High Reliability...

Strategies to Improve Quality and Patient Safety

Texas Association for Healthcare Quality
December 17, 2014

Presented by
Beth Guyton, CPHQ

Copyright Interactive Quality, LLC 2014
Speaker’s Disclosure

Founder of Interactive Quality, LLC.

No research funding or commercial speaker’s bureau.

Not on an advisory board for any product.

The purpose of the presentation is to share knowledge, information and ideas. No products or services will be discussed during this presentation.
Learning Objectives

- Identify 3 attributes of healthcare organizations that deliver highly reliable patient care
- Identify 3 characteristics of organizations that hinder patient safety and high reliability
- Describe how psychological safety enhances patient safety and supports a culture of high reliability
The Ongoing Quality Improvement Journey: Next Stop, High Reliability

By Mark R. Chassin and Jerod M. Loeb

The Ongoing Quality Improvement Journey: Next Stop, High Reliability

ABSTRACT Quality improvement in health care has a long history that includes such epic figures as Ignaz Semmelweis, the nineteenth-century obstetrician who introduced hand washing to medical care, and Florence Nightingale, the English nurse who determined that poor living conditions were a leading cause of the deaths of soldiers at army hospitals. Systematic and sustained improvement in clinical quality in particular has a more brief and less heroic trajectory. Over the past fifty years, a variety of approaches have been tried, with only limited success. More recently, some health care organizations began to adopt the lessons of high-reliability science, which studies organizations such as those in the commercial aviation industry, which manage great hazard extremely well. We review the evolution of quality improvement in US health care and propose a framework that hospitals and other organizations can use to move toward high reliability.

Efforts to improve the quality of health care have used a wide variety of approaches. In the past half-century all of the following have been in vogue at one time or another: redesigning professional education; the work of epic figures such as Ignaz Semmelweis, the nineteenth-century obstetrician who introduced hand washing to medical care, and Florence Nightingale, the English nurse who determined that poor living conditions were a leading cause of death of soldiers at army hospitals.
“The need for major improvements in safety and quality has never been greater. Yet current approaches are not producing the pace, breadth or magnitude of improvement that is all stakeholders’ desire. Along with a number of other observers, we believe that it is essential to look outside healthcare for solutions. Specifically, we should first get a clear picture of how complex organizations establish and maintain extremely high levels of safety. Then we must apply lessons we learn form them to healthcare.”

Chassin & Loeb, 2011 The Ongoing Quality Improvement Journey; Next Stop, High Reliability p.563
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. High-reliability science is the study of organizations in industries like commercial aviation and nuclear power that operate under hazardous conditions while maintaining safety levels that are far better than those of health care. Adapting and applying the lessons of this science to health care offer the promise of enabling hospitals to reach levels of quality and safety that are comparable to those of the best high-reliability organizations.

Methods: We combined the Joint Commission's knowledge of health care organizations with knowledge from the published literature and from experts in high-reliability industries and leading safety scholars outside health care. We developed a conceptual and practical framework for assessing hospitals' readiness for and progress toward high reliability. By iterative testing with hospital leaders, we refined the framework and, for each of its fourteen components, defined stages of maturity through which we believe hospitals must pass to reach high reliability.

Findings: We discovered that the ways that high-reliability organizations generate and maintain high levels of safety cannot be directly applied to today's hospitals. We defined a series of incremental changes that hospitals should undertake to progress toward high reliability. These changes involve the leadership's commitment to achieving zero patient harm, a fully functional culture of

Address correspondence to: Mark R. Chassin, The Joint Commission, 1 Renaissance Boulevard, Oakbrook Terrace, IL 60181 (email: mchassin@jointcommission.org).

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

The Milbank Quarterly, Vol. 91, No. 3, 2013 (pp. 459-490)
© 2013 The Authors. The Milbank Quarterly published by Wiley Periodicals Inc. on behalf of Milbank Memorial Fund
“Almost 14 years have passed since the Institute of Medicine’s report ‘To Err is Human’ galvanized a national movement to improve the quality and safety of healthcare. Isolated examples of improvement now can be found, and some of the results so far are impressive. Measured against the magnitude of the problems, however, the overall impact has been underwhelming.”

Chassin & Loeb, 2013
Common HRO Challenges?

- Hypercomplexity
- Tight coupling
- Extreme hierarchical differentiation
- Multiple decision makers in complex communication network
- High degree of accountability
- Need for frequent immediate feedback
- Compressed time constraints

Becoming an HRO: Operational Advice for Hospital Leaders, 2008 AHRQ
What is High Reliability?

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.  

http://en.wikipedia.org/wiki/High_reliability_organization

“The hallmark of an HRO is not that it is error-free but that errors don’t disable it.”  

Weick & Sutcliffe, 2007
What is High Reliability?

“HRO describes on the **organizational level** the structure necessary for High Reliability, on the **social level** the collaboration found in response to threat, and on the **individual level** the satisfaction of problem solving while modulating threat responses.

These three levels facilitate the free flow of information and the migration of action for a quick response to, and interaction with, surprise or accelerating events.

**The High Reliability Organization emerges from the interactions between people responsive to the environment in an organization that allows this.**”

http://high-reliability.org/pages/home
“HRO’s combine attributes that seem contradictory and hold them in productive tension: they are centralized and decentralized, hierarchical and collegial, rule-bound and learning-centered.”

What is High Reliability?

How do Organizations Become a HRO’s?
# Attributes of HRO’s

<table>
<thead>
<tr>
<th>Phase</th>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention</td>
<td>Preoccupation with Failure</td>
<td>Look for and be sensitive to early signs of failure.</td>
</tr>
<tr>
<td>Prevention</td>
<td>Reluctance to Simplify</td>
<td>Don’t accept simple explanations regarding observations and the environment. Acknowledge that threats to safety can be complex and be mindful of subtle changes that may compromise safety.</td>
</tr>
<tr>
<td>Prevention</td>
<td>Sensitivity to Operations</td>
<td>Acknowledge that systems are dynamic and non-linear, and that it is difficult to tell how one area of the organization’s operations will act compared to another area.</td>
</tr>
<tr>
<td>Containment</td>
<td>Deference to Expertise</td>
<td>Defer to relational knowledge with a focus on assembly of knowledge, experience, learning and intuition rather than deferring to superior in the hierarchical structure. Set the expectation that all staff should speak up regarding safety concerns.</td>
</tr>
<tr>
<td>Containment</td>
<td>Resilience</td>
<td>Develop organizational ability to maintain function during high demand events. This involves preserving function, returning to function, and learning.</td>
</tr>
</tbody>
</table>

Chassin and Loeb’s “The Ongoing Quality Improvement Journey: Next Stop High Reliability”

- Leadership
- Culture Change to Develop a Safety Culture
- Robust Process Improvement
Chassin and Loeb’s HR Health Care Maturity Model Framework

Leadership
- Board
- CEO & Management
- Physicians
- Quality Strategy
- Quality Measures
- Information Technology

Culture Change to Develop a Safety Culture
- Trust
- Accountability
- Identifying Unsafe Systems
- Strengthening Systems
- Assessment

Robust Process Improvement
- Method
- Training
- Spread
Chassin and Loeb’s Framework - Modified

Leadership
- Board, CEO & Management, Physicians
- Develop Leadership on Every Level (Informal Leaders, Personal Skills)
- Ethical Leadership
- Quality Strategy
- Culture Change Strategy (Relationship-Centered Culture, Learning Culture, Just Culture)
- Quality Measures
- Information Technology

Culture Change to Develop a Safety Culture
- Trust
- Actively Create a Culture of Psychological Safety and a Just Culture
- Intentionally Promote Social Learning
- Accountability
- Identifying Unsafe Systems
- Assessment

Robust Process Improvement
- Method
- Training
- Spread
Leadership on Every Level

In a complex adaptive system, leadership is defined as “the ability to inspire or influence commitment above and beyond routine compliance, often affecting the organization by influencing organizational identity and social movements.”

Organizations as Complex Adaptive Systems: Implications of Complexity Theory for Leadership Research. Marguerite Schneider, Mark Somers New Jersey Institute of Technology, School of Management 1982
Recognizing My Patterns of Relating

Ladder of Inference from “The Fifth Discipline” by Peter Senge
Mindfulness is about being fully present in the moment and being open to new ideas. Being mindful makes us more aware of context and how our perspective is framing what we are experiencing. Mindfulness makes us more effective in the moment.
“Failure is not as much the accident but failure to identify the accident sufficiently early in its birth. Early identification, in this covert state, allows interaction with fewer resources and greatest effectiveness.”

www.high-reliability.org
“A well-developed organization mind, capable of reliable performance is thoroughly social. It is built of ongoing interrelating and dense interrelations. Thus, **interpersonal skills are not a luxury in high-reliability systems. They are a necessity.**”

Weick & Roberts, 1993
High-quality Relationships

“Interpersonal relationships in the workplace have a significant impact on people and their engagement in interpersonal social behaviors, as well as on core processes such as coordination and error detection.”
Carmeli et al, 2008
(Dutton & Ragins, 2007; Kahn, 1990; Choi, 2006; Gittell, 2003; Weick and Roberts, 1993)

“The capacities enabled by high-quality interpersonal relationship allow members to exchange more variable information and ideas which are critical to creating and sharing solutions to problems and new ways to improve work processes and outcomes.”
Carmeli et al, 2008
Because people are not as complex as the systems they have to manage, they can miss important information and therefore their diagnoses are incomplete and their remedies often short-sighted.

Sometimes the remedies can magnify the problem rather than resolve it.

To overcome the mismatch between less complex individuals and highly complex system demands, individuals must pool differing observations and information. This occurs through social interactions and social networks.

Weick 1987
“Collective mind is conceptualized as a pattern of heedful interrelations of actions in a social system.”
Weick & Roberts, 1993

It is through collective mind that individuals pool information to create a more complex understanding of the situation at hand. This enables collaborative teamwork to identify and address potentially dangerous situations.
Weick & Roberts, 1993
Heedful Interrelating

“Actors in the system construct their actions (contributions), understanding that the system consists of connected actions by themselves and others (representation), and interrelate their actions within the system (subordination). Ongoing variation in the heed with which individual contributions, representations, and subordinations are interrelated influence comprehension of unfolding events and the incidence of error. As heedful interrelating and mindful comprehension increase, organizational errors decrease.”

Collective Mind in Organizations: Heedful Interrelating on Flight Decks, Karl E. Weick
Administrative Science Quarterly, 1993
Heed Concepts

- Noticing
- Taking care
- Attending
- Applying one’s mind
- Concentrating
- Putting ones’ heart into something
- Thinking what one is doing
- Alertness
- Interest
- Intentness
- Studying
- Trying

Heedful performance is the outcome of training and experience that weave together **thinking**, **feeling** and **willing**. This is in contrast to habitual performance which is the outcome of drill and repetition.

Collective Mind in Organizations: Heedful Interrelating on Flight Decks, Karl E. Weick, Administrative Science Quarterly, 1993
“We believe that the organizational culture that is so essential to establishing and maintaining high reliability in healthcare is the ‘safety culture’ described by James Reason and Alan Hobbs. They posit that this culture involves three mutually reinforcing imperatives: trust, report, and improve.”

The Ongoing Quality Improvement Journey: Nest Stop, High Reliability Chassin & Loeb, 2011
“All in all, trust emerges as a most valuable and still highly underrated concept for the optimization of safety performance in HROs. The full benefits of trusting behavior can be gained only if HROs manage to develop and maintain work settings that favor the beneficial aspects of trust, including collaboration and knowledge-sharing between human actors in HROs.”

Trust in High-Reliability Organizations, Schobel, 2009
How do you Improve Trust in Your Organization?
Relationship Rich Performance

ETHICAL LEADERSHIP

- Mutual Respect
- Transparent Flow of Information
- Confidence in the Team

TRUST

PSYCHOLOGICAL SAFETY

- Team Learning Attitude
- Trust Confidence Respect
- Inter-Personal Risk Taking

LEARNING + ADAPTATION

HIGH PERFORMANCE

Copyright Interactive Quality, LLC 2014
The benefits of ethical leadership are well documented and have a direct impact on organizational performance through improvements in employee engagement, employee commitment, error reporting, innovation and learning behaviors.

Furthermore, ethical leadership is acknowledged as an effective predictor of job satisfaction, organizational commitment, moral identity, voice behavior, and organizational citizenship behavior.
Why is Ethical Leadership Important?

- **Leader effectiveness** is linked to perceptions of leader’s honesty, integrity, and trustworthiness (Den Hartog et al, 1999; Kirpatrick & Locke, 1991; Kouzes & Posner 1993; Poner & Schmidt, 1992)

- Ethical leaders proactively influence followers ethical and unethical behavior (Tevino et al., 2000, 2003)

- Ethical leadership is positively correlated to follower’s trust in the leader (Bass & Avolio, 2000)

- Follower’s perception of ethical leadership predicts satisfaction with the leader, perceived leader effectiveness, willingness to exert extra effort on the job, and willingness to report problems to management. (Brown & Trevino, 2006)

- There is a positive relationship between employee’s perception of a benevolent ethical climate and organizational commitment. (Cullen, Parboteeah, & Victor, 2003)
What Defines an Ethical Leader?

Ethical leaders are desirable role models who explicitly communicate their values to followers through conversations, stories, behaviors, interactions, decision-making, performance feedback, rewards, discipline, goal-setting and goal-achievement in such a way that followers see the ethical leader as fair, trustworthy, and genuine in his concern for and interactions with others in both his personal and professional lives.
Role of Leaders in Reporting and Improving Patient Safety

The way in which the managers and administrators handle errors influences whether the provider feels safe in reporting an error. It also plays a role in identifying the causes of the error and implementation of change to prevent recurrence. (Arndt, 1994; Wolf, 2005)
Organizational Learning

Organizational learning becomes more important as work environments become more complex and when interdependent work is required. (Abraham Carmeli et al. 2008)

Conceptualizing learning as a relational process highlights the fact that the nature of the relationship between members facilitates or impedes learning behaviors in organizations. (Gherardi et al., 1998; Elkjaer, 2003)
Social Learning

- Observing and reflecting
- Acting and reflecting
- Inquiring and reflecting
Learning depends on members sharing knowledge and creating new solutions so things will be done more efficiently and effectively.

Abraham Carmeli et al 2008
Learning Behaviors in the Workplace: The Role of High-quality Interpersonal Relationships and Psychological Safety, Systems Research and Behavioral Science
“Attitudes guide behaviors. This is the richness of High Reliability as we discuss attitudes toward failure, complexity, honesty, duty, empathy and so on. This is where the individual learns to think and behave in a High Reliability manner and where knowledge is shared.”

http://high-reliability.org/pages/vanStralen
Obstacles to High Reliability

- Rigid Hierarchical Structure
- Fallacy of Centrality (idea that if something doesn’t have to do with me, it isn’t happening/relevant)
- Errors not seen as valuable info essential to improving patient safety
- 65% of hospital staff responding to AHRQ Safety Culture survey fear mistakes made are held against them. (AHRQ 2012)

Chassin & Loeb 2013
Obstacles to High Reliability

- Group think
- Overestimation of group’s power, morality, and invulnerability
- Lack of shared values, openness, and disclosure
- Routine, automatic interrelating
- Lack of cooperation

Weick & Roberts 1993
What is Culture?

The way we do things around here - that really impacts our ability to provide quality care, engage our staff and deliver business results.

“Culture eats strategy for breakfast everyday.” Peter Drucker
Questions or Ideas?

Beth@interactivequality.net
972.322.5418
Resources

- Organizational Culture as a Source of High Reliability, Weick 1987
- Organizing for High Reliability, Weick and Sutcliffe, 1999
- Managing the Unexpected, Weick and Sutcliffe, 2007
- Learning Behaviors in the Workplace: The Role of High Quality Interpersonal Relationship and Psychological Safety, Carmeli, 2008
- The Ongoing Quality Improvement Journey: Next Stop, High Reliability (Chassin and Loeb, Health Affairs 2011)
- Through the Eyes of the Workforce; Creating Joy, Meaning and Safer Health Care, 2012 Lucean Leape Foundation
- Culture of Respect (part 1 and 2), Leape et al, 2012
- The Power of Zero: Steps toward High Reliability Healthcare (Healthcare Executive Mar/Apr 2013)
- High Reliability Healthcare, Getter There from Here, Chassin and Loeb, 2013
- http://high-reliability.org/