

AAC In Acute Care:
Facilitating Patient-provider
Communication and Reducing Risks.
USSAAC Webinar MAY 7, 2018

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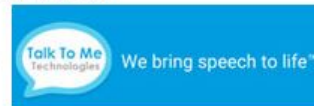


WHAT WILL YOU LEARN?

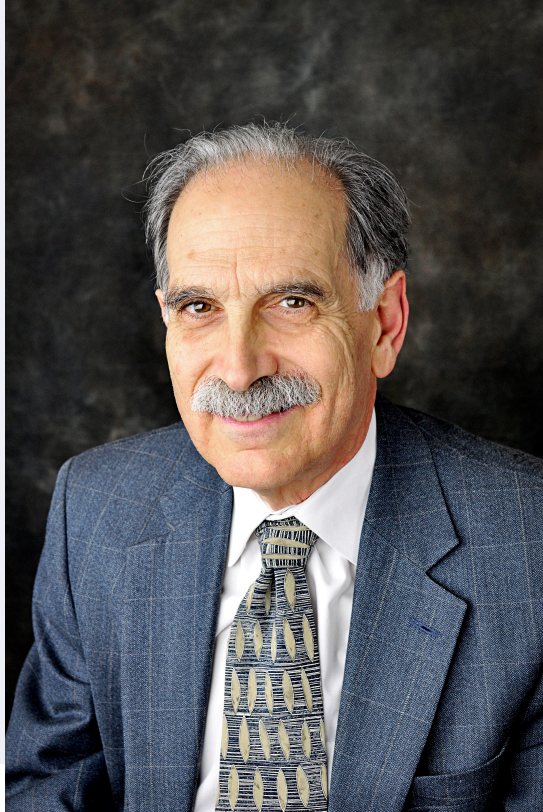
- Understand the impact of communication barriers on medical outcomes
- Understand the human and financial costs of adverse medical events
- Understand the role of AAC in overcoming communication barriers in the ICU
- Identify strategies for supporting patient participation in medical decision making and end of life conversations
- How to build a “culture of communication”

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Introduction



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The University of Iowa

Voxello Founder & CSO

Disclosures

- Voxello® is a University of Iowa spin off company that has developed the noddle® smart switch and noddle-chat™ speech generating app
- Richard Hurtig has a financial interest in Voxello®
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Acknowledgements

- The UI research team includes: Rebecca Alper, Karen Bryant, Krista Davidson, Debora Downey, Claire Gorman, Briar Kleeman, Karen Stenger, & Michele Wagner
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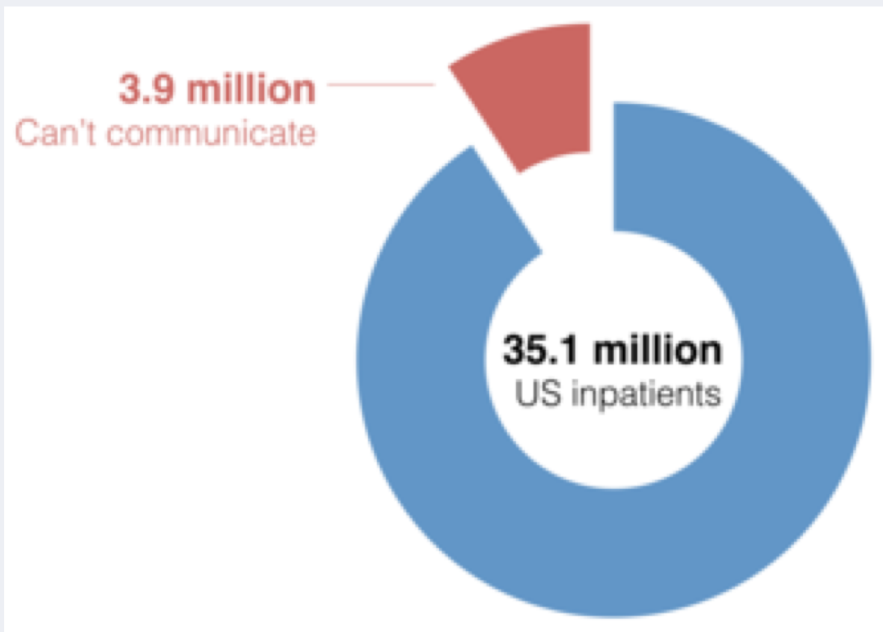
Outline

- Communication Barriers in the ICU
- Preventable Adverse Events: Impact on patients and healthcare costs
- Strategies to address access & communication needs
- Medical Decision Making and End of Life Conversations
- Building A Culture of Communication: Improving outcomes, improving patient satisfaction and reducing staff stress
- Q+A

Overcoming Communication Barriers



For Effective Care, Every Patient Needs To Communicate.



Percentage of ICU patients unable to access nurse call	Percentage of ICU patients unable to use speech
33	33

Elements of Patient-Provider Communication

Patient	Provider
<ul style="list-style-type: none">• Summon help• Communicate needs• Participate in care & decision making• Maintain personal identity & personality	<ul style="list-style-type: none">• Respond to summon for help• Understand patient needs• Engage patient in care & decision making• Treat patient, not only the disease

Communication Vulnerable Populations

Individuals With Complex Communication Needs (CCN)

- Acute and Temporary conditions
 - due to trauma, acute disease or surgery
- Pre-existing conditions
 - due to developmental disorders (CP, MD)
 - due to acquired disorders (ALS, PD)
 - due to dementia (AD, AD/RD)
- Individuals With Limited English Proficiency

Barriers To Effective Communication

Lead to:

- Poorer medical outcomes and higher preventable adverse medical events (AEs)
- Significant isolation and a dramatic shrinkage in the individuals' social world.
- Loss of autonomy & exclusion from medical decision making.
- The inability to speak makes individuals susceptible to our society's paternalistic approach to dealing with individuals with a disability.
 - "Elder Speak"

Preventable Adverse Events Pose A Significant Ethical And Financial Burden On The United States Health Care System.

Adverse Event	Number	Average Cost	Total Cost
Adverse Drug Reaction	1,427,266	\$5,000	\$7.1 Billion
Falls	254,995	\$7,234	\$1.8 Billion
Pressure Ulcer	1,151,021	\$17,000	\$19.5 Billion
Ventilator Associated Pneumonia	38,958	\$21,000	\$818 Million

The Role of Communication in Patient Care

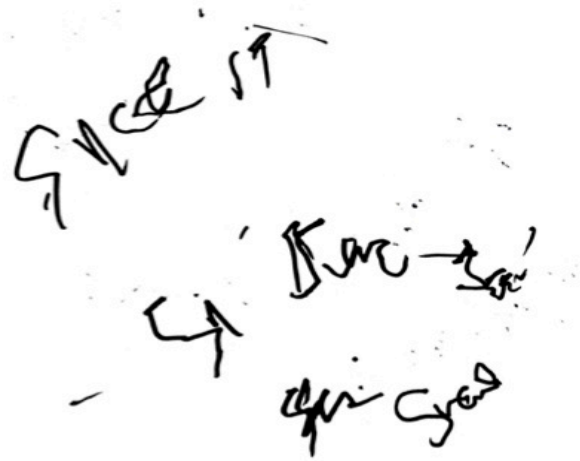
- Pain Management
- Fall Prevention
- Pulmonary Issues
- Adverse Drug Reactions
- Delirium & Patient Stress

What is the current standard of care? Nurses' Communication Strategies

Communication strategy	Percent of nurses indicating use of strategy
Paper and pencil	96
Picture or symbol board	80
Lip reading	70
Alphabet boards	65
Electronic voice output device	46
Sign language	35
Other	18

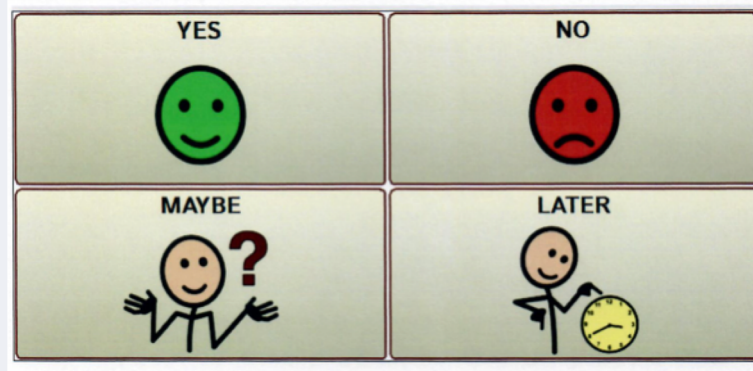
Problem with
Paper & Pencil

Illegible writing



The image shows a piece of paper that has been rotated clockwise. On the paper, there are several lines of handwritten text in black ink. The text is completely illegible because the paper's orientation is not horizontal. The words are slanted and difficult to decipher, but some characters like 'S', 'V', 'E', 'R', 'T', 'I', 'C', 'A', 'L', 'I', 'T', 'Y' are visible, suggesting the text might be related to a technical or scientific concept.

Problem with
relying on a
simple Yes/No





Problem with Lip Reading

A difficult skill

Not all speech sounds are visible

Oral intubation makes it hard to articulate clearly

McGurk Effect

What you perceive is biased by

- What you are expecting
- What you see
- What you hear

Problem with
stand alone
electronic voice
output devices



Impact of Communication Barriers

Patient Experience

- Frustration/Stress
- Inability to maintain autonomy and personality
- Risk of Adverse Events
- Risk of Delirium
- Increased LOS
- Perceived Value of Care
- Family Perception of Care

Nurse/Caregiver Experience

- Frustration/Stress
- Inability to see the patient and understand the patient's needs
- Potential for Errors in Cares
- Wasted time
- Extra cares
- Burnout

Current State Of Affairs

- Limited communication protocols for patients who have limited communication abilities
- Communication barriers associated with higher risks for preventable AE's, which cost hospitals money
- Communication barriers impact patient satisfaction, which influence reimbursement rates for hospitals
- Joint Commission standards mandate that hospitals address communication barriers

Establishing A Culture Of Communication

- Establish patient-provider communication as an institutional priority.
 - All conscious patients must be able to summon help
 - All conscious patients can effectively communicate with their nurses, other healthcare professionals and family members
- Provide tools and training
 - AT to provide access to nurse call
 - AAC tools to support bedside communication
 - Training for patients & nurses

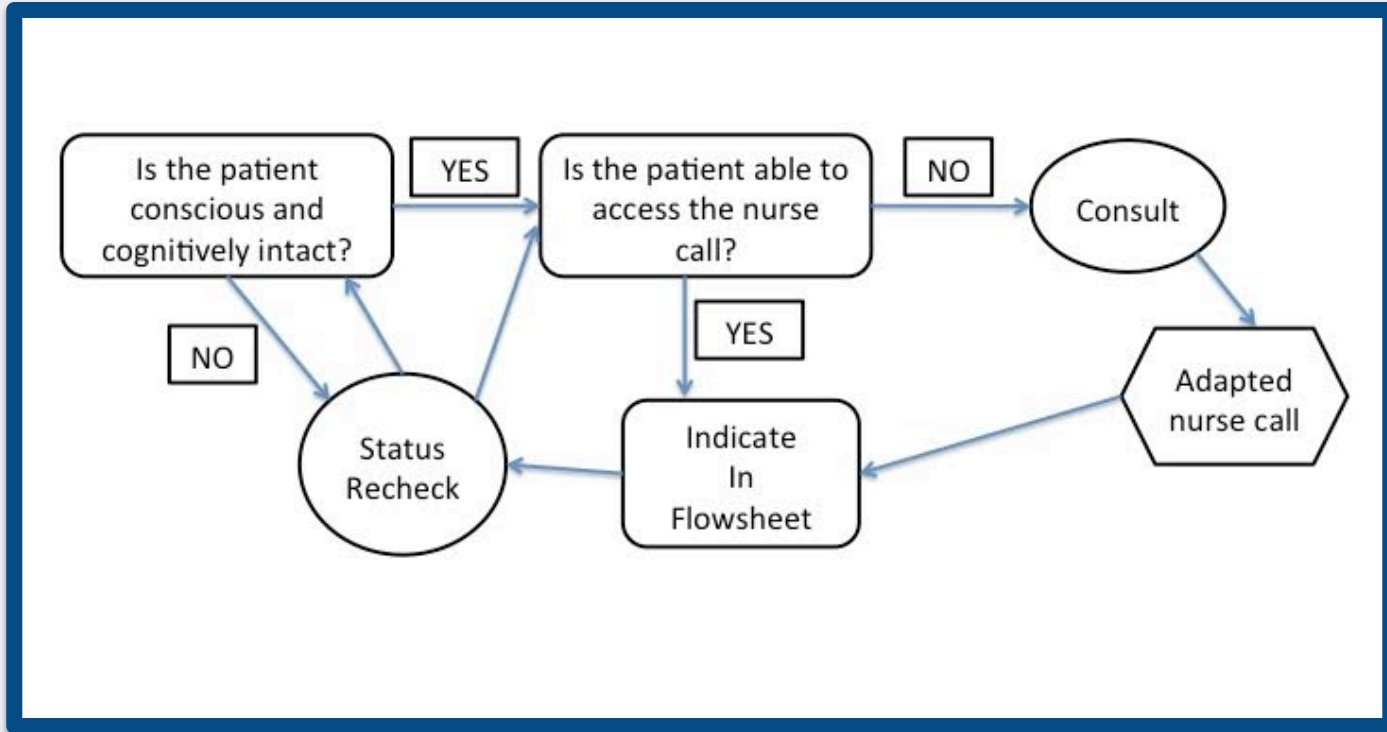
The First Part Of Patient-Provider Communication: Accessing The Nurse Call System

- All conscious patients should have access to the nurse call system.
 - Standard nurse call pendant
 - Standard alternative switches
 - **Pressure plate**
 - **Pressure bulb**
 - **Breath call**
- Patients who lack the motor skills to use the call pendant (pillow speaker) or the standard alternative switches will need some form of assistive technology to access the call system.

Identify The Voluntary Gesture That The Patient Can Produce

- What is a voluntary gesture?
 - Any motor response a patient can make on command
 - Any motor response a patient can make repeatedly
- Types of gestures
 - tongue click
 - pushing tongue into cheek
 - lip squeeze
 - wink or eye blink
 - Head, jaw, shoulder or limb movement
- Select the appropriate transducer/switch

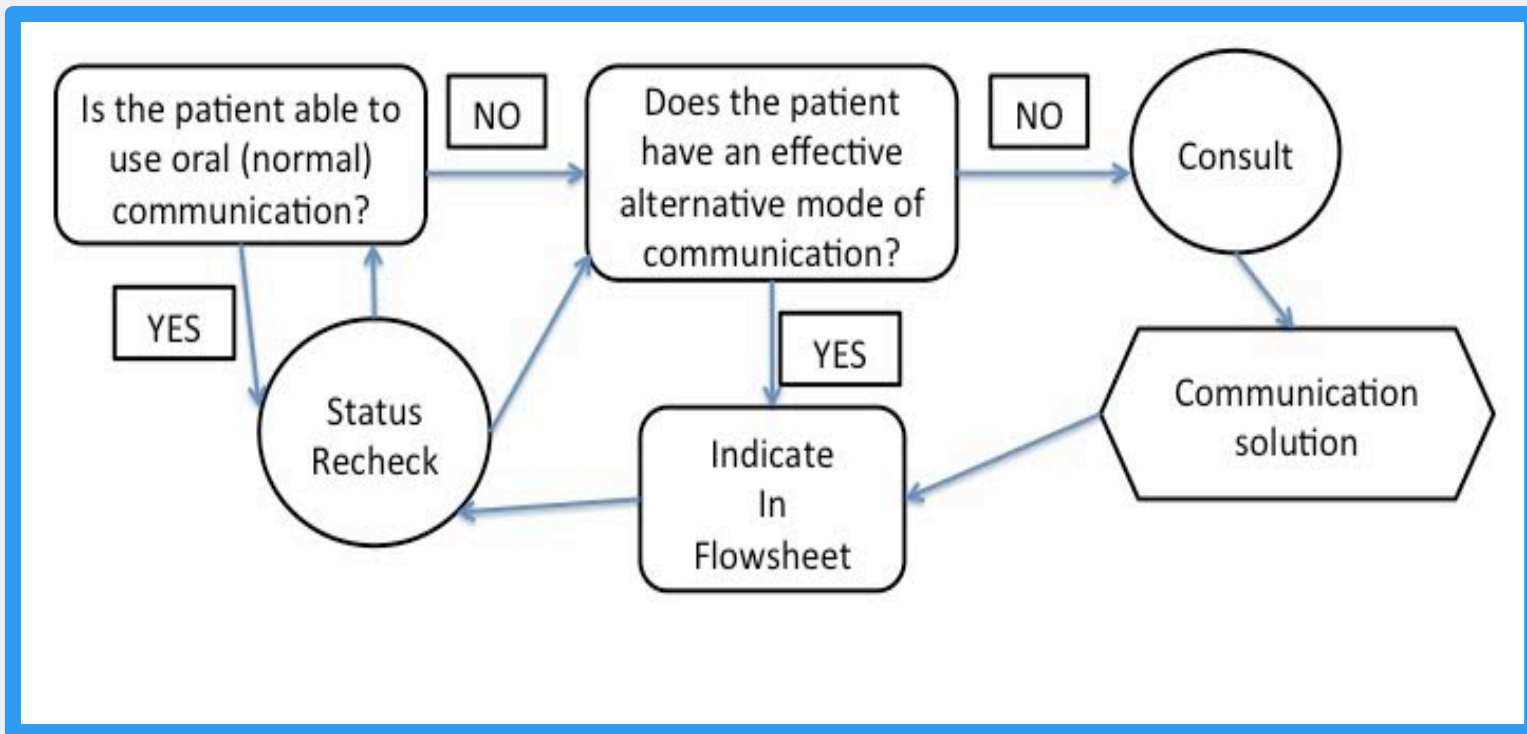
Nurse Call Decision Tree



The Second Part Of Patient-Provider Communication: Tools to overcome communication barriers

- All conscious patients should be able to communicate with caregivers.
- Patients who lack the motor skills speak or write should be provided with assistive technology to support communication.
 - Communication Boards
 - Speech Generating Devices
 - Tools to overcome limited proficiency in language used by caregivers

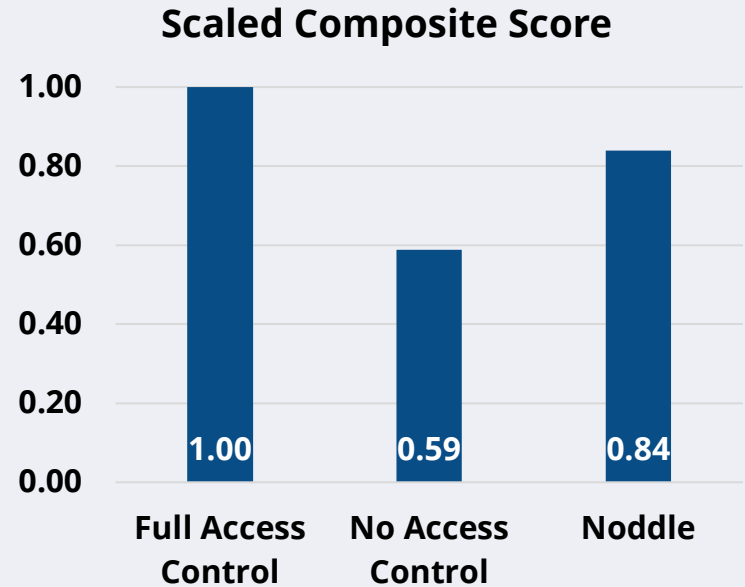
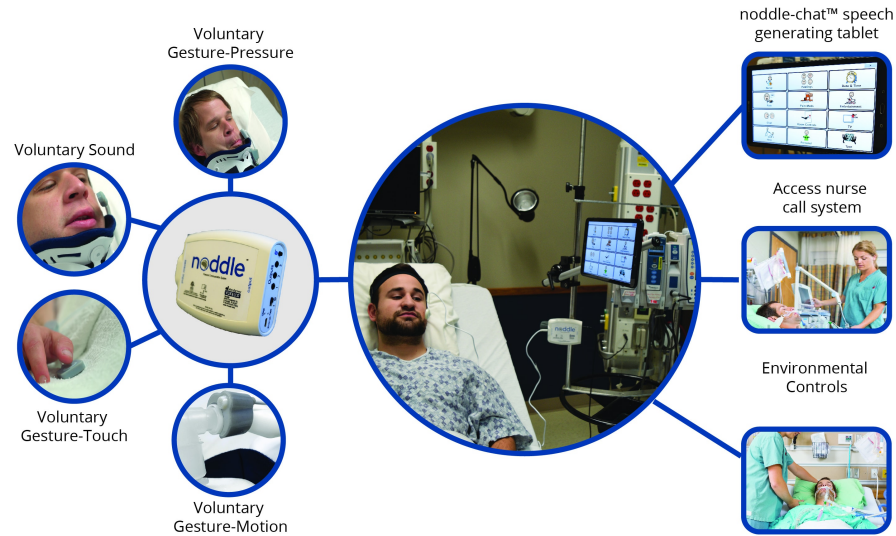
Communication Decision Tree



Evidence Based Intervention

- Our study (reported at ATIA 2018) compared
 - ***no-access control group*** (patients with no effective treatment options)
 - ***full-access control group*** (patients who have current treatment options)
 - ***intervention group*** (patients for whom the noddle® is the only treatment option)
- Basic Question: Will patients' perceptions of their ability to summon help and communicate with their caregivers be positively impacted by having access to our intervention?
 - The primary data comes from exit survey questionnaires administered on the day of or the day prior to a patient's discharge from the hospital.

Clinical Trial Results



Some Illustrative Cases



The Problem Of Thinking “Short-term” Rather Than “Long-term”

Medical Decision Making and End-of-Life Communication Needs

- Avoid thinking about “difficult conversations” until it may be too late.
- Avoid failing to appreciate the progression of a disease and an unpredictable time course.
- Anticipate:
 - Decline in the ability to speak or write
 - Cognitive decline

What is “Giving Hope”

“The word *hope* first appeared in English about a thousand years ago, denoting a combination of **confidence** and **desire**. But what I desired—life—was not what I was confident about—death.”
(Kalanithi, 2016 , p133)

Elements Of Medical Decision Making

- Competence to make decisions
- Problem of reliance on yes/no responses
- Need for Communicate Patient-Provider Communication

Societal Challenges

- Patients & family inclination to avoid talk about death and dying until it is too late.
- Healthcare professionals' reluctance to be bearer of "bad news". Not knowing how to talk about death and fear of negative reactions.
- Appreciating cultural differences with regard to medical decision making and end of life conversations

Societal Solutions

- Early post-diagnosis engagement of patient & family
 - Training healthcare professionals
 - Seeing it as a process not a “one off”
- Community-wide initiatives
 - Gunderson Lutheran Hospital, La Crosse Wisconsin, Advanced Directives Plan

To Support Medical Decision Making

- Have a range of communication templates that would enable non-speaking individuals to
 - indicate their preferences
 - solicit information about the consequences of both making or not making a particular decision.
- Make it easy for individuals to demonstrate an understanding of the consequences of certain decisions about their care.
- Insure that their wishes on medical and spiritual issues are as unambiguous as possible and clearly grounded in their current situation.

Supporting Psychological & Spiritual Needs

- Providing the means to initiate “difficult conversations”
 - Confronting likelihood of death
- Providing the means to express a wide range of emotions
 - Anger and humor are what make us human
- Providing the ability to control interactions
 - start, continue, postpone, end & cutoff
- Provide the means of discussing beliefs related to
 - Mortality & Afterlife
 - Prayer and intercession of a higher power
 - Wishes related to funeral/ memorial service rituals
 - Burial, Cremation, Organ donation...

Medical Decision Making/EOL Communication Templates

The screenshot shows a software window titled "Chat Editor (Chat Editor)" with a menu bar containing "Settings", "Library", and "Help". Below the menu bar is a toolbar with icons for back, forward, home, stop, and close, along with the text "Edit Mode" and "Capture". The main area of the window contains a grid of buttons for communication templates. The buttons are arranged in a 4x4 grid, with the bottom-left button being orange and labeled "Go Back". The other buttons are yellow with black text. The text on the buttons is as follows:

Questions about condition.	Patient Questions	General Conversation	Prognosis
Reaction to Prognosis	Emotions	Discuss Advanced Directives	Questions about Advanced Directives
Religion and Spirituality	Dialysis	Ventilation	Nutrition and Hydration
YES	NO	MAYBE	LATER
Go Back			Keyboard

Some Illustrative Cases

- Absent Advanced Medical Directive –Losing Control
 - “chocolate ice cream and football” The value of the “difficult conversations”
 - “dueling siblings” – Emergent Trauma
- Early Advanced Medical Directive –Changing Wishes
 - “living with the disease” perspective changes

Supporting patients in end of life: Summary

- The decision to accept or terminate life-sustaining treatment is always a painful one.
- Allow the patients to have a significant role in those decisions
- The approach to empowerment of individuals who may be unable to speak and who may only be able to generate a single intentional gesture has enabled individuals
 - To remain engaged with their caregivers.
 - To actively participate in medical decision making even in terminal end-of-life scenarios.

Making The Case For Building A Culture Of Communication



- Patients who experience communication barriers are at a 3 times higher risk of experiencing an AE.
- Addressing communication barriers can lead to
 - 681,440 fewer AEs annually
 - \$6.8 billion cost reduction
 - Lower malpractice claims
 - Higher patient satisfaction
 - Lower staff stress

Steps To Establishing a “Culture of Communication”

- **Assess your patients’ communication barriers**
- **Engage others on your team in a discussion/collaboration**
- **Establish standards of care that include AAC strategies**
- **Provide training on communication strategies to nursing and other healthcare providers**
- **Advocate for resources to overcome all communication barriers**

Questions



For More Information

The University of Iowa Assistive Devices Lab

<https://clas.uiowa.edu/comsci/research/assistive-devices-lab/home>

Voxello

www.voxello.com

Thank you

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ISAAC is excited to announce that registration is now open for the 18th Biennial Conference of the International Society for Augmentative and Alternative Communication, being held at the Gold Coast Convention and Exhibition Centre on the **Gold Coast, Queensland, Australia, from July 21 through 26, 2018.**

The ISAAC 2018 Conference provides four days focusing on the latest in research and clinical innovations in AAC plus social events with fantastic networking and entertainment. The conference also includes an exhibit with opportunities to meet representatives from companies who work for best outcomes in communication for all.

As well as the main conference, registration for the Pre-Conference Workshops and AAC Camp is also open. ISAAC 2018 Pre-Conference Workshops offer an opportunity to hear about best-practice in AAC from presenters around the world. The AAC Camp, "Let's Get Real" is themed around reality TV and will provide lots of fun and learning for AAC users of all ages.

Register today at www.isaac-online.org and we'll see you on the Gold Coast, Australia in July 2018!