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BETTER OUTCOMES.

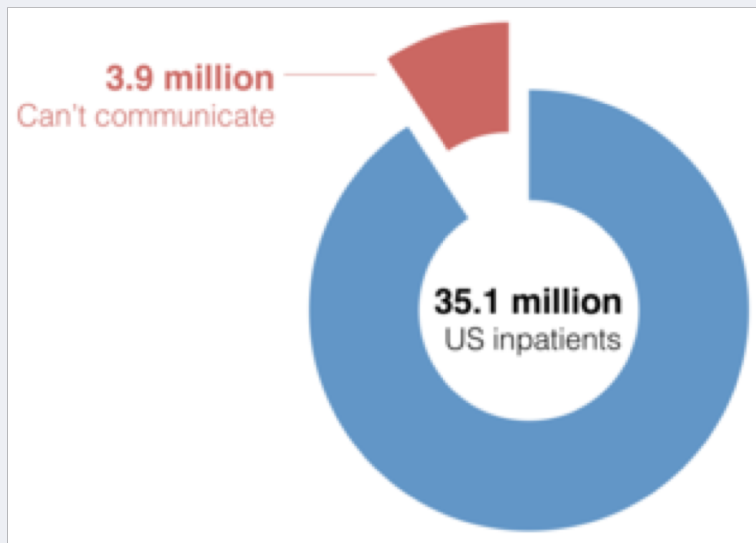
Overcoming barriers to patient-provider communication in the ICU

Overcoming Communication Barriers



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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 call
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

What does **noddle**[®] look like at the bedside?



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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/ADRD)
 - 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

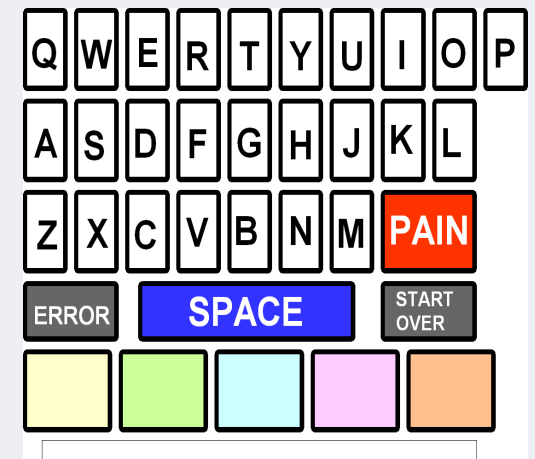
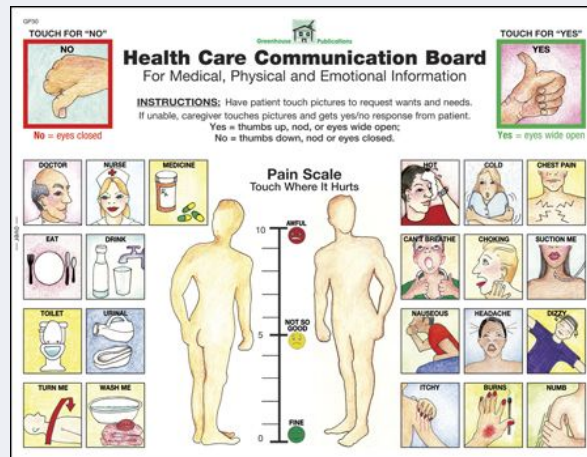
Problem with
Paper & Pencil

Illegible writing

Handwritten text that is illegible due to being written on a textured surface like paper.

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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



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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

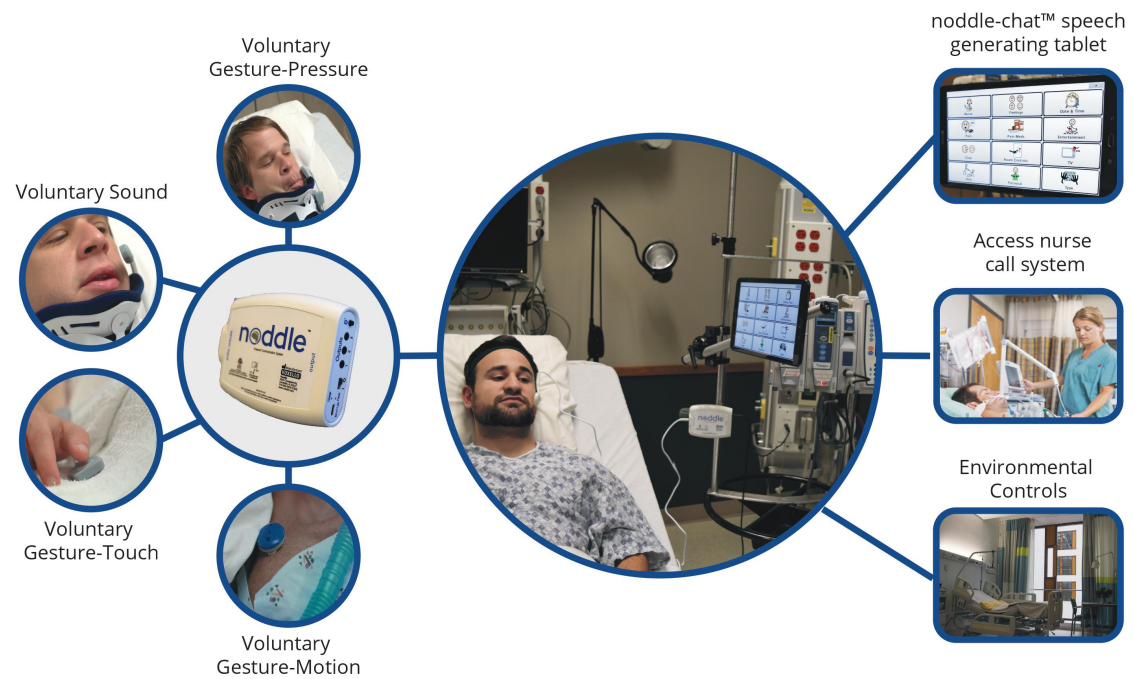
External

- 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



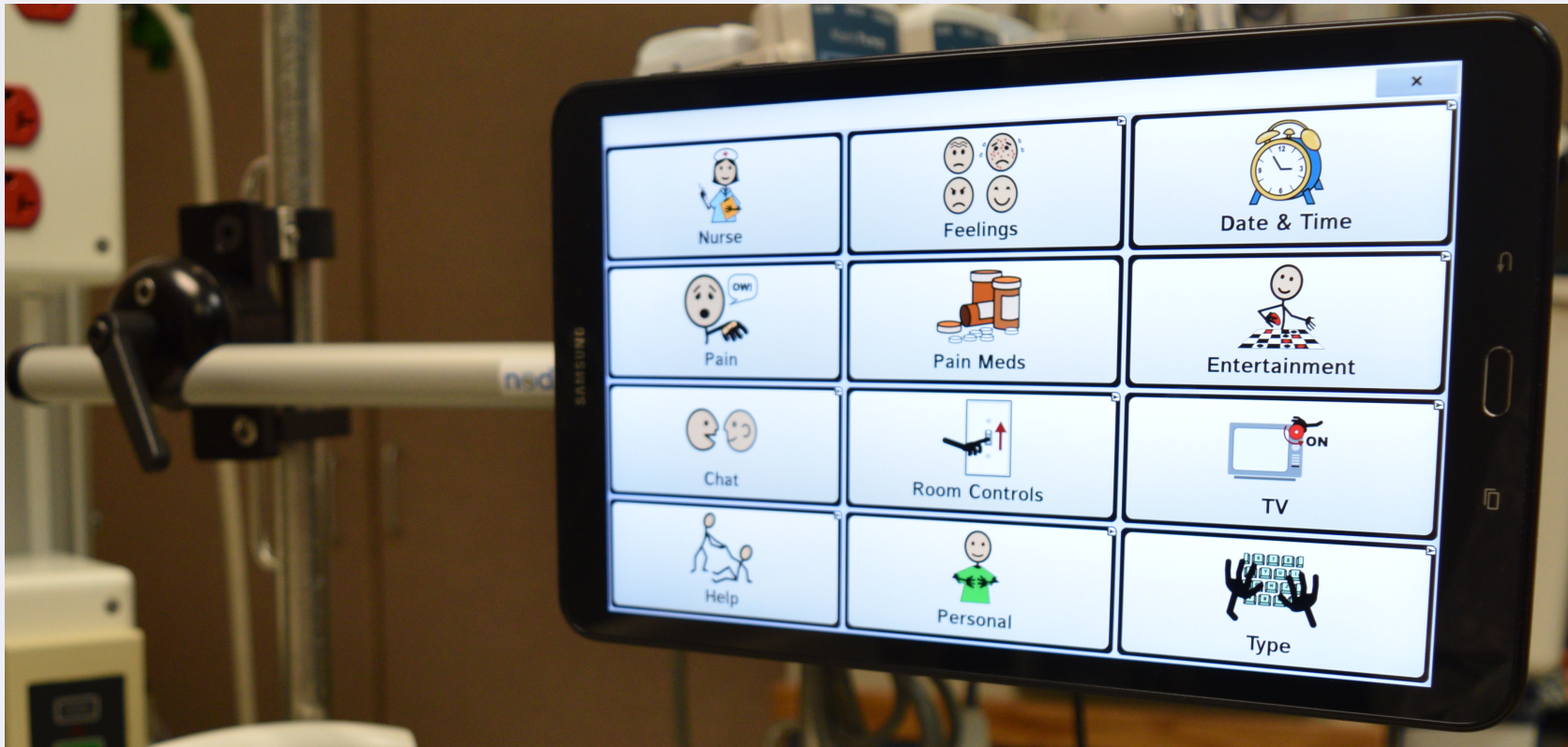
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What is the noddle[®]?



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What is the **noddle-chat™**?



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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

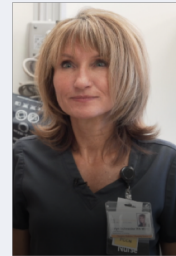
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Testimonials



*Dr. Matthew Howard, Chair and DEO, Department of Neurosurgery
John C. VanGilder Chair in Neurosurgery at UIHC*

Before the noddle, we'd use whiteboards, letterboards, or try and read lips. It was so frustrating for patients and for our nursing staff. We save so much time with the noddle because it's a more direct way to communicate...



*Jolyn Schneider, BSN, RN, PCCN,
Intensive and Specialty Services,
Burn/Trauma at UIHC*

The noddle helps us to provide a higher standard of care. It decreases the patient's frustration with not being able to communicate with us effectively.... the noddle makes a patient feel that the University is doing the best it can to provide them quality care.

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Illustrative Cases



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Next Steps

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

More info at www.Voxello.com and on social media



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