Communication Vulnerability and Patient Safety: The Role of Augmentative Communication

OR

Has Your Intubated Patients Talked to You Today?

ISAAC DANMARK and
Aargus Universitetshospital, Skejby

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1. Introduction
2. Where I work and describe program and services
3. What is communication vulnerability
4. Barriers to communication success
5. How we started our inpatient AAC program
6. Joint Commission Standard for Communication Vulnerability
7. Cycle of Stress
8. Phases of Communication Vulnerability and interventions
Augmentative Communication Program

- Outpatient (Waltham campus)

- Inpatient (Longwood campus)
Inpatient Augmentative Communication Closet

Augmentative Communication Program
Children’s Hospital Boston Statistics (2011)

- 395 beds (~50% medical)
- 48 bed multidisciplinary KOE
- 38 bed cardiac ICU

- 24,943 inpatient admissions
- 228 specialized clinical programs with more than 557,620 visits annually.
- The hospital performed 26,534 surgical procedures.
- 1,299 nurse

Children’s Hospital is a certified Magnet Hospital for nursing excellence, highest level of recognition of hospital nursing awarded by the American Nurses Credentialing Center.

Communication Vulnerability: What is it?

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*

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/mismatch**

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Jeff Burns, M.D., Anesthesiology and Director of Multidisciplinary Intensive Care Unit and Andrew (16 y.o. with Duchenne Muscular Dystrophy) October 1996

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Barriers/challenges
Barriers to communicative success according to The Participation Model (Beukelman and Mirenda 1998)

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

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

What are some of the current barriers in many hospital settings?

Practice barriers

- A person is often in the hospital for life saving or life sustaining measures.
- The clinical priorities of the medical team focus on the urgent medical needs of the patient before communication.
- It is only in rare instances that poor patient communication and the ensuing stress and fear related to that communication vulnerability is recognized as a direct factor in a patient’s medical state and recovery.*
- “We do not welcome staff who are not part of our unit”
Attitudinal barriers

- medical thinking – nurse/doctor knows best
- the medical environment is too scary, new and complicated to expect a novice to be a partner in the process
- it is easier to provide medical care if the patient does not interfere by asking questions, negotiating or challenging decisions.

Knowledge barriers

- Nursing has identified communication as an area of need for more than 20 years.
- Information about resources (tools and professionals) is frequently not available to nurses.
- The practice of AAC for patients who are nonspeaking, is not familiar to nurses, so this is not part of nurse training and minimal information in the nursing literature addresses the issue of communication vulnerability.
- The lack of knowledge regarding the assessment process, identification of appropriate tools and strategies and implementation expertise is a significant barrier to patient care (What can they do for him? They work with speech?"

Resource barriers

- Resources may be described both in terms of clinical tools and access to clinical experts.
- Tools: While it is not uncommon for an ICU to use marker and paper, a letter board or a dry erase board, even generic communication boards or simple voice output aids are typically not available.
- Clinical expertise in the assessment and implementation process may not be available to the institution
- *Even within field of speech pathology, professional preparedness has not kept up with the growing interest in augmentative communication services especially as it relates to hospital services
Environmental Barriers

- The hospital environment is dense with medical equipment and supply carts.
- Patient bedspace may have limited room for additional equipment/material
- Due to storage limitations, communication tools and equipment may not be readily available (at a bedspace OR even on the unit).
- Electromagnetic Interference (EMI) considerations may be barrier for some technology

How did our Inpatient AAC program begin?

Why is this topic timely in the United States and in a growing number of nations?

- Changes to 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
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

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.”

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.”
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 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.

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

**Research Data**

- Happ (2004) and Patak et al. (2006)
- Patients with access to communication:
  - Receive less sedation
  - Are transitioned quicker
  - Have increased satisfaction with health care
  - Feel more in control…and generally do better…
- Available simple tools and strategies to improve communication usually go unused and ignored.
Poor Communication Impacts Patient Safety

- 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)

Profile of Patients with communication vulnerability

- Congenital conditions
- Acquired conditions
- Degenerative conditions
- Condition related to medical intervention (surgery)
- Condition related to medical treatment

Jeff – Nager Syndrome
Congenital non-speaking condition
Fracture of third and fourth cervical vertebrae, leaving him paralyzed.
Patient video

Costello, J.M Boston Children's Hospital © 2014

CYCLE OF STRESS RESPONSE
ACCH, 1985
Impact of communication vulnerability: Impact on the patient

- challenges and needs of patient
  - Powerlessness
  - Loss of Control
  - Disconnection from loved ones
  - Inability to participate in own care
  - Inability to ask questions, express needs, fears, PERSONALITY, etc.

Stress of the nonspeaking condition reaches beyond the patient
Communication vulnerability: Impact on Family

• Stress for parents (Costello, 2000), fear child will feel abandoned as can not solicit loved one and has not way of advocating for self
• (Hurtzig and Dowden 09) “Family, although completely exhausted, refuse to leave or sleep due to their concern that their family member will require assistance and no one will be there to interpret the child’s efforts to get help”

Patient video

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

Post heart-transplant, a mother’s perspective
Communication Vulnerability: Impact on staff

1. Quality of care issue "all patients who described good communication with their providers told us they were treated in a caring, concerned and respectful manner' - Duclos, et. Al. 2005 International Journal of Quality in Health Care v 17 # 6 page 483

2. Patients inability to communicate has a negative impact on the nurse/doctors tendency to communicate with them, (Ashworth, 84)

What strategies (if any) are used when a patient can not speak?

- Nurses rely on lip reading
- Have a familiar family member interpret
- Gestures
- Pen and paper
- Alphabet board
- Hand drawn pictures
- Medical staff ask yes/no questions*
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
- Pain scale and body board
- Call for nurse/modified nurse call
- Gain attention of loved ones/staff with simple voice output

Also – developmentally young/emergent communicators and ‘control’
Simple voice output aid such as 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
  - more

Powerlink Timer

- Timer for switch operated fan or radio for control
- Environmental control unit

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
Patient video

Adapted Nurse Call System: “Without it there’s no independence”
Communication Boards

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

Customized Communication Boards

- Call Arabic interpreter

Customized Communication Boards

- Customized communication boards

Costello, J.M Boston Children's Hospital © 2014
http://www.vidatak.com/
Partner Assisted Scanning

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

*** will discuss partner assist scan considerations later

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Key rule for partner assisted scanning...offer an 'out'

Potential scenario:

- Patient appears distressed
- Partner offers options that seem reasonable to the context
- Patient may become more upset or frustrated
- Heart rate increases and/or patient becomes emotional
- Medical management of distress/anxiety is considered

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Television

"Jen, you are getting too upset. Can we pause?"

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ALWAYS offer an 'out'...otherwise someone is forced to totally agree with you or totally disagree.

Offered choices may not be what Patient really wants!

For all users of AAC, we often ask many questions based on what the partners ‘thinks’ is important.
Across

1. Pain
2. Move
3. People
4. Comfort
5. Needs
6. Entertain
7. Feelings

THEN

Down

1. Back
2. Down
3. Mom
4. Back rub
5. Suction
6. Read
7. Afraid

Down

1. Bed up
2. Father
3. Cloth
4. Medicine
5. Music
6. Sleepy

Down

1. Head
2. Turn
3. Nurse
4. Swab
5. Toilet
6. TV
7. Bored

Selected category

Digital recording tool such as MessageMate 40

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

GoTalk or Quick Talker

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

**More Speech-Generating Devices**

- *Nova Chat 7*
- *Dynavox Maestro*

**Lightwriter**

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

iPad

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

- Picture Symbols

Communication applications

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

Phases of Communication

Vulnerable Patient

- Not so black-and-white
- Timing of recovery and ability to participate in communication varies greatly
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 feature match to the patient (including customized as needed) and available and accessible to the patient at all points of care.

• **Follow through**
  - Implementation of communication supports and modification as needed throughout admission

Questions to ask/consider at admission

**Questions to ask:**

- Does the patient currently have difficulty communicating and participating in the admission process?
- Does the patient have an existing augmentative communication device or strategy that he/she employs for expressive and/or receptive language?
- Is a process or procedure during hospitalization expected to induce communication vulnerability?
- Will hospitalization make the use of current and needed vision or hearing aids not possible?
Referral source

- Craniofacial team
- Plastic surgery
- Tracheostomy team
- Organ transplant team
- Physicians
- Nurses
- Respiratory therapy
- Radiology
- Social work
- Child Life
- Psychiatry
- Pastoral care
- Pre-op clinic nurses

You do NOT need fancy tools

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

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”
Communication Boards
- General comfort
- Body board
- Body positioning
- ABC
- QWERTY
- Customized

Customized Communication Boards

Patient video
Wall pops (erasable adhesive boards)

Partner Assisted Scanning

- Establish patient’s “yes/no” response
- Scan by row/column to identify target

**** will discuss partner assist scan considerations later
Dry Erase Board
- Used to write messages
- Receptive and expressive language
- No training required

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

Simple voice output aid such as 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
  • more
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

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.

Digital recording tool such as MessageMate 40
- Speech generating device
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**Kyle and MessageMate w/ Scanning**

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**Patient video**
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C Eye

- Requires calibration
- Over-the-bed mount

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<th>Proloquo2Go</th>
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Physical Access

- Bedside mount
- Angled switch
- Eye gaze frame
- Rolling mount – Eye Gaze SGD over the bed
What are some of the AAC assessment considerations when a patient is “Communication Vulnerable”?

Domains of Assessment and Feature Matching in Bedside Assessment

(quick mention…as this is really a two-hour discussion!)
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