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## A Safety Culture Transformation at a Children's Hospital

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### In 2009, We Passed the 10 Year Anniversary of the IOM Report – "To Err is Human"

Are Hospitals Safer in 2011?

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### Hospitals fall short on safety, quality: Leapfrog

Business Insurance, April 15, 16, 19, 20, 2009

**Most U.S. hospitals still have a long way to go** before they meet even minimum safety and quality standards, according to the 2008 Leapfrog Hospital Survey Results report.

"Health care for so long has operated behind a curtain," she said. "We haven't fully understood the level of quality that we're dealing with."

Indeed, Laurel Pickering, executive director of the New York Business Group on Health, said **none of the 50 members of her coalition are using Leapfrog data** in their negotiations with insurers and health care organizations.

By contrast, **insurers do use the Leapfrog report**, along with their own claims data, to determine which hospitals to include in their provider networks, according to an industry spokesman.

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### We don't really know.

Charles Vincent, B.M.J. November 2008, 337:1205-1207

Considerable efforts have been made to improve patient safety and it is natural to ask... are patients any safer? The answer to this simple question is curiously elusive... we believe that the **lack of reliable information** on safety and quality of care is hindering improvement in safety across the world.

Final Sheet: Child Clinical Safety Officer - Lucinda Pickering Children's Hospital Feb 10 presentation at ONMG Safety Round

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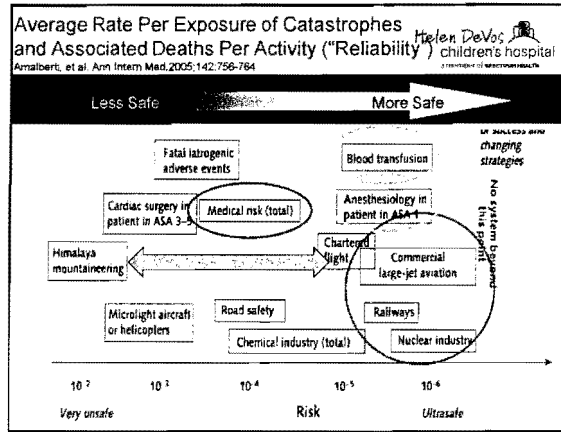
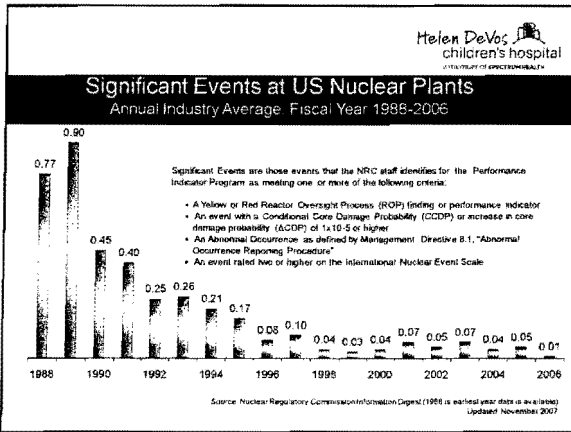
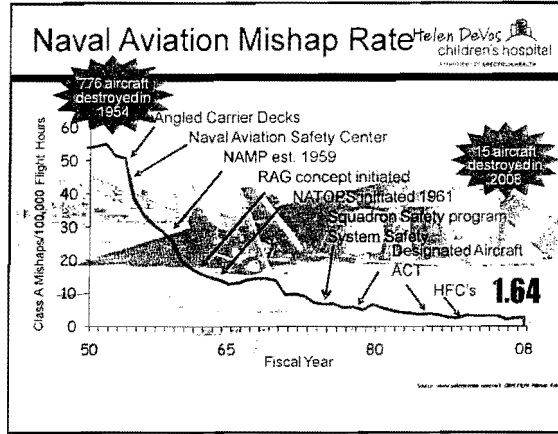
### A 2010 Update

- 13.5% (1 out of every 7) of hospitalized Medicare patients suffer an adverse event
- 15,000 patients die per month due to medical mistakes
- 44% of all events rendered as preventable
- Annual costs equate to \$3.8 billion in Medicare alone
- 25.1 per 100 admitted patients harmed by adverse drug events

Department of HHS, Nov. 2010  
Landrigan et al, New Eng Jour Med, Nov. 2010

Can Hospitals **Is Zero Even Possible?** Organizations

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### Creating a Safety Culture

- Expectations
- Accountability
- Level playing field (authority gradient)
- Reporting
- Metrics

### Creating a Safety Culture

- Transparency
- Physician leadership
- Executive support
- Situational awareness
- High reliability principles

## Safety and Quality One in the Same

Rely on basically the same principles  
High reliability characteristics apply to both  
Improving safety improves quality, and vice versa

## The Basics of a Patient Safety Culture Transformation

Prevention  
Detection  
Correction  
Sustainment

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## Prevention "Creating the Culture"

Learned Behaviors

- » Pay attention to detail
- » Support the Team
- » Questioning attitude
- » Clear communication

Clear the air

- » Lessen the authority gradient
- » Limit intimidation
- » Safe environment for reporting
- » Full transparency

## The Basics of a Patient Safety Culture Transformation

Detection

## Detection

Develop metrics

- SSER
- Days since last event
- Days between events
- Lagging, realtime

Develop a standardized classification

- SSE, PCE, NME, ADE/1000

Effective reporting

- Efficient and supported incident reporting
- Adverse drug events in real time

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## How Do We Measure Preventable Harm?

**Joint Commission Definition of Sentinel Event:** An unexpected occurrence involving death or serious physical or psychological injury, or risk thereof

- Notice that it avoids the causation question

**Serious Safety Event:** those events occurring from a deviation from generally accepted performance standards and resulting in moderate to severe patient harm or death.

- The SSER is calculated monthly as the number of Serious Safety Events for the previous 12 months per 10,000 adjusted patient days for the same time period.

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## Flowchart & Guide

Deviation from standard of care?

**Yes**

Did the deviation reach the patient?

**No** → Not a Safety Event

**Yes**

Did the deviation cause more than minor or minimal temporary harm to the patient?

**No** → Near Miss Safety Event

**Yes** → **Serious Safety Event**  
Death, severe or moderate, prolonged harm, or severe temporary harm

Note: Known complication is defined as an adverse outcome expected in the literature as a potential risk related to care, and is not present at the time of admission or subsequent encounter.

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## Variation from standard of care that results in:

**Serious Safety Event**  
Event that reaches the patient and results in death, life-threatening consequences, or serious physical or psychological injury  
*Cause Analysis Level: RCA*

**Near Miss**  
Event that almost happened - the error was caught by one last detection barrier  
*Cause Analysis Level: Trend, ACA*

**SEC** Safety Event Classification  
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## The Basics of Improving Patient Safety

Prevention

Detection

Correction

Sustainment

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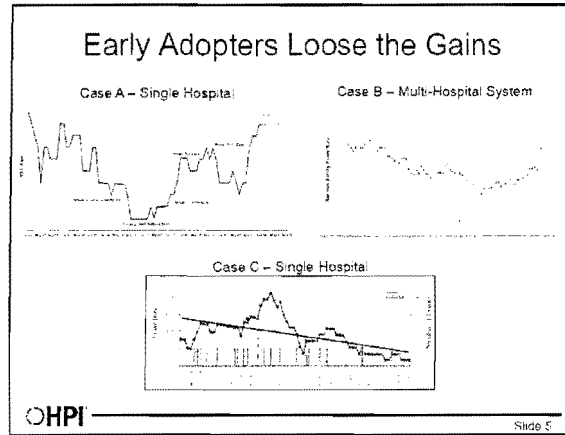
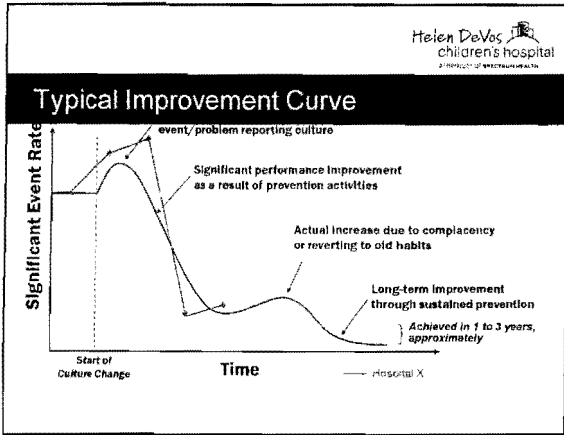
## Correction

- Learn the Science**
  - Human and System Failure mode methodologies
  - Taxonomies
  - Error types
- Root Cause/Common Cause analysis**
  - Expand RCA expertise to units
  - Real time reporting and determination
- Full integration with Risk Management**
  - Work as a team
  - Classify all events in a database
  - Share transparently and frequently

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## The Basics of Improving Patient Safety

Sustainment



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### Mindfulness: Weick

#### Implementing High Reliability Principles

**“Together these processes produce a collective state of mindfulness. To be mindful is to have an enhanced ability to discover and correct errors that could escalate into a crisis.”**

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### To Achieve a High Reliability Organization

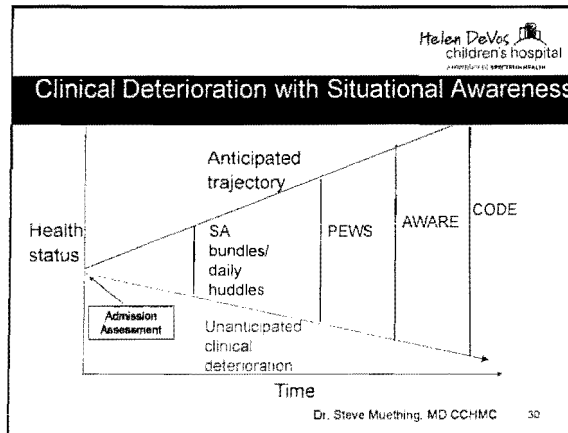
- A strong safety foundation and culture
- A safety infrastructure
- Real, and actionable metrics
- Full transparency
- Physician and administrative leadership
- Risk management as part of the team

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### High Reliability Principles

- Value driven units**  
Measures and metrics that are real time, make sense, and actionable
- Reluctance to simplify**  
Encourage diverse opinions and perspectives
- Preoccupation with failure**  
Regard even the “inconsequential” errors as symptoms something is wrong
- Deference to expertise**  
Refer to front line expertise
- Sensitivity to operations**  
Pay attention to front line issues
- Situational awareness**  
Know what is going on (perception), risks that exist (comprehension), and potential future consequences of the situation (projection)
- Commitment to resilience**  
Expect errors, detect quickly, bounce back and respond to them

Weick, Managing the Unthinkable: Assuring High Performance in an Age of Complexity, Jossey-Bass, 2007



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## Pediatric Early Warning

**Pediatric Early Warning Score (PEWS)**

Adapted from: *Key to Success Hospital for Sick Children: Brighton Pediatric Early Warning Score*

	0	1	2	3	Score
<b>Behavior</b>	Feeding Adequate	Sleeping	Irritable	Extremes or Contused	
<b>Circulatory</b>	Pink or Capillary refill < 2 seconds	Pale or Capillary refill > 3 seconds	Grey or Capillary refill > 4 seconds OR Tachycardia of 30 above normal rate	Grey and mottled or capillary refill > 5 seconds or above OR Tachycardia of 30 above normal rate or Hypotension	
<b>Respiration</b>	Within normal parameters with no retractions	> 10 above normal parameters using necessary muscles OR SpO <sub>2</sub> FIO <sub>2</sub> or SaO <sub>2</sub> < 94%	> 20 above normal parameters OR SpO <sub>2</sub> FIO <sub>2</sub> or SaO <sub>2</sub> < 90%	5 below normal Parameters with retractions and/or SpO <sub>2</sub> FIO <sub>2</sub> or SaO <sub>2</sub> < 88%	

Score 7 extra for % hourly respiratory or persistent vomiting (towards surgery)

○  
Green = 0-2 Score

○  
Yellow = 3-4 Score

●  
Red/Orange = 5 Score

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## High Reliability Microsystems ("HRU's")

- Nurse-Physician Co-leadership
- Unit level outcomes
- Unit level innovation and improvement
- Learning system across microsystems
- Locus of Prioritization of goals
- High Reliability Unit pilot

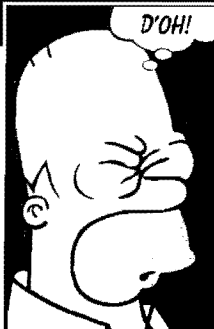
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## Keys to Sustaining a Safety Culture

- Increase physician leadership**
  - Safety coaches
  - Team/HRU leaders
  - Lead by example
- Continuous enforcement and support of behaviors**
  - They then all become habits
- Start early**
  - Nursing and medical students, interprofessional approach
  - Residents
  - Staff orientation
- Keep safety as a priority**
  - Regardless of staff changes, revenue crunches, or new leadership
  - Starting meetings, safety stories
  - Always reporting events, or non-events
  - Constant good catch reporting
- Drive toward high reliability units**

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Paul Sherak said it best:  
"This safety work is hard!"



\*Special thanks to Paul Sherak for the slide.

