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High Reliability Organizations Healing Without Harm by 2014

Stand up if...

- You have suffered harm as a patient at a hospital or other care facility (an infection, fall, a delayed diagnosis causing delay in treatment, other...)
- A family member has suffered harm in a hospital or other care facility...
- A friend or colleague has suffered harm in a hospital or other care facility...
- You have had to disclose harm or otherwise handle the situation when a patient was harmed in your hospital or other care facility...

AGENDA

- Objectives
- Five Principles of HRO
- Facts about Errors
- How do Serious Safety Events Occur
- Anatomy of a Serious Safety Event
- Error Prevention Techniques
- Leadership Methods

Why we're here

Our mission calls us to deliver holistic care.

For Ascension Health, holistic care means caring for the physical, emotional, social, and spiritual well-being of the whole person by:

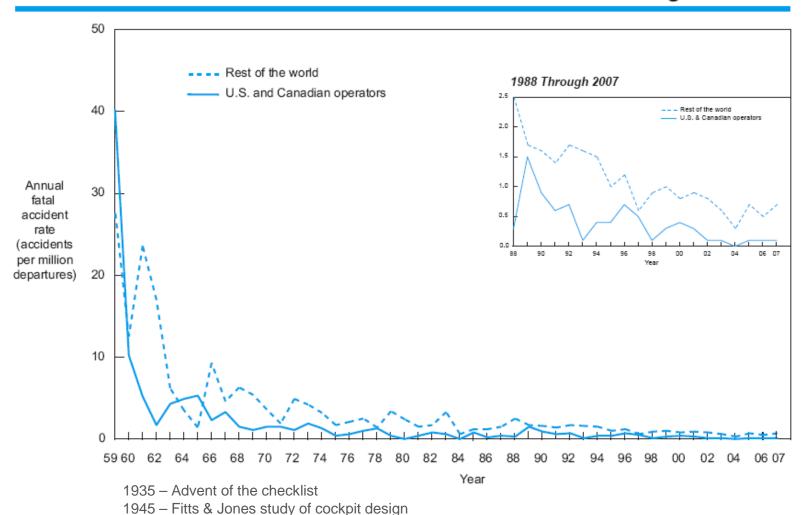
- Attending to the spirit through compassionate relationships and empathetic, effective communication.
- Inviting shared decision making among patients, providers and care teams.
- Delivering safe, reliable, evidence-based, and interdisciplinary care consistent with individual preferences.

Healing without Harm by 2014 Timeline

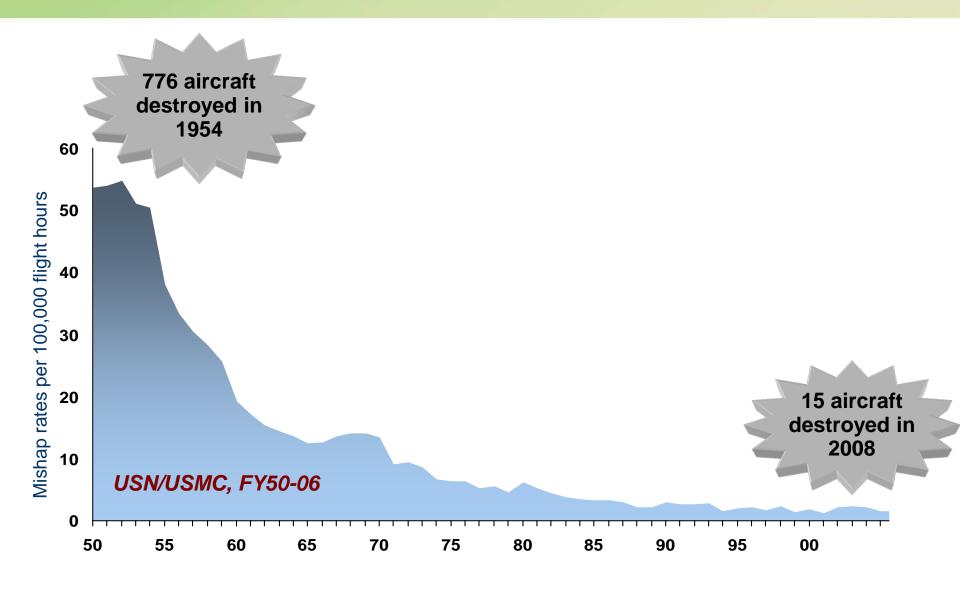
FY10: Foundation	FY11: Immersion	FY12: Accountability	FY13: Sustainability	FY14: Sustainable Achievement
By the end of FY10, 100% of the targeted hospitals (N=66) will have established a baseline* for Serious Safety Events.	By the end of FY11, 100% of the targeted hospitals will be reporting Serious Safety Event rates and 75% will have begun training (leaders/ Associates and/or active medical staff).	By the end of FY12, 75% (50) of the 66 targeted hospitals will have completed training of leaders, Associates, and active medical staff.	By the end of FY13, the overall Ascension Health Serious Safety Event rate is reduced by 15% from true baseline.	By the end of FY14, the overall Ascension Health Serious Safety Event rate is reduced by 40% from true baseline.
DEC 09	DEC 10 —	DEC 11 —	DEC 12 —	S
2010	2011	2012	2013	2014

Commercial Aviation

U.S. and Canadian Operators Accident Rates by Year Fatal Accidents – Worldwide Commercial Jet Fleet – 1959 Through 2007

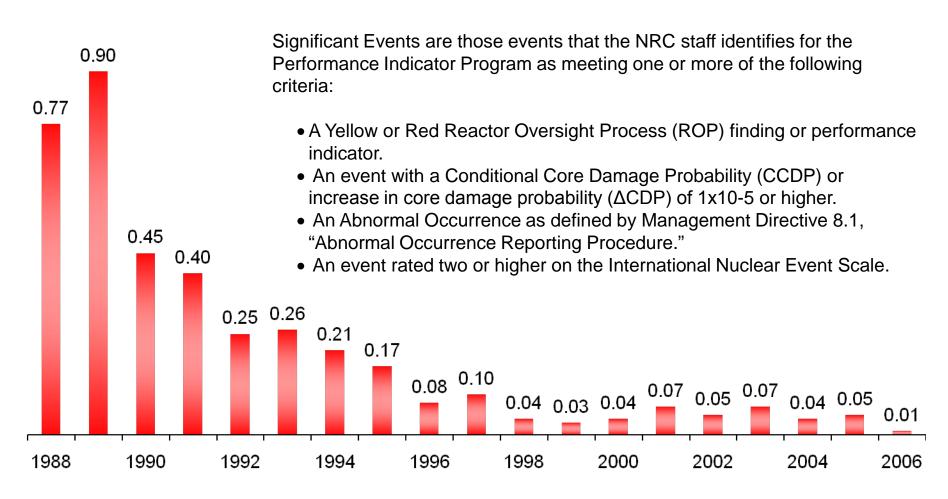


Naval Aviation Mishap Rate

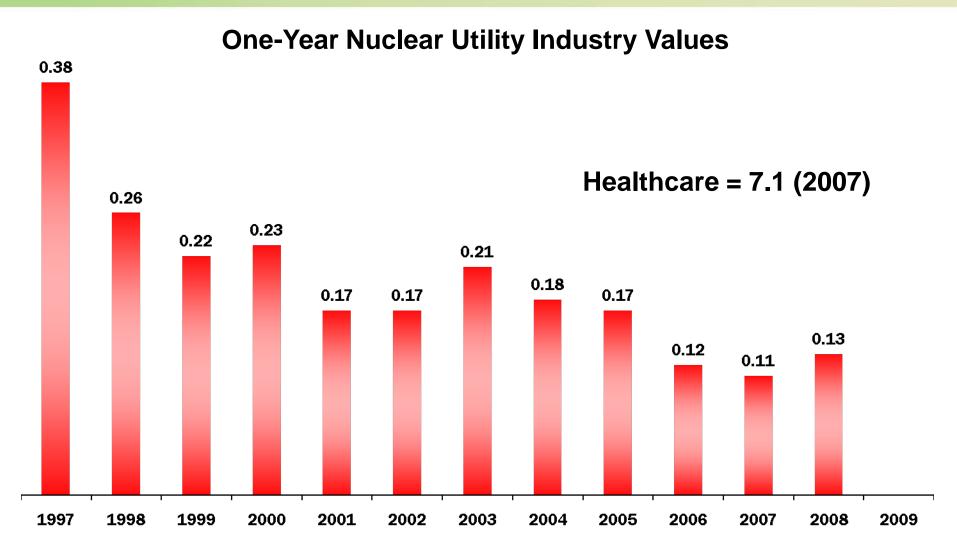


Significant Events at US Nuclear Plants

Annual Industry Average, Fiscal Year 1988-2006



Industrial Safety Accident Rate



ISAR = Number of accidents resulting in lost work, restricted work, or fatalities per 200,000 worker hours.

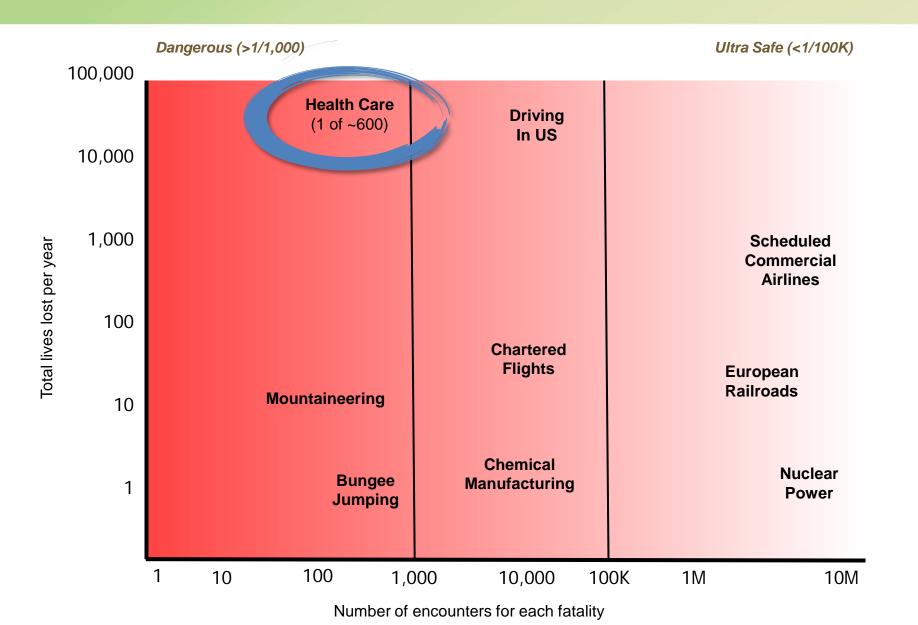
Note: Starting in 2008, data includes supplemental personnel.

Source: World Association of Nuclear Operators, Updated: 4/09

Nuclear-Powered Submarines

- 5,500 cumulative years of nuclear reactor operations.
- 127 million miles submerged (265 round trips to moon).
- Zero reactor accidents.
- Operated by 20 year olds.

How Safe is Healthcare?



Reliability from the patient's perspective...

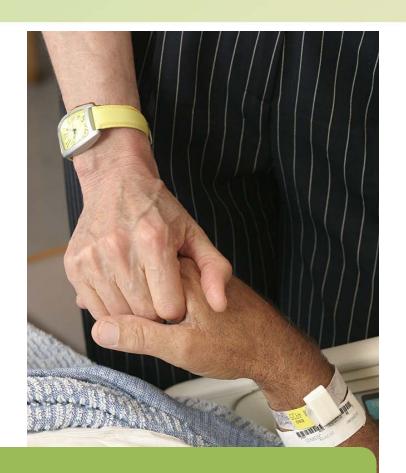
Don't kill me (no needless deaths).

Do help me and don't hurt me (no needless pain).

Don't make me feel helpless.

Don't keep me waiting.

Don't waste resources - mine or anyone else's.



SAFETY + Quality + Satisfaction = Exceptional Care

Healing without Harm by 2014

•Healing without Harm by 2014 is a destination in quality, safety, and experience for patients and caregivers.

•This destination is possible through the principles and practices of high reliability.

Five Principles of HROs

Three Principles of Anticipation

Preoccupation with Failure

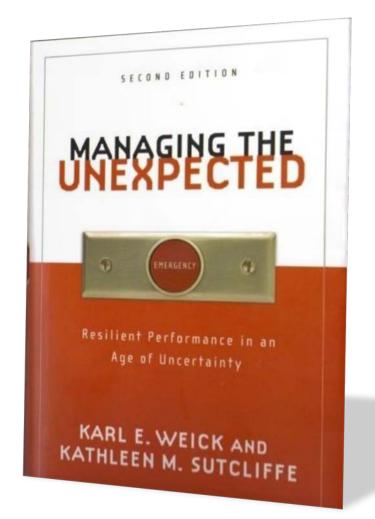
 Remaining alert to small, inconsequential errors as a symptom that something's wrong.

Sensitivity to Operations

 Paying attention to what's happening on the front-line.

Reluctance to Simplify Interpretations

 Encouraging diversity in experience, perspective, and opinion.



Five Principles of HROs

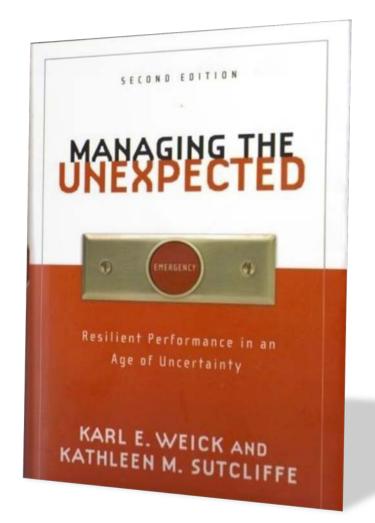
Two Principles of Containment

Commitment to Resilience

 Developing capabilities to detect, contain, and bounce-back from events that do occur.

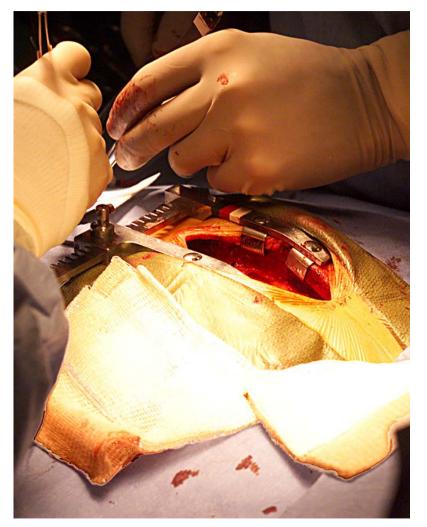
Deference to Expertise

 Pushing decision making down and around to the person with the most directly related knowledge and expertise.



Facts about Errors

- 1. Everyone makes errors... even very experienced people.
- 2. We work in **high-risk situations** that increase the chance we will make an error.
- We can avoid most errors by practicing low-risk behaviors.

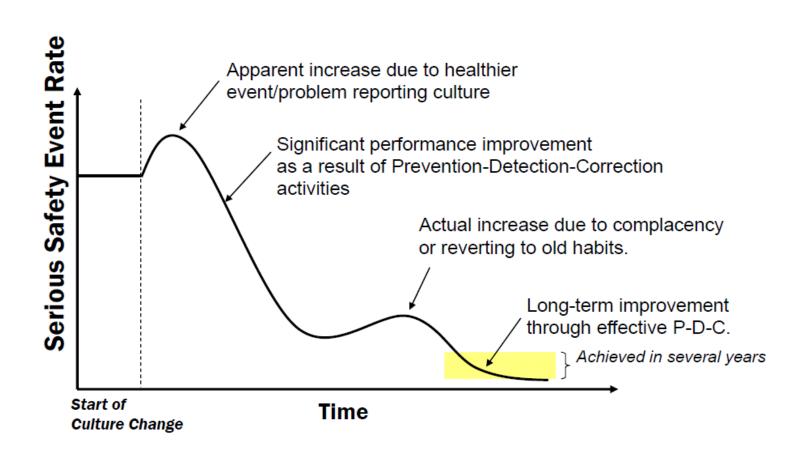


Facts about Errors

- **4. Culture** affects how we behave, and our behaviors determine outcomes.
- Most near-misses and significant events are due to system or process problems.

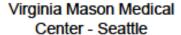
System Failure Modes	Ascension Health (67 hospital) %
Structure	14%
Culture	49%
Process	21%
Policy & Protocol	11%
Technology & Environment	5%

Typical Improvement Curve



Patient Safety is only for clinicians, right?







Mary McClinton

Mary McClinton died on November 23, 2004 at Virginia Mason Hospital, almost three weeks after a non-surgical procedure to treat a brain aneurysm. In what the hospital itself called an "avoidable mistake," staff at Virginia Mason injected McClinton with a toxic cleaning solution instead of either saline or the radiological dye routinely administered at the conclusion of the procedure. The containers were unmarked.







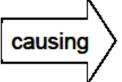
In November and December of 2004, the elevator hydraulic fluid was used as detergent in one step of a multi-step cleaning and sterilization process of surgical tools.

Contract elevator maintenance employees had drained the fluid from elevators into containers that had held surgical detergent. The containers were not properly re-labeled or securely stored. The containers were restocked and shipped as detergent back to Durham Regional Hospital and Duke Health Raleigh Hospital. Both technicians in central sterile supply and the Operating Room teams noticed that something was "different" or "not quite right." No one followed-up on their concern.



Serious Safety Events

Deviations from bestpractice care



Significant Patient Harm



Serious Safety Events include errors that result in death, permanent loss of function, or injury, such as:

Transfusion reaction

Medication error

Misdiagnosis

Hospital-Acquired Infection

Treatment error

Delay in treatment

Wrong site/side surgery or procedure

Fall with serious injury

others...





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SM

SOHPI

A deviation from generally accepted performance standards (GAPS) that...

Serious Safety Event

- Reaches the patient and
- Results in moderate harm to severe harm or death

Serious Safety Events

Precursor Safety Event

- Reaches the patient and
- Results in minimal harm or no detectable harm

Precursor Safety Events

Near Miss Safety Event

- Does not reach the patient
- Error is caught by a detection barrier or by chance

Near Miss Safety Event

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St. Vincent's HealthCare – Jacksonville, FL

FY 2007-2009* Reported Events

	St. Vincent's	St. Luke's*
Potential Safety Events	146	38
Serious Safety Events	73	18
Ave Days Between	15	41
Deaths	28	9
Ave Days Between	39	81

^{*} FY 08 - FY 09 Only for St. Luke's

SSE Examples:

- Multiple consultants ordering pain medications resulting in unrecognized over-sedation and code
- Missing evolving MI and inappropriate pt transfer
- Failure to maintain fall precautions resulting in fall with fracture
- ✓ Delay in calling code with unresponsive pt

Level of Harm	St. Vincent's	St. Luke's
Death	27%	36%
Severe Permanent Harm	9%	12%
Moderate Permanent Harm	2%	8%
Severe Temporary Harm	15%	12%
Moderate Temporary Harm	17%	4%
Minimal Permanent Harm	0%	0%
Minimal Temporary Harm	13%	8%
No Detectable Harm	11%	16%
No Harm	3%	4%
Event Almost Happened	3%	0%

includes both Serious Safety Events & Precursor Safety Events)

PRIVALEGED AND CONFIDENTIAL



How do serious safety events occur?



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Human Error – A Symptom, Not Cause

Human error is not the cause of failure, but a *symptom of failure*

Human error – by any other name or by any other human – should be the *starting point* of our investigations, not the conclusion

Source: Fitts, P. M., & Jones, R. E. (1947). "Analysis of factors contributing to 460 'pilot error' experiences in operating aircraft controls." *Memorandum Report TSEAA-694-12*, Aero Medical Laboratory, Air Material Command, Wright-Patterson Air Force Base, Dayton, Ohio.





Human Error Classification

Based on the Skill/Rule/Knowledge classification of Jens Rasmussen and the Generic Error Modeling System of James Reason

	Skill Based	Rule Based	Knowledge Based
Activity Type	Familiar, routine acts that can be carried out smoothly in an automatic fashion	Problem solving in a known situation according to set of stored "rules," or learned principles	Problem solving in new, unfamiliar situation for which the individual knows no rules – requires a plan of action to be formulated
Error Types	SlipsLapsesFumbles	Wrong ruleMisapplication of a ruleNon-compliance with rule	Formulation of incorrect response
Error Prevention Themes	 Self checking – stop and think before acting 	 Educate if wrong rule Think a second time if misapplication Non-compliance – reduce burden, increase risk awareness, improve coaching culture 	Stop and find an expert
Error Probability	1:1000 to 3:1000	1:100	3:10 to 6:10



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Three Types of Human Errors

Skill-Based (Auto-Pilot Mode)

Errors made when performing acts or tasks that require limited or no thought attention

Rule-Based (If-Then Response Mode)

Errors made when performing acts or tasks that require application of rules - accumulated through experience and training - to familiar situations

Knowledge-Based (Figuring-It-Out Mode)

Errors made when performing acts related to new or unfamiliar situations that requires problem solving and for which a rule does not exist or is not known



Skill-Based Errors

What We're Doing At The Time

We are doing tasks so routine and familiar that we don't even have to think about the task while we are doing it.



Type of Error	Example Error Prevention Strategy
Slip – Without intending to we do the wrong thing	Stop and think before acting
Lapse – Without intending to, we fail to do what we meant to do	

1 to 3 of 1,000 acts performed in error (pretty reliable!)

In healthcare, skill-based errors comprise, on average, 25% of all errors.



Rule-Based Errors

What We're Doing At The Time

We choose how to respond to a situation using a principle (rule) we were taught or told or learned through experience.

Type of Error	Example Error Prevention Strategy
Used the wrong rule – We were taught or learned the wrong response for the situation	Education about the correct rule
Misapplied a rule – We knew the right response but picked another response instead	Think a second time – validate/verify
Chose not to follow the rule – Usually because we thought not following the rule was the better option at the time	Reduce burden, increase risk awareness, improve coaching

1 in 100 choices made in error (not too bad!)

In healthcare, rule-based errors comprise, on average, 60% of all errors.



Knowledge-Based Errors

What We're Doing At The Time

We're problem solving in a new, unfamiliar situation. We don't have a skill for the situation, we don't know the rules, or no rule exists. So we come up with the answer by:

- Using what we do know (fundamentals)
- Taking a guess
- Figuring it out by trial-and-error

Type of Error	Example Error Prevention Strategy
We came up with the wrong answer (a mistake)	STOP and find an expert who/that knows the right answer

30 to 50 of 100 choices made in error (yikes!)

In healthcare, knowledge-based errors comprise, on average, 15% of all errors.



Human Error Types in GEMS*

Skill-Based (Auto-Pilot Mode)

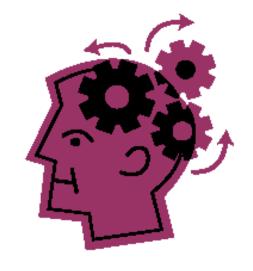
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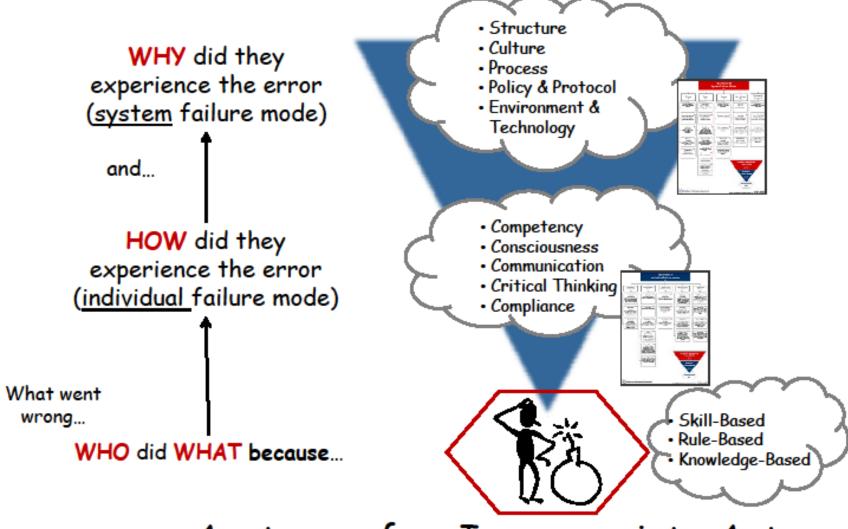


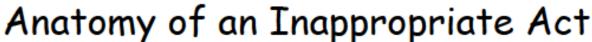
Analyzing the "holes"...

St. Vincent's HealthCare		St. Vincent's	St. Luke's
Skill-Based	7%	8%	5%
Rule-Based	72%	75%	65%
Knowledge-Based	21%	17%	30%
	N = 72 EE = 7% (80% CF)	N = 52 EE = 8% (80% CF)	N = 20 EE = 13% (80% CF)

*Generic Error Modeling Systems; Rasmussen and Reason







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The Anatomy of an Event

Multiple Barriers

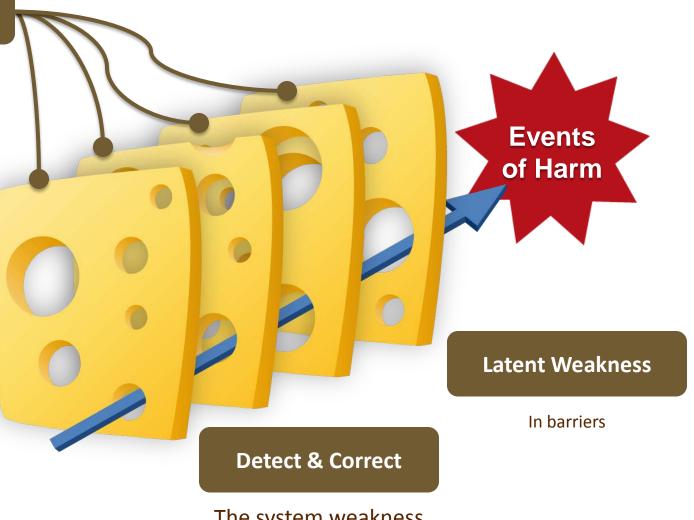
In technology, processes, and people - designed to stop active errors (our "defense in depth")

Active Errors

By individuals result in initiating action(s)

Prevent

The errors



The system weakness

Care Management

Barriers to prevent event fall

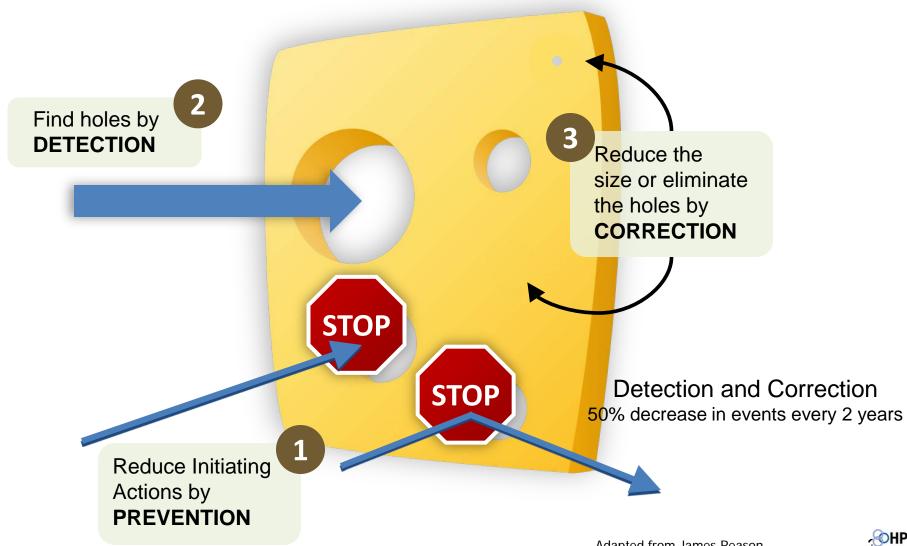
The patient requested privacy while up to BR; found unresponsive with fracture and permanent mental status changes.

Fall with injury

Nurse did not provide PCT with guidance on Patient being "up with assistance."

PCT did not assure visual of pt who was up to BR Physician wrote standard order (using order sheet) for pt at significant risk for falls Nurse did not further clarify physician order "up to BR with assistance." Care team did not know the extent of patient's risk for falls – falls assessment was documented post fall.

Three Things We Must Do to Eliminate or Reduce Unwanted Events



Error Prevention for Staff

EXPECTATIONS	TECHNIQUES
I am accountable for :	I will:
1. Patient, Personal and Peer Safety	Practice peer checking & coaching using ARCC
I will demonstrate an open, personal and co-worker (200%) commitment to safety	2. Stop and resolve in the face of uncertainty
2. Clear & Complete Communications	Include the "5P Handoff process when transferring & sharing
I am personally responsible for professional, accurate, clear and timely verbal and written communications	 patient care responsibility 2. Use SBAR to communicate patient concerns 3. Use Repeat-Backs and Read-backs with 1 or 2 Clarifying Questions 4. Document legibly
3. Paying Attention to Detail	1. Practice S.T.A.R.
I will attend carefully to important details	

What is a RED RULE?

An act that has the highest level of risk or consequence to patient or employee safety if not performed exactly, each and every time



"Red" designates the highest priority for exact compliance – STOP action if you can't comply

Red Rules

- Defining red rules. Red rules are rules that cannot be broken.
- Example of a red rule in everyday life. The use of seatbelts while riding in an automobile could serve as an example of a red rule that everyone should follow in everyday life.
- Red rule criteria.
 - It must be possible and desirable for everyone to follow a red rule every time in a process under all circumstances (red rules should not contain verbiage such as "except when..." or "each breach will be assessed for appropriateness")
- Summary. Red rules have the potential to promote an organizational culture of safety that shares accountability for the safe delivery of patient care.

Patient Identifiers

Specimen Labeling

Red Rule Basis/Intent: To promote a culture of patient safety by ensuring individuals are reliably identified as the individual for whom the service or treatment is intended, also to match the service or treatment to the individual.

Red Rule Expectations:

Employees will use at least twopatient identifiers (Name and date of birth) Red Rule Basis/Intent: To promote a culture of patient safety by ensuring specimens are properly and accurately labeled.

Red Rule Expectations:

Employees will label all specimens at the bedside in front of the patient

 Red Rule Violations: Individuals found in breach of red rules will be disciplined in the following progression:

1st offence- Written-counseling to be placed in personnel file

2nd offence- Suspension of employment

3rd offence- Termination of employment

Error Prevention Techniques

Recommended Techniques for All

Team Checking/Team Coaching (ARCC)

Handoffs—5 Ps

SBAR

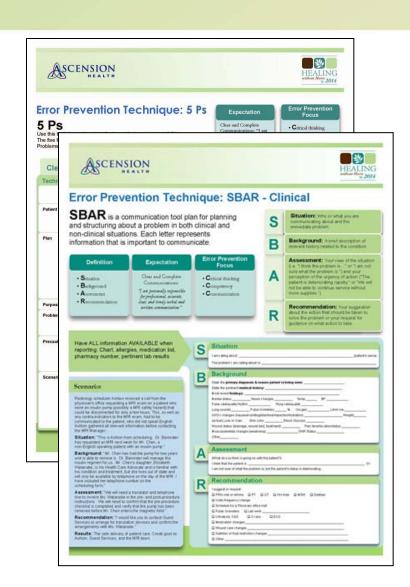
Read-backs/Repeat-backs with

Clarifying Questions

Document Legibly and Accurately

Stop and Resolve

Self-Checking with **STAR**



Patient, Personal, and Peer Safety

A responsibility to protect in a manner of mutual respect – an assertion and escalation technique

With ARCC use the lightest touch possible...

Ask a question

Make a Request

Voice a Concern

If no success...

Use Chain of Command

A Safety Phrase

"I have a concern..."

Clear, Concise and Complete Communications

The "Five Ps" —A Simple Responsibility Change Checklist

I own it until I hand it off to an appropriate person.

An effective handoff includes the 5 Ps:

□ Patient or Project — what is to be handed off
 □ Plan — what is to happen next
 □ Purpose (of the plan) — the desired end state
 □ Problems — what problems you have encountered with this patient or what is known to be different, unusual, or complicating about this patient or project
 □ Precautions — what you are or would be concerned about or what could be expected to be different, unusual, or complicating about this patient or project

Techniques Practice - Instructions

- Work with a partner.
- Review the scenario (on next screen). Apply the 5 Ps technique.
- Partner A explains what they would say in this situation using the 5 P technique at the time of transfer assessment.
- Partner B suggests improvements.
- Share any best practices or examples you have that relate to this technique.

Practice Activity: 5 P Scenario

A 55-year-old female with a very complex medical condition is admitted for a femoral artery bypass graft. Following this procedure, she is transferred to the ICU with an arterial line in place.

Due to an incomplete transfer assessment, the patient's arterial line is not connected to a monitor as required. The arterial line remains disconnected from the monitoring device for more than 12 hours.

At shift change, the nurse assuming care of the patient notices this. The patient remains unstable during much of the recovery period. Fortunately, no harm results from the 12 hour period that the arterial line was not attached to the monitor.

Leadership Methods

Leadership Method for Performance Excellence

Reinforce & Build Accountability

Walking Rounds , 5:1 Feedback, Fair and Just Accountability

I will round with purpose each day to understand what is happening at the front line, engage with our people, and identify problems impacting operations by:

I will reinforce expectations during rounds by:

- ✓ observing performance and practice 5:1 feedback 5 bits
 of positive for every 1 bit of negative feedback,
- ✓ no mixed messages focused praise, focused correction,
 ✓ lightest touch possible to get the desired result, and
- ✓ instant feedback as close in time as possible to the act

I will manage fairly and consistently when a person's actions deviate from performance expectations by:

- determining and distinguishing between unintended human error and intended non-compliance,
- evaluating for system or process issues that influence individual decision making, and
- implementing fair consequences for intended noncompliance.

Red Rules for Safety - Our Safety Absolutes!

I will reinforce Red Rules — our safety absolutes — as an important part of protecting from harm and will make it easy to comply with Red Rules by:

- finding and fixing problems that make Red Rules compliance challenging,
- implementing reminders and forcing functions into work processes to make it easy to comply,
- standing behind individuals who "stop the line" when they cannot comply with a Red Rule, and
- recognizing Red Rule compliance and following through with fair consequence for intended non-compliance with Red Rules.

Daily Check-In

15 Minutes • Focused • On Feet

I will huddle at the start of the day to maintain awareness of operations and to give direction about priority and responsibility for resolution. We review:

- esponsioning for resolution, we review.

 Significant activities from the last 24 hours.
- ✓ anticipated activities in the next 24 hours
- ✓ priorities, problems, and precautions

I will meet with my direct reports at least monthly to review overall team performance, identify and prioritize problems, and mobilize to solve causes and achieve outcomes

Find, Fix, and Prevent Problems

Pre-Task Brief – After Action Review with Thoughtful Task Assignment & Staff Develop

I will conduct a Pre-Task Brief prior to beginning a nonroutine or routine but significant task to improve the likelihood of success by:

- OSummarizing the critical steps and objectives
- Anticipating error-likely situations and potential problems
 Foreseeing worse-case conditions and contingency plans
- □Evaluating defenses identify vital safeguards
- □Reviewing past experience personal, hospital, industry

I will conduct an After Action Review following a nonrousine or rousine but significant task to ensure operating experience is captured and used to improve future performance by:

- Odiscussing what went right and what went wrong Ocapturing lessons learned for future activities
- Didentifying improvements to management for resolution Occaching each other on great performance and opportunities to improve

I will ensure the individual team members assigned to tasks are capable and willing and I will use Pre-Task Briefings and After Action Reviews to praise and develop individual team members.

Rapid Response to Safety Critical Issues "Condition-Problem-Cause Solving"

- Mobilize those with the expertise to solve the cause and authority to empower action
- Quions/Rule Out / Take Action)

Top 10 Problem List with Problem Owners & Actions Plans

I will maintain a list of the Top 10 problems compromising safe operations in my area. Each problem has a problem owner, and a Level 1 & 2 Action Plan.

- Dis single-person responsibility for the problem and for each action assigned?
- □Do our workers think the problem is a problem? □Does our action plan address both process changes as well as behavior changes needed to solve the problem?
- DDo actions map back to causes related to the problem? Diff we complete all of these actions, will we resolve the problem? If no, what are we missing?

Reinforce & Build Accountability

- Rounding to Influence
 - Walking Rounds
 - 5:1 Feedback
 - Fair & Just Accountability
- Red Rules for Safety
- Daily Check-In

Find & Fix Problems

- Pre-Task Brief
- After Action Review
- Rapid Response to Safety Critical Issues
- Top Ten Problem List with Problem Owners & Action Plans



Benefits of a Daily Check-In

Leadership Awareness

- For the senior leader: awareness of what's happening at the front line by staying in touch with your people
- For operational leaders: awareness of "what's going on" in other areas and cross-department impact
- Mental organization a chance to "plan your day"

Problem Identification & Resolution

- Early notification of issues
- Breaking down silos all directors to pool ideas and resources in solving problems and potential problems

Accountability for Safety

- "Talking about perfect care has become easier" more aggressive in leadership for Zero events
- Dialogue about how we are at risk, how we can reduce our risk, and how we can support each other
- Transparency "A patient fell on my unit last night and broke an ankle"





Leadership Method: Daily Check-In

Leadership Huddles/Daily Check-In happens every day and is face-to-face or by phone. It is always led by the senior leader, and every leader must come prepared. Identified problems are assigned to owners, who are then responsible for developing an action plan.

Unit Daily Check-In happens every day and occurs face-to-face on the unit. It is always led by the unit leader. The staff must come prepared. Identified problems are assigned to owners, who are then responsible for developing an action plan.

Both check-ins are leadership methods designed to identify potential problems before they become a reality. They should be focused and last 15 minutes.

	Method Item	Description
Accountability	Look Ahead	Identify significant safety or quality issues from the last 24 hours or the last shift. What immediate actions did you take? Is this an isolated instance or could this be happening in other places? What other areas does it impact?
Expectation		Anticipated Issues: 1. 2. 3. 4.
occuntability: I will reinforce expectations." Error Prevention Focus	Look Ahead	Anticipate safety or quality issues in the next 24 hours or the next shift. • How are you preparing your team for these tasks? • What Safety Behavior error prevention fechniques should be used? Anticipated Issues: 1. 2. 3. 4.
Critical Thinking Compliance Communication Consciousness	Leadership Scenario	The Senior Leader, Dr. Dell asked Dr. Seah to share his Safety Success Story. Dr. Seah discussed an exomple regarding the operation checklist he is testing. The anesthesia learn had been distracted by a monitor that kept flashing while they were attempting to find a good vein for the IV. They did not administer the antibiotic the patient should have received. The nurse called a time-out for the team to run the Before Incision check. Reading the lines off the wall poster. Dr. Seah asked, "Has the antibiotic been given within the last sky minutes?" The anesthesia recident replied, "Oh, fight, It will be." Everyone walled as the medication began to flowin. Once that was completed the operation proceeded. This was a Last Strong Barrier Calch type of Near Wiss Safety Event. I hankfully, the checklist acuyth the omission and the antibiotic was administered, reducing the risk of post-operative infection.
	Unit Scenario	checklist. The other doctors present were very interested in Trying if out themselves. The leader asked Ann to share her success stay. Ann recently attended an educational session on infection control techniques and the importance of hand washing. Back of work, she noticed that a physician went from patient to patient without washing is hands, she encountered the doctor in the corridor and addressed him saying that she attended the hand-washing seminar and noticed he did not always follow procedure. The doctor appeared suprised by the comment but sheepsthy agreed that hand washing is very important and that he will be more careful. Sharing this stay had multiple benefits. One, if recognized Ann for her catch and the appropriate wayshe handled the situation. Two, the stay served as a reminder to everyone to frequently wash their hands. Three, it reinforced the fact that everyone can Speak Up for Safety to arrow eets when needed.

START HERE

Leadership Daily Check-In

- Happens every day
- 15 minutes
- Face-to-face or by phone
- Always led by senior leader
- Every leader comes prepared
- Problems are assigned owners

EVOLVE OVER TIME

Unit Daily Check-In

- Happens every day
- 15 minutes
- Face-to-face on unit
- Always led by unit leader
- Staff come prepared
- Problems are assigned owner₆