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Value-Driven Health Care: The purchaser perspective

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Summary

The four cornerstones of value-driven health care are health information technology standards, quality standards, price standards and incentives.

Value-driven health care seeks to directly link quality health care to reimbursement. The four cornerstones of this movement are health information technology standards, quality standards, price standards and incentives. These standards and the how purchasers plan to implement them are summarized.

Keywords

Pay for Performance; quality; reimbursement

INTRODUCTION

The Institute of Medicine (IOM) report on medical errors in confluence with ongoing concerns of health care cost hyperinflation consolidated efforts to improve health care quality and galvanized purchasers and providers alike to develop quality measures tied to reimbursement. Pay-for-Performance (P4P) represents the most public face for these efforts to couple expended cost to improved health. President George W. Bush endorsed the need for transparency and high quality in health care (1) with Secretary of Health Michael Leavitt expanding on the four “cornerstones of value-driven health care” (2): health information technology (IT) standards, quality standards, price standards and incentives (Table 1).

HEALTH INFORMATION TECHNOLOGY STANDARDS

Under the value-driven health care model, interoperable health information technology underpins health care reform. Persuasive evidence supports the use of standardized electronic health records (EHRs) transmissible across different care and reimbursement settings to benefit the consumer, the provider and the purchaser by reducing error, service duplication and cost (3,4). A national health information network, the idealized implementation of this interoperable IT has been estimated to require \$400 billion in capital investment and 5-year operating costs (5) with general lack of support for the government to underwrite the cost (6). Instead, the federal government has advanced work toward achieving health information flow through standard setting and other quality initiatives and plans to use its purchasing power to award future contracts to provider who meet health IT standards. To this end, the American Health Information Community (AHIC) has convened several groups representing stakeholders from

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health care providers, health plan purchasers, patients, technology providers and government agencies to tackle facets of an integrated health IT system.

Formed in 2005, AHIC is a federal advisory committee made up of public and private sector leaders who represent a broad spectrum of health-care stakeholders and whose charter is to make recommendations to the Secretary of the HHS on how to accelerate adoption of interoperable electronic health IT in a smooth, market-led way (7). With the sponsorship of the Office of the National Coordinator for Health Information Technology, the office responsible for advising the Secretary of HHS on the actions needed to meet the President's call for widespread availability of secure, interoperable health IT, AHIC initiated work on harmonization of industry-wide standards for health IT, development of certification procedures, addressing the heterogeneity in privacy and security laws and policies, EHR fraud reduction and prevention, development of national health information network prototypes, standardized measurements of EHR adoption, formation of a clinical decision support advisory group and consensus development of best practice guidelines for EHR information exchange (8). This initiative, named the Health Information Technology Initiative, has reported interim progress (8), the most important of which is the development of interoperability specifications designed to harmonize hundreds of competing standards. These three interoperability specifications cover the electronic health record, biosurveillance and consumer empowerment (9). The interoperability specifications recommended by the AHIC have been accepted by the Secretary of Health with development of adoption plans for integrating these specifications into the federal health-care delivery system by December 2007.

The Certification Commission for Healthcare Information Technology (CCHIT), a voluntary private-sector organization formed by the American Health Information Management Association, the Healthcare Information and Management Systems Society, and The National Alliance for Health Information Technology charged with certifying health IT products using the guidelines established by AHIC (10), is operational having certified 37 ambulatory care IT products by the end of 2006 and continues to receive requests for product certification. To accelerate adoption of IT, certain donations of IT and training services to health care providers have been permitted (11) providing low resource practices, such as rural-based practices, access to these technologies. Baseline measures of IT adoption and development of measures to assess future adoption have been established (8).

Purchaser groups including Leapfrog and the Partnership for Value-driven Health Care have endorsed these IT initiatives. The Leapfrog Group was initially formed by a group of large employers in response to the lack of transparency in the assessing health care provider quality and to provide market reinforcement for high-quality affordable (12). Leapfrog aimed to trigger giant leaps forward in the safety, quality and affordability of health care by supporting informed health care decisions by those who use and pay for health care and promote high-value health care through incentives and rewards. The most significant accomplishment of this Group is the hospital ratings generated through the Leapfrog Hospital Quality and Safety Survey and the hospital recognition and rewards programs (12). The Partnership for Value-driven Health Care is a Leapfrog working group composed of public and private groups tasked with developing a guide to purchasing health care services that reward quality.

The Partnership, in its Purchaser Guide, recommends concrete steps for its members to support this cornerstone (13). Purchasers should collaborate to establish and support interoperable health IT by requesting insurance plans, third party administrators, providers and other contractors to monitor activities of the CCHIT and the AHIC and encourage contractor participation in these activities and in local and state initiatives to create information exchanges and communities. Members should also encourage contracts with ambulatory service providers who have implemented CCHIT certified EHR systems and should measure health plan

performance with regard to IT using the Template Request for Information (RFI) or eValue8 RFI, standardized surveys to collect benchmark information (13).

Bridges to Excellence (BTE), a nonprofit organization that designs programs that encourage delivery of more effective and efficient care with financial and other incentives, instituted Physician Office Link, a program that monetarily rewards ambulatory care practices for using health IT (13,14). Basic levels assess use of evidence-based standards of care, maintenance of registries to identify and follow at-risk patients and provision of educational materials to patients with recommended incentives of \$15 per member per year. Meeting intermediate levels requires expansion to electronic maintenance systems for EHRs, electronic decision support, computerized physician order entry of medications and laboratory tests with a commensurate increase in recommended incentives to \$30 per member per year. Advanced participants are rewarded for having electronic systems that are interoperable with other systems at the recommended rate of \$50 per member per year. The Medicare Payment Advisory Commission (MedPAC) has recommended that CMS focus on encouraging health IT adoption as a first step in introducing P4P for physicians accepting traditional Medicare plans (15).

QUALITY STANDARDS

Measuring quality of care requires standardization of performance measures. Comparison of hospital practices was undertaken by the Hospital Quality Alliance (HQA) in conjunction with CMS (16). The Hospital Compare Initiative reviewed the performance of more than 4000 hospitals in the management of acute myocardial infarctions, heart failure, pneumonia and surgical infections, including 30-day mortality from the first two conditions. Openly accessible data from this review can be used to compare hospitals across different geographic and metropolitan areas (17). Further, the collaboration is exploring mechanisms of public reporting of care quality. Similarly, the AQA Alliance (AQA) has approved a series of starter measures evaluating physician level quality information for care in the ambulatory setting (18). Pilot programs under the Medicare's Better Quality Information to Improve Care for Medicare Beneficiaries have been initiated in six states (California, Massachusetts, Indiana, Minnesota, Arizona and Wisconsin) (19). An important component of quality standard measurement is dissemination of and public access to these ratings. The Ohio Department of Aging, serving and representing more than two million individuals 60 years and older, developed the publicly accessible Long-term Care Consumer Guide website. The searchable website provided CMS quality data and state satisfaction data linked to nursing homes or assisted living facilities, including any deficiencies noted. The effect of the website on consumer behavior was not evaluated; however, state-mediated informal dispute resolution requests increased on website roll-out, an interesting unintended consequence (20).

The Purchaser Guide urges purchasers to request the use and public reporting of AQA and HQA endorsed measures of quality. Where none exist, the Guide recommends the use of other national consensus-based collaboratives such as the National Quality Forum, Leapfrog or BTE. BTE has established three condition-centered quality of care measures programs for diabetes, cardiac and spine care patients (21). BTE promotes both monetary and nonmonetary incentives. Top physician performers can earn up to \$200 per patient per year for cardiac care to \$50 per patient per year for spine care. BTE also makes available the names of physicians who meet performance measures in the three programs. Of note, the majority of developed quality measures provide limited focus on diagnostic imaging. Another purchaser concern is the "Lake Wobegon" effect where every program or physician is above average and the ability to differentiate on quality is lost.

PRICE STANDARDS

An important component of value-driven health care is price. Although there are many determinants of price, consumers are most sensitive to premiums and co-payments. Further, price alone may not adequately convey the cost of care delivery. Purchasers desire a high level of transparency in pricing of hospital and outpatient services. The same level of transparency is desired regarding negotiated contracts across purchasers and insurers in a given market. The Purchaser Guide recommends direct participation in collaborations that establish and support uniform standards for measuring or reporting quality and cost or price information and request availability of cost or price of care to plan enrollees with standardized reporting from contractors as consensus reporting standards are developed (13). In an effort to spur open disclosure of negotiated reimbursements, the Centers for Medicare and Medicaid Services (CMS) has made its payment information for common hospital inpatient and outpatient services, ambulatory surgery centers and physician services publicly available through their Health Care Consumer Initiative (22). The payment list is not comprehensive and does not separately cover common radiology procedures, with the exception of percutaneous breast biopsy.

In the past year, several commercial insurers began to provide information on cost and quality of care. Cigna expanded its health care cost and quality information tools to include estimated average cost and range of costs of outpatient surgery and radiology procedures for their members in New Hampshire and Wichita, Kansas (23). Humana's Provider Transparency Resources allows comparison of hospital information on structure for following The Leapfrog Group-developed safety practices, evidence-based care processes and patient outcomes on complication rates and length of stay (24). In some of their markets, these quality data are accompanied by cost of typically billed services and discounts given to plan participants. Physician level information on frequency of guideline adherence is available for those providers who have treated a minimum number of patients for a given condition; however, no physician level price information is provided. UnitedHealthcare issued its first report card on Colorado hospitals quality and affordability in 150 medical procedures. Cost evaluation used paid-claims data adjusted for case-mix and disease severity with report card information available to contracted providers (25). Aetna's Physician-Specific Transparency Tools provides information on negotiated rates for services and clinical quality and efficiency using performance-based network evaluations (26). These evaluations encompass adverse events, 30-day readmit rates, efficiency of medical services use and volume of Aetna members treated.

Collectively, these tools aim to sensitize patients to the cost of their care and to effect more mindful consumption of services such as choosing hospitals and physicians based on quality and net price to consumer. In common, these tools restrict access to current plan members and/or contractors, rather than making the information fully and publicly transparent. The purchaser likely views these data as proprietary information, the public release of which may interfere with their business practices and potentially their profitability. True transparency should allow choice between insurers based on plan premiums, levels of negotiated rates and coverage and quality of contracted providers.

INCENTIVES

Ultimately, consensus-based standards developed to build the first three cornerstones need to be broadly implemented. Purchasers can facilitate dissemination and adoption through quality-based provider incentives. The Agency for Healthcare Research and Quality has published a comprehensive decision guide for quality-based purchasing (27) to aid structuring these pay for performance (P4P) plans which summarized here. The question-driven guide divides the

process into four phases that takes the decision-maker from contemplation to final plan evaluation (Table 2).

Contemplation of pay –for-performance adoption

In contemplating adoption of P4P programs, community readiness depends on sponsor influence and local provider capacity to engage in quality measurement and improvement (27). Dominant purchasers can introduce P4P programs and gain provider buy-in more easily than in a fragmented market (28,29). In a similar fashion, though having the opposite effect, organized providers with large market shares are better positioned to opt out of incentive programs (30). Further, local providers may not have sufficient capacity to measure compliance with outcomes-based quality standards such as those discussed above, therefore the initial scope of P4P programs may link rewards to structure or process. For example, MedPAC's recommendation to reward adoption of health IT introduces the provider to a P4P incentive environment and gives the provider the tools to build the capacity to measure quality. Purchasers can approach P4P in concert with other local purchasers. As a group, they may have more leverage to institute P4P (28,29) and can present a unified set of measures that eases provider compliance (31). Multiple purchaser participation also diminishes the likelihood that non-participating purchasers will reap the benefits from quality improvements instituted by providers as part of another's P4P plan (28,29). This concerted approach however brings anti-trust issues to the fore (27) and limits individual purchaser control over final P4P plan. Additionally, individual P4P plans can provide a marketing edge to insurers when soliciting business (27).

In the contemplation phase, if, when and how to seek provider perspective can be problematic. Purchasers may view providers as obstacles rather than partners. Providers may resist accepting the validity of metrics generated by non-clinical stakeholders (32,33), may express concern at their inability effect behavior change in their patients and may not endorse the incentive structure proposed by the purchasers. Nevertheless, the several pilot programs have successfully involved providers in P4P plan development, with one program that found participating physicians supported tougher quality measures than those initially instituted (27). Prior to designing a publicly-available quality reporting initiative for Colorado hospitals, the Colorado Business Group on Health (CBGH), a business coalition representing 200,000 covered lives and 22 public and private purchasers, extensively researched existing efforts in the P4P arena (20). CBGH started to build consensus for a hospital reporting initiative, widely collaborated with the state medical society, public and private purchasers, and other stakeholders, and cultivated advocates to present the plan to the respective stakeholders. To gain physician buy-in, the CBGH used well-established quality measures, in this case maintained by AHRQ, rather than developing de novo instruments. Further, although CBGH did not form to design and implement this specific initiative, its size, scope of purchasers and number of lives covered likely aided the process. The CBGH established a quality reporting initiative rather than a full-fledged P4P program, the steps used by the CBGH to build momentum and acceptance prior to development and implementation are directly applicable to more comprehensive P4P plans.

The Maine Health Management Coalition, a group of purchasers and providers, used similar techniques to design and implement the Pathways to Excellence program with P4P financial incentives for all state primary care providers and, in a pilot program, hospital incentives (20).

Designing pay-for-performance programs

Designing the P4P plan can be the most difficult phase. The decision to target specific providers, groups or hospitals rests on which performance or cost issues present the largest

problem (and therefore the biggest potential gain), the number of plan members covered by the targets and the availability of robust quality data for the type of provider (27). Targeting individual physicians leads to stronger links between incentives and performance compared to group incentives and effecting change in provider behavior is easier to implement for an individual provider than for a group at large. Targeting hospital systems rather than individual hospitals or individual providers focuses on the group with the most ability to coordinate change and quality of care as well as have the resources to invest in large scale initiatives such as EHR systems (27). The AHRQ report notes participation and incentive structure to be addressed are voluntary vs. mandatory participation, use of bonuses or penalties, bonus (penalty) structure and absolute vs. relative thresholds. Requirement for participation will be determined by the influence of the purchasers compared to the providers, availability of robust data and the structure of the P4P plan (27).

Current programs rarely use penalties to motivate behavior although future programs may use penalties to set minimum acceptable requirements. P4P pilot programs use one of four bonus structures (27). Single benchmark structures reward all those who meet the benchmark with a fixed incentive. Tiered benchmark structures escalate incentives with each additional level of performance met. Combination plans structure incentives for meeting benchmarks with provisions for additional incentives based on performance improvement regardless of benchmarks. Continuous rewards pay incentives in proportion to ongoing provider achievement. These differing structures alternately reward consistently high performers or improvers. Use of absolute benchmarks allows all providers to achieve (and be rewarded for meeting) set standards. In contrast, relative benchmarks or a tournament structure rewards only the highest performers. This tournament structure can lead to continuous efforts at provider improvement to increase the probability of achieving the highest standards and may result in lesser overall cost for the purchaser than the use of absolute benchmarks; however, providers may view this reward mechanism as too uncertain and may choose to opt out (27).

MHMC structured its financial incentives using three global performance categories, office systems, administrative data and practice-reported data, for each category in which a practice performs well. The plan used a tiered benchmark structure with two-star plans receiving a flat bonus from $\frac{1}{4}$ of the available bonus. Practices achieving three stars divided the remaining $\frac{3}{4}$ of the pool and received \$1,500 to \$20,000, modified by member-months (20). MHMC made use of a combination tournament structure and tiered structure for its hospital pilot program measuring patient satisfaction and safety, clinical effectiveness and efficiency. To collect performance guarantees from funds contributed by the hospital to the incentive pool, the hospital must achieve a 60th percentile score relative to other providers. To collect the performance bonus from funds contributed by the payers, the hospital must achieve a 90th percentile score compared to other providers (20).

In addition to structuring the P4P plan, funding sources need to be considered. Sources may come from new money, reallocation of provider payments, redirection of annual premiums and/or cost savings from institution of the P4P plan (27). The Ohio Department of Aging public reporting initiative was initially underwritten by state general revenue funds (20). Additional funds have been received from annual fees paid by nursing homes and assisted living facilities paid to state. The CBHC initially received private sector funding from a pharmaceutical company with initiative maintenance are managed and funded by the Colorado Hospital Association (20). The MHMC funded the physician incentive program. The hospital incentives were jointly funded by the hospitals' contribution of 1% of revenues (performance guarantees) received from the MCHC payers with payers adding 1% of payments to participating hospitals (performance bonus). Hudson Health Plan, a prepaid health plan, rolled out a physician P4P initiative (20). Initially, the plan set aside a sum based on the difference between cost-savings estimates and state payments to the plan. Starting in 2002, the state began giving its own bonus

payments to the plan based on its continued performance, which now equal the P4P program expenses.

Implementation of pay-for-performance programs

In the third phase, implementation, purchasers must address adequate risk adjustment and underlying differences in the patient population that will have a marked influence on provider compliance (32–34). However, very little data exist on the use of risk adjustment in actual practice. Further, practices may achieve an equilibrium level of compliance with relative ease, but additional improvement may entail effort beyond which a practice is willing to implement. This is of concern for many conditions, particularly those that are more tightly linked with patient behavior rather than physician action. For example, when measuring the proportion of patients with HbA1c levels within the recommended range, a practice's equilibrium rate of compliance may be below target and improving the compliant proportion may require influencing a group of patients who are either at higher risk or who are particularly resistant to compliance. In these setting, quality based payments are less likely to succeed as practice motivators than if the quality measure required less patient participation (35).

Public reporting should be considered a complement to P4P, with studies showing provider response to public reporting (36,37). Interest in quality improvement can be sustained with subsequent financial incentives (38). In fact, several programs described have either limited their P4P activities to dissemination of quality scores (Ohio Department of Aging and CBGH) or have had the creation of financial incentives preceded by public reporting efforts (MHMC) (20).

Evaluation of pay-for-performance programs

The final phase, evaluation, would ideally be conducted similar to a clinical trial with implementation and evaluation in a test market and comparison of the same set of measures to a control market (39). In a recent assessment of four P4P plans, the plan rollouts did not include a control arm and formal return-on-investment evaluation was not planned, although at least one plan surveyed provider and payer acceptance after implementation with modification of scoring in response to provider and payer feedback, including selection of additional benchmarks that can be submitted for “extra credit” (20). A recent study by AHRQ reviewed the evidence in nine randomized trials of P4P programs where physicians were assigned to the incentive or control groups (35). Among these nine trials, incentives included additional fee-for-service payments, quality bonuses and public release of quality data (reputational incentive). Eight of the nine trials used monetary incentives and evaluated a range of preventive health and chronic care outcomes. Of the ten quality outcomes evaluated across the eight studies, six were positively influenced and four were negatively influenced. Only one study used reputational incentives and demonstrated that hospitals with poor performance are more likely to engage in quality improvement initiatives, particularly if these quality ratings were publicized.

However, most purchasers will not have the resources or the market share to do so. In these plans, external trends that affect cost, care delivery and outcome will be difficult to parse from the effects of the P4P plan. Ultimately, purchasers will need to decide what level of rigor is sufficient to assess plan success. Finally, purchasers need to contend with unintended consequence of P4P plan institution such as patient selection, diversion of resources and gaps in care (27). The so-called testing phenomenon, teaching for the test (40), may lead to institutional resources devoted bonus-qualified activities at the expense of unmeasured care encounters. Adverse patient selection and “creaming” of desirable patients may result if chronic care measures are implemented in a practice that has a disproportionately sicker population.

These potential consequences can lead to gaps in care both within the practice and in the community at large.

Putting it all together

Rosenthal and Dudley concluded that there are five incentive design elements likely to have the greatest effect on provider behavior (Table 3) (41). Individual vs. group incentives have the different advantages as described above. Paying the right amount needs to consider the cost of improvement, shared savings and market share of the sponsor. Selecting high impact performance measures may require coordination among the payers and can focus on clinical quality, structural improvements such as IT, process improvements such as reminder letters for cancer screening, outcomes such as post-operative mortality, under- or overuse. Making payment reward all high-quality care can be structured to pay out for meeting thresholds, making significant improvements or paying for each patient who receives the appropriate care. Prioritizing quality improvement in underserved populations needs to address the often higher cost of improving care in some populations; incentives need to reflect this higher cost and may need to shift from provider rewards to patient rewards for compliance.

The variability in local conditions precludes recommending a single best solution. Rather, the optimum local solution successfully negotiates the needs of all stakeholders where the benefits and limitations of the implemented program have been explicitly considered.

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Table 1

Summary of the four cornerstones of health care as proposed by the U.S. Department of Health and Human Services

FOUR CORNERSTONES OF VALUE-DRIVEN HEALTH CARE

•	Health IT standards	
	•	Goal: National health information network
	•	Progress:
	•	<ul style="list-style-type: none"> AHIC development of interoperability standards to harmonized competing standards Establishment and operationalization of a health IT product certification commission (CCHIT) Certification of at least 37 ambulatory care IT products
•	Quality standards	
	•	Goal: Standardized performance measures comparable across institutions/practices, transparency of provider quality information
	•	Progress:
	•	<ul style="list-style-type: none"> Completion of Hospital Compare Initiative evaluating hospital management of AMI, HF, pneumonia, surgical infections HQA exploration of mechanisms of public reporting of hospital quality AQA approval of starter set of ambulatory care quality measures Piloting of the Better Quality Information to Improve Care for Medicare Beneficiaries program
•	Price standards	
	•	Goal: Transparency in and linkage of price and quality of provider services
	•	Progress:
	•	<ul style="list-style-type: none"> CMS publication of payment information for common services Private payer initiation of publication of cost and quality information, predominantly available to plan members only
•	Incentives	
	•	Goals: Encourage implementation of health IT, quality and price standards using provider incentives
	•	Progress:
	•	<ul style="list-style-type: none"> AHRQ publication of comprehensive decision guide for quality-based purchasing Piloting of pay-for-performance initiative by public and private institutions Preliminary assessment of performance-based incentive program effectiveness

Table 2

Checklist for Pay for Performance (P4P Program Design and Implementation (adapted from Dudley and Rosenthal (27))).

Phase 1: Contemplating P4P	
•	Is our community ready?
•	Should we partner with other purchasers or go it alone?
•	When and how should we engage providers in P4P discussions?
Phase 2: Designing P4P	
•	Which providers should we target first? Hospitals or physicians? Specialists or primary care providers?
•	For physicians, what are the advantages and disadvantages of targeting individual clinicians versus medical groups? In the case of hospitals, what are the advantages and disadvantages of targeting individual hospitals versus hospital systems?
•	Should provider participation be voluntary or mandatory?
•	Should we use carrots or sticks—bonuses or penalties—or a combination?
•	How should the bonus be structured?
•	Should we use relative or absolute performance thresholds?
•	What are our options for phasing in pay for performance?
•	Where do we find the money?
•	How much money should we put into performance pay?
•	What measure characteristics make them attractive candidates for inclusion in an initial measure set?
Phase 3: Implementing P4P	
•	How do we address providers' concerns about whether risk adjustment adequately captures the severity of illness of their patients?
•	If we currently sponsor a private or public report card, will P4P offer more of an incentive? If we are considering both a public report and P4P, which should we pursue first?
•	Should we tailor pay for performance for subsets of a particular group of providers, e.g., safety-net hospitals?
•	How should we think about pay for performance and its relationship to benefit design, including tiered networks?
•	Is there any special advice for Medicaid agencies and Medicaid managed care plans interested in pay for performance?
Phase 4: Evaluating P4P	
•	How can we tell if the P4P program is working?
•	What unintended consequences should we look for?

Table 3

Five Key Elements of Pay for Performance Programs (adapted from Rosenthal and Dudley (41))

Five Key Elements of Pay for Performance Programs		
	•	Individual vs Group incentives
	•	Paying the right amount
	•	Selecting high-impact performance measures
	•	Making payment reward all high-quality care
	•	Prioritizing quality improvement for underserved populations.