AAC in Pediatric ICU and Acute Care Settings: A Requirement for Best Patient Care

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Welcome to Boston!

Disclosures

• Rachel Santiago is a full time salaried employee at Boston Children’s Hospital
• John Costello is a full time salaried employee at Boston Children’s Hospital
Augmentative Communication/Autism Language Programs

Outpatient Augmentative Communication Program

Outpatient ALS Augmentative Communication Program

Outpatient Clinic Consultation
  - Tracheostomy Clinic
  - Cerebral Palsy Clinic

Inpatient Augmentative Communication Program

  - Cardiac
  - Medical
  - Medical/Surgical
  - Neonatal
  - Acute Care Units

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A little about us…

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AGENDA

• Define communication vulnerability & research discussion
• Common barriers to successful AAC in ICU/acute care
• Patient profiles
• Phases of communication need
• Children vs. Adults: Child and Pain
• Trends and patterns of care
• Domains of assessment
• Bedside intervention: Tools and strategies

What is communication vulnerability?

• Vision so poor that the patient is unable to read/see, even with corrective lenses
• Inability to understand loud speech, even with hearing aids
• Inability to produce speech that is intelligible to the team
• Altered mental status
• Inability to speak or understand the language of the medical team
Who is communication vulnerable?

Individuals with:
1. Pre-existing hearing, speech, cognitive disabilities
2. Recent communication difficulties due to disease/illness/accident/event
3. Recent communication difficulties due to medical treatment (e.g., intubation, sedation)
4. Linguistic differences
5. Limited health literacy
6. Limited ability to read/write
7. Cultural differences/mismatch

Why Do We Care?

- Joint Commission Standards:
  - Identify needs
  - Address needs
- Patient-satisfaction scores
- Research shows poor communication affects patient outcomes
- Minimize adverse events resulting from poor patient-provider communication

Join Commission on Communication Vulnerability

Effective communication is:

“The successful joint negotiation of meaning wherein patients and health providers exchange information, enabling patients to participate actively in their care from admission through discharge and ensure that the responsibilities of both patient and providers are understood. To truly be effective, communication requires a two-way process (receptive and expressive) in which messages are negotiated until the information is correctly understood by both parties.”
Research

- Patients with access to communication supports:
  - Receive less sedation
  - Transition more quickly
  - Have increased satisfaction with health care
  - Feel more in control
- Communication vulnerable patients are at increased risk for:
  - Serious medical events (Cohen et al., 2005)
  - Sentinel events (The Joint Commission, 2007)
  - Poor medication compliance/adherence (Andrulis et al., 2002; Flores et al., 2003)
- Patients meeting criteria for AAC/AT needs not always receiving services
  - Greatest need in ICU

Adverse Events & Communication

Who does communication vulnerability impact?

Patient:
- Loss of control
- Limited participation in own care
- Low mood, anxiety, depression, worry, etc.

Family:
- Fear of family member’s inability to gain attention, seek help
- Fear of family member’s inability to express wants/needs
- Distress over temporary loss of family member’s personality

Staff:
- Delivery of quality care
- Don’t have time to “figure it out”
- Education, discharge, and follow-through
- Limited communication attempts beyond the essential
- Supporting patient from emotional, psychological, and developmental perspective (especially long-term patients)

References:
- (This text does not contain a list of references as it is a continuous narrative.)
Barriers
Why is bedside AAC not a formal, required, or standard service at all hospitals?

Barriers to communicative success according to The Participation Model
(Blukelman and Mirenda 1988)

- Access Barriers
  - Physical/motor
  - Cognitive
  - Literacy
  - Visual/auditory

- Opportunity Barriers
  - Policy
  - Practice
  - Knowledge
  - Skill
  - Attitude

Common Barriers in Acute Care

- Practice Barriers
  - Focus on life sustaining/saving measures
  - Clinical priorities: medical > communication
  - Institutional or professional complacency
  - Doctor/RN knows best
  - Less interference or interruptions by patient = easier bedside care
  - Lack of buy-in for implementation

- Attitudinal Barriers
  - SLP education on bedside AAC
  - Frontline staff education on bedside AAC
  - Accessibility of RN resources, trainings, educational materials
  - Lack of staff with clinical expertise
  - Time

- Knowledge Barriers
  - Lack of tangible materials

- Resource Barriers
  - Storage space
  - Clean equipment policies
  - Equipment handling, pick up, bedside safety, bedside interference
What is commonly done to address communication vulnerability?

- Lip reading (by patient, by staff)
- Reliance on family/caregiver to interpret
- Gestures
- Pen/paper
- Alphabet board
- Hand drawn pictures
- Yes/no questions
- Non-English speakers
  - Ad hoc interpreters
  - Interpretation applications and software

Problem...

- Family/caregiver burden
- Guessing (and guessing wrong)
  - Potential for miscommunication is high
- Ad hoc interpreters: (Napoles et al., 2015)
  - Not bound by HIPAA
  - Higher risk of error
  - Filled information
- Reduced access to the nurse-call system
  - Alternative methods may be available but not appropriate or reliable
- Weakness or motor impairment
  - Reduced ability to access ‘standard’ communication strategies
- Yes/No questions:
  - Limits patients’ participation in and direction of care
  - Often not provided with an option to indicate “I don’t know,” “Maybe,” “I need more information.”
  - Speaking beyond the immediate needs of patient is low

Where to begin?

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Patient-Provider Communication at the Patient-Level

(Patak et al., 2009)

- Evaluate the Effectiveness of the Intervention
- Monitor for Changes in the Effectiveness of the Intervention
- Select a Communication Intervention
- Refer to Communication Specialist
- Assess the Patient’s Communication Need

Figure 1. Diagram of formalized process to manage patient-provider communication at the patient-level.

Patient Profiles:

- **Patient Population**
  - Communication vulnerable at baseline
  - Acute onset of communication vulnerability
  - At risk for communication vulnerability

Patient Profiles

- **Communication Vulnerable at Baseline**
  - Baseline speech, language, and/or communication deficits
  - Patients who use AAC or AT outside the hospital environment
  - Intellectual disability
  - Tracheostomy or other form of mechanical ventilation
  - Language difference / Non-English speakers
  - Baseline motor skills that impact use and access to nurse call system
Role of the SLP

- Communication Vulnerable at Baseline
  - Assist with adding medical related vocabulary to patients current communication system
  - Design and construct new communication supports
  - Explore optimal access options
  - Set up adapted call button
  - Identify patients who are appropriate for referral to our outpatient department
  - Disseminate information about how the patient communicates

Patient Profiles

- Acute onset of Communication Vulnerability
  - Intubation or other form of mechanical ventilation
  - New tracheostomy
  - Medical procedure, treatment, or device that impedes a patient’s ability to effectively speak
  - Brain injury, aphasia
  - Aphonia, dysphonia or new onset vocal chord paresis
  - Dysarthria, unintelligible speech
  - Altered mental status; sedation
  - Psychiatric disorder
  - Decreased motor skills needed to effective use and access the nurse call system

Role of the SLP

- Acute onset of Communication Vulnerability
  - Evaluate current communication skills/bedside
  - Design and construct supports to meet needs (refer to phases)
  - Mount, train partners
  - Periodic reevaluation and modification or enhancement of communication supports as needed
  - Explore optimal access options
  - Set up adapted call button
  - Identify patients who are appropriate for referral to our outpatient department
  - Disseminate information regarding how the patient communicates
  - Provide education regarding communication supports and strategies to the family and medical team
Communication Vulnerability: Who does it impact?

- At risk for communication Vulnerability
  - Risk for intubation or other form of mechanical ventilation
  - Pre-tracheostomy
  - Anticipated medical procedures or treatments
  - Degenerative condition
  - Positional restrictions

Role of the SLP

- At risk for communication Vulnerability
  - BCH Model of Preoperative AAC
    - Allows patient participation in selection of tools and messages during less acute and stressful situations
    - Allows for time to familiarize with communication supports, leading to more functional use
    - Sense of control in own care
    - Preservation of personality
  - Message Bank when possible
  - School based/community based instruction and pre-planning
    - Vocabulary selection
    - Message banking
    - Creating materials

Phases of Communication Need

- Phase 1: Emerging from Sedation
  - Gaining attention
    - Nurse-call
    - Bedside
  - Answering simple questions
    - YES – NO – I DON’T KNOW
Phases of Communication Need

• Phase 1: Emerging from Sedation

- Eye blinks (1 for "yes" | 2 for "no" | raise eyebrows for "I don’t know")

• Phase 2: Increased wakefulness
  - Everything from phase 1 and...
  - More relevant vocabulary
  - Picture boards
  - Alphabet boards
  - Multi-message voice-output communication aids
  - Voice amplification
Phases of Communication Need

- **Phase 3: Broad and diverse communication**
  - Everything from phase 1 and 2 and...
  - Generative, robust communication
  - Encoding strategies
  - Internet access and mobile communication
  - Phone or video chat access
  - Environmental control (beyond nurse-call system)
    - Tablet
    - Computer
    - Leisure activities

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Feature-Matched Assessment:

Systematic process by which a person’s strengths, abilities, and needs are matched to available tools and strategies  

(Shane and Costello, 1994)

Think about **baseline** and **anticipated** strengths, abilities, and needs
Assessment Domains

- At each phase of communication need
- Monitor for changes by reassessing across various domains
- Monitor for increased communicative functions

Domains of Assessment:

1. Cognition
   - Alertness/awareness
   - Sedation
   - Baseline status

2. Speech and Language Skills
   - Use of speech, symbols, text, and communication devices

3. Sensory
   - Vision
   - Hearing
   - Anticipated swelling/incision sites

4. Respiratory Status
5. Gestures
6. Sign Language
7. Literacy
8. Vocabulary selection
9. Medical Status
10. Motor Skills
11. Team members & Communication Partners
12. Patient motivation & buy-in

Domains of Assessment: Bedside Considerations
Communication Vulnerability Can Impact All Patients

**BUT** our treatment is not the same for all patients

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Children are NOT small adults

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Basic Tenets (A-B-C-D-E-F) to Approaching the Child’s Bedside

- Assure
- Bring
- Control
- Direct
- Emotion and Personality
- Fun

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A-B-C-D-E-F

• **Assure** – In a hospital setting, a child is constantly on guard for the clinician who will invade their personal space and introduce an unwanted procedure

• **Bring materials and tools** with you to the first visit. For many children, ‘seeing is understanding’

• **Control**. Children need to feel a sense of control in the hospital.

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A-B-C-D-E-F

• **Direct attention to the child**. While your behavior will ultimately be directed by the child’s behavior, your attention should always be to the child first

• **Emotion and personality** - hospitalization is a very emotional experience. Loneliness, isolation, separation, anxiety, sorrow, etc. The reflection of personality is essential and is key to successful development and implementation of communication strategies.

• **Fun**. Children understand their world and cope through play. Despite potentially life threatening medical circumstances, you must be ready to focus on fun

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**Intensive Care Unit Experience: through the Eyes of a Child**
Children’s reaction to pain
Toddlers and preschoolers (2-5 yr):

- Experience pain but can not always identify the source or location
- “Magical thinking” may lead child to believe their pain is punishment for real or imagined misbehavior…they believe the pain is someone’s fault.

Children’s reaction to pain
Communication needs:
- Children may view procedures as punishment for bad behavior
  - Important to:
    - Express Fear
    - Express Anxiety
    - Solicit parents and loved ones for comfort
    - Seek explanation and protection

Children’s reaction to pain
School age (6 - 12 years)

- Can tell the location of pain
- Understand illness is caused by germs
- Believe staff’s response depends on how well they express pain
  - Some children may withhold expression of pain to avoid RN interventions

Brewerton (1982)
Children’s reaction to pain

School age (6 - 12 years)

• Communication needs:
  – Children need to be able to effectively communicate matters of comfort and pain
  – Where?
  – How much?
  – What kind? (Nausea vs. aches vs. itchy)
  – What do I need now?

Children’s reaction to pain

Adolescents (13 and older)

• Begin to understand:
  • There are multiple causes of illness, that the body may respond to many different factors and illness is caused by physical weakness or susceptibility.
  • Different interventions may be needed to address illness and that staff act with necessary intent and empathy.

• Communication need:
  – At this more mature stage, a child may eager to ask questions, interact with staff and understand the intent of intervention.
    • Will I be okay?
    • What is the plan?
    • What is that medicine for?
    • Will this hurt or make me nauseous?
    • How long will I need to take this medication?
Trends and Patterns of Care
Across pediatric caseload

Objective
To analyze trends in AAC service delivery in patients referred for augmentative and alternative communication consultation in the pediatric intensive care and acute care settings.

Methods
• IRB approved retrospective review
• Reviewed EMRs and billing data of patients followed by a single speech-language pathologist in the Inpatient Augmentative Communication Program between December 2015 – May 2016 (n=168)
• Data was entered into the RedCap data collection software and analyzed

*n=168 does not represent actual total volume
Methods

- Information gathered and analyzed included:
  - Patient variables (age, baseline diagnosis, baseline communication status)
  - Admission variables (i.e. date, reason for admission, admitting department, etc.)
  - Assessment recommendations
  - Intervention recommendations

Results

- 168 unique patients were seen during the 6-month time frame for assessment
- 540 patient encounters
- 112 patients (67%) were seen for follow-up intervention encounters
- Mean number of follow-up encounters = 3.84 sessions

Patient ages ranged from 1 month – 32 years

Baseline Speech, Language, and/or Communication Disorder

- Yes: 35%
- No: 65%
Results
Reason for Patient Admission
- Respiratory
- Neurological
- GI/Nutrition
- Surgical, orthopedic
- Cardiac
- Surgical, other
- Neurooncological
- Oncological
- Solid Organ Transplant
- Behavioral Mgmt./Boarding
- Bone Marrow Transplant
- Other

Most referrals generated from:
1. Medical-surgical ICU
2. Neurology/neurooncology
3. Medical ICU
4. Complex Care Service

Results
Assessment and Intervention Strategies

Access Tools and Strategies
- Sip/Puff switch
- Mounting equipment
- Switch scanning
- Switch access
- Partner-assisted scanning
- Eye tracking technology
- Eye gaze
- Direct selection

43% of patients required supported access during intervention.
Discussion

• Demographics:
  – Over half of referred patients had a noted baseline communication impairment
  – Broad age range, with average of 11.82 years
  – High % of patients admitted with respiratory complications

• Assessment Considerations:
  – Low-tech picture-based communication boards most recommended along w/ unaided strategies
  – ~Half of patients required supported access strategies during first encounters

• Intervention Considerations:
  – High tech strategies typically recommended during follow up encounters, if recommended at all
  – >1/2 patients w/ follow up visits required new or modified AAC strategies

Limitations

• Retrospective review
• Single clinician caseload
• Referral bias

Conclusions

• Low-tech goes a long way!
  – Unaided and aided strategies should be explored
• Foundation of knowledge in AAC
• Access is key
• Be prepared, especially in the ICU
• Communication enhancement is DYNAMIC!
Trends and Patterns of Care
Pediatric Patients Undergoing Tracheostomy

Objective
For pediatric patients undergoing tracheostomy,
1. To describe an approach to service delivery throughout the recovery continuum and,
2. To identify trends in bedside AAC assessment and intervention recommendations

Methods
• Chart reviewed all patients who underwent tracheostomy and were followed by the Inpatient Augmentative Communication Program (ACP) between 2013-2016 (n=83)
• Looked at:
  − Timing of first evaluation (i.e. pre-operative or post-operative consultation)
  − Types of recommendations (i.e. tools and strategies)
Pre-operative Consultation

- 47 patients referred pre-op for initial evaluation
  - 83% intubated, ventilated, or nonspeaking
  - 70% used a speech-generating device (SGD)
  - 79% used low-tech communication strategies
  - 78% of all pre- and post-op pts. used unaided strategies

Post-operative Consultation

- 36 patients referred post-op for initial consultation
  - 89% used an SGD
  - 88% used low-tech strategies
  - 76% required change in strategies over time
  - 78% of all pre- and post-op pts. documented for unaided strategies

Augmentative Communication Consult

Santiago et al. (2017)
Limitations
- Referral bias
- Retrospective review
- Single clinician caseload

Recommendations
- Refer early when able
- Availability of varied SGD for assessment and intervention
- Provision of low-tech and unaided strategies is key – SGD are not always the answer
- Communication needs may change over time
- Follow-up throughout the recovery continuum

Trends and Patterns of Care
Early Mobility – ICU Patients with Prolonged Bedrest
Early Mobility Protocols

- Typically aim to:
  - Improve patient quality of life
  - Decrease hospital acquired conditions
  - Improve functional outcomes

- Involves gradual introduction of safe, developmentally appropriate activities
  - Mobility & early activity
  - Predefined screening process

Early Mobility

- Early Mobility at BCH:
  - Johns Hopkins PICU Up™ Program
  - Multidisciplinary effort that launched January 2017
  - Strong early mobility efforts exist, but areas for improvement

- Areas for Improvement:
  - Consult services within a scheduled timeframe
  - Engage bedside staff/parents in routine activities
  - Clear guidelines for inclusion/exclusion criteria
  - Improve interdisciplinary communication of mobility goals

Subcommittees

- Culture and Education Group
- Barrier Identification Group
- Safety Guidelines Group
- Measurement Group
- Intervention Group
PICU Up! Levels

- Levels w/ Tiered Activity Plans/Guidelines
  - Based on inclusion/exclusion criteria, severity of illness, behavioral state (SBS score)
  - Level 1 – SBS -3 to -2
  - Level 2 – SBS -1 to +3
  - Includes pts w/ intubation or tracheostomy, dialysis, femoral access
  - Level 3 – SBS -1 to +3

- Parallels the “Phases of Communication Need” (Costello, Patak, & Pritchard, 2010)
- Will better capture consult orders for services
  - (PT, OT, Aug. Comm, Feeding, Child Life, Psych, etc.)
- Multidisciplinary approach w/ increased family & bedside staff involvement

Palliative Care & End of life

Introduce broad range of AAC tools and strategies to support:
- Expression of needs
- Social connectedness
- Comfort
- Nurse call

Palliative Care & End of life

Goals for the SLP

- Support and enable:
  - participation in daily care/decision making
  - express emotional state
  - discuss illness or concrete experience related to illness
  - expression of self
  - opportunities for control
  - social connectedness and emotional closeness
  - reflection/contemplation of positive life events
  - expression of legacy
Palliative Care & End of Life Lessons Learned:

• A simple message can create a powerful connection (for patient and family), especially in the last days or hours of life.
• Continued ability to communicate a simple message, even when intentionality is in question, can contribute to the legacy of emotional connection with loved ones.

Palliative Care & End of Life Lessons Learned:

• Communication needs and goals change with disease progression.
• Try to anticipate course of changing needs.
  – Better to pre-plan and not need it, then need and not have it.
  – Message banking (when able).
  – Tools with varied access options.
• At each stage, make sure that maintaining ‘the person’ is foremost.

Palliative Care & End of Life Lessons Learned:

Always remember that the person with a life threatening illness is not the only person affected by loss of communication skill.
Communication Kits

Productivity, time, and management issues may prevent SLPs from seeing all patients in need

- Some hospitals train front line staff (RNs, physicians, child life specialists, etc.) to support early communication needs

- Caution:
  - Staff education on “communication readiness”
  - Just because patient can’t use communication kit DOES NOT mean patient isn’t a candidate for AAC!

Communication Kits

- Provide education and in-service trainings
  - Aided AND Unaided strategies
  - Decision trees to guide selection of appropriate tools and strategies
  - When to consult SLP for further assessment as needed

- Communication toolkit:
  - Include inventory list
  - Include sign-out and sign-in sheet
  - Include descriptions of each tool and how to present (with special consideration for patients with reduced mobility, vision, and hearing)

Communication Kits

- Communication boards
  - Pictures
  - Alphabet
  - Varied displays (eye gaze, partner-assisted scanning, direct selection)

- Non-English supports
  - Bilingual visual aids

- Writing tools
  - Clipboard, pen/paper
  - Dry erase board
  - Boogieboard

- Sensory aids
  - Magnifying glass
  - Voice amplifiers
  - (Personal hearing aids)*
  - (Personal glasses)*

- Tools to gain attention
  - Voice-output communication aids
  - Chimes
  - Adapted nurse-call access

Simple mounting supports:
- Switch arm
- Tabletop or bed mount
- Instructions
Communication Tools and Strategies

• Custom tools and strategies
  – Usually with referral or formal consultation with inpatient augmentative communication specialist
• Pre-made; Ready-to-go tools
  – Accessible by front-line staff
  – “Communication Toolkit”
  – Later consult specialist for more in-depth assessment and intervention

Communication Systems Are...

- Multimodal, not a single strategy
- Not ‘one size fits all’
- May require modifications and reassessment based on patient status
- May include a wide range of vocabulary & messages based on MANY factors

Aided vs. Unaided Communication Strategies

• Unaided:
  – Natural forms of communication (including gestures and facial expressions) as well as manual signs and American Sign Language (ASL).
• Aided:
  – Communication that requires some form of external support (including line drawings, pictures, printed words, speech-generating device, etc.)
Access Considerations

- How will the patient access their existing or new communication system?
  - Baseline skills and needs
  - Anticipated effects or surgery or medical event (i.e. IV boards, incision sites, halo traction)
  - Anticipated environmental considerations (i.e. lay supine 48 hrs post op, nurse-call wall adapter)
  - Sedation
  - Weakness

Environmental Considerations

- How will implementation of tools, materials, and/or strategies affect cares and vice versa?
  - Space
  - Placement
  - Positioning
  - Physical Therapy
  - Impact of medication
    - Eye gaze
    - Blurry vision
    - Generalized weakness
    - Physical restraints
  - Signage!

Tools and Strategies

This is not an exhaustive list of aided tools! Keep in mind... there's more out there!

Tech is changing every day!
Bedside Signage
• May be
  – General, premade signage
  – Custom
• Purpose:
  – Baseline communication strategies/preferences
  – Helpful communication tips
  – Equipment set up
  – Presentation of materials

Sample Bedside Signs
• “I can understand what you are saying. Please speak directly to me.”
• “I blink once for YES and twice for NO”
• Please write when speaking with me. Use the dry erase board or typewriter

Bedside Signs

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Yes/No/I don’t know

- Pre-established, unaided strategies
  - Eye blinks
  - Gestures (thumbs up/down)
  - Eye gaze towards partner’s hand (right hand = yes, left hand = no, look up = I don’t know or Something else)

- Picture boards/cards

Gaining Attention: Bedside

- Voice-output communication aid (VOCA)
- Call chime
- Doorbell

Gaining Attention: Nurse-Call

- Hospitals mandated to supply specialty call cords. Contact:
  - Engineering
  - Distribution
  - OT, PT, SLP, RN Manager, others
Gaining Attention: Nurse-Call

- Compatible adapters
- Nodule, by Voxello
- Access switches, various sizes
- Pneumatic devices

Communication Boards

- General comfort
- Body board
- Body positioning
- ABC
- QWERTY
- Customized

Communication Boards & Low-Tech Tools

- Picture-symbols and/or photographs
- Paired written labels
- Access:
  - Direct selection?
  - Partner assisted scanning?
Communication Enhancement: Non-English Speakers

- Support “closed loop” communication
- Bilingual materials and tools = ideal
- Collaboration with interpreter services for:
  - Digitized voice recording
  - Translated written messages
  - Culturally sensitive visuals

Bilingual Communication Boards/Aids
“KomHIT Refugee”

https://kom-hit.se/flykting/

Dart - Communication and Data Center at Sahlgrenska University Hospital in collaboration with Group Staff Communication and External Relations, Västra Götaland Region

https://kom-hit.se/flykting/

EZ Board by Vidatek

http://www.vidatak.com/ezboards.html

Widgit Health

Commercially Available Communication Boards

Empower Communication Board™
by Attainment Company

…and MORE!
**Eye Gaze**

- Eye gaze communication boards

**Partner Assisted Scanning**

- Partner scans through messages using:
  - Auditory
  - Visual
  - Both
- Patient confirms selection using predetermined method

  *How to: https://www.youtube.com/watch?v=KyBkofHqBkY*

**Writing**

- Dry erase boards
- Pen/paper
- BoogieBoard
Voice Output Communication Aids

- Allows for recording and playback of a single or series of messages
- Used for:
  - Gaining attention
  - Social scripts
  - Participation in motivating activities
  - Cause-effect
  - And (lots) more

Speech-Generating Devices

High-tech

- Digitized or Synthesized voice
- Access:
  - Physical direct selection
  - Eye gaze
  - Single or multi-switch scanning
- Mounting:
  - Rolling mount
  - Bedside mount
  - Wheelchair mount

Speech Generating Devices

High-tech, Mobile-tech

- Customizable AAC apps
- Picture-symbol
- Text-to-speech
- Full-communication apps
- Medical Communication apps – with prestored messages
Speech Generating Devices on Tablets

- Grid 3
- Proloquo2Go
- GoTalk Now
- TouchChat
- SoundingBoard

Text-to-Speech

- Dedicated systems:
  - E.g. Lightwriter
- Mobile tech applications
- Computer/Laptop:
  - Software
  - GoogleTranslate (NOT for translation!)
- Speech-generating devices

Physical Access

- Bedside mount
- Angled switch
- Eye gaze frame
- Sip and Puff Switch
- Floor & tabletop mounts
- Sensor switches
Voice/Sound Amplification

- Amplifies a weak voice
- Helpful for patients with vocal fold dysfunction and prolonged intubation
- Amplification d/t hearing loss in absence of hearing aids
- Transdermal microphones: great for BiPap
- Pocketalker for patients hard of hearing

This Year @ ASHA:

Sessions related to AAC in ICU, Patient-provider communication, or Communication in Healthcare:

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References

References, cont’d.


