

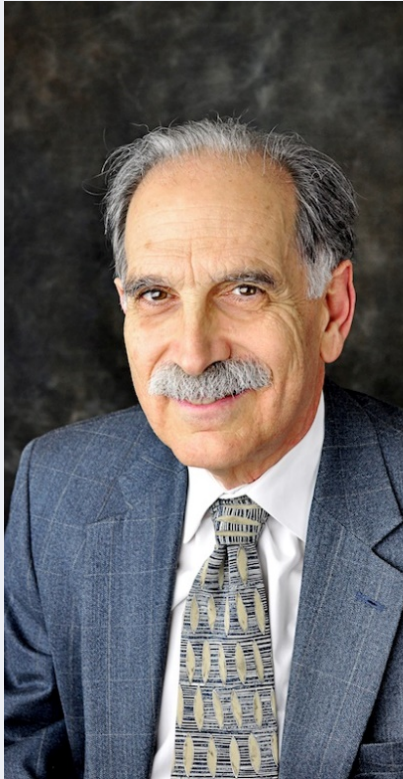


**VOXELLO**<sup>®</sup>

BETTER OUTCOMES.

Overcoming barriers to patient-provider communication: Mitigating the risk of preventable adverse events

# Introduction



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*National Institute of Nursing Research of the National Institutes of Health under 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.*



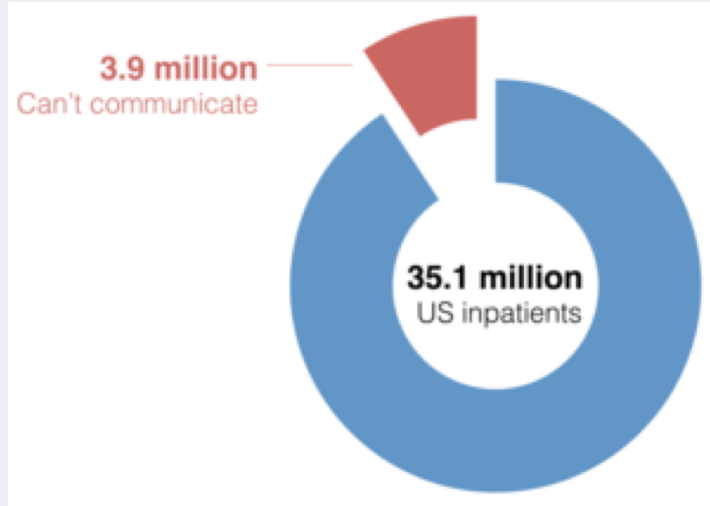
# Purpose-Process-Outcome

- Patient-Provider Communication : Barriers and Impact
- Discuss current/desired state with these barriers
- Current Solutions and their limitations
- Potential solution
- Summary
- Q+A/Next Steps?

# 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)
  - Individuals With Limited English Proficiency

# Current State—U.S. Healthcare System

- High rate of Preventable Adverse Events
- Hospitals Must Cover High Cost of Treating Preventable Adverse Events



# Preventable adverse events pose a significant ethical and financial burden on the United States health care system.

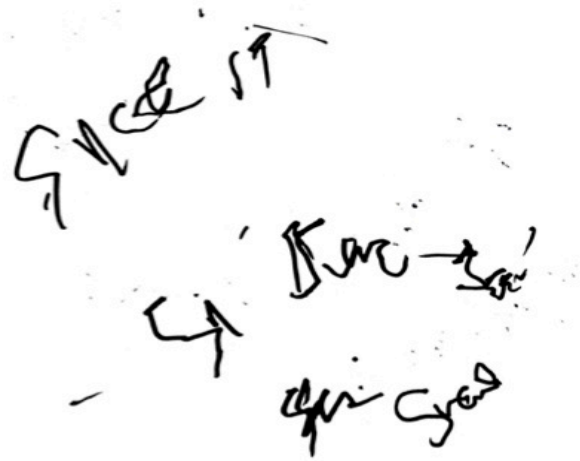
Adverse Event	Number	Average Cost	Total Cost
Adverse Drug Reaction	1,427,266	\$5,000	\$7.1 Billion
Falls	254,995	\$7,234	\$1.8 Billion
Pressure Ulcer	1,151,021	\$17,000	\$19.5 Billion
Ventilator Associated Pneumonia	38,958	\$21,000	\$818 Million

# Nurses' Communication Strategies

Communication strategy	Percentage 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

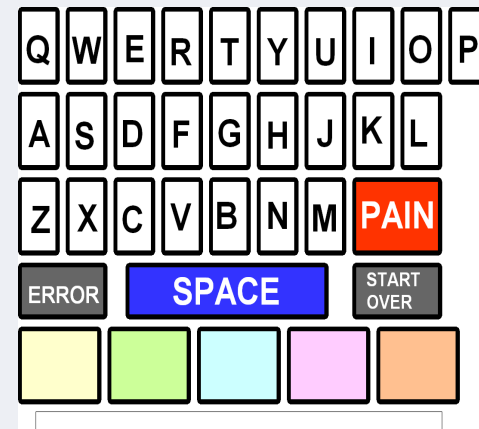
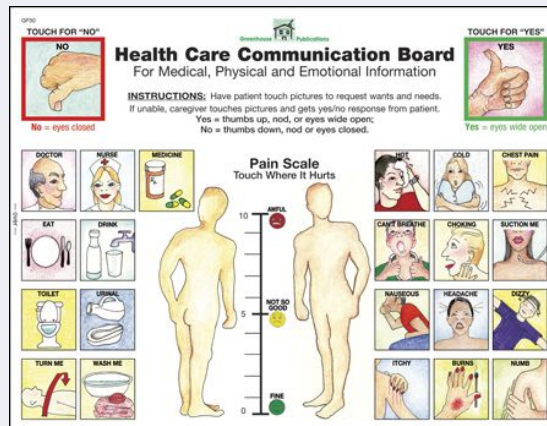
Problem with  
Paper & Pencil

Illegible writing



Handwritten text that is illegible due to being rotated and written in a cursive style.

Problem with  
alphabet and  
symbol boards



## 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

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

How did  
we get  
here?

- 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



# Healthcare drivers for change

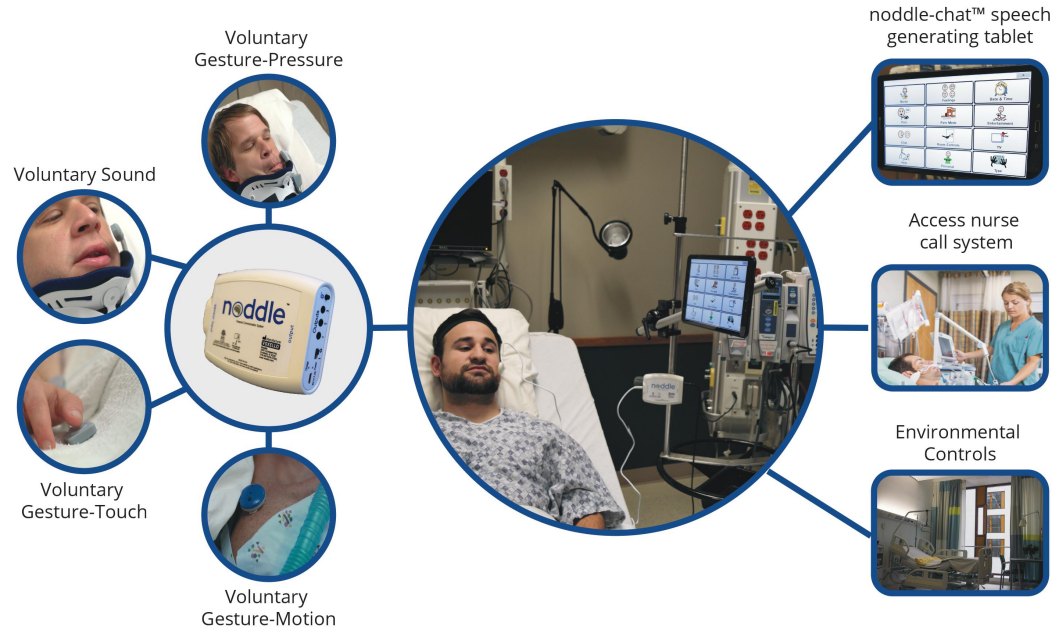
## External

- As of 2008, all costs resulting from a preventable adverse event are borne by the hospital
- In 2012 the Joint Commission hospital accreditation standards mandate that all patients are provided effective means of communication with caregivers

## Internal

- Hospital understand they have a critical responsibility to reduce preventable adverse events
- A chief focus for most hospitals involves empowering patients and caregivers in planning and executing the care process leads to shorter length of stay and improved patient satisfaction

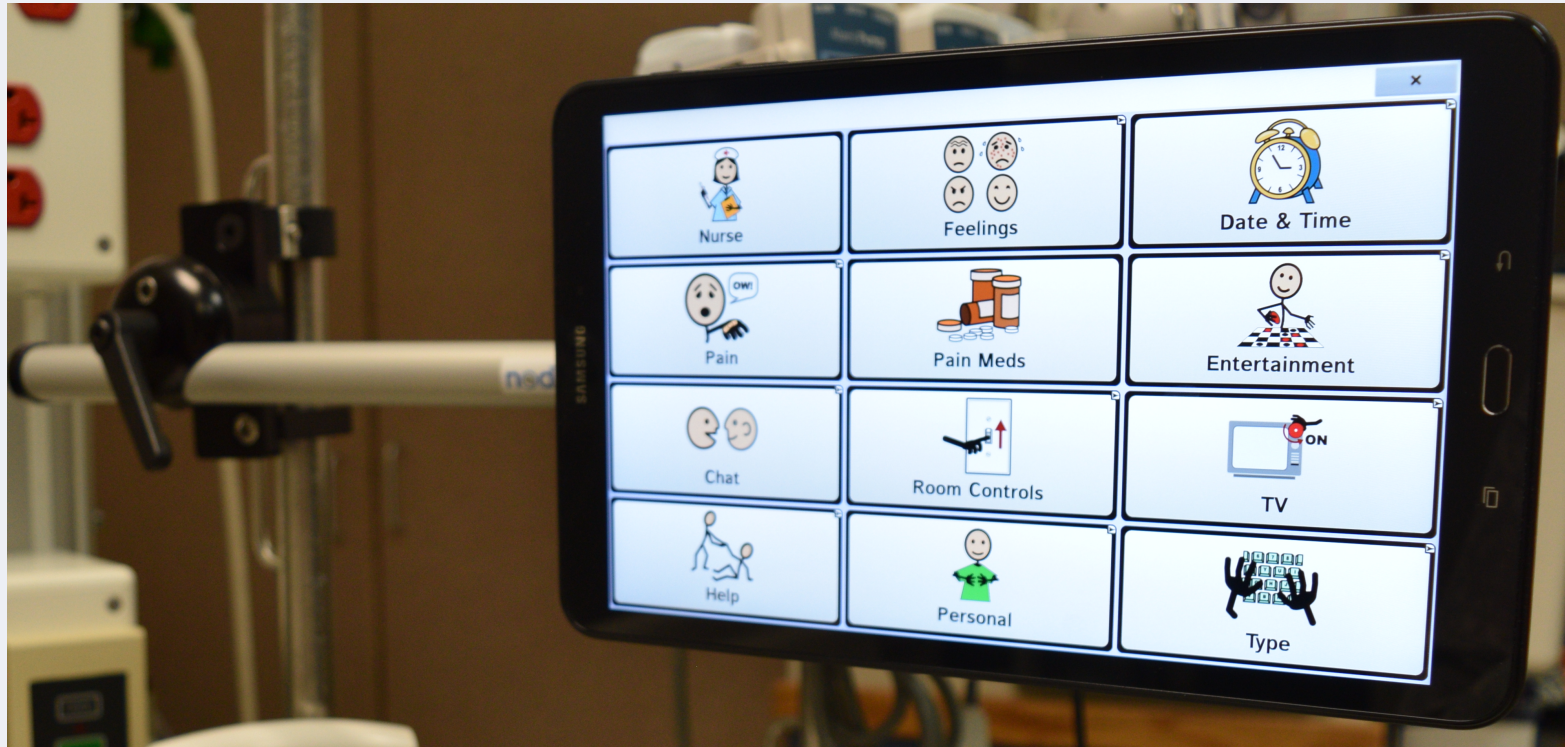
A Solution to  
these problems



# What is the noddle<sup>®</sup>?



# What is the noddle-chat™?



# Summary

## Strong ROI Potential

- 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

# Testimonials



# Questions



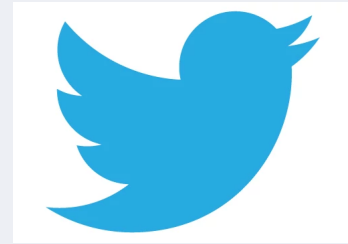
# Next Steps

- Engage with us on assessing patients' communication barriers
- Engage others on your team in this discussion/collaboration
- Pilot the technology



Stay tuned for a follow-up e-mail with a short, 90-second video showing the noddle in action.

Be sure to connect with us on Social Media!



# Thank You!

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