Transformation of Health Care at the Front Line

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CONCERN ABOUT ESCALATING COSTS AND THE quality of health care delivered in the United States continues to mount.[1] This has led to an increasing focus on pay-for-performance, value-driven health care and public reporting of quality and cost information. However, several authors have questioned the effectiveness of pay for performance and public reporting to improve patients' outcomes and have highlighted the potential for unintended negative consequences.[2-6] Currently, frontline clinicians are exposed to disparate pay-for-performance programs that are often uncoordinated and not clearly aligned with producing better outcomes for patients.[2,6] Evidence is produced at an astonishing rate, but its incorporation into clinical practice is difficult.

For patients, the current transparency efforts often have little useful information for decisions regarding a specific disease and selection of clinician or treatment option.[7] However, policy makers and purchasers are faced with an underperforming health care system and untenable cost estimates, so maintaining the status quo is not an option. Recently, 82% of Americans indicated that the health system needs fundamental change or complete restructuring.[8]

Health care is now at a critical fork in the road. One option is to continue down a path that too often frustrates clinicians, confuses patients, and fails to align incentives with improving quality and value. The other is to take the path that aligns quality and value efforts with care where it matters, at the front line with clinicians and patients. The Agency for Healthcare Research and Quality (AHRQ) has a role to play in developing the science of measurement, research on quality improvement, and informing how to transform the system successfully, but leadership and collaboration from all stakeholders and a clear vision are needed.

The approach described in this Commentary is by no means exhaustive. Each key driver to engage and enable frontline clinicians and their patients to transform care and achieve better outcomes could be the subject of multiple articles, but at the least, a vision must be outlined, the best path and methods to make progress debated, and the focus shifted to the front line of care.

Quality Measurement and Payment

The multitude of quality organizations (eg, National Quality Forum, National Committee for Quality Assurance, Ambulatory Care Quality Alliance) have each made contributions to the quality enterprise, but there is a need to move beyond simply developing more measures and to focus on developing high-priority measures such as those that influence outcomes on high-prevalence diseases, demonstrate baseline performance variability, and have potential mechanisms to improve results. A mix of process and outcome measures is needed, but measures should increasingly focus on patient-centered outcomes, including appropriate risk adjustment that is improved over time.

Occasionally, a given measure may not be appropriate because of patient preference or clinician knowledge of information not captured in claims or electronic data. In these cases, exception reporting should be allowed to minimize "unfair penalization" and the potential unintended consequence of clinicians avoiding complicated cases. However, exception reporting will need to be monitored so it is truly the exception and provides information for requisite refinements.[9]

The measurement enterprise needs to be linked to a strategy for capturing high-priority data with minimal workflow disruption. Instead of chart review–based measurement, functional electronic health records (EHRs) are needed, along with patient registries that capture quality measurement data, such as monthly reports, to provide feedback to clinicians. Measurement is the first step in clinician- and practice-based improvement.

Current measures often focus on individual patient-clinician interactions at a single point in time and, therefore, undervalue teamwork and patient outcomes over time. Measures focused on adherence to process in single interactions, when implemented widely, may have unintended negative consequences for patients.[10] Measures need to focus more on the patients' outcomes over an episode of care, such as from hip fracture through recovery. If a patient with

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back pain is evaluated and treated in a less costly manner by a multidisciplinary team, this high-value, efficient performance should be rewarded. Measuring and paying fee-for-service for each unit of care fails to align incentives for care coordination across settings.

In addition, a collaborative process of measure development and implementation that involves clinicians and patients should be pursued. Patients are critically important to inform public performance reporting efforts intended for patients' use. A poorly designed measure would serve to demoralize clinicians and fail to improve patient care.[5,6] The performance measurement enterprise needs a national body to develop a strategy, set goals, and begin to fill in critical gaps in measurement such as efficiency, risk-adjusted outcome measures for many diseases, and measures for episodes of care. An explicit investment in measure development as a tool to evaluate application of evidence in practice is needed. Measure implementation should be an iterative process wherein measures are evaluated, improved, and phased out if needed. Furthermore, better evidence is needed to inform how best to design value-based incentives, including testing methods such as shared savings and tiered case management. The science of measure development and effective implementation to improve health care warrants substantial support.

Health Information Technology

Health information technology (HIT) is the foundation for performance measurement, quality improvement, and care coordination. Measurement should be built seamlessly into HIT products to collect pertinent information at the front end of care delivery. For example, EHRs should have functionality to capture quality measures adopted by payers as part of the patient-clinician encounter. This patient-level clinical data can allow for more robust risk adjustment and identifying and tracking patients with multiple comorbidities. An EHR should produce performance reports on quality metrics for clinicians and identify patients who are failing to achieve certain outcomes. Development of EHRs depends on new collaborations among vendors, professional societies, and other measure developers that integrate electronic guidelines and decision support into the workflow and allow tailoring to individual patient preferences. Interoperability between systems and exchange of health information is essential to enable coordinated care between clinicians and across settings. Important patient health information that is difficult or impossible to locate should become the exception instead of the norm.

HIT is increasingly playing a role in patient empowerment and communication. Personal health records enable patients to manage their own health information, become educated and track results, and communicate with clinicians. When a patient leaves a clinician's office, no reliable method of follow-up communication currently exists. For example, imagine a group of patients with diabetes whose glucose measurements, even via a cell phone, could populate their personal health records, which are accessible and linked to their clinician's EHR. This shifts the patient-clinician interaction to extend beyond the office to help prevent disease exacerbations and the associated hospitalizations.

Comparative Effectiveness

Developing the next new device or medication with potential blockbuster status is the current primary driver of the research enterprise. However, clinicians are faced daily with patients with common ailments for which there is no evidence to guide selection of one therapy or test over another. For clinicians to achieve better, more efficient results, this comparative effectiveness information must be available. Given the high costs and potential for poor outcomes among patients with multiple chronic conditions, it is imperative for research to pursue answers to comparative effectiveness in this population. Moreover, accelerating the production and use of requisite research will be most efficient and relevant if generated as a by-product of care delivery. Approval of a drug or device by the US Food and Drug Administration should not be seen as the end of its evaluation but instead as the beginning of testing its effectiveness and safety.

Quality Improvement Collaboratives and Learning Networks

The testing, scaling, and spreading of interventions to improve quality and efficiency needs to be performed via learning networks led by clinicians and other stakeholders. Networks of practices and hospitals should serve as learning laboratories that systematically implement interventions, measure results, and inform refinements of existing measures. These frontline collaboratives should extend beyond the academic center and include broader communities and populations. The research team may be affiliated with an academic center but should partner with frontline clinicians in the community and focus on testing whether successful interventions are scalable to practice sites in the community. These networks can save lives and publish important results for others to emulate.[11,12] AHRQ has funded such networks, but a sustainable model needs to be enabled by a payment system that rewards networks of providers for the results achieved.

Clinician Training

The final piece of the puzzle for transforming health care at the front line is shifting how clinicians are educated and trained. Medical education, resident training, and continuing medical education predominantly focus on mastering detailed knowledge. Given the enormous amount of information being generated, trainees and practicing clinicians must be taught how to measure results, focus on improvement, and incorporate evidence into their practice. The Ac-

creditation Council for Graduate Medical Education core competencies include "practice-based learning" and "systems-based practice," but this typically has not been woven into the fabric of how physicians are educated and trained.[13] A clinician should be able to learn from his or her individual practice, make small tests of change and measure the results, and network with a broader group of clinicians to help answer mutual questions. This focus on quality improvement, coordination of care, and measuring results is especially critical for training future generalist physicians.

Next Steps to Transforming Health Care at the Front Line

A recent article addressed transforming health care through 3 translational steps.[14] However, what does this all mean for frontline clinicians and patients? Other articles have revealed that physician leaders and researchers are concerned about the potential of proceeding down a path that disconnects clinicians from the system and fails to benefit patients.[2-6,10] This is an important concern. Several next steps would shift the course toward clinician engagement and improved patient care.

First, there must be an investment in the key drivers outlined above (quality measurement and payment, HIT, comparative effectiveness, quality improvement collaboratives, and clinical training). These fundamental building blocks are the foundation to transform care at the front line. In 2003, the National Institutes of Health, other government agencies, foundations, and private sources spent more than $90 billion on biomedical research but only $1.4 billion on health services research.[15] Currently, even less is spent on the building blocks that inform the third translational step, including quality improvement and system redesign interventions, to determine how to transform care. Second, clinicians need to actively engage in the process of developing solutions to improve care at the front line. Third, the current health care payment system should increase its focus on payment for high-quality, efficient care and strive to reward achievement of improved patient outcomes over episodes of care and minimize opportunity for unintended negative consequences. Fourth, a champion is needed for transformation of care at the front line who can convene stakeholders and build the requisite capacity and infrastructure. This will require clinicians, consumers, plans, employers, researchers, government agencies, and all other stakeholders to join and focus efforts where it matters—at the front line of care between clinician and patient.

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