


**AAC and the Intensive Care Unit: What, When and Why**

**Addressing the Needs of Patients who are Communication Vulnerable**

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Augmentative Communication Program  
Boston Children's Hospital



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**Boston Children's Hospital**

- Program History
- Model of Intervention



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**Inpatient Augmentative Communication Closet**



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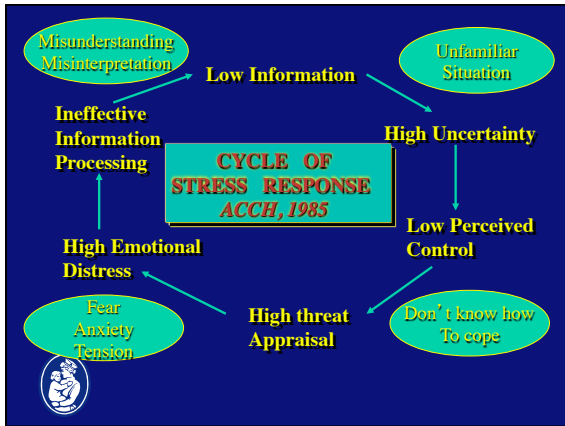
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**What is communication vulnerability?**

- 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

\*Serious communication disabilities in hospitalized patients. Emsw, D. W. Eng, J. Silver, 1998

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**Poor Communication Impacts Patient Safety**

- Patients with communication vulnerability are at 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)

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## Risk for Serious Medical Events

- Communication-vulnerable patients are:
  - Higher rates of hospitalization
  - Higher rates of drug complications
  - Highest use of resources to provide care
  - Lowest levels of satisfaction with care
  - Increased risk of delayed care
  - Increased risk of malpractice
  - Increased length of hospital stay
  - Less likely to return for follow-up appointments after Emergency Room visits

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Bartlett, G. et al.  
CMAJ 2008;178:1555-1562

- “The presence of physical communication problems was significantly associated with an increased risk of experiencing a preventable adverse event”
- “We found that patients with communication problems were three times more likely to experience preventable adverse events than patients without such problems”




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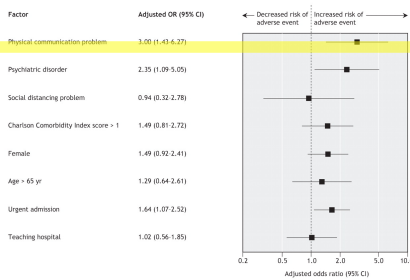
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Figure 3: Odds ratios (ORs) and 95% confidence intervals (CIs) for factors associated with preventable adverse events, adjusted for age, sex, Charlson Comorbidity Index score, admission status and type of hospital



Bartlett, G. et al. CMAJ 2008;178:1555-1562

CMAJ·JAMC

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Joint Commission

**Patient video or  
Patient Photos**



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Why is this topic timely in the United States?

- Changes to THE JOINT COMMISSION hospital standards for accreditation that address "communication vulnerability" in 2011 (measured as of 2012 July).
- Increased focus nationally and internationally on the impact of communication vulnerability on patient care.
- Increased focus on the Joint Commission International Standards of Care

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Joint Commission

**Patient video or  
Patient Photos**



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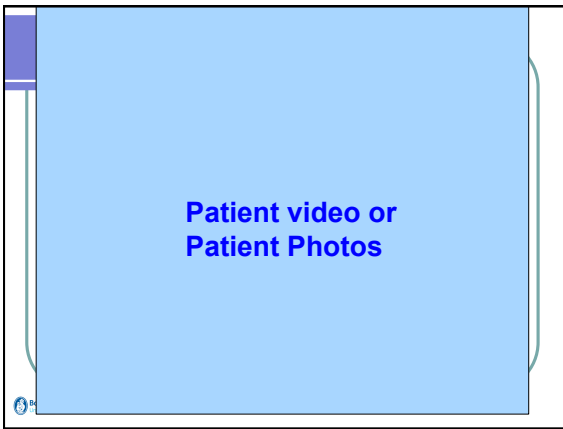
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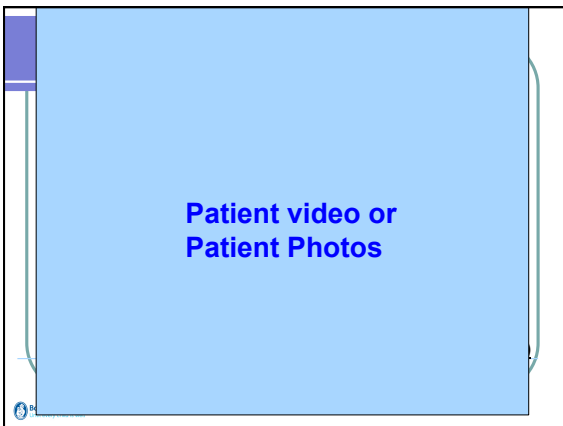
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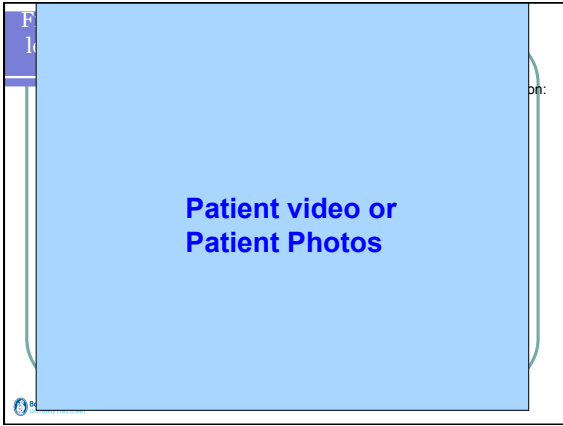
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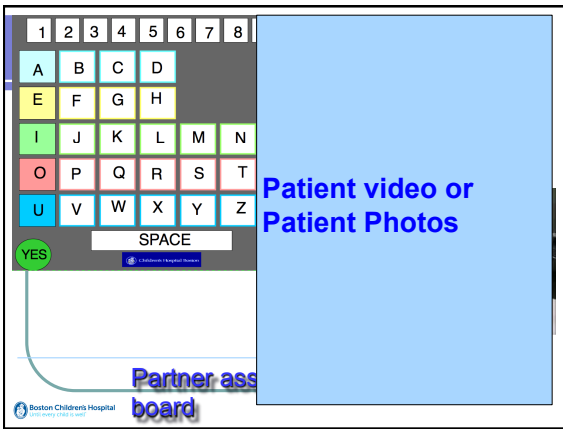
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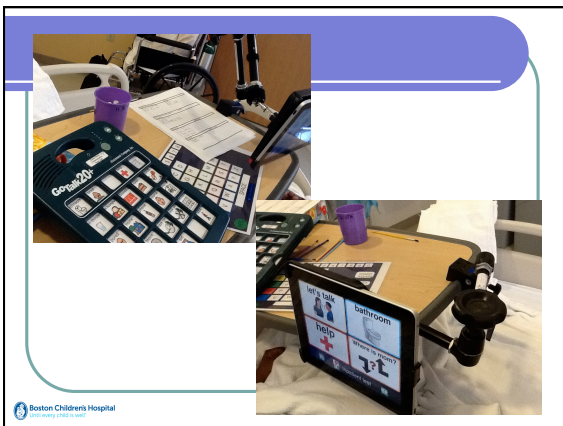
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Guidelines for admission to Pediatric ICU  
American Academy of Pediatrics and the Society of Critical Care  
Medicine *Pediatrics*, V 103, No. 4 April 1999

- **Severe or potentially life threatening** (Endotracheal intubation and potential mechanical ventilation)
- **Pulmonary or airway disease**
- **Severe, life threatening or unstable cardiovascular conditions**
- **Neurological conditions or seizures**
- **Hematology/oncology disease:** (tumors or masses compressing airway)
- **Endocrine/metabolic disease**



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In general, these conditions include

issues of :

- airway patency/management of air gasses
- Muscle function, strength and coordination
- Neuro-cognitive/neuro-linguistic impairment



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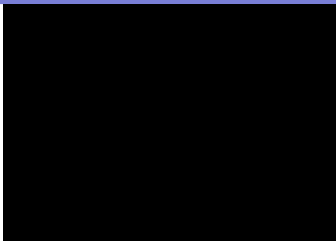
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*My son's ability to communicate, allowed me to advocate for him*



Post heart-transplant,  
a mother's perspective



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Importance of communication and potential impact on patient outcomes is recognized by:

- American Association of Critical Care Nurses
- Society for Critical Care Medicine
- National Institute of Health
- The Joint Commission



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### Roadmap 'Guide' to help facilities implement standards

**p. 10 Recommended issues and related practice examples to address during Admission:**

**Identify whether the patient has a sensory or communication need** ...*"it may be necessary for the hospital to provide auxiliary aids and services or augmentative and alternative communication (AAC) resources to facilitate communication."*

**Identify if the patient uses any assistive devices...** *"make sure that any needed assistive device are available to the patient throughout the continuum of care."*

Advancing Effective Communication, Cultural Competence, and Patient- and Family-Centered Care

#### A Roadmap for Hospitals



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### Roadmap 'Guide' to help facilities implement standards

**p. 18 Monitor changes in the patient's communication status**

...*"Determine if the patient has developed new or more severe communication impairments during the course of care and contact the Speech Language Pathology Department, if available. Provide AAC resources, as needed, to help during treatment."*

Advancing Effective Communication, Cultural Competence, and Patient- and Family-Centered Care

#### A Roadmap for Hospitals



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p. 59 **New Standard** PC.02.01.21 The hospital effectively communicates with patients when providing care, treatment, and services:

...” Patients may have hearing or visual needs... or be unable to speak due to their medical condition or treatment. Additionally, some communication needs may change during the course of care. Once the patient’s hospital communication needs are identified, the hospital can determine the best way to promote two-way communication between the patient and his or her providers in a manner that meets the patient’s needs”



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**A Roadmap for Hospitals**

Quality  
Safety  
Equity

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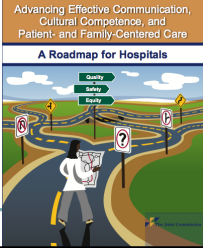
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**New Standard** PC.02.01.21 (cont'd)

“Examples of communication needs include the need for personal devices such as hearing aids or glasses, language interpreters, communication boards and devices...”



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**A Roadmap for Hospitals**

Quality  
Safety  
Equity

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**COMMUNICATION VULNERABLE PATIENTS**

Individuals with

1. **Pre-existing hearing, speech, cognitive disabilities** who may (may not) have access to communication tools/ supports
2. **Recent communication difficulties** occurring as a result of their disease/illness/accident/event
3. Communication difficulties that occur as a **result of medical treatment** (e.g., intubation, sedation)
4. **Linguistic** differences
5. **Limited health literacy**
6. **Limited ability to read/write**
7. **Cultural differences**

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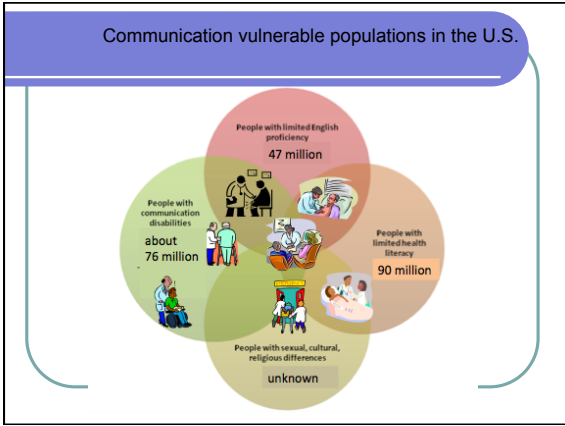
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**Communication** Saturday, November 14, 2009 [www.patientprovidercommunication.org](http://www.patientprovidercommunication.org)

**About PPC**  
*About Patient Provider Communication*

The Patient Provider Communication Forum is a national and international effort to promote information sharing, cooperation and collaboration among individuals who are committed to seeking improvements in patient-provider communication across the entire health care continuum—from a doctor's office, emergency room, clinic, ICU, acute care and rehabilitation hospital, home health service and hospice.

Members of the group bring together a range of perspectives and experience in the area of patient-provider communication. The group works to share knowledge and resources and to raise awareness at both the practice and policy levels of the need to overcome existing communication barriers and to increase communication access across health care settings.

The Patient Provider Communication Forum seeks to achieve shared learning about patient-provider communication through:

- monthly conference calls among participants.
- an interactive website to share resources and tools and to seek feedback and opinions from the field.
- collaborative projects such as white papers, presentations and research studies that intersect the areas of interest and experience of group members.
- Special interest conversations about topics, such as: (e.g., emergency preparedness, intensive care units (ICUs), The Joint Commission's Proposed Standards related to effective communication, cultural competence and patient-centered care and information about specific populations and/or healthcare settings.)

Supported by: **ACI** AGENCY FOR COMMUNITARIAN INTERVENTIONS

<http://www.patientprovidercommunication.org/>

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### Communication Vulnerability: Who does it impact?

- Patient
- Family
- Staff

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### Communication Vulnerability: Who does it impact?

- Patient
  - Loss of control of environment, sense of self, ability to participate in own care (Garrett et al., 2007)
  - Inability to speak is closely linked to: insecurity, panic, worry, fear, anger, stress, and sleep disturbances (Happ et al., 2004)
  - Feelings of low mood can lead to withdrawal from family and care givers. This impacts participation in care and recovery (Magnus and Turkington, 2005)



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### Communication Vulnerability: Who does it impact?

- Family
  - Afraid child will not be able to communicate wants and needs
  - Concern that child will not be able to call out for them and may feel abandoned
  - Distress over temporary loss of child's personality (Costello, 2000)



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### Communication Vulnerability: Who does it impact?

- Staff
  - Delivery of nursing care
  - Nurses typically do not have time to "figure out" what patient is trying to communicate.
  - Education regarding patient care and delivery of medical information
  - Supporting a child from an emotional, psychological, and developmental perspective
  - May lead to limiting communication attempts beyond what is essential (Costello, 2000 and Garrett et al., 2007)



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**Communication Vulnerability:  
Who does it impact?**

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



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**Communication Vulnerability:  
Who does it impact?**

- Communication Vulnerable at Baseline
  - Baseline speech, language, and/or communication deficits
    - Congenital
    - Acquired prior to inpatient admission Intellectual disability
  - Trach or other form of mechanical ventilation
  - Language difference
  - Baseline motor skills that impact use and access to nurse call system



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**Communication Vulnerability:  
Who does it impact?**

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



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## Communication Vulnerability: Who does it impact?

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

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## Role of the SLP

- Baseline communication vulnerability
  - Assist with adding medical related vocabulary to patient's 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

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## Role of the SLP

- Acute onset communication vulnerability
  - Evaluate current communication skills
  - Design and construct new communication supports
  - 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

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## Role of the SLP

- **At risk for communication vulnerability**
  - Voice/message banking
    - Allows patient participation in selection of tools and messages during less acute and stressful situation
    - Allows for time to familiarize with communication supports, leading to more functional use
    - Sense of control in own care
    - Preservation of personality
  - Pre- and Post-op Process

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## Feature Matching in the Acute Care Setting: Quick Considerations

- **Cognitive status**
  - Alertness
  - Awareness
  - Orientation
- **Impact of medications/sleep/delirium/time of day**
- **Vision**
- **Hearing**

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## Feature Matching in the Acute Care Setting: Quick Considerations

- **Other sensory considerations:**
  - Swelling
  - Incision site
- **Respiratory Status**
  - Respiratory support
    - Trach
    - Ventilator
    - Mask
  - Phonation
- **Language Skills**

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Feature Matching in the Acute Care Setting:  
Quick Considerations

- Motor skills: Pre and post morbid
  - Control
  - Strength
  - Access
  - Ability to write/type/point
- Physical Positioning
- Use of symbols vs. photographs vs. text
- Motivation and participation of the patient
- Age of the patient



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Working with Care Providers:  
Family and Staff

- Recognize the need for communication supports
- Demonstrations
- Establishing the need to have equipment ready, available, and accessible
  - Bedside signs
  - Documentation
- Periodic reevaluation and modification



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Communication Needs: What to consider?

- Communicate medical information (i.e. pain, positioning, comfort, etc.)
- Understand medical information
- Emotional needs and social interaction
- Control
- Personality
- Ask questions
- Call for help or assistance
- Other



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## 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)



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## Phases of Communication Vulnerable Patient

- Phase 1: Emerging from sedation
  - Yes/no/I don't know board
  - Adapted nurse call system
  - Simple voice-output communication aid (VOCA) to gain attention

Also – developmentally young/emergent communicators and 'control'



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## Phases of Communication Vulnerable Patient

- Phase 2: Increased wakefulness
  - Phase 1 supports
  - Additional vocabulary
  - Simple picture board
  - Alphabet board:
    - QWERTY
    - ABC
  - Body/positioning board
  - General comfort board
  - Customized communication board
  - Voice amplification
  - Multi-message voice output devices
  - Digitally recorded messages



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## Phases of Communication Vulnerable Patient

- Phase 3: Need for broad and diverse communication access
  - Phase 1 and 2 supports
  - Broader range of vocabulary
  - More sophisticated page sets
  - Generative communication with alphabet
  - Word/grammar prediction
  - Internet access



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## Phases of Communication Vulnerable Patient

- Not so black-and-white
- Timing of recovery and ability to participate in communication varies greatly



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## Key Components to Successful Intervention:

- Getting the Referral
  - Recognizing when a patient is communication vulnerable or *at risk* for communication vulnerability
- Providing effective resources
  - Making sure provided resources and materials are available and accessible to the patient.
- Follow through
  - Implementation of communication supports and modification as needed throughout admission



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## Areas to focus:

- Universal awareness of patient-provider communication
- Consistency in provider awareness for identifying and addressing patient communication needs.
- Addressing communication vulnerability at all points of care
  - Inability to speak
  - Inability to see/hear
  - Understand the language
  - Inability to physically access the nurse call

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## AAC: What can it look like?

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## 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”

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# Communication Boards

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



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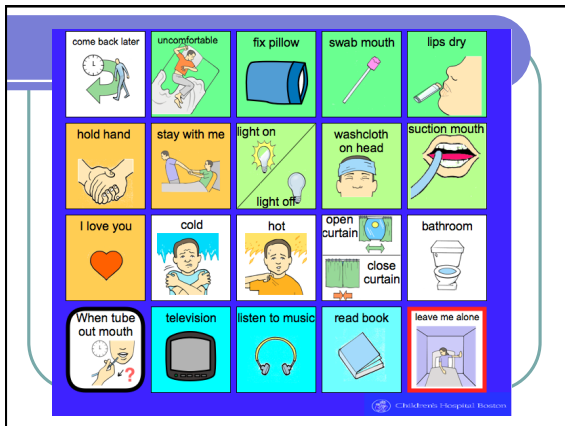
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body comfort

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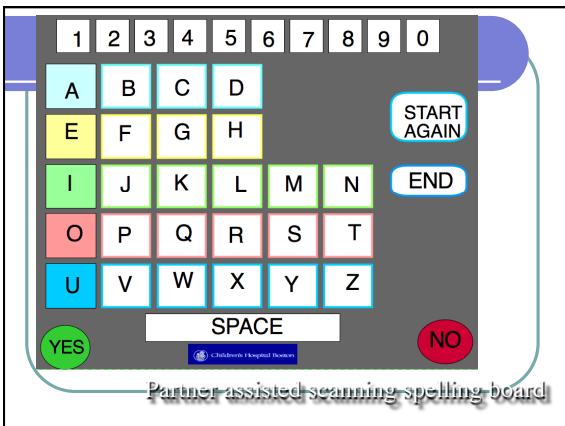
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Partner-assisted scanning spelling board

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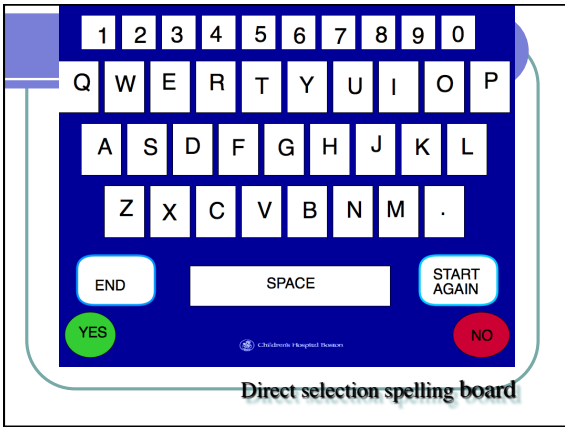
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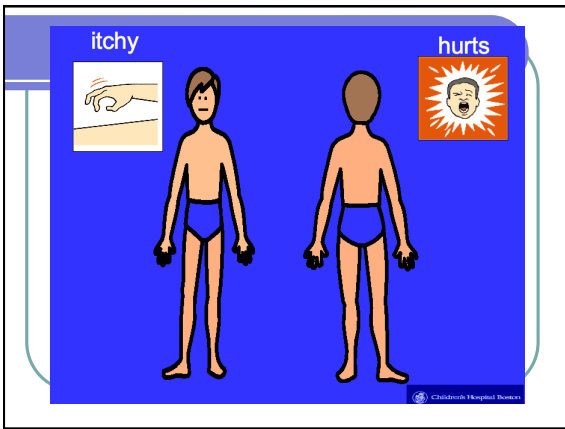
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### PAIN CHART

**LEVEL OF PAIN**

10  
9  
8  
7  
6  
5  
4  
3  
2  
1

**how am I doing?**  
what day /time?  
what is happening?  
when is tube coming out?

aches  
stings  
hurts/aches  
dull  
sharp  
radiating  
burns

how am I doing?  
what day /time?  
what is happening?  
when is tube coming out?

IV  
remove restraints  
exercise  
massage

leave me alone  
don't leave  
come back later  
prayer

bathtub  
cool cloth  
yellow  
glasses

wash face  
shampoo  
comb/brush  
teeth brushed

**I WANT PAIN MEDICINE**  
shot  
one pill  
two pills

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### I AM

- Short Of Breath
- Choked
- Nauseous
- Anxious
- Disappointed
- Tired
- Lonely
- Bored
- Thirsty
- Cold
- Unsure

### I WANT

- To Sit Up
- Water
- Blanket
- To Turn Left
- Lights On
- Quiet
- To Be Comforted
- Prayer
- Exercise
- Lotion
- Bedpan
- Pillow
- Lights On
- Blanket
- To Rest

### I WANT TO SEE

- Doctor
- Nurse
- Respiratory Therapist
- Physical Therapist

### I WANT TO CLEAN

- Mouth
- Teeth
- Face
- Hair
- Nails

**PAIN CHART**

**LEVEL OF PAIN**

10 Worst  
9  
8  
7 Moderate  
6  
5  
4  
3 Slight  
2  
1 None

**THIS PART - THE PAIN IS**

- Constant
- Intermittent
- Radiating
- Throbbing
- Dull/Aching
- Sharp
- Stabbing
- Burning
- Tender

**I WANT PAIN MEDICINE**

**PLAN OF CARE:**  YES  NO  Please Explain  Need Reassurance  When  What  Stop  When To The Point?  When Can I Be Home?

<http://www.vidatak.com/>

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## Customized Communication Boards

**Questions**

- When can I get out of my room?
- Can I eat ice cream?
- When can I go downstairs?
- Can I eat something?
- What is this medication?
- Who are you?
- What is this medicine for?
- What will you do?
- How many days will I be here in the hospital?
- How long will it take?

**Icons:** pain, weight, vital signs, nursing chart, medicine, vitals, all done, bathroom, wheelchair, bed, etc.

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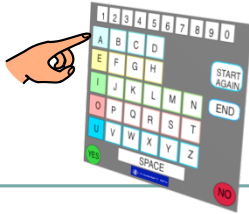
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## Partner Assisted Scanning

- Establish patient's "yes/no" response
- Scan by row/column to identify target



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The only child's way

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## Dry Erase Board

- Used to write messages
- Receptive and expressive language
- No training required



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The only child's way

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## Boogie Board

- Used to write messages
- Can use fingernail
- Lightweight
- Often motivating



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The only child's way

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## Step-by-Step

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



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## Jellybean Switch

- Used for access to communication tools, computer, and switch toys
- Can be mounted securely for optimal access
- Used with adapted nurse call system



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## Powerlink Timer

- Timer for switch operated toys and appliances
- Environmental control unit
- Variety of control options
- Good for toys with plugs, switch toys, music players, etc.



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## MessageMate 40

- Speech generating device
- Digitized voice
- Up to 40 messages
- Access: direct selection or switch scanning
- Can be mounted securely for optimal access



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**Patient video or  
Patient Photos**

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## GoTalk

- Speech generating device
- Digitized voice
- Multiple levels and storage for overlays
- Core vocabulary
- Lightweight and portable



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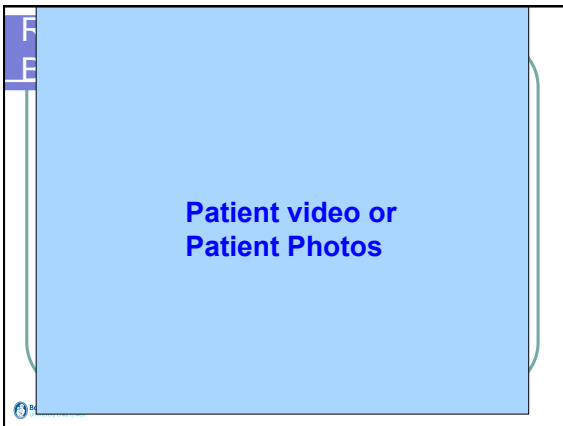
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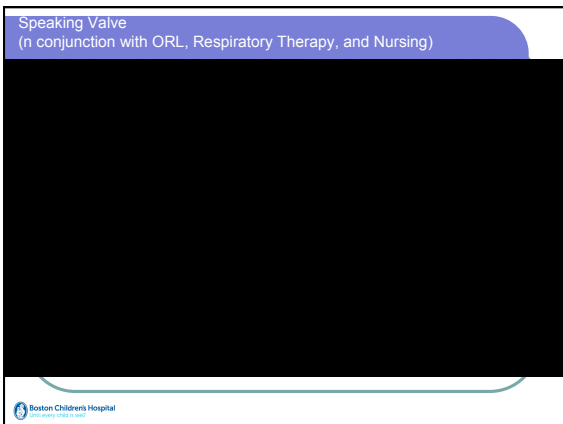
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## More Speech-Generating Devices



Nova Chat 7



Dynavox Maestro



Quick Talker

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## Lightwriter

- “Speaks” aloud typed messages
- Synthesized voice (multiple options)
- Dual screen
- Ability to store frequently used messages
- New Lightwriters = word prediction



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**Patient video or  
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## Voice Amplifier

- Amplifies a weak voice
- Helpful for patients with vocal fold dysfunction and prolonged intubation
- Able to add headphones to amplify others speech for patient in need of auditory amplification



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## C Eye

- Requires calibration
- Over-the-bed mount



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## iPad

- Example Apps:
  - Assistive Chat
  - Predictable
  - Talk Assist
  - Touch Chat
  - Sounding Board
  - Proloquo2Go
  - SonoFlex
  - GoTalk Now



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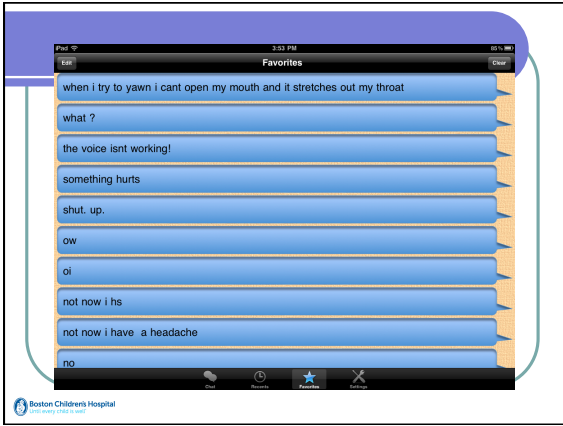
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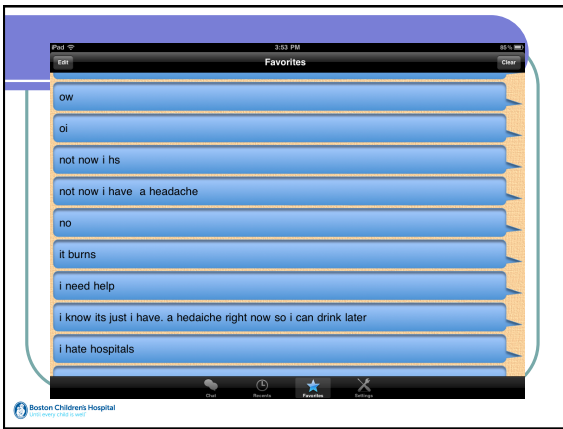
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### Communication Applications

- Picture Symbols

I need help	cancel phone	panic	hangry	thirsty
hold my hand	light on	light off	no more medicine	change my room
I keep pain	any with me	no	bedroom	change my room
request food	the phone	blanket	noisy	change my room
what's time?	TV	book	change my room	

Answers HD- YesNo

SoundingBoard

GoTalk NOW

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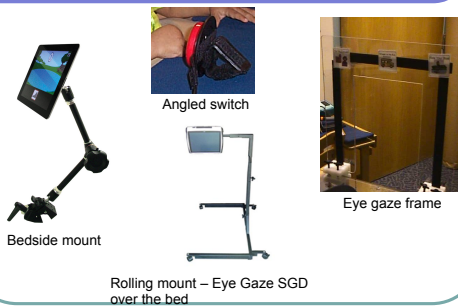
## Communication applications

- Full featured symbol based apps:
  - Picture symbols and text-to-speech



Proloquo2Go TouchChat SonoFlex

## Physical Access

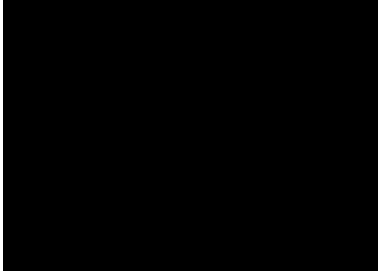


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Patient video or  
Patient Photos

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## The Importance of Patient-Provider Communication: "That's not what I'm saying!"



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## Case Study: Robert

- Age: 11 years
- Diagnosis: Cerebral Adrenoleukodystrophy
  - X-linked
  - Mismatched Bone Marrow Transplant on June 2, 2011

"Adrenoleukodystrophy, or ALD, is a genetically determined neurological disorder that affects 1 in every 17,900 boys worldwide. The presentation of symptoms occurs between the ages of 4 and 10, and affects the brain with demyelination."

"Boys develop normally until the onset of symptoms occurs. Symptoms typically rival those of attention deficit disorder before serious neurological involvement becomes apparent. The symptoms progress rapidly and lead to vegetative state within two years, and death anytime thereafter."

(www.adlffoundation.org)

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## Case Study:

- Adrenoleukodystrophy
  - Common symptoms
    - behavioral changes
      - abnormal withdrawal
      - Aggression
    - poor memory
    - poor school performance.
  - Other symptoms
    - visual loss
    - learning disabilities
    - Seizures
    - poorly articulated speech
    - difficulty swallowing, deafness
    - disturbances of gait and coordination
    - Fatigue
    - intermittent vomiting
    - increased skin pigmentation
    - progressive dementia.

**Patient video or  
Patient Photos**

(http://www.ninds.nih.gov)

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## Case Study: Robert

- Treatment
  - Bone marrow transplants can provide long-term benefit to boys who have early evidence of X-ALD, but the procedure carries risk of mortality and morbidity
  - Rare

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## Case Study: Robert

- Robert's Baseline Skills:
  - Typical development
  - Quiet disposition
  - Bolivian
  - Primarily Spanish speaking
  - Understands English
- Initial Consult
  - Recommended by Child Life Specialist
  - Transfer to ICU

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## Initial Consult – ICU 5/2

- Altered motor function, dysphagia, and dysarthria
- Speaking few words
  - Typically one word utterances
  - Reduced intelligibility
  - Benefits from prompting by family members
  - More easily understood given clear context
- Motor skills – somewhat reduced strength and coordination, however functional
- Significant pain and itchiness

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## Initial Consult – ICU 5/2

- MessageMate 40
  - Mounted
  - Approximately 20 messages
  - Appropriate access w/ direct selection (i.e. "UNO").
- General Inpatient Picture-Communication Boards
- Father recorded messages in Spanish and English

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## Initial Consult – ICU 5/2

- MessageMate 40

bathroom	hungry	eyes	hot	cold
TV	music	book	go for walk	go sleep
adjust bed	question	arms & hands	YES	NO
food	game	help	something hurt	help

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## Case Study: Rob 5/7

- Clinical Status:
  - Transfer to BMT unit
  - Speech slowly improved followed by decline
  - Frequently fatigued
  - Decreased coordination of tongue, jaw, and lips
  - Frustrated by inability to speak
  - Hand tremors
- GoTalk 20 – keyguard, larger targets, easier access
- Customized communication boards

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## Case Study: Rob

5/7

- GoTalk 20



- Customized communication boards

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## Case Study: Robert

5/14

- Clinical Status:

- Brief awake periods
- Infrequently engaged
- Increased motor deficits: strength and coordination, hypotonic

- Partner assisted auditory-visual scanning

- GoTalk overlay
- Communication Boards

- Visual Cue Cards

- Orientation, receptive language

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## Case Study: Robert

5/23-5/30

- Clinical Status:

- Mental Status: waxes and wanes
- Medical Plan: Weaning Medication
- Motor Skills: significantly reduced
- Some approximated verbalizations? (i.e. "I love you")
- BORED

- Velcro choice board – 2-4 pictures at a time

- Yes/No/I don't know

- Powerlink Timer, cassette player, switch interface

- Partner assisted auditory-visual scanning

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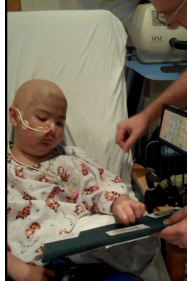
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Case Study: Rob 5/23-5/30

- Velcro choice board



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Case Study: Rob 6/6

- Clinical Status:
  - Increased alertness x2 days
  - Increased vocalizations and laughter
  - Mother noticed increased movements of his tongue in an apparent attempt to formulate words.
  - Complaining more (parents pleased)
- Velcro choice board – increased # of choices
- Yes/No/I don't know board + speech-sound production
- Powerlink Timer, cassette player, switch interface
- Partner assisted auditory-visual scanning

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Case Study: Rob 6/14

- Clinical Status:
  - Gestures: raise left arm for "yes"
  - Increased pain
- Modified body/pain board – some reaching/pointing
- Velcro choice board
- Yes/No/I don't know
- Powerlink Timer, cassette player, switch interface
- Partner assisted auditory-visual scanning

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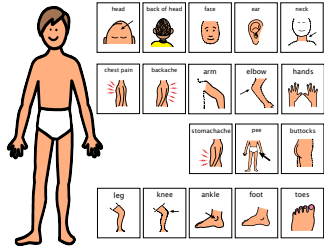
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Case Study: Rob

6/14

• Modified body/pain board



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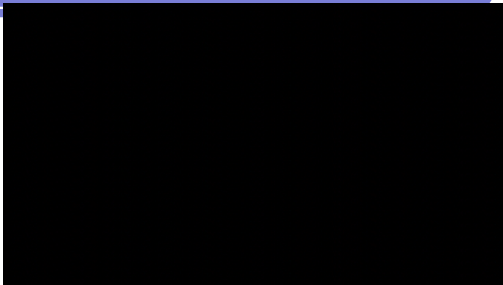
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Case Study: Rob

6/14



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Case Study: Rob

6/25

• Clinical Status:

- Improving mental status
- Increased alertness
- Longer sustained attention
- Minimal vocalizations

• Continued use of previously provided materials

- Partner assisted auditory-visual scanning
  - Alphabet board – “Abue” (grandmother), “pray”
  - Customized communication boards

• MessageMate 40

- 10 identified messages
- Single switch scanning – Big Red Twist, left hand

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## Case Study: Rob

7/2

- **Clinical Status:**
  - Improving mental status
  - Increased alertness
  - Increased pain
  - Little to no vocalizations
- Continued use of previously provided materials
- Partner assisted auditory-visual scanning
  - Alphabet board
  - Customized communication boards
- MessageMate 40
  - 40 identified messages
  - Column-Row, single switch scanning
  - Joking around

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## Case Study: Rob

6/25



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## Case Study: Rob

7/18

- **Clinical Status:**
  - Maintained mental status
  - Increased frustration
  - Continued pain management – sedation varies
- Continued use of previously provided materials
- Dynavox Maestro
  - Need for broader, more diverse communication
  - Rolling Mount
  - Single Switch Scanning

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Case Study: Rob 7/18



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Case Study: Rob 8/7

- Clinical Status:
  - Maintained mental status
  - Increased frustration
  - New pain management plan
- Continued use of previously provided materials
- Dynavox Maestro
  - Need for broader, more diverse communication
  - Rolling Mount
  - Single Switch Scanning
- Communication Book: paper copy of Dynavox pages

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Case Study: Rob 8/16-8/22

- Transfer back to ICU
- Increased work of breath and ICU airway management
- Accessing Dynavox and low-tech AAC

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Case Study: Rob

9/5

- Clinical Status:
  - Back in BMT unit
  - Maintained mental status
  - Continued pain management
  - Rash → discomfort
- Continued use of previously provided materials
- Dynavox Maestro
- Communication Book – most helpful d/t rash and discomfort
- SBS
  - Jokes
  - Gain attention at night w/ foot

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Case Study: Rob

10/8

- Clinical Status:
  - Pain management stabilized
  - Rash subsided
  - Slow progressive decline in motor and cognitive function
  - Ready for discharge to inpatient rehab
- Disease progression =
  - Decreased access to Dynavox
  - Intermittent access to MessageMate (memorized)
  - Increased use of low-tech AAC; partner assisted communication

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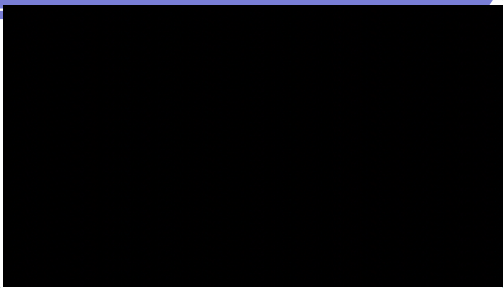
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“It can make a big difference”



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