What is High Reliability, and Why Does Health Care Need It?

Mark R. Chassin, MD, FACP, MPP, MPH
President and CEO, The Joint Commission

Oklahoma Hospital Association
Annual Convention
Oklahoma City, OK
November 2, 2016

The Joint Commission Today

1. Strong focus on enhancing customer value: improving accreditation, engaging physicians
2. Effective advocate with CMS: modernizing the most outdated COPs (2012 LSC, finally)
3. High reliability is gaining momentum
4. We are an improvement company, creating and delivering effective quality solutions: Center for Transforming Healthcare (CTH)
Reframing the Mission of The Joint Commission

- Board refocused our mission in 2009
- Key part of effort to improve customer value
- Mission:
  “To improve health care for the public by evaluating health care organizations and inspiring them to excel…”
- Reoriented surveyors to the central need to conduct educational, collaborative surveys

Representative Customer Comment

“I’m just getting caught up after last week; 30 surveyor days is exhausting. The survey team was highly collaborative while not yielding an inch on standards. I know---just the balance you’re looking for. There were over a dozen systemic opportunities for improvement that we had not recognized on our own. I’ve never seen as experienced and effective a team as this group.”

Bill Conway, MD, Henry Ford Health System
Exceed Customer Expectations

We track Net Promoter Score (NPS)
- High bar for customer satisfaction
- 0 to 10 scale on likelihood to recommend
- NPS = (%9-10) minus (%0-6)
- Assess drivers and work to improve

Likelihood to recommend (NPS)

<table>
<thead>
<tr>
<th>Year</th>
<th>Apple</th>
<th>Amazon</th>
<th>Comcast (Cable TV)</th>
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<tbody>
<tr>
<td>2012</td>
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<td></td>
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</tr>
<tr>
<td>2015</td>
<td>64</td>
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Growth in Joint Commission
US Customers


21,070
Joint Commission US Customers

<table>
<thead>
<tr>
<th>Program</th>
<th>2015</th>
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<tbody>
<tr>
<td>Ambulatory Care</td>
<td>2106</td>
</tr>
<tr>
<td>Behavioral Health</td>
<td>2288</td>
</tr>
<tr>
<td>Certification</td>
<td>3982</td>
</tr>
<tr>
<td>Home Care</td>
<td>5791</td>
</tr>
<tr>
<td>Hospitals</td>
<td>4393</td>
</tr>
<tr>
<td>Laboratory</td>
<td>1502</td>
</tr>
<tr>
<td>Long Term Care</td>
<td>1008</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21,070</strong></td>
</tr>
</tbody>
</table>

Payer Initiatives: Swiss Re

- One of world’s largest reinsurers
- Preferential underwriting terms to liability insurance clients for using CTH tools:
  - Oro™ 2.0 (high reliability self-assessment)
  - Targeted Solutions Tools (TSTs) to improve hand hygiene, reduce falls, etc.
- 1st direct financial incentive for CTH adoption
- Exploring other incentives: ↓ premiums
Payer Initiatives: Anthem Blue Cross

- Nation’s 2nd largest private insurer
- Quality incentive program for 800 hospitals
  - Will include bonus payments for our integrated care certification and for antimicrobial stewardship standard
  - Incentive should offset certification fee
  - Joint promotional activities underway
- Exploring similar incentives for hospital-based palliative care, among others
Griffin Hospital: Insulin pen misuse could have infected patients with diseases

3000 patients over 6 years

FOX NEWS

Illinois Woman Dies After Catching Fire in Surgery

Published September 18, 2005 - Associated Press

ST. LOUIS — A southern Illinois woman died after being severely burned in a flash fire while undergoing surgery, a rare but vexing problem in operating rooms.

Janice McCall, 65, of Energy, Illinois, died at Vanderbilt University Medical Center in Nashville, Tennessee, on Sept 8, six days after being burned on the operating table at Heartland Regional Medical Center in Marion, Illinois, her family’s attorney said.
Current State of Quality

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
Current State of Improvement

- We have made some progress
  - Project by project: leads to “project fatigue”
  - Satisfied with modest improvement
- Current approach is not good enough
  - Improvement difficult to sustain/spread
  - Getting to zero, staying there is very rare
- High reliability offers a different approach
  - The goal is much more ambitious
  - High reliability is not a project

High Reliability Healthcare

- Our team has worked for 7 years with academics and experts from HROs (nuclear, aviation, military, amusement parks)
- We have created a model for healthcare:
  - Leadership committed to goal of zero harm
  - Safety culture embedded throughout
  - RPI (lean, six sigma, change management)
- Many resources, tools, and programs
High-Reliability Health Care: Getting There from Here

MARK R. CHASSIN and JEROD M. LOEB
The Joint Commission

Context: Despite serious and widespread efforts to improve the quality of health care, many patients still suffer preventable harm every day. Hospitals find improvement difficult to sustain, and they suffer “project fatigue” because so many problems need attention. No hospitals or health systems have achieved consistent excellence throughout their institutions.

Joint Commission
High Reliability Initiatives

- High Reliability Resource Center
- Self Assessment Tool for hospitals (OroTM 2.0) extensively tested, available now
- Partnering in South Carolina, Michigan, and Illinois with state hospital associations
- Using high reliability framework on survey
- Tools for getting to zero: Center for Transforming Healthcare and TST
High Reliability is Catching On

A high reliability organization (HRO) is an organization that has succeeded in avoiding catastrophes in an environment where normal accidents can be expected due to risk factors and complexity.

High reliability organization - Wikipedia, the free encyclopedia
https://en.wikipedia.org/wiki/High_reliability_organization

High Reliability Main Page | The Center for Transforming Healthcare
At the Joint Commission Center for Transforming Healthcare, our mission is to transform health care into a high reliability industry by developing effective solutions...

High Reliability and Health Care: Getting There from Here
By M. CHAUSIN - 2013 - Cited by 100 - Related articles
No HRO would permit a condition this unsafe to exist. Hospitals and health care organizations do not exhibit the features of resilience that characterize HROs. In a high-reliability environment, errors and unsafe conditions are recognized early and prevented by rapid remediation from causing harm.
Leadership

- All components of leadership must commit to the ultimate goal of high reliability (zero harm): Board, management, MD and RN leaders
- Quality is the number one strategic priority
- Physicians lead and participate in QI
- Quality program goes beyond requirements
- Improvement efforts directed at most important causes of harm in your patients
- Quality measures widely published
Safety Culture

- Aim is not a “blame-free” culture
- HROs separate blameless errors (for learning) from blameworthy ones (for discipline, equitably applied to all groups)
- Prerequisites for safety culture in health care
  - Eliminate intimidating behaviors
  - Hold everyone accountable for consistent adherence to safe practices
- HROs balance learning and accountability

What Behaviors are Intimidating?

- Wide range: impatience to physical abuse
- Most common?
- Refusal to answer questions or to return phone calls or pages; condescending tone or language; impatience with questions
- 2013 ISMP survey:
  - 11-15% personally experienced these from MDs and non-MDs >10 times in past year
  - 63%: constant nit-picking, fault-finding
Sentinel Event Alert on Intimidating Behaviors

Intimidating and disruptive behaviors can foster medical errors, contribute to poor patient satisfaction, and prevent adverse outcomes. They increase the cost of care and cause qualified clinicians, administrators, and managers to seek new positions in more professional environments. Safety and quality of patient care is dependent on teamwork, communication, and a collaborative work environment. To assure quality and promote a culture of safety, health care organizations must address the problem of behaviors that threaten the performance of the health care team.

Mean Girls of the ER: The Alarming Nurse Culture of Bullying and Hazing

It's not only threatening the profession, it's putting patients' lives at risk.
Results from ISMP

<table>
<thead>
<tr>
<th>“At least once” in past year (%)</th>
<th>2003</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Assumed order correct to avoid contact</td>
<td>39</td>
<td>33</td>
</tr>
<tr>
<td>2. Asked colleague to talk to prescriber</td>
<td>39</td>
<td>38</td>
</tr>
<tr>
<td>3. Pressured to act, despite safety concern</td>
<td>49</td>
<td>39</td>
</tr>
<tr>
<td>4. Assumed order safe due to reputation</td>
<td>34</td>
<td>30</td>
</tr>
</tbody>
</table>

| Past disrespectful behavior altered handling of order clarification or questions (% YES) | 49 | 44 |
| My organization deals effectively with disrespectful behavior (% NO) | 61 | 56 |

Robust Process Improvement

- Systematic approach to problem solving (lean, six sigma, and change management)
- The Joint Commission has fully adopted RPI
  - Improve processes and transform culture
  - Focus on our customers, increase value
- The Joint Commission is adopting all components of safety culture
- We measure RPI and safety culture and report on strategic metrics to Board
Quality Progress Cover Story
June 2016

Joint Forces
Improve efforts at Joint Commission linked to culture change p. 14

How We Work
Process improvement program breeds quality culture, empowers staff
by Tyler Gaskill, assistant editor
Lean and Six Sigma

- Lean empowers employees to identify and act on opportunities to improve processes.
- Lean tools increase value by eliminating steps in processes that represent pure waste.
- Six sigma improves outcomes of processes by identifying and targeting causes of failure.
- Together they are a systematic, highly effective toolkit for process improvement.

Lean and six sigma routinely produce 50%+ improvement.

Technical Solution is Not Enough

- Lean, six sigma provide technical solutions that can markedly improved processes.
- Why does improvement fail so often?
  - Not for lack of a good technical solution.
  - Failures occur when organization fails to accept and implement a good solution it had.
- RPI addresses this challenge directly.
- Change management = a systematic way to implement and sustain good solutions.
Technical Solution is Not Enough

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Why does improvement fail so often?

• Not for lack of a good technical solution
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RPI addresses this challenge directly

Change management = a systematic way to implement and sustain good solutions

Facilitating Change™

Key components of managing change

1. **Plan**: engage all stakeholders, identify sponsor, champion and process owner

2. **Inspire**: paint a convincing picture of how beneficial the change will be

3. **Launch**: initiate the change, intensify communication to stakeholders

4. **Support**: sustain the improvement; empower process owner

Change management is not linear
Resistance to Change

Managing resistance is critical to success

- “Resistance Analysis” is a vital tool
- Who is likely to resist and why?

Sources of resistance

- Technical
- Political
- Cultural

Each requires a different strategy to overcome

RPI in Health Care Today

- Only a small percentage of hospitals or systems use RPI in any form or fashion
- RPI is used differently by different hospitals
  - Most use only some of the parts; change management is most often left out
  - Most limit training to small group
  - Most do not use it to transform
- Compelling business case for RPI
The Business Case

Administrative processes in health care are often just as broken as clinical processes
• Billing, supply chain, throughput
• RPI can improve margins directly

Learning RPI allows organizations to solve their own problems, eliminate consultants
Quality improvements often don’t save $$
Generate positive ROI now while learning how to redesign care processes for future
Mayo program ROI = 5:1

Training and Deployment

We have a large group of experts in lean, six sigma, and change management (RPI)
• Studied experience of major corporations (for example, GE, Lilly, BD, Cardinal)
• Extensive experience with 27 hospitals and systems applying RPI tools

We are training hospitals and systems to:
• Get the most out of RPI tools and methods
• Embed RPI throughout their organizations
Using RPI together with leading US hospitals and health systems to solve most difficult quality and safety problems

Project topics:

- **2009-10**: hand hygiene, wrong site surgery, hand-off communications, SSIs
- **2011**: safety culture, preventable HF hospitalizations, and falls with injury
- **2012**: sepsis mortality, insulin safety
- **2013-4**: C. difficile prevention, VTE
Participating Hospitals

Atlantic Health
Barnes-Jewish
Baylor
Cedars-Sinai
Cleveland Clinic
Exempla
Fairview
Floyd Medical Center
Froedtert
Intermountain
Johns Hopkins
Kaiser-Permanente
Mayo Clinic
Memorial Hermann
New York-Presbyterian
North Shore-LIJ
Northwestern
OSF
Partners HealthCare
Sharp Healthcare
Stanford Hospital
Texas Health Resources
Trinity Health
VA Healthcare System-CT
Virtua
Wake Forest Baptist
Wentworth-Douglass

Health Facilities Management Magazine

2014 ES Department of the Year: Wentworth-Douglass Hospital
RPI Improves Housekeeping

- New wing added in 2012: 130,000 SF
- Challenge to ES staff:
  - Add this building to existing 364,000 SF
  - No new staff, same high quality cleaning
- Used RPI to redesign workflow
- Met the challenge
- Saved the hospital about $440,000

Wentworth-Douglass RPI program = 3:1 ROI
(only 60% of projects aim at financial goals)

Current State of Quality

- 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
RPI Delivers Results

- “One-size-fits-all” best practice is inadequate
- Complex processes require more sophisticated problem-solving methods (RPI)
- Three crucial and consistent findings:
  - Many causes of the same problem
  - Each cause requires a different strategy
  - Key causes differ from place to place
- **RPI**: producing next generation best practices; solutions customized to your causes

Some Important Causes of Hand Hygiene Failures

1. Faulty data on performance
2. Inconvenient location of sinks or hand gel dispensers
3. Hands full
4. Ineffective education of caregivers
5. Lack of accountability

   ➔ Each requires a very different strategy to eliminate
Causes Differ by Hospital

Main Causes of Failure to Clean Hands
(across all participating hospitals)

Each letter = one hospital

<table>
<thead>
<tr>
<th>Failure Cause</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ineffective placement of dispensers or sinks</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Hand hygiene compliance data are not collected or reported accurately or frequency</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Lack of accountability and just-in-time coaching</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Safety culture does not stress hand hygiene at all levels</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
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<tr>
<td>Ineffective or insufficient education</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Hands fall</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<td>x</td>
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<tr>
<td>Wearing gloves interferes with process</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Perception that hand hygiene is not needed if wearing gloves</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
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<tr>
<td>Health care workers forget</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
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<tr>
<td>Distractions</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
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Note that not all of the main causes of failure appear in every hospital. The chart above represents the validation of the root causes across hospitals. This underscores the importance of understanding hospital-specific root causes so that appropriate solutions can be targeted.

RPI Drives Major Improvements

Center Projects | Results(%) |
---             | ---        |
Hand hygiene    | 71↑        |
Hand-off communication failures | 56↓        |
Wrong site surgery risks
  • Scheduling | 46↓        |
  • Pre-op     | 63↓        |
  • Operating Room | 51↓      |
Colorectal SSIs | 32↓        |
Falls with injury | 62↓        |

Targeted Solutions Tool (TST)

- Web-based tools: secure extranet channel
  - Available to all accredited customers now
  - No added cost, voluntary, confidential
- Educational, no jargon, no special training
- Coaches available to guide users to solutions
- Targeting only your causes means you don’t use resources where they aren’t needed
- 2010: hand hygiene; 2012: safe surgery and hand-off communication; 2015: falls
January 2015

Impact of Hand Hygiene TST

TST improves HH: 55% to 85%, Reduces HAIs by 35%

200 Beds
- Expect 370 HAIs/yr
- Annual impact:
  - 129 fewer HAIs
  - 8 lives saved
  - $2.5M cost avoided

400 Beds
- Expect 730 HAIs/yr
- Annual impact:
  - 260 fewer HAIs
  - 16 lives saved
  - $5M cost avoided
Used TST to achieve >95% hand hygiene compliance

Bloodstream infections fell by 2/3

MRSA Rate Decreases as Hand Hygiene Improves
System - Ventilator Associated Pneumonias: All Adult ICUs
HAI Hospital Scorecard

<table>
<thead>
<tr>
<th>Sugar Land Hospital HAI Scorecard</th>
<th>ICU CLABSI</th>
<th>Floor CLABSI</th>
<th>ICU CAUTI</th>
<th>Floor CAUTI</th>
<th>Total SSI</th>
<th>Perf Std SSI</th>
<th>NHSN SSI</th>
</tr>
</thead>
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<tr>
<td></td>
<td>0</td>
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</table>

<table>
<thead>
<tr>
<th>Hip</th>
<th>Knee</th>
<th>ORIF</th>
<th>MRSA</th>
<th>Clostridium difficile</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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Number of HAIs in one month

Michael Shabot, MD
Memorial Hermann System EVP

“We fully attribute to the Center for Transforming Healthcare’s hand hygiene TST the final drop in HAI rates to zero or near-zero system-wide. After implementing the hand hygiene TST, our hospitals began to report zeros as their most common monthly CLABSI and VAP result. Our mothers were right after all! Feel free to quote me. This actually saves lives.”
Joint Commission and High Reliability

- We must have much more ambitious goals for healthcare improvement: zero harm
- Current methods are inadequate
- Culture change is difficult, takes time
- Lean, six sigma, and change management (RPI) are delivering impressive results
- ROI of at least 4:1 is readily achievable
- Some hospitals/systems approaching zero
- Joint Commission has tools to help