Quality and the Health System
Becoming a High Reliability Organization

Monaliza Gaw, MPA, MSN, CPHQ, NEA-BC, RN[a],
Frank Rosina, MD, MHCM[a,b,*], Thomas Diller, MD, MMM[c,1]

KEYWORDS

- Safety • Reliability • Culture • Microsystems • HRO • High reliability organizations
- Patient safety culture

KEY POINTS

- Despite substantial improvement efforts, health care quality and patient safety lag behind the expected level of performance; medical errors are the third leading cause of death in the United States.
- Improvements in quality and patient safety require the transition to the concepts of high reliability organizing used in many other complex industries.
- High reliability organizing is focused on leadership commitment, dedication to a culture of safety, and the use of advanced performance improvement methods.
- Leaders must engage clinical microsystems to successfully build and implement the concepts of high reliability organizing.

INTRODUCTION

Each day, hundreds of thousands of physicians, nurses, therapists, and other health care providers come to work with the intention of providing excellent care to the patients they serve. Before the 1990s, it was assumed that health care was a safe and high-quality endeavor. Errors that were occasionally recognized were assumed to be due to the actions of specific providers who carelessly made mistakes. Thus,

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most of the quality and patient safety efforts centered on mortality and morbidity reviews and peer review to identify and remediate those health care providers that were not high quality. With the publication of the Institute of Medicine's reports, "To Err is Human" in 1999 and "Crossing the Quality Chasm" in 2001, the perspective that all mistakes were made by poor training, intention, or negligence began to change.[1,2] Now, nearly 2 decades into intense quality and patient safety improvement work, we collectively have a much better understanding of the true impact and causation for suboptimal quality and medical error.

Over the past 2 decades, there have been many pivotal revelations. For example, Dr. Elizabeth McGlynn and her associates published the landmark article, "The Quality of Health Care Delivered to Adults in the United States" in 2003 that demonstrated only 55% compliance with 439 process indicators that were considered to be evidence based.[3] Numerous papers originated from Fisher and Wennberg[4–6] working on the Dartmouth Atlas that demonstrated pervasive unwarranted variation in the delivery of medical care in various geographies. These variations were counter to the goal to provide care that was evidence based and rather due to organizational and economic factors unrelated to patient need. Further, these variations were associated with substantial regional variations in cost. However, spending more on health care failed to produce improvements in quality, access to care, and or patient satisfaction. In 2010 and 2011, 3 pivotal and systematic papers were published that together demonstrated adverse event rates in hospitalized patients ranging between 18% and 33%, with up to 1.5% of those patients suffering a lethal outcome.[7–9] This work culminated in the landmark article published in 2016 by Makary and Daniel[10] that estimated medical error in hospitalized patients causes approximately 251,000 deaths per year, making it the third leading cause of death in the United States behind only heart disease and cancer.

We currently live and work within a health care system that produces some of the most amazing outcomes possible. There have been incredible advances in heart disease, cancer, trauma, and many other services. The US delivery system has the ability to perform miracles for countless patients each year. Yet, sadly, we continue to fail to provide evidence-based and safe care routinely. Much has been written about both our superb accomplishments and the causes of our failures. In 2010, Mark Chassin and Jerod Loeb[11] at The Joint Commission called for radical change, strongly arguing the health care delivery system must transition from peer review and project-based improvement efforts to embrace the concepts of high reliability organizing that is so prevalent and effective in many other high-risk industries.

HIGH RELIABILITY ORGANIZATIONS

Reliability is the probability that a system will yield a specified result. Thus, high reliability organizations are those organizations that are involved in a complex, high-risk environment that deliver exceptional safety and consistency every day. Chassin and Loeb outlined a framework for high reliability based on the successes of other industries such as the military, commercial aviation, and nuclear power. Becoming an high reliability organization cannot be approached as a project with a checklist of things to accomplish that ultimately results in the achievement of high reliability status. Rather, the work is a constant journey toward excellence. The more appropriate definition of an high reliability organization, therefore, is high reliability organizing—the constant organization of work and infrastructure that leads to highly reliable outcomes.