TRAVELING THE AAC/SGD EVALUATION AND FUNDING HIGHWAY
Presented by the Akron Children’s Hospital Augmentative Communication Team
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- The presenters have no financial or non-financial relationship with the manufacturers of any of the products referenced in this presentation.
- All presenters are either full-time salary exempt employees or hourly part-time employees of Akron Children’s Hospital.

TODAY’S AGENDA & GOALS
- Introductions
  - Who we are
  - Who are you?
  - Anyone from another state?
- Who is appropriate for AAC
- Basic overview of AAC options
- The components of a successful AAC evaluation and funding submission
- Meet some fabulous kids who are using AAC
- Discussion
WHO IS APPROPRIATE FOR AN AAC/SGD EVALUATION?

- Common Misconceptions:
  - Child must have a certain level of cognitive functioning
  - Child must have receptive language skills that surpass his/her expressive language skills
  - Child must already show signs of intentional communication (e.g. gestures, eye gaze)
  - Child must be nonverbal

WHO IS APPROPRIATE FOR AN AAC/SGD EVALUATION?

- Common Misconceptions Continued:
  - Child must use a light tech method of AAC before they are appropriate to assess for SGD use (e.g. manual signs, PECS, picture communication)
  - Child must be a certain chronological age
  - Child must have a minimal cognitive functioning level
  - Child must have a certain level of motor function
  - Child must be able to use their upper extremities
  - Child must have a clearly identifiable medical diagnosis

WHO IS APPROPRIATE FOR AN AAC/SGD EVALUATION? cont.

Any child who lacks the ability to functionally communicate age appropriate daily wants, needs, and thoughts in a manner that can be clearly understood by a variety of communication partners across daily environments.
WHO IS APPROPRIATE FOR AN AAC/SGD EVALUATION? cont...

- Child may present with difficulties in the following areas:
  - Gaining attention
  - Initiation of and response to communication
  - Response to simple/complex yes/no questions
  - Expression of basic needs (e.g., hunger, thirst, toileting, fatigue)
  - Expression of basic wants (e.g., activities, locations, people)
  - Expression of basic or complex medical status
  - Expression of emotional state

WHO IS APPROPRIATE FOR AN AAC/SGD EVALUATION? cont

- Expression of binary choices
- Response to "wh-" questions
- Expression of information regarding recent or future activities
- Expression of novel information
- Expression of information outside of the immediate environment
- Expression of information regarding specific people or activities

WHO IS APPROPRIATE FOR AN AAC/SGD EVALUATION? cont

- Possible diagnoses include:
  - ASD
  - Down Syndrome
  - Cerebral Palsy
  - Fragile X
  - Dysarthria
  - Apraxia
  - Receptive/Expressive Language Disorder
  - Seizure disorder
  - Other genetic disorders
  - And on and on and on...
### POSSIBLE OUTCOMES OF AN AAC/SGD EVALUATION

- Child is not currently appropriate for a high-tech SGD
  - May recommend other interventions prior to reassessment in the future
- Child may require ongoing (and likely) multidisciplinary diagnostic treatment sessions
  - Helps to determine appropriate access method
  - Provides increased exposure to SGD use
  - Helps to determine child’s level of motivation for AAC/SGD use
  - Provides ability to further assess appropriate vocabulary organization of AAC communication
- Short term loan/rental of a SGD for further evaluation prior to purchase

### POSSIBLE OUTCOMES OF AN AAC/SGD EVALUATION cont.

- Not all AAC evaluations lead to a recommendation of a high-tech voice output device.
- Non-speech generating AAC options
  - PODD (Pragmatic Organization Dynamic Display)
  - Picture communication book
  - PECS
  - Manual sign
- Low Tech SGD Recommended
- High Tech SGD Recommended
- Various treatment options for implementation

### WHAT IS AN AAC EVALUATION?

- AAC assessments are conducted to identify, develop, and modify AAC systems; create and adjust AAC intervention plans; and to measure progress with existing AAC systems. In general, the AAC assessment process involves (a) exploring and defining the concerns of the patient, caregivers and staff; (b) gathering assessment data which may include establishing cognitive abilities, determining receptive and expressive language levels, identifying communication opportunities in the patient’s environment, and ascertaining preferred and optimal modalities and methods of engagement; (c) matching the features needed in a range of low- to high-tech AAC tools to the communication needs of the patient; (d) conducting trials with those potential AAC tools; and (e) making recommendations for initial implementation plans.
AAC ASSESSMENT IS NOT*

- Recommendations for specific AAC systems need to be based on objective and subjective evidence gathered during the evaluation. It is unethical to select an AAC device or system for an individual based on personal preferences, policies, price, or promotions.
- Personal Preferences:
  - I like the THINGAMAJIG, so that's what I recommend for all my students.
  - I never use the THINGAMAJIG because I don't understand how it works.
- Policies:
  - Our school uses the THINGAMAJIG with all our students because it is easier to support students all using the same system.
  - Our facility has an agreement with the makers of the THINGAMAJIG.


AAC ASSESSMENT IS NOT* CONT

- Price:
  - We can only afford to buy a THINGAMAJIG.
  - We want to use a free or low-cost THINGAMAJIG app.
- Promotions:
  - I looked at all the devices at the AT show and picked out a THINGAMAJIG for my student.
  - I watched a bunch of videos on YouTube and decided on the THINGAMAJIG for my student.
  - I met some AAC device users using the THINGAMAJIG and choose that for my student.
  - I saw a TV show on the THINGAMAJIG and want it for my child.


FROM ASHA'S AAC GLOSSARY

- "Communication is based on the use of the individual words of our language. True communication is spontaneous and novel. Therefore, communication systems cannot be based significantly on pre-stored sentences. Communication requires access to a vocabulary of individual words suitable to our needs that are multiple and subject to change. These words must be selected to form the sentences that we wish to say."

FEATURE MATCHING

- Feature Matching: the systematic process by which a person's strengths, abilities and needs are matched to available tools and strategies (Shane & Costello, 1994).
- Your 1st step is to know the child! Not the equipment!
- Feature matching is not "What app are we going to get?"
- SETT - Student Environment Task Technology - Joy Zabala
  - This is a good framework, but remember your task is COMMUNICATION!
  - The TASK is not always the academic curriculum.

FEATURE MATCHING

- Know the goals of the family.
- Have linguistic competence in mind at all times
- AAC vs. Assistive Technology
  - IDEA defines AT as any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of a child with a disability.
- AAC is AT. Not all AT is AAC
**FEATURE MATCHING**

- What are the current barriers to communicative competence?
- Pragmatic needs - how can they be met?
- How does the patient currently communicate?
- What are the patient’s literacy skills?
  - Do you need symbolic communication, visual scenes, alphabet, word prediction, or a combination?
- Speech Output
  - Text-to-speech needs

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**FEATURE MATCHING**

- **Access**
  - Direct or indirect
- Number of symbols on a screen
- Visual acuity
- Attention
- Ability to target specific vocabulary
  - Such as hide/show keys
- Size and weight of device
- **Motor Planning**
  - Size of keys, accuracy of selection
- Number of keystrokes to get to a message
  - Misconception: Larger keys per screen = a lower cognitive load

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**FEATURE MATCHING**

- Device Selection:
  - Skilled AAC evaluators need to have extensive device knowledge. This can come from:
    - Conferences - ISAAC, Closing the Gap, ATIA, Regional Workshops
    - Online Classes
    - Certifications
    - Device manufacturer workshops
    - Device manufacturer consultants
    - Online resources
    - AAC Professionals
    - Experience with PWUAAC (Person Who Uses AAC)
- You need to match the technology with the patient, not the patient to the technology.
**AAC ASSESSMENTS**
- Communication Matrix - [www.communicationmatrix.org](http://www.communicationmatrix.org)
- Augmentative & Alternative Communication Profile A Continuum of Learning - Tracy Kovach, Ph.D
  - To assist with ongoing assessment
- TASP - Test of Aided-Communication Symbol Performance
- [http://www.aactechconnect.com](http://www.aactechconnect.com)
- AAC is as much science as it is an art form

**DEDICATED SGDS VS. AAC APPS**
- Apply feature matching to BOTH dedicated SGDs and Apps.
- AAC Apps sometimes are OTC AAC
- AAC practitioners need to remain in the professional role when determining appropriate AAC Apps.
- An AAC evaluation should not only be “What app do I get?”

**PROS OF AAC APPS**
- Easy to obtain
- Highly portable
- Relatively low cost
- Empowers family and consumer
- Based on mainstream technology and viewed by users as mainstream
- "Cool" factor
- Intuitive to use across
- Use is considered by some to be more "peer-like" and "peer accepted"
- Much more likely to be viewed by AAC users of all ages as acceptable technology rather than traditional AAC devices
- Can be preliminary assessment tool
- Can be a child’s first AAC device - may be the only one, but may not be.
PROS OF AAC APPS CONT...

- Young users may attract communication partners because it is considered cool technology
- Can be very motivating especially with the wide variety of apps that engage user and support use of the technology
- One part of “arsenal of assistive technology”
- Can be used either as a complete or supplemental speech generating device (SGD)
- Useful for a range of assistive needs, from picture schedule systems to GPS tools, minimizing the need for multiple AT items
- Communication partners readily accept technology & feel comfortable in interacting with the AAC user
- Some vendors have attempted to replicate their dedicated SGDs thus offering Apps based on successful language representation system

CONS OF AAC APPS

- Durability
- Limited accessibility
- Quality control issues
- ‘Buyer Beware’ purchase
- Does not meet criteria for funding as durable medical equipment (DME)
- Poor volume, durability can be an issue
- Lack of technical support and training available
- Multiple functions can be distracting for some users
- Limited growth potential within individual apps
- Generally less customizable than dedicated SGDs, especially in regards to access
- Impression that the system is so inexpensive, it is disposable - can lead to poor decision making/ uninformed purchases
- Purchases made without clinical recommendation or guidance

CONS OF AAC APPS CONT...

- Loss of time in language development or rehabilitation
- Limited opportunities for ‘hands on’ evaluation of hardware & apps
- Even the most competent apps involve a very high burden for programming and customization
- When AAC is not successful, begins to lay the foundation for disinterest and feelings of failure
- Additional apps can be extremely distracting to many users and interfere with use of device for communication
- Can lead to abandonment/discontinuance of successful use of SGD by teachers, families or caregivers
- Use of several different systems without direction can result in confusion and even interfere with development or rehab of language and effective communication strategies
- Limited research, thus rely on informal investigation and anecdotal reports
### FUNDING SOURCES
- Medicaid
- Ohio Managed Care Organization
  - CareSource
  - Buckeye
  - United Healthcare Community Plan of Ohio
  - Molina
  - Paramount
- Private Insurance
- Tricare
- Schools - IEP and IDEA come into play. Know the regulations!
  - Know the actual law, not just your district policy.

### FUNDING SOURCES CONT.
- Grants/Scholarships
- Fundraisers
- Private Pay
- Medicare - 65 and older
- A rich uncle
- In Ohio, iPads and apps are not currently funded by private insurance or Medicaid
- Dedicated vs. open platform SGDs

### FUNDING CHANGES
- Currently only a Medicare issue
- Medicare rules trickle down to Medicaid
- Capped rental
- Feature availability
- When Medicare
- Advocacy options:
PARTICIPANTS IN A SGD EVALUATION

- Patient and their caregivers
- Licensed SLP
- Licensed OT and/or PT
- Doctor
- Educational staff
  - School based SLP
  - School based OT/PT
  - Teacher
  - Classroom assistants
  - Psychologist

Medicaid requires the most detail for an SGD. We'll follow a Medicaid format for the written evaluation.

MEDICAID

THINGS TO KNOW

- Medicaid is a medical insurance funder
  - The report must be from a medical standpoint
- Medicaid is the payer of last resort
- Your patient may have Medicaid and private insurance
  - Follow all Medicaid guidelines and this will cover private insurance requirements
- School clinicians with appropriate certification in their field may complete a Medicaid report, but don't focus on the child's academic needs
- At what price point do you ask Medicaid for funding?
THINGS TO KNOW CONT.

- Medicaid requires a very specific Certificate of Medical Necessity (CMN) to be filled out by an OT, SLP, and the physician
- SLP must have their CCCs
- COTAs and PTAs can not perform the evaluation
- Available from SGD manufacturers
- A separate narrative speech and language evaluation is required along with the CMN
- 90-day timeline
- Medicaid information you need to provide is very duplicative
- Paperwork should be submitted to SGD manufacturer

Medicaid Certificate of Medical Necessity (CMN)

SECTION A

- Name
- Billing Number
- Trial vs. Purchase
- Diagnosis code and description
- Consumer’s diagnosis/progress
- "Patient"
  - This is the generic term we will use in our examples.
  - Examples used today are from multiple patients
  - Make the report personal - use the name in your reports
STANDARDIZED OT ASSESSMENTS

- Standardized OT assessments are conducted in pre/post sessions to determine needs related to fine motor control, visual perceptual and visual motor skills, as well as bilateral gross motor coordination.

- Assessments include:
  - The Beery-Buktenica Developmental Test of Visual Motor Integration (VMI)
  - Motor Free Visual Perceptual Test (MVPT-3)
  - Bruininks-Oseretsky Test of Motor Proficiency -2nd Edition (BOT2)
  - Learning Accomplishment Profile-Diagnostic
  - Peabody Developmental Motor Scales-2 (PDMS-2)
  - Jordan Left-Right Reversal Test
  - Sensory Processing Measure / Sensory Profile
RANGE OF MOTION
STRENGTH (ROM)/ Tone
- Functional range of motion (ROM) and strength are observed and assessed
  - Manual Muscle Testing - Strength
  - Modified Ashworth Scale - Tone
- Gross motor and fine motor skills are used to determine accessibility to SGD/AAC device
- ROM limitations are evaluated for alternative access methods
- When looking for a good place to start with switch placement, a good strategy is to observe and interrupt a strong repeatable movement – D. Kay, OT

HAND SKILLS
- Hand preference is determined by observation and parent report
- Grasp patterns observed and documented
- Gross motor hand access indicates need for:
  - Larger icon size
  - Type of mount, due upper extremity force when making selections
  - Possible need for alternative access methods including: switches, head array, eye gaze, etc
  - Possible need to access device with alternative muscle movements (lower extremity, elbow, cervical movements)

HAND SKILLS CONT.
- Fine motor access with finger isolation determines need for:
  - Keyguard/touchguide
  - Use of a stylus
  - Size of icons
  - Type of mount when considering need for upper body stabilization
  - Positioning/ placement when accessing device
**ACTIVITIES OF DAILY LIVING**

- Use and integration of recommended devices in Activities of Daily Living (ADLs) are considered during the evaluation process.
- A child’s level of independence with grooming, dressing, bathing and toileting indicates:
  - Motor control (fine motor skills observed with fasteners and clothing management may carry over to device use)
  - Attention to task
  - Safety
  - Need for improved ability to express wants/needs/desires associated with ADLs

**POSTURE/POSITIONING**

- Posture and positioning needs to be considered in all aspects of potential device use:
  - Wheelchair
  - Activity chair
  - Functional environments
  - Transportation/safety

**POSTURE/POSITIONING CONT.**

- Positioning is key to functional upper extremity ROM
- Proper pelvic alignment allows:
  - Improved proximal upper extremity ROM for success with access
  - Access to full visual field (posteriorly tilted pelvis encourages cervical flexion and upward gaze strain)
- Need for bracing/splinting is assessed to improve success with access (hand splints, functional splints, TLSO bracing, etc.)
MOBILITY

- Ability to ambulate or perform independent mobility is observed and assessed while determining SGD/ AAC recommendations
- When considering a device for an ambulating patient, OT looks at:
  - Safety of patient and device
  - Ease of portability
  - Functional use across all environments

MOBILITY CONT.

- Power Mobility considerations:
  - Mount location
  - Caregiver ease, mount placement should not hinder transfer
  - Distance of device and/or placement of switch mounts to ensure continuous access to communication device
  - Incorporation of head array to control device and power wheelchair if possible

MOBILITY CONT.

- Independent wheelchair mobility considerations:
  - Placement of mount to ensure safe visual field and access
  - Ease of device removal for independent transfers
  - Safety
- Dependent wheelchair mobility considerations:
  - Ease of transfers and functional care
  - Positioning for optimal use and visual fields
  - Streamlining mounting system for access to community entry ways
MOTOR SKILLS AND SGD ACCESS
- Direct selection
  - Touch
  - Eye gaze
  - Head tracker
  - Stylus
- Indirect selection
  - Scanning
  - Joystick
  - Mouse

DIRECT SELECT: TOUCH ACCESS
- Size of keys
- Keyguard/Touchguide
- Number of keys on a screen
- White space
- Acceptance time
- Release time
- Activate on selection vs. activate on release
- Stylus
- Joystick/mouse

DIRECT SELECT: HEAD POINTING
DIRECT SELECT: HEAD POINTING
- Replaces a standard computer mouse
- Translates natural movements of a user’s head into directly proportional movements of the computer mouse pointer, so as the user moves his head the mouse pointer on the screen also moves.
- Activations of the target occur when a user dwells on a key for a set amount of time or activates a switch
- No special software required – USB connection

DIRECT SELECT: EYE GAZE
- Positioning, positioning, positioning
  - Wheelchair (tilted/upright)
  - Stander
  - Bed
- Stimuli in evaluation environment
  - Position of therapists in room during set up
  - Minimal conversations to allow patient to focus on novel task.
- Proper mount/ tabletop set up
- Calibration variables
  - Number of targets
  - Accommodation of visual deficits
  - Target size and picture
  - Glasses
  - Ambient light

INDIRECT SELECTION: SCANNING
- A selection can only be made by activating a switch when the desired key is somehow highlighted.
- 1-switch scanning
- 2-switch scanning
- Linear scanning
- Group scanning
  - Row/column
  - Quarter row/column
  - Customized
INDIRECT SELECTION: SCANNING

- Auto scan
- Hold scan
- Step scan
- Partner Assisted Scanning
- Auditory Scanning

SCANNING - IMPORTANT CONSIDERATIONS

- Switch placement
- Visual demands
- Auditory demands
- Motor demands
- Timing options
- Adjustable acceptance and release time
- Apps - what are the scanning options?
  - Was the app designed to scan?
  - Does it use the iOS scanning option?

SCANNING RESOURCES

- iOS7 Switch Control: The Missing Manual:
  http://www.ablenetinc.com/Portals/0/KnowledgeBase/Manuals/iOS7-UserGuide.pdf
  • Updated April 2014
- “Strategies for Access and Language Integration” - Workshop offered by David Kay, OTR - www.prentrom.com/training
- Linda Burkhart: Stepping Stones to Switch Access:
Two Switches for Success: Access for Children with Severe Physical and/or Multiple Challenges: L. Burkhart - http://www.lburkhart.com/hand2sw4s.htm

Need to discuss how patient will access SGD in their daily lives in multiple environments.
- Wheelchair mount
- Caregiver ease with mounting arrangement (transfers)
- Floor mount
  - May be needed for wheelchair use or for patients in bed
- Table top with table mount/stand
- Table use
- Use when on the floor, couch etc.
- Ability to transport device across environments
INTEGRATION OF MOBILITY AND POSITIONING WITH THE SGD
CONT.

- Examples cont.
  - Durability
  - Consistency of placement
  - Safety with transportation
  - Keyguard necessity for patients with motor deficits to facilitate access and accuracy across environments
  - Medicaid will pay for 1 mount option!!

POSSIBLE MOUNTING OPTIONS

- Velcro
- Modular Hose
- Wheelchair mounting kit
  - Available with Medicaid cap
- Rehadt
  - Custom mounting quotes - Rob McPherson will work with the Medicaid cap in Ohio
- Daessy
- Mount’n Mover
- Ram Mount - iPads, switches and smaller items
- Ablenet.inc - Tom Nikola, representative in Ohio
Cognitive Status Assessment

SECTION C

COGNITION

- Difficult to assess with non-verbal patients
- Focus on problem-solving and memory retention specific to device use
- Standardized test scores need to be interpreted with caution when determining cognitive ability to use an SGD successfully.
  - Skilled observations are ESSENTIAL for cognitive assessment of a non-verbal patient
- Assess cognition in reference to peers
  - "Patient’s cognition is severely impaired compared to same age peers; however, cognitive skills defects do not preclude patient from using an SGD successfully."
Sensory Status

SECTION D

VISION

At ACH, OTs assess vision due to required multi-disciplinary AAC evaluations
- Visual perceptual and visual motor skills are observed during age-appropriate tasks including: handwriting, fine motor activities and hand-eye coordination.
- Eye contact, tracking and visual fields are functionally observed and documented accordingly.
- May reference a recent vision report
- Information from an ophthalmologist/optometrist is more essential when recommending an eye gaze system.

VISION cont.

- Adjustments for visual deficits may include:
  - Placement of device to accommodate for visual neglect
  - Low light environment for improved visual attention/reduction of environmental stimuli
  - Change of contrast or background of device/icons
  - Use of auditory prompt due to low vision and poor ability to visually attend
  - Cortical Visual Impairment
**HEARING**

- Reference recent hearing screenings/evaluations
- SLP may need to do a hearing screening if one hasn’t been completed
- May need to comment that the patient responded to speech and environmental sounds at conversational levels
  - Can get this information during the SGD evaluation and/or medical history and school record review

**Speech, Language, and Communication Status**

**SECTION E**

We are providing examples of statements that could be made in each of the following sections.

**SPEECH PRODUCTION / ORAL MOTOR SKILLS**

- Oral motor and speech screening/evaluation
- Need to state level of severity and diagnosis
  - Name it! Say “patient’s speech is severely dysarthric.”
- Need to discuss amount of verbal speech that is intelligible to a familiar and non-familiar listener in known and unknown context
SPEECH PRODUCTION / ORAL MOTOR SKILLS CONT.

- Make a prognostic statement
  - Despite 3 years of speech-language therapy prognosis for continued improvement of speech production skills is poor based on patient’s age and diagnosis.
  - Patient’s speech is limited to simple vowel structures.
  - Patient is able to imitate CV, VCV combinations, but is not able to produce function words or word approximations spontaneously.
  - Single words are intelligible to a familiar listener when context is known approximately 50% of the time. As phrase and sentence length increase, intelligibility diminishes greatly. Due to the nature of apraxia, patient is not able to correct his speech production to aid in comprehension.
  - Patient is not able to communicate at a level commensurate with his language skills using spoken words.

RECEPTIVE LANGUAGE

- Can be difficult to accurately assess in someone who is non-verbal; especially if they have motor difficulties
- Comprehension of directions, questions, vocabulary, and concept development.
- Gather information from
  - Familiar people - family, school staff, other therapists
- Remember this powerful statement: Patient’s receptive language functioning does not preclude him/her from using an SGD successfully.

RECEPTIVE LANGUAGE CONT.

- Demonstrates comprehension of basic conversation through facial expressions and appropriate shaking of her head “no.”
- Consistently responds to basic yes/no questions regarding her wants/needs through facial expressions (e.g. smiles for affirmative responses, frowns for negative responses).
- Frowns or shakes her head to refuse an undesired item or activity upon presentation.
- Mom reports that patient expresses her need for “help” by establishing eye contact with her mother.
- Smiles in anticipation of desired activities.
- She communicates hunger via crying behaviors and will smack her lips together when she is thirsty.
- Communication of toileting and sleeping needs are also communicated via crying behaviors.
RECEPTIVE LANGUAGE cont.

- Demonstrated age appropriate sustained attention to motivating play activities
  - How they interact with people
    - Respond to a joke
    - Face brightening with familiar people, situations, objects
    - Appropriate non-verbal social responses
- Response to name
  - Follows simple one-step directions and an emerging ability to respond to multi-step directions given sign cues
  - Uses a picture schedule successfully to assist with following daily classroom routines
- She also demonstrates inconsistent comprehension and responses to simple yes/no questions regarding her wants and needs

EXPRESSIVE LANGUAGE

- Describe mode of current communication
- Comment on effectiveness of current mode of communication
- Elaborate on any communication limitations
- Current communication effectiveness across environments and communication partners
- Comment on any functional spoken word, sign, and/or picture vocabulary
- Important to compare the discrepancy between receptive and expressive language
- Patient’s current expressive language abilities do not enable him/her to communicate at a level that is commensurate with his/her receptive language ability

EXPRESSIVE LANGUAGE cont.

- Currently relies on use of gestures, reaching, eye gaze and facial expressions to communicate.
- Use a few simple signs given cues/models to express simple wants and needs.
- Primarily attempts to communicate her wants and needs spontaneously through body movements/gestures.
- Unable to communicate personal identification for safety, express wants/needs, describe emotional state or describe physical symptoms.
**EXPRESSIVE LANGUAGE cont.**
- Patient only communicates through rote scripted phrases.
- Patient only uses routine carrier phrases in spontaneous, intelligible communication
- Patient only communicates when cued and/or prompted
- Comment on behaviors that appear to be communicative in nature

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**DESCRIPTION OF COMMUNICATION BEHAVIORS AND INTERACTION SKILLS**
- All behavior is communication!
- Address the patient’s behavior in the report
- Describe how the behavior may be linked to communication
- These kids can look like “master manipulators” of their environment

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**DESCRIPTION OF COMMUNICATION BEHAVIORS AND INTERACTION SKILLS cont.**
- Vocalizes for attention and requests
- Self injurious behavior
- Frustration when not understood
- Abandons attempts at communication
- Avoids engagement
CURRENT SGD USE
- The 5-year “rule”
  - Not really a “rule”
- Must discuss why a new SGD is needed if the patient currently has an SGD
- Include age of current SGD
- Comment on how current SGD functions
- Include number of times SGD has been serviced

EMOTIONAL STATUS AS IT RELATES TO COMMUNICATION
- Very similar to behaviors as these are closely linked
- You need to ensure that the SGD will fill a need that is not currently being met

EMOTIONAL STATUS AS IT RELATES TO COMMUNICATION cont.
- Patient’s lack of effective communication is frustrating to him.
- It results in negative behaviors that make it difficult for him to relate to his family and peers.
- He makes many attempts to communicate but is only 10% intelligible to unfamiliar listeners in known context.
- He quickly becomes angry when he cannot make basic wants and needs known
Patient is reliant on others to interpret his communication attempts. He does not have a way to indicate when a non-preferred choice is given to him. When this happens, patient occasionally will stop participating in the activity and any conversational attempts he is making. Patient is not able to communicate pain reliably with his current communication methods. He is reliant on communication partners and caregivers to interpret whether he is in pain.

Patient is not able to communicate pain reliably with his current communication methods. He is reliant on communication partners and caregivers to interpret whether he is in pain.

Patient is easily frustrated when he is not able to have his communication needs met. He will throw toys, vocalize loudly, or walk away. He will also occasionally squeeze someone’s arm when he is frustrated or excited. He is reliant upon a communication partner to interpret these communication attempts. He also is not able to communicate when he is not feeling well, tired, hungry, or thirsty. When he is not able to meet these needs he becomes frustrated and negative behaviors emerge.

Patient is a social boy who does not have a way to communicate with effective and age appropriate means. Patient will push items away. He will cry to indicate frustration but when communication partners are not able to interpret why he is crying he can become more frustrated. Patient is not able to communicate basic wants/needs, physical state, information about events, or sickness without relying on a caregiver to interpret his facial expressions and limited gestures. If they interpreted incorrectly, patient’s basic needs are not met.
EMOTIONAL STATUS AS IT RELATES TO COMMUNICATION cont.

- Patient is very social and motivated to communicate.
- He enjoys social interactions.
- He will attempt to communicate via his current limited methods.
- When he is not able to make his wants and needs known he will continue to vocalize louder until a communication partner interacts with him.

STATE WHY CURRENT COMMUNICATION BEHAVIORS PREVENT THE CONSUMER FROM COMMUNICATING BASIC NEEDS

- Basic needs are*:
  - Wants/desires – don’t stop here
  - Hunger/thirst
  - Pain
  - Emotional state
  - Identifying information
  - Safety
  - Toileting
  - Basic needs are not*:
    - Identifying colors, animals, months, days, etc.
    - Greetings/closures

*Based on experience with Medicaid reviewers

IDENTIFY PRIMARY COMMUNICATION PARTNERS

- May seem obvious - but state them
  - Immediate family
  - Extended family
  - Medical personnel
  - Outpatient therapy staff
  - School staff/work staff
  - Peers
  - Other members of the community
**Message Needs (Pragmatics)**

- Patient needs to communicate using voice output with multiple communication partners in multiple environments, both novel and familiar.
- Patient needs to convey his wants/needs, emotional and physical state, personal information related to his safety and to communicate with peers, family, caregivers, and people in the community in a manner that is easily and clearly understood by familiar and unfamiliar communication partners without the interference of interpretation errors on behalf of his communication partners.
- Patient needs to be able to verbalize his feelings, describe physical symptoms and answer questions regarding his physical state when asked by family members, physicians and/or nurses.

**Message Needs (Pragmatics) Cont.**

- Patient also needs to be able to give his personal identifying information in the event he was ever separated from his family.
- Patient also needs a means of reliably expressing his novel thoughts, comments, wants/needs, desire to continue or terminate a current activity, feelings, and medical information.
- Patient also needs to acquire a means of appropriately securing attention from others within the environment.

**Vocabulary (Semantics)**

- Patient needs a flexible vocabulary system that will allow him to communicate single words that he can then combine to make novel utterances as well as pre-programmed phrases and sentences.
- He needs access to a large number of core vocabulary words to state wants/needs, make comments, initiate communication appropriately, state feelings, his physical state, and request continuation and termination of an activity.
- SGD use will also allow patient to have a functional and appropriate means of acquiring attention from others. He needs to be able to access this vocabulary quickly and efficiently in both familiar and novel environments.
- Access to age-appropriate core vocabulary via a SGD will allow patient to generate novel/autonomous expressions regarding wants/needs/thoughts and decrease the risk of communication breakdown that can occur with the misinterpretation of his facial expressions, eye contact, and other vocalizations.
- Access to core vocabulary via SGD will also allow patient to appropriately gain the attention of others in order to initiate communication and remove his reliance on others to visually attend to him and notice his attempts to communicate via his limited methods.
**VOCABULARY (SEMANTICS) CONT.**

- Patient needs a flexible vocabulary system that will allow him to communicate single words that he can then combine to make novel utterances as well as pre-programmed phrases and sentences.
- He needs access to a large number of vocabulary words to state wants/needs, make comments, initiate communication appropriately, state feelings, his physical state, and request continuation and termination of an activity.
- SGD use will also allow patient to have a functional and appropriate means of acquiring attention from others. He needs to be able to access this vocabulary quickly and efficiently in both familiar and novel environments.
- Patient needs an SGD that will enable him to select one key to state an entire sentence or thought as well as individual words or carrier phrases (e.g. 'I want') to create novel utterances.

**COMMUNICATION ENVIRONMENTS**

- Home
- Extended family members' homes
- Peers' homes
- School/work
- Medical appointments
- Outpatient therapy appointments

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**SGD Assessment**

**SECTION F**
SECTION F

- Everything you’ve discussed in sections B-E comes back in Section F.
- Now you draw a connection to the specifics you need in a SGD

![Images of SGD devices]

REPRESENTATIONAL SYSTEM

- Symbolic representation
  - Photographs
  - Symbol Stix
  - PCS Symbols
  - Unity Symbols
  - Alphabet
  - Visual scenes
- Describe what symbol system(s) patient can use to facilitate successful communication

REPRESENTATIONAL SYSTEMS

CONT.

- Patient was able to use any symbol system presented
- Due to visual deficits the symbols used are not as important as having a system that will provide auditory feedback
- Patient can use any symbol set as long as the symbol size can be changed to accommodate his/her visual acuity
- Patient responded best when SGDs used the Symbol Stix picture set
- Patient can use any symbol set; however, it is important the SGD also allow for photographs
**Vocabulary Encoding**
- How the patient will learn and use the vocabulary to communicate
- LAMP
- Icon prediction
- Hide/show keys
- Word prediction
- Next word prediction
- Phrase prediction
- Visual scenes

**Vocabulary Encoding cont.**
- Patient recognized vocabulary encoded in various symbol systems doing best when using an SGD that used Unity symbols and the LAMP therapy approach and techniques. Patient needs a system that will accommodate 1/2 - 1” square keys now as he continues to refine his pointing access, but will also grow with him to have a larger vocabulary as his motoric abilities and cognitive abilities continue to grow.
- Patient can use any picture set as long as the SGD allows for variation in the size of the picture up to 2”x2”. He is able to recognize some letters. Patient has successfully participated using various vocabulary symbols on an SGD with auditory scanning.
- During the evaluation patient responded best with the SymbolStix picture set and the language organization system called ChatPower. He was able to quickly sequence pages to find needed words or phrases and he was able to state his entire message by touching the message bar, navigate back to the home page and clear his screen to begin his next message without prompts.

**Vocabulary Expandability and Message Generation**
- Need to explain how the patient will communicate his/her message NOW and in the future
- Talk about the specific vocabulary organization and why it works
- Similar to the pragmatics and semantics
- Remember, everything you’ve stated in sections B through E comes back into play in Section F
VOCABULARY EXPANDABILITY AND 
MESSAGE GENERATION cont.

- Patient needs an SGD that will accommodate his current needs and grow with him as his language expands.
- He needs a device that will allow him to have access to single words and phrases to combine to make novel messages.
- He also needs a system that will give him quick access to pre-programmed messages.
- Patient needs a system that will accommodate growth in vocabulary based on the number of pictures on a screen.
- During the evaluation, patient communicated most effectively and with longer utterances using ChatPower. He quickly learned to sequence 2-4 keys to request a desired activity. He used the ChatPower 42 vocabulary with all keys available. He may be able to expand his vocabulary to the ChatPower 48 or 80 program in the future as his vocabulary needs grow. This would allow patient to communicate messages more efficiently as each message would require fewer key sequences.

VOCABULARY EXPANDABILITY AND 
MESSAGE GENERATION cont.

- Patient needs an AAC system with the ability to grow with him as his needs change.
- He needs a system that will accommodate full sentences as well as a word-based vocabulary that will allow him to put words and carrier phrases together in novel ways as his abilities change.
- Patient requires an SGD with a vocabulary system that will allow for a combination of pre-programmed sentences and phrases as well as single words.
- He needs an SGD system that will allow him to change between pages of stored vocabulary to create customized messages.
- He requires an SGD system that will allow him to access these messages/words via customized 2-switch scanning.

RATE ENHANCEMENT TECHNIQUES

- Patient needs a system that will allow him to communicate medical and safety information quickly via full sentences and easy access.
- He also needs the ability to have single words and carrier phrases available so that as his abilities grow he can combine those words into novel utterances.
- Patient needs the ability to use head pointing technology to access a communication device. He does not have the physical ability to touch keys with his hand. Use of a switch is not appropriate due to his tone and inability activity a set target with consistency. Patient needs head pointing technology that allows for changes in speed the cursor travels across the screen, how long he needs to rest on a location before it will activate, and also allow averaging of time over the selected key. Initially he needed the dwell time set to 4.0 seconds. Over several months of trials with head pointing he is able to activate keys with a dwell time of .9 seconds.
Vocabulary Builder (a type of icon prediction using the LAMP approach) was used successfully by Patient today when a touchguide was on the device. He was able to quickly learn and remember icon sequences for the following words: want, go, more, stop, sleep. He used all of these words independently, spontaneously, and appropriately after they were taught. He also used feeling words to get a reaction from the clinician, requested foods, identified colors, and navigated to desired pages with minimal prompts.

Patient needs a device that will accommodate his current needs as well as his expanding communication needs as his vocabulary grows. Despite adequate access with 60 location keys, a 60 location touchguide and vocabulary builder exposing only 15 keys, patient demonstrated some mis-hits due to another part of his hand resting on the screen and preventing him from activating the desired key on the first attempt.

Patient demonstrated persistence and the ability to correct mistakes. To increase initial success a 15 location touchguide was trialed. This touchguide covers the screen with plexiglass and prevented mis-hits as the only access to the screen was a 3/4” hole. This is appropriate for Wesley to begin communicating more effectively while his finger isolation accuracy continues to improve with ongoing occupational therapy.

Patient needs an SGD that will accommodate logical sentence construction to increase speed of communication. For example, when patient selects the “want” key, a screen that would change to logical options to follow the word “want” would allow him to communicate he need more effectively.

He also needs consistent key placement for commonly used vocabulary and navigation keys to improve the speed at which he can compose and speak a message.

Patient also needs a device that will allow for flexible programming - adding page links where links don’t currently exist and removing pages links that are not needed for him.

Patient needs a system that will allow him to access carrier phrases quickly (I want, I need, I like) and have logical page progression to the next type of word needed in the sentence.
ACCESS TECHNIQUES AND STRATEGIES

- Key size
- Keyguard/touchguide
- Acceptance time
- Release time
- Head Pointing
- Eye Gaze
- Scanning
- Auditory scanning

OVERLAY OR KEYBOARD ORGANIZATION AND FEATURES

- Key size
- Number of keys per screen
- Key spacing
- Scanning options
- Ability to link pages
- Keyguard/touchguard
  - We typically mention it every place we discuss access

DEVICE OUTPUT MODES

- Need for voice output
- Address need for text to speech
- Need for auditory prompts
- Visual display
- Word prediction
- Icon prediction
- Phrase prediction
- Text display
- Speak display
PORTABILITY CONCERNS
- Address need for patient to be able to transport it to various communication environments
  - Wheelchair mount
  - Mount that will allow swing-away access for ease of caregiver assisted transfer
  - Ambulatory status - can the patient carry it?
  - Address size and weight of SGD

COMPARISON OF SGD SPECIFICATIONS
- Compare 3 similar devices
  - If you are using an iPad as a comparison, we recommend you compare 3 dedicated SGDs as well as the iPad
  - State why the selected SGD meets the consumer’s needs
    - Feature matching!
    - Summarize why the chosen SGD has all the features that your patient needs
  - State why other 2 SGDs do not meet the consumer’s needs

DOCUMENT WHY A LOWER TECH SGD IS INADEQUATE
- Lack of appropriate vocabulary
- Not enough capability for language growth
- Patient has a higher interest in high-tech SGD due to voice output
- Lower tech SGDs and/or communication boards have been trialed and documentation shows the patient isn’t interested
- Lower tech SGDs and/or communication boards have been trialed and documentation shows the patient participates more readily with a VOCA
DOCUMENT WHY A LOWER TECH SGD IS INADEQUATE cont.

- Spontaneous communication occurred with a higher tech SGD and patient was prompt dependent on lower tech SGD
- Need for scanning options
- Patient is reliant upon communication partner and not able to be independent

TREATMENT PLAN AND FOLLOW UP

SECTION G

SHORT TERM AND LONG TERM GOALS

- Patient will independently turn the SGD on/off across daily environments in 80% of opportunities with cues and prompts as needed. (1 month goal).
- Patient will state his name on the SGD to at least 3 communication partners. (1 month goal).
- Patient will learn at least 10 new core vocabulary words while expressing comments and requests during structured treatment tasks, using consistent motor patterns learned through repetition/practice, with 80% consistency (1 month goal).
- Patient will utilize his SGD to initiate, respond to, and expand social greetings and closures in 3 out of 4 opportunities, using consistent motor patterns learned through practice. (2 month goal)
- Patient will utilize his SGD to make requests and respond to simple questions pertaining to specified functional and interactive activities in 3 out of 4 opportunities. (3 month goal)
Patient will use his SGD to state his name, address, and phone number in 4/5 opportunities. (1 month goal)

Patient will state how he feels at the beginning of each therapy session. (1 month goal)

Patient will use his SGD appropriately to gain attention of others and initiate communication in 4/5 opportunities. (2 month goal)

Patient will use the SGD to make a variety of requests (such as activity initiation, continuation, termination) during structured treatment tasks, familiar routines, and interactive activities with 85% accuracy. (3 month goal)

Patient will respond to simple “wh” questions regarding current activities, personal identification information, and wants/needs using acquired core vocabulary, in 4/5 opportunities. (6 month goal)

Patient will state his name, address, and phone number when asked in 3 out of 4 opportunities. (1 month goal)

Patient will independently request objects/activities and activity termination on 3 out of 4 opportunities. (1 month goal)

Patient will learn 50 new vocabulary words generating requests and comments, using them in at least 3 different environments with 75% accuracy. (3 month goal)

Patient will play a game using functional speech with the SGD with a variety of individuals on 3 out of 4 opportunities. (3 month goal)

Patient will generate simple requests, comments, or feelings pertaining to a specific topic on 3 out of 4 opportunities. (6 month goal)

Patient will state his name, address, and phone number when asked in 3 out of 4 opportunities. (1 month goal)

Patient will communicate his physical state to 2 non-therapy individuals in 3 out of 4 opportunities. (1 month goal)

Patient will independently request objects/activities, with 90% accuracy given faded multimodality cues. (3 month goal)

Patient will hold a functional conversation with non-therapy individual for 2-3 interchanges using consistent motor patterns learned through repetition/practice. (3 month goal)

Patient will play a game using functional speech with the SGD with a variety of individuals on 3 out of 4 opportunities. (6 month goal)

Patient will generate simple questions, requests, comments, feelings pertaining to a specific topic on 3 out of 4 opportunities. (6 month goal)
HOW TRAINING WILL BE ACCOMPLISHED

- Evaluating clinician will be available for therapy and basic training once the SGD arrives
- Family and school staff will be provided with information on how to set up training with the SGD manufacturer
- Online training resources
- Online training videos
- Phone support provided by SGD manufacturer
- If the family doesn’t call us, we may not know the SGD was successfully funded

NECESSARY MODIFICATIONS TO THE SGD

- Keyguard/Touchguide
- Wheelchair mount
- Eye gaze module
- Head tracking module
- Switches with mounts if necessary
- Pillow speaker

Prescription for SGD

SECTION H
**PRESCRIPTION FOR SGD**

- List name of SGD, all required accessories, and vendor
- Evaluator’s names, license number, evaluation date, signature
  - Date of evaluation AND
  - Date evaluation was completed and signed
- Physician’s name, signature, NPI number, Medicaid provider number
- Add date of last in person medical appointment
- Add date of last in person speech-language therapy appointment

**OTHER REQUIRED INFORMATION NEEDED**

- SLP Resume
- Assignment of Benefits/Client Information Form
- Medicaid requirements should be consistent; however, nothing is consistent except change
- Copies of front and back of all insurance cards
- Remember - 90 day timeline
  - You need to give the device manufacturer time to process the paperwork
  - If you do ongoing therapy to determine SGD decision, your last treatment date can be used as the evaluation date to start the 90-day timeline.

**WHAT IF I GET DENIED?**

- You will receive notice of why you were denied
- File an appeal
- If denied again - contact Disability Rights of Ohio
  - Kristen Henry
  - khenry@disabilityrightsohio.org
  - (614) 466-7264, x112
- Lewis Golinker (lgolinker@aol.com), attorney
REASONS FOR DENIAL

- Missing information
- Not filling out each section completely - you will likely be repeating yourself. Repeat yourself. Say it again. And again.
- Missing signatures
- Insurance cards not provided
- Did not compare 3 SGDs
- Did not explain why you need the features of a particular SGD and thoroughly stated the requested SGD had those features
- Medical necessity not documented

REASONS FOR DENIAL CONT.

- Various rotating reasons
  - Multiple modes of access not needed
  - You didn’t chose an SGD from a preferred vendor
  - You didn’t request a rental first
  - You didn’t provide a tooth x-ray
  - Evaluation not signed
  - not medically necessary because client "cannot speak well...does not understand well...has problems with participating and cooperating."
  - Dr. didn’t write D.O. or M.D. after their name

HOW CAN WE HELP YOU?

- Akron Children’s Hospital Services
  - Comprehensive AAC evaluations
  - Sometimes we recommend additional diagnostic treatment sessions to obtain all needed evaluation information
  - Therapeutic services post SGD delivery
  - Multidisciplinary treatment sessions
- We welcome you at our evaluations and treatment sessions
- Stated in our intake packet
- Caregivers verbally informed when appointment is scheduled
- We request families bring the latest IEP and ETR to the evaluation
- We attempt to contact you prior to submitting any paperwork if parents sign a release
DISCUSSION

CONTACT US
- Speech-Language Pathologists
  - Amy Miller Sonntag
    - asonntag@chmca.org
  - Christine Hurtubise
    - churtubise@chmca.org
  - Stacey Fernstrum
    - sfernstrum@chmca.org
- Occupational Therapists
  - Lindsay Ripple
    - lripple@chmca.org
  - Mary Beth Doerr
    - mdoerr@chmca.org
- 330-543-8264
- Request an intake packet

REFERENCES
- Van Tatenhove (2014) has developed several forms for gathering evaluation data that are available for download on her website, www.vantatenhove.com under Resources>Papers>Assessment
  - http://praacticalaac.org/tag/assessment/
- Pros and Cons of AAC Apps - taken from the ATIA Newsletter - June 2012, L. Rush & C. Helling
REFERENCES CONT.

- Using a Clinical Approach To Answer “What Communication Apps Should We Use?” Gosnell, Costello, & Shane: http://www.childrenshospital.org/~/media/Centers%20and%20Services/Programs/A_E/Audiology/gosnellcostelloshanePerspectivesoct2011.ashx

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