



The Impact of Communication Barriers on Adverse Events in Hospitalized Patients

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Learner Outcomes

1. Identify common adverse events
2. Describe communication barriers faced by hospitalized patients
3. Explain the impact of adverse events on the US healthcare system

Agenda

- Overview And Background On Barriers To Patient Provider Communication And Adverse Events
- Data On Incidence & Costs Associated With Adverse Events
- Data On Estimated Reduction Of Adverse Events And Cost Savings If Communication Barriers Are Addressed
- Impact Of Addressing Communication Barriers On Patient Perceptions
- Questions And Wrap-up

Background: Patient-Provider Communication

- Effective patient-provider communication plays A role in:
 - Medical Outcomes
 - Patient Satisfaction
 - Nurse/Caregiver Satisfaction
- Barriers to effective patient-provider communication include:
 - Physical Limitations (e.g. Access To Nurse Call)
 - Inability To Speak Or Write
 - Linguistic Barriers

Background: Patient-Provider Communication

Care Standards Mandate that patients must be able to summon help and effectively communicate with their caregivers.

- **The National Joint Committee's Communication Bill of Rights** (1992) identified communication as a basic right and declared that individuals with impaired communication have the right to functional assistive technology.
- The **Joint Commission** (2010) has deemed effective communication, cultural competence, and patient-and family-centered care vital components of safe, quality care and has made that part of their accreditation standards

Background: Patient-Provider Communication

Ideally patients should be able to

- Summon help by accessing nurse call system.
- Communicate why they summoned help.
- **Unfortunately many patients can't**
 - **In intensive care units**
 - 33% of conscious patients can't access the nurse call
 - 33% of conscious patients can't speak because of mechanical ventilation
 - **In non-intensive care units**
 - 9% of conscious patients can't access the nurse call

(Zubow & Hurtig 2013)

Adverse Events-1

- The Institute of Medicine report, *To Err Is Human: Building a Safer Health System*, highlighted the pervasive problem of adverse events (AEs) in health care (Kohn et al, 2000).
- A key element of that report was the differentiation of **preventable AEs** from unavoidable AEs.
- What was startling was that the **preventable AEs** may have contributed to somewhere between **44,000 and 98,000** deaths in US hospitals each year.
- ***Adverse Drug Reactions, Ventilator Associated Pneumonias, Pressure Ulcers and Patient Falls*** are among the most prevalent preventable AEs.

Adverse Events-2

- The Department of Health and Human Services (HHS) report on the incidence of Medicare beneficiaries' adverse events (Levinson, 2010) revealed that **13.5%** of patients had experienced AEs.
- **1.5%** percent of patients had experienced adverse events that contributed to their deaths.
- As a result of their inability to effectively communicate with medical providers, approximately **15,000** Medicare patients' had died.
- Despite increased hospital awareness of patient safety, **18%** of admitted patients were harmed by medical interventions with **63% of those injuries would have been preventable.** (Landrigan et al., 2010)

Adverse Event Risk

- Patients with communication impairments **3x more likely** to experience a preventable **adverse event** than patients without communication impairment (Bartlett et al., 2008).
 - Physical barriers
 - Linguistic barriers
- Communication /Language Barriers also impact adverse events in the hospitalized pediatric population.(Cohen 2005).



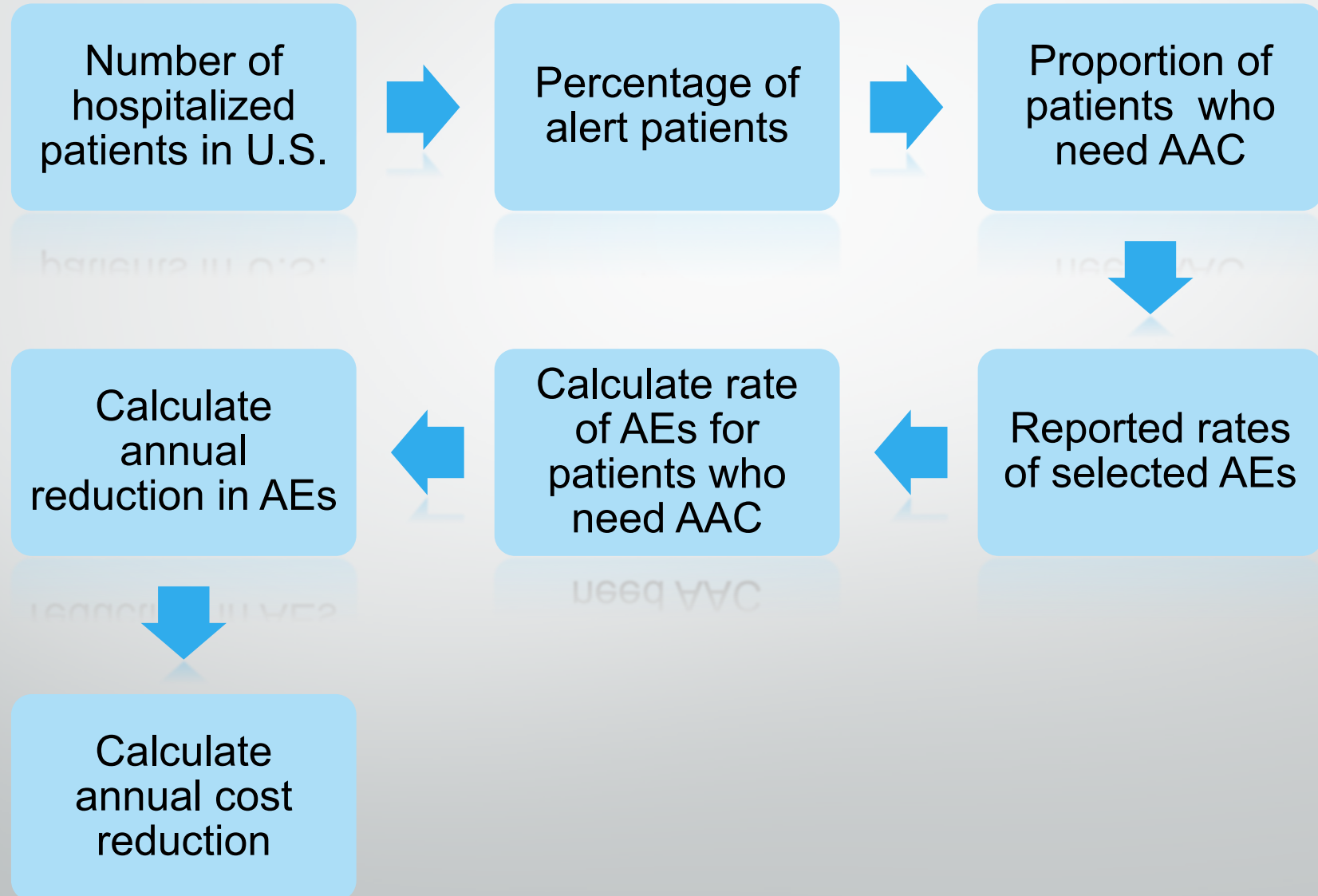
Impact of Communication Barriers on Adverse Events

- Use AHA and HHS/AHRQ national data to
 - Obtain up to date incidence of AEs
 - Obtain current costs associated with treating preventable AEs
- Estimate % of inpatient population facing a communication barrier
- Partition incidence rates for the increased risk populations
- Estimate the incidence and costs associated with the increased risk
- Estimate the potential reduction in AEs if hospitals address communication barriers
- Estimate the cost savings to hospitals from the reduction in AEs

Adverse Events & Associated Costs

Adverse Event	Annual Number of Cases	Average Cost Per Case
Pressure Ulcers	1,151,021	\$17,000
Ventilator-Associated Pneumonia	38,958	\$21,000
Patient Falls	254,995	\$7,234
Adverse Drug Reactions	1,427,266	\$5,000

Calculating Risk and Cost Reduction



Annual AE Occurrence and Cost Reductions

Adverse Event	Annual Reduction in Number of Cases	Annual Cost Savings (\$ Millions)
Pressure Ulcers	221,820	4,000
Ventilator-Associated Pneumonia	1,888	40
Falls	49,141	355
Adverse Drug Reactions	275,057	1,400
Total	547,906	5,795

Next Steps: Eliminate Barriers



Voxello noddletm Clinical Trial (ongoing)

- Provide access to nurse call and speech generating device
- Study Groups
 - Traditional Access and Communication (Control1)
 - No Access and Impaired Communication (Control2)
 - Novel AT/AAC system (noddletm & noddle-chattm)
- Outcomes Measures
 - Patient exit surveys

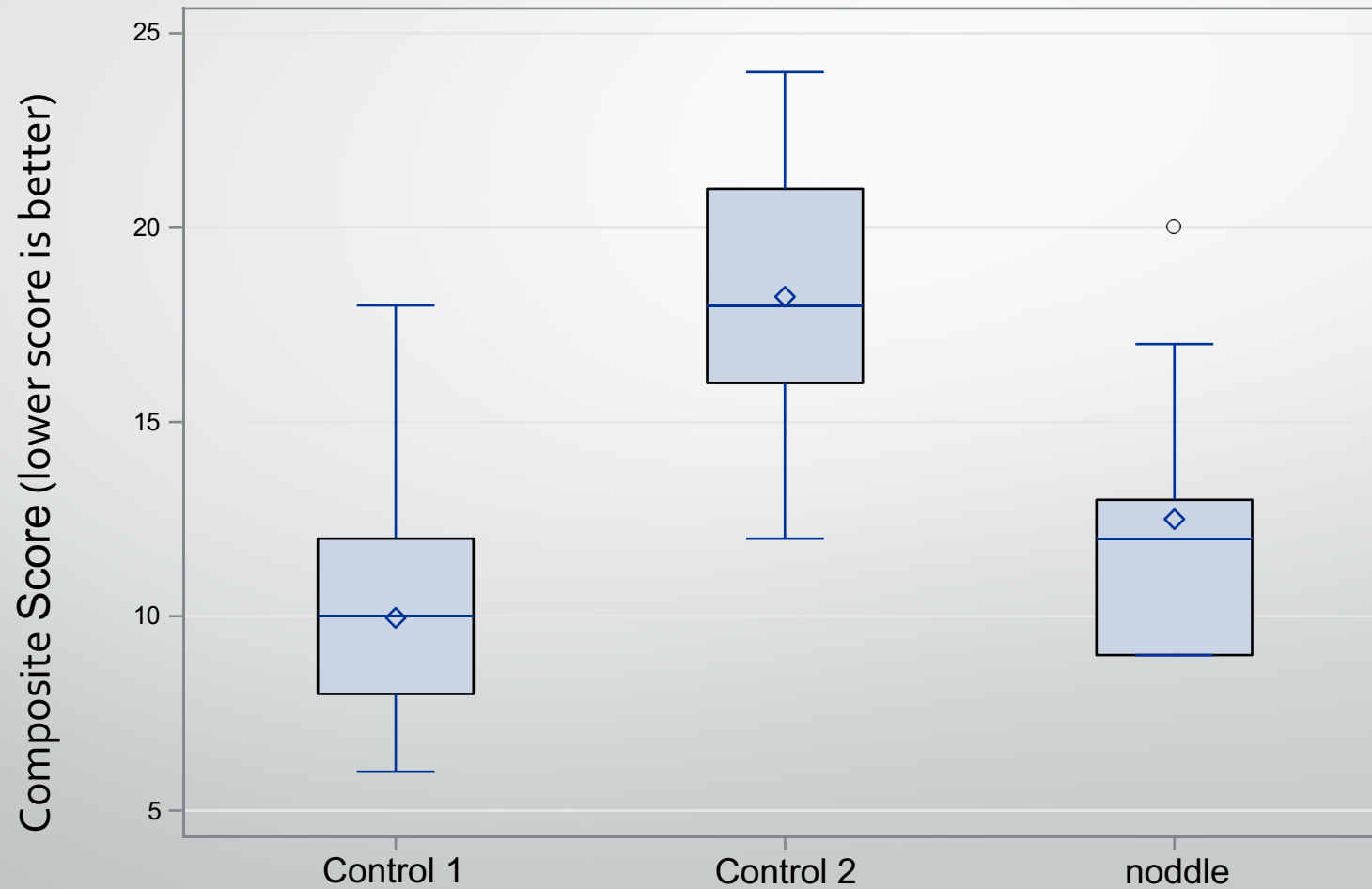
Patient Survey

- 5-Point Likert Scale (strongly agree-strongly disagree)
- Survey items
 - I was able to independently summon help when I needed it.
 - I had no way to let others know if I needed help or was in pain.
 - I was not able to independently get my nurse to assist me.
 - Having the ability to call my nurse made me feel more at ease.
 - Using my nurse call allowed me to help my nurse take better care of me.
 - Having access to my nurse call did not increase my independence.

Preliminary Results

control groups n=100, noddle=10

$F(2,107) = 95.37$ $p < .0001$



Tukey's Studentized Range (HSD) Test

GROUP Comparison	Difference Between Means	
Control1 – Control 2	-8.2637	***
Control1 - noddle	-2.5392	***
Control 2 - noddle	5.7245	***

Comparisons significant at the 0.05 level are indicated by ***

Summary

- Reducing risk for patients experiencing communication barrier
 - 547,906 fewer AEs annually
 - \$5.8 billion annual cost savings
- Facilitating patient-provider communication is both an ethical imperative and an essential part of a multi-pronged approach for reducing the human and financial cost of preventable AEs.

Questions



Contact

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