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ISSUE BRIEF
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Pay For Performance: Rewarding Improvements in the Quality of Health Care

Health care cost increases, overuse of services, resource limitations, new technologies and treatments, medical malpractice lawsuits, patient safety, and consumerism are all central to the current health care debate. As health care executives, providers, researchers, policymakers, and the public debate the appropriate use and availability of health care resources, increased attention has been given to the quality of health care. Adding to this renewed emphasis on quality is growing recognition that variation in the quality of health care performance and lack of adherence to evidence-based best practices is contributing significantly to the health care cost burden.

Recent health policy debates have focused on providing incentives for key health care providers such as doctors and hospitals to improve the quality of health care provided to patients. To date, however, there is no consensus on how to define or measure quality. Despite this lack of consensus, approaches such as pay-for-performance (P4P), to reward those that have improved health care quality, have been gaining momentum in the health care market. The Centers for Medicare and Medicaid Services (CMS) has been considering P4P programs in Medicare, and there are a growing number of such programs in the private health care market.

Health care actuaries have a unique perspective on issues related to the quality of health care. Actuaries have experience in estimating the interplay between health care costs and quality, and the evaluation of statistical variation in care patterns and evidence-based practice. Actuaries also have a clear understanding of the relationship between the effect of risk mix on the evaluation of relative performance and developing provider reimbursement approaches and benefit designs that effectively reward value and support a quality-oriented health care system.

With health care quality once again front and center, the Academy Health Care Quality Work Group is providing background and analyses, from an actuarial perspective, on issues related to health care quality and the related P4P approach to provider reimbursement. This issue brief explores current definitions and measures of health care quality and it examines the P4P approach to rewarding improvements in health care quality, particularly within the Medicare program.

Health Care Quality

While most industries have vastly improved quality control, health care remains one area that continues to be plagued by failures to meet established best practices of care. The findings of the Institute of Medicine (IOM)[1] on the level of unnecessary medical fail-

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ures have given rise to the search among all payers for methods to create incentives that encourage and reward high quality medical care.

As important as health care quality is acknowledged to be, however, there is no consensus as to what defines quality and how it should be measured. Most definitions of quality appear to address at least the following to some degree, though the relative importance and measurement of each varies:

- Efficiency
- Effectiveness
- Safety
- Balance between risks and benefits
- Patient satisfaction

There are several organizations that espouse a definition of quality, and each varies depending on the orientation of the particular organization. One example is a definition of quality developed by the American Academy of Family Physicians. It states, "Quality medical care may be defined as that care which may reasonably be expected to lead to an optimal outcome, and must include care which educates patients about their personal responsibility for their health, prevents illnesses when possible, and utilizes appropriate modalities to diagnose and treat disease. Quality medical care is dependent on the interaction between those who provide care and those who receive care. Quality care should produce optimal health outcomes in the most cost-effective manner and result in high patient satisfaction."[2]

The IOM's Committee on Quality of Health Care in America developed the following six specific aims for improvement.[1] According to the IOM, these aims are focused on the core need for health care to be:

Safe — avoiding injuries to patients from the care that is intended to help them.

Effective — providing services based on scientific knowledge to all who could benefit, and refraining from providing services to those not likely to benefit.

Patient-centered — providing care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions.

Timely — reducing waits and sometimes harmful delays for both those who receive and those who give care.

Efficient — avoiding waste, including waste of equipment, supplies, ideas, and energy.

Equitable — providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status

The unprecedented and increasing availability of data and information regarding virtually all aspects of the health care experience has given rise to new and varied measures of quality. The majority of these measures can be grouped into three categories:

1. **Clinical process** measures
2. **Outcomes** measures
3. **Structural** measures

Clinical process measures focus on the appropriateness of care with respect to recognized standards. *Outcomes* measures focus on the impact of care to the health and well being of the patient. *Structural measures* focus on the adequacy of resources and infrastructure to meet care needs and manage a quality-oriented health system.

The specific quality measures recommended continue to evolve as research and practice have provided greater evidence about correlations between structure and process measures and patient outcomes and/or costs. There is a wide range of measures available for assessing clinical quality. Among the prominent organizations that have developed clinical quality measures are:

- National Quality Forum
- Joint Commission on the Accreditation of Healthcare Organizations (JCAHO)

- National Committee for Quality Assurance (NCQA)
- Institute of Medicine (IOM)
- Agency for Healthcare Research and Quality (AHRQ)
- National Committee for Quality Health Care (NCQHC)
- CMS

Evidence-based Medicine

Clinical process, outcomes, and structural measures are linked through a concept known as evidence-based medicine (EBM). Evidence-based medicine is the latest attempt to develop a definition of quality that is both widely accepted and can be applied across all segments of the health care domain. What is EBM? It is "the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical practice with the best available external clinical evidence from systematic research."[3]

The movement toward using the latest research in treating patients traces its origins back to the early 1970s when John Wennberg and his colleagues[4] discovered the wide variations in practice patterns for treating the same medical problems. Further research estimated that only 15 percent of what physicians did was based on clinical trials.[5] This prompted the question: What is the right thing to do? Evidence-based medicine attempts to answer this question.

There is great enthusiasm about EBM since it offers the potential for unprecedented gains in health care quality and patient safety. As important, defining quality in the context of adherence to EBM can also serve as a practical proxy and predictor of activities that will lead to improved outcomes. The inherent complexity of the American health care system and its limited ability to accommodate change are recognized as significant challenges.

A significant federal effort embracing EBM is underway as CMS looks to introduce performance criteria into Medicare. EBM could provide a solid foundation for establishing a P4P system since it is considered by many in the field as the leading and most objective measure of quality.

Analysis of Pay-for-Performance

Pay-for-performance incentive/reimbursement programs are intended to align financial remuneration with favorable or desired outcomes, and as a result improve the quality and cost-effectiveness of care provided and overall patient satisfaction. Current reimbursement methods (i.e., fee-for-service, salary, pre-paid capitation, and other financial incentives) generally have not delineated the variations in provider performance. Such existing reimbursement methods may have rewarded overtreatment and/or undertreatment, discouraged innovation, and rarely differentiated quality or improvements in quality. Although there are obvious exceptions to this general assessment, momentum has been growing for alternative approaches, such as P4P, to improve health care quality

Past efforts to align incentives were more limited, but more focused P4P approaches that respond to the perceived limitations of current reimbursement and incentive programs are now gaining in popularity and prevalence. There were 35 known P4P programs in 2003, more than 75 by mid-2004, and more than twice that amount reported in early 2005. Most of the programs have been developed by commercial health plans for their members. With CMS's recent interest, the opportunity for P4P executed on a large scale is a potential new development.

Pay-for-performance programs have become an integral part of new and developing health care strategies. For example, they are integral to tiered-networking programs and provider contracting strategies. Provider performance measurement and assessment, and determining how well each provider performs compared to peers and/or targeted outcomes, are important metrics in developing provider network programs. Both the health plan and the provider are interested in the results. Astute providers are interested in improving their performance. Health plans want to inform their publics who is the best, often ranking providers from top to bottom. Members are interested in who they should see to best solve their health care concerns. Pay-for-performance is at the center of these programs.

The long-term viability of P4P will be its ability to drive the desired provider performance. Initially, a key to this will be the size of the financial reward/penalty. A small reward/penalty will likely have little impact, and funding a significant reward/penalty requires careful financial planning. A cost neutral program requires financial takeaways from poor performers to fund the extra payments to high performers. The extent of the takeaways needs to be large enough that adequate funds are available for rewards while at the same time discouraging unacceptable provider practices. In addition, the costs

of establishing such programs needs to be offset by financial gains from this approach (e.g., reduced health care costs and increased members as a result). To date, the financial penalties have been relatively small, limiting the amount that can be paid high performers. Simple financial analysis shows that a large amount could be paid to only a very small portion of the providers, limiting the potential for behavior modification of the masses.

Increasingly, health care experts believe that cost and quality should go hand in hand, with the highest quality providers being defined as the providers that consistently provide best-practice medicine on a cost effective basis. If this is rewarded through P4P programs, the identification of those providers with the best results will help patients obtain care at the lowest possible prices. This will have a significant long-term advantage to the providers, the patients, and society as a whole. To the extent that health care costs can be reduced, and resultant savings extracted from the health care system, more funds would be available for additional incentives and improvements in the cost effectiveness of the system.

Regardless of the actual measure of quality, there needs to be an efficient, comparable, and reliable source for collecting data to assess performance against each metric. The historical lack of prevalent technology has handicapped the collection of reliable data for P4P programs. Similarly, the lack of standardization across payers and the lack of industry-wide data have created confusion regarding relative performance of providers. These issues may need to be addressed before more sustainable and effective pay for performance programs occur.

Although there is considerable interest in P4P programs today, their long-term viability and interest is unknown. Other industries have and continue to experiment with P4P programs. It is clear the health care system will have an opportunity to test P4P programs over the coming years and hopefully achieve the anticipated results. If improvements occur, many of today's health care concerns will be minimized, quality will be improved, and patients will have their health care needs met more effectively.

The Current State of Pay-for-Performance in Federal Health Programs

Over the past several years, CMS announced or implemented numerous P4P actions and trial programs to assess P4P health and cost benefits. These programs have been directed at hospitals, physicians, and improvements in care management. For 2005, the Medicare Payment Advisory Committee (MedPAC) recommended Congress expand these programs and establish a P4P mechanism that rewards hospitals, physicians, and home health organizations that demonstrate improved quality. MedPAC recommended further that Congress institute a physician payment incentive that encourages the acquisition, implementation, and use of improved clinical and medical record information technology (IT).

CMS is considering providing incentives to providers to first build the necessary IT platforms that would make a P4P system viable. This is a particularly important step for medical practices since a majority of these physician organizations do not have electronic medical records. With 80 percent of all health care delivered in an ambulatory setting, this lack of automation would severely limit the effectiveness and scope of a P4P initiative.

In addition to the obvious advantages that standardized data in an electronic format could bring to Medicare, IT advances can improve the measurement and monitoring of quality and can ultimately support improvements in the efficiency of the entire health care system.

Current Medicare P4P Initiatives

Hospitals

Hospital Quality Initiative — As part of the broader National Quality Initiative, the hospital initiative seeks to empower consumers with quality-of-care information that will help in health care decision making and encourage providers and clinicians to improve the quality of health care. Section 501 of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) provided a negative financial incentive (0.4 percent payment withheld) to encourage hospitals to report on 10 quality measures. This effort has been broadly successful with 98.3 percent of the eligible hospitals reporting such measures.

Premier Hospital Quality Incentive Demonstration — Recognition and financial rewards are provided to hospitals that demonstrate high-quality performance in a number of acute care areas. Additional financial payments are provided if a hospital demonstrates top-decile performance (+2 percent incentive) or 2nd-decile performance (+1 percent) in one of five areas: heart attack, heart failure, pneumonia, coronary artery bypass graft, and hip and knee replacements. Performance is based on 34 reported quality measures.

Physicians

Physician Group-Practice Demonstration — This demonstration (focused on large group practices) rewards physicians that improve the quality and efficiency of health care services delivered to Medicare fee-for-service patients. The objective is to improve coordination of Part A (Hospital) and Part B (Physician) services, promote investment in administrative structure and process, and reward physicians for improving health outcomes. Physician groups can earn performance-based payments as they achieve savings when compared to a control group.

Medicare Care Management Performance Demonstration — This is a three-year demonstration project to promote the adoption of health IT to improve care for chronically ill Medicare beneficiaries. Unlike the previous project, this one is focused on small to medium-sized practices and offers bonus payments to physicians who meet or exceed established performance standards. Authorized by Congress in MMA Sec.649, the demonstration is required to be budget neutral.

Medicare Health Care Quality Demonstration — Mandated by MMA Sec. 646 and also required to be budget neutral, this demonstration is a five-year project, currently being designed. Those eligible include physician groups, integrated delivery systems, and regional coalitions of such groups. Payments under the demonstration will be tied to cost savings and improvements in process and outcome measures in a targeted population versus a control population. Improved quality is expected by reducing variations in care through evidence-based approaches to care delivery and best-practice guidelines.

Disease Management / Care Management

MMA-mandated Projects — MMA, under Sec. 721 and 623, mandated two disease/care management demonstration projects. The first project, which applies to congestive heart failure and diabetes, requires disease management vendors and insurance companies to offer a standardized care program, resulting in cost savings of at least 5 percent as compared to a control unmanaged population. The second project focuses on end-stage renal failure and offers financial incentives for quality improvement.

Disease Management Demonstration for Severely Chronically Ill Medicare Beneficiaries — Like the MMA-mandated project, this project focuses on congestive heart failure and diabetes. It tests whether applying a disease management program with prescription drug coverage can improve outcomes and reduce cost.

Disease Management Demonstration for Chronically Ill Dual Eligible Beneficiaries — This demonstration evaluates the coordination of a Medicaid prescription drug program with a Medicare-funded disease management program for dual-eligible beneficiaries suffering from congestive heart failure, diabetes, and/or coronary heart disease. It will test whether such coordination helps to improve quality and lower costs.

Care Management for High Cost Beneficiaries — Currently under development, this program looks to reduce costs through guaranteed savings and targets high-cost, high-risk beneficiaries. Participating providers are required to meet clinical quality standards, as well as guaranteeing cost savings to the Medicare.

MedPAC Proposal

The Medicare Payment Advisory Committee is an independent federal body established by the Balanced Budget Act of 1997 to advise the U.S. Congress on issues affecting Medicare. In addition to advising Congress on payments to private health plans participating in the Medicare Advantage program and providers under the fee-for-service program, MedPAC also analyzes care access, care quality, and other issues.

In MedPAC's March 2005 Congressional report, MedPAC offered Congress several pay-for-performance recommendations for hospitals, physicians, and home health providers. These recommendations focus on four general quality measures and rely largely on improvements in the use of IT. These four quality measures include:

Process Measures – used to determine whether care that is known to be effective is provided.

Outcome Measures – provide information on how care affects patients, such as whether complications developed from the care provided.

Structural Measures – designed to insure that the provider is capable of providing good care.

Patient Experience Measures – provide information on whether a patient's needs are met.

MedPAC's recommendations rested on two key design principles:

a) Reward providers based on both improving care and exceeding certain benchmarks.

b) Be budget neutral and fund any financial incentives by setting aside a small portion of existing Medicare payments.

Key P4P recommendations include:

Hospitals

For hospitals MedPAC recommended that a P4P quality incentive program should be established that recognizes process, outcome, and structural quality measures. Such a program should provide a financial incentive that adjusts for underlying population risks based on both primary and secondary diagnoses at initial admission.

Home Health

MedPAC recommended that a P4P quality incentive program should specifically recognize outcome quality measures and a beneficiary's improvements while under home health care. The Commission believes that there are sufficient available accepted measures so that a portion of a home health provider's payment can be feasibly based upon quality.

Physicians

MedPAC's physician recommendations are focused on both improved IT implementation and financial incentives to encourage improved quality.

MedPAC believes that improved IT is key to improving health care quality and that financial incentives should be offered to encourage physicians to adopt it. With improved IT, it is believed that new valuable data may be captured and assessed that will offer good health improvement opportunities. According to MedPAC, until such data is captured, sufficient structural, process, and patient experience measures are available upon which to base a quality incentive payment policy and MedPAC has recommended Medicare create such a payment policy. Like the hospital and home health recommendations, the program should be self-funding and budget neutral.

MedPAC recommended that these incentive programs start small, with between 1 percent and 2 percent of the available payments held back to reward those showing better quality measures and those meeting minimum IT standards.

Issues associated with Pay-for-Performance in Medicare

On the surface, P4P in Medicare offers many unique opportunities to improve the alignment of incentives around quality of care:

- Many P4P programs have had minimal impact on provider behavior because market share has so little effect on provider incomes. Medicare, however, has the potential to significantly change the balance of incentives in the marketplace.

- Medicare has the ability to set the standard for measuring and rewarding quality. In the past, Medicare has led the industry by establishing new payment approaches such as Diagnostic Related Groupings and the Resource Based Relative Value System. Similarly, Medicare could establish a recognized standard for measurement and structure for P4P.

- Medicare P4P strategies can logically encourage a more rational health care infrastructure over time without imposing deadlines that some elements of the system will not find workable.

- Medicare has the opportunity to take a longer view and reap the benefits of investment in quality improvements, unlike the shorter view often believed to be held by the private sector where the investment rewards are more tenuous.

On the other hand, Medicare will have many of the same challenges with P4P as we have seen in the private sector:

- Lack of credible, easily collected and auditable data and metrics to measure performance.

- The ability to provide a significant enough incentive to drive changes in provider practices may require a greater shift in provider compensation than is determined politically and financially feasible.

- The P4P structure may need to reward structure and process measures in lieu of outcomes metrics unless valid risk adjustment methodologies can be applied.

- Given the diversity of quality metrics, a need for a balanced scorecard of multiple drivers may ultimately be essential to a sustainable view of quality.

Summary

While key players in the health care marketplace have not yet reached consensus on how to define or measure health care quality, most agree that quality improvements in the health services market place are needed and desired. Pay-for-performance is one approach currently being considered that provides incentives and reimbursements for improvements in quality, cost-effectiveness, and overall satisfaction with health care. Both the private sector and the public sector, most notably CMS, are examining and beginning to implement P4P programs that align financial payment with favorable or desired health care quality outcomes. Current P4P programs focus on hospitals, physicians, and improvements in care management.

The Medicare Payment Advisory Commission has made several P4P recommendations to Congress that rely heavily on improving health IT. While MedPAC recommends a P4P approach for certain aspects of the Medicare program, there may be challenges such as a lack of credible data to measure and reward performance, providing enough incentive to drive change, and applying risk adjustment methodologies to outcome measures.

Afterword

This issue brief, developed by the American Academy of Actuaries' Health Care Quality Work Group, is just one of the projects being undertaken by the actuarial profession on health care quality issues. The actuarial profession is also evaluating the link between the quality and cost of health care through research projects commissioned by the Society of Actuaries (SOA). The first recently completed research report, Linking Quality and Costs: An Analysis of the Hospital Quality Information Initiatives Measure, explores the return on investment for health providers that implement certain quality programs. The study was conducted by MPRO, Michigan's Quality Improvement Organization, which collected data from a number of health providers based in Michigan.

Health care quality programs, such as P4P, will be greatly helped by actuarial input that would not only estimate the cost savings of these initiatives but also evaluate their design and develop procedures to monitor the results. This will ensure that the effects of the initiatives are consistent in pricing, reserving, and forecasting.

The next "quality and cost" research project sponsored by the SOA will address improved quality of health care and the relationship to health care costs. A practical result of the next study is planned so as to complement existing hospital quality measures in order to give a more complete picture of a hospital's quality of care. The Academy also continues to monitor the health care quality issue and we will respond as appropriate as issues arise on this topic.

[1] Institute of Medicine's Committee on Quality of Health Care in America, Crossing the Quality Chasm: A New Health System for the 21st Century (2001), http://www.iom.edu/report.asp?id=5432.
[2] American Academy of Family Physicians' Quality Initiative, http://www.aafp.org/x36879.xml.
[3] D.L. Sackett et al., "Evidence-based Medicine: What It Is and What It Isn't" (Editorial), British Journal 312, no. 7023 (1996): pp. 71-72.
[4] J.E. Wennberg and A. Gittelsohn, "Small Area Variations in Health Care Delivery", Science82, no. 117 (1973): pp. 1102-1108.
[5] Committee for Evaluating Medical Technologies in Clinical Use, Assessing Medical Technologies (Washington: National Academies Press, 1985), pp. 5.