOS: Verbally, Speak It, Predictable, Tobii Dynavox Compass
  - Windows: Tobii Dynavox Compass, PRC Pass, Alphacore
  - Android: Speak It, Predictable, Speech Assistant AAC
  - PC/laptop: NaturalReader

"DEDICATED" SGD'S

- Ablenet
  - QuickTalker Freestyle (mini)
- Forbes Rehab Solutions
  - Winslate devices
- LC Technologies
  - Eyegaze Edge
- Prentke Romich Company (PRC)
  - Accent devices
- Talk to Me Technologies
  - Zuvos devices
- Tobii Dynavox
  - T- and I-series
  - LightWriter (Toby Churchill)

Source: LC Technologies, Eyegaze Edge

Source: PRC, Accent 1200

Source: Tobii Dynavox, I12+

3. TRIALING AAC SYSTEMS

- Take potential AAC systems for a test drive
  - Low tech
  - High tech

- Where can you get high tech systems to trial?
  - Lending libraries *(see resource)*
  - Associations (ALSA, MS Society)
  - Contact the app developer (OMazing Kids blog, AmyandpALS.com)
  - Some manufacturers have product placements, loans, or SLP copies

TRIALING AAC SYSTEMS (CONTINUED)

- Also consider:
  - YouTube / How-to videos online
  - The manufacturer's website
  - App reviews/descriptions
  - Lite versions
  - Network with other SLPs
  - Checklist/rubrics *(see resources)*

INTERVENTION

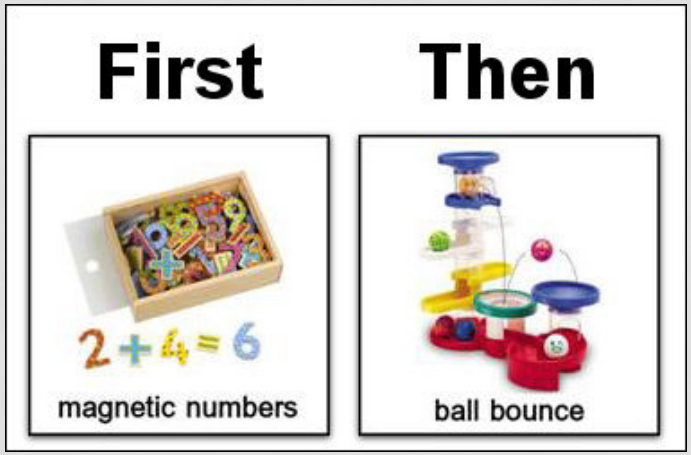
FOR EMERGING COMMUNICATORS

OVERALL GOALS FOR EMERGING COMMUNICATORS

- Establish engagement
- Maximize non-symbolic communication
- Establish a reliable method of symbolic communication
- Get buy-in
  - From family
  - From team
  - From individual

1. START WITH ENGAGEMENT

- You may not use the AAC system right away
- You may dance back and forth between modeling AAC and focusing on the interaction/engagement
- Establish back and forth exchanges/routines to lay the language onto later



WHY ENGAGEMENT FIRST?

- Being in-tune with the individual
- The relationship and interaction drive the language/communication
- These individuals only want to communicate about their interests and motivations
  - So we need to be able to have that perspective to support the language
- Following the individuals lead
  - What are they looking at?
    - Floortime, Social Thinking

STRATEGIES FOR ENGAGEMENT

- At or below the individual's eye level
- Face to face
- Close interactions
- Follow their gaze
- Use tone and affect to alert the brain and make things fun
- Melody, music, singing, movement
- "People toys"
- Find a topic/activity they are interested in

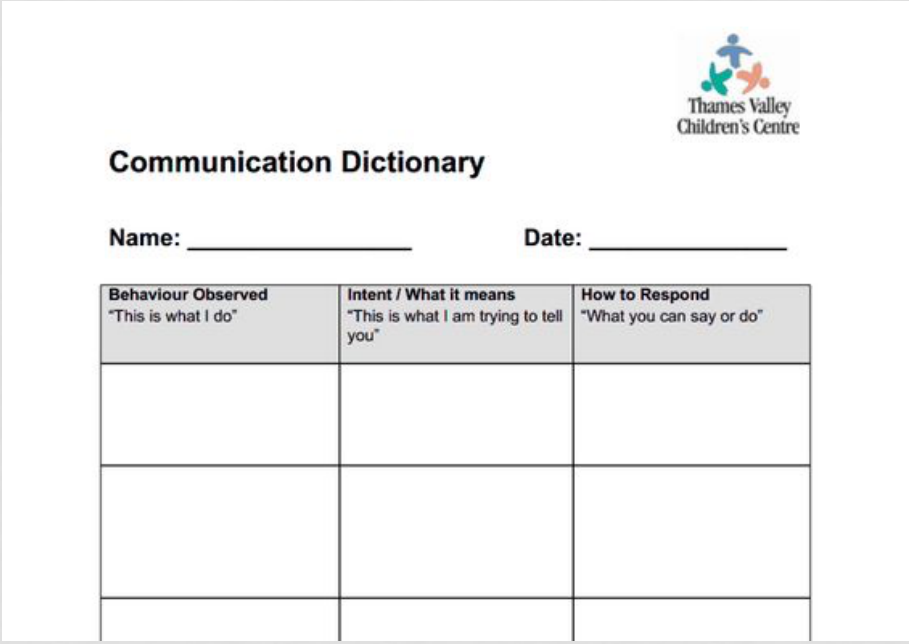
2. MAXIMIZE NON-SYMBOLIC COMMUNICATION

- Acknowledge the signal
- Interpret the meaning
- Respond/reinforce consistently
- Create a "**Communication Dictionary**"
- Have symbols available for making associations during the shaping process

COMMUNICATION DICTIONARY

WHAT IS IT?

- A collection of non-symbolic communicative acts and their associate meanings consistently used by an individual to express his wants, needs, and/or ideas *(see resources)*
  - Shared with the team



Thames Valley Children's Centre

Communication Dictionary

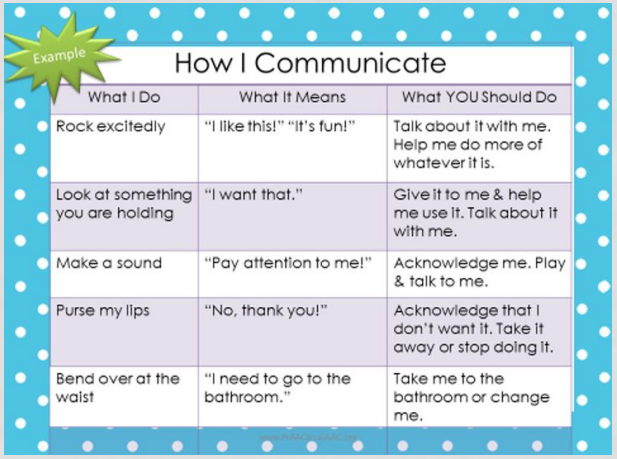
Name: _____ **Date:** _____

Behaviour Observed "This is what I do"	**Intent / What it means** "This is what I am trying to tell you"	**How to Respond** "What you can say or do"

COMMUNICATION DICTIONARY

WHY IS IT NEEDED?

- To maximize the communication the individual is using and to be consistent in applying meaning because:
  - Everyone knows what signals are being used for what messages
  - And how to respond for reinforcement and expansion/extension



HOW TO MAKE A COMMUNICATION DICTIONARY

- Observe (remember your FCBA, language sample)
- Make note of the behavior/signal and your interpretation of meaning
- Observe more
  - Were you right?
- Great! Now write it down!
- And share it with EVERYONE!
- Spreadsheet: Behavior-MEANING-RESPONSE
- Make a part of AAC system

(See resources)

3. ESTABLISH A RELIABLE SYMBOLIC SYSTEM

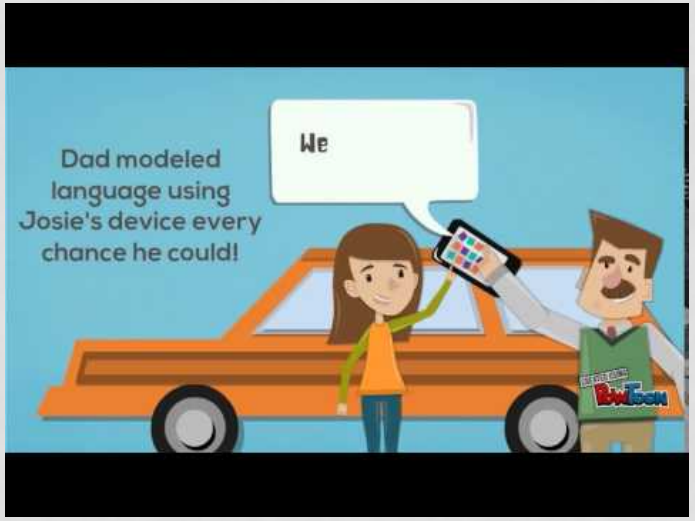
- Start with communication dictionary
- Establish a "first vocabulary" from this dictionary
- Teach connections between existing signal (non-symbolic) and it's symbolic representation (word)
  - MODELING
  - MODELING
  - MORE MODELING
- Creating ongoing opportunities to use (attempt) their new symbols

These points are true, regardless of the AAC system you have chosen to trial

4. PROVIDE MODELING

Also referred to as:

- Aided-Language Stimulation
- Aided Language Input
- Aided Language Modeling
- Partner Augmented Input



What does it mean???

You "speak" AAC to the individual to teach him to "speak" using AAC

5. ACHIEVE BUY-IN

- By modeling the language that goes along with the individual's message
- By educating the team on the goals and focus
  - receptive/modeling
  - creating opportunities for initial use
- By following the individual's lead
- By being honest
  - Communication is messy
  - This takes a long time
- By helping the team notice the little triumphs along the way

INTERVENTION

FOR CONTEXT-DEPENDENT COMMUNICATORS

GOALS FOR CONTEXT-DEPENDENT COMMUNICATORS

- Maximize the communication they are already using
  - Spoken or pictured communication, non-symbolic signals that remain
- Grow the symbolic system that is established to include:
  - More contexts
  - More partners
  - More words
  - Grammar
  - Literacy
- Check back in on engagement & buy-in

1. MAXIMIZE CURRENT COMMUNICATION

- Same as for emerging communicators AND
- Might step in with more communication partner training here
- Provide even more opportunities across many more activities/environments
- Practice with less skilled/less familiar partners
  - Peers
  - Other school staff/teachers
  - Extended family
- Word combinations with existing vocabulary
- New communication functions with existing vocabulary

2. GROW THE SYSTEM

- Follow normal language development guidelines to progress the individual's language
  - Content, form, use
- Make more vocabulary available on the system
- MODEL (more than one word utterances)
- Model navigation on the system
- Companion activities for TEACHING vocabulary meaning and use
  - Books
  - Theme activities

3. PROVIDE MODELING

- Just as discussed in prior slides AND
- Modeling one more word beyond what the communicator is already using
  - Verbalizing a complete utterance, might only visually model key words
- Wider range of vocabulary
  - Verbs
  - Modifiers
  - Negatives
  - Question words
  - Pronouns
- Model navigation/operation

INTERVENTION

FOR INDEPENDENT COMMUNICATORS

OVERALL GOALS FOR INDEPENDENT COMMUNICATORS

Gain, maintain, or regain...

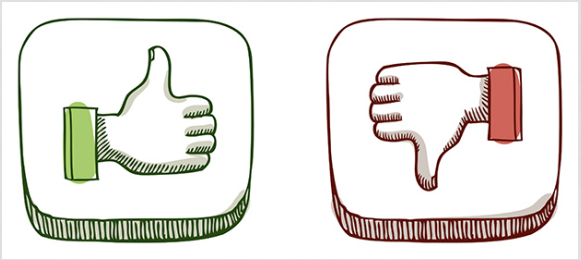
- **Functional communication**
- **Communication independence**
  - And reduce caregiver burden?

Improve **communication success, efficiency, and speed**, and **reduce fatigue**

Independent use, programming, and customization of communication systems and devices

1. EDUCATION & COUNSELING

- Review AAC & options
- Address pros & cons
- Set realistic expectations



- Prepare for speech changes or decline
  - Patient's Clinical Pathway for Communication Changes with ALS
  - Pre-laryngectomy counseling
  - Energy conservation strategies
  - Voice and message banking
- Make appropriate referrals

2. SPEECH GENERATING DEVICE (SGD) DECISION-MAKING

Empower the independent communicator to make **informed decisions**

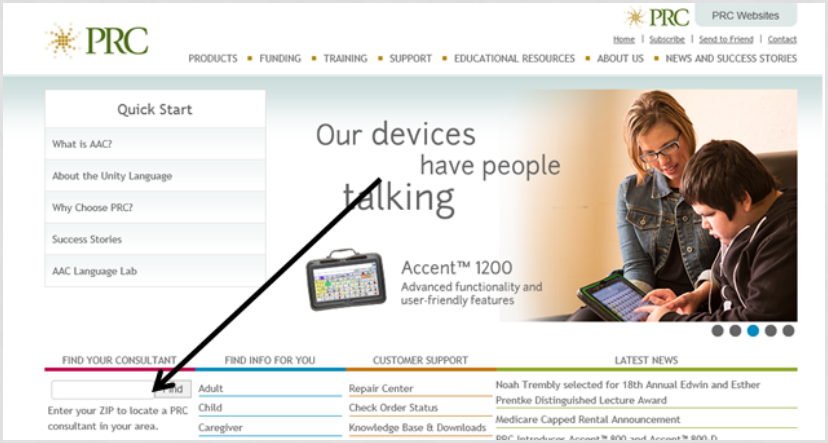
- SGDs cost a lot of **money**!
- SGDs take a lot of **time** to learn!
- Don't forget about **resources**
  - Financial
  - Community supports
  - Vendor rapport & availability
  - How many ST sessions are left?

3. SGD ACQUISITION

- Complete the SGD Funding Request
  - Collaborate with the individual
  - Again, set realistic expectations
  - See resource list
- Hold therapy while insurance reviews the request?
  - Plan
  - Instructions
  - Check-ins

SGD ACQUISITION (CONTINUED)

- Collaborate with local vendors
  - Most vendors are obligated to provide training!
  - Home visits
  - Remote training
  - Device set-up, calibrations, and programming



4. TEACH OPERATIONAL INDEPENDENCE

- Train goal-driven skills
  - Organization
  - Navigation
  - Rate-enhancing techniques
  - Alternative access
  - Adjustments and settings

Source: http://www.bendbulletin.com/health/2379526-151/medicare-tightens-coverage-of-speech-generating-devices

OPERATIONAL INDEPENDENCE

- Brainstorm goal-driven ideas for content
  - Communication categories
  - Communication contexts
  - Page layouts
  - Pre-programmed utterances

Source: Tobii Dynavox, Compass

OPERATIONAL INDEPENDENCE

- Caregiver training
- Explore the world wide web!
  - Some websites provide SLP resources and lesson plans
  - Customize plans to meet the individual's needs

5. DEVELOP TRAINING MATERIALS

- Bookmark the user manual
- Locate video tutorials on the device
- Provide a list of resources, websites, tutorials, etc.
- Use the individual's learning style
  - Film your training sessions on their Smartphone/tablet
  - Encourage note taking
  - Model and provide several practice opportunities

DEVELOP TRAINING MATERIALS

- Seek out additional resources
  - ALS Association Evergreen Chapter (ALSA EC)
  - Support groups
  - Webinars or local courses

TRAINING RESOURCES

- ALS Association Evergreen Chapter (ALSA-EC) Assistive Technology website (http://www.alsa-ec-at.org)
- PRC AAC Language Lab (http://aaclanguagelab.com)
- Saltillo Community (https://saltillo.com/blog/topic/resources-tips)
- Tobii Dynavox Support & Training (https://www.tobiidynavox.com/en-us/support-training/)

(See resources)

MODELING & THEN SOME

MODELING

Also referred to as:

- Aided-Language Stimulation
- Aided Language Input
- Aided Language Modeling
- Partner Augmented Input

What does it mean???

You "speak" AAC to the individual to teach him to "speak" using AAC

Input Output

Spoken language development

Child learning aided symbols

WHY DO WE MODEL THIS WAY?

- You learn a language by being immersed in it
  - AAC is this individual's language
- Modeling **teaches**: CONTENT, FORM, and USE
- We are **teaching** LANGUAGE using the MODALITY of AAC
  - You teach the language by using the language
- This is the **MOST ESSENTIAL PIECE OF YOUR AAC INTERVENTION!**
  - DO IT!
  - OFTEN!

HOW DO YOU MODEL?

- Use the individual's AAC system to speak to them in **naturally occurring communication interactions**
  - AND/OR use another AAC system (e.g., poster, manual communication board/book, replica device)
- Say your full message, show the *key words*
- Model language on the AAC system at a level just above what the individual is typically doing
  - 1-2 words above current level of expression

HOW TO (CONTINUED)

- Use support strategies to encourage attention
  - Movement, sound, light, waiting, vocal prompt (throat clear)
  - engagement strategies
  - reduce complexity with masking
  - Slow down, exaggerate your pointing movements
- Match the individual's message
- Balance conversational turns

MODELING ON PODD

https://www.youtube.com/watch?v=TOvC9OoygaA

MODELING ON COMMUNICATION BOARD

https://www.youtube.com/watch?v=MwMZDQ-c58U&t=68s

MODELING ON HIGH TECH DEVICE

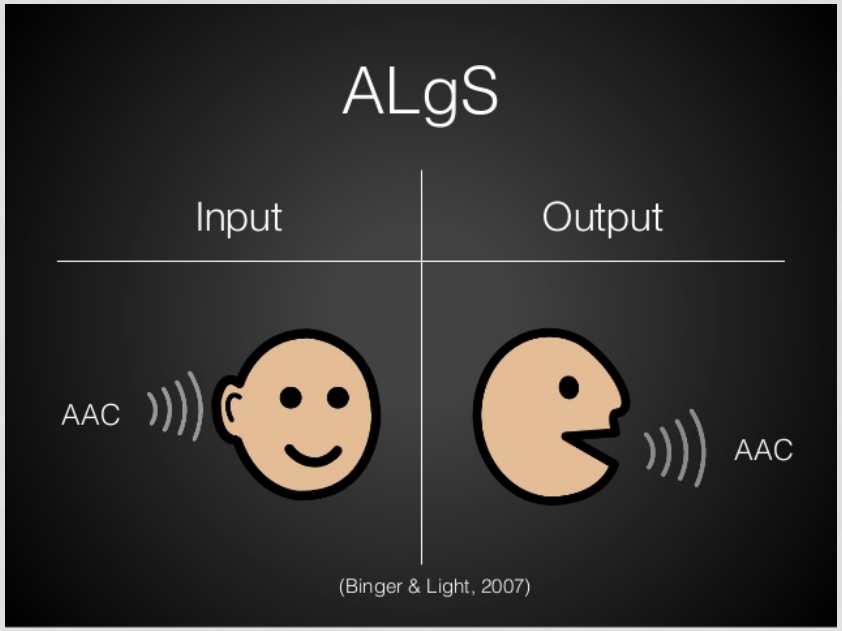
- https://www.youtube.com/watch?v=CT1KQVDbmus

MORE EXAMPLES OF MODELING

- http://praacticalaac.org/praactical/praactical-resources-video-examples-of-aided-language-input/

See our resource page for more great information modeling

BUT WHEN ARE THEY SUPPOSED TO ACTUALLY "USE " IT?



Typically developing children are exposed to language for a full year before we expect them to talk; and then we only expect one-word utterances (initially)

Language learning for AAC users could take years!

MONITORING "AAC PROGRESS" AT THIS STAGE

- Focus on MODELING, not on expression
  - Although you are providing opportunities for expression
- Modeling builds receptive skills and supports buy-in
- Consider developing measurable goals around modeling if needed by your setting
- Track progress with attention to models and attempts to initiate/use their system to express
- **See resources for information on goal setting and data sheets to help you track progress**

MORE INTERVENTION STRATEGIES

- Create communication opportunities
  - Sabotage, temptation
- Expectant Delay/Pause/Wait
- Open-ended Questions (if you have to question)
- Narration, Self Talk, Feedback
- A.R.E.E (Burkhart, Porter)
- Use routines
  - Repetition with variety

EVEN MORE STRATEGIES

- Follow the individual's lead, HIS message-motivation, relevance, interests
- Explicit vocabulary instruction
  - Focused Stimulation
  - 360 days of core words
- Adjust task difficulty and use a variety of prompts and cues

THANK YOU!

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RESOURCE PAGE

Resources and links can be found at www.nwacs.com under the Resources Tab

BONUS SLIDES

EARLY INTERVENTION

CONSIDERATIONS

ISN'T SIGN LANGUAGE THE BEST AAC FOR EARLY INTERVENTION?

- Research review suggests that **sign language is not the best supplement to verbal speech** for hearing children
  - Seattle Children's hospital, Cassie David, MS CFY-SLP Marci Revelli, MS CCC-SLP. *Considerations for Recommending Signs to Children without a Hearing Loss, August 2016 (Unpublished)*.
- Several studies between 2012 and 2014 comparing SGD use and manual signs for hearing children with developmental delays revealed
  - A stronger preference by children for SGD use
  - Better long-term sustainability of the modality
  - Longer utterances

LIMITATIONS OF SIGN

- Children do not always have the motor abilities to make exact signs
- The child is limited in who they can communicate with (must speak sign)
- If a child has a highly preferred topic, may use idiosyncratic signs that are difficult to understand across communication partners
- A child may rely on the parent as a translator
- Lack of exposure to fluent sign vocabulary due to limitations in sign knowledge of models (parents, teachers)

MORE LIMITATIONS OF SIGN

- More demand on retrieval because the array is not visible
- Manual sign shapes are not as closely matched in iconify to their referent, which may impact ease of leering
- Increased physical response effort compared to pointing to or exchanging a picture

RESEARCH TO SUPPORT THIS NOTION

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IF WE USE SIGN, ARE WE DOING IT RIGHT?

- For signing to be a functional language alternative to spoken communication, the child needs to be exposed to the modeling of **new signs** and **signing combinations every day** (Glairon, 2003)
- An average of 10-100 signs in adult communication models who are hearing and teaching children with developmental delays
  - This just isn't enough to grow a solid first vocabulary!
- We need to be using MULTIPLE MODALITIES in EI and this includes VEBRAL, SIGN, GESTURE, and a **ROBUST PICTURE COMMUNICATION SYSTEM**

RATE OF TYPICAL LANGUAGE LEARNING FOR VERBAL CHILDREN AGES 1.5 – 6 YEARS

- An average of 9 words per day (Templin, 1957)
- Around 10 words per day (Aitchison, 1994)
- 12 words per day (Chomsky, 1988)
- 13 words per day (Miller and Gildea, 1987)

Our kids can't learn words we don't expose them to in a way they can fully <u>understand and express</u>

AVERAGE EXPRESSIVE VOCABULARY FOR VERBAL CHILDREN

(Smith, 1973; McNamara, 1982)

- 2 year old 500 words
- 3 year old over 1,000words
- 5 year old up to 3,000 words

- **How many words (spoken, signed, pictured) do our EI kids have in their vocabularies?**
- **How many do they have ACCESS to if verbal skills are limited?**

For most, NOWHERE NEAR THESE NUMBERS!

GREAT RESEARCH & RESOURCES ON AAC IN EI

- Penn State (Janice Light, Kathy Drager) AAC in Early Intervention http://aackids.psu.edu/index.php/page/show/id/1/
- PrAACtical AAC Blog, Early Intervention tag http://praacticalaac.org/tag/early-intervention/
- Early Intervention & AAC: What a Difference 30 years Makes! Romski et al (2014) **http://www.tandfonline.com/doi/full/10.3109/07434618.2015.1064163**

CHOOSING AN AAC SYSTEM

BONUS SLIDES

CHOOSING AAC SUPPORTS

- Use what you learned in your assessment
- **Organized** language systems rather than fragmented collections of symbols/boards
- Include **Core and Fringe**
- Cover your **Pragmatic** bases
- Consider **access** needs
- Consider **client and family preferences**

You may have to go out of your comfort zone and work with less familiar materials/systems

CHOOSE A SYSTEM THAT SUPPORTS THE "VISION"

- **More (vocabulary)** really is better – especially for modeling
- Vocabulary comes **before grammar**
  - **If you want to build word combinations, don't use carrier phrases- expand single word vocabulary to include words that go together (verbs, nouns, adjectives, pronouns etc...)**
- **There is more to life than requesting**
  - supports need to represent this fact even if the child may not be quite "there" yet
- Don't choose systems that solve for the moment but **offer no platform for growth**
- High tech needs a low-tech backup plan (**Multimodal communication**)

COMMUNICATION BOARD CHECKLIST

Aided Language (modeling) boards should include:

- **Core Vocabulary**
  - General core
  - Personal Core -Child specific vocabulary
- Fringe Vocabulary
  - Activity specific vocabulary
- Words that cover all functions
  - Including a way to signal that what I want to say is not on the board!
- Mix of novel and familiar vocabulary
- **Enough vocabulary!**
  - (modeling just above where the individual is)

Linda Burkhart et al-*ALS, Research to Practice*

CHOOSING A FIRST VOCABULARY

- WHAT does the individual want to say?
  - The individual's spontaneous message as demonstrated by non-symbolic communicative behaviors
- "POWER" words (Pat Dowden, UW Augcom)
- Laying the foundation for sentence composition and literacy
- Providing the words to teach new communicative **functions**
- Brainstorm **core words** that support the nouns the individual is most interested in
  - See web resource-Building Vocabulary worksheet from *Speak for Yourself*

Pat Dowden, UW-AugComm-Tools to discover empowering vocabulary for emerging communicators (see resources)

VISUAL SCENE DISPLAYS

WHAT?

- High tech AAC Alternative to grid-based picture communication displays
  - highly contextualized
  - personal

WHY?

  - To reduce cognitive demands
  - Make learning easier
  - Support social interactions and exchange of ideas

- Apps that do this
  - Touch Chat-MultiChat 15, Student
  - Snap Scene
- Research summary and details on VSDs at Leader Project http://www.leadersproject.org/2014/01/15/contemporary-approaches-to-intervention-visual-scene-displays-vsd/

INTERVENTION

BONUS SLIDES

FIND THE SPARK AND FAN THE FLAMES – LINDA BURKHART

- Visual supports are useless without **supportive communication partners**
  - **Gayle Porter, "smart partner"**
- Become a supportive communication partner and teach others
- What is it??
- How do I become one??

A SUPPORTIVE PARTNER…

- **Knows the AAC system** inside and out
- **Provides access to the system** at all times
- Provides ample models (**aided language modeling**)
- Brings a **motivating, reinforcing activity** to the table
- **Tempts** with **aided language**
- **Shares control** with the child
- **Acknowledges** communication attempts of all kinds
  Reiterates, **Enhances**, and **Expands** with AAC (A.R.E.E.)
- **Sabotages** expectations to create **learning opportunities**
- **Waits**
- **Teaches** language in **natural experiences, everyday!**

10 WAYS TO PROVIDE LANGUAGE THERAPY

AAC STYLE!

1. WAITING & EXPECTANT DELAY

- Expectant delay
  - "Watch-Wait" Maintain eye contact with the person while you wait quietly with an expectant look on your face

(Gail Vantatenhove, The Art & Science of AAC Intervention)

- Simply Waiting
  - For the individual to initiate
  - For the individual to respond

Meme courtesy of PrAACtical AAC

2. COMMUNICATION TEMPTATIONS

- Sabotaging routines
  - Through delay
  - Through violating expectations
  - Through playing "dumb"
- Creating gentle barriers
- Using aided language modeling to tempt
- Using absurdity
- Waiting/Pausing in routines

3. QUESTIONS

CHANGE, REDUCE, OR ELIMINATE THEM!

HOW TO CUT QUESTIONS

- We tend to ask our nonverbal/less verbal individuals a lot of yes/no and "this" or "that" questions
  - this teaches them to be responders and limits their opportunities to truly communicate
- Do you want juice?
  - What do you want to drink? (gesturing to choices)
- Do you want more or are you all done?
  - Tell me what you want (gesturing to choices)
- Narrate (verbally AND visually) what you are doing, what you want, what you don't want – you can even "pretend" to provide some temptation and a valuable modeling opportunity
  - I'm so thirsty! I want some juice. Mom, what do you want to drink? Oh, you want juice too! Here you go….etc

4. 5. 6. & 7. A.R.E.E.

- **Acknowledge** the child's message, even if he didn't use a symbol
- **Reiterate** the message so the child knows you understand his attempt and to check for accuracy in your understanding
  - Do this affirmatively, when you can, not always with a question
- **Enhance** the message – model a new form for enhanced meaning, clarity, efficiency
- **Expand** the message through word combinations

Burkhart & Porter

8. USE PROMPTS & CUES

- Verbal prompts & cues
  - Open ended question or statement (I wonder what you want, What should we do next?)
  - Directive (Tell me what you want, Use your words. You need to ask me)
  - Closed question with part of answer (this or that)
  - Hint
  - Carrier Phrase
- Visual prompts & cues (gesture to object, without pointing to actual communication board
  - Gesturing toward board, holding board in close proximity
- Visual model (pointing to the picture on the board)

See resources

9. FOCUSED STIMULATION

- Repetition with variety!
- Teaching, not testing!
- Step by Step (courtesy of PrAACtical AAC)
  - STEP 1: Introduce the new word(s) using focused **AIDED language stimulation (**similar to Frontloading**)**
  - STEP 2: Teach the new word(s) with explicit instruction activities
  - STEP 3: Elaborate on the new word meanings with engaging practice activities
  - STEP 4: Provide repeated exposure to the new word(s) on an ongoing basis
  - STEP 5: Check for understanding and reteach, as necessary

10. PROVIDE (AIDED) LANGUAGE MODELING

ALL OF THE TIME!

HOW MUCH DO I MODEL?

- Model max language without overwhelming
- Models should be slow enough for observation
- Model a mix of **novel and mastered**
- **Pair with speech**
- Used alongside a **prompt hierarchy**
- Should occur at least 80% or more of interactions (Burkhart, Van Tatenhove)
- Average of 100-125 models on word/word sequence on device before spontaneous use of that word/sequence observed (Van Tatenhove, 2009)

WHY DO WE DO IT SO MUCH?

- Assumption is that AAC users learn language **like all other children**
  - Intensive models
  - Language immersion environment
- Language **input needs to match output** for optimal success
- Models need to occur in natural experiences, **not just activities**
- Through modeling, we work out the "messiness"
  - Content, Form, Use
  - Breakdowns and repair strategies
  - Operational use