



PATIENT SAFETY OVERVIEW

Presented at Medicine Meets Virtual Reality

Heidi B King, MS
Deputy Director
DoD Patient Safety Program
Program Manager
Healthcare Team Coordination
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IOM: QUALITY SERIES

- IOM Report: "To Err is Human: Building a Safer Health System"
- Released 30 Nov 1999
- Used case report format:
 - Two large studies:
 - Colorado and Utah 15K (2.9% AE rate/6.6%death) = 44,000
 - 53% preventable
 - » 29% negligence
 - New York 30K discharges (3.7% AE rate /13.6%death) = 98,000
 - 58% preventable
 - » 27.6% negligence
 - Based on 33.6M Admissions/1997
 - Total National Cost = \$17B to \$29B
 - Preventable adverse events
 - Healthcare costs represent half

⚡ Adverse Event: An injury caused by the medical management of the patient rather than the underlying disease or condition.

⊘ Preventable Adverse Event is an AE attributable to an **error**.

WHAT IS AN ERROR?

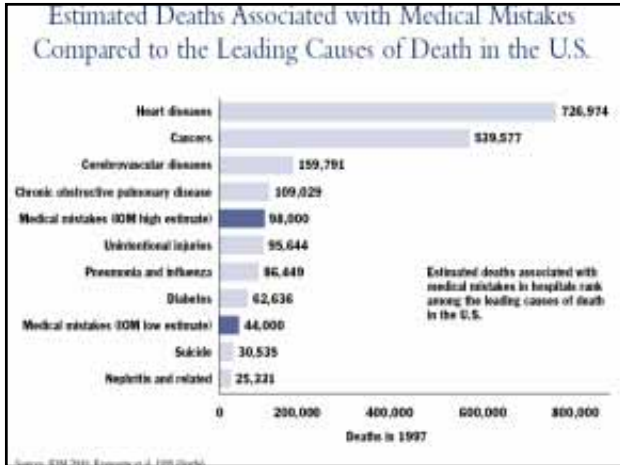
- **Error:** A failure of a planned action to be completed as intended (i.e. error of execution) or the use of a wrong plan to achieve an aim (i.e. error of planning). the accumulation of errors results in **accidents**.
 - IOM 2000, Reason 1990
 - **Error of commission:** An error that occurs as a result of an action taken.
 - **Error of omission:** An error which occurs as a result of an action not taken.
 - JCAHO
- **Accident:** An event that involves damage to a defined system that disrupts the ongoing or future output of that system. (IOM)

IOM: QUALITY SERIES

"To Err is Human: Building a Safer Health System"

- Establish a national focus on patient safety; AHRQ
- Identify and learn from errors: establish nationwide mandatory and voluntary reporting systems
- Raise standards and expectations for improvements in safety through the actions of oversight organizations, group purchasers, and professional groups.

"CREATE SAFETY SYSTEMS INSIDE HEALTHCARE ORGANIZATIONS THROUGH THE IMPLEMENTATION OF SAFE PRACTICES AT THE DELIVERY LEVEL."



Safety in Complex Systems

- Six Sigma Systems
 - Aviation
 - Nuclear Power
 - Marine Shipping
- 3.4 errors/million exposures
 - 99.9996% probability of surviving a commercial flight
- Medicine runs 1 error per 2,000 exposures
 - 1 in 20 chance of being injured if hospitalized

What would a 1% error rate in other high-reliability organizations look like?

ERRORS PER HOUR

- 1 unsafe plane landing at Chicago O'Hare Airport
- 160,000 lost pieces of mail
- 320,000 bank checks deducted from the wrong account



♥ **Patient Safety** – Freedom from accidental injuries during the course of medical care; activities to avoid, prevent, or correct adverse outcomes which may result from the delivery of health care. (IOM)

WHO: Increased Risk

- Older patients (> 64yr)
- Youngest patients (< 1yr, especially neonates)
- High co-morbidities
- Poly-pharmacy
- Literacy issues
- Longer stays in hospitals

Remember all patients are at risk once they enter our environment!

WHERE & WHEN

Any time a transition in care takes place

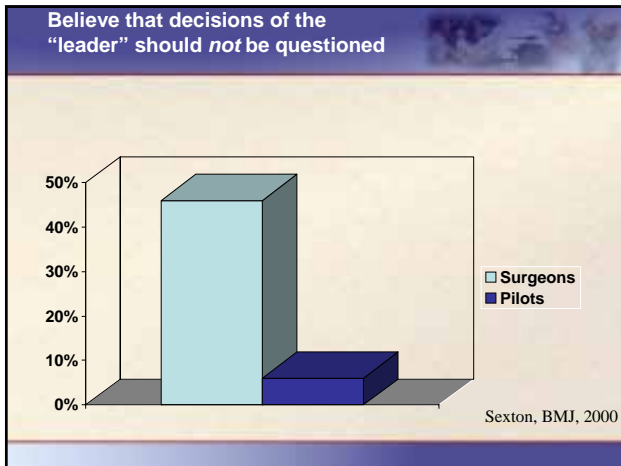
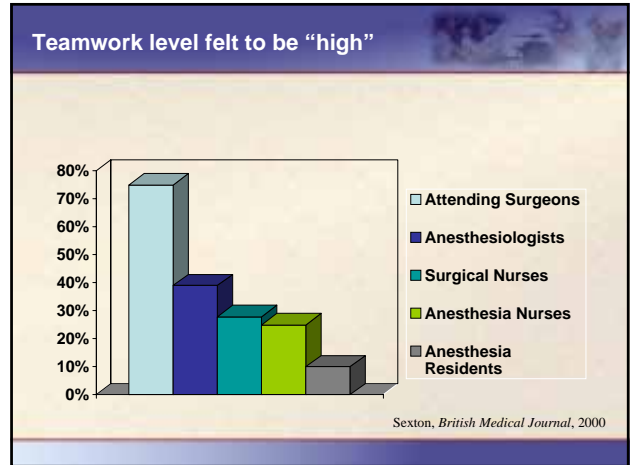
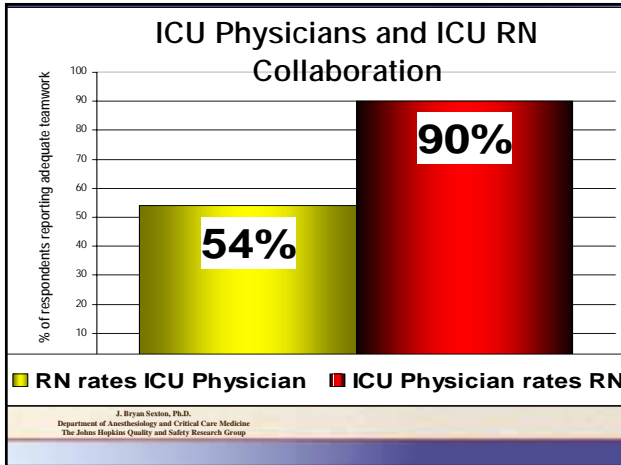
- Admission
- In hospital transfer
- Sign-out/shift change
- Discharge
- Clinic
- Consultant

Procedures and Treatment

- Medication (50% reported errors)

Complex-high stress-high turnover environments

- Intensive care units (adult & pediatric)
- Emergency departments
- Operating rooms
- Specialty Units
 - ✓ Oncology Units
 - ✓ Dialysis
 - ✓ Labor & Delivery Units



Conflict Resolution in the OR

- Conflict was observed in 10% of flights and 10% of surgeries



• Resolved in 80% of instances in cockpit



• Resolved in 20% of instances in operating room

