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# Linking Employee and Patient Safety to Create High-Reliability Organizations

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Montefiore Health System
Director, Environmental Health and Safety

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# Webinar Logistics

- All participants are muted

- 45-minute presentation

- 10 minutes Q&A session
  - Use the comments/chat box on your sidebar to submit questions
  - We'll respond to as many questions as we can in the Q&A session so we can end on time!

- Web/Phone Conference Issues or Concerns
  - If you are having difficulty seeing/hearing the presentation, please submit a question using the Comments box
  - A short evaluation survey will be sent after the session – please help us with your feedback!

- All attendees will receive a link to the recorded webinar, presentation slides, and injury reduction guide within a day or two of the webinar

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# Today's Speakers

**Christy Foster, Director, Healthcare, BSI EHS Services and Solutions**

Christy Foster is an industry leader with over 20 years of EHS experience in the public and private sectors including the healthcare, biotech, semiconductor, and manufacturing industries, focused in the area of worker injury prevention. Christy has led worker injury prevention projects for some of the most respected healthcare institutions in the nation, resulting in millions of dollars in savings and signification incident reductions for her clients. She is a co-founder of the EHSSENTIALS Symposium for healthcare EHS and a lecturer for the San Jose State University Engineering Department. She has a BS in Biology from the University of New Hampshire and Masters in Public Administration from National University.

**Jared Shapiro, DrPH(c), PhD(c), MPH, FAcEM, CEM, CHSP, CHEP, NRP, MICP**

Mr. Shapiro, who oversees all aspects of Environment of Care and Life Safety, Hazardous Waste, Radiation and Laser Safety, and Emergency Management for the entire health system, is an accomplished healthcare executive with 16 years of experience focused on healthcare operations, operational management, regulatory compliance, and performance improvement. He is an expert in organizational management, process improvement, program and project leadership, as well as training and development. As the many appellations following his name indicate, he is a dedicated, experienced and learned professional. Most notably he holds the prestigious credentials as a Certified Emergency Manager, Certified Healthcare Safety Professional, Certified Healthcare Emergency Professional and is a Fellow of the American College of Emergency Managers.

# What is a High Reliability Organization?

- Organizations that operate in complex, high-hazard environments for extended periods of time without serious accidents or catastrophic failures. (AHRQ)
  - Problems are anticipated, detected early, and responded to early enough to prevent significant consequences
  - Relentlessly prioritizing safety over all other performance pressures
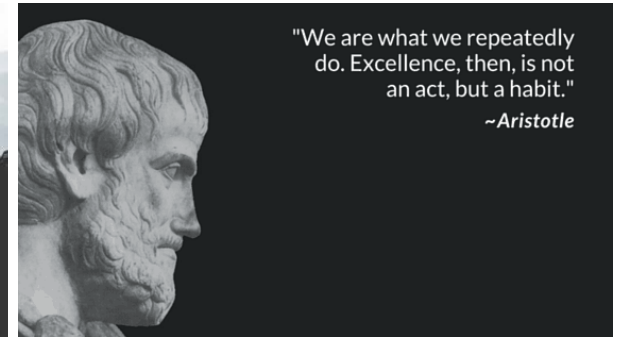






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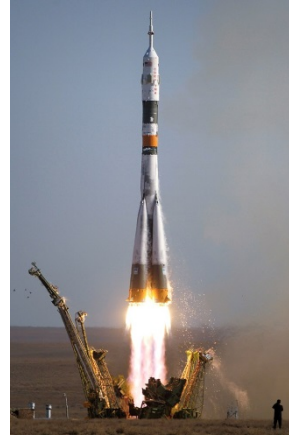
# Why High Reliability for Hospitals

**Principles of HRO**

- Preoccupation with failure

- Fixate on how things could fail

- Reluctance to simplify

- Simplify checking complex processes

- Not simplifying the process

- Sensitivity to operations

- Understanding current status

- Commitment to Resilience

- Anticipate trouble spots

- Deference to Expertise

- Subject matter experts, not authority

**Medical Errors**

- 100,000+ deaths annually from medical errors

- 3rd biggest cause death in US

- No significant improvement

You cannot improve one thing by 1000% but you can improve 1000 little things by 1%.

Jan Carlzon

"We are what we repeatedly do. Excellence, then, is not an act, but a habit."

~Aristotle

# The Challenge

A bad system will beat a good person every time.
W. Edwards Deming

- Inefficient and Burdensome Processes

**Paper-based Processes**

**Lacking Corrective Action**

**No Measurable Metrics**

**High Administrative Burden**

**Manual Aggregation**

**Reactive vs. Proactive**

**Lack of Transparency**

**No Performance Improvement Structure**

# Foundation for Strong HRO

- The Joint Commission has suggested the following foundational elements:
  - Leadership commitment to zero-harm goals
  - Establishing a positive safety culture
  - Robust process improvement culture

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# What Does Leadership Commitment Look like?

- Aligned agreement of the overall governing body sharing a single vision of zero harm

  *"One of the most salient characteristics of high-reliability organizations is that they are not satisfied with whatever their current level of safety may be."* **(Chassin and Loeb, 2011)**
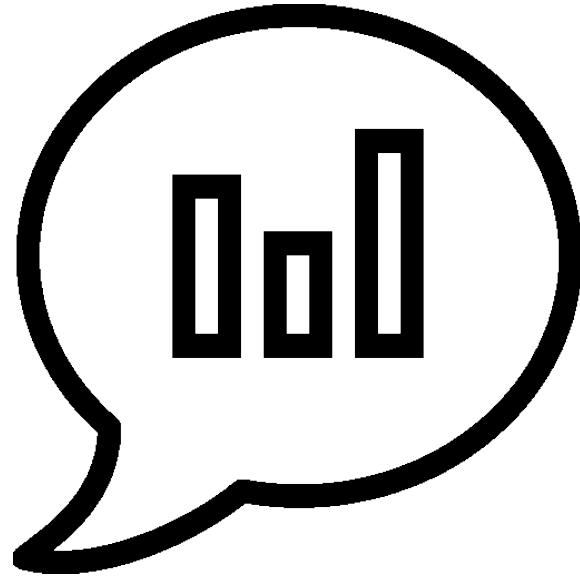
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# Tools for Achieving High Reliability



Lean + Six Sigma + Change Management = Effective Safety Processes
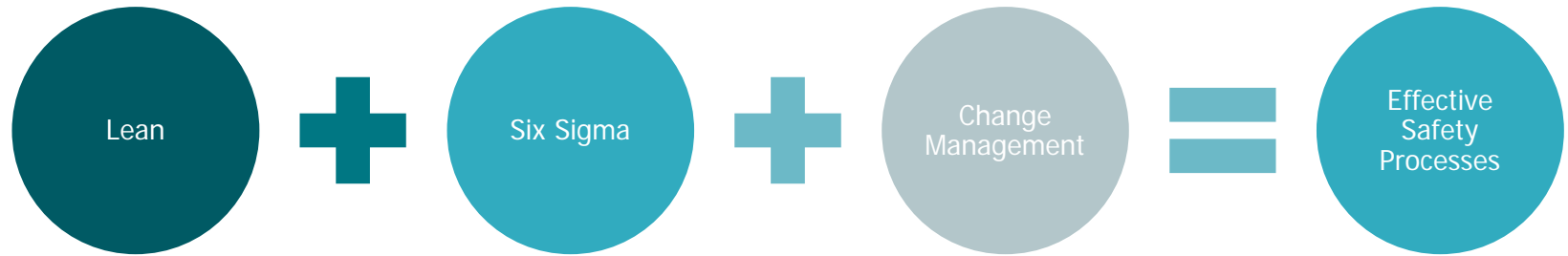
**Interactive Poll – How many of you are using Lean, Six Sigma, or Change Management Processes in your employee safety/injury prevention programs?**

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# Other key elements for HRO

- Visible physician leadership and engagement

- Financial rewards and staff advancement opportunity based upon performance to safety and quality measures
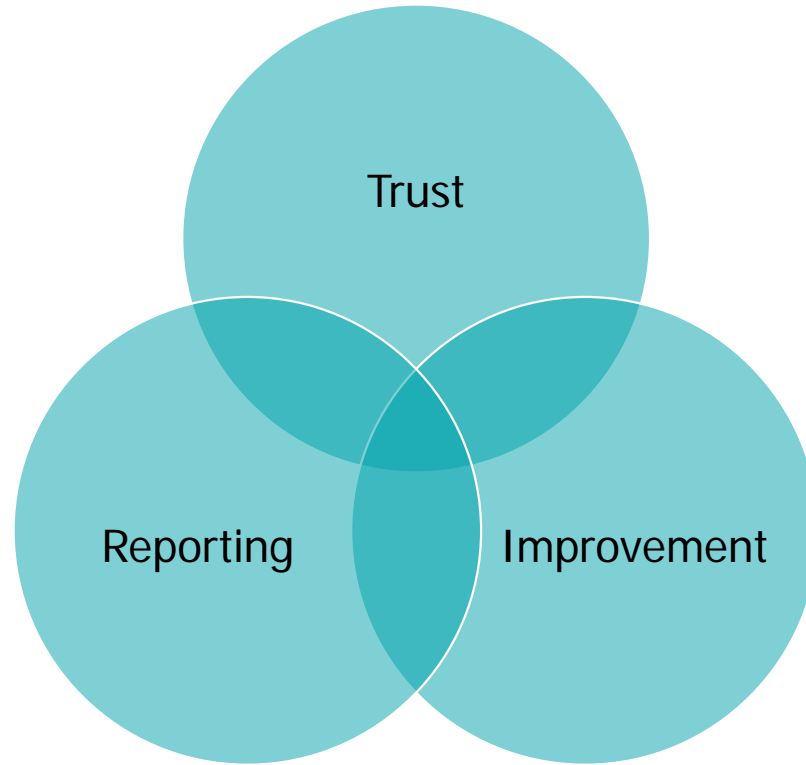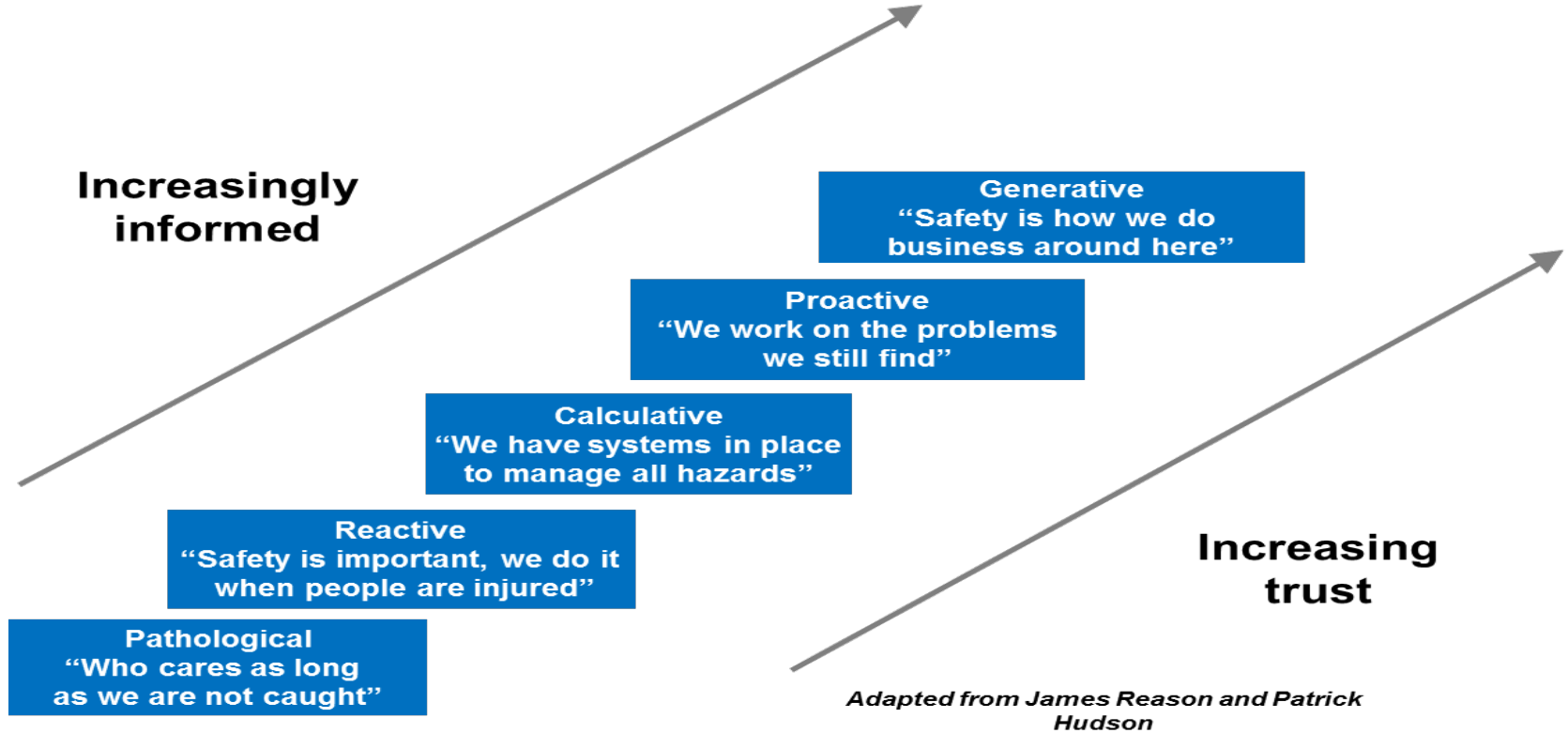
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Culture of Safety

# What Does a Culture of Safety look like?

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# Culture of Safety Maturity



**Increasingly informed**

**Generative**
"Safety is how we do business around here"

**Proactive**
"We work on the problems we still find"

**Calculative**
"We have systems in place to manage all hazards"

**Reactive**
"Safety is important, we do it when people are injured"

**Pathological**
"Who cares as long as we are not caught"

**Increasing trust**

*Adapted from James Reason and Patrick Hudson*

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# Data Collection and Analysis

- Hospitals need to compile their results across multiple potential harm areas and near misses to identify systems that are most in need of improvement
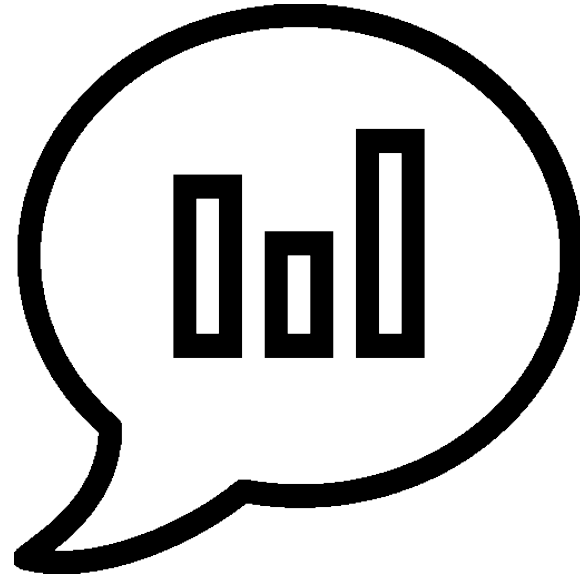
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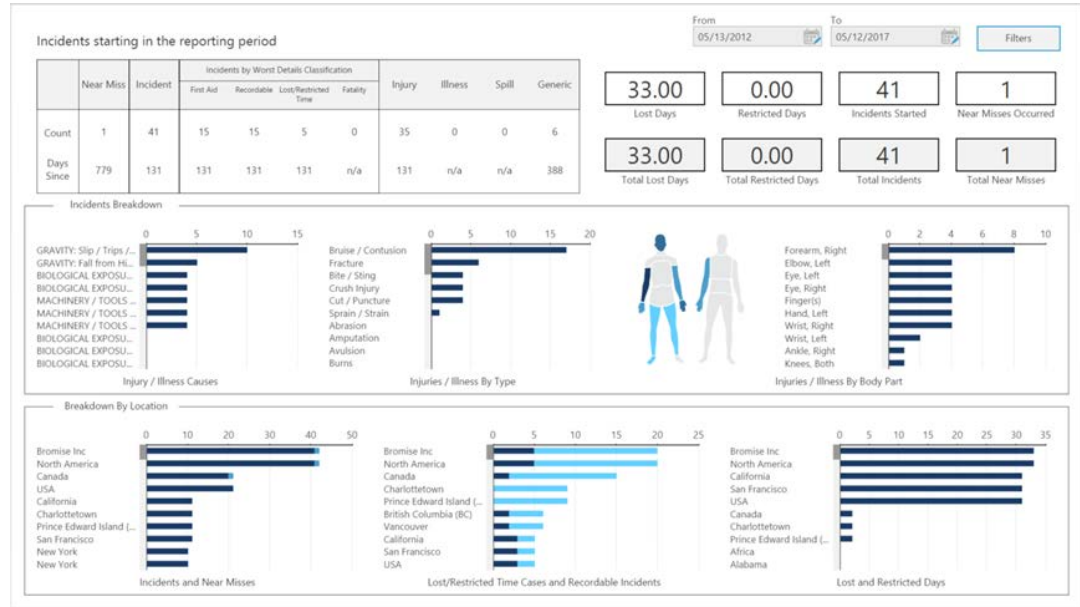
# Safety as Part of Strategic Planning

- Include safety culture results

- Set goals for improving culture metrics

- Report results to the board

**Interactive Poll – How does your organization use safety culture surveys?**

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# Linking Employee Safety and Patient Safety Efforts

## Daily huddles

- Department level
- Facility wide

## Data reporting

- Use the same system to collect all information

## Joint Committees

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# Looking outside the organization

- Continuous improvement requires organizations to pursue ideas outside of the walls of their hospital
  - Consider non-traditional sources of benchmarking

# Case Study

Montefiore Health System

Jared Shapiro, DrPH(c), PhD(c), MPH, CEM, FAcEM, CHSP, CHEP, NRP
Director, Environmental Health and Safety

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High Reliability Solution System-wide

# Index

1. Who we are

2. Why High Reliability for Hospitals

3. Transitioning to High Reliability

4. Results

5. Path Forward

It's not enough to do your best, you must know what to do and then do your best.

– W Edwards Deming

# Montefiore



**Notable Centers of Excellence**
- Children's Hospital at Montefiore
- Montefiore Einstein Center for Cancer Care
- Montefiore Einstein Center for Heart and Vascular Care
- Montefiore Einstein Center for Transplantation

## Academic

**M**

## Medical

## Community

### Teaching

**EINSTEIN**
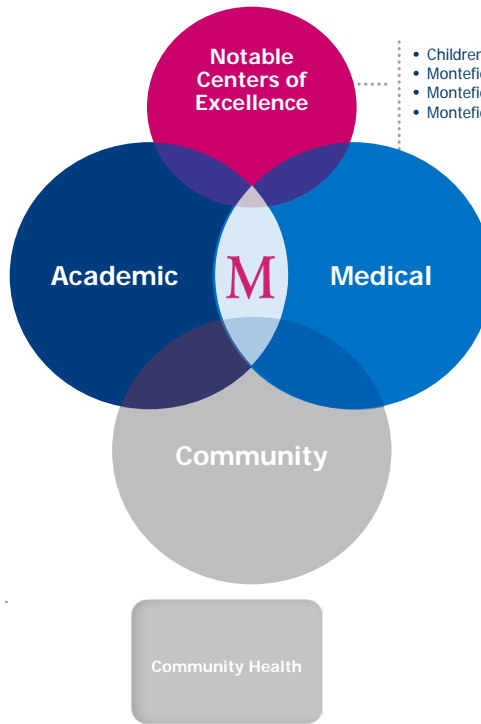Albert Einstein College of Medicine

### Research

- ~2,200 Faculty
- ~1,450 Residents & Fellows
- ~740 Allied Health Students
- ~2,100 Graduate & Undergraduate Nursing
- ~200 Home Health Aides
- ~100 Social Workers

- Clinical
- Translational
- Health Services

### Hospitals
- 11 Hospitals
- 3,236 Total Beds
- 150 Skilled Nursing Beds
- 1 Freestanding ED
- 1 Rehabilitation Hospital

### Primary & Specialty Care
- Advanced Primary Care
- Mental Health
- Substance Abuse
- Sub-specialty Care
- Dental
- School Based Health Centers
- Mobile Health

### Home Care
- Home Health Programs
- Primary Care
- House Call Program
- Telehealth
- Short and long term care

### Workforce
- ~30,000 Employees
- ~3,500 Physicians
- ~ 4,300 Medical & Allied Health Staff
- ~4,060 Integrated Provider Association Providers
  - ~3,350 Employed
- ~5,650 RN/LPN
- ~4,200 NYSNA
- ~12,700 1199
  - 850 RNs

### Community Health

- Health Education
- Community Advocacy
- Wellness
- Disease Mgmt.
- Nutrition
- Obesity Prevention
- Physical Activity
- Reduce Teen Pregnancy
- Lead Poisoning Prevention

### Corporate Functions
- Finance
- Legal
- Strategic Planning
- Purchasing
- Compliance
- Marketing
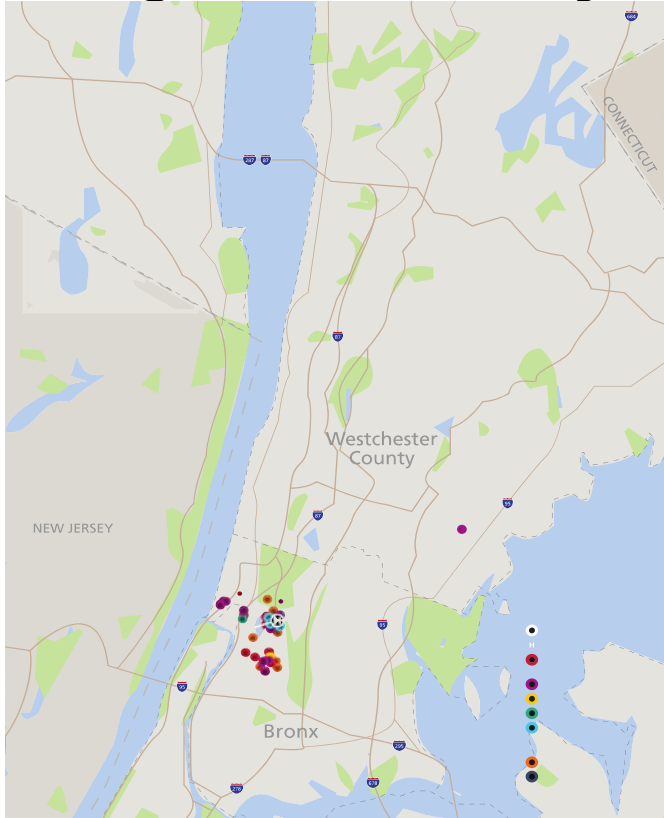- Public Affairs
- Human Resources

### Information Technology
- Clinical support
- Network applications

### CMO
- Care Management (~ 360K Covered Lives)
- Disease Management
- Care Coordination
- Telemedicine
- Pharmacy Education

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# Integrated Delivery System



## Our Locations

**3,236 Total Beds Across 11 Hospitals**

– Including 132 beds at the Children's Hospital at Montefiore (CHAM)

– 86 NICU/PICU beds

**150 Skilled Nursing Beds**

**200 Sites Including**

**Hutchinson Campus** – Hospital without Beds

**1 Freestanding Emergency Department –** First in New York State

**68 Primary Care Sites**

– 21 Montefiore Medical Group Sites

– 23 School Health Clinics

**16 Mental Health/Substance Abuse Treatment Clinics**

**73 Specialty Care Sites**

– 3 Multi-Specialty Centers
– 4 Pediatric Specialty Centers
– 12 Women's Health Centers

**10 Dental Centers**

**5 Imaging Centers**

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# Environmental Health and Safety

- **EOC Rounding Tool**
- **Fire Safety**
- **Construction Site Safety**
- **Post Construction**
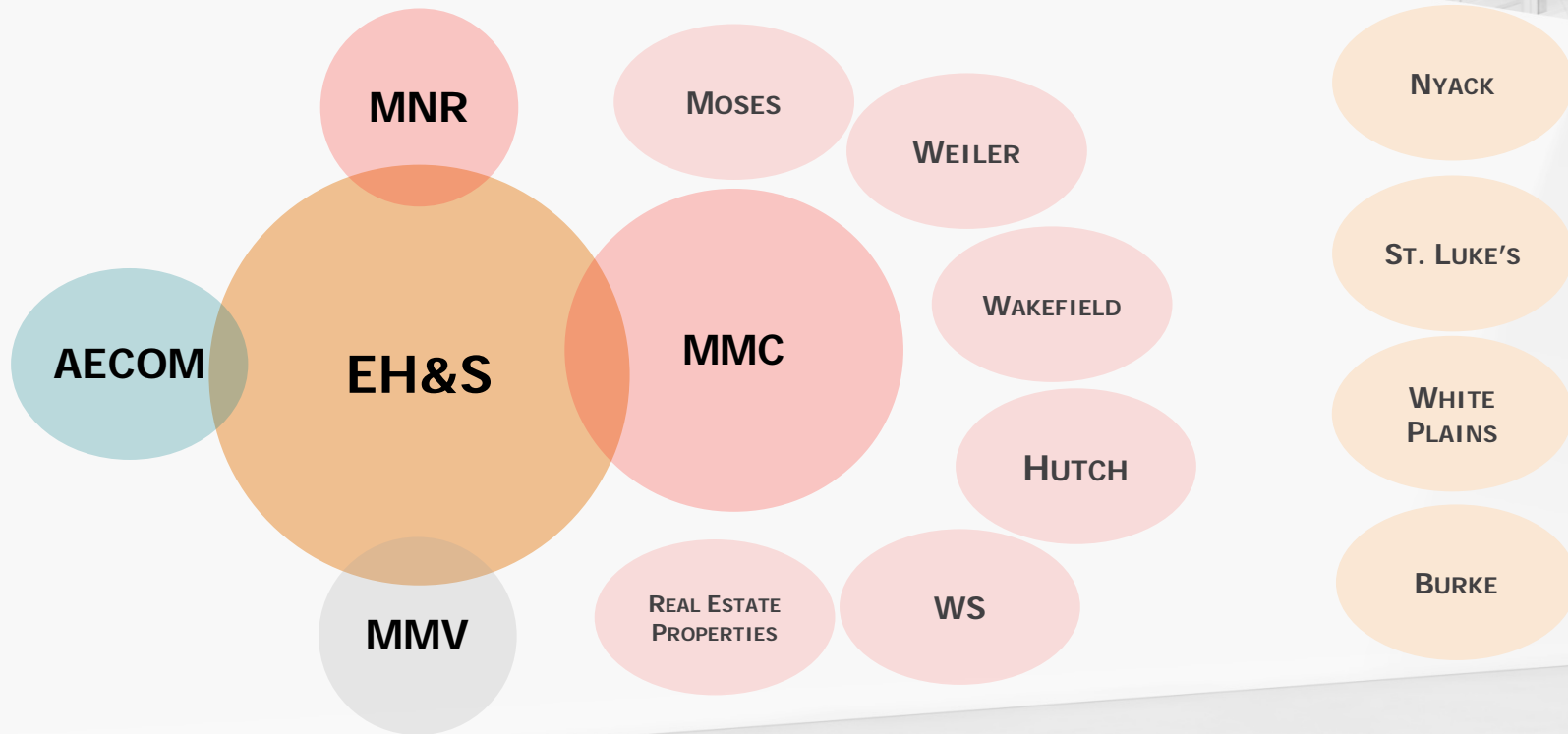- **Hazardous Materials Compliance**
- **Emergency Management**
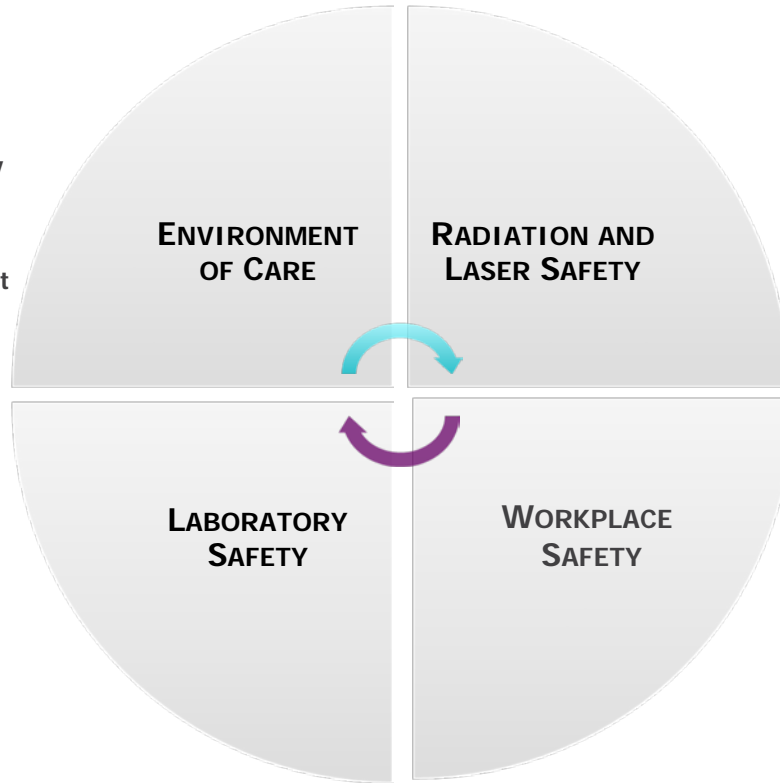
- **Radiation Badging**
- **Lead Apron Inspections**
- **Safety Rounding**
- **Laser Safety Program**
- **Therapy Procedures**

**ENVIRONMENT OF CARE**

**RADIATION AND LASER SAFETY**

**LABORATORY SAFETY**

**WORKPLACE SAFETY**

- **Laboratory Rounding**
- **Chemical Compliance**
- **Waste Minimization**
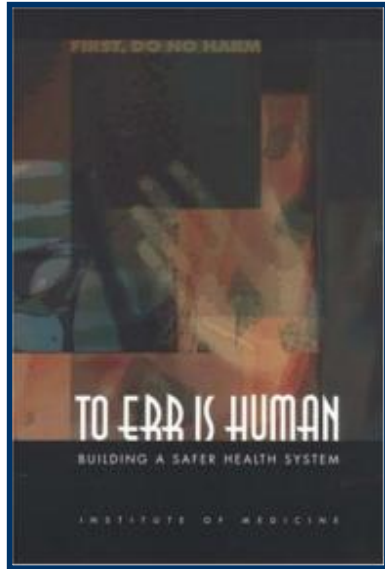- **Waste Removal and Tracking**

- **Ergonomic Assessments**
- **Complaint Investigation**
- **Injury Investigation and Prevention**
- **Needlestick Prevention**
- **Facility Planning**

# Our Clients

MNR

AECOM

EH&S

MMV

MOSES

WEILER

MMC

WAKEFIELD

HUTCH

REAL ESTATE PROPERTIES

WS

NYACK

ST. LUKE'S

WHITE PLAINS

BURKE

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# To Err Is Human



FIRST, DO NO HARM

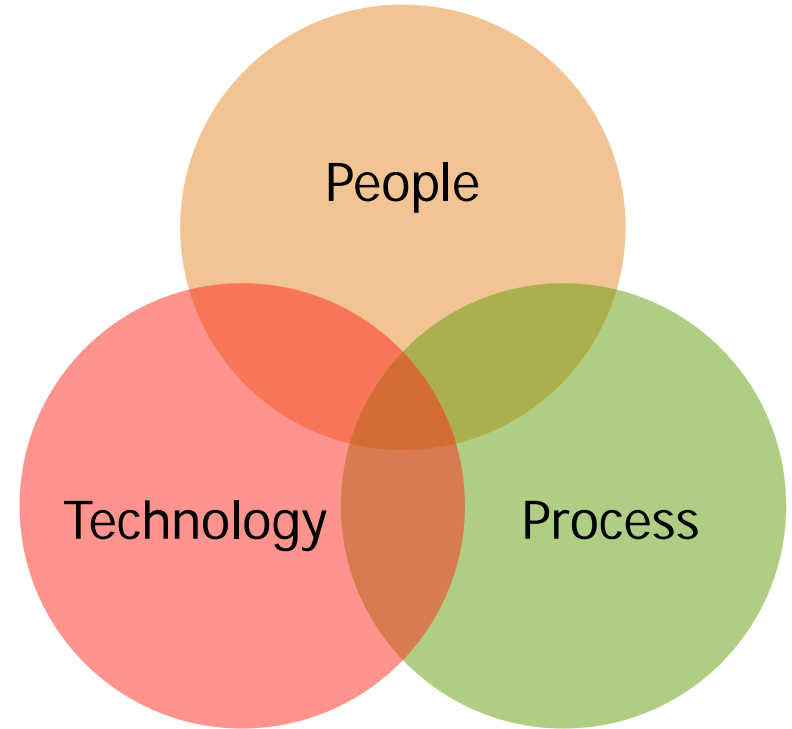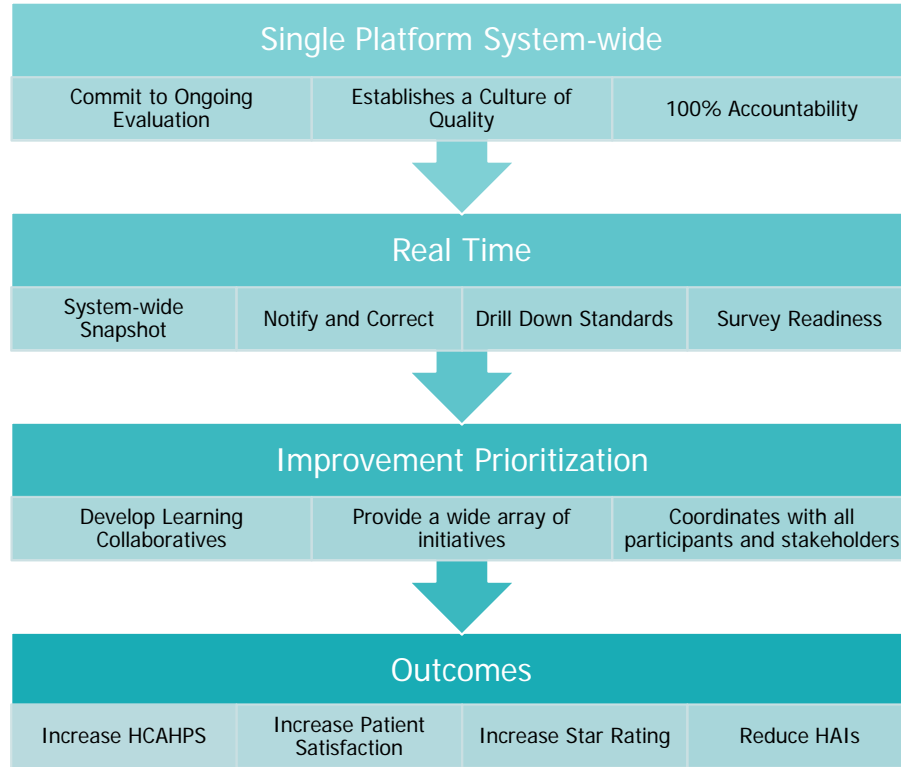**TO ERR IS HUMAN**
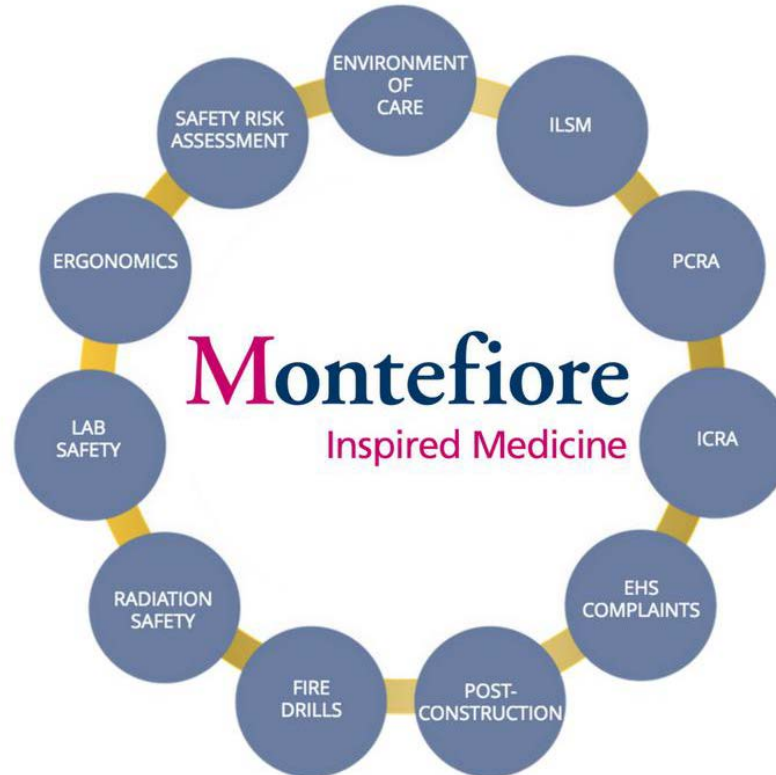
BUILDING A SAFER HEALTH SYSTEM

INSTITUTE OF MEDICINE

"The common initial reaction when an error occurs is to find and blame someone.  However, even apparently single events or errors are due most often to the convergence of multiple contributing factors.  Blaming an individual does not change these factors and the same error is likely to recur."

"Preventing errors and improving safety for patients requires a systems approach in order to modify the conditions that contribute to errors.  People working in health care are among the most educated and dedicated workforce in any industry.  The problem is not bad people; the problem is that the system needs to be safer."

# Readiness Rounds Solution

| Single Platform System-wide | | |
|---|---|---|
| Commit to Ongoing Evaluation | Establishes a Culture of Quality | 100% Accountability |

| Real Time | | | |
|---|---|---|---|
| System-wide Snapshot | Notify and Correct | Drill Down Standards | Survey Readiness |

| Improvement Prioritization | | |
|---|---|---|
| Develop Learning Collaboratives | Provide a wide array of initiatives | Coordinates with all participants and stakeholders |

| Outcomes | | | |
|---|---|---|---|
| Increase HCAHPS | Increase Patient Satisfaction | Increase Star Rating | Reduce HAIs |

People

Technology

Process

# Environmental Health & Safety

**Montefiore**
*Inspired Medicine*

# Montefiore Environmental Health & Safety Provides Framework for System-wide High Reliability Deployment

March 2017

Author
Jared Shapiro DrPh(c), MPH, CEM, FAcEM, CHSP, CHEP, NRP

## Contents

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# 5 Key Steps

Deploying a High Reliability Approach

**Proactive Checking**
+
**Follow-up & Service Recovery**
+
**Data Aggregated Dashboards**
+
**Performance Improvement**
+
**Regulatory Compliance**

=
**High Reliability**

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# EH&S Pathway



**Corrective Actions**

In 2017, **over 7,000 items** identified as needing action and correction have been managed in the Readiness Rounds closed-loop follow-up process, ensuring that all items found failing are indeed corrected.



**Quality Observations**

It is expected that in 2018 Montefiore will make over **150,000 quality observations**, managed entirely on the Readiness Rounds platform.
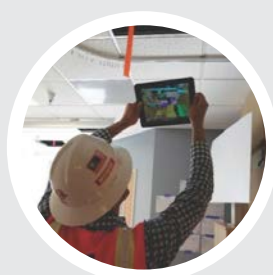


**Performance Improvement**

Using the Readiness Rounds Top 10 Failing approach, Montefiore has **numerous performance improvement efforts** underway. The staff uses the Readiness Rounds P.I. dashboards to manage and trend performance improvement progress, assuring objective data is always available.



**Transparency & Accountability**

The Readiness Rounds platform is now providing Montefiore's EH&S department staff a level of transparency and accountability not previously achievable, greatly improving outcomes.

# Service Recovery/Follow-up

Automated closed-loop ensures all findings are corrected.

Photos can be used to verify correction

When an item fails…

… and **was corrected** at time of inspection:

…or **was not corrected** at time of inspection:

Manager Notified

Item deemed non-compliant

Performance Improvement Indicator

Removed from loop when corrected

Responsible Person Notified

*text = urgent
email = routine

Item deemed non-compliant

28 day reminder and escalation to supervisor

14 Day Reminder

*frequency customizable

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# Dashboards & Reporting

Dashboard Features

Report Library of Over 3,800
Dashboard Options

Electronically
pushed real-time

Consistent structure
system-wide

Designed to drive
performance
improvement

Top 10 Failing™

Licensed for use of
TJC Standards*
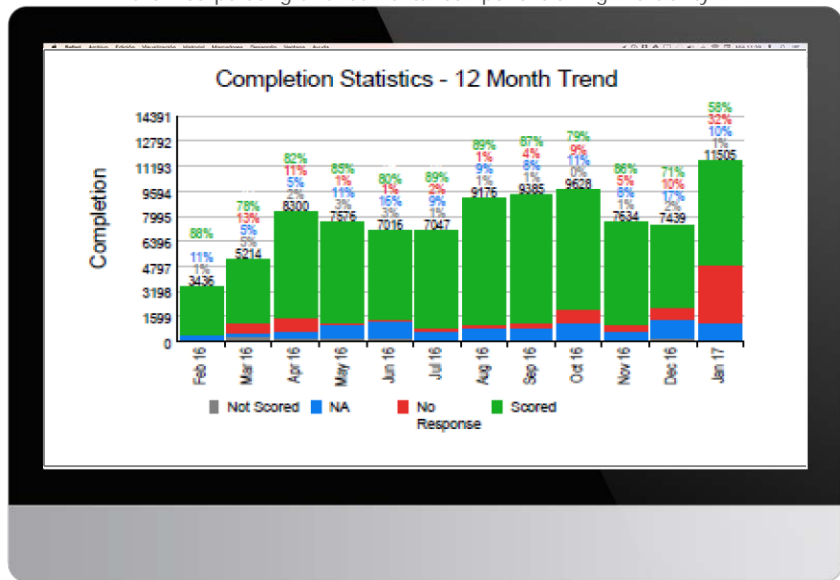
Subscription-based
(Right data to the right
person)

# Performance Improvement

Objective Real-time Data That Drives Performance Improvement

**Accountability**

By ensuring that assigned checking is indeed being completed, you are incorporating a fundamental component of high reliability.

**Transparency**

By providing the ability to view the status of any item at any time, you are building transparency to show what is and is not being completed.
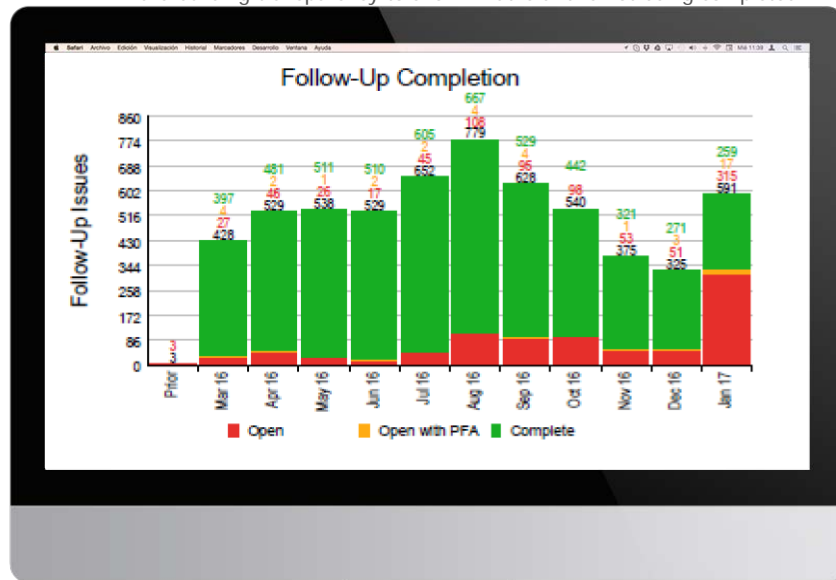
# Performance Improvement

Performance Improvement Prioritization



- **Immediate focus for PI teams**
- **Objective data**
- **Eliminates endless meetings**
- **Ability to trend improvements**

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# Performance Improvement

Regulatory Compliance

- Linked to TJC EP's

- CMS – COP

- Objective data PPR

- Assists real time onsite findings

# Return on Investment

## Performance Improvement

With over 150,000 annual observations and over 7,000 failing items corrected in 2017, this approach has already made a significant contribution to patient safety. With the process now established system-wide, the ability to expand the solution to further improve other areas with performance improvement efforts is possible.

## Regulatory

Now that the highest failing items are being clearly identified, staff has immediate focus on potential findings prior to a regulatory visit. With the deployment of consistent performance improvement initiatives, the number of regulatory findings is being reduced.

## Staffing

It is estimated that the deployment of the Readiness Rounds solution at Montefiore has provided a 2 full-time employee (FTE) capacity improvement in the central EHS team.

# Path Forward

- Montefiore EHS
  - System-wide Jan 2016

- White Plains Hospital
  - Entire process & platform including EHS Jan 2018

- Montefiore System-Wide
  - Evaluating for system wide deployment 2018

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Questions?

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# Thank You!

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# Thank You for Attending

- Please fill out our short survey

- Join us for our next session

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**EHS guide to injury reduction**

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