Moving Payment from Volume to Value: What Role for Performance Measurement?

Timely Analysis of Immediate Health Policy Issues
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Introduction

Health reform legislation has offered the promise of dramatically altering the way providers are paid, shifting from paying for volume to paying for value. Viewed by many as potentially transformative, it is one of the few policy approaches that achieved support across the political spectrum. President Obama frequently emphasized the shift in payment methods that health reform would accomplish.[1] Bill Frist, a physician and former Republican Senate majority leader, emphasized the change, "The most powerful way to reduce costs (and make room to expand coverage) is to shift away from 'volume-based' reimbursement (the more you do, the more money you make) to 'value-based' reimbursement."[2] After passage of the Patient Protection and Affordable Care Act (The Affordable Care Act), the immediate media explanation of its significance placed particular emphasis on this payment alteration. Dr. Tim Johnson explained the change on ABC News, "Doctors and hospitals will have to be paid differently. Not simply for procedures—the more they do the more they make—but for outcomes."[3]

The problems created by volume-based payment, as epitomized by the fee-for-service approach to paying physicians for each individual service provided, have become increasingly recognized. U.S. health care quality is often mediocre, yet provided at an enormous cost. Mediocre quality of care suffers no sanctions; indeed, reimbursement on the basis of the number of services generated may actually reward substandard quality, since reimbursable services that do not benefit patients are directly rewarded. These two facts, a general tolerance of uneven and mediocre quality capturing an enormous and growing national commitment in resources, prompt a search for the causes and solutions to this health care dysfunction. Why doesn't health care deliver sustainable cost-effective, high-quality care—or in other words, high-value care?

This interest in achieving higher-value care has led to efforts to improve the measurement of care, to use the measures for quality improvement, to engage purchasers and consumers with the new information, and, potentially, to adopt payment approaches that support improved quality and greater cost-effectiveness, as indicated by measurement. Proponents of greater reliance on measurement in payment believe that such an approach would support higher value rather than indiscriminate volume.

Accordingly, there are broad-based calls for what has variously been labeled "value-based," "results-based," "performance-based," or "outcomes-based" payment. These different terms have slightly different implications but all convey the similar notion that clinicians and other providers would receive payment based primarily on assessing the benefits to patients and society of the health care they produce, rather than on the effort and accompanying resources used in producing the care.

Given the hope associated with what is being presented as fundamental change, it is important (and perhaps disconcerting) to point out that the payment approaches specifically identified in the Affordable Care Act for pilot testing—including bundled episodes, shared savings and partial capitation to accountable care organizations and other provider entities, and further development of payment options for patient-centered medical homes—do not actually produce a complete shift from volume-based to value-based payments. Rather, some of the new, promising approaches remain grounded firmly in fee-for-service payment, but provide certain new incentives to alter the content of care. Other approaches represent a more fundamental shift away from fee-for-service, but do not currently work by providing payments based on assessed value using performance measurement. Rather, they primarily are designed to alter the payment incentives physicians and other providers respond to, with the goal of improving value, whether or not the value can be recognized and rewarded in real time.

In short, although there is broad policy consensus that current volume-

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based payment approaches need to be replaced with alternatives that achieve higher value for the considerable financial investment made, there is some disagreement on how much the new approaches require the active adoption and implementation of performance measurement as the basis for payment, rather than changing the fundamental incentives that payment approaches provide. In the former approach, value would be measured and rewarded directly; in the latter approach, value would be rewarded indirectly by providing incentives for the provision of care thought to be more likely to produce higher value.

The goal of this paper is to explore what is meant by value-based payment, emphasizing different views on the role of performance measurement in supporting the concept and to identify approaches to overcoming the current obstacles to recognizing and rewarding higher-value care.

After considering different concepts of value-based payment, the paper explains how the two different concepts—one emphasizing performance measurement of value and the other emphasizing changing payment incentives for providers—can produce different payment approaches. Next, the paper reviews provisions of the Affordable Care Act that call for explicit value-based payment through the use of specific performance measures. The paper then provides a brief snapshot of the state of measurement of quality and costs, and points to the difficulties of using measures to produce a "value index" of providers or geographic areas. The paper concludes by exploring strengths and weaknesses in some payment models related to the objective of producing higher-value health care, and suggests a different role for performance measurement—as a complement to protect against adverse responses to altered payment incentives.

Different Views on the Use of Quality Measures in Payment

Proponents of Reliance on Measures

Some policymakers are optimistic that even with the use of traditional payment methods, an explicit consideration of quality and cost of care can produce higher-value care than simply paying for services rendered. The new attitude toward payment, as Mark McClellan, former administrator of the Centers for Medicare and Medicaid Services, put it, is, "You get what you pay for. And we ought to be paying for better quality."[4] The hope is that the new payment approaches would directly reward society's desired performance, as described in the six aims of quality set forth by the Institute of Medicine in *Crossing the Quality Chasm*—namely, care that is "safe, effective, efficient, patient-centered, equitable, and timely."[5] For these policy analysts, moving from current volume-based payment approaches to value- or outcome-based payment is the literal goal; where measures of value do not exist, there would be an imperative to develop and implement them. A common mantra for many has become, "you can't manage what you don't measure."

Skeptics of Using Current Measurement Sets

Others are skeptical that we have valid measures for much of what people would consider the core elements of the care provided by health professionals and institutions. Further, some doubt we can readily overcome the many logistical obstacles to permit valid and reliable assessments using available measures of the value of care provided. These policy analysts are more apt to quote Albert Einstein, "Everything that can be counted does not necessarily count; everything that counts cannot necessarily be counted."

There is important agreement among the different groups. They agree that current volume-based reimbursement approaches need to be replaced promptly. Further, those who rely heavily on measurement of value typically acknowledge large gaps in current measurement sets and want to alter payment incentives as a necessary complement to the essential and overriding commitment to measuring performance. For their part, critics of heavy reliance on measures to reward performance often do recommend using measures as an adjunct to altering basic payment incentives—but only when there are valid and relevant measures that can be applied opportunistically to support the use of altered incentives. They often recommend this use of available measures to detect untoward behavior produced by too-strong provider response to the altered incentives.

Although all can agree to endorse the desire for new and better measures, nevertheless, the different views on the role of measuring performance in trying to attain higher-value health care create tension that has not been generally acknowledged. They can produce different payment reform options and different operational approaches to accomplishing payment change to produce higher value.

Measuring Value

As noted, some payment experts consider the goal of payment reform to be to literally and directly reward "value," which in health policy

discussions commonly refers to some assessment of the quality of care provided (the numerator) divided by some measure of costs to provide the service(s). Although this formulation that value = quality / costs is commonly used as health policy shorthand, current attempts to assign the "value" of the health services delivered by a practice, provider organization, or geographic area lack quantitative precision. Quality is commonly measured using many different scales, such as the percentage compliant with a standard or the mortality rate for a condition. Costs are measured usually simply as dollars spent, but sometimes the cost factor in determining "value" can also represent the rate of increase in costs, not the absolute costs.

$$\text{VALUE} = \frac{\text{QUALITY}}{\text{COSTS}}$$

(e.g., % compliance with a standard, or mortality rate for a condition)

(e.g., absolute dollars spent, or the rate of increase in costs)

Using these different measurement scales, there is no standard mathematical basis for deciding how to measure how much "value" is altered with a change in either the numerator or denominator. So, for example, if an intervention is shown to increase measured quality at a higher measured cost, we don't know whether the intervention has increased or decreased value. For assessing value, policymakers have not achieved the kind of agreement found in cost-effectiveness analysis, which typically standardizes effectiveness into quality-adjusted life years (QALYS), which then can be used in relation to costs to determine cost effectiveness of an intervention.[6] But the approach of converting measures of effectiveness into a common metric to determine QALYS is not without controversy; for example, related issues of equity and fairness come up in deciding how to adjust for age in discounting an expected health benefit over time. Attempting to convert different quality measures into a common metric to permit quantitative assessment as part of a value equation would be difficult and controversial. Yet, without conversion to a common metric, our ability to make a global assessment of value will be elusive.

As a policy goal, then, there is consensus on the desirability of using payment policies to achieve higher value for the dollars spent for health services, whether by improving quality or reducing costs, as an alternative to simply paying for services rendered regardless of how well or efficiently they are provided. The casual use of value has become common as a qualitative aspiration to indicate that those footing the bill for health services can get "more bang for the buck." That aspiration, however, is grounded in the real and urgent concerns about the fragmentation and operational dysfunction that result in mediocre quality at huge national expense—essentially the lack of a "value" proposition in the delivery of health care.

The concept of value has entered the health policy lexicon and is in common use. Yet, experts do not agree on how formally or quantitatively assessments of value can be made, and as discussed above, whether performance measurement needs to be an essential component of altered payment methods.

The Use of Measures for Accountable Care Organizations

For example, for some, the appeal of what has been labeled accountable care organizations (ACOs) lies with the belief that we can now measure performance well enough to make assessments of whether organizations have achieved desired thresholds of performance to ensure sufficient accountability of quality and costs. In theory, if an assessment of performance becomes a direct component of their financial success, providers—in this case, accountable care organizations—will shift their attention and resources toward achieving value on the measures being applied. A recent definition of accountable care organizations by some of the concept's main proponents, Mark McClellan and Elliot Fisher, puts performance measurement at the forefront as an intrinsic part of the ACO concept.[7] They acknowledge current limitations in available measures by calling for implementation of ACOs with a "starter set" of measures of quality, efficiency, and patient experience, before making the transition to advanced measures that emphasize health outcomes, functional status,

and reductions in health risks. But they seem confident that needed, additional measures will be forthcoming.

Others focus much more on changing payment incentives to organizations able to provide care across a range of health care services that patients need, and expect higher value to be produced *whether or not their higher value can be measured in real time.* They would use measures more strategically, seeing their use often as complementary to changing payment incentives, by measuring aspects of care that might get short shrift under the new payment approach under consideration, to provide public confidence that lower cost can be achieved with better care.[8] For example, such measures might provide important information and influence behavior to moderate providers' responses to capitation incentives—that is, the payment up front of a fixed amount per capita regardless of the volume of services provided. Healthcare Effectiveness Data and Information Set (HEDIS)[9] measures, which focus on primary and secondary prevention activities, can be used to counter the concern that providers receiving per capita payments for populations under their care might skimp on these preventive services.[10]

Under this view, measures primarily advance a strategic purpose—namely, to help protect against behavior that new payment models might unintentionally promote. But even here, limitations on available measures urge caution in how the new payment approaches should be implemented and suggest the need for process protections for patients, such as appeals and grievance procedures, in addition to the use of measurement to assess performance. For these experts, then, measuring particular aspects of performance represents a relatively small component of adopting new payment approaches—it is not unimportant, but not nearly as central as putting the new incentives in place.

Measuring Value Versus Changing Incentives

As articulated in a recent commentary by John Rother, a veteran of payment policy discussions, changing the incentives to providers through payment policy is a critical step toward realizing our goals for excellent health care performance.[11] The focus here on change in payment approaches is to alter incentives—not to specifically reward value. Similarly, the goal of one of the new payment approaches, episode-based payments, is to create financial incentives for providers to improve efficiency and coordination of care.[12] That can occur without measurement of efficiency or coordination.

Another expert, Harold Miller, has argued that new payment models do represent a shift from volume- to value-based payments because of their emphasis on the need for providers to consider costs, by giving providers greater responsibility for the factors that drive costs.[13] The new payment approaches like episode-based payments change the incentives that providers respond to; they do not intrinsically rely on the assessment of performance in meeting quality or cost objectives in making payments, most simply because there is a lack of meaningful, actionable performance measures.[14]

The Network for Regional Healthcare Improvement's Payment Reform Summit, convened by Miller to try to achieve a consensus among policy experts and practitioners on desirable payment reform, listed key elements of better health care payment systems. One element is that new approaches should pay for services with a demonstrated relationship to desired outcomes, and give providers payment bonuses and/or penalties based on the outcomes they achieve for their patients, the satisfaction of their patients, and the patients' utilization of other health care services.[15] Note that in this principle, measurement and pay-for-performance remain components of the new payment policy, but are not dominant. The core concept is encouraging services with a known relationship to outcomes, whether or not the outcomes can be measured in real time. Here, the bonuses and penalties might be viewed as complementary to the basic payment incentives.

Other payment policy experts, on the other hand, consider measuring performance to be an essential and intrinsic component of improved payment models and call for a more literal application of the concept of value-based payments. For example, Bob Galvin argues that reformed payment approaches require that the performance-based payments must be large enough to make it worthwhile for providers to participate, with the size of rewards for measurably better performance being able to cover at least the cost of improvement, thereby likely exceeding the income that simply providing more services would generate.[16]

For Galvin, a main problem with current application of pay-for-performance enhancements of standard payment is that not enough reimbursement has been based on measured performance, and so the approach has had limited impact. He looks to the United Kingdom, which provided as much as 25 percent of a

general practitioner's income based on his or her performance in meeting targets on a range of incentive payments focused on the delivery of specified care, mostly in primary and secondary prevention.[17] A clear result of the U.K. program was that National Health Service physicians devoted a lot of effort to achieving the needed performance, and a lot extra was paid out to them. What is not clear is whether the investment—a prototype for some of today's value-based payment efforts—was worth the investment.[18] That is, did it achieve higher value?

Different Concepts of Value-Based Payment Produce Different Payment Approaches

The differences in approaches between reliance on real-time performance measurement and embedding altered incentives in basic payment can be illustrated by different approaches for reducing avoidable hospital readmissions.[19]

Approach 1: Emphasizing Performance Measurement

The Affordable Care Act in Section 3025 has adopted what is basically a pay-for-performance approach based on measurement of readmission rates for particular diagnoses. Under this approach, every hospital's rate of avoidable readmissions – that is, diagnoses whose rates of readmission reliably vary based on the quality of hospital discharge procedures and post-hospital follow-up activities – would be measured and publicly reported for a subset of conditions (initially, acute myocardial infarction, pneumonia, and congestive heart failure). Some hospitals—perhaps those with the highest 20 percent of readmission rates—would be subject to financial penalties. The basic payments that all hospitals receive for discharges would not be altered, whether or not particular readmissions were avoidable. Rather, "value-based payments," in this case, penalties, would be focused on outliers, determined through performance measurement.

Approach 2: Altering Provider Incentives

An alternative approach would not rely on measuring readmission rates but would change the inherent payment incentives related to readmissions for all hospitals. In what has been called a "warranty" payment approach, with the implied promise of a successful initial hospitalization that in essence warrants that a readmission within a specified time would not be needed, there would be no (or, more likely, reduced) additional payment for readmissions for a subset of conditions within a specified time. The base payments for these conditions might be increased to make up for the reduced payment for readmissions. As an example of this approach, currently, in the Medicare in-patient, psychiatric hospital prospective payment system, no new payments are made for readmissions within the first 72 hours of discharge.[20]

In a somewhat gentler approach to altering provider incentives, the basic payment system could alter the payment for a preventable readmission to an estimate of the variable cost to the hospital of the readmission, perhaps 60 percent of a full payment amount.[21] If applied in Medicare, the financial penalty would be embedded in the base payment amount, plausibly providing a direct incentive for all hospitals to try to reduce readmissions for this subset of hospital discharges, whether or not they are likely to be in the outlier group subject to financial penalties based on their measured performance.

There might still be an important role for measurement to complement the altered, embedded incentives. For example, measurement of readmission rates might provide helpful public information to influence consumer choice of hospitals or to target egregious performance for remedial intervention. But for this discussion, the key point is that measurement can be complementary to a basic change in payment policy that relies on embedding altered incentives into payment, without the requirement to measure actual performance.

In various ways, altering incentives in basic payment is easier to administer, and it should have more immediate impact on provider behavior. Yet, it is a cruder approach and, as discussed below, runs the risk that the new incentives will be too strong and lack needed measurement to detect undesirable problems caused by overreaction to the new incentives.

In distinguishing between the two approaches described here, it is important to remember that Medicare adoption of a range of prospective payment systems for different provider types has not depended upon real-time measurement. When the inpatient prospective payment system based on payment for diagnosis-related groups (DRGs) was implemented in the mid-1980s, there was concern hospitals to discharge patients "quicker and sicker," as the powerful new incentives of a fixed payment might cause hospitals to prematurely discharge patients.[22]

Payment System Comparison: Reducing Medicare Hospital Readmissions Using Two Different Value-Based Payment Approaches	
Approach 1: Emphasizing Performance Measurement	**Approach 2: Altering Provider Incentives**
Paying (or Penalizing) Outliers for their Performance The Affordable Care Act's Section 3025 adopts what is basically a pay-for-performance approach rooted in measurement of readmission rates for particular diagnoses. Under this approach, every hospital's rate of avoidable readmissions (that is, diagnoses whose rates of readmission vary reliably based on the quality of hospital discharge procedures and post-hospital follow-up activities), would be measured and publicly reported for a subset of conditions. Some hospitals—perhaps those with the highest 20 percent of readmission rates—would be subject to financial penalties. The basic payments that all hospitals receive for discharges would not be altered, whether or not particular readmissions were avoidable; rather, "value-based payments" (in this case, penalties) would be focused on outliers, determined through performance measurement.	**A Warranty Approach for All Hospitals** Currently, in the Medicare in-patient, psychiatric hospital prospective payment system, no new payments are made for readmissions within the first 72 hours of discharge. This has been called a "warranty" payment approach, since a successful initial hospitalization in essence warrants that a readmission within a specified time period would not be needed. Under this approach, there is either no or more likely reduced additional payment for readmissions for the subset of conditions within a specified period of time, but the base payments for these conditions might be increased. This approach does not rely on measuring readmission rates, but changes the inherent payment incentives related to readmissions for all hospitals. Publishing measured readmission rates might be desirable, but complementary to the payment change.

However, adoption of the approach did not await the ability to measure in real time each hospital's rate of quicker and sicker discharges. Indeed, such measurement would still be difficult to accomplish today.

Rather, research studies have looked at the issue and concluded that the altered incentives did not lead Medicare patients to receive fewer appropriate tests and procedures, although there was evidence that patients were somewhat more likely to be discharged to their homes in a more unstable condition.[23] The point here is that supporting research evaluating the impact of the new payment system using a sample of hospitals is not the same as requiring actual measurement of premature discharges in real time from all hospitals.

Value-Related Provisions in the Affordable Care Act

The Affordable Care Act includes something for all sides of the value-based payment debate. For proponents of measurement-drive payment models, the Act includes the following provision:

- ***Section 3022*** calls for a Medicare Shared Savings Program, which would provide payments specifically for new accountable care organizations. The legislation specifically requires measurement and assessment of quality as reflected in clinical processes and outcomes, patient and caregiver experience with care, and utilization reflecting efficiency and effectiveness of care, such as hospital admissions for ambulatory care sensitive conditions.

The Act introduced the concept of value-based payments in other ways as well. The health reform debate involved extensive and sometimes contentious debate about creating "value indexes" for geographic areas,

hospitals, and physicians, again based on the view that quality and cost could be reliably and validly measured and used for making differential payments to recognize and promote improved performance. As discussed below, the House of Representatives had the more extensive debate on the issue, with some members proposing that provider payments be altered to pay more for care in apparently more efficient rural and northern regions' counties, while reducing payment updates for less efficient urban and southern regions.[24]

Given the contentious nature of the debate, the House compromise was to ask the Institute of Medicine (IOM) to study the value issue in two ways. First, the IOM would conduct a study that would explore whether Medicare's current geographic payment adjustments for the prices paid to physicians and hospitals, which are designed to reflect differences in input prices, are accurate and to propose specific improvements, if any. Second, and broader in scope, the IOM would conduct a companion study on geographic variations in the volume and intensity of services and recommend how to incorporate "quality and value" metrics into Medicare payment systems.

Because much of the House health reform bill's language was lost when Congress decided to use the Senate bill as the basis for final legislation, permitting only a few House amendments to be brought as part of reconciliation bill amendments, the House compromise was not included in the Affordable Care Act. Subsequently, the secretary of the Department of Health and Human Services (HHS), Kathleen Sebelius, committed in writing to congressional members of the Quality Care Coalition (members representing lower-spending districts) that she would commission the IOM study as called for by the House.[25] Recently, the IOM announced formation of the study panel, which has already begun meeting.[26]

The Affordable Care Act includes a Senate provision that would pay for individual physician services based on a "value index" assigned to physicians according to their quality and costs:

- ***Section 3007*** creates a new "value-based payment modifier," which, starting in 2015, will be used to provide differential payments based on quality and cost of care. Since the payment adjustments are to be budget neutral, some physicians would receive bonuses and others penalties under this provision. Presumably, the IOM's study will be influential in determining how CMS might apply a value-based payment modifier.

Further, the Act continues to advance the notion of bringing value into payments made to physicians, hospitals, and other providers through established payment mechanisms:

- ***Section 3013*** provides for the identification of gaps in quality measures and authorizes (but does not appropriate) funding intended to fill those gaps, relying on collaboration between CMS, the Agency for Healthcare Research and Quality (AHRQ) and the National Quality Forum, which will be primarily responsible for identifying the measure gaps. Priorities are to be given to the following areas:
  - health outcomes;
  - functional status;
  - coordination of care;
  - "meaningful use" of health IT;
  - safety;
  - patient experience;
  - efficiency; and
  - disparities.

While this work proceeds, the current pay-for-reporting and pay-for-performance programs—labeled as value-based purchasing—for physicians and hospitals will be extended and expanded. The most advanced is the program for hospitals; FY 2013 measures will include measures for five conditions and patient experience as measured by the Hospital Consumer Assessment of Healthcare Providers and Systems Survey (HCAHPS). FY 2014 will include measures of efficiency.

While not usually presented as part of value-based payment initiatives, in fact, for those who think that positive change will derive primarily from changes in payment incentives and the organizational changes that should follow, there are important provisions as well, the most important being the following:

- ***Section 3021*** creates a Center for Medicare and Medicaid Innovation within the Centers for Medicare and Medicaid Services to test payment and service delivery models that reduce costs while preserving or enhancing the quality of care provided under Medicare, Medicaid, and CHIP, and funds it at $10 billion every 10 years. The legislation specifically suggests pursuing models that transition providers away from fee-for-service and toward comprehensive payment, among other approaches.

Concerns with the State of Performance Measurement

The current policy interest in using measurement to evaluate performance and, ultimately, the value of services rendered has its roots in recent efforts to require providers to report quality-related metrics and, in some cases, to tie marginal payments to performance. The latter is called pay-for-performance. More recently, measures of "efficiency," as captured by utilization and cost information, and measures of patient experience with care have been added as well. Clearly, the pay-for-performance approach—although it is controversial and its success in positively altering provider behavior is unproven[27]—has become the basis for suggestions of even broader adoption of value-based payment, with the payments extending beyond a marginal, few percent add-ons or deductions and instead involving a major portion of providers' reimbursement, much as the U.K. has done.[28]

The logic of pay-for-performance seems compelling to many, and its rapid expansion was considered inevitable. In the words of a 2006 *New England Journal of Medicine* editorial, "pay-for-performance, will, in effect, merge financial incentives with a tremendous expansion in public profiling [against a broad array of quality measures]."[29] At the height of interest in pay-for-performance a few years ago, the rationale for developing and using more measures was taken for granted by many. Payment based on measures, some argued, should represent a substantial portion of the reimbursement income of a physician's practice, with an acknowledgment that perhaps measures should be rotated annually so as not to overwhelm the practice with too many measures at one time.[30]

There were and remain many practical issues about how to implement a pay-for-performance approach to provide incentives for improved provider behavior, which remain beyond the scope of this issue brief.[31] Nevertheless, many of these problems would be even more relevant if value-based payments were made a larger portion of a clinician's or organization's reimbursement package. Whatever the practical challenges, experts disagree over the likelihood that the measures needed, in essence, to construct value indexes for practices and larger organizations will be forthcoming in the foreseeable future.

For more than a decade, multiple stakeholders have worked to create reliable and valid measures of care to be used in public reporting, provider profiling, and potentially in value-based payment. The National Quality Forum is charged with endorsing national consensus standards for measuring and publicly reporting on performance. Its process attempts to validate candidate measures and instructs would-be users on their proper application. It has collected over 600 used (and useful) measures and continues to review and endorse more.[32] Yet, in the view of many, even this large and growing number of measures is not likely to support a dramatic shift from volume-based payment to payment that directly rewards high value. Some barriers have been technical. Currently, measurement approaches must rely on existing data sources, which for the most part have been administrative claims rather than true clinical information, which would be facilitated by widespread adoption of health information technology, especially electronic health records.

There are major gaps in the current quality measure sets as well as practical concerns about how measurement of quality is actually conducted, leading some quality-of-care experts to conclude that the measurement of quality in health care is neither standardized nor consistently accurate and reliable. This in turn leads to the concern for some that despite the compelling logic of basing payment on measured performance, current publicly-reported quality measures might misinform the public and be misused by payers in making inferences about quality.[33]

Some important clinical areas where measures are lacking include:

- diagnostic errors (which are common and outnumber surgical errors as the leading cause of outpatient malpractice claims and settlements);[34]
- risk-adjusted surgical success rates;[35]
- appropriateness of diagnostic and therapeutic interventions;[36] and
- the ability to skillfully manage patients with varying combinations of multiple clinical and psychosocial problems. [37]

A Medicare Payment Advisory Commission (MedPAC) analysis documented that family physicians, general practitioners, and internists each treat nearly 400 different diagnostic categories comprising treatment episodes. For these three primary care specialties, between 63 and 71 episode types make up 80 percent of their total episodes.[38] Yet, the current CMS program of pay-for-reporting, called the Physician Quality Reporting Initiative, which the Affordable Care Act considers the forerunner to actual pay-for-performance for physicians in Medicare, has selected three process

measures for each specialty on which to base a quality reporting initiative. Whatever such a limited snapshot of care is useful for, it does not provide a meaningful assessment of the quality, much less the value, of the care these clinicians provide. Assessing a few physician activities based on available measures—which represent a trivial component of the hundreds of decisions health professionals make every day—is akin to the drunk who lost his keys in the bushes but is looking for them under the lamppost because the light is so much better. In terms of providing physicians with a valid report card of their quality and cost—and then attaching financial rewards and penalties to that report card—there is a risk of falling into the trap identified by Steven Kerr in his classic management essay, "On the folly of rewarding A, while hoping for B."[39]

A Complication: Controversies in Measuring the Cost of Care

Although most of the focus of performance measurement of value has focused on the quality numerator, recently there has been growing controversy about even whether costs (the denominator) can be measured accurately and put into any value index.

The Dartmouth Atlas achieved broad policy and, more recently, political attention because its data show that Medicare costs vary significantly across the country with no apparent differences related to clinical quality or patient experiences with care.[40] This seminal research on geographic spending variations across the country, performed by Dartmouth researchers and published in peer-reviewed journals, suggested that as much as 30 percent of Medicare spending was unnecessary to produce the same level quality of care.[41]

While the fundamental Dartmouth findings that there are substantial, largely unexplained regional practice and spending variations have recently been confirmed, the magnitude and implication of the Dartmouth spending variation findings have only been recently scrutinized. Concerns have been raised about whether the Dartmouth Atlas findings properly account for individuals' underlying health status; the differences in input prices, such as wage rates in different regions; and varying spending for activities for explicit purposes other than direct health care delivery, including graduate medical education and subsidies to support disproportionate-share hospitals that serve as safety net hospitals.[42] Further, recent analysis finds that the pattern of spending variations found in Medicare are not emulated in commercial insurance spending, largely because of the effect of negotiated prices for hospitals, physicians, and other providers, which vary geographically with a very different pattern compared with Medicare's administratively set prices.[43]

Finally, policy research has pointed to an important difference between per capita spending across geographic areas and *rates of increase* in per capita spending; for example, some typical low Medicare-spending areas also have relatively high rates of growth in spending.[44] For some policy purposes, the base spending variations would be the relevant consideration, but for "bending the curve" of health spending, the rates of growth would seem to be more relevant. There is no clear-cut agreement on which metric—per capita spending or growth in per capita spending—should be used in calculating a value index of an area's or provider's performance. Perhaps the commissioned IOM study will find such a consensus.

If the cost of care is to be measured and used to determine value-based payments—presumably, based on a value index specific to medical practices, provider organizations, or geographic areas—these and other details will need to be resolved.

All Payment Incentives Have Strengths and Weaknesses

Jamie Robinson observed, "There are many mechanisms for paying physicians; some are good and some are bad. The three worst are fee-for-service, capitation, and salary."[45] The basic goal of developing and testing alternative payment approaches, including those identified for study in the Affordable Care Act, is to move toward use of better—or less bad—payment approaches. The Affordable Care Act explicitly calls for pilots to test payment models for medical homes (Sec. 3021, 2703, 5405), accountable care organizations (Sec. 2706, 3022), bundled payments (Sec. 3023, 2704), and global capitation (Sec. 2705).

Miller and others have provided extensive reviews of how alternative payment approaches would work and have detailed the incentives inherent in each, as well as the practical, operational issues related to implementation.[46] All payment approaches provide both desirable and undesirable incentives, and there is no guarantee that payment systems with a demonstrated relationship to desired outcomes will not have untoward effects as well.

Fee-for-Service

Despite its deserved, checkered reputation for promoting care fragmentation and overspending, even beleaguered fee-for-service payment contains positive attributes currently overlooked in the zeal to move away from volume-based payment. Fee-for-service rewards industriousness; it inherently adjusts payment to some extent for patient health status because sicker patients receive more attention—and more services—from providers. And fee-for-service permits targeting specific activities of interest; for example, specifically coding and then paying relatively generously for administering vaccinations generates more attention by physician practices to this aspect of preventive care than if the vaccinations were incorporated into a bundled payment. Indeed, given these positive attributes, some elements of fee-for-service might actually be included in new payment models. Nevertheless, at its core, fee-for-service's "more is better" set of incentives is no longer affordable.

Medical Home Payments

Some of the new payment approaches remain grounded in fee-for-service but with some variations that theoretically should produce higher "value." For example, a common payment method being used in patient-centered medical home demonstrations is to provide an additional payment per member per month to cover the costs of a range of expected medical home activities in addition to standard fee-for-service payments, which mostly pay for face-to-face, patient-physician office visits. Proponents of such a mixed payment model theorize that a mixed fee-for-service and monthly medical home per capita payment could balance the undesirable fee-for-service, volume-generating incentive with the undesirable capitation payment incentive to stint on care. In that way, mixing the incentives could produce both higher quality (by now financially supporting non-face-to-face activities related to communicating with patients and coordinating care) and reduced health system costs (as the responsive medical home reduces the frequency of preventable emergency room visits and hospitalizations).

But, of course, some physician practices might choose to respond to the incentives separately, continuing to generate a high volume of office visits, while stinting on the complementary medical home services. Performance measures would certainly help in this context to identify whether practices respond to the new incentives as hoped for. Higher value care would be produced only if they do.

Bundled Payments

The Affordable Care Act directs the HHS secretary to test bundled payments in both Medicare and Medicaid to provide incentives for providers to coordinate care and be jointly responsible for an entire episode of care, initially focused on episodes based around hospitalizations for particular conditions. In the Medicare demonstration, a single payment would be made to the hospital for all of the services for acute inpatient care; hospital outpatient care; post-acute care provided by skilled nursing facilities, rehabilitation units, and home health agencies; and ambulatory care, including physician services. The bundled payment would cover an episode that includes three days prior to hospitalization through 30 days following discharge.

In theory, because it provides a fixed payment for a period of time associated with hospitalizations, bundled payments provide strong financial incentives for providers to improve efficiency through enhanced coordination of care and reduction of services that do not improve care.[47] Because they would receive a fixed payment to cover the costs of the bundled episode of care, just as DRGs currently do for hospitals alone, the providers who participate in the bundled payment now would have internalized incentives to be efficient and reduce unneeded services, in contrast to basic fee-for-service incentives where reducing unneeded services benefits the payers. Indeed, the potential of bundled episode payment lies directly with the incentives provided for collaboration and efficiency—within the bundled episode.

However, bundled episodes retain the volume-based incentive to generate lots of episodes.[48] Indeed, a main cause of high spending in the United States has been diagnostic and therapeutic interventions, often for discretionary services for which there is a large "gray zone" related to appropriateness. So bundled episodes may temper the current incentives to do unnecessary diagnostic tests within an episode but may actually increase the incentive to use diagnostic testing to find more treatable conditions eligible for large episode-based payments. The incentives to offer more procedures requiring a hospitalization may be enhanced if the alignment of hospitals and physicians generates efficient "service line" operations, which might increase patient demand for services of marginal need as part of what has been called a "medical arms race."[49] And as noted above, currently there are not good measures of the

appropriateness of procedural interventions. If they become available, such complementary measures would help ensure that the new incentives inherent in the bundled episode do not produce unwanted provider behavior.

Conclusion

There is consensus that health reform needs to adopt payment systems that better reward the *value* of the care provided, rather than merely the *volume*. What is uncertain is how to make that fundamental and ambitious change. Some believe that value will need to be measured directly through application of comprehensive performance metrics that permit a valid assessment of the many aspects of the quality and costs of care. At this time, however, for all the activity and progress in developing, testing, and implementing performance measures, we lack both the requisite measures and the operational ability to implement them to fairly evaluate quality and costs.

Recognizing the large gaps in measures and concerns about measurement implementation, value-based payment may be more easily achieved by altering payment incentives to promote behaviors that have a demonstrated relationship to desired outcomes, whether or not real-time measurement can confirm the desired outcomes are achieved in particular cases. The main challenge with this approach is that incentives to promote desirable outcomes also have the potential to promote undesirable outcomes if misapplied. Here, performance measures specifically designed to identify the misapplication of incentives might play an important complementary role.

The Affordable Care Act makes specific commitments to explore both broad approaches outlined in this paper, by specifying approaches that would further the idea of measure-based performance assessment, while at the same time fostering pilots and demonstrations that rely mostly on altering payment incentives. Without question, further progress in filling the gaps in current measurement sets will advance both approaches.

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