Zero Harm Is the Goal

By Erin S. DuPree, MD, FACOG

Ask 10 healthcare leaders if they've heard of high reliability, and it's almost certain all 10 will say they have. Ask those same 10 to define high reliability, and things get interesting.

Many healthcare leaders have a genuine interest in high reliability but often do not know exactly what it means or how to incorporate it among their organization's other priorities. They just know it sounds right to say their organization is working to "get to high reliability," and they hope it will be the silver bullet that solves all problems. Unfortunately, the term "high reliability" can become a buzzword when used without understanding what it is. Employed this way, it may sound great but lack substance—all sizzle and no steak.

The first thing true high-reliability organizations (HRO) acknowledge is how much they don't know and how much there is to learn. A culture of learning and teaching is at the core of an HRO. Other complex, high-risk enterprises—such as the airline and nuclear power industries, as well as amusement parks—have adopted this concept and avoided catastrophic events for long periods of time.

In an HRO, everyone from the front lines to the boardroom takes responsibility for safety, which first and foremost requires trust. In a trusting organization, management and staff recognize that everyone across the organization has expertise and contributes to patient care. Peers hold each other accountable. Staff members feel comfortable reporting errors and variations in care to their supervisors. Everyone feels accountable for safety, which is really a relentless focus on improvement, and behaves accordingly.

In fact, these organizations prize the identification of errors and close calls for the lessons that can be extracted from them. Through careful analysis of what occurred before the error or near miss took place, a specific weakness in safety protocols or procedures is highlighted and can be remedied to reduce the risk of future failures. There is a focus on prevention, not reaction. The further upstream the problem is, the more important it is to fix.

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High-reliability organizations

Few healthcare organizations today have set zero harm as an explicit goal at the governing board level. Those that have are worth studying, because their results allow us to see that zero harm, while it might seem impossible, may actually be something we can achieve. The two organizations profiled here—Memorial Hermann Health System and Cincinnati Children's—both exemplify what it means to work toward zero harm, and each has lessons for every healthcare organization striving for high reliability.

Memorial Hermann Health System

Around 2002, the 12 hospitals in the Memorial Hermann Health System (MHHS) began looking at ways to use clinical quality measures to achieve better care. Four years later, that want became a need. A pair of blood transfusion errors within days of each other killed one patient and left the other in critical condition. Those incidents led to a sense of urgency across the organization to improve its patient safety efforts.

MHHS began looking seriously into the concept of high reliability and how it can affect patient safety. It examined and then adopted the incremental changes hospitals should undertake to progress toward high reliability. These changes involve a commitment to zero harm across every level of organizational leadership, a culture of safety throughout the organization, and widespread deployment of a highly effective approach to performance improvement.

One of the first changes MHHS made was to institute a new blood transfusion protocol. Under the new system, two providers must observe and sign off at each step in the transfusion process, from the blood being drawn from the patient for typing and cross matching, to the blood bank drop-off, to the processing of blood within the blood bank, to pickup, and back to the patient for transfusion. The patient gets a red armband with a unique number and his or her name, and the number is part of each cross check.

From 2007 to 2013, more than 800,000 procedures were performed in MHHS facilities without a single transfusion adverse event.

As part of its high reliability efforts, MHHS collaborated with the Joint Commission Center for Transforming Healthcare on the Center's first improvement initiative, which targeted hand hygiene. The results were dramatic, as the average across all MHHS hospitals went from a baseline of 44% hand hygiene compliance to 92%. This was done using Robust Process Improvement®—a management system with a set of strategies, tools, and methods to define and measure the impact of a problem, discover specific causes, and create targeted solutions. Soon after compliance exceeded 85% at all 12 MHHS hospitals, the average rate of central line–associated bloodstream infections and ventilator-associated pneumonias decreased to essentially zero across the system.

To keep the momentum going, MHHS instituted the "Board to the Bedside" initiative, which involved all 21,500 health system employees, including approximately 7,500 nurses and 5,400 affiliated physicians. The initiative was designed to engage everyone in high reliability, from those in the boardroom to those working with the patients. For the initiative, MHHS centralized its quality departments, trained all employees off-site in the principles of high reliability, created and enforced the use of evidence-based protocols for most medical procedures, expanded its EHR to facilitate clinical decision support, and rigorously documented performance with data dashboards.

Despite the organization's previous success with high reliability efforts, a number of high-volume physicians balked at new protocols and took their referrals elsewhere, while others lost their privileges. Still, MHHS' results again were overwhelmingly positive. One hospital received the system's Certified Zero Award for having no central line–associated bloodstream infections for 12 months. Five hospitals had no ventilator-associated pneumonias during that same year. Six hospitals had no retained foreign objects, seven had no serious pressure ulcers, one had no hospital-associated injuries, two had zero deaths among surgical inpatients with serious treatable complications, and two had no birth traumas.

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Cincinnati Children's

There is no gray area in Cincinnati Children's goal. The very first line on its Web page devoted to high reliability reads, "Our goal is to be the safest hospital." The page then goes on to explain how Cincinnati Children's 2015 strategic plan calls for eliminating all serious patient harm and achieving the lowest rates of employee injury among all hospitals by leveraging internal and external expertise toward becoming an HRO.

The fact that Cincinnati Children's is still becoming an HRO may surprise some, because most people would have considered it to be an HRO years ago. After all, using high reliability principles for at least the past three years, Cincinnati Children's has reduced serious patient safety events by 80%, reduced lost time days by 83%, and continually driven down injury and illness rates. The hospital also has shown it is committed to the five high reliability principles that have practical applications for healthcare:

- Preoccupation with failure—never being satisfied with no accidents for many months or many years, and always being alert to the smallest signal that a new threat to safety may be developing
- Reluctance to simplify observations—being able to identify the often subtle differences among threats that may make the difference between early and late recognition
- Sensitivity to operations—recognizing that the earliest indicators of threats to organizational performance typically appear in small changes in the organization's operations
- Commitment to resilience—recognizing that despite best efforts and past safety successes, errors will occur and safety will be threatened
- Deference to expertise—when confronted by a new threat, having mechanisms in place to identify the individual(s) with the greatest expertise relevant to managing the new situation and to place decision-making authority in the hands of that person or group

The leadership and staff at Cincinnati Children's understand that even with all of their success, the high reliability journey is ongoing. It's a learning journey, a commitment to acknowledging an organization does not "arrive" at high reliability or run out of things to learn. The more someone knows about high reliability, the more that person realizes how little he or she knows.

To Cincinnati Children's and MHHS, high reliability isn't a buzzword. It's an approach to ensuring great care for every patient.

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