

CLINICAL GRAND ROUNDS: COMMUNICATION INTERVENTIONS FOR CRITICALLY ILL NONSPEAKING PATIENTS

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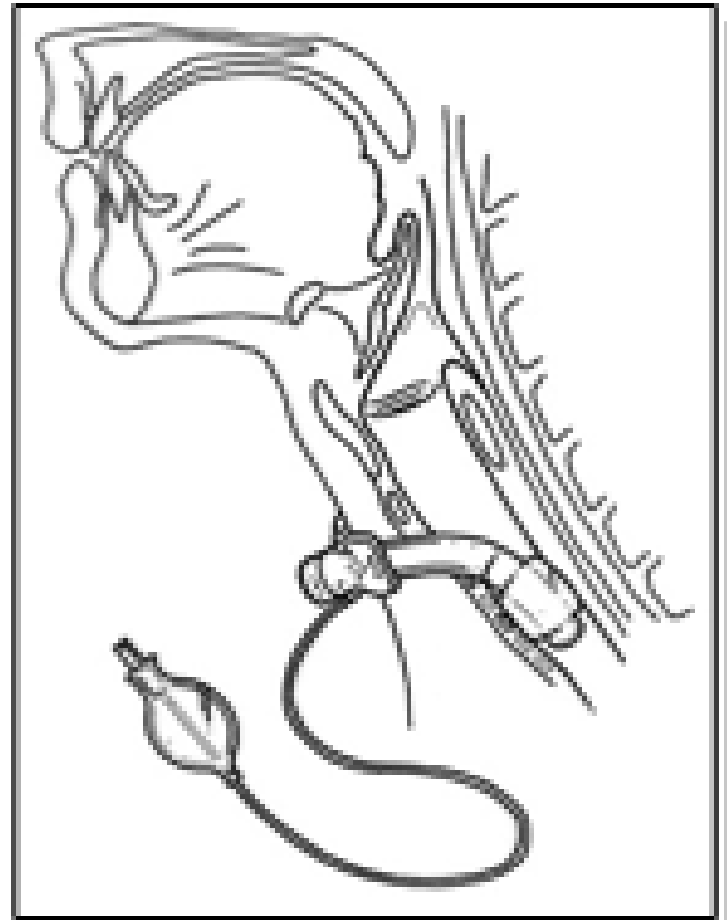
Introduction and Background

- **Communication difficulty is the most common distressing** symptom reported by mechanically ventilated (MV), critically ill ICU patients (Nelson, 2004; Rotondi 2002).
- **Panic, terror, sleep disturbances, and increased stress level are** associated with the inability to speak (Bergbom-Engberg, 1989; Fitch, 1989; Pennock, 1994; Rotondi, 2002).
- Nonspeaking ICU patients become increasingly **passive or depressed**

Speech is interrupted for intubated, trached, or mechanically ventilated patients

Why no speech with a trach/ventilator?

- Air inflow thru trach tube cannot exit (upward) through vocal cords because of inflated cuff
- Cuff remains inflated to keep O₂ levels (sats) at max levels
- Although some patients can use a special inline speaking valve while on a ventilator (separate line diverts airflow upward thru VFs), many cannot
- Most critically ill patients must use all incoming air to maintain O₂ levels (at least acutely)



Severity of illness and concomitant conditions also affect communication

- Critical illnesses that can precipitate an ICU admission include:
 - Transplants
 - Cardio-thoracic conditions
 - Pulmonary illness and hypoxia
 - Strokes and neurologic injuries
 - Trauma
 - Kidney disease
- **Delirium, medical instability, systemic illness, end-stage disease processes, infections, and medications** also interfere with coherence and communication
- **Premorbid conditions frequently encountered in the ICU:**
 - **dementia, developmental disability, mental illness, sensory deficits (hearing and vision), language differences**

Ethics of Communication in ICU

- The need for communication in the ICU is a medical necessity, not a luxury (Dowden, et al., 1986 a/b; Mitsuda, et al, 1992)
- Communication is a fundamental patient right (Patak, et al)
- Patients often need to communicate more than medical needs (living wills, finances, social conversation, family news)

New mandate

- **U.S. Joint Commission** (previously The Joint Commission on Accreditation of Health Care Organizations)
- **New standards (Jan, 2011) address 16 issues related to patient-provider communication. Selected standards --**
 - Identify and address each patient's communication needs across the care continuum
 - Provision of communication services
 - Auxiliary aids for communication or sensory deficits,
 - Assessment of patient understanding
 - Demonstrate cultural sensitivity
 - Compensate for language barriers
 - Must conduct training on the use of communication tools
- **Demonstration of compliance with standards will be required for Joint Commission accreditation of health care facilities**

SLPs & Communication Therapy in ICUs

- Not “usual care” in most facilities
- May require “special” consult to see ICU patients
 - Typically focused on swallowing
 - Minimal emphasis on re-establishing communication
- Historically, communication therapy/AAC is not systematically embedded in “best practices” for hospital ICUs/critical care units

Patient Profiles - Overview

Motor ability	+	-
Cognition	+	-
Literacy/Language	+	-
Sensory Skills (Vision/Hearing)	+	-

- **Assessment parameters**
- **Result in a “communicator profile”**
- **Match strategies to communicator**
- **Not “one size fits all”**
 - **Patients will fluctuate**
 - **AAC strategies may need to be changed or adjusted daily**

Levels of AAC/Communication Interventions

- **Low Tech**
- **Mid Tech**
- **High Tech**

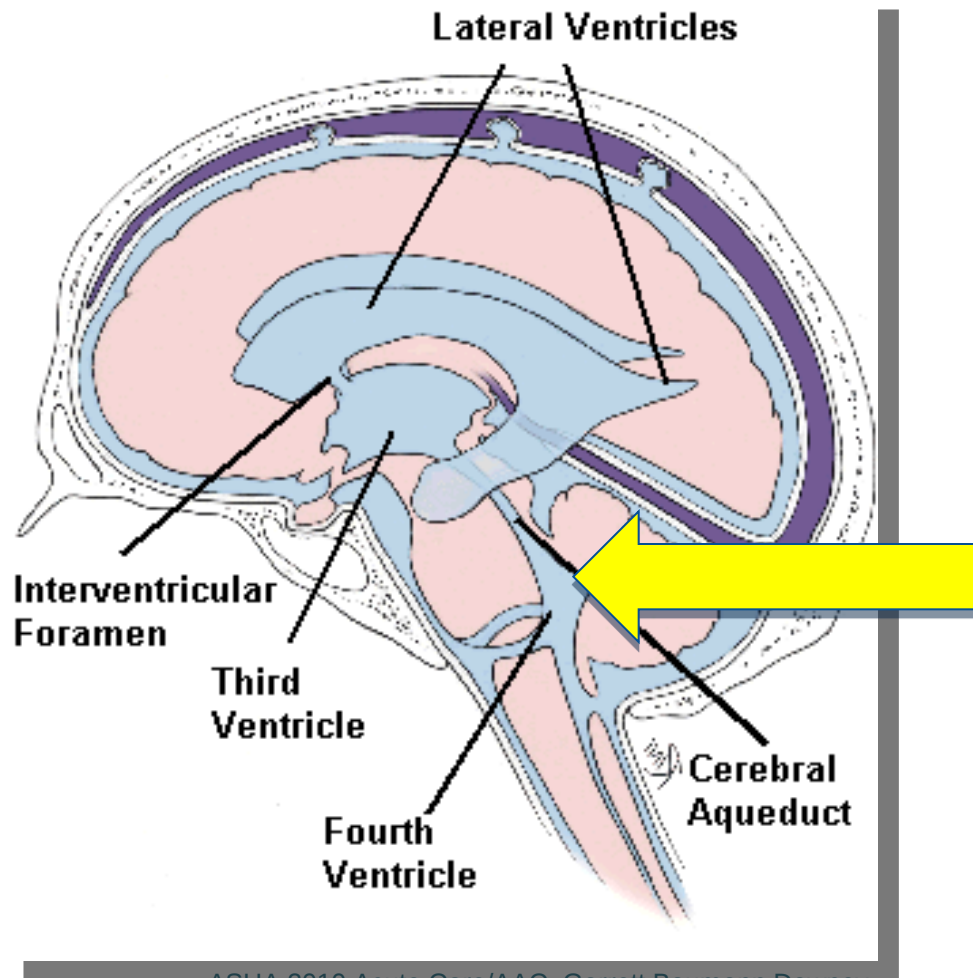
II. CASE #1 - LOW TECH INTERVENTION

- Marie
- 51 year-old woman
- Married, mother of 2
- Accountant

Timeline of critical medical events

- **April, 2008: Excruciating headaches did not respond to medication**
- **June, 2008: Lost feeling in right arm**
- **Early July, 2008: Legs buckled, self-admission to E.R., transferred to neurosurgical ICU; scans and biopsies. First diagnosis in error.**
- **Mid-July, 2008: Definitive diagnosis (see next slides)**
- **Mid July, 2008: Stereotactic radiation and chemo; initial reduction in tumor size; complete+ regrowth 1.5 weeks later**
- **Mid July, 2008: Intubation and mechanical ventilation**
- **Early August, 2008: Very limited volitional movements; vision became severely impaired**
- **Mid August, 2008: Patient died**

4th ventricle glioma



Type of tumor

- **Malignant glioma – Grade 4 (max on 1-4 scale)**
- **Also known as glioblastoma multiforme**
 - **Gliomas consist of abnormally growing brain cells that originate in the brain**
 - **Astrocyte (brain cell) and oligodendrocyte (glial cells)**
 - **Characteristics – rapidly spreading, tendrils, own blood supply**
 - **Cells re-enter a mitotic state (continuously divide)**
 - **Poor prognosis, even with radiation, chemo**
 - **Difficult to reduce the bulk of the tumor via surgery due to precarious location above brainstem/below cerebellum**

Week 2 (pre-involvement)

- Still speaking, nodding yes/no, gesturing.
- Due to deteriorating respiratory parameters, a tracheostomy was performed. Ventilator on standby/used at night.
- Mouthed speech had fair-good intelligibility
- Decreasing movement of upper extremities and left leg
- Good preserved movement of right leg

Week 2 (pre-involvement)

- **Attempt to use in-line speaking valve**
 - **Via O2 airline from ventilator**
 - **Cuff is deflated**
 - **Occlusion of valve diverts air upwards through vocal folds and allows phonation – “normal speech”**
- **Failure**
 - **Decreasing precision of oral motor skills/ articulatory coordination, range, and strength**
 - **O2 saturation levels decreased precariously**
- **No back up methods for communication were available/provided**

Week 3: AAC services obtained

- **Ventilator use continuous**
- **Severe motor impairment of upper and lower extremities**
- **Vision became severely limited due to to impingement of tumor on upper brain stem (cranial nerves); pressure of blocked CSF on occipital lobe**

Patient's Assessment Profile

Motor ability	+	-
Cognition	+	-
Literacy/Language	+	-
Sensory Skills (Vision/Hearing)	+	-

Initial communication interventions

- **Establishment of yes/no signal increasingly necessary**
 - **Ambiguity of head nods, thumb signals**
- **Family resistance & confusion**
- **Partner dependent alphabet board**
- **Phrase inventory begun**
- **Primary difficulty – inviting family to imagine what might need to be said.**
 - **Friends more helpful at this stage than close family members**

Assessment Profile

- **Motor ability**
- **Cognition**
- **Literacy/Language**
- **Sensory Skills (Vision/Hearing)**

Posted yes/no signal chart

_____ communicates by:	
Yes:	_____
No:	_____
Other signals:	

Big Mack (single message SGD) trial for attention getting

- **Arm/under hand placement**
- **Right foot – adjustable mount placement from end of bed**
- **Message: “Please come here – there’s something I need you for”**
- **Discontinued:**
 - **Variable motor control**
 - **Family member or friend
always available to observe
nonverbal requests for assistance**

Positioning & Mounting Ideas in the ICU

Things to remember when mounting/position-

- Type of device selected
 - Should a light be on/off?
 - Electronic versus paper screen
- Motor movement
- Visual capabilities
- Typical patient position
- Level of comfort
- Not a barrier to accessing vital parts of the room



Cornerstone Communication System: Auditory Scanning System

STRATEGY: PARTNER - DEPENDENT AUDITORY SCANNING

USE WITH: Patients who cannot speak or move

STEPS:

- 1) **NURSE:** Read the general *CATEGORIES* aloud
(Example: Physical Needs, Greetings, Personal/Family, Help, Control Phrases, Spelling)
- 2) **PATIENT:** With a prearranged signal, the patient indicates when the desired *CATEGORY* is reached
- 3) **NURSE:** Turn to the selected *CATEGORY* page and read specific *MESSAGES*
- 4) **PATIENT:** With a prearranged signal, the patient indicates when the specific *MESSAGE* has been reached
- 5) **NURSE:** Offer *SPELLING* as an additional option

PRIMARY CATEGORIES PAGE - -

ANNOUNCE FIRST

“(NAME), which category is your message in?...Listen to the list...nod for the one you want...If you don’t answer, I’ll repeat...”

- Physical needs
- Room
- Questions
- Activities
- Messages for Family and Friends
- -----*scan to here 1st time* -----
- Decision-Making (under development)
- -----
- -
- Go to Spelling
- STOP

PHYSICAL NEEDS

page 1/7

- **GET A NURSE!!!!!!**
 - **RIGHT NOW**
 - **Soon**
 - **Bedpan**
- **PAIN**
 - **Tylenol**
 - **Ask me how much pain on the pain (number) scale**
 - **Propofol**
 - **Sedative/sleep aid**
 - **Anxiety medicine**

PHYSICAL NEEDS

page 2/7

- **REPOSITION ME**

- Turn me

- RIGHT

- LEFT

- Sit up

- Head of bed

- UP

- DOWN

- I feel squished – stretch me out a little

- Get me up in the chair

PHYSICAL NEEDS

page 3/7

- **PILLOW**

- Add
- Remove
- Ask me where (head, arms, legs, sides)
- Right ... Left

- **STRETCH MY LIMBS**

- Arms
- Legs
- Feet/Ankles
- I want P.T.

PHYSICAL NEEDS

page 4/7

- **MASSAGE**

- Legs
- Feet and Toes
- Arms and Elbows
- Hands and Fingers
- Neck
- Jaw/Face
- (Lotion)

- **SCRATCH MY ITCH**

- (ask me where – scan thru body parts)

PHYSICAL NEEDS

page 5/7

- **EYES**

- Eye Patch

- On
 - Off
 - Switch Eyes

- Drops for Right Eye

- Cold Compress

- BOTH eyes
 - Right eye
 - Left eye

- Lacrilube for my left eye

PHYSICAL NEEDS

page 6/7

- **STOMACH**

- Nausea
- Tube is bothering me

- **TRACH**

- Suction down to the trach – I feel junk down there
- Trach is uncomfortable

- **MOUTH**

- Suction me – soft green suction please
- Lip Balm
- Minty sponge thing
- (Lemon swab)

PHYSICAL NEEDS page 7/7

- **CROWD CONTROL**

- QUIET - Can everyone leave for awhile, please?
- COMPANIONSHIP - Can someone stay?
- PARTY ON

- **SLEEP**

ROOM

page 1/1

- **LIGHTS**
 - On
 - Off
 - Dimmed
- **CURTAINS**
 - Open
 - Closed
 - Partially open
- **DOOR**
 - Open
 - Closed
- **TEMPERATURE**
 - Too cold
 - Too hot

QUESTIONS

page 1/4

- **WHAT TIME IS IT?**
- **ABOUT MY CARE**
 - What are my vitals?
 - What procedures do I have today?
 - When is:
 - Radiation?
 - Chemo?
 - Physical Therapy?
 - C-PAP trials
 - Passy Muir and Voicing Trials
 - CT scan/MRI?
 - When is the doctor coming in?

QUESTIONS

page 2/4

- **ABOUT MY FAMILY**

- name

- name

- Mom

- Dad

- name

- When are they coming to visit?

- How is he/she doing?

- Give him/her a hug for me

QUESTIONS page 3/4

- **ABOUT MY CONDITION**

- Give me an update on everything, please.
- (Medical condition) – what is happening?
- How is my breathing?
 - Breath rate
 - Oxygen levels
 - Lungs
- How is my digestion working?
- What are the results of my tests?
- What is your best prognosis (to doctor)?
- Why I am having these symptoms? (to doctor; spell symptom)

QUESTIONS

page 4/4

- **I HAVE QUESTIONS ABOUT OTHER STUFF**
 - My business
 - Our finances
 - Legal stuff
 - Living and Dying
 - Talk to me about this

ACTIVITIES (page 1 of 1)

- **I WANT TO:**
 - Listen to music
 - Look at pictures
 - Hear some stories/reminisce
 - To hear some group B.S., folks.
 - Read to me:
 - Book (I'll spell which one)
 - Newspaper
 - Magazine (I'll spell)
 - Meditate
 - Pray
 - Rest

MESSAGES FOR FAMILY AND FRIENDS

page 1 /1

- **EMOTIONAL**

- I love you
- Hold my hand
- I need touch/hugs
- Thank you so much

- **SOCIAL**

- I'm thinking of the following person (SPELL)
- How are you?
- Tell me about what's happening at home
- Tell me what's happening with your family
- How long are you staying?
- When will you visit again?
- Take care

Decision Making

- Tell me my options
- (under development)

Last Page

- GO TO SPELLING
- STOP – I'm DONE

Ideas for new messages here

Novel Message Communication – Spelling via Partner Dependent Auditory Scanning

Is it in Row...?

Then -- Is it...(letter ...letter....letter....letter?)

1 (A thru D)	A	B	C	D		
2 (E thru H)	E	F	G	H		
3 (I thru N)	I	J	K	L	M	N
4 (O thru T)	O	P	Q	R	S	T
5 (U thru Z)	U	V	W	X	Y	Z

Partners -- Please summarize the letters as we go so I don't forget what I was spelling

6 Is it a NUMBER?

Partners: Announce the #s one by one when it's a numeric answer. I'll signal when I reach the number I want.

1 2 3 4 5 6 7 8 9 0

7 CONTROL PHRASES

Partners: Announce each phrase by one. I'll let you know what I want to do with our communication

END of Word

NO that's not right

Go to Message Book

QUIT

How was instruction to partners managed?

- **Family/friends – ever present**
- **Bedside sessions with demos/teaching of strategies when able**
- **Meetings to co-construct vocabulary with family/friends in conference room; role playing**
- **“Pass the message” – attendees encouraged to train other friends and caregivers**
- **Posting info**
- **Nurses not as involved**

Use of Communication Systems

- **Addressing end-of-life issues**
 - **Children**
 - **Planning**
 - **Party**
 - **Decision-making – Terminal wean**

Outcomes

- **How do you measure effectiveness of this type of intervention?**
 - **Physical needs met?**
 - **Family satisfaction?**
 - **Number of decisions made?**
 - **Decreased frustration?**
 - **Anecdotal reports**
- **No adequate outcome measure for contribution of communication intervention in terminal cases**
- **Meets metric of “best practices” and “communication methods across the health care continuum” posed by the Joint Commission.**

III. CASE 2: MID-TECH Intervention

Brooke M. Baumann M.S., CCC-SLP

ASHA Conference

Philadelphia, PA

November 18, 2010

■ Combination of.....

- high and low tech AAC interventions
- partner-dependent and patient-initiated AAC strategies

- 77 y/o female admitted from a SNF with acute respiratory failure secondary to COPD exacerbation.
- Condition complicated by prolonged ventilator dependence (multiple intubations), pneumonia, and C-DIFF.
 - PMH:x **macular degeneration**, cardiac abnormalities, and diabetes.

- Nonspeaking for 15 days upon day of AAC evaluation
- AAC evaluation completed 1 day after tracheostomy completed
 - In-line speaking valve use not approved at facility – no immediate speech options
- English speaker
- 12 years of education

- Wore glasses for near and far vision; however typically not wearing them.
 - Found across the room
- Right visual field cut found on screening
- Edentulous
 - Mild to moderate impact on artic/intelligibility

- No attempts made to answer “yes” or “no” questions or mouthe words.
- Inconsistently used gestures, pointing, and air writing to communicate basic needs.

■ ICU Communication Screening Protocol

(Garrett & Happ, 2006; adapted from Mitsuda, Barrsiag-Benson, Hazel, & Therriault, 1992)

■ Vision & Scan Screen (Garrett K; revised 2005 Garrett & Lasker)

■ AAC System Trials

■ Writing Sample

IC Communication Screening protocol

(adapted from Mitsuda, Baarslag-Benson, Hazel, & Therriault, 1992 by Garrett & Happ, 2006)

Patient: 20306-01

Unit/Room: 11F-2

Evaluator: PR

Date: 7/16/10

Instructions: Use the questions below as a guideline for assessing the patient's alertness, ability to comprehend, basic communication signals, and motor ability. Score YES if the

ASSESS COGNITION

Is patient alert?

Can patient follow commands?

Raise your arm and make a fist.

Blink your eyes twice.

Yes	No	Partial	N/A
Yes	No	Partial	N/A

followed 1-3: 100%

Weak UE movement

ASSESS ORAL MOTOR SKILLS

Are patient's mouth movements clear when mouthing speech?

Count from 1 to 10.

Tell me what your first job was (in a sentence).

Yes	No	Partial	N/A
Yes	No	Partial	N/A
Yes	No	Partial	N/A

Glasses: macular degeneration

ASSESS COMPREHENSION

Does the patient need support to understand spoken info?

Does the patient use glasses?

Does the patient use hearing aid(s)?

Are they available?

Does the patient require alerting cues, pantomime, or pointing cues to understand info/commands?

Describe any cultural language barriers.

Yes	No	Partial	N/A
Yes	No	Partial	N/A
Yes	No	Partial	N/A
N/A	Yes	No	Partial

Glasses were NOT within the patient's reach

CHOOSE STRATEGIES FOR EXPRESSIVE COMMUNICATION

Does patient have a reliable yes and no signal?

How does patient signal yes?

How does patient signal no?

Can the patient point?

Point to your feet.

Point to your (name of family member) in person or in a photo.

Does the patient have restraints and/or other?

Can the patient write?

Write your name.

Write your name.

Write your favorite color.

Yes	No	Partial	N/A
Yes	No	Partial	N/A
Yes	No	Partial	N/A
Yes	No	Partial	N/A
Yes	No	Partial	N/A
Yes	No	Partial	N/A

Writing rated as fair for single words using PRINT, UE weakness and/or vision deficits

Can the patient spell?

By pointing to an alpha board.

Using eye pointing strategy to clear board.

Using partner dependent scanning strategy.

difficult to visualize with glasses

Yes	No	Partial	N/A
Yes	No	Partial	N/A
Yes	No	Partial	N/A

Difficulty with visualizing alphabet board WITH glasses

Can patient select needs from limited set of choices?

Pointing.

Using eye pointing strategy.

Using partner dependent scanning strategy.

ASHA 2010 Acute Care/AG Garrett
Baumann Downey

11/18/10

Vision & Scan Screen

Right visual field cut

24 pt font - pt was
80% accurate

16pt font - pt was
60% accurate

12pt font - pt
unable to visualize

11/18/10

Name: _____
Date: _____ 16

Scores	
24 pt. ____/5	16 pt. ____/10
12a pt. ____/10	12b pt. ____/10

Instructions: "Circle or point to the word 'good' each time you see it [point to referent in the box below]. Read right [model]."

good

bead	good	take	moth	home
bye	one	good	bee	good
good	good	baby	house	shirt

see	nose	good	good	hope	fine	train
good	show	tired	pies	seem	good	good
talk	maybe	good	snow	pie	good	salt
good	good	deep	dog	said	melt	good

good	table	shine	carpet	good	good	team
paste	good	glue	time	girl	gone	good
good	born	good	socks	pick	tone	glow
glow	good	point	there	see	good	good

good	table	shine	carpet	good	good	team	milk
paste	good	glue	time	girl	gone	good	good
good	born	shout	socks	pick	tone	glow	good
glow	good	point	there	see	good	pass	soda

SLP Systematic Observations

■ Environment:

- ☐ Pt in bed.
- ☐ Could not access small notebook placed in room for writing

■ Motor Screening:

- ☐ Bilateral hand/digit edema; difficulty with fine motor control.
- ☐ Right handed/ambidextrous.
- ☐ No restraints placed.
- ☐ Good head control.

■ Informal Cognitive Screening:

- ☐ Orientation Questions- 5/5 correct but confused regarding reason for medical admission.
- ☐ Comprehension - followed 3-step commands with 100% accuracy.
- ☐ English-speaking. Adequate Spelling.

■ Computer Ability: Pt reports using her daughter's computer.

Patient Assessment Profile

Motor ability	+	-
Cognition	+	-
Literacy/Language	+	-
Sensory Skills (Vision/Hearing)	+	-

□ Mouthing

- SLP placed patient dentures
 - Reinforced with staff- assists with reading mouthed speech
 - Articulation boundaries
- Minimal attempts made to mouthe words
 - Why?
 - Recent tracheostomy, 15 day history of not speaking.
- SLP prompted pt to mouthe
 - Fast rate of mouthing
 - Cued to use slow rate and overarticulation
 - Significant increase in intelligibility
 - However, not always understood by staff
- [Brooke Stuff\Videos\Im so happy_nb.dv](#)

VIDEO

AAC System Trials

■ Low Technology Trials

□ Yes and No Signal

- No consistent signal at baseline
- Taught *to use head nods*
- *Posted*

□ Signals and Gestures

- Baseline use of gestures- inconsistent
- *Personalized Signal Dictionary - Posted*
 - Licking her lips = swab mouth
 - Wave arm to the Left/Right = indicate direction for turning

□ Pre-made Communication Boards – unsuccessful

- Difficulty visualizing and locating messages on premade communication boards on unit

- Unfamiliar
- 20-25 images
- small font

VIDATAK

PATIENT NAME _____

FOR INDIVIDUAL USE ONLY

I AM

- Short of breath
- Gagging
- Hot
- Thirsty
- Better
- Wet
- Tired
- Nauseous
- Frustrated
- Light-headed
- Disappointed
- Unsure (of what is happening)
- Anxious
- Cold
- Hungry
- Worse
- Drowsy
- Angry
- Pain
- Afraid

I WANT

- To be suctioned
- Make a call
- Water
- Ice
- Lotion
- To sit up
- Bath
- Blanket
- Pillow
- Socks
- Exercise
- To turn
- left right
- Massage
- Call light, TV
- Eyeglasses
- Hairbrush
- Family
- To lie down
- To sleep
- Shampoo
- Urinal
- Bedpan
- Lights
- on off dim

CLEAN MY

- Mouth
- Teeth
- Face
- Nose
- Hands
- Hair

I WANT TO SEE

- Doctor
- Nurse
- Respiratory
- Therapist
- Assistant

☐ YES ☐ stop ☐ NO ☐ explain

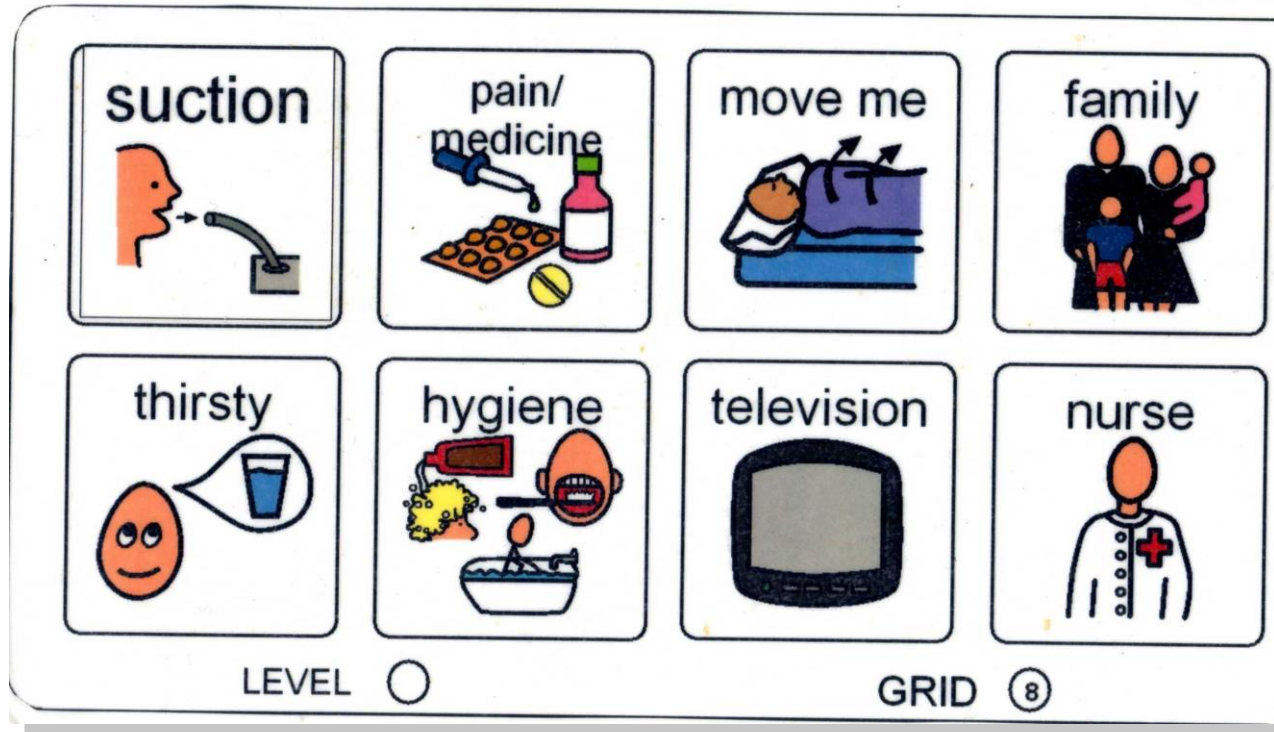
Thank You

☐ immediately ☐ later ☐ as soon as possible

where how when why what who

Vidatak, LLC

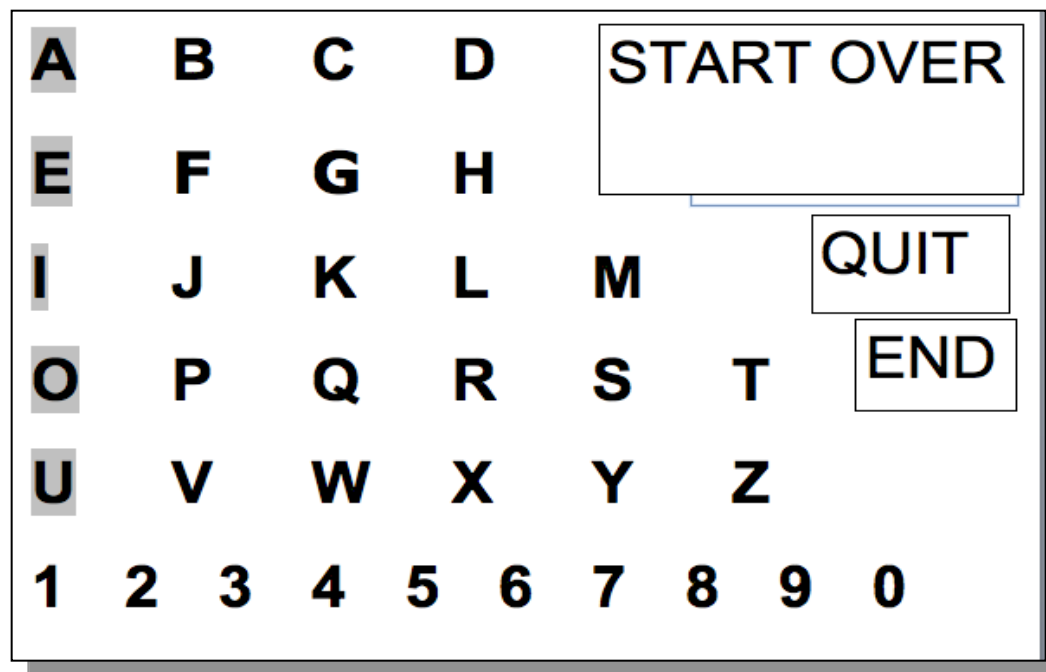
□ Success with Personalized Communication Board



- Included 8 items patient frequently requested in ICU.
- Patient able to visualize and independently point to items when placed on her LEFT

□ Spelling

- Orientation to board. Placed on L. Enlarged font
- Familiar to patient (rather than communication board)
- 100% accuracy with partner confirmation of message



- **1st Letter Spelling and Mouthing** - unsuccessful
 - Unable to coordinate mouthing and pointing to first letter of each word.
 - Spelled out each word
 - Continued to require encouragement to mouthe.

- **Writing** – partially successful with support
 - Defer to writing sample
 - Tried felt tip and marker for thicker grip
 - Initially wrote in cursive. Cued to use print.
 - Improved for single words with print
 - Fatigue and reduced legibility with phrases

■ High Technology AAC Trials

- Limited to pool of devices in grant-funded communication-AAC project* (none in SLP department).

□ * SPEACS (Happ, Garrett, et al. 2001)

- Spelling Device (Lightwriter®) - Not successful.

- Digitized SGD (20 messages) TechSpeak®
 - Difficulty visualizing all images
 - Unable to activate messages with direct selection
 - No switch access on device
 - With a switch, possible device candidate with auditory feedback

- Digitized SGD (N-8) SuperTalker
 - Display of 8 images
 - Used same display as individualized communication board
 - Placed in L visual field
 - Patient liked ease and success with device
 - Use as a topic setter

Supertalker –
TOPIC SETTER

1st letter spelling
& mouthing



■ Communication Strategies

- Encourage pt to use **head nods** to indicate “yes” or “no”
- Set topics using **Supertalker**
- **THEN** resort to mouthed speech
 - Slow rate
 - Short messages
 - Exaggerate articulation
- **IF** message still unclear
 - **Alphabet board Spelling**
 - Use enlarged alphabet board. Confirm message
 - **OR** ask patient to use **writing**
 - instructions to “*PRINT single TOPIC words*”

☐ **Signals/Gestures**

- Look for familiar signals
- Posted at bedside
- Add to the list. Be creative!

☐ Communication Partner should confirm ALL messages

Example of a Posted Communication Care Plan

(Garrett, Happ, Baumann, SPEACS Project, 2008)

SPEACS COMMUNICATION CARE PLAN

Date Posted: 2/7/07 Patient Initials: C.T.

1. This patient likes to talk about:
Current Events his dog
Football

2. Please make sure the patient ALWAYS has:
glasses

3. Communication Tips (i.e., lock eyes, etc.):
• Lock eyes
• position pt = HOB upright

4. Communication Strategies that work BEST:

① Mouthing words and pointing to 1st
* Give him letterboard letter:
* Watch mouthing
* AND Watch him point to letters

② Pt. ALSO uses SPELLING DEVICE
• Make sure pt. positioned adequately to type message.
• "MEMO" - Ask pt. to write message during your tasks.
* LISTEN AND READ MESSAGE *

Pt specific topics

Sensory aids

Communication tips

Communication strategies

- Nurse setup of materials for patient for optimal communication interaction

- Patient INITIATES communication in the ICU
 - 3rd follow up session
 - Nurse reports use of high and low tech strategies
 - High Tech- Supertalker- “TV”
 - Low Tech- Prior to nurse arrival, pt printed “noise”
- Discuss novel topics
 - Distress with losing son at early age
 - Used alphabet board spelling with SLP confirmation
- Request medical attention
 - SLP observation
 - High Tech- Supertalker- “Nurse”--- “Pain”
 - Low Tech- Used signal for “turn right”

IV. High Tech Case: S

- Young adult male
- MVA sustained a C3-C4 cervical spine injury
 - Quadriplegic
 - Ventilator dependant
- Pre-morbidly
 - Energetic and fun loving young adult
 - Risk Taker
- Seen by the AAC Service as soon as he was stabilized in the Surgical Intensive Care Unit (SICU).
- Very alert and aware during his initial days in SICU
 - Realization of his overall prognosis.
 - Immediately began to show signs of depression
 - Lack of interest in family members and friends
 - Became fairly passive with respect to the procedures and cares the nurses and other medical staff carried out

Diagnostic Decision Tree

- ❑ Develop a reliable yes/no response
- ❑ Environmental control
- ❑ Determining Access
- ❑ Switch
- ❑ Mounting issues
- ❑ Determining Vocabulary

Bedside AAC Evaluations

- ❑ Identify yes/no response
- ❑ Quick assessment of cognitive status
- ❑ Assess Motor status
- ❑ Assess visual status
- ❑ Assess auditory status
- ❑ Assess communication needs

Develop Yes/No response

- ▣ Developed in our initial consultation.
- ▣ Used eye gaze (looking up for “yes” and down for “no”).
- ▣ Initially, we offered a high tech solution (Dynamic Display Device); however, he was disinterested.

Environmental Controls

- ❑ Do not give up—
Hook can be
environmental
control
- ❑ Returned later in the day with a device and demonstrated IR control options
 - TV
 - Bedside fan at his
- ❑ He became more responsive.



Determining Access

- ▣ Assess for the most minimal amount of movement
- ▣ Motor response = Tongue in check
- ▣ Access method = Scanning

Switch Use

- ❑ Charge transfer proximity switch was mounted by his cheek
- ❑ Activated by pushing his tongue into his cheek despite being intubated.



Mounting Issues

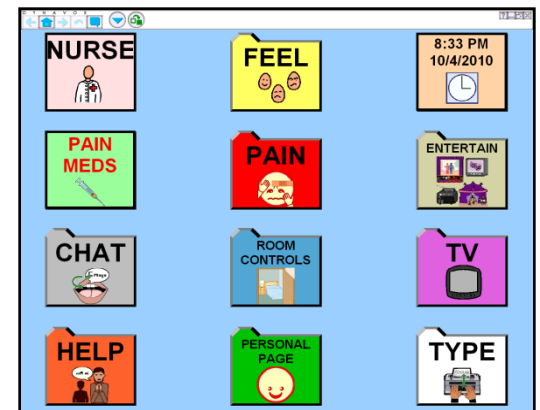
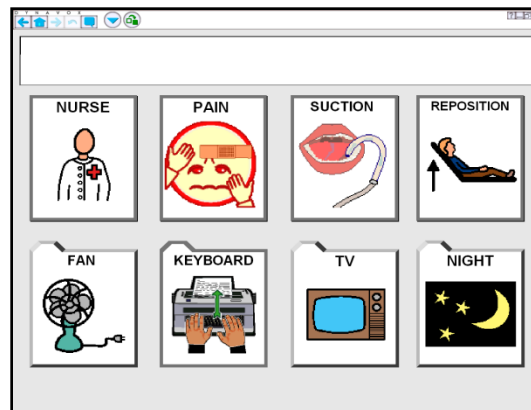
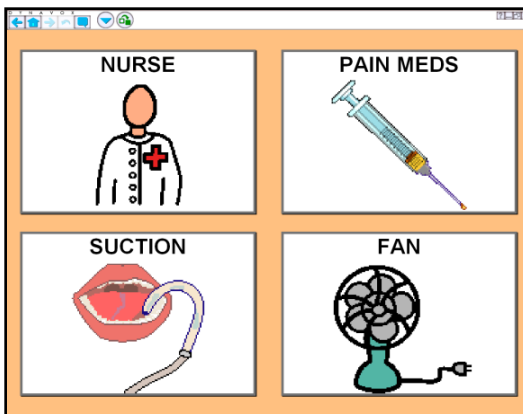
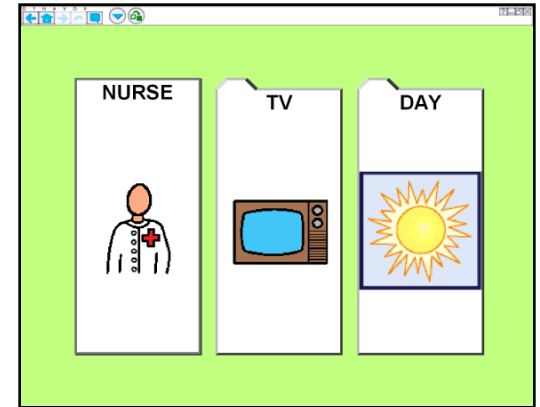
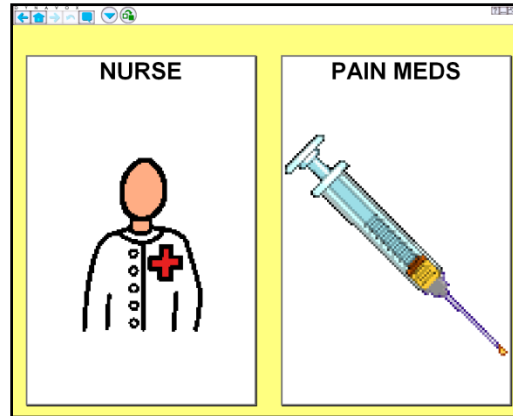
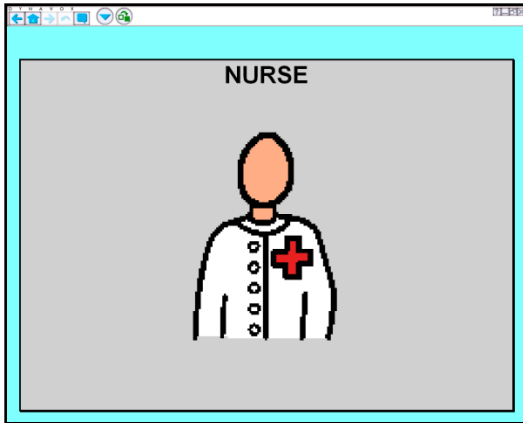
- ❑ **S** had his cervical spine stabilized with a halo brace which was used as a mounting platform for mounting.
- ❑ It is important to recognize that mounting issues may change as the patient becomes more stable and improves.



Determining Vocabulary Needs

- ❑ Remember most trauma patients have an intact language system.
- ❑ Don't start at expert instead build towards it.
- ❑ Start out with a 2 or 3 page set (nurse, power for TV, power for Fan).
- ❑ Advance to a page set that allows for navigation to custom TV page set.
- ❑ Advance to complete page set
 - Iowa template

Exemplars of Templates



Outcomes Day 1

- Within an hour we had him reliably controlling a multiple button template that allowed him:
 - To call the nurse;
 - Control the fan at the bedside;
 - Turn the TV on and off; and
 - Ask for pain medication.
- By the end of the day, we were able to progress him to a multiple page system with a wide range of communication options.

Changes Noted Day 1

- ❑ **S** began using the system the way many people take to a video game and became absorbed in figuring out how to get the desired function on the first scanning pass.
- ❑ **S** eagerly demonstrated his skill to the nurses, to his girl friend and to other family and friends.
- ❑ Because of his ability to quickly master control of the system people treated him differently and provided encouragement and further opportunity to practice.
- ❑ **S** began to regain some sense of **control/power** in previously perceived hopeless environment.

Outcomes Day 2

- ▣ **S** was adept at navigating through the system
- ▣ **S** was working with us to make programming changes to suit his particular needs for communication and ECU.
- ▣ TV page was customized to allow for direct access to his favorite channels.

SICU Stay of +90 Days

- His relationship with his girl friend grew and she spent long hours with him providing meaningful interactions.
- **S** Demonstrated that even though he would be a quadriplegic he could have autonomy and significant relationships.
- As his medical condition improved he shed the halo and then the collar we worked with him as a collaborator to develop a way of always keeping his switch accessible.
 - Baseball cap
- Prior to discharge from the SICU to a care facility he married his girl friend.
- His greatest concern at discharge was that he would be able to keep his switches and baseball cap so that his ability to control his environment would not be lost.

Summary of Case

- Key to the success—
 - Early referral
 - Consistent support from nurses, family and friends.
- That support was in part his “luck of the draw” in nurses and friends but also their ***natural response to an alert and motivated patient.***
- **S** demonstrated that when given a sense of autonomy and an ability to effectively communicate being a quadriplegic was not the end of life.

Acutely Ill Patients With CCN

CONCLUDING REMARKS

- ❑ **PROBLEM:** There is increasing evidence suggesting that communication impairment is one of the most difficult aspects in assessing and treating discomfort and pain in critical care (Happ, 2000).
- ❑ **PROBLEM:** Patients with CCN report having experienced feelings of anxiety, insecurity and panic during their hospitalization or stint on mechanical ventilation (Bergbom-Engberg, 1989).
- ❑ **PROBLEM:** The nursing literature notes the use of non-vocal behaviors (i.e., mouthing words, gestures, and head nods) as being the primary modes of communication used by patients with CCN; however, these have been perceived by the patient as being ineffective (Etchels, et al., 2003).
- ❑ **SOLUTION:** One possible implementation is to include all forms of AAC across all hospital venues. But we must educate nurses regarding the use of such AAC systems if the implementation of these systems is to be successful.

PARADIGM SHIFT

PATIENT RIGHT vs. PATIENT LUXURY

AAC options, low- to high-tech, for acutely ill patients with CCN is emerging as a more pronounced “patient right” rather than a “patient luxury.”

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V. Wrap-up and Summary

- Many people are candidates for AAC and communication interventions in ICUs
- Most do not receive services from SLPs or trained nurse communication partners
 - So, returning to the question posed at the beginning – do we have a role in delivery of communication services in the ICU?

Take home messages - continued

- **Assessment strategies are relatively simple**
- **Minimal equipment (Phase II) and well-planned low-tech materials can positively impact communication interactions (i.e., “Go for it”)**
- **A small pool of intermediate and high tech devices can significantly extend an SLP’s ability to serve these individuals**

Resources

Augmentative and Alternative Communication in Acute and Critical Care Settings

- Richard Hurtig, Ph.D
- Debra Downey, M.S..
- \$70 (U.S.)
- Available on amazon.com

Resources

Augmentative Communication Strategies for Adults with Acute or Chronic Medical Conditions (2007)

- Editors: David R. Beukelman, Ph.D., Kathryn L. Garrett, Ph.D., & Kathryn M. Yorkston, Ph.D.
- Brookes Publishing Co., Inc.
- \$59.00 (U.S.)
- Available on amazon.com
- Includes a CD with printable forms

Patient Provider Communication Website

www.patientprovidercommunication.org

Resource

***The Hospital
Communication Book: A
Useful Resource for
Patients, Providers and
Family Members***

<http://www.communicationpeople.co.uk/Hospital%20Book.htm>

Free, downloadable hospital communication book in 2 sections

Free issues of Augmentative Communication News – to print/download

- <http://www.augcominc.com/newsletters/index.cfm?fuseaction=newsletters&q=ICU>
 - Issue Vol 19 #1 – Adults with Aquired Medical Conditions (synopses of AAC book chapters)
 - Issues Vol 5 #6 AAC for people with trachs/vents

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