Building a Highway to Quality Health Care

Sam R. Watson, MSA, MT, (ASCP)* and Peter J. Pronovost, MD, PhD†

President Eisenhower's Federal Highway Act of 1956 transformed America's local patchwork of roads into a national, interconnected highway system. This investment in a critical infrastructure was transformative, and one of the largest public works ever funded by the U.S. government. Nearly everyone in the United States has been touched by this system, be it for travel or access to goods.

Health care today is in a similar situation as America's hodgepodge road system was in the early 20th century. There have been many local and regional projects and several national initiatives, all independently seeking to improve the quality and safety of patient care. The federal government has supported these efforts through the Agency for Healthcare Research and Quality's (AHRQ) research portfolio, the Centers for Medicare & Medicaid Service's (CMS) Partnership for Patients, and the Centers for Disease Control and Prevention's (CDC) research and public health funding. These investments are needed, although they are still insufficient for the size of the problem.

As with the old road system, we have yet to invest in the basic infrastructure necessary for all patients, hospitals, and providers to improve and sustain improvements in quality and safety. In this essay, we review the investments needed to establish a quality infrastructure that supports broad and sustained improvements in quality and safety.

Improve Performance Measures

There is an ever increasing call for data from hospitals, and increasingly so from non-acute care providers and physicians. For example, The Johns Hopkins Hospital reports more than 250 performance measures, and Hopkins physicians report several hundred more measures. However, many of those measures have limited value, many are of low or unknown validity, and many are perceived unimportant. All of the measures consume precious resources. For most measures, it is difficult to link processes (the care delivered) with outcomes (the results achieved); such linkages would be invaluable in improving quality.

Physicians and provider organizations need to partner with regulators and policy makers to ensure measures are valid, meaningful, and cost-effective. Policy makers should create standards for how accurate a performance measure must be before it is used in pay for performance programs or publicly reported. Perceptions that the data are good enough serves neither patients, nor policy makers, nor providers. The use of a small number of measures that physicians believe are valid will engage clinicians in quality improvement and ensure accountability for the quality of care delivered.

Although electronic health records offer significant potential to enhance quality and reduce the costs of collecting performance data, this potential has yet to be realized. Despite making substantial investments in electronic health records, most hospitals still collect performance measures manually, frustrating clinicians and squandering resources.

Coordinate Efforts

Hospitals are inundated with external demands to improve quality. The AHRQ, CDC, CMS, The Joint Commission, state hospital associations and health departments, insurers, and professional societies are all recruiting hospitals to participate in quality improvement efforts. Although each effort is well intentioned, they often are uncoordinated, under resourced, and lack valid measures. These problems ultimately discourage providers and provider organizations and deflate the effectiveness of these efforts. Nevertheless, the federal government has made progress in coordinating efforts. For example, the Health and Human Services Office of Healthcare Quality coordinated efforts around hospital-associated infection. Still, most efforts are not coordinated.

In conjunction with the National Quality Forum, HHS has published a national quality strategy. This document, or one like it, should serve as the playbook for federal, state, and local organizations.

From the *Michigan Health & Hospital Association Keystone Center, Lansing, Michigan; and Johns Hopkins Medicine, Armstrong Institute for Patient Safety and Quality; The Johns Hopkins University School of Medicine, Departments of Anesthesiology & Critical Care Medicine, and Surgery; Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland.

Correspondence: Sam R. Watson, MSA, MT, (ASCP), MHA Keystone Center, 6215 W St. Joseph, Lansing, MI 48917 (e-mail: swatson@mha.org).

Conflicts of Interest: Mr. Watson is currently receiving support through Blue Cross Blue Shield of Michigan and the Centers for Medicare Medicaid Partnership for Patients Hospital Engagement Network. Dr. Pronovost is currently receiving grant support from the Agency for Healthcare Research & Quality for quality improvement research in surgery, the National Heart, Lung and Blood Institute for 5-year outcomes for acute lung injury patients, and the Gordon and Betty Moore Foundation to design an integrated intensive care unit system; consulting fees from the Association of Professionals in Infection Control and Epidemiology, Inc.; and has received speaking honoraria from the Lehigh Bureau and various hospital and health systems, book royalties from the Penguin Group, and board membership from the Cantel Medical Group.

Copyright © 2014 Wolters Kluwer Health, Inc. All rights reserved.
to coordinate efforts and share scarce resources and to yield large scale improvement. Large scale, coordinated efforts are most effective when they have central data collection and summaries of evidence-based practices, with local variation in how these practices are implemented. A balance is needed between dictating practices to providers and failing to establish accountability. Collaborative efforts that incorporated a structure for peer learning (horizontal coordination) and accountability (vertical coordination), reduced central line-associated bloodstream infections across the United States, offering hope for reducing other types of harm.

**Support Local Improvement Efforts**

Care improves or fails to improve at the bedside. Substantial theory and practical experience suggests that those closest to the work are most knowledgeable to improve it.

There are 3 paramount features when supporting physicians, nurses, and other providers in improving care. First, clinicians must possess a range of skills to improve care processes, including skills in improvement science, human factors principles, and quality measurement and evaluation. Clinicians must be able to lead change, to understand how to design, test, implement, and evaluate improvement efforts, to collect data, to sustain and spread learning to other units, service lines, and organizations, to engage clinicians in supporting the work, and to be supportive of clinicians.

Second, clinicians need protected time away from clinical responsibilities to conduct improvement efforts. They have to train colleagues, capture data, identify, and plan for the next change to occur, and improve performance. Hospital leaders are often less likely to provide financial support for this protected time. Their concerns are valid. Too often, the clinicians who received support from hospitals lacked improvement skills, and too often, hospital leaders did not hold them accountable for producing results. On the other hand, clinicians who donate their time to quality improvement often feel unappreciated and resentful afterward.

We believe the concerns of clinicians and hospital leaders over quality improvement can be mitigated by creating a compact; an explicit agreement stating the skills required of clinicians, the work they will do, the results they aim to achieve, and what support the hospital will provide for the clinician. When the performance expectations are clear and when performance is reviewed regularly, physician quality leaders can realize significant results. From our experience, a substantial barrier to improving quality of care is the lack of staff with the time, skills, and accountability needed for improvement work. On most units, there is no physician explicitly responsible for ensuring the practice of high quality and safe patient care. If we are to make progress, this needs to change.

Third, there must be an effective quality management infrastructure that creates a chain of accountability—from the health system board of trustees to the hospital, departments, units, and ultimately, the clinician patient day. There has been growing improvement in this realm, but many quality departments are under resourced, and most have large gaps between a board mandate for better quality and the care delivered at the bedside. Boards must be involved and given a concise business case for investing in quality departments. At the end of the day, the quality department should not own the improvement work. They should serve as the in-house experts to assist, train, and mentor the bedside providers charged with making changes.

The features outlined above will require investment. One may argue that such a capital investment will yield an infrastructure to support change into the future. One of the authors (P.J.P.) estimated that such an investment at his hospital would cost less than 1% of their revenue and would bring a 4- to 5-fold return on this investment. Considering the level of change anticipated between now and 2020 from the Affordable Care Act, it is in our best interest to make these investments.

**ACKNOWLEDGMENT**

The authors thank Christine G. Holzmoller, BLA, for the assistance in editing the manuscript.

**REFERENCES**


