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Perspectives on Quality

Quality-based payment: six case examples

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Abstract

Introduction. The logic of paying more for high-quality care and less for low-quality resonates. Increasingly health system leaders worldwide acknowledge that payment reforms are needed to do just that, prompted no doubt by the growing body of evidence indicating that quality is not what it should be.

Purpose. This review was undertaken to explore contexts in which quality-based payment appears feasible. The ultimate intent is to provoke thoughtful debate about whether and how quality-based payment might fit within a particular developing country's framework of policies to ensure and promote quality of care.

Methods. With guidance from key informants with first-hand knowledge of international quality-based payment schemes, a purposive sample of six quality-based payment schemes was assembled. Schemes were examined to identify environmental contexts and design features.

Results. Examples illustrate a variety of approaches and a breadth of contexts in which quality-based payment has been implemented. Contrary to what might be expected, implementation does not appear to be constrained to private-sector purchasers, private-sector providers, hospital settings, nor to any particular type of underlying payment system. Further, quality-based payment pioneers are using a variety of incentive structures, and are tapping a rich mix of structural, process, and outcome standards to benchmark quality.

Conclusion. Despite significant operational challenges, quality-based payment has been implemented in developing as well as developed countries, albeit not frequently in either instance. What we do not know—what the literature is nearly silent on—relates to the sustainability and ultimate impact of alternative incentive schemes.

Keywords: incentive payments for patient safety, incentive payments for quality, pay for performance, quality-based payment, value-based purchasing

Whether intended or not, all payment schemes include behavioral incentives. Quality-based payment embodies explicit financial incentives to reward or penalize providers based on the level of quality of care they deliver. The logic of paying more for high quality and less for low quality is presumed in most purchase transactions, e.g. the buying of food, shoes, but not in health care sector transactions. In fact, the provision of substandard or defective care often has no direct financial consequence to the provider organization.

The extent to which purchasers globally are pursuing quality-based payment is not known. Most analysts would agree, however, that quality-based payment is the exception to the rule; the tide is changing, however, particularly in the USA.

Purpose

In what contexts is quality-based payment feasible? Some might expect it to be practiced only in a subset of developed countries. Others might predict that quality-based payment is only possible in the private sector—by private purchasers for care delivered by private providers. Some might expect to see quality-based payment applied only to care in hospital settings, which have more developed administrative and information systems compared with clinics and other settings. Still others might envisage quality-based payment only within the context of fee-for-service payment systems.

This review was undertaken to explore these hypotheses, and to examine quality-based payment design features, namely incentive structures and performance standards used to benchmark quality. The ultimate aim is to provoke thoughtful debate about whether and how quality-based payment might fit within a developing country's framework of strategies to ensure and promote quality of care.

Methods

Developing country examples were identified primarily by a small number of key informants with first-hand knowledge of

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quality-based payment schemes. Developed country examples were found in published and gray literature. A purposive sample of six quality-based payment schemes was constructed. There were other examples, but the featured six were singled out because they illustrated one or more particular application context and because related documentation was more readily available than with other examples. Feasibility was deemed by existence; that is, implementation within a given context was judged to be feasible if an example was found.

Background

Quality of care is not what it can be, not what it should be. This is true of developed as well as developing countries. The Institute of Medicine cites more than 70 peer-reviewed publications documenting serious quality-of-care shortcomings in the USA alone [1]. A subset of quality problems is attributed to medical errors and inadequate systems to ensure patient safety. Other quality problems are attributed to widespread failure to implement recognized best practices [2].

Although no compendium of studies exists to systematically document the state of quality of care in developing countries, a number of individual studies underscores the seriousness of quality concerns [3–5; J. R. Heiby and S. Etian, submitted for publication]. The extent to which quality problems are acknowledged by global health sector reform leaders is variable. This may start to change, however, with the 2004 launch of the World Alliance for Patient Safety, which includes support for global prevalence studies of adverse effects as one of its principle aims [6].

Payment is emerging as a policy tool that can be used in addressing quality concerns. The World Health Organization calls for incentives that are sensitive to performance [7]. The Institute of Medicine recommends that purchasers examine their current payment methods to remove barriers that impede quality improvement and incorporate stronger incentives for quality enhancement [1].

In the remainder of this article, six quality-based payment examples are summarized. Four are from the developing countries of Costa Rica, Haiti, and Nicaragua, and two are from the USA. Next is a discussion of specific contexts in which quality-based payment has been implemented, followed by a discussion of design features. The article concludes with a review of challenges to quality-based payment.

Illustrations of quality-based payment applied to public providers

The Costa Rica Social Security Institute is a quality-based payment pioneer. In 1994 the Institute reorganized itself by formally separating the purchasing and care-provision functions. Contracts with public hospitals were used as a vehicle to improve quality. In 2000, an incentive system was established in part to reward those public hospitals that complied with technical performance indicators (e.g. protocols related to the prevention of nosocomial infections and delivery complication rates). The purchasing department allocated 2% of its annual budget (US$ 15 million) to an incentive pool for ultimate distribution to high-performing hospitals [8,9].

The Nicaraguan Ministry of Health, which covers about 70% of the country's population, recently implemented reforms to improve provider accountability. Reforms included contracts with public hospitals and a pilot program using explicit financial incentives to improve performance. Six public hospitals participated in the pilot program, which offered an incentive bonus (a maximum on average of 17% of hospital revenue) for achieving performance targets. Targets included technical quality standards (e.g. re-infection rates) and interpersonal quality standards (e.g. rates of complaints) [10].

Illustrations of quality-based payment applied to private providers

In 1998, the Costa Rica Social Security Institute—distinct from its public hospital incentive program above—signed a performance contract with COOPESALUD, a private, employee-owned cooperative, for primary health care services. Performance standards included technical quality standards (e.g. existence of a commission to analyze maternal and infant deaths) and interpersonal quality standards (e.g. existence of a consumer suggestion and resolution system). The Institute reduced COOPESALUD's budget by up to 2.5% if less than 90% of performance targets were reached during the previous 6-month period [11].

In 1999, the US Agency for International Development introduced a 10-year pilot in Haiti to financially reward or penalize non-governmental providers of primary care depending in part on whether quality targets were met. Targets included technical quality standards (i.e. availability of modern methods of family planning) and an interpersonal quality standard (i.e. average waiting time for attention to children). Providers were paid a portion (95%) of their historical budget, and were allowed to earn back the withheld 5% plus an additional 5% if targets were achieved [12].

The US national Medicare program provides coverage for older Americans and is the country's single largest purchaser of health care. In 2003, the Medicare program initiated a pilot quality-based payment program for hospital care. Under the 3-year pilot, roughly 300 private, not-for-profit hospitals opted to compete for bonuses based on their technical performance. For each of five conditions—acute myocardial infarction (AMI), coronary artery bypass graft, heart failure, community-acquired pneumonia, and hip and knee replacement—four to nine technical quality standards are tracked. For example, measures for AMI include in-patient AMI mortality rates. Hospitals in the top 10% for a given condition receive a bonus equal to 2% of the diagnosis related group payment rate. Hospitals in the second 10% receive a 1% bonus. Bonuses total $7 million per year. In the last year of

the demonstration, a financial penalty will be levied against those hospitals that do not achieve a predetermined level of performance improvement [13,14].

In 2002, a group of large US employers in the New York area joined with Empire BlueCross BlueShield (BCBS) health plan to pay hospitals differentially according to two technical quality standards—installation of a computer system linked to software designed to prevent prescribing errors by physicians and staffing of intensive care units (ICUs) with physicians who have credentials in critical care medicine. The two standards are part of a quality agenda being led by a larger, nationwide coalition of employers that call themselves the Leapfrog Group. To encourage adoption of the two standards, the plan pays bonuses—in 2002 up to 4% of each hospital's quarterly claims—to achieving hospitals [15,16].

Quality-based payment environmental contexts

These six examples show that quality-based payment appears feasible in a breadth of contexts. Interestingly, it can be implemented in poor as well as rich countries. Contrary to what might be expected, implementation does not appear to be constrained to services delivered by private providers and paid for by private purchasers. The single case of Nicaragua, for example, with its incentive scheme involving public providers and public purchasers, suggests wide-ranging applicability. The Costa Rica and Haiti examples indicate feasibility in settings other than hospitals. See Table 1.

Furthermore, quality-based payment appears feasible within a variety of underlying payment systems. The set of examples indicates that each of the three primary types of payment system—budget transfer, capitation, and fee-for-service—can be adapted to incorporate financial incentives for quality, as demonstrated by the Costa Rica, US Medicare, and US Empire BCBS examples, respectively.

Quality-based payment design features

Quality-based payment pioneers are using a variety of incentive structures. Financial incentives include bonuses, such as in the case of Nicaragua, and penalties, such as is the case with Costa Rica COOPESALUD. Schemes also combine bonus payments and penalties, as did the pilot in Haiti.

Interestingly, in the Haiti and Nicaragua case examples, the facilities introduced a related scheme to pass along the bonus incentives that had been applied to them to their staff. In Nicaragua, bonuses were passed along in the form of a cash supplement to wages or in the form of improved staff amenities [10].

Funds to support increased payments for high-quality providers can come from one or more of three sources: reductions in payments to low-quality performers, representing a provider-to-provider transfer, savings generated from higher quality of care, or a new revenue source.

A review of the quality standards used to benchmark quality in the six examples indicates a rich variety of measures. Table 2 presents a sampling of elements of quality that purchasers seek to influence. Measures are stratified by whether they reflect technical (clinical) or interpersonal performance, and by whether they represent a structure, process or outcome attribute [17].

Both diagnosis- or treatment-specific measures and cross-cutting measures are represented. Some measures reflect attributes specific to patient safety, such as Nicaragua's inclusion of re-infection rates and Costa Rica's inclusion of a unit-dose drug distribution system.

Each of the six pioneering organizations creatively fashioned its own particular version of quality-based payment, influenced by its unique set of enabling conditions and challenges. To succeed, each had to overcome a number of barriers. The next sections discuss some of these challenges, beginning with difficulties in defining, measuring, and tracking quality.

Table 1 Differential payment case examples, by level of country development, by public versus private provider, by provider setting, by public versus private purchaser, and by type of payment system

Quality-based payment example	Country level of development	Public versus private provider	Provider setting	Public versus private purchaser	Type of payment system
Costa Rica hospital program [8,9]	Developing	Public	Hospital	Public	Budget transfer
Nicaragua [10]	Developing	Public	Hospital	Public	Budget transfer
Costa Rica COOPESALUD [11]	Developing	Private	Primary care	Public	Budget transfer
Haiti [12]	Developing	Private	Primary care	Public[1]	Budget transfer
US Medicare [13,14]	Developed	Private	Hospital	Public	Capitation or per case
US Empire BCBS health plan [15,16]	Developed	Private	Hospital	Private	Per diem, form of fee for service

[1]Foreign government donor.

Table 2 Elements of quality that purchasers are trying to influence via payment incentives, by type of standard, and by whether standard is diagnosis specific or cross-cutting

	Diagnosis- or treatment-specific quality measure	Cross-cutting quality measure
Technical quality: structural standard	Commission to analyze maternal and infant deaths and to establish intervention plan [11] Availability of family planning supplies [12] Staffing of intensive care units with physicians with credentials in critical care medicine [16]	Hospital quality committee [9] Unit-dose drug distribution [9] Designated person to coordinate all aspects of nosocomial infection [9] Program coordination with the Ministry of Health [12]
Technical quality: process standard	Delivery complication rates [9] Provision of aspirin within 24 hours of acute myocardial infarction admissions [14]	Application of care protocols [11]
Technical quality: outcome standard	In-patient mortality rates for coronary artery bypass graft [14]	Re-infection rates [10] Hospital readmission rates [9]
Interpersonal quality: structure standard	(no example found)	Consumer suggestion and resolution system [11] Administration of a patient satisfaction instrument [9] Linkage with local civil representatives to facilitate provider-to-patient communication [10]
Interpersonal quality: outcome standard	(no example found)	Average waiting time for attention to children [12] Rates of complaints [10]

Challenges in defining, measuring, and tracking quality

Thousands of measures have been developed to quantify and compare health care quality [18], but there is no consensus on which subset is most appropriate to use as a barometer of quality.

Interpretations of quality vary. For example, in some cultures, good quality means that an adequate number of caregivers staff the office or facility. In others, good quality means optimum clinical outcomes. Different stakeholders attach different levels of importance to different aspects of quality [19]. From the point of view of consumers in Cambodia, for example, quick attendance to patients and availability of drugs were noted as important attributes [20]. Members of a team of quality measurement experts in Africa, on the other hand, focused on physician technical competence, such as knowledge levels for assessing and managing common and serious conditions [5]. Quality definitions also vary by country disease burdens, resource constraints, and by a particular health system's level of development. In the USA, for example, adequately stocked drug inventories are presumed in all hospitals and would not typically be mentioned as an indicator of quality, whereas in many developing countries, this is not the case.

Quality measurement can be daunting, particularly in health systems with emerging information and monitoring systems. But as the four developing country examples illustrate, information infrastructures need not have evolved to electronic medical records or computerized billing to support quality-based payment. Instead, provider-specific quality data can be gleaned and tracked from a combination of the following: medical chart review and abstraction, patient surveys; provider surveys, staff perception surveys, and care observation [21].

Other challenges to quality-based payment

A number of other potential barriers may need to be addressed. Low operational autonomy of providers, as restricted by government rules, can limit a provider's ability to respond to purchaser incentives for quality [22]. Relatedly, civil service or union rules can restrict a manager's ability, for example, to pass along payment incentives to staff. Furthermore, over time, workers may view bonus payments as entitlements rather than as rewards for good performance.

To the extent that financing pools fund smaller portions of total health care expenditures, i.e. due to an increased share of out-of-pocket funding, purchasing becomes fragmented [22] and the potential of quality-based payment is diminished. Diffuse purchaser power also occurs when no particular purchaser

represents a threshold share of purchasing power, making it easier for providers to ignore purchaser signals. This is exacerbated when, as is the case in the USA with its pluralistic health care system, multiple purchasers make competing quality demands on providers.

The lack of separation between the purchaser and provider functions, i.e. when the same entity has responsibility for both purchaser and provider functions, can confuse and challenge quality-based purchasing due to the absence of purchaser independence [23].

Last but by no means least, the political will needed to change payment systems to incorporate quality considerations, particularly in environments in which quality problems are not acknowledged and taken seriously, may be lacking.

Conclusions

Some purchasers have overcome challenges to quality-based payment. While not commonplace, payment has been used to help achieve quality aims in a variety of contexts. Contrary to what might be hypothesized, implementation does not appear to be constrained to developed countries, to services delivered by private providers in hospital settings, to private purchasers, or to any particular type of underlying payment system. Furthermore, quality-based payment pioneers are using a variety of financial incentives and are tapping a rich mix of structural, process, and outcome standards to benchmark quality. This breadth of environmental contexts and range of design features is observed even when drawing from an abbreviated sample of six examples.

Unfortunately we know little about the sustainability and impact of various quality-based payment strategies—the Holy Grail of any quality-based payment research agenda. Only two of the case examples—Haiti and Nicaragua—were evaluated in terms of the impact of incentives on quality. Both evaluations found the incentives to have a positive impact, although the ability to generalize from these findings is limited.

> Too little attention has been paid to the careful analysis and alignment of payment incentives with quality improvement . . . To assist purchasers in the redesign of payment policy . . . a vigorous program of pilot testing and evaluating alternative design options should be pursued [1].

A new generation of payment research is needed. A recent evidence review of nine US quality-based purchasing evaluations found mixed results. Review authors call on researchers to better specify environmental and design variables in future evaluations so that findings can be appropriately interpreted and applied [24].

Given the significant size of the global health care tab—an estimated US$ 3.6 trillion of health goods and services were purchased in 191 countries in 2000 [25]—it is no surprise that pioneering purchasers are using their market clout to demand value and make providers accountable for quality of care. Other public and private purchasers are encouraged to engage stakeholders in a debate about whether and how quality-based payment might fit within their country's framework of strategies to ensure and promote quality. Purchasers who opt to pursue a quality-based payment approach should be encouraged to evaluate their experience and make the findings available in the public domain.

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