

**AAC and Early Intervention:
Building Foundations for Success**
Alycia Berg, M.S., CCC-SLP

Augmentative Communication Program
Children's Hospital Boston at Waltham



- Evaluations and Diagnostic Therapy
 - Clinical Supervision
- Trainings and Outreach



Children's Hospital Boston

**Learner Outcomes &
*Session Goals***

- Identify and clarify *practice issues & misconceptions* about AAC with very young children
- Use a feature-match approach to identify AAC *tools and strategies* for young children
- Learn *techniques for incorporating AAC* to support participation, learning & communication



Children's Hospital Boston

*Who is At Risk?
Individualized*

- Heterogeneous group
 - No single disability or combination can define a need for early AAC intervention
- Individualized assessment
 - Communication behaviors
 - Physical Needs
 - Sensory Status
 - Medical Needs
 - Family Stressors



Children's Hospital Boston

*What do we mean by Early Intervention?
IFSP*

- *Individual Family Service Plan*
 - Public Law 99-457; 1986 amend. extended FAPE to children 3-5 yrs.
 - Section 619 Part H; mandated services to infants and toddlers (0-3).
- *Family Centered Practice:*
 - The child within the context of the family
 - Maximize the development of the child
 - Optimize the family's ability to address the child's needs
- *SLP role:*
 - Team effort in planning and service delivery
 - Provide direct service
 - Make referrals



Children's Hospital Boston

Continuum of AAC

Early Behaviors to Symbolic Communication

- Body Movements and Expressions
- Vocalizations
- Words and approximations
- Gestures and Signs
- Communication displays
- Technology



Children's Hospital Boston

At Risk:

Earliest behaviors may not fit the expectation

- **The Partner:** Stressors, miss or misread, ? how to
- **The Child:** Responses are
 - subtle, delayed, inconsistent or absent

Because of these barriers
Interactions cannot be maintained, and
initiations decrease because they are seldom
successful



Children's Hospital Boston

**Communicative Interactions:
4 Primary Goals**

(Light, Parsons, Drager)

- *Express Needs and Wants*
- *Develop Social Closeness*
- *Exchange Information*
- *Fulfill Social Etiquette routines*



Children's Hospital Boston

TOTAL COMMUNICATION

- Continued work on speech, while providing alternative methods for successful communication
- Decrease reliance on one communication method
- Enable child to adjust communication method based on own ability as well as on the requirements of different partners & contexts



Children's Hospital Boston

Why Implement AAC?

Light, 2005

- Maximize LANGUAGE learning
- Increase PARTICIPATION
- Develop SOCIAL INTERACTIONS
- Encourage TURN TAKING
- Express a RANGE of communication functions
- Guide family & others for SUCCESS
- Create EXPECTATIONS



Children's Hospital Boston

Make me WANT to be Assessed!

(Costello, Gosnell, Berg, Abramson –Asha 2010)

- Engaging, Sustained Social Interactions that are FUN!
- Embedded in Meaningful and Familiar Routines
- Occur with High Frequency
 - For repeated opportunities to practice
- Incorporate Motivating Content
 - Familiar People or Characters
 - Sound Effects
- Highly Interactive
 - Music and songs
 - Play based (Topic Displays)



Children's Hospital Boston

AAC CAN help!

However, many children transition to preschool with underdeveloped, limited communication repertoires yet have restricted access to AAC modes

Cress & Marvin, 2003



Children's Hospital Boston

WHEN...

- Avoidance of social interactions
- Dependence on others to 'interpret' increases
 - Communication breakdowns occur
- Successful interactions with others change
 - Frustration is evident
 - Learned Helplessness

Early intervention is critical –avoid playing "catch-up"

P.S. It's never too late to start!




Children's Hospital Boston

So, Why Not AAC?
Common challenges

- **Wait and See** - By 3 years old, a child typically ...
 - 900-100 words
 - 3-4 word sentences
 - ~75% intelligible
- **Prereqs**- a child must demonstrate specific competencies before introducing AAC
- **Fear**- that AAC may interfere with speech development or using AAC means giving up on speech
- **Too Overwhelming**- using too many (?) pictures or words
- **Access to tools and resources**- Time, money, equipment
- **Making it work**- difficulty implementing AAC in daily routines

● **Myth Busters!**




Children's Hospital Boston

Myth Buster # 1...
A child must exhibit pre-requisite skills before starting AAC

True or False?

- It is necessary for the child to understand specific concepts/vocabulary that can be used for communication.
- Before participating in low-tech or high-tech AAC Assessment, an infant/young toddler must be able to follow directions.
- Voice output is not appropriate for infants and young toddlers

FALSE!



Children's Hospital Boston


6 months old

Clinical Assessment goal:

- Turn-taking, social connectedness, anticipation
- Switch use and access (on / off - wait)

Clinical tools:


- Little Step-by-Step recorded with a single message "Peek-a-boo"
- Introduction to low tech eye gaze for symbols



Children's Hospital Boston

High Tech "Infants"
Age 14 month

- **Clinical Assessment goal:** Use of an Eye Tracking System
- **Clinical Tool:** (Tobii P10 with custom SDPro displays)
 - Step 1: Calibration and interaction with the device
 - Step 2: Navigation of Dynamic* page sets to intentionally engage*Displays with page links, 4 main targets + go back




Children's Hospital Boston

Device Calibration
14 months old

How to get a 14 month old to calibrate?


- Calibration task
 - Look, hold gaze, and track multiple targets
- Be clinically creative and imaginative with set up
- Remember, he does not need to understand the task to complete it!



Children's Hospital Boston

Myth Buster #2...

The use of AAC will interfere with a child's vocal development



Children's Hospital Boston

Myth Buster #2...

Miller, D., Light, J., & Schlosser, R. (2006).

- Research results indicate using AAC does **NOT** stop children from learning to talk.



Children's Hospital Boston

AAC Intervention CAN:

- Expand Vocabulary (Aided Language Stimulation)
 - Provide Input (Visual Supports)
 - Provide a means of Expression
- Support and clarify verbal speech attempts
 - Increase participation



Children's Hospital Boston

Making it work:

Effective Strategies (Light, 2005)

- Model speech and use of AAC in context
- WAIT! Allow time to communicate
- Scaffold for success
- Provide multiple opportunities to be engaged and interact
- Position yourself and tools appropriately to reduce demands (attention and access)



Children's Hospital Boston

Janice Light & Kathy Drager / AAC-RERC

<http://aackids.psu.edu>

- Step 1: Identify meaningful contexts for communication with your child
- Step 2: Provide effective means for your child to communicate
- Step 3: Select appropriate vocabulary for your child
- Step 4: Set up the environment to support your child's communication
- Step 5: Use appropriate interaction strategies to support communication



Children's Hospital Boston

Engineering the Environment

Tips for eliciting communication

- Create a visually enhanced, language rich environment
- Put materials within the child's reach
- Create communication temptations (sabotage, interrupt routines, toys with many pieces)
- Have expectations



Tools and Strategies

No Tech, Low Tech, and High Tech



Children's Hospital Boston

Key differences between communication using natural speech and communication using AAC?

- There are frequently restrictions in what a person is able to communicate at any give time.
- Individuals (and others!) must often plan ahead for communications
- AAC is often most effective in situations where the interactions are predictable.



Children's Hospital Boston

Speech

- Verbal Speech Production
 - Touch Cues
 - Co-Active Movement
 - Expectant Pauses
 - Turn-Taking
 - Multi-Media



Children's Hospital Boston

No Tech

Sign Language


- Signing Time video series
- On-line learning for families
<http://www.aslpro.com/>
- Custom Sign Language Dictionary



Children's Hospital Boston

Low Tech
Control of the environment





- Purpose
- Switch type
- Switch Placement
- Reinforcement



Children's Hospital Boston

Low Tech
Symbolic Representations


- Objects
 - full, partial
- Photographs
 - Cut out, Flat, Visual Scenes
- Line drawings (PCS)
 - Topic Displays, Communication Notebook

Children's Hospital Boston

Computer Interactions:
A tool for language learning
(Grant and Singer, 2004)

- Establish **Cause/Effect**
 - Virtual Play
- Vocabulary Building and Literacy
 - Independent Access
 - Visual Attention
 - Communication




Children's Hospital Boston

**Computer Interactions:
Software selection and Access**

- **Goals and Developmental Level**
- **Direct Access**
 - Touchscreen (cause/effect, targeting)
- **Indirect access**
 - Switch (single, two-switch) with USB Interface box
- **Literacy Supports**
 - Adapted Stories

PowerPoint, IntelliTools, Boardmaker Family, Switchit Maker, SoftTouch, Living Books, Onemorestory.com, Tumblebooks Ebooks



Children's Hospital Boston


Early Learning Activity Websites

- Priory Woods School – Touchscreen/ Switch
- helpkidzlearn.com- Switch
- SenSwitcher (northern grid)- Switch
- Starfall.com- Touchscreen
- Kneeboancers.com – Switch






Children's Hospital Boston



Apple Apps for engagment and exposure
cause/effect (not for communication!)


- Alfababy
- Baby Piano
- Peekaboo Bar
- Songs from Duck Duck Moose



Children's Hospital Boston

Low Tech:
Single and Sequential Messages



- **Goals:** Initiation, participation and turn-taking
- **Single target**
- **Record a single message**
 - Use an age and gender matched voice when possible
 - Record in 'first person' ; the child is saying the message!
- **Social Sequenced Scripts:** A series of recorded messages
 - LITTLE Step-by-Step, Sequencer, Big Talk Triple Play
- **Co-planning for messages**
- **Interface options for access-** add a switch



Children's Hospital Boston

Low Tech:
Talking Photo Album


- Fits 4x6 photographs or symbols
- Remnants (tickets, drawings, etc)
- ~10 seconds of recording per page
- Story telling, jokes, reading
- Access considerations

Children's Hospital Boston

On-going Needs


- AAC evaluation is an on-going process!
- Develop many modes for functional participation
- Provide opportunities for meaningful interactions.
- Bridge the gap
- Reduce frustrations
- Independence
- Expand language
- Develop early literacy



Children's Hospital Boston

Remember!
Total Communication


- Honor and value all attempts
- Model use of a strategy and language expansion
- Encourage and expand speech whenever possible
- Don't be afraid to try something



Children's Hospital Boston

What Else is Needed to Make a Communication System Work?


- *Teams and families* must meet regularly to coordinate any needed assistance for customizing, using, maintaining and carrying over use of the communication system.
- A *transition plan* must be in place to assure that needed assistance, equipment and support is provided as they enter preschool.



Children's Hospital Boston

Funding:

- Insurance
- Local Loaner Libraries (Lacy Equipment Lab, CRCP-Regional Consultation Program, Easter Seals)
- Company Loans
- Local Charities
- Gifts



Children's Hospital Boston

For More Information...

- ASHA: <http://www.asha.org/public/speech/disorders/AAC.htm>
- AAC Intervention: www.aacintervention.com
- Creative Communicating: <http://www.creativecommunicating.com>
- Simplified Technology: www.lindaburkhart.com
- AAC-RERC: <http://aac-rerc.psu.edu/>
- Creative AAC and EI Resources:
<http://aac.unl.edu/early.html>



Children's Hospital Boston

Children's Hospital Boston-Waltham
www.childrenshospital.org/ACP

- Alycia Berg, MS, CCC-SLP
○ Alycia.berg@childrens.harvard.edu



Children's Hospital Boston

Children's Hospital Boston-Waltham
www.childrenshospital.org/ACP

- **IT'S NEVER TOO EARLY TO START AAC!**



Children's Hospital Boston
