ZERO

It’s powerful.
It’s controversial.
And it’s the cornerstone of high reliability organizations.

Thornton Kirby, President & CEO
South Carolina Hospital Association
Lorri Gibbons, RN, MSHL
Vice President Quality and Safety
South Carolina Hospital Association

These presenters have nothing to disclose
December 9, 2015
Objectives:

The participant will be able to:

• Understand why zero has been controversial throughout history
• Identify why health care providers need better strategies to improve safety of care
• Demonstrate understanding of high reliability concepts and the challenges in health care
• Identify next steps to pursue reliability
In the history of math, the concept of zero was late to the party
The Egyptians never needed it

- Before the pyramids, they developed a system for counting and they mastered geometry.
- They measured volumes and were master astronomers and timekeepers.
- But they were practical in their use of mathematics; they didn’t use math for logic or philosophy.
The Greeks rejected it

- They built on the system developed in Egypt, going well beyond geometry
- And the Greeks developed a more sophisticated way of expressing numbers
- But they didn’t use zero
- Zero, like infinity, had philosophical implications that were unacceptable to Aristotle
Eventually, a clash of beliefs

Aristotle rejected the void, and thus he had to reject the idea of creation out of the void.

The Bible teaches creation of the universe out of the void, and Western civilization eventually had to make a choice.
Why did the Greeks oppose the concept of zero for centuries?

*Because it challenged their beliefs.*
How is this history relevant?

Two simple questions:

How many harm events do you hope to have in your hospital next year?

What are your hospital’s patient harm goals for the coming year?
ZERO

The *essential* ingredient for building a high reliability organization.
Health care: How close are we to zero?

- Routine safety processes fail routinely
  - Hand hygiene
  - Medication administration
  - Patient identification
  - Communication in transitions of care

- Uncommon, preventable adverse events
  - Surgery on wrong patient or body part
  - Fires in ORs, retained foreign objects
  - Infant abductions, inpatient suicides

Mark Chassin, MD, President, The Joint Commission
Tulane Medical Center alerts patients after medical gear improperly sterilized

Published: Thursday, March 10, 2011, 9:30 PM       Updated: Tuesday, March 15, 2011, 3:36 PM

By Bill Barrow, The Times-Picayune

Tulane Medical Center has notified 360 patients that it failed to properly sanitize gastrointestinal scoping equipment used during seven weeks last fall, potentially exposing the group to various infectious diseases.

Dr. Robert Lynch, the hospital’s CEO, acknowledged the error in a Jan. 3 letter that invited affected patients to obtain free screening for hepatitis B, hepatitis C and HIV. The letter, however, characterized the chances of infection as “minimal to non-existent.”

Lynch cited a mistake in one of five steps in its sanitizing protocol and framed the tests as a way “to reassure patients whose procedures were impacted.”

State epidemiologist Dr. Raoult Ratard, who has conferred with Tulane officials
Griffin Hospital: Insulin pen misuse could have infected patients with diseases

Griffin Hospital President and CEO Patrick Charmel, left, demonstrates how the insulin pen was misused. Dr. Harold Schwartz, center, chief of gastroenterology, and Dr. Howard Quentzel, chief of infectious diseases, also spoke at a Friday press conference. Mercy A. Quaye — New Haven Register
Operating-Room Fire at Hospital Burns Patient, Prompts Changes

FirstHealth of the Carolinas officials should know by the end of the month whether they have taken adequate corrective steps to prevent operating room fires like the one recently that burned the neck and shoulders of a patient during an emergency surgery at Moore Regional Hospital.

The N.C. Division of Health Service Regulation placed Moore Regional on "immediate jeopardy" status following an
'You're taking out wrong kidney, surgeon was told''

by CLARE KITCHEN, Daily Mail

Comments (0)| Share

A surgeon accused of killing a patient by taking out the wrong kidney was warned he was making a mistake by a medical student watching the operation, a court heard yesterday.

Dr Mahesh Goel dismissed the concerns of student Victoria Fern and pressed on with the surgery, it was said.

Goel and consultant urologist John Roberts are accused of manslaughter over the 'appalling error' which left 70-year-old Graham Reeves with one diseased kidney.

The Korean War veteran died five weeks after the botched operation.

Roberts, 59, and Goel, 39, had shown a level of care far below that which is expected of competent surgeons, prosecutor Leighton Davies QC said.

'It was a drastic surgical error described by Mr Roberts himself in the aftermath as the worst thing he had done in his life,' said Mr Davies. 'He says it was an appalling error.'
Are we getting better fast enough?

• We have made some progress
  – Project by project: leads to “project fatigue”
  – Satisfied with modest improvement

• Current approach is not good enough
  – Focusing on process improvement doesn’t necessarily deliver improved outcomes
  – Improvement difficult to sustain/spread
  – Getting to zero, staying there is very rare
It doesn’t have to be this way
We need a new approach!

• We have a **duty** to deliver the best possible care with current medical knowledge
• Our routine safety procedures fail us routinely
• Fatigue is prevalent among our QI professionals
• Payment rewards/penalties
• Consumerism will fuel transparency of your data
The opportunity in human terms

No. 3 killer in the US…..
preventable medical errors!
Claiming 400,000 lives each year – more than 1000 people each day!
The opportunity in financial terms

$3,733,678,100
How are high reliability organizations different?

• “High reliability organizations” manage very serious hazards extremely well
  – Commercial aviation, nuclear power

• What do they all have in common?
  – Highly effective process improvement
  – Fully functional safety culture
  – Discover and fix unsafe conditions early
  – “Collective mindfulness”
If health care adopted high reliability principles, we could largely eliminate harm!
Hippocrates would be proud!

HARM
7 Challenges of High Reliability Organizations

- Hyper-complexity
- Tightly coupled teams
- Extreme hierarchical differentiation
HRO Challenges Cont’d

• Multiple decision makers

• High degree of accountability

• Need for immediate and frequent feedback

• Compressed time constraints
Two Challenges Specific to Health Care

• Higher work force mobility

• Care of patients rather than machines
South Carolina’s Experience
Health Affairs

The Ongoing Quality Improvement Journey: Next Stop, High Reliability

By Mark R. Chassin and Jerod M. Loeb

ABSTRACT Quality improvement in health care has a long history that includes such epic figures as Ignaz Semmelweis, the nineteenth-century obstetrician who introduced hand washing to medical care, and Florence Nightingale, the English nurse who determined that poor living conditions were a leading cause of the deaths of soldiers at army hospitals. Systematic and sustained improvement in clinical quality in particular has a more brief and less heroic trajectory. Over the past fifty years, a variety of approaches have been tried, with only limited success.

Mark R. Chassin is president of the Joint Commission.

Jerod M. Loeb is executive vice president for Health Care Quality Evaluation at the Joint Commission.
High Reliability Self-Assessment Tool (HRST)

- **Leadership**: Board, CEO, physicians
  - Quality strategy, quality measures, IT

- **Safety culture**
  - Trust and accountability
  - Identifying unsafe conditions or practices
  - Strengthening systems, measurement

- **Robust process improvement**
  - Methods, training, spread

Mark Chassin, MD, President, The Joint Commission
South Carolina Safe Care

creating highly reliable healthcare – every patient, every time!
Our Objectives

• Build universal awareness of high reliability science among SC hospitals

• Demonstrate that it is possible to achieve high reliability at scale

• Move all SC hospitals closer to high reliability for the benefit of every patient in our state
31 Participating Hospitals from 12 systems represent over 50% of the state’s acute care discharges
What will high reliability health care look like?
Memorial Hermann Healthcare System is on an all-out mission to eliminate health care-acquired infections. Despite a bit of physician resistance, the results so far are astonishing.

Hospitals and Health Networks, October 1, 2013
Blood Incompatibility
### HAI Hospital Scorecard

#### Sugar Land Hospital HAI Scorecard

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<th>ICU CAUTI</th>
<th>Floor CAUTI</th>
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**Number of HAIs in one month**
Responding to the 2001 IOM report – Crossing the Quality Chasm

Safe
Effective
Patient Centered
Timely
Efficient
Equitable
We will eliminate all serious harm by leveraging our internal and external learnings toward becoming a high reliability organization (HRO) by June 30, 2015.
Days Between "UNSAFE" ICU Transfers
(UNrecognized Situation Awareness Failure Events)

From 1/1/10 through 4/1/10 (92 days) there were 11 UNSAFE ICU Transfers. One every 8.4 days.

3/22/10: Situation Awareness "Go live"

UCL 1/1 - 3/28/10: 24 days
Palmetto Health, Columbia, SC

Board and Leadership Engagement
Regional Medical Center, Orangeburg, SC

System-Wide Huddles
GHS Laurens County Memorial Hospital, Laurens, SC

System-Wide Huddles
GHS Laurens County Memorial Hospital, Laurens, SC

Serious Safety Event Classification Committee
Patient Family Advisory Council

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Alternate with Sub-Committees
Education
Communication
Patient Experience

Council Meets Every Other Month

ROPER ST. FRANCIS
Charleston, South Carolina
Robust Process Improvement

LEAN

Six Sigma

Change Management
Culture of Safety

- Working with Outcome Engenuity
- Just Culture process
- Culture of Learning
- Accountability for behavior
- No red rules
Certified Zero Harm Award

creating mindful, sustainable & highly reliable health care in sc

South Carolina Hospital Association
every patient counts
A journey of a thousand miles begins with a single step.
—Laozi
What is the low-hanging high reliability fruit?
High Reliability in Health Care

Join the Journey
to High Reliability
the Gold Standard in Health Care

"The road to high reliability is an ongoing journey. It's a commitment to patient safety and the way we deliver quality health care."

Mark Chassin, MD, FACP, MPP, MPH,
President and Chief Executive Officer of The Joint Commission
Is safety your organization’s core value?

Daily Safety Huddle

Setting A Goal of Zero

ACT

PLAN

STUDY

DO
Management proposes a 25% reduction in central line associated bloodstream infections.

Good progress! I vote to approve.

How many central line-related deaths are you asking me to endorse?
Conversations about zero aren’t easy.

Because zero still challenges our beliefs.
Not everyone agrees zero is possible.
Over the past two years SC hospitals have earned 148 Zero Harm Awards in three categories. How long can they go?

12 months – 58
18 months – 56
24 months – 7
30 months – 25
Here's to the crazy ones, the misfits, the rebels, the troublemakers, the round pegs in the square holes... the ones who see things differently -- they're not fond of rules... You can quote them, disagree with them, glorify or vilify them, but the only thing you can't do is ignore them because they change things... they push the human race forward, and while some may see them as the crazy ones, we see genius, because the ones who are crazy enough to think that they can change the world, are the ones who do.

Steve Jobs
American entrepreneur and inventor
(1955-2011)
Can you harness the power of zero?
QUESTIONS
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