The AAMI Foundation's National Coalition to Promote the Safe Use of Complex Healthcare Technology
Presents:

Fail Safe Use of Complex Medical Devices

Patricia Hercules, BSN, MS, RN-BC
Director, System Clinical Programs

Teresa Ryan, RN, BSN, CPHRM
Manager, Risk Mgmt, MH Southeast Hospital

M. Michael Shabot, MD, FACS, FCCM, FACMI
Executive Vice President, System Chief Clinical Officer

AAMI FOUNDATION

AAMI Foundation

Mission

The AAMI Foundation drives reductions in preventable patient harm and improvements in outcomes associated with the use of health technology.

- *National Coalition for Alarm Management Safety*
- *National Coalition for Infusion Therapy Safety*
- *National Coalition to Promote Continuous Monitoring of Patients on Opioids*
- *National Coalition to Promote the Safe Use of Complex Healthcare Technology*

A Special Thanks

AAMI FOUNDATION

Thank You to Our Industry Partners!

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Medtronic

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smiths medical
bringing technology to life

LinkedIn Questions

Join our group

Please post questions on the

AAMI Foundation's LinkedIn page.

OR

Type a question into the question box on the webinar dashboard.

Speaker Introduction

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Fail Safe Use of Complex Medical Devices

AAMI Foundation Seminar

December 4, 2017

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MEMORIAL HERMANN

V1

High Reliability in Healthcare

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How is healthcare different from many other industries?

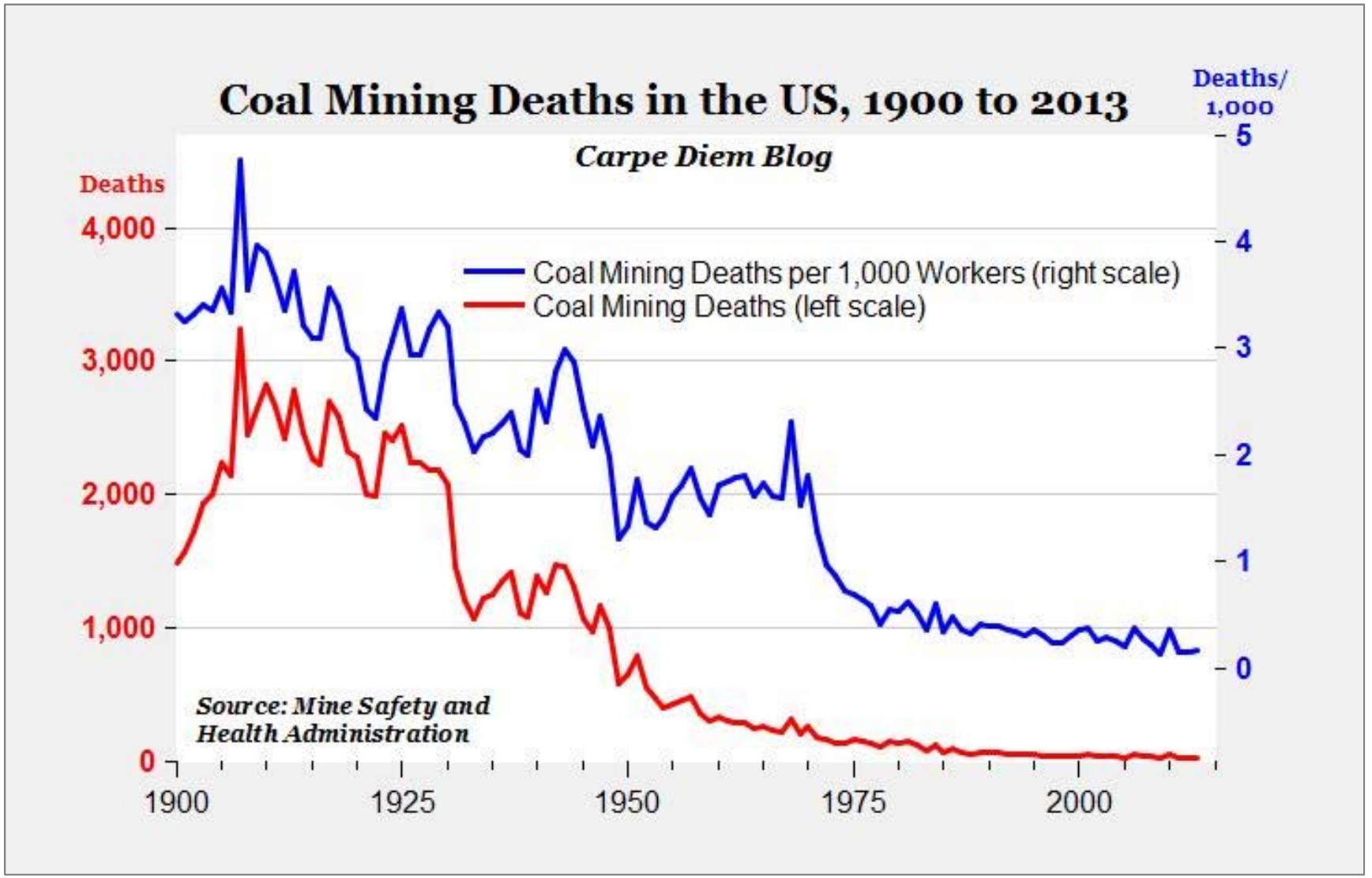
High Reliability in Healthcare

MEMORIAL HERMANN

How is healthcare different from many other industries?

U.S. Coal Mining Deaths

MEMORIAL HERMANN



Hospital Patient Harm

Question: How many avoidable deaths occur in U.S. hospitals each year?

- 25,000
- 50,000
- 100,000
- 200,000

Source: James JT. A New, Evidence-based Estimate of Patient Harms Associated with Hospital Care. *Jol Patient Safety* 2013;9:122-128.

Hospital Patient Harm

Question: How many avoidable deaths occur in U.S. hospitals each year?

- 25,000
- 50,000
- 100,000
- 200,000

Equivalent to a fully-loaded Boeing 737 crashing **every 7 hours**

Source: James JT. A New, Evidence-based Estimate of Patient Harms Associated with Hospital Care. *Jol Patient Safety* 2013;9:122-128.

Hospital Patient Harm

MEMORIAL HERMANN

Question: How many avoidable deaths occur in U.S. hospitals each year?

BMJ 2016

ANALYSIS

Medical error—the third leading cause of death in the US

Medical error is not included on death certificates or in rankings of cause of death. **Martin Makary** and **Michael Daniel** assess its contribution to mortality and call for better reporting

Martin A Makary *professor*, Michael Daniel *research fellow*

Department of Surgery, Johns Hopkins University School of Medicine, Baltimore, MD 21287, USA

251,454

Source: James JT. A New, Evidence-based Estimate of Patient Harms Associated with Hospital Care. *Jol Patient Safety* 2013;9:122-128.

737 crash every 5.5 hours

Hospital Patient Harm

MEMORIAL HERMANN

Question: How many avoidable deaths

Memorial Hermann's Goal

ANALYSIS

BMJ 2016

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0 (Zero)

251,454

737 crash every 5.5 hours

Source: James JT. A New, Evidence-based Estimate of Patient Harms Associated with Hospital Care. *Jol Patient Safety* 2013;9:122-128.

How Can Memorial Hermann Get to Zero?

New Nursing Staff?

New Doctors?

All New Execs?

How Can Memorial Hermann Get to Zero?

MEMORIAL HERMANN

Robust Process Improvement

The Path to Quality Outcomes

Robust Process Improvement:
Path to Quality Outcomes

Lean

Six Sigma

Change Management

Robust Process Improvement:
Changing Standard Work

Standard Work =

What we do every day

What we do every day =

CULTURE!

Joint Commission Center for Transforming Healthcare

Robust Process Improvement:
High Reliability Standard Work

	15-Jan	14-Dec	14-Nov	14-Oct	14-Sep	14-Aug	14-Jul	14-Jun	14-May	14-Apr	14-Mar	14-Feb
Blood Stream Infection Prevention Bundle												
Central Line Insertion												
MD Hand Hygiene	97.83%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Chlorhexadine	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
MD gown, gloves, hat & mask	100.00%	97.37%	100.00%	100.00%	100.00%	100.00%	100.00%	97.14%	100.00%	95.24%	100.00%	100.00%
Drape patient head to toe	100.00%	97.37%	100.00%	100.00%	96.43%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Sterile field maintained during procedure	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Assistant Hand Hygiene	100.00%	100.00%	100.00%	97.50%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Assistant gown, gloves, hat & mask	97.83%	100.00%	96.88%	97.50%	100.00%	100.00%	96.00%	100.00%	100.00%	100.00%	95.24%	96.88%
Insertion Bundle Compliance	95.65%	94.74%	96.88%	97.50%	96.43%	100.00%	96.00%	97.14%	100.00%	95.24%	95.24%	96.88%
% Femoral Lines	8.70%	0.00%	0.00%	2.50%	0.00%	0.00%	0.00%	2.86%	2.78%	0.00%	0.00%	0.00%
% Femoral Lines justified by careful site selection	100.00%			100.00%				100.00%	100.00%			
Ultrasound Guidance												
% Ultrasound Guided CVC Insertions	100.00%	100.00%	92.31%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%		100.	00%

Central Line Sterile Insertion Bundle

Ultrasound Guidance for Central Line Punctures

Culture Change

OR Surgical Safety Checklist

High Reliability Hand Hygiene

Hospital Acquired Infections, Conditions and Patient Safety Indicators

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Central Line Associated Bloodstream Infections

Ventilator Associated Pneumonias

Surgical Site Infections

Retained Foreign Bodies

Iatrogenic Pneumothorax

Wound Dehiscences

Pressure Ulcers Stage III & IV

Obstetrical Associated Injuries

Venous Thrombosis and/or Pulmonary Embolism

Deaths Among Surgical Inpatients with Serious Treatable Complications

Birth Traumas

Serious Safety Events

Hospital Acquired Infections, Conditions and Patient Safety Indicators

Central Line Associated Bloodstream Infections

Ventilator Associated Pneumonias

Surgical Site Infections

Retained Foreign Bodies

Iatrogenic Pneumothorax

Accidental Punctures and Lacerations

Pressure Ulcers Stages III & IV

Hospital Associated Injuries

Deep Vein Thrombosis and/or Pulmonary Embolism

Deaths Among Surgical Inpatients with Serious Treatable Complications

Birth Traumas

Serious Safety Events

High Reliability
Certified Zero Award

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1. Zero Events


2011
MEMORIAL HERMANN
High Reliability
Certified Zero Award
To: Memorial Hermann Southeast Hospital
Zero Iatrogenic Pneumothorax for 12 Months
February 1, 2010 to January 31, 2011
Dan Wolterman
President & Chief Executive Officer
M. Michael Shabot, M.D.
System Chief Medical Officer
BREAKTHROUGHS IN PATIENT SAFETY
Robert G. Croyle
Chair, Health System Board

2. 12 Consecutive Months

3. Certified Zero Category

2016

MEMORIAL® HERMANN

High Reliability Certified Zero Award

To: TIRR Memorial Hermann

Zero Central Line Associated Bloodstream Infections

Hospital-wide for 24 months

June 2014 to May 2016

Breakthroughs in Zero Harm Patient Safety

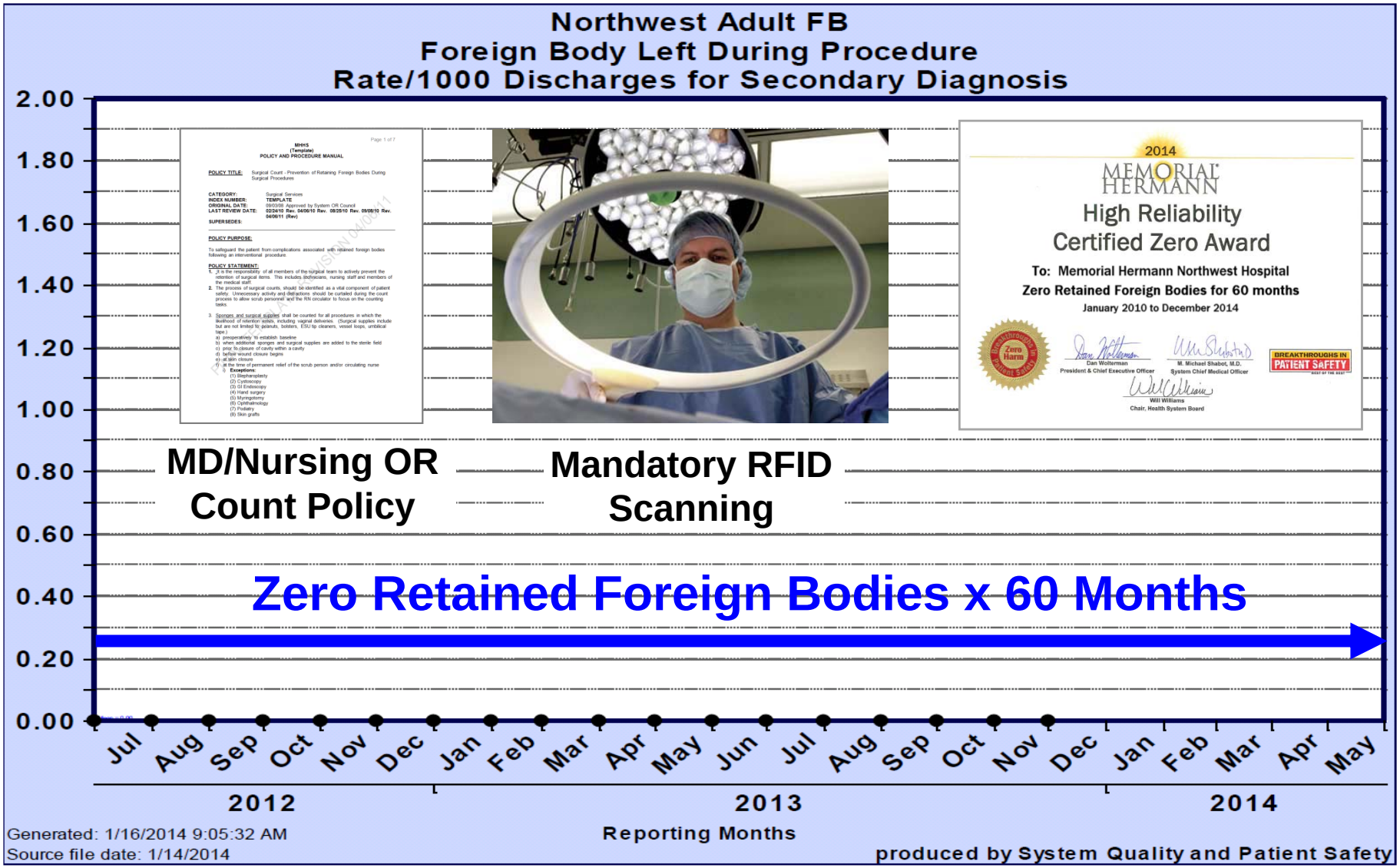
Benjamin K. Chu, M.D.
President & Chief Executive Officer

M. Michael Shabot, M.D.
System Chief Clinical Officer

BREAKTHROUGHS IN PATIENT SAFETY
BEST OF THE BEST

Will Williams
Chair, Health System Board

MH Northwest: Zero Retained Foreign Bodies



Hospital Acquired Conditions
"Never Events"

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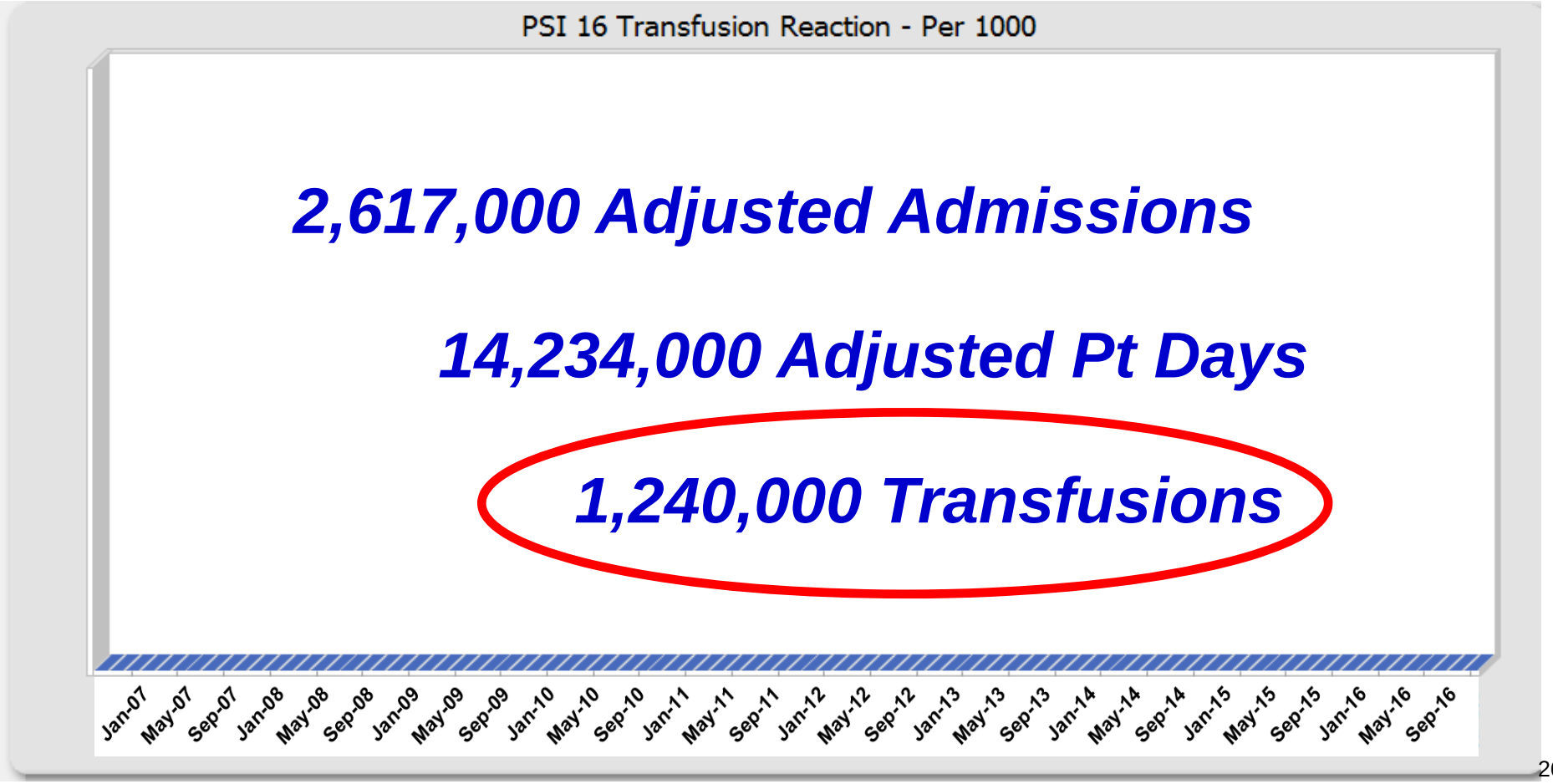
Acute Hemolytic Transfusion Reactions

Transfusion Events Jan 2007 - Dec 2016



Hospital Acquired Conditions
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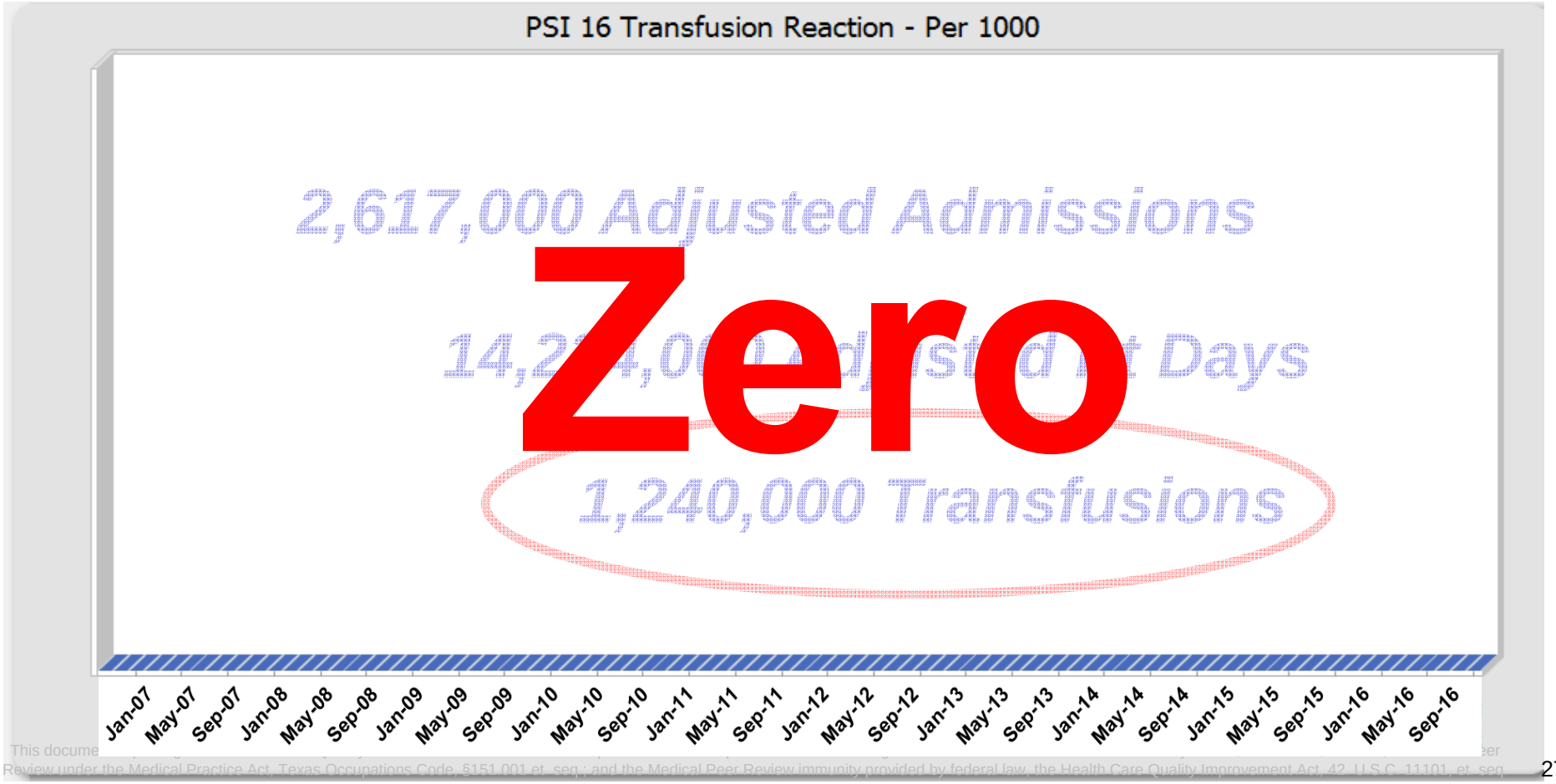


This docume eer Review under the Medical Practice Act, Texas Occupations Code, §151.001 et. seq.; and the Medical Peer Review immunity provided by federal law, the Health Care Quality Improvement Act, 42 U.S.C. 11101, et. seq.

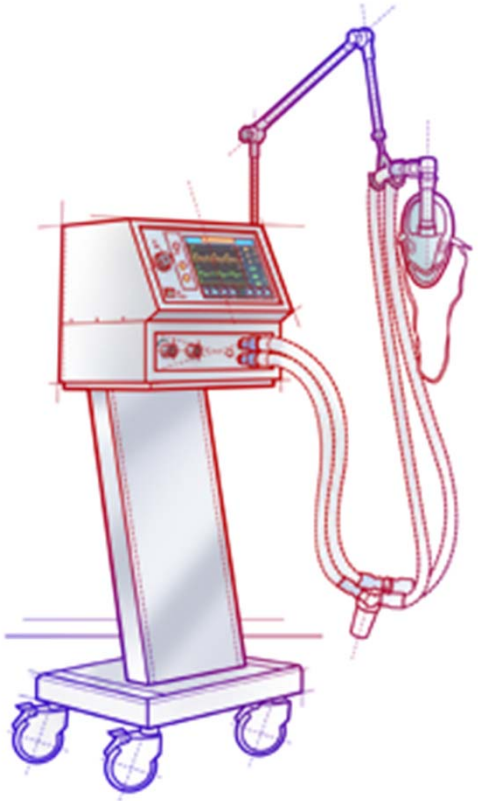
High Reliability 2011-2017
Certified Zero Awards

263

ICU Central Line Associated Bloodstream Infections (18)
ICU Catheter Associated Urinary Tract Infections (16)
Hospital-Wide Central Line Associated Bloodstream Infections (7)
Hospital-Wide Catheter Associated Urinary Tract Infections (5)
Ventilator Associated Pneumonias (23)
Surgical Site Infections
Retained Foreign Bodies (46)
Iatrogenic Pneumothorax (24)
Accidental Punctures and Lacerations (3)
Pressure Ulcers Stages III & IV (37)
Hospital Associated Injuries (7)
Deep Vein Thrombosis and/or Pulmonary Embolism (2)
Deaths Among Surgical Inpatients with Serious Treatable Complications (1)
Birth Traumas (16)
Obstetric Trauma in Natural Deliveries with Instrumentation (4)
Serious Safety Events 1&2 (21)
Serious Safety Events 1 & 2 for 1000 Days (2)
All Serious Safety Events (1)
Early Elective Deliveries (9)
Manifestations of Poor Glycemic Control (21)

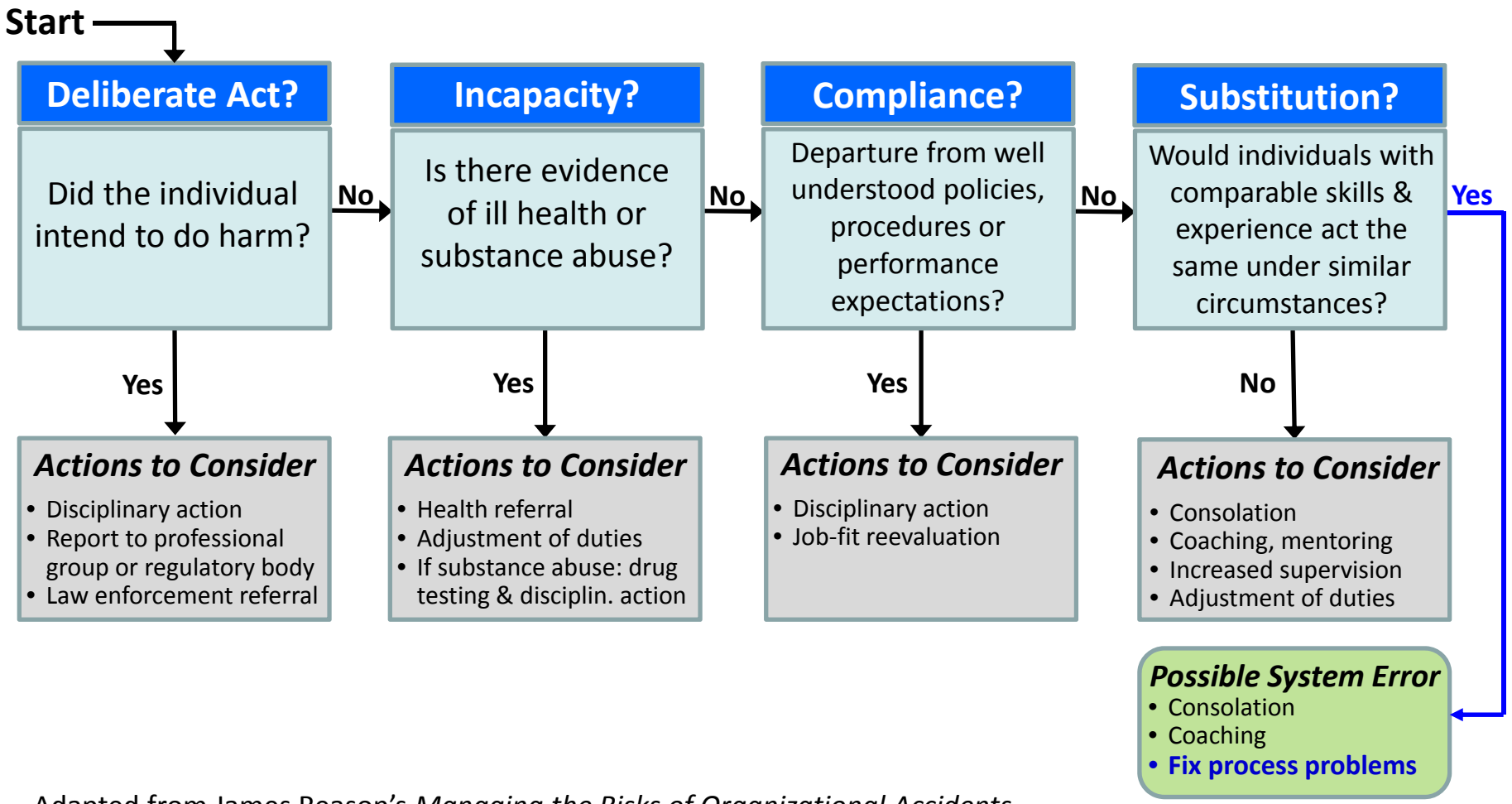

2014
MEMORIAL HERMANN
High Reliability
Certified Zero Award
To: Memorial Hermann Northeast Hospital
Zero Early Elective Deliveries for 12 months
January 2013 to December 2013

Complex Device Case Scenario



ICU Ventilator

Just Culture Performance Management Decision Guide



Adapted from James Reason's *Managing the Risks of Organizational Accidents*

The Process Challenge

Process that assures that new critical life safety and monitoring devices are not placed into service on nursing units until nurses and other care givers who use these devices on patients have received formal in-service training and this training is documented in writing for each.

Process includes a requirement of 100% compliance with individual caregiver education prior to rolling out the equipment onto the unit.

“Fail Safe” Project Team

Charge-Streamline a “Fail Safe” Process -ultimate goal of zero harm

Six Sigma –Process Work Flow Design

- Time efficient
- Cost Effective

Executive Sponsor

Interdisciplinary Project Team

- Quality and Safety
- Risk Management
- Education Management and Specialists– Nursing and Other
- Clinicians
- Supply Chain

Fail Safe Project & Team Charter

Executive Sponsor: Dr. Shabot ***Project Champion: Pat Hercules***

Problem Statement

Patients may be harmed if staff does not receive training on all new equipment and devices, especially critical life support or monitoring devices such as ventilators and physiological monitors. Clinicians and caregivers must be sufficiently trained on these devices in a timely manner, and must be able to demonstrate competency prior to using equipment / devices.

Currently, there is no standardized process to ensure adequate and timely training for clinicians and caregivers using critical equipment so that they do not suffer the consequences of informal training.
(October 2013)

Customers

Primary: Patients
Key Stakeholders: Clinicians and Caregivers
MHHS & Facility Leaders
Risk Management

Project Alignment with Strategic Plan

Quality & Safety
Customer Satisfaction

Project Scope

In scope:
New Equipment with risk assessment of high risk (critical).
Memorial Hermann Patient units and procedural areas
Clinicians and caregivers that touch patients
Out of scope:
New Equipment with risk assessment of low / medium risk.
Pharmacy Department & Physicians and Physician Assits.

Project Goal

Develop a process to ensure that staff education has been completed, documented and signed off on a per nurse and other appropriate caregiver basis before newly acquired critical equipment, especially, monitoring or life support equipment, is placed into service in a clinical area. All new equipment will require initial training before being put into use. Each equipment will be labeled a risk assessment category and have different levels of responsibility for training and competency assessment.

Business Case: Employees must perform at efficient and effective levels; thus, it is critical to be trained and knowledgeable about new critical equipment in their areas, to avoid risks of regulatory non-compliance and inconsistencies in patient care.

In Scope Progression

(October 2013)
In Scope:
Devices with Risk Assessment of Critical -High Risk
Units: Patient Care Units and Procedural Areas
Clinicians-RNs, RTs, and other clinicians that touch patients with the identified devices

Out of Scope:
Units: OR Surgical Services
Clinicians: Physicians

(2014)
In Scope Addition:
Devices with Risk Assessments of Complex-Medium Risk and Simple-Low Risk

(2016)
In Scope Addition
Units: Operating Rooms, PACUs, Endoscopy, Cath Lab, Ambulatory Services,

System Fail Safe Steering Committee

Interdisciplinary Membership

- Executive Sponsor
- CMO representation
- CNO Representation
- Quality
- Risk Management
- Infection Prevention
- Outpatient Services
- Operating Rooms
- Education – Nursing and other
- Clinical Specialty Representation /Hospital Representation (e.g. ER, NICU, ICU, Pedi
- Supply Chain
- Environmental Services

Fail Safe Steering Committee

Scope and Responsibilities

- Oversee the High Level Process for education plan associated with New Medical Devices approved to come into Memorial Hermann Hospital System.
- Assign the Risk Assessment Category for each Medical Device (Critical, Complex, or Simple).
- Oversee each Medical Device Education Plan, Roll Out Status, and Completion.
- Communicate Initiative Purpose and Process Throughout the System.
- Oversee the ongoing evaluation of the Fail Safe Initiative, including Cost Benefit Analysis when appropriate.

Fail Safe High Level Process

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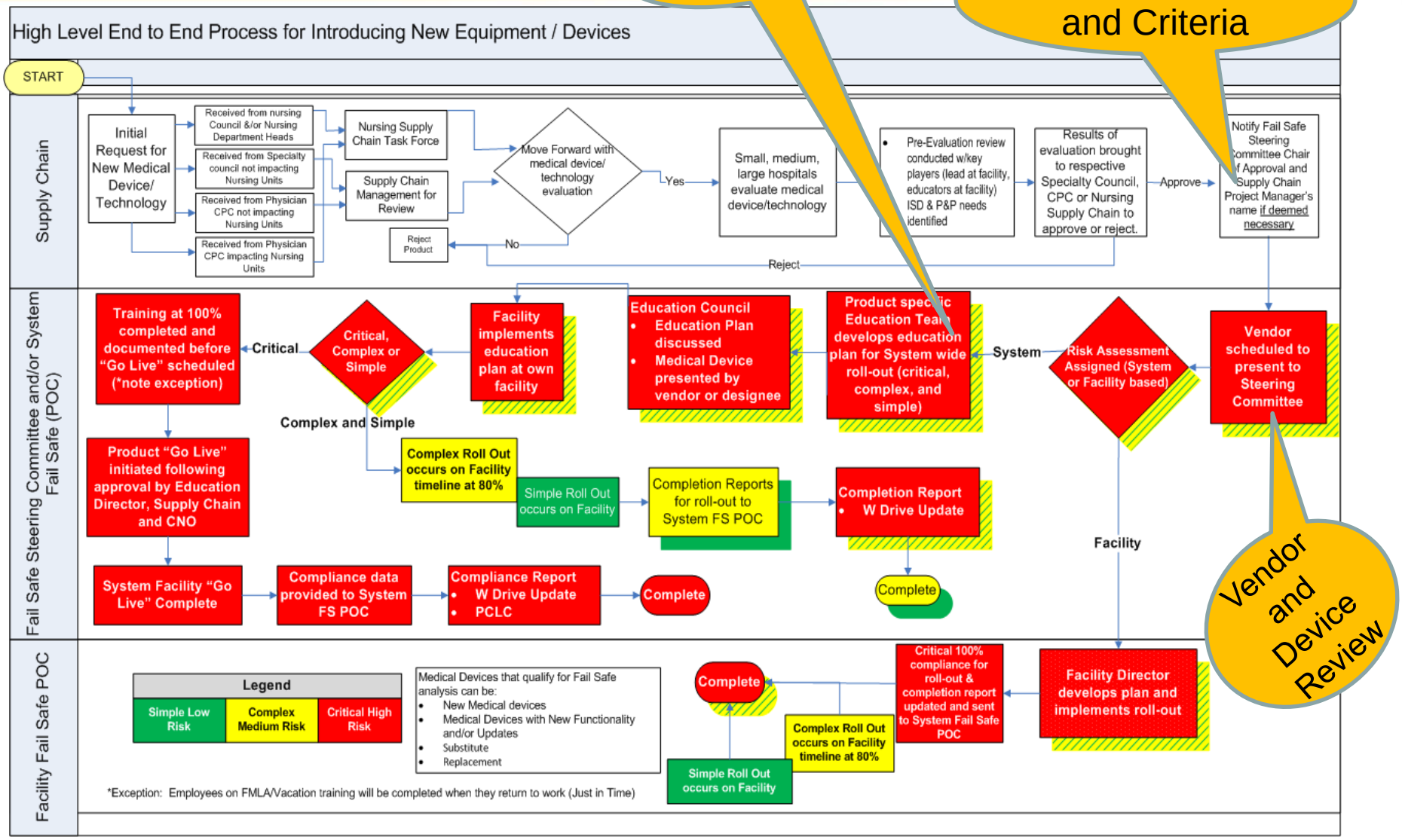

Intake Request and Criteria for Fail Safe Analysis

Is it a Medical Device?

(http://www.fda.gov/aboutfda/transparency/basics/ucm211822.htm)

Is there a potential for injury or harm?

What is the complexity and/or the Change?

- Current device (new location for use)
- New Device
- Upgrade:
  - Change in current practice
  - Change in display or functionality
  - Change in technology
- Substitute (temporary with changes)
- Replacement

- Name of Individual Requestor and Date
- Name and description of Medical Device
- Vendor Company Name
- Vendor Representative Name/Contact Information
- Supply Chain Contact/Project Manager
- Scope of Change: System or Facility
- Type of roll out: Single or Staggered - phases
- Recommended Target Clinical Area
- Recommended Target Employee Group
- Contract for Purchase finalized with internal purchase number availability
- Projected Date for roll out

Medical Device _____ Vendor _____

Discussion Topics for the Vendor Presentation

1. Medical Device Review: Purpose, Function, Technology, Type of Change, Cost
2. FDA Risk Classification
3. System implementation vs Facility Based approval for roll out
4. Evaluation Information: Number of devices evaluated, Hospital/Hospitals participating, outcome evaluation of evaluation
5. Maude reports or any negative outcome impacting safety reported
6. Training: Target population-end users
7. Training Material and Support: Training material availability including online support, competency check off tool availability, length of training required, vendor support quantified
8. Cleaning process recommendation

Critical, Complex, or Simple?

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Risk Analysis

Risk Assessment Process

What do we need from the Risk Assessment process:

- An understanding of the potential risks inherent to medical device malfunction before using a new medical device ~ or ~ operating a device with enhanced or undated technology
- User friendly and comprehensive tool for measuring the above

The Risk Assessment tool criteria:

- Potential severity of harm to patients ***
- Probability of occurrence and frequency of harm to patients***

Resulting assessment or score:

- Determines educational rigor to be applied prior to device roll out

***without education and practice accountability

Medical Device-Technology Assessment Tool

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Fail Safe Medical Device-Technology Risk Assessment Tool

Date:
Medical Device/Technology:

Name of Reviewer

Severity of Harm to Patients without Education and Practice Accountability

Severity	Criteria	Rank
Catastrophic	Death or life threatening	4
Critical	major injury / adverse health outcome	3
Marginal	moderate injury / adverse health outcome	2
Negligible	possible minor injury / adverse health outcom	1

Probability of Occurrence of Harm to Patients

Occurrence	Criteria	Rank
Frequent	Expected to occur frequently, almost on every occasion	5
Probably	Expected to occur in most circumstances, will occur several times	4
Occasional	Likely to occur sometimes	3
Remote	Unlikely, but possible	2
Improbable	So unlikely, it can be assumed occurrence may not be experienced	1

FDA Class Definitions

Class I - low risk and are therefore subject to the least regulatory controls

Class II - higher risk devices than Class I and require greater regulatory controls to provide reasonable assurance of the device's safety and effectiveness

Class III - the highest risk devices are are therefore subject to the highest level of regulatory control, and must typically be approved by FDA before marketed

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Determine Ranks

Severity — Rank
What is the harm to patients or employees if a device is misused, employee has no training on it, or device breaks down?

Occurrence — Rank
How likely will a patient or employee be harmed if something went wrong with the particular device?

Total (add together) _____

FDA Rating for the Equipment Class: I II III

100% education required prior to roll out? Yes No

Fail Safe Education

Fail Safe Assessment & Education Process

Fail Safe Committee

Review Device & Assigns Risk Score

Fail Safe Education Representatives

Develop Education Plan

Education/ Specialty Council

Review Education Plan

Facility Educators

Educate staff & document in PIL

Hand Off Communication Tool

Training Program Guide

Hand Off Communication Tool and Guide

Medical Device: **Fail Safe Meeting Date:**

Owner: **Date of Request:**

- Description of the Medical Device
- Reason for analysis by Fail Safe Steering Committee
- Type of Change
- FDA Rating
- MAUDE Report/s
- Vendor/Contact Information
- Supply Chain Product Manager
- Device Evaluation: Dates/Location /Specialties
- Approvals: Councils/Other
- **Risk Assessment Rating/Competency Accountability Requirement**
- Scope of Change and Facilities with Roll Out
- Target Population: Clinical Areas and Employee groups
- Product Availability and Cost
- Key Dates: Projected Time for Roll Out

Training Program Guide for (Medical Device)

Education required, not quantified prior to rollout

80%

100%

Training Program (Minimum Requirements)	Equipment Risk Assessment		
	Simple Low Risk	Complex Medium Risk	Critical High Risk
Content Deliverable	✓	✓	✓
PIL module			
Vendor module			
written documents			
Other (Specify)			
Validation of Skill Knowledge		✓	✓
written / online quiz			
oral quiz			
Return Demonstration (verbal or action)			
Other (Specify)			
Hands on Facilitated / Precepted "skills" Return Demonstration			✓
Classroom			
Bedside			
Simulation Lab			
Other (Specify)			
Identified and Trained Super Users			✓
Unit specific individuals (on every shift)			
Operational Administrators (OAs)			
Other (Specify)			
Support and Resources during Facility "Go Live"	✓	✓	✓
Onsite Vendor Representative			
System Supply Chain Project Manager			
System Bio Med Project Manager			
Facility Educator			
Facility Director and Managers			
Facility Materials Management			
Facility Bio Med			

✓ Represents a "Must Have" in Training Design

Training Program Guide for Ventilator (Example)

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Fail Safe - Training Program Design Guide

Medical Device/Technology: Name

Ventilator-Critical

Training Program (Minimum Requirements)	Equipment Risk Assessment: Simple Low Risk	Complex Medium Risk	Critical High Risk
Content Deliverable-*Including Practice Accountability	✓	✓	✓
PIL module			☒
Vendor module			☒
Written documents			☒
Other (Specify)			
Validation of Skill Knowledge		✓	✓
Written / online quiz			☒
Oral quiz			
Return Demonstration (verbal or action)			☒
Other (Specify)			
Hands on Facilitated / Precepted "skills" Return Demonstration			✓
Classroom			☒
Bedside			☒
Simulation Lab			
Other (Specify)			
Identified and Trained Super Users			✓
Unit specific individuals (on every shift)			Respiratory T
Operational Administrators (OAs)			☒
Other (Specify)			
Support and Resources during Facility "Go Live"	✓	✓	✓
Onsite Vendor Representative			☒
System Supply Chain Project Manager			☒
System Bio Med Project Manager			☒
Facility Educator			☒
Facility Director and Managers			☒
Facility Materials Management			☒
Facility Bio Med			

✓ Represents a "Must Have" in Training Design

Revised 4.2016

Fail Safe Compliance with Database Management

Hand off Communication Tool and Guide

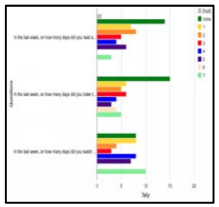
Database Management Process

FS POC
Enter FS device information

FS POC
Enters proposed education plan

FS POC
Enters any changes to plan

FS Support
Enters LMS completion info



Fail Safe Education Compliance Report

FS Director
Send report monthly to stakeholders
Education/Specialty Council
Fail SafeSteering Committee
CNO Council
Enterprise Risk Committee

Process Stakeholders
FS POC-Point of Contact
FS Support - Administrative
FS Director - Clinical Director

Fail Safe Database Resource

Fail Safe Database Resource	
Calculate completion percentage & education cost	
# of employees requiring education by cost center	0
# of employees completed education by cost center	0
% Completion	0%
Cost of Education *	$ -

** # of employee X $40/hr X ed time*

		Cost Centers							
		029-5500		029-5550		029-5551		Total	
Job Codes		Required	Complete	Required	Complete	Required	Complete	Required	Complete
RNI	PC0901								
RN II	PC1001								
RN III	PC1101								
RN IV	PC1207								
Total		0	0	0	0	0	0	0	0
% Complete			0%		0%		0%		0%

Objective

- Using LMS reports, input compliance data into database

Education Compliance Report

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Fail Safe Devices FY 2018.xls [Compatibility Mode] - Microsoft Excel

Fail Safe Device Education Dashboard

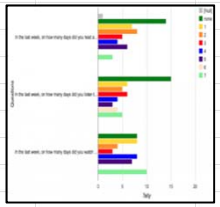
FY 2018

Completed | In Progress

Device (Example)	Fail Safe Committee	Facility/Specialty Team	Education/ Specialty Council	Risk Assessment	Education % Required	Scope of Change	Clinical Area	# of Staff Educated	Completion %	Estimated Education Cost
EKG leads	8/1/2017	8/15/2017	9/6/2017	Simple 2		System-wide	Respiratory Tx	216	95%	$ 6,566.40
Midline Catheter	8/1/2017	8/21/2017	9/6/2017	Critical 7	100%	System-wide	Nursing - All	1023	78%	$ 25,534.08
Chest Compression Devise	10/3/2017	11/5/2017		Complex 4	80%	TMC	Nursing - All	1023		
ABC Rapid Infuser	10/3/2017	11/5/2017		Critical 7	100%	TMC	ICU	325		
XYZ Code	10/3/2017	11/5/2017		Critical 7	100%	System-wide	Nursing - All	1023		

Report Objectives

- Distribute to identified stakeholders
- Obtain feedback
- Revise process as needed



Medical Device Assessments

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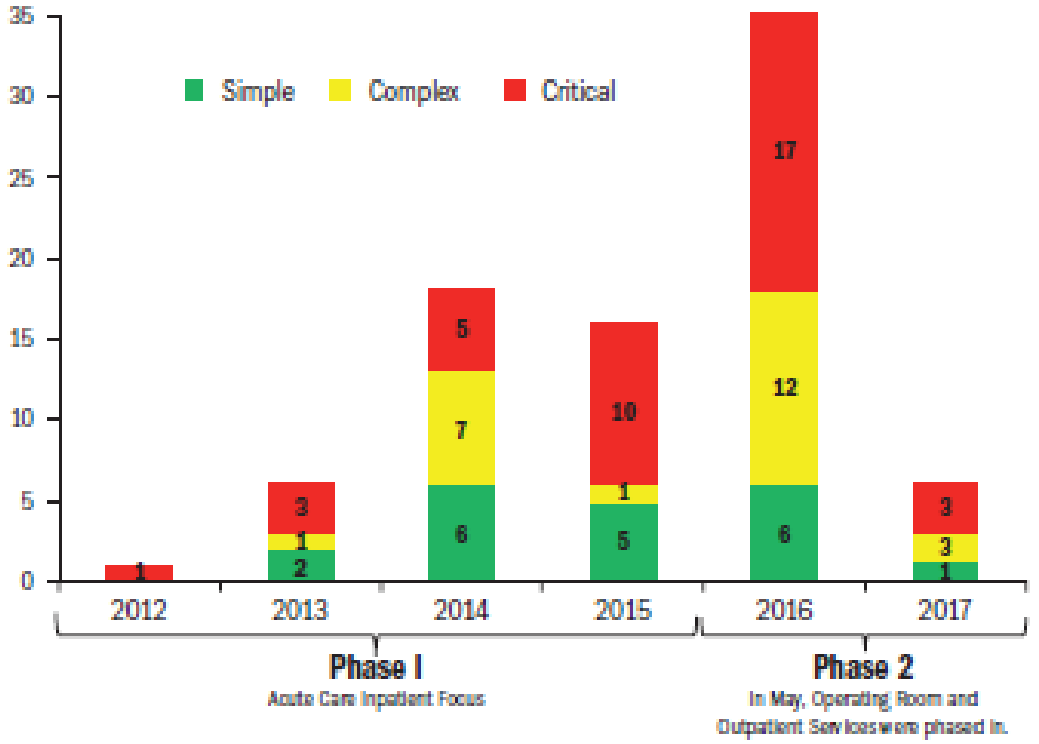
Fall Safe Committee Count of Medical Device Assessments by Year and Risk Category

- Phase 1 - 47% (39) assessed as Critical
- Phase 2 - 39% (7) OR Medical Devices assessed as critical (since May 2016)



Why we assess the risk….

RMs share lessons learned from adverse events involving medical device use in the acute care setting to include:

- ✓ Gaps identified in the existing safety culture
- ✓ ID ways to engage third party partners in adopting and supporting a safety culture
- ✓ Re-engagement of RM and hospital leadership oversight of equipment management to mitigate future risks to our patients and to the organization

Our goal is, with 100% compliance, the frequency of all medical device safety events will decrease!

Serious Safety Events


2014
MEMORIAL HERMANN
High Reliability
Certified Zero Award
To: Memorial Hermann Northwest Hospital
Zero Serious Safety Events 1 & 2 for 12 months
January 2013 to December 2013
Breakthroughs in Patient Safety
Zero Harm
Dan Wolterman
President & Chief Executive Officer
M. Michael Shabot, M.D.
System Chief Medical Officer
BREAKTHROUGHS IN PATIENT SAFETY
Will Williams
Chair, Health System Board


2015
MEMORIAL HERMANN
18
Zero Harm
Breakthroughs in Patient Safety
Will Williams
Chair, Health System Board

September 6, 2015
MH Greater Heights Hospital
1000 Days Since Last SSE1-2

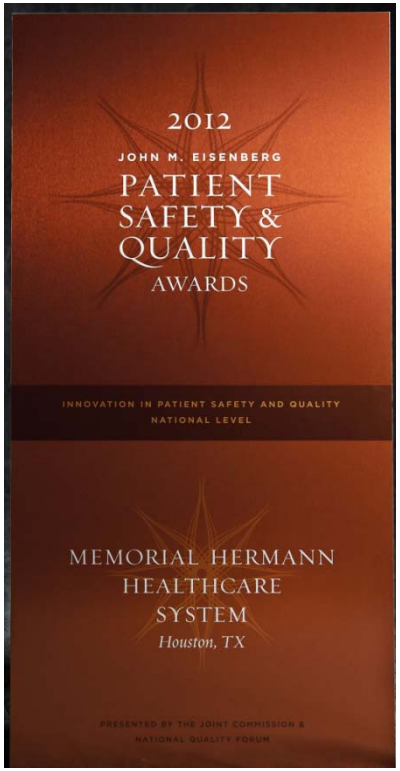
John M. Eisenberg Patient Safety and Quality Award

MEMORIAL HERMANN

March 8, 2013 | Washington, DC

The Joint Commission

NATIONAL QUALITY FORUM



MH Sugar Land Hospital
Malcolm Baldrige Award

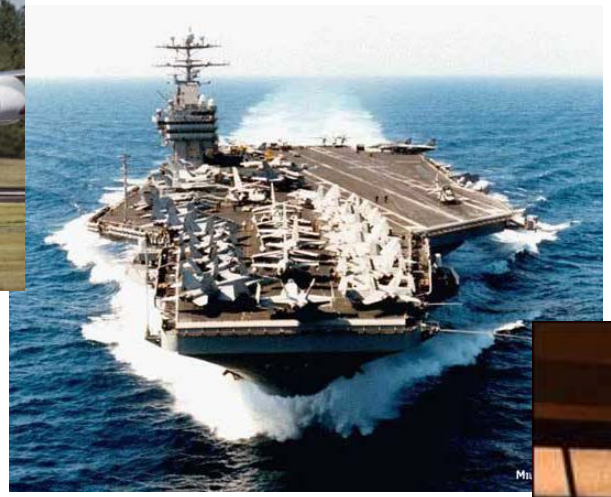
MEMORIAL HERMANN

Malcolm Baldrige National Quality Award

2016 Award Recipient

High Reliability Organizations

Commercial Aviation



Nuclear Aircraft Carriers

Air Traffic Control

OPERATION BREAKTHROUGH
PATIENT SAFETY
BEST OF THE BEST

High Reliability Organizations

Memorial Hermann Health System

Nuclear Aircraft Carriers

Commercial Aviation

Air Traffic Control

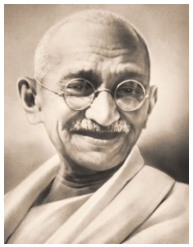
OPERATION BREAKTHROUGH
PATIENT SAFETY
BEST OF THE BEST

Thank you!

MEMORIAL HERMANN

"You must be the change you want to see in the world"

Mahatma Gandhi (1869-1948)



Future/Ongoing Initiatives

December 15, 2017 12 noon to 1 pm EST

"UCSF's Experience With Sending Alarms to Phones in the Intensive Care Nursery"

Please join us to learn the strategy UCSF used to determine how and when and which alarms to send to the nurses phones in the NICU…and all the lessons learned!

Presenter: Kevin Spolini, MSN, RN
Clinical Informatics Mission Bay Hospitals
UCSF Benioff Children's Hospital
San Francisco, CA

January 15, 2018 12:00 PM to 1 PM EST

"Clinical Alarm Management Strategies – Meaningful Alerts; Reducing Non-actionable Alarms"

Please join us to learn the technique of creating alarm default settings specific to certain patient profiles to reduce alarm fatigue!

Presenter: Sharon H. Allan, DNP, RN, ACNS-BC

Central Nursing - Clinical Standards

The Johns Hopkins Hospital

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