

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

# Webinar Logistics



## ASHA CEUs – live webcast

- Free - USSAAC members;  
\$25 – non-USSAAC members
  - Participant form and instructions on website
  - Can only receive CEUs for live webinar
  - **NOTE: You need to scan and send participant form to [smeehan8@ku.edu](mailto:smeehan8@ku.edu) by 5/21**
- Archived webcasts  
<https://www.isaac-online.org/english/news/webinars/>
  - Enter questions in the chat box. We will answer as time permits.



# WHAT WILL YOU LEARN?

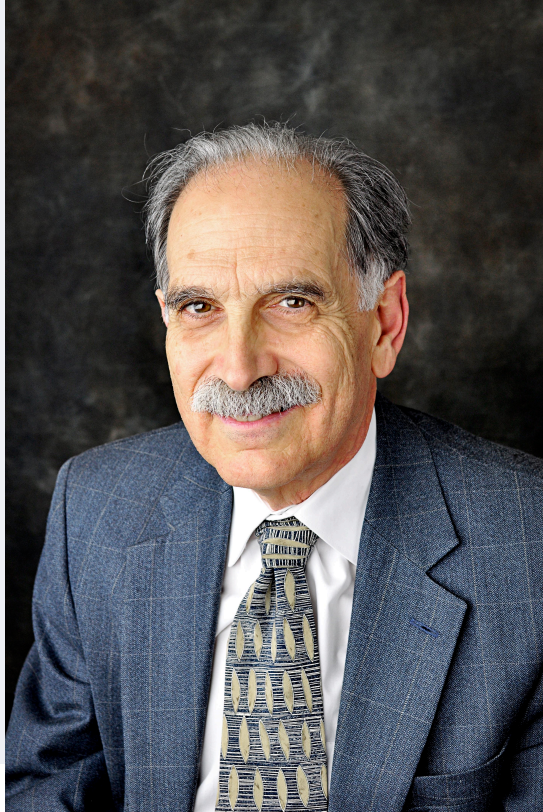
- Understand the impact of communication barriers on medical outcomes
- Understand the human and financial costs of adverse medical events
- Understand the role of AAC in overcoming communication barriers in the ICU
- Identify strategies for supporting patient participation in medical decision making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

## Supporters

USSAAC would like to recognize and thank our Institutional and Corporate Members for their support



# Introduction



**Richard Hurtig, Ph.D., ASHA Fellow**

**Professor Emeritus**

**Department of Communication Sciences &  
Disorders**

**Director of the Assistive Devices Laboratory**

**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®
-

# Acknowledgements

- The UI research team includes: Rebecca Alper, Karen Bryant, Krista Davidson, Debora Downey, Claire Gorman, Briar Kleeman, Karen Stenger, & Michele Wagner
- Clinical Partner Sites: University of Wisconsin, St Louis Children's Hospital, Children's Hospital of Philadelphia, Thomas Jefferson Neurosciences Hospital
- National Institute of Nursing Research of the National Institutes of Health: Award Number R43NR016406 & R44NR016406. The content of this presentation is solely the responsibility of the author and does not necessarily represent the official views of the National Institutes of Health.

# Outline

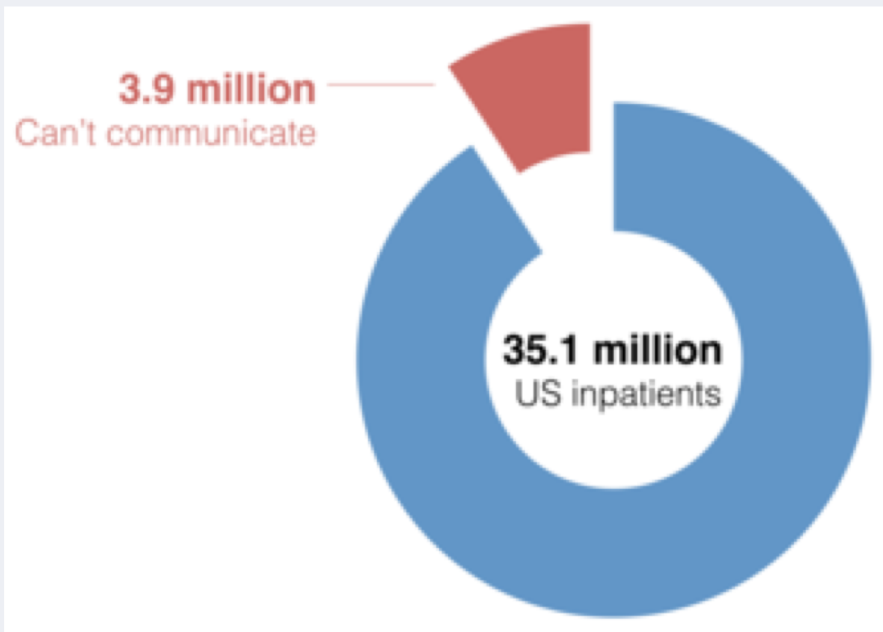
- Communication Barriers in the ICU
- Preventable Adverse Events: Impact on patients and healthcare costs
- Strategies to address access & communication needs
- Medical Decision Making and End of Life Conversations
- Building A Culture of Communication: Improving outcomes, improving patient satisfaction 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
<b>33</b>	<b>33</b>

# Elements of Patient-Provider Communication

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

# 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

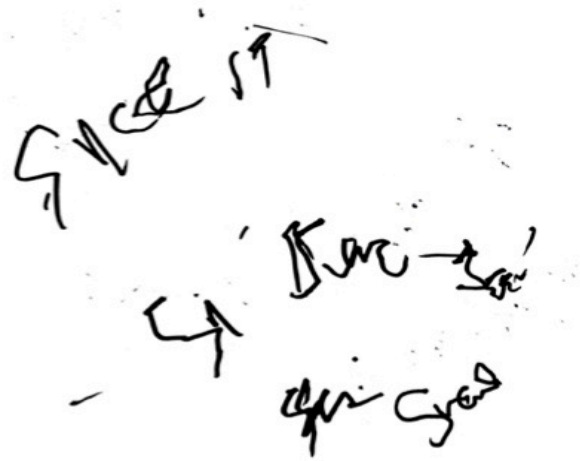
- Pain Management
- Fall Prevention
- Pulmonary Issues
- Adverse Drug Reactions
- Delirium & Patient Stress

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

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

Problem with  
Paper & Pencil

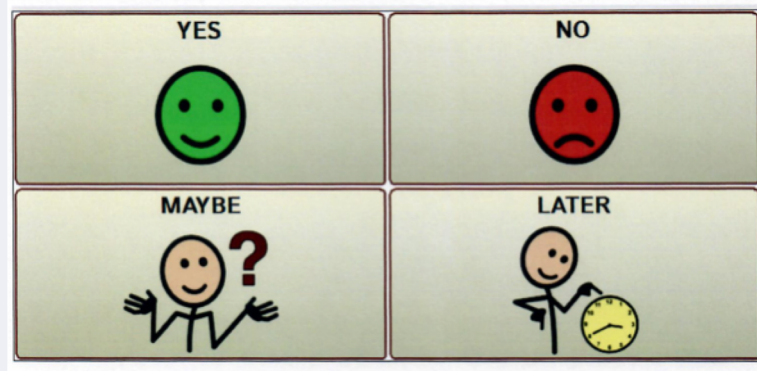
Illegible writing



The image shows a piece of paper with handwritten text that is completely illegible. The writing is dark and appears to be on a textured or possibly wet surface, which has caused the ink to bleed and become blurry. The text is arranged in three lines, but the characters are too distorted to be recognized.



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

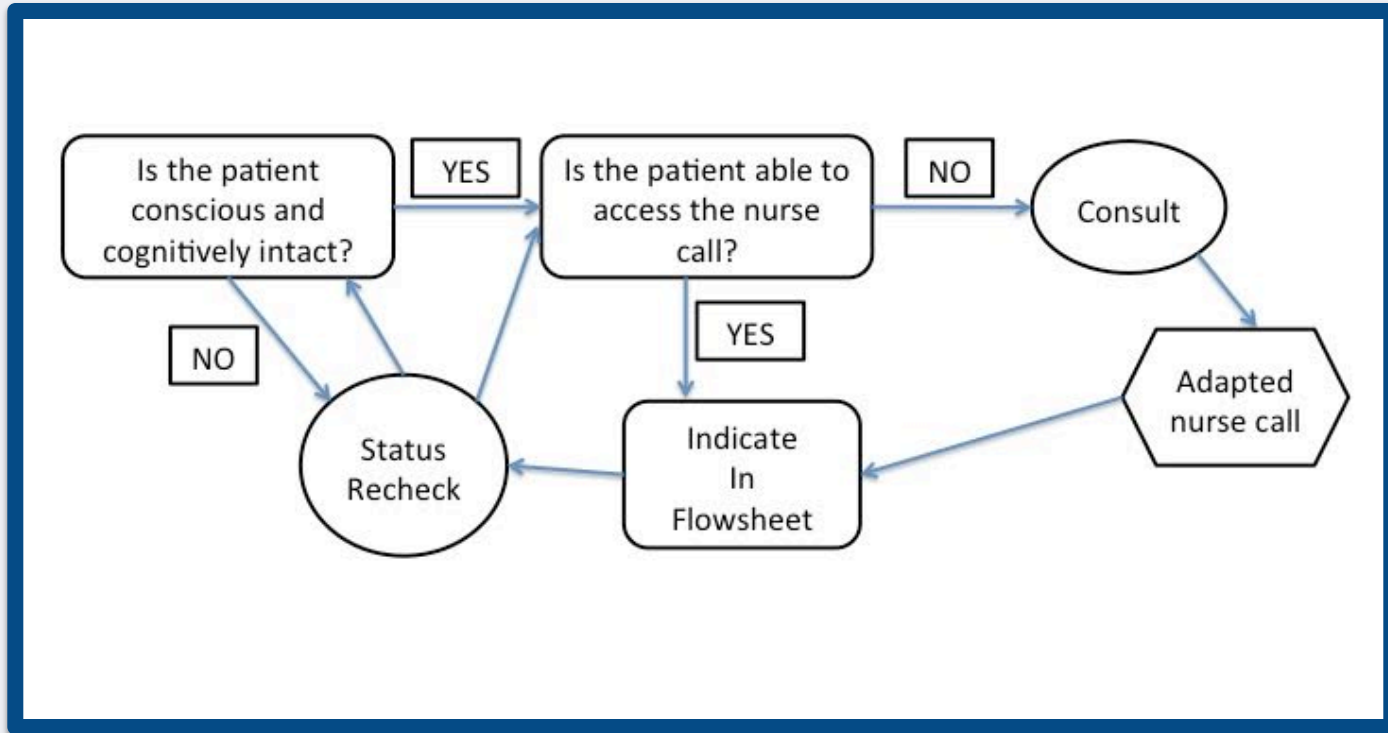
- All conscious patients should have access to the nurse call system.
  - Standard nurse call pendant
  - Standard alternative switches
    - **Pressure plate**
    - **Pressure bulb**
    - **Breath call**
- Patients who lack the motor skills to use the call pendant (pillow speaker) or the standard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

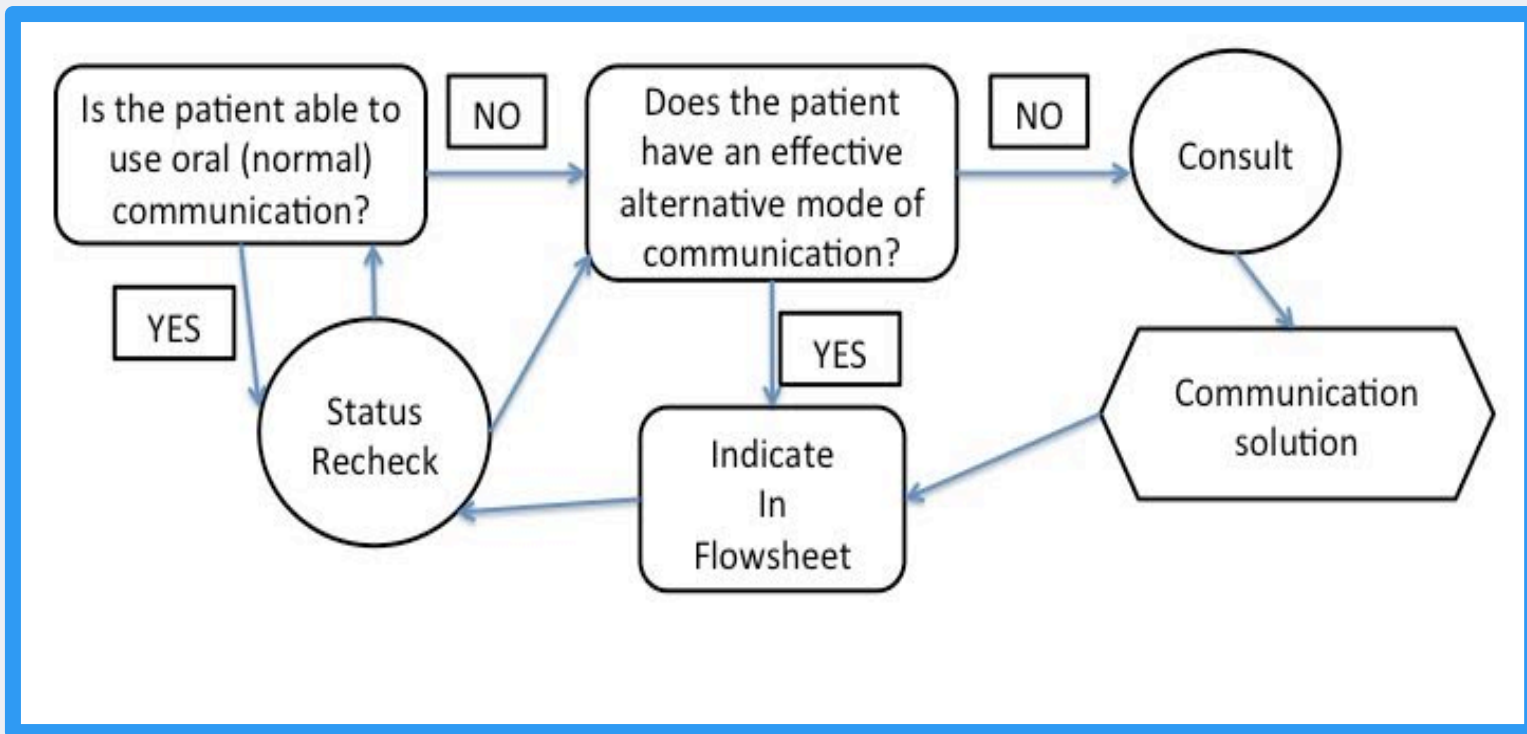
# Nurse Call Decision Tree



# 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

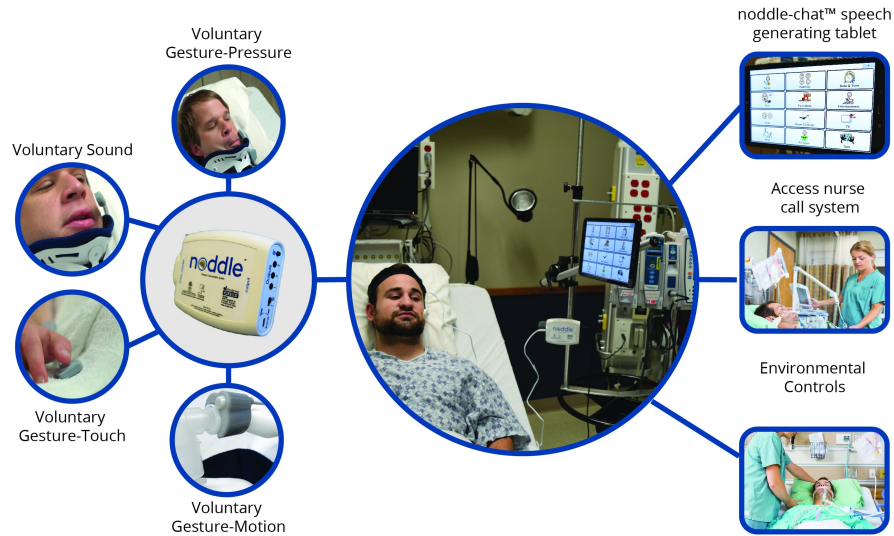
# Communication Decision Tree



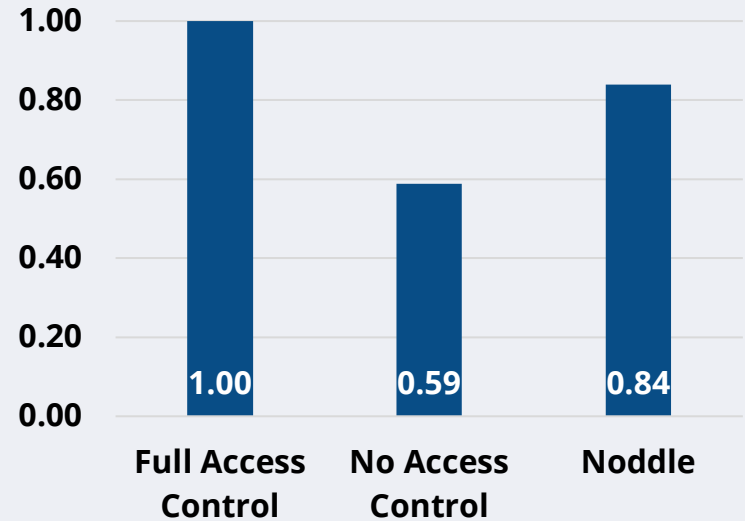
# Evidence Based Intervention

- 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



## Scaled Composite Score



# 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 is a toolbar with icons for navigation (back, forward, home, stop) and a "Capture" button. The main area contains a grid of buttons for communication templates, each with a small dropdown arrow in the top right corner. The buttons are arranged in a 4x4 grid, with the bottom-left cell containing a "Go Back" button with a speech bubble icon. The bottom-right cell contains a "Keyboard" button. 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](http://www.voxello.com)

# Thank you

## ASHA CEUs

<http://www.ussaac.org/webinars>

- Free to USSAAC members
- **\$25 for non-members.** A link to PayPal is available at <http://www.ussaac.org/ceu-information>
- Go to website for instructions, participant form and Certificate of Attendance
- Scan and send CEU form to [smeehan8@ku.edu](mailto:smeehan8@ku.edu) by May 21, 2018
- **UP NEXT: 6/5/2018 Eastern: Sarah Blackstone and Amy Goldman: People Who Use AAC in Emergencies and Disasters: Tales from the Trenches**

## Evaluation Survey

<http://www.ussaac.org/webinars>

- Please fill out our short survey

## Archived Webinars

<https://www.isaac-online.org/english/news/webinars/>

- **Video & slides for all webinars**
- **Available in a few days**



**ISAAC** is excited to announce that registration is now open for the 18<sup>th</sup> 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](http://www.isaac-online.org)** and we'll see you on the Gold Coast, Australia in July 2018!