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From Volume To Value: Better Ways To Pay For Health Care

Providers would be better able to reduce costs and improve quality under episode-of-care and comprehensive care payment systems.

by Harold D. Miller

ABSTRACT: Payment systems for health care today are based on rewarding volume, not value for the money spent. Two proposed methods of payment, "episode-of-care payment" and "comprehensive care payment" (condition-adjusted capitation), could facilitate higher quality and lower cost by avoiding the problems of both fee-for-service payment and traditional capitation. The most appropriate payment systems for different types of patient conditions and some methods of addressing design and implementation issues are discussed. Although the new payment systems are desirable, many providers are not organized to accept or use them, so transitional approaches such as "virtual bundling," described in this paper, will be needed. [Health Aff (Millwood). 2009;28(5):1418–28; 10.1377/hlthaff.28.5.1418]

Serious problems exist with the quality and cost of health care today. One major cause of these problems is that current payment systems encourage volume-driven care, rather than value-driven care. Physicians, hospitals, and other providers gain increased revenues and profits by delivering more services to more people, fueling inflation in health care costs without any corresponding improvement in outcomes. Moreover, current payment systems often penalize providers financially for keeping people healthy, reducing errors and complications, and avoiding unnecessary care.[1] Fortunately, alternative payment systems exist that encourage both higher quality and lower costs by giving providers greater responsibility for the factors driving health care costs.

Factors Driving Health Care Costs

Total per capita health care costs are driven by five principal factors: the prevalence of health conditions in the population (for example, how many people have heart disease); the number of "episodes of care" they require per condition (for example, how many heart attacks a person with heart disease has); the number and types of health care services a person receives in each episode (for example, when

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a person has a heart attack, does he or she receive coronary artery bypass graft (CABG) surgery, a stent, angioplasty, or simply medical management?); the number and types of processes, devices, and drugs involved in each service (for example, the type of stent the heart attack patient receives); and finally, the prices of each of those individual processes, devices, and drugs (Exhibit 1). Each of these factors is affected differently by different payment systems.

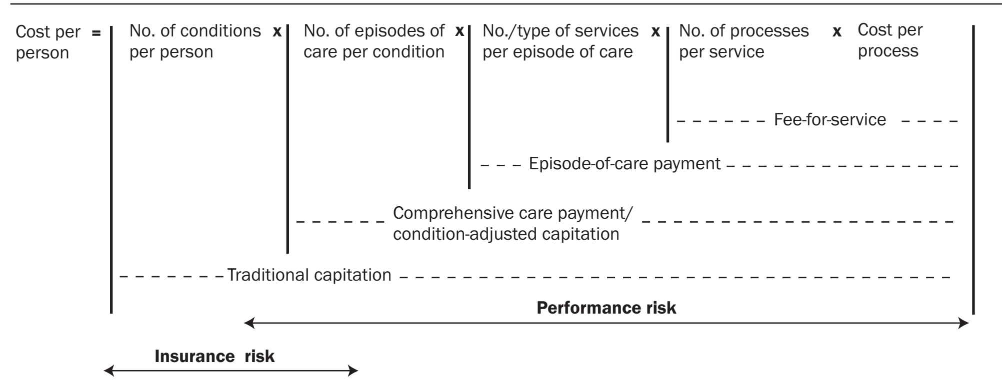
How Payment Systems Control Health Care Costs

■ **Fee-for-service.** The most common way of paying for health care services today is the fee-for-service system, under which a predetermined amount is paid for each discrete service provided. In the framework of the diagram in Exhibit 1, fee-for-service payment puts the provider at risk for the number and cost of processes within each service, but there is no limit on the number of services, and providers get paid regardless of quality or outcomes.

Supplemental systems such as prior authorization and pay-for-performance (P4P) have been created to address these problems with fee-for-service payment, but they can lead to a level of micromanagement of providers that is inefficient and can deter innovation, while leaving undisturbed the major disincentives in the underlying payment system.

■ **Episode-of-care payment.** Some of the problems with fee-for-service payment can be addressed by episode-of-care payment—that is, paying a single price for all of the services needed by a patient during an entire episode of care. (This single payment is also frequently called a "case rate.")[2] Episode-of-care payment gives the provider responsibility for one additional factor in the health cost equation: the number and types of services within an episode (Exhibit 1). For example, once a patient has a heart attack, a single payment would be made to a provider for all care needed by that patient to treat that heart attack. The amount of the payment would

EXHIBIT 1
Variables For Which The Provider Is At Risk Under Alternative Payment Systems



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be adjusted for severity; for example, a provider would be paid more for caring for a heart attack patient with major artery blockage than one with minimal blockage.

The advantages of episode-of-care payment include the flexibility for providers to decide which services should be provided within the episode (rather than being restricted by the services specifically authorized under fee-for-service) and the incentive it creates to eliminate any unnecessary services within the episode. Moreover, if the services of multiple providers are covered by the same episode-of-care payment (which is called "bundling" payments), there is also an incentive for those providers to coordinate their services.

■ **Traditional capitation.** As is apparent from Exhibit 1, episode-of-care payment does not create any constraint on the number of episodes of care. For some types of episodes, this is not really a problem (for example, there is little variation in the rate of surgery for hip fractures across the country,[3] and it is unlikely that obstetricians will convince more women to become pregnant, no matter how lucrative a labor and delivery episode is), but for others it is a problem (people can get heart surgery when they do not need it,[4] and many chronic disease patients are hospitalized frequently for preventable exacerbations of their disease).[5]

"Capitation" models of payment are designed to control the number of episodes of care as well as the cost of individual episodes. The basic concept is for a provider (or a group of providers, working in a coordinated fashion) to receive a single payment to cover all of the services their patients need during a specific period of time, regardless of how many or few episodes of care the patients experience.

A key problem with most capitation systems is that the amount of the payment is the same regardless of how sick or how well a provider's patients are. This gives the provider a strong and undesirable incentive to avoid patients who have multiple or expensive-to-treat conditions, and it puts providers at risk of financial difficulty or bankruptcy if they take on large numbers of such patients.

■ **Comprehensive care payment.** Fortunately, as Exhibit 1 shows, there is a middle ground between episode-of-care payment (which does not control the number of episodes) and traditional capitation (which puts the provider at risk for how sick patients are). This approach can be called "comprehensive care payment" or "condition-adjusted capitation."[6]

Under this model, a provider or group of providers would receive a single payment to cover all of the services their patients need during a specific period of time (such as a year). However, this payment would be adjusted based on the health of the patients and other characteristics that affect the level of services needed (for example, whether they have language barriers or not). A provider would receive a higher payment if he or she has more patients with severe rather than mild heart disease, but the payment would not depend on what kinds of treatment patients receive.[7] As a result, a provider gets paid more for taking care of sicker patients but not for providing more services to the same patients.

Comprehensive care payment gives providers responsibility for performance

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risk—their ability to manage their patients' conditions in a high-quality and efficient manner—whereas traditional (non-condition-adjusted) capitation systems transfer all of the cost risk to the provider. As shown in Exhibit 1, the insurance risk—whether a patient has an illness or other condition requiring care—is really what insurance is designed to address,[8] and under comprehensive care payment, that risk remains with the payer.

Which Payment System Is Best?

Both episode-of-care and comprehensive care payments, in principle, address all or most of the key concerns about fee-for-service payment, without leading to the problems associated with traditional, full-risk capitation (Exhibit 2). The major difference is the ability to control the number of unnecessary episodes.

This implies that episode-of-care payment is best targeted to patients with conditions where the cost of an episode of care is believed to be unnecessarily high or where there is high variation in the cost of episodes among similar patients, but where the rate at which episodes occur is not a concern (Exhibit 3). For example, the cost of an uncomplicated labor and delivery for a pregnant woman varies greatly across the country, depending on the rate at which birthing centers or hospitals are used, how frequently cesarean sections are used, and so forth.[9]

In contrast, comprehensive care payment is more appropriate for patients with conditions where episodes are believed to occur more frequently than necessary. For example, the rate at which patients with chronic diseases and other ambula-

EXHIBIT 2
Comparison Of Alternative Payment Systems

	Fee-for-service	Episode-of-care payment	Comprehensive care payment	Traditional capitation
Discourages unnecessary services in an episode?	No	Yes	Yes	Yes
Pays for all necessary services in an episode?	No	Yes	Yes	Yes
Encourages coordination of multiple providers?	No	Yes	Yes	Yes
Facilitates comparison of costs of different providers?	No	Yes	Yes	Yes
Encourages providing high-quality services?	No	Yes, for services affecting outcomes that occur within the episode	Yes, for services affecting outcomes that occur within the payment period	Yes, for services affecting outcomes that occur within the payment period
Avoids penalty for taking sicker patients?	Yes	Yes	Yes	No
Discourages unnecessary episodes?	No	No	Yes	Yes

SOURCE: Author's analysis.

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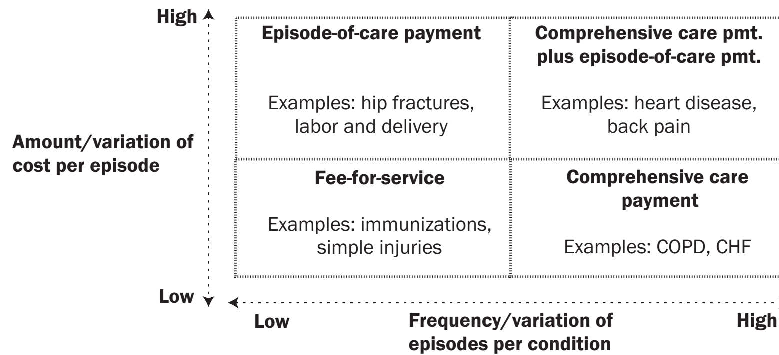
EXHIBIT 3
How Different Payment Systems Solve Different Cost/Quality Problems



SOURCE: Author's analysis.
NOTES: COPD is chronic obstructive pulmonary disease. CHF is congestive heart failure.

tory care–sensitive conditions are hospitalized varies greatly across the country.[10] (Some have proposed that a year of chronic disease care should be defined as an episode; in effect, this approach is an application of the comprehensive care payment model to patients with a particular condition.)[11]

A combination of both payment systems may be needed for patients with conditions where both the cost of individual episodes and the frequency of episodes are believed to be too high. For example, the *Dartmouth Atlas of Health Care* project has found wide variations in the frequency of cardiac surgery and other types of procedures across the country, with no evidence that patients achieve better outcomes in areas with higher frequencies.[12] Moreover, the cost of heart surgeries varies greatly from hospital to hospital, even after case severity and outcomes are adjusted for.[13] To address these situations, a physician practice or health system could receive a comprehensive care payment to manage patients with the underlying condition, and then, out of the comprehensive payment, an episode-of-care payment could be made to a hospital if it is determined that a particular patient needs surgery or other treatment.

A final category includes conditions where the problem is not overuse or misuse, but underuse of services (for example, low rates of immunization); for these, fee-for-service may continue to be the most appropriate payment system.

Using multiple payment methods for different types of conditions and patients is not unusual; for example, surgeons and obstetricians are typically paid on a case-rate basis, whereas other physicians are paid fees for individual services. The goal should be to pay for the care of each condition or combination of conditions in the right way, not necessarily the same way for all conditions.

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The Devil Is In The Details

A number of additional issues need to be addressed in the design and implementation of these new systems.

■ **The challenges of bundling.** The concept of paying a provider a single amount to cover all of the services it delivers during an episode of care isn't new. Indeed, Medicare has been paying hospitals on this basis since 1983 through the inpatient prospective payment system. What is not commonly done is to pay a single amount to cover the services of two or more independent providers—that is, to have a "bundled" payment. For example, Medicare pays case rates to both hospital and surgeon for a patient receiving heart surgery, but it pays them separately.

The decision about whether separate providers will have their payments "bundled" together into a single payment will depend in part on whether there is an organizational structure in place that can accept a bundled payment and divide it in a way that the individual providers find acceptable.[14] Instead of waiting for such organizational mechanisms to emerge, particularly where hospitals and physicians have strained relationships, or limiting new payments to those providers that have them, proposals have emerged for "virtual bundling"—that is, paying providers separately but having each provider's payments adjusted based on all providers' joint performance.[15]

Physician practices trying to participate in a comprehensive care payment system face a different challenge, because a single payment designed to cover all services a patient needs would mean that the practice would have to be responsible not only for its own costs, but for paying claims to other providers for the costs of hospitalizations, diagnostic services, and so forth. Most providers do not have their own claims payment systems, and even with a good condition-adjustment system, a single high-cost hospitalization could cause financial problems.

These problems could be addressed by using a "virtual" comprehensive care payment structure. For example, a physician practice could receive a single condition-adjusted payment for all of the services it provides directly to its patients, but the payer would continue to pay hospitals and other providers separately. (One version of this approach has been termed "comprehensive primary care payment.")[16] If the physician practice also receives a bonus or penalty payment based on the rate at which its patients use other services (such as hospitalizations or imaging services), the physician practice would still have an incentive to control total costs, but without being fully financially responsible for paying all providers. Another intermediate model would be for a physician practice to receive a single payment to cover all outpatient services its patients receive (including from other providers), with bonus/penalty payments based on inpatient service use.

■ **Setting the payment amount.** Many of the problems with payment systems are caused not by the payment method itself, but by inappropriate payment amounts. If the amount of fee-for-service, episode-of-care, or comprehensive care

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payment is set too low, providers may be forced either to underprovide care or to suffer financially. If the amount is set too high, the pressure to improve efficiency will be less, and unnecessary services may be provided.

There are three basic approaches to determining payment levels, any of which could be applied to either episode-of-care or comprehensive care payments.

Regulation/price setting by the payer. The federal government uses this approach to establish the rates paid by Medicare to providers under its various payment systems. In Maryland, the Health Services Cost Review Commission sets mandatory all-payer rates for hospitals.[17]

Negotiation between payer and provider. This is the method typically used by commercial health plans to determine how much they will pay providers. The outcome, however, depends on the relative size and level of consolidation of payers and providers in a particular regional market.

Price setting by the provider; competition for patients based on value. Although this model is used in most other economic sectors, it is used rarely in health care, other than for services where consumers pay all or most of the cost of the service (such as for cosmetic or laser eye surgery).

It would likely be easier to use the third option (market competition) under episode-of-care and comprehensive care payment structures than under fee-for-service. Under FFS, even if consumers know the price of individual services, they do not know how many services will be used by different providers to treat them, so they cannot easily compare the relative value of different providers. In contrast, a single price for an entire episode of care or for an entire year of care would make such comparisons much easier.[18]

In addition, however, changes in the cost-sharing requirements for consumers will also be needed to facilitate price competition. Whereas most insurance benefit structures require consumers to pay at most a portion of the "first dollar" that the provider charges for each individual service (through a copayment, coinsurance, or deductible), episode-of-care and comprehensive care payments would facilitate a benefit design in which consumers were charged the "last dollar"—that is, the difference in total prices between higher-cost and lower-cost providers.

■ **Assuring quality of care for patients.** A concern about episode-of-care and comprehensive care payments is that they may encourage providers to skimp on care, particularly preventive services with longer-term outcomes. (Even fee-for-service payment is not immune to this problem, as evidenced by the widespread concerns about quality of care and the proliferation of P4P programs.)

The first level of protection for patients is the use of a good condition adjustment system to ensure that sicker patients can receive more services. A growing number of these systems are available.[19] Beyond this, patients can be protected through techniques such as the following: (1) making outlier payments for patients requiring unusually high amounts of care; (2) including rewards or penalties for providers based on the outcomes of their care; (3) requiring that essential

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services be delivered for payment to be received; and (4) publicly reporting on quality measures, particularly for minority and disadvantaged populations.

■ **Aligning incentives across multiple payers.** It is difficult for a provider to change the way patient care is provided, particularly when new staff or infrastructure are required, if only some patients are paid for under a new payment system. Moreover, there is the risk that instead of eliminating inefficiencies, providers will shift costs to payers who are still using fee-for-service systems.

However, aligning multiple payers is challenging, because antitrust laws and policies at both the federal and state levels limit the ability of multiple payers to discuss and agree on changes in payment systems. To overcome this, state governments and nonprofit regional health improvement collaboratives are playing a growing role in forging consensus on new payment systems among multiple payers.[20]

Examples Of Episode-Of-Care Payment Systems

There has been relatively limited experience with episode-of-care payment that bundles multiple, independent providers together, and the experience that does exist has focused on surgery. This is presumably because both surgeons and hospitals are already paid case rates, so the transition to a single, bundled episode-of-care payment is simpler than for medical conditions, where the physicians are paid on a fee-for-service basis. For example, in 1984, physicians at the Texas Heart Institute began charging a single, bundled payment for CABG surgery. A 1987 study found that this price was 13 percent lower than what Medicare paid for similar surgery.[21] Also, in 1987, an orthopedic surgeon in Lansing, Michigan, collaborated with his principal hospital to offer a fixed total price for shoulder and knee surgery, including a warranty for any subsequent services needed for two years. A study found that the payer paid 40 percent less and the surgeon received more revenue by reducing unnecessary services, such as radiography and physical therapy, and reducing complications and readmissions.[22] In yet another case, under Medicare's Participating Heart Bypass Center Demonstration, four hospitals in the 1990s were paid a single amount covering both hospital and physician services for CABG surgery. An evaluation showed that Medicare paid 10–37 percent less, physicians identified ways to reduce length-of-stay and unnecessary hospital costs, and patients preferred the single copayment, with no cost shifting to outpatient care.[23] In 2009 several new efforts were initiated to implement bundled episode-of-care payment systems, including Medicare's Acute Care Episode Demonstration[24] and PROMETHEUS Payment[11] pilots in several communities.

Examples Of Comprehensive Care Payment Systems

An example of a comprehensive care payment system has been in existence in Minnesota for more than a decade through the Patient Choice system,[25] which was first created under the auspices of the Buyers Health Care Action Group (BHCAG)[26] and now is operated by Medica.

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Under the Patient Choice model, "care systems" (groups of providers, including both hospitals and physicians) bid on the condition-adjusted (total) cost of caring for a population of patients. The care systems are divided into cost/quality tiers based on their relative bids. Consumers select a care system, and they pay the difference in the bid price if they select a care system in a higher cost tier.

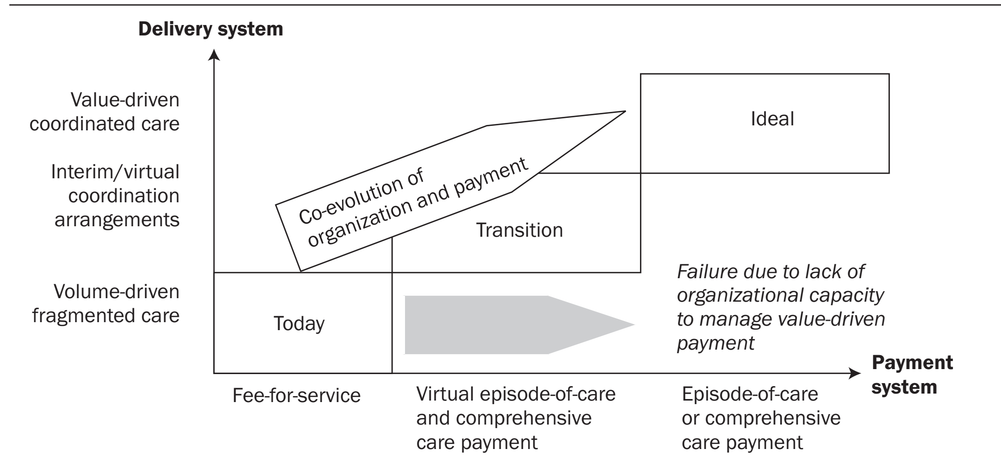
Providers bill based on fee-for-service codes (with the addition of new codes to cover previously unpaid-for services), but the fee levels paid are adjusted to keep total payments within a budget, and each provider is paid directly by the payer. The budget is based on the care system's bid, but it is adjusted upward or downward based on the characteristics of the patients who are actually cared for, so the care system has no incentive to avoid accepting sicker patients.

Analyses indicate that this system has encouraged patients to select more cost-effective providers and has encouraged providers to reduce their costs while maintaining or improving quality to attract more consumers.[27] In 2008 and 2009, several new efforts were initiated to implement versions of comprehensive care payment systems, including the Alternative Quality Contract created by Blue Cross Blue Shield of Massachusetts[28] (which covers all health care costs in a single condition-adjusted payment), the primary care practice payment model being tested by the Massachusetts Coalition for Primary Care Reform (which covers all practice expenses, but not hospitalization and other services, in a single payment),[16] and the PROMETHEUS Payment pilots for patients with chronic disease.

Moving From Volume-Driven To Value-Driven Health Care

Implementing episode-of-care and comprehensive care payment systems could help address the cost and quality crises in health care. However, improving pay-

EXHIBIT 4
Transition In Both The Payment And The Delivery Systems



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ment systems is a necessary but not sufficient step.[29] Providers will need to change their internal processes, methods of coordination, and even organizational structures to actually create better care. In addition, benefit structures for patients may need to be changed, and quality measurement and reporting systems will need to be organized or expanded in each community.

This cannot happen instantaneously, so a transition process will be needed in payment systems (Exhibit 4), rather than trying to move immediately to the ideal, long-run structure. For example, the virtual bundling systems described earlier could be used as transitional steps while providers are organizing themselves to accept full episode-of-care or comprehensive care payments. Although this "coevolution"[14] could take longer than might be desirable, it could have a higher probability of long-run success.

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