



# Augmentative Communication in the Pediatric ICU/Acute Care

John M. Costello

Boston Children's Hospital

Augmentative Communication Program

Contacts: [John.costello@childrens.harvard.edu](mailto:John.costello@childrens.harvard.edu)

<https://www.facebook.com/ACPCHBoston>



**Boston Children's Hospital**  
Until every child is well™



HARVARD MEDICAL SCHOOL  
TEACHING HOSPITAL



## Augmentative Communication Program at Boston Children's



Expert care  
meets creative  
solutions



HARVARD MEDICAL SCHOOL  
TEACHING HOSPITAL

Update Page Info 1

Follow



Join us on facebook at:

<https://www.facebook.com/ACPCHBoston>



**Boston Children's Hospital**  
Until every child is well™



HARVARD MEDICAL SCHOOL  
TEACHING HOSPITAL

# Augmentative Communication Program



Amanda O'Brien, CFY



Alycia Berg, SLP



Jenny Abramson, SLP



Rachel Santiago, SLP



Jennifer Buxton, OTR, ATP



Katie O'Neill, SLP



Elizabeth Rose, SLP



Susanne Russell, OTR



John Costello, SLP



Rebecca McCarthy, SLP



Meghan O'Brien, SLP



Michelle Howard, SLP



Amaliya Silsby, SLP



Peggy Dellea, OTR



Christina Yu, SLP - CFY



**Boston Children's Hospital**  
Until every child is well™



**HARVARD MEDICAL SCHOOL**  
TEACHING HOSPITAL

# AAC in Pediatric ICU/Acute Care



# **Children are NOT small Adults**

## **Why is pediatric acute and intensive care different from adult services?**

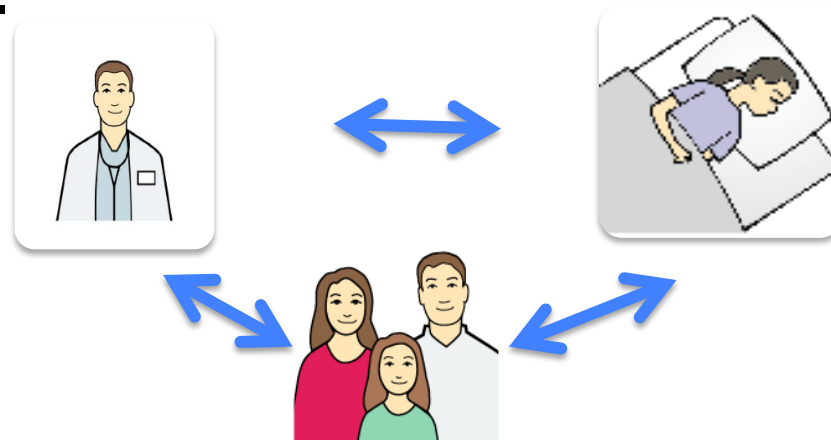


**Boston Children's Hospital**  
Until every child is well™



**HARVARD MEDICAL SCHOOL**  
TEACHING HOSPITAL

- The bedside assessment and intervention involves a triad of interaction including the child who may be developmentally quite young, the parent(s) and siblings and the clinician.



# **We propose basic tenets (A-B-C-D-E-F) for successfully engaging a child at bedside.**

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

# 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.

# 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

# You do NOT need fancy tools

You DO need a dedicated focus on problem solving communication supports and providing intervention

# Bag of Tricks at bedside

- Picture symbol boards (examples in varied languages)
- Text based boards (examples in varied languages)
- Various keyboard layouts (qwerty, ABC, partner assist, etc.)
- Simple voice output
- Switches (and jack adaptors)
- Multi-target voice output
- Ipad with multiple apps
- White board
- Camera
- Bedside mounting tools
- Eye gaze boards – various layouts

| Provider to patient                |                            | English                             | Arabic                        |
|------------------------------------|----------------------------|-------------------------------------|-------------------------------|
| English                            | Arabic                     | Time to take your vitals            | حان الوقت لأخذعلاماتك الحيوية |
| My name is _____                   | أنا اسمي _____             | It is time for medicine             |                               |
| I am a nurse                       | أنا ممرضة                  | This medicine is for _____          |                               |
| I am a doctor                      | أنا طبيب                   | It is time for a test               |                               |
| You are very brave!                | انت شجاع جدا               | This test will help about...        |                               |
| Do you need anything?              | هل تحتاج اي شيء؟           | You will have a test later          |                               |
| We are calling for an interpreter. | نحن نتصل من أجل المترجم    | You will need later.                |                               |
| Do you need help?                  | هل تريد مساعدة؟            | You will stay in the hospital       |                               |
| We need to move you a bit.         | نحتاج أن نحرك قليلا        | Can you tell me how to communicate? |                               |
| Do you need to use the bathroom?   | هل تحتاج أن تستخدم الحمام؟ | Don't know                          |                               |
| Any pain?                          | هل لديك أي ألم؟            |                                     |                               |
| Yes                                | No                         | Maybe                               |                               |
| نعم                                | لا                         | ربما                                |                               |

Patient to provider board

| Arabic                   | English                        | Arabic               |
|--------------------------|--------------------------------|----------------------|
| لدي ألم                  | When will the doctor come?     | متى سوف يأتي الطبيب؟ |
| أريد أن أطلب الطعام      | when will the medicine arrive? | متى سوف يصل الدواء؟  |
| أنا سعيد                 | Thank you for your help        | شكرا لمساعدتك        |
| أنا حزين                 | I do not want this             | أنا لا أريد هذا      |
| أنا ضحكان                | I need an interpreter          | أحتاج مترجم          |
| أنا جائع                 | Please wait                    | انتظر رجاءً          |
| أحتاج أن أذهب إلى الحمام | Yes                            | نعم                  |
| أنا لا أجد               | No                             | لا                   |
| ما هذا؟                  | Maybe                          | ربما                 |
| أريد .....               | I don't know                   | أنا لا أعلم          |

|                                                  |                                         |                                            |                                 |
|--------------------------------------------------|-----------------------------------------|--------------------------------------------|---------------------------------|
| <p>medicine<br/>medicina</p>                     | <p>uncomfortable<br/>Estoy incómodo</p> | <p>pain<br/>tengo dolor</p>                | <p>bathroom<br/>baño</p>        |
| <p>light on<br/>Luz prendida</p>                 | <p>light off<br/>luz apagada</p>        | <p>hungry<br/>hambriento</p>               | <p>thirsty<br/>sediento</p>     |
| <p>cold<br/>frio</p>                             | <p>hot<br/>caliente</p>                 | <p>fix pillow<br/>almohada</p>             | <p>get dressed<br/>vestirse</p> |
| <p>arts &amp; crafts<br/>arte y manualidades</p> | <p>television<br/>televisión</p>        | <p>listen to music<br/>escuchar música</p> | <p>read book<br/>libro</p>      |

Family to provider

| English                | Arabic               |
|------------------------|----------------------|
| She has pain           | عندما يكون الألم؟    |
| I need baby wipes      | عندما يكون الحفاضات؟ |
| I need more toys       | عندما يكون اللعب؟    |
| I need help            | عندما يكون المساعدة؟ |
| I am little            | عندما يكون الصغير؟   |
| What is this medicine? | عندما يكون الدواء؟   |
| What is this for?      | عندما يكون هذا؟      |

|                                   |                                       |                                         |                                   |
|-----------------------------------|---------------------------------------|-----------------------------------------|-----------------------------------|
| <p>I love you<br/>¡Te quiero!</p> | <p>leave me alone<br/>déjame solo</p> | <p>stay with me<br/>quédate conmigo</p> | <p>When tube out?<br/>hueco</p>   |
| <p>bathroom<br/>inodoro</p>       | <p>dry lips<br/>labios secos</p>      | <p>uncomfortable<br/>muy doloroso</p>   | <p>untie hands<br/>desamarrar</p> |
| <p>television<br/>televisión</p>  | <p>music<br/>música</p>               | <p>hot<br/>acalorado</p>                | <p>cold<br/>frio</p>              |

|                                       |                                            |                                        |                                     |                                      |
|---------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|--------------------------------------|
| <p>yes<br/>sí</p>                     | <p>no<br/>no</p>                           | <p>nurse<br/>enfermera</p>             | <p>suction<br/>succión</p>          | <p>very painful<br/>muy doloroso</p> |
| <p>I love you<br/>¡Te quiero!</p>     | <p>hold hands<br/>tomarse de las manos</p> | <p>uncomfortable<br/>incómodo</p>      | <p>thirsty<br/>sediento</p>         | <p>hungry<br/>hambriento</p>         |
| <p>leave me alone<br/>déjame solo</p> | <p>tired<br/>bostezar</p>                  | <p>hot<br/>demasiado</p>               | <p>cold<br/>frio</p>                | <p>go to bathroom<br/>ir al baño</p> |
| <p>television<br/>televisión</p>      | <p>music<br/>música</p>                    | <p>pen and paper<br/>pluma y papel</p> | <td> <p>toys<br/>juguetes</p> </td> | <p>toys<br/>juguetes</p>             |



HARVARD MEDICAL SCHOOL  
TEACHING HOSPITAL

Until every child is



# Potential Candidates for AAC

- Communication Vulnerable at Baseline
- Acute Onset of Communication Vulnerability
- At Risk for Communication Vulnerability
- Palliative Care and End of Life

# Points of Care

---

- Emergency
- Pre-operative/Preadmission
- Operating Room Holding
- Post Op Holding
- Bedside ICU/Acute Care
- Discharge

# Regardless of point of care

---

A patient should be able to:

- ◆ Access nurse call
- ◆ Gain attention of loved ones/others in the room
- ◆ Participate in own care at level medical and cognitive status allow with appropriate language/representations
- ◆ Have his/her methods of communication documented for all providers to understand/expect
- ◆ Have access to the most appropriate communication tool ranging from quick access/no tech strategies to high tech integrated systems

# Profile/Phases of Communication Vulnerable Patient

Phase 1: Emerging from Sedation

Phase 2: Increased wakefulness

Phase 3: Need for Broad and diverse  
communication access

(Costello, Patak, and Pritchard, 2010)



# Phase 1

## Emerging from Sedation

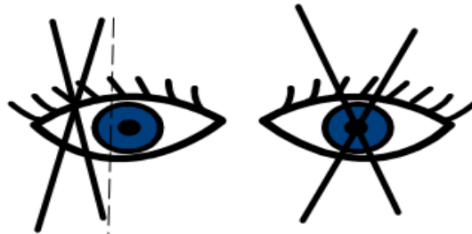
---

- Yes - no - I don't know
- Call for nurse/modified nurse call
- Gain attention of loved ones/staff with simple voice output
- Possible need for bedside sign

Also – developmentally young/emergent communicators and ‘control’



I have NO sight in my right eye OR in the  
outside half of my left eye



PLEASE REMEMBER:



I may not look like it, but I am  
listening to you SO:

- ❖ Talk to me
- ❖ Don't talk **about** me
- ❖ Don't talk about my trach in front of me.... I don't want to hear it.
- ❖ Even if I look asleep...talk about medical things with mom OUT of the room. Hearing it gets me upset!

Thanks, MIRA



bathroom



COMPUTER



**Boston Children's Hospital**  
Until every child is well™



HARVARD MEDICAL SCHOOL  
TEACHING HOSPITAL

# Phase 2

## Increased wakefulness

---

- Require all of phase 1 strategies
- Require more relevant vocabulary
- Picture boards – needs, body/comfort, personal interests
- Alphabet boards
  - ABC
  - QWERTY
- Multi-message voice output devices with digital or synthetic messages
- Voice amplification
- Possible need for bedside sign

# Phase 3

## Broad and Diverse Communication Access

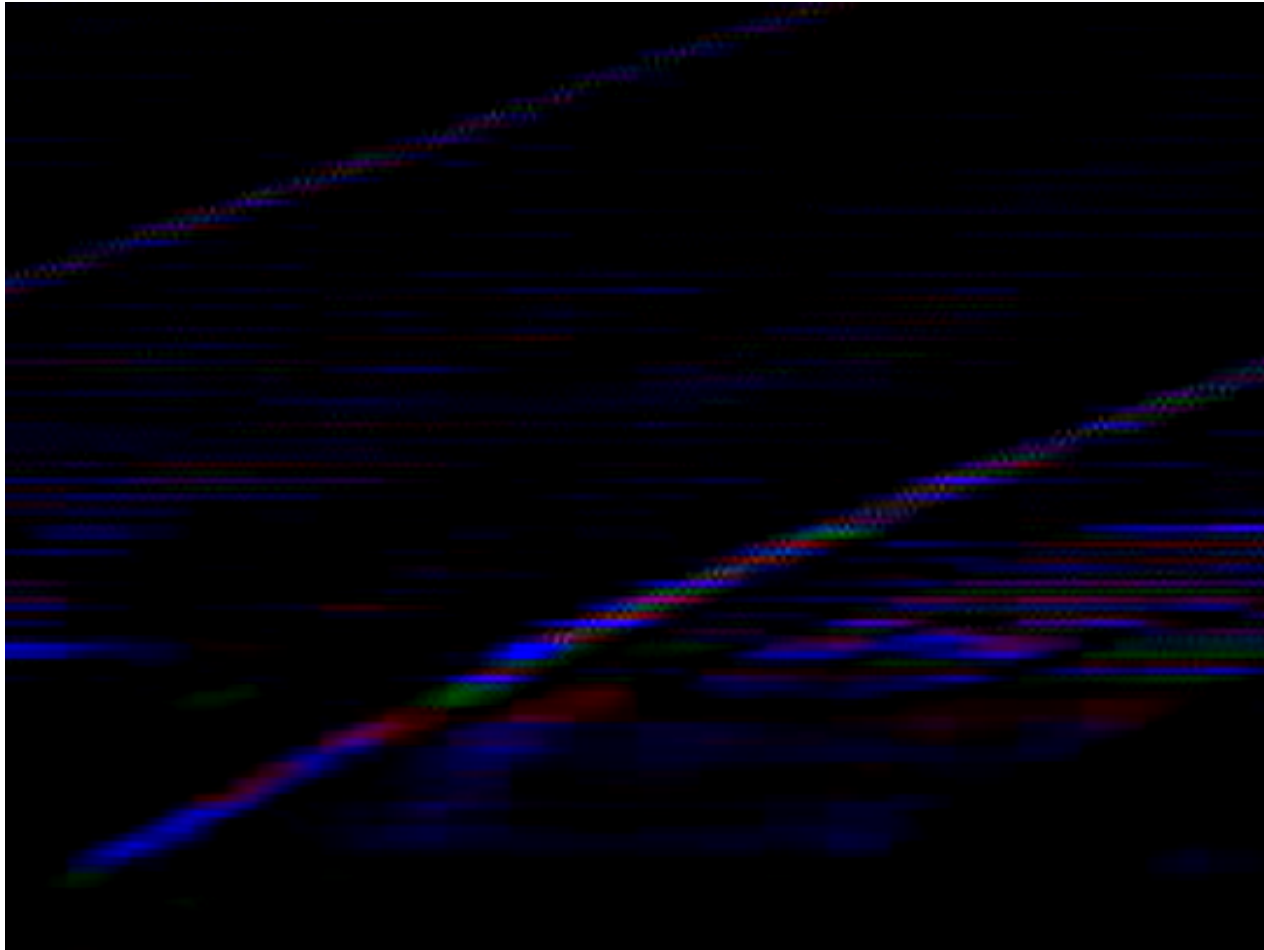
---

- All options from phase 1 and 2
- Generative communication with alphabet and sophisticated page sets
- Word and grammar prediction
- Encoding strategies
- Music and video files
- Internet access
- Telephone
- Possible need for bedside sign

# Phases of Communication Vulnerable Patient

---

- Not so black-and-white
- Timing of recovery *and* ability to participate in communication varies greatly
- Many patients fluidly move back and forth through phases during hospital stay



**Boston Children's Hospital**  
Until every child is well™



**HARVARD MEDICAL SCHOOL**  
TEACHING HOSPITAL

## Important considerations for success:

---

- Staff training regarding PPC
- Family training
- Getting referrals from teams in hospital
- Referral system/infrastructure
- Discharge follow-up
- Medical records
- Billing



## Augmentative Communication Program at Boston Children's



Expert care  
meets creative  
solutions



HARVARD MEDICAL SCHOOL  
TEACHING HOSPITAL

Update Page Info 1

Follow



Join us on facebook at:

<https://www.facebook.com/ACPCHBoston>



**Boston Children's Hospital**  
Until every child is well™



HARVARD MEDICAL SCHOOL  
TEACHING HOSPITAL