Is Your Hospital Considered a High Reliability Organization (HRO)?

Khalil Rizk, MPH, MHA, CPHQ, CPHRM
Chief of Quality Important & Risk Management Alameda Healthcare

Introduction

We all know how much is being done to improve the safety of patients and staff in hospitals around the world. Many professional and governmental organizations have dedicated a great deal of resources to improve the patient safety. Individual hospitals and leaders spend time and effort to reduce errors and incidents to the minimum possible rates. But despite all these efforts, patients still suffer preventable harm every day and hospitals are still considered unsafe facilities and should be avoided as much as possible.
To be more realistic and may be more optimistic, we have to admit the tangible improvement in the overall safety awareness among patients, families, and the healthcare workers. Such improvement may also be supported by reduced rates of incidents and medical errors across the entire healthcare continuum and most specifically in the hospital settings. However, this reduction is yet to be documented and verified.

The crucial question that remains today is how can we sustain improvement in patient safety and can we reach to a stage of total safety in hospitals? Can our hospitals be called "highly reliable organizations"?
To my knowledge so far, hospitals or health systems have not achieved sustainable results in the elimination of harm done to patients in hospitals.

Where is the Problem?

After a thorough analysis of the safety problem in hospitals, John Nance concluded in his book "Why Hospitals Should Fly" that medical errors are merely human mistakes committed within a human system inadequately designed to catch and neutralize those mistakes in time. He identified three tiers of safety system in hospitals - perception, assumption, and communication. He added, overconfidence of some healthcare professionals is based on flawed assumption and accounts for many of major mistakes. Nance advised healthcare professionals to employ more and more checklists to eliminate, or at least reduce, the effect of unreal perception, assumption, and poor communication on medical errors. Such simple tactics, such as checklists, were widely adopted in the aviation industry and have proven their effectiveness. Other system re-engineering methods may be employed by using simple technology, such as bar-coding, to reduce human dependence, build enough buffers, and eventually eliminate errors. Nance recommends the implementation of a three-tier safety system in hospitals: (1)
1. Minimize the occurrence of human errors through training that leads to culture change
2. Build the system to fully absorb anticipated mistakes before reaching the patient
3. Redirect the thinking of all team members for 100% error-free

Nance concluded his book by demanding hospitals to become High Reliability Organizations (HROs).
Many of us, observers and activists of patient safety in hospitals are aware of a famous saying by Dr. Donald Berwick, former administrator of the Centers for Medicare and Medicaid Services (CMS) and long-term president of the Institute of Healthcare Improvement (IHI) *"every system is perfectly designed to get the results it consistently achieves. If a hospital is killing 10 patients per year, it is perfectly designed to do just that"* (2)

In order to check the level of awareness of the HRO concept among hospital managers, I posted few leading questions and was privileged to receive some genuine yet educated responses by the Chief Executive Officer of As-Salam International Hospital – Dr. Salah Fakhouri:

Q1: How can we implement a culture change that is conducive of reduction or elimination of human errors?

Dr. Salah Fakhouri: Hospital leaders are responsible for putting programs in place to create awareness among the staff, in an effort to support them in comprehending the dangers to patients resulting from human errors. These programs need to emphasize on the importance of reducing and even eliminating errors for the sake of patient safety. Since hospitals deal with human lives and any error may result in permanent disability or loss of life, then one of the basic methods that ensure a culture change towards reducing or eliminating human error is embedded in continuous training, to ensure hospital wide commitment to practicing checking and double checking prior to rendering any service.

Q2: Do you think we can minimize the occurrence of human errors through training?

Dr. Salah Fakhouri: Training, training and more training shall no doubt prepare the staff to perform their activities in a consistent manner that shall result in consistent outcomes with zero human errors. We all know that practice makes perfection and as such training shall ensure that the staff shall master the way they go their check lists, perform procedures, or render services. This is a basic principle that is essential to be imbedded in the minds of the people working in the healthcare industry.

Mark R. Chassin and Jerod M. Loeb from The Joint Commission noted that organizations in commercial aviation and nuclear power that operate under hazardous conditions maintain safety levels that are far better than those of health care. Such organizations are considered high-reliability organizations. The question remains whether we can apply the lessons learned from aviation and nuclear power to enable hospitals to reach comparable levels of quality and safety. Commercial air travel, nuclear power, and even amusement parks are pertinent examples of HROs. Chassin asked whether hospitals could become highly reliable as well and what would they have to do differently to become highly reliable as well? (3)

Many attempts have been made to compare hospitals to other organizations in different industries such as the aviation and nuclear power. Although they may seem diverse, these organizations have a number of similarities:
• They are considered social organizations in a sense they provide direct services to individual people
• They have high potential for error and they employ risky technologies that touch human lives
• There is no room for experimentation or trial and error, the scale of possible consequences from errors are huge
• These organizations use complex processes to conduct complex work
• HROs share many properties with other high-performing organizations including highly trained-personnel, continuous training, effective reward systems, frequent process audits and continuous improvement efforts. (4)

Q3: Can we safely compare the healthcare industry with that of aviation or nuclear power?

Dr. Salah Fakhouri: The healthcare industry shall always benefit from the systems adopted by other industries, in addition to aviation and nuclear power industries, they can learn from the car, IT and electronic industries. These industries have set and tested their processes and developed checks and balances to ensure that there is no room for human error in their service or production lines and aiming at achieving a zero error culture. Healthcare industry is on the way to evolve the safety culture and move forward into new levels of safety.

What are the Characteristics of HRO?

HRO is an organization that conducts relatively error-free operations over a long period of time and makes consistently safe decisions resulting in high quality and reliability operations / services. HRO can be considered as error-resilient organization that enjoys a high-level of safety over long periods of time.

Karl Weick and Kathleen Sutcliffe emphasize that professionals in HROs maintain a state of "mindfulness" in conducting their business and making decisions. Five behaviors are usually displayed by professionals in these organizations:
1. ***Preoccupation with failure:*** Observe and track small failures and anomalies, i.e. chronic worry about errors, assume each day is a bad day, and build collective bonds among suspicious people.

2. ***Reluctance to simplify interpretations:*** Restrain temptations to simplify matter and conduct thorough checks and balances, reviews, and multiple perspectives.
3. ***Sensitivity to operations:*** Pay close attention to operations where everyone maintains situational awareness and uses resources effectively.
4. ***Commitment to resilience:*** Anticipate trouble areas and be ready to improvise. Try to improve your capacity to develop trust and engage in learning.
5. ***Deference to expertise:*** Look forward to expertise and let decisions be made by experts and avoid rigid hierarchies.

In their book, Managing the Unexpected: Assuring High Performance in an Age of Complexity, Karl Weick and Kathleen Sutcliffe write: These HROs "operate under very trying conditions all the time and yet manage to have fewer than their fair share of accidents." (5)

Roberts proposes a different description current state of safety in hospitals. She indicates only few HROs enjoyed a record of high safety over long periods of time and they consistently avoided failure numerous times while other organizations have actually failed resulting in catastrophic consequences. In other words, there are two tiers of organizations: Reliability-seeking and reliability-achieving organizations. Reliability-seeking organizations are not distinguished by their low number of errors or accident rate, but rather by their effective management of risky processes and operations. (6)

Q4: Do you consider hospitals as reliability-seeking organizations and to what extent they have gone towards becoming HROs?

Dr. Salah Fakhouri: It is a long way to go, the healthcare industry is very complex and the type of people seeking its services come with different and complex morbidities, in addition to the highly specialized and sub-specialized care/service givers who encounter these people, and as such it becomes extremely challenging for hospitals to become HROs. There is no doubt that they are moving in the right direction, however, they need to find the right methods to become HROs.

Let us go back to the basic question – Is your hospital considered a HRO?
You can actually determine to what extent your hospital is becoming a HRO based on the response to the following questions:

- Is your passion for patient safety always present on the agenda in each department and service?
- Is your staff at every level comfortable with reporting adverse events and near misses without any fear for reprimand?
- Do your staff and colleagues in the hospital identify and pursue opportunities to improve the level of care at every junction?
- Is there is clear and explicit commitment to explore and understand systems and processes employed in patient care?
- Do you observe high levels of interpersonal trust and support among your hospital staff on one hand, and between staff and leadership, on the other hand?
- Is there clear and expressed willingness to share lessons learned from errors or mistakes without hesitation?

HROs vs. Non-HROs: (7)

Characteristics of HROs
• High levels of interpersonal trust and support
• Coworkers viewed as competent, credible, and committed to patient safety
• Leadership is visible and provides resources (role models)
• Willingness to share lessons learned

Characteristics of Non-HROs
• Attend meetings and solve nothing
• Conduct briefings and persuade no one
• Evaluate proposals and miss the winners
• Miss deadlines for projects

What Do We Learn from Other HROs?

We should learn from our mistakes and make sure that hospital staff is aware of what happens at our facilities. We want to manage the behavioral choices of hospital staff to avoid short-cuts and promote a blame-free culture. The "power of zero" is a fairly new concept that is consistently used to describe the hospitals aspirations to reduce medical errors and mistakes down to zero and sustain the zero level for the longest possible period of time. Some hospitals monitor this as part of their key performance indicators by looking at the duration since the last major patient care incident in the hospital. The longer this period is, the closer this hospital becomes to be called a HRO. It is interesting to analyze what will be taking place in the hospital during this time. The leadership is committed to patient safety, the staff is getting more and more obsessed with patient safety and fear of failure, doubt his assumptions over and over again, and question his practices every day. The staff in such hospitals believes in the following saying "if you are not sure it is safe, then it is not safe".

Once they achieve an advanced state of becoming a HRO, hospitals would have developed an internal environment of "collective mindfulness" in which all workers look for, and report, small problems or unsafe conditions before they pose a substantial risk to the organization and when they are easy to fix.

Q5: Do you think hospitals can achieve the "power of Zero Harm"

Dr. Salah Fakhouri: This should be the main goal to each and every hospital and I am confident that if we all aim to work together on achieving the "Power of Zero Harm" we will achieve that. We need to raise the bar, hospitals during the past 50 years started shifting the focus from "we know what you want" to "let us know what you need". I am confident that in the coming decade hospitals shall achieve the "power of zero harm"

Conclusion

The status of HRO has been maintained by some non-healthcare organizations for extended periods of time. Industries such as civil aviation and nuclear power continue to enjoy a state of "mindfulness". The healthcare industry in general, and particularly hospitals, deal with human lives and they deserve to achieve the title of "High Reliability Organization". Hospitals deserve to become more reliable and to provide their customers with peace of mind when they seek their services.

References

1. John J. Nance, JD.: Why Hospitals Should Fly, The Ultimate Flight Plan to Patient Safety and Quality Care, Second River Healthcare Press, 2009
2. Berwick, Editorial Note, Patient Safety and Quality Healthcare, July-August, 2008 http://www.psqh.com/julaug08/editor.html
3. Mark R. Chassin & Jerod M. Loeb, The Joint Commission and Joint Commission Center for Transforming Healthcare, The Milbank Quarterly, Vol. 91, No. 3, 2013 (pp. 459–490)
4. Karl Weick and Paul Schulman: Managing the Unexpected: Resilient Performance in an Age of Uncertainty, John Wiley & Sons, Inc., 2007, http://high-reliability.org/High-Reliability-Organizations
5. Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (1999), Organizing for High Reliability: Processes of Collective Mindfulness. In B. M. Staw & L. L. Cummings (Eds.), Research in Organizational Behavior (Vol. 21, pp. 81-123). Greenwich, CT: JAI Press, Inc.
6. Karlene H. Roberts, HAAS School of Business, University of California, Berkley
7. Weick, K. E., & Sutcliffe, K. M. (2007), Managing the Unexpected: Resilient Performance in and Age of Uncertainty, Second Edition, San Francisco, CA: Jossey-Bass