

Population Health NEWS

Healthcare Quality, Safety Measurement: The Journey Is Slow, but Goals Make Effort Worthwhile

by Frank Mazza, M.D.

The pursuit of defining and measuring both clinical quality and patient safety in healthcare is a laudable goal that features inextricably linked essential elements. Would anyone question perfecting the stopping power of Porsche brakes, the side impact protection of Volvo roll cages or the road handling of Michelin tires in terms of accident protection and the survivability of accidents? Of course not.

And yet with approximately 250,000 people dying each year in the United States due to medical errors,¹ large-scale efforts to quantify care quality and outcomes are still in the early phase.

The Institute of Medicine defines clinical quality as “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge,”² while defining patient safety as “the prevention of harm to patients.”³ Both descriptions imply elements that are reliable, replicable and durable.

Given these definitions and the relative ease of data access, it is understandable that initial efforts to benchmark healthcare facilities for their quality and safety would focus on data elements, such as harm-free, clinical outcomes; risk-adjusted mortality; and avoidance of hospital-acquired complications. These include hospital-associated infections that reflect failure to perform hand hygiene and other routine, evidence-based, infection prevention processes.

The earliest developed measures in this regard have been subject to criticism that is justifiable to some extent for relying on highly variable and fallible documentation and coding practices that were originally conceived in a pre-electronic, medical record era. In this setting, both over-documentation and under-documentation were common and made more problematic by the need to capture information that was not appropriately reflected in ICD-9, which was the predominant system for healthcare coding.

In those early days, many hospitals and providers also denied and even resisted the movement toward objective quality reporting—preferring to assert that they knew quality when they saw it—to the extent that measurement was not even needed.

Moving Forward More Safely

Fortunately, times have changed. Quality and safety indicator measurement is not only the norm in various healthcare settings, but the movement has evolved with the expectation that measures will be automatically and electronically captured. This is in contradistinction to the method of years past when teams of trained staff—usually registered nurses—methodically and to a significant degree of variability and unreliability extracted necessary information from patient charts.

Lessons learned by institutions from these early capture efforts served to unfairly punish hospitals and providers for complications that were not entirely preventable; however, they have given way to more reliable reflections of true quality and safety using coding modifiers that identify that the event did not meet specifications for a true failure or because it was present on admission. Ongoing efforts at further refinement in this process are intended to ensure that these indicators are even more reliable and specific to the conditions they are intended to measure. It is logical that over time, the evidence base will continue to grow to the point that automatic capture and reporting of quality and safety measures will be as reliable and meaningful as the automatic “20 point analysis” of a car’s systems to assess whether it is still road-ready.

Making the Journey Easier

In the reform era, public and private payers must increasingly link payments to quality, outcomes and costs. The implications to providers and health systems are profound: Only those that demonstrate positive clinical outcomes across episodes while safely lowering expenditures will survive and thrive.

What is becoming clear to providers is that medical analytics and software that help organizations to monitor, manage and report with confidence on their clinical performance will also hold the key to improving the delivery of safer, higher quality care. Additionally, these capabilities will support purchasers in identifying superior value for their healthcare spend.

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To effectively meet the expectations of both providers and payers requires a unique blend of specific functionality that centers on three fundamental areas: safety risk management and surveillance, pay-for-value reporting and performance analytics. A combination of SaaS-based solutions and information services should be made available on a stand-alone or fully integrated basis to more effectively monitor and measure clinical and financial performance with precision and conviction. This is the formula that will help healthcare systems truly deliver and be compensated for value, while paving the way for improved safety and quality—and finally measure what really matters.

Understanding Impact of Human Error in Healthcare Settings

In most cases, human error can be attributed to one or more specific causative factors. The first of these relates to the sheer complexity of care. Clinical care is also delivered as part of a complex-adaptive system that is composed of many tightly coupled microsystems. Human beings are highly susceptible to cognitive biases that adversely affect their ability to solve problems accurately and reliably. They also exhibit significant limitations in working memory that make them prone to error due to factors, such as distraction, stress and sleep deprivation.

Healthcare professionals must understand why these events transpired in the first place. In this regard, event-reporting systems are critical tools. They enable healthcare professionals to identify and catalogue the contributing factors that lead to incidents, and frequently detail with great accuracy why they occurred without the requirement of time and expense of a more formal, root-cause analysis.

When captured in a structured taxonomy, incidents can be aggregated and prioritized for performance improvement. Because errors and adverse events occur relatively frequently in healthcare, no organization can afford to maintain resources that target them all for improvement at one time. But organizations can efficiently and effectively learn and improve by prioritizing their efforts after reviewing their data.

If It Can't Be Measured, It Can't Be Improved

In order to unlock the value-based healthcare and make improvements, there must be a commitment to measuring a minimum set of outcomes for every major medical condition and standardizing them. Information technology vendors are creating software solutions to automate outcomes data collection and aggregation and embedding the standard sets into electronic medical records. A data platform to allow voluntary provider benchmarking and learning on a condition-by-condition basis is under development. Determining standard sets of outcomes for each medical condition is a practical and necessary step for accelerating value improvement in healthcare.⁴

As more employers, health plans and government purchasers begin implementing value-based, payment models, quality and safety risk management solutions will play an integral role in helping to align physician and hospital bonuses and penalties with cost, quality and outcomes measures.⁵ With the widespread use of healthcare information technology (HIT), the healthcare data that providers require to track patient care are now readily available.⁶ Episodes of care, where measurement complexity is most sensitive, require the most sophisticated systems to track and measure.

Fortunately, episode evaluation systems exist that can span the entire continuum of patient care. Unlike traditional, encounter-based systems, these systems have the capacity to capture all clinically related encounters and assign them to a single episode of illness regardless of care setting, allowing providers and purchasers to accurately compare the total cost and utilization of medical services against peer groups, national norms and best practices. This gives providers the power to measure what matters using meaningful and reliable information for assessing the integrated delivery of cost-effective care.

Looking Down the Road

The destination continues to be reliable assessment and reporting of clinical quality and patient safety, and the journey has just begun. Progress has perhaps been slower than expected, but there is no turning back. In the name of safe, high-quality healthcare for all, healthcare organizations, government, academics and vendors must all join together to assure that this is an expedition worthy of everyone. After all, everyone is a patient or will be one someday.

¹ Kohn LT, Corrigan JM, Donaldson MS (Ed.). "To Err Is Human. Building a Safer Health System." National Academies Press. November 1999.

² Hughes RG. "Patient Safety and Quality: An Evidence-Based Handbook for Nurses." Agency for Healthcare Research and Quality. April 2008.

³ *Ibid.*

⁴ Porter ME, Larsson S, et al. "Standardizing Patient Outcomes Measurement." *New England Journal of Medicine*. 2016;374:504-506.

⁵ Gerhardt W, Korenda L, et al. "The Road to Value-Based Care." Deloitte University Press. March 20, 2015.

⁶ Better, Smarter, Healthier: In Historic Announcement, HHS Sets Clear Goals and Timeline for Shifting Medicare Reimbursements From Volume to Value." HHS.gov. Jan. 26, 2015.

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