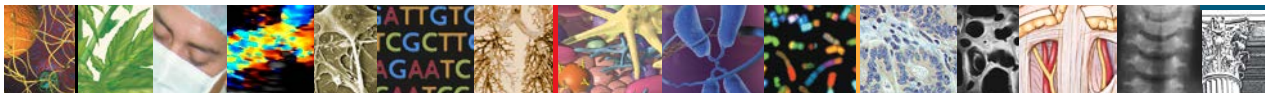

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Perspective

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Getting More Performance from Performance Measurement

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Just a few decades ago, there was little effort to measure the performance of the health care system — indeed, most aspects of health care quality were considered unmeasurable. The situation started to change as research revealed wide variability in the safety and quality of health care and as measurement was increasingly recognized as an important tool for improving quality. Today, health care providers and payers spend substantial resources collecting, analyzing, and reporting data on providers' performance. Given the investment and stakes involved, we need to ensure that we get the most improvement possible out of these efforts.

The current measurement paradigm, however, does not live up to its potential. Many observers fear that a proliferation of measures is leading to measurement fatigue without commensurate results. An analysis of 48 state and regional measure sets found that they included more than 500 different measures, only 20% of which were used by more than one program.[1] Similarly, a study of 29 private health plans identified approximately 550 distinct measures, which overlapped little with the measures used by public programs.[2] Health care organizations are therefore devoting substantial resources to reporting their performance to regulators and payers; one northeastern health system, for instance, uses 1% of its net patient-service revenue for that purpose.[3] Beyond the problem of too many measures, there is concern that programs are not using the right ones. Some metrics capture health outcomes or processes that have major effects on overall health, but others focus on activities that may have minimal effects.

Having worked for decades on performance measurement, from inside and outside provider organizations, we have had successes when measurement contributed directly to improvement — and disappointments when measures led to discord, resistance, and little change for the better. How can we learn from these experiences to get more performance out of performance measures?

Recent years have seen substantial activity in assessing readmissions to hospitals, motivated by research revealing high readmission rates among Medicare patients. Health plans, purchasers, regional collaboratives, and others have developed programs that use such metrics to guide reductions in preventable readmissions, and the Affordable

Recommendations for Improving Health Care Measurement.

Stakeholder Group	Recommendations
Clinicians	Develop and implement measures relevant to your practice, explore data to find opportunities for improving care, and build the necessary data-collection infrastructure (e.g., registries).
Patients and consumers	Call for transparent quality measurement and reporting, and participate in efforts to collect patient-reported outcome information.
Payers	Align with other payers on a smaller required set of high-impact and outcome-oriented measures.
Vendors of health information technology and electronic health records	Establish the electronic building blocks for measures (rather than constructing and specifying measures one by one).
Measure developers and endorsers	Accelerate the development and endorsement of measures to fill critical gaps, and in high-priority areas, allow for rapid feedback and adaptation to respond to any unintended consequences or changing evidence.
Hospitals and health systems	Invest in measuring and understanding health at the population and community levels, with a focus on metrics that may stretch beyond the clinical encounter within the health system walls.
Researchers and scientists	Produce the next generation of research in the science of measure development and implementation, including risk adjustment, attribution methods, and defining episodes of care; monitor for unintended consequences and adjust measures accordingly.
Employers and purchasers	Purchase health care on the basis of meaningful, actionable quality and cost measures, focused on outcomes and team- and system-level performance.

Care Act created the Medicare Hospital Readmissions Reduction Program, which ties provider payments to 30-day readmission rates. When such programs began, some observers expressed concern about the metrics' focus on a small subgroup of patients and raised questions about how many readmissions were really preventable, whether hospitals could address the root causes of readmissions, whether focusing on readmissions might distract organizations from other important efforts, and whether the programs might disadvantage hospitals serving poorer populations. In response, the Centers for Medicare and Medicaid Services (CMS) and other program developers made refinements — for instance, revising the algorithms used for identifying planned readmissions and monitoring for unintended consequences, such as greater use of observation status. Yet recognizing that measurement and payment-reform programs have to start somewhere and can be improved over time, readmissions-reduction programs have moved ahead and continue to evolve.

The results have validated this approach: national readmission rates, which hovered around 19% between 2007 and 2011, had dropped to approximately 17.5% by 2013.[4] Though additional research is needed to elucidate the factors affecting readmissions, recent research suggests that the measured decrease resulted from actual changes in care and not simply greater use of observation units or emergency department care. The readmissions measures helped drive change because they were easy to capture with claims data, they are outcome measures that allow hospitals to create programs tailored to their own patient populations, and they include all the clinicians who care for a given patient. The measures may continue to evolve as researchers, measure developers, and policymakers consider how they can be adjusted for factors unrelated to quality of care, such as sociodemographic factors.

Similarly, the rate of early elective deliveries had stayed fixed for many years, even though there was evidence that the practice led to a greater need for neonatal intensive care, higher risks of maternal and neonatal complications, and health problems later in the children's lives. The situation started to change after studies showed that rates could be reduced through mandatory peer review of potential early elective deliveries before they were scheduled, "hard stop" policies prohibiting such deliveries without formal documentation of medical necessity, and other approaches. Measurement played a critical role, as the Leapfrog Group, CMS, and the Joint Commission began incorporating early elective deliveries into their measurement and reporting programs. When federal and regional initiatives, payment reforms (such as

including early-elective-delivery metrics in pay-for-performance programs or not paying for such deliveries), and educational efforts were deployed in addition to measurement and reporting, the rates of early deliveries fell from 17% in 2010 to 4.6% in 2013.[5] This effort succeeded because there were clear measures that could be used for multiple purposes, such as payment and accreditation; reducing such deliveries was the right thing to do clinically; and hospitals and health systems could immediately implement clear policy changes, such as hard stops.

Unfortunately, for every instance in which performance initiatives improved care, there were cases in which our good intentions for measurement simply enraged colleagues or inspired expenditures that produced no care improvements. One example of a measurement effort that had unintended consequences was the CMS quality measure for community-acquired pneumonia. This metric assessed whether providers administered the first dose of antibiotics to a patient within 6 hours after presentation, since analyses of Medicare databases had shown that an interval exceeding 4 hours was associated with increased in-hospital mortality. But the measure led to inappropriate antibiotic use in patients without community-acquired pneumonia, had adverse consequences such as *Clostridium difficile* colitis, and did not reduce mortality. The measure therefore lost its endorsement by the National Quality Forum in 2012, and CMS removed it from its Hospital Inpatient Quality Reporting and Hospital Compare programs.

An audio interview with Dr. Cassel is available at NEJM.org

The problem with this measure was that the clinical situation — a patient presents with symptoms that could indicate pneumonia but no diagnosis — was not the right place to intervene. Although patients with community-acquired pneumonia do benefit from rapid administration of antibiotics, symptoms such as shortness of breath, fever, and coughing are not specific to pneumonia, so antibiotics were also being given to patients with asthma or congestive heart failure. There was too much clinical variability for the measure to help physicians focus on exactly the right course of action.

Of course, these examples reflect only a small fraction of what's known about measurement, and many organizations, such as the Veterans Health Administration, large employers, specialty societies, public health agencies, and international health organizations, have done considerable work in this area. But such examples suggest that there are opportunities for spurring dramatic advances in performance measurement. Possible strategies for doing so include continuing to improve the available measures, focusing on patient health outcomes and improving value; increasing the use of electronic clinical information, clinical registries, and "big data" sources to supplement or replace claims data and manual chart reviews; aligning reporting requirements among federal, state, and private payers; consolidating requirements from accrediting and certifying bodies; reducing the noise level generated by conflicting proprietary report cards; and using measurement at the right level of attribution within teams and systems. Furthermore, measurement can lead to improvement only in organizations that have a culture of accountability and a workforce skilled in quality-improvement science. In the table, we offer some recommendations for avoiding the repetition of past failures and increasing the likelihood of success for performance initiatives.

The science and practice of performance measurement have advanced substantially in the past decade, and increased transparency regarding results means that we know more quickly what works and what doesn't. Furthermore, all stakeholder groups are now invested in getting more performance out of measurement, which should ultimately drive the care improvement that patients need and deserve.

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