

Unit 2 Principles of Quality and Safety for HIT

Improving Patient Safety

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Objectives

- Describe the ways that every system is designed to achieve the results it gets.
- Apply basic principles of safe design.
- Explain the ways that teams make wise decisions with diverse and independent input. (Investigate the fallibility of people and systems).

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Bilateral cued finger movements

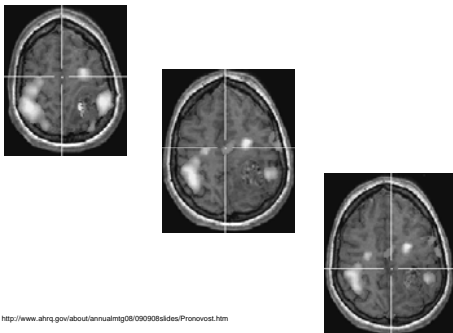


Image: <http://www.ahrq.gov/about/annualimg08/090908slides/Prnozovst.htm>

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X-Ray Reveals Sponge

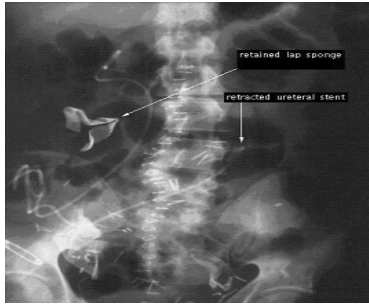


Image: <http://www.ahrq.gov/about/annual/mag/08/090008slides/Prnovost1.htm>
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A Fatal Mistake

Josie King (18 months old)
died from medical error



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The Problem is Large

In U.S. Healthcare system

- 7% of patients suffer a medication error
- 44,000- 98,000 deaths
- 100,000 death from HAI
- Patients receive half of recommend therapies
- \$50 billion in total costs

Similar results in UK and Australia

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A Question...

How can this happen?

We need to view the delivery of
healthcare as a science

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How can we improve? Understand the science of safety

1. Accept we are fallible- assume things will go wrong rather than right
2. Every system is perfectly designed to achieve the results it gets
3. Understand principles of safe design
 - Standardize
 - Create checklists
 - Learn when things go wrong
4. Recognize these principles apply to technical and team work
5. Teams make wise decision when there is diverse and independent input

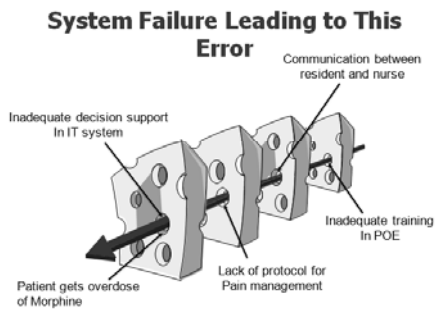
Caregivers are not to blame

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The Swiss-Cheese Analogy

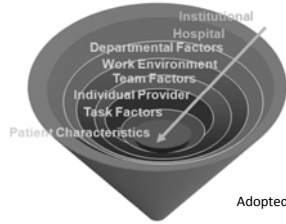


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System Factors



Adopted from C. Vincent

Image: Pronovost, (2008), Safety in Medicine.

Esmolol



<http://www.answers.com/topic/esmolol-hydrochloride>

Aviation Accidents Per Million Departures

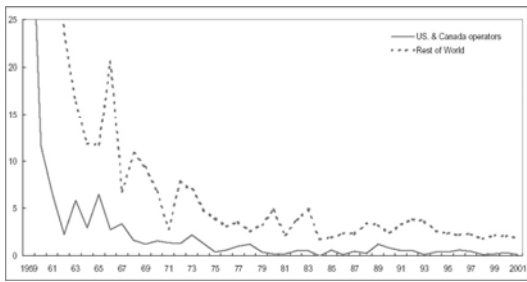


Image: Boeing, 2001 Statistical Summary of Commercial Jet Airplane Accidents, June 2002

Principles of Safe Design

- Standardize
 - Eliminate steps if possible
- Create independent checks
- Learn when things go wrong
 - What happened?
 - Why did it happen?
 - What did you do to reduce risk?
 - How do you know it worked?

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Standardize



Image: MS Clipart

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Eliminate Steps



Image: <http://www.atmexperts.com>

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Create Independent Checks



<http://www.theolivepress.es>

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Communication

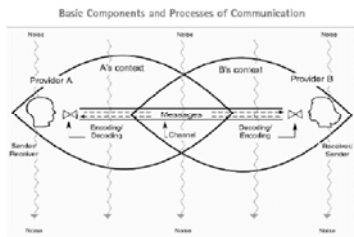


Figure 1. Steps of the basic components and processes of communication, as derived from communication theory and organizational studies, by Sherry Elizabeth Dayton, Joint Commission Journal, Jan. 2007

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The Jelly Bean Test



<http://73.bp.blogspot.com/oxwjc9sQp8TbCxyYKpWVAAAAAACAANpPiNLFjw/s1600/jelly-beans.jpg>

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Don't Play Man Down



Image: Johns Hopkins University

When you feel something say something!

Your Role

- Assume things will go wrong
- Develop lenses to see systems
- Work to Mitigate Technical and Teamwork Hazards
 - Standardize work
 - Create independent checks
 - Learn from mistakes
- Make wise decisions by getting input from others
- Keep the patient the north star

Summary