



The Society for Cardiovascular Angiography and Interventions

SCAI President's Page

Pay for Quality — What Every Interventional Cardiologist Needs to Know: Part II

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Last month, my President's Page examined the background and goals of the rapidly evolving initiative of pay for performance at both the facility and physician levels [1]. (To review this page online, log on to www.scai.org and click on "President's Pages".) In this second part, I have again invited SCAI's Senior Director for Advocacy and Guidelines, Mr. Wayne Powell, to be a co-author. Mr. Powell's insights regarding the issues and challenges of developing and implementing a fair, effective Pay-for-Performance (P4P) program are a tremendous asset to the Society and its members. In this page, we will further outline some of the challenges facing the P4P initiative. Despite the challenges, however, most stakeholders in healthcare agree that a physician-level P4P program will be established in the future. Similar to the old cliché of

"buyer beware," it is important to understand the complexities involved in measuring quality of care and implementing P4P in interventional cardiology.

The Status of P4P in the United States

As noted last month, the P4P initiative has been assigned various names. Personally, I prefer "*pay for*

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quality" (P4Q) because it emphasizes what should be the foremost goal: achieving the highest quality of care for our patients. SCAI continues to monitor the activities in Congress, including the schedule of hearings. The Society expects legislation including some form of P4Q will be proposed soon and followed by congressional hearings and debate on the proposed plan. SCAI will provide updates in the Advocacy section of our website as needed.

SCAI remains an active member of the American Medical Association's (AMA) Physician Consortium for Performance Improvement, which promotes a fair and ethical P4Q program that is patient-centered and links evidence-based performance measures to financial incentives. The Consortium has set forth five principles for any P4Q program:

1. Ensure quality of care.
2. Foster the patient–physician relationship.
3. Offer voluntary physician participation.
4. Use accurate data and fair reporting.
5. Provide fair and equitable program incentives.

Each of these principles is expanded on the AMA website. SCAI, both on its own and as part of the Consortium, is prepared to testify or participate in dialogue with legislators, regulatory agencies such as the Centers for Medicare and Medicaid Services (CMS), and groups such as the Agency for Healthcare Quality and Research (AHRQ) about proposed P4Q programs. Indeed, SCAI is working to encourage such discussion now, before legislation reaches Congress.

P4Q – The Basic Concept Is Simple and Not New

Healthcare expenditures are increasing dramatically, from 13.8% of the gross domestic product in 1993 to 16.5% in 2006, and they are expected to grow to 20.0% by 2015. Although we the consumers, through taxes, employer benefits, or insurance premiums, are ultimately paying for healthcare, the escalating costs make it prudent to examine how these funds are being used. It is doubtful any consumer would willingly pay more for a product he or she knew was of low quality. Especially now, intelligent shoppers research a potential purchase using the internet, *Consumer Reports*, and other sources, including *word-of-mouth* recommendations. Consumers feel that since they are spending their hard-earned money on a product, they want the best they can afford. Likewise, those who are involved with the administration of healthcare dollars want to ensure their money is well spent on appropriate and necessary care resulting in good outcomes and ultimately healthier patients. This would be fairly easy if purchasing healthcare was as straightforward as buying a refrigerator,

but it is not. If there will be a P4Q program in the future, the first challenge will be to define what we are paying for, in other words to define *quality*.

P4Q – The Devil Is in the Details

A fundamental concern about P4Q programs is that measuring "quality" in the real world of medical practice is not as clear-cut or easy as it initially appears [2]. In its March 2005 Report to Congress, the Medicare Payment Advisory Commission (MedPAC) concluded that "it is feasible to base a portion of physician payment on quality." The report also concedes that measuring physician quality is "more complex than measuring quality in other settings" for several reasons, including an insufficient data infrastructure, the wide variety of specialized services provided, and the number of physicians [3]. In our view, the challenges faced in developing an acceptable physician-level P4Q program can be divided into the issues of defining the proper performance measures and fair implementation of this system.

Developing Appropriate Performance Measures

Clearly, everyone would agree that to achieve the best clinical outcomes, proven therapies or treatment strategies should be implemented whenever possible. It is logical, therefore, that performance measures be based on carefully defined parameters that have a demonstrated ability to improve patient outcomes. We are confident that each of you could easily define several cardiovascular therapies of unquestionable benefit in selected patients; for example, aspirin, "statins" in patients with hyperlipidemia, ACE-inhibitors in patients with depressed left ventricular function, and so forth. One such measure directly related to interventional cardiology, and currently the focus of considerable scrutiny, is the door-to-balloon (D2B) time for patients with acute ST-segment elevation myocardial infarction (STEMI) who are referred for primary percutaneous coronary intervention (PCI). The 2004 ACC/AHA Clinical Guidelines for STEMI and the 2005 ACC/AHA/SCAI Guideline for PCI both recommend a D2B of 90 minutes or less [4,5]. Data from numerous studies support improved patient outcomes when this D2B is achieved, so this is an appropriate performance measure [6,7].

Although an appropriate performance measure, D2B time is a complex variable affected by multiple different factors. It could be adversely affected by delays in the recognition of STEMI in the emergency department and other delays in the activation of the catheterization laboratory team. These are system-related issues and not directly related to the performance of the interventional cardiologist, but for which the interventional cardiologist could be held "responsible" in a physician-level incentive system. It could also be adversely

affected by the behavior of the interventional cardiologist in the lab. Despite the apparent simplicity of this measure, there is not a crisp definition of the “balloon time” and this unfortunately provides an opportunity to “game” the system. Is the balloon time marked by the delivery of the balloon to the culprit lesion, inflation of the balloon, deflation of the balloon, or the establishment of normal flow in the artery after balloon inflation? You are probably wondering just how much time difference could there be between these; surely not more than 1–2 minutes, and how important could that be? This difference may not be importantly clinically, but statistically, if applied to all of your acute STEMI cases per year, it could change the percentage of cases making the <90 minute D2B benchmark. Believe it or not, auditing of cases in some centers has uncovered the fact that there are a few operators who actually inflate the balloon in the aorta before engaging the coronary artery to deduct minutes from the D2B time. Clearly, an appropriate performance measure, especially if it is complex and not defined by a simple yes-or-no answer, must be crisply defined to avoid some of the abuses described above. Some have suggested that the endpoint be the restoration of TIMI 2 or 3 flow in the artery since this is really the goal, as opposed to the inflation of a balloon. However, what happens if you deliver, inflate, and deflate the balloon, but there is still very poor flow in the artery due to “no reflow” or a huge thrombus burden? What happens if you decide to use a thrombus-extraction device first before you place a stent and inflate a balloon in the artery? All of these questions can and must be answered before D2B is adopted as a metric in P4Q.

It is also important that a P4Q program examine the full range of the care provided by a physician. For example, suppose the D2B time is terrific, but the patient leaves the hospital without appropriate antiplatelet therapy and suffers stent thrombosis. The patient is rushed back to the lab and has another great D2B time, but was this great, high-quality care? And . . . who is responsible for this bad outcome? The physician performing the original PCI or the physician who sent the patient home without the proper medications?

Implementing a Fair System

At a minimum, a fair system should have the following three elements. First, a fair system would include not only appropriate performance measures, but also be subject to auditing to insure the integrity of the results. Clearly, it would be impossible to examine every medical record to insure that the performance measures claimed were actually present. I hesitate to use this example, because it will immediately invoke negative responses.

However, similar to the audit system used by the Internal Revenue Service in the U.S., some form of record auditing system will be necessary. This is done within the ACC-National Cardiovascular Data Registry[®] and appears to work well [8]. However, as soon as payments are based on quality measures, false quality data submitted to the government or its agents could be considered fraud and thus subject to prosecution as well as whistleblower lawsuits. Penalties under those provisions are much tougher than penalties from the IRS.

Second, a fair system must be appropriately risk-adjusted. Several models exist for the risk-adjustment of PCI mortality that are detailed enough to consider many variables that influence patient outcomes yet straightforward enough to be useable. Although there are several established systems for risk-adjustment [9], a perfect system does not exist. The data-collection methods used by Medicare cannot become a burden on either physician or patient; nor does CMS want to implement a cumbersome, expensive system. As MedPAC has noted, the risk-adjustment methods should not make physicians apprehensive about treating patients whose outcomes could lower their quality scores.

Finally, a fair system must be statistically relevant. Everyone is aware of the type of errors that occur in a scientific study when the sample size is too small. In a similar fashion, it is problematic to assess the performance or quality of a program when only a small number of cases are available for evaluation. Carried to the extreme, if a physician submits data on only one primary PCI annually and the D2B time is <90 minutes, you have 100% compliance with this metric. However, is this really statistically relevant, and does it provide a true assessment of the program and operator? Volume standards for both facilities and physicians are included in the ACC/AHA/SCAI guidelines for PCI [5], but are debated. At issue is the question of whether a low-volume facility with excellent outcomes should be criticized simply because it is a few cases short in the annual total. The answer to this question is unclear at the moment.

Since it is already occurring, it is likely that the “scores” each facility and physician receives as part of the P4Q process will be reported in the public domain. Data from many state programs are reported publicly, and there are several organizations that evaluate available Medicare data and issue ratings of facilities. Not only does this public reporting of data mandate fairness and accuracy, but it is important to realize that there may be unintended negative consequences of the process.

The Risks of Public Reporting

Possible unintended negative consequences of public reporting have surfaced and are gaining attention

among those interested in promoting the quality of care. One of the earliest reports described the migration of complex and high-risk bypass surgery patients from New York State to an out-of-state regional medical center following the implementation of public reporting of bypass surgery mortality rates in New York [10]. Therefore, the apparent improvement in surgical mortality attributed to this initiative may simply reflect an unwillingness to perform high-risk cases. Jha and Epstein, recently analyzed the impact of New York State's public reporting system for coronary artery bypass surgery 15 years after its launch [11]. Those who selected a top-performing hospital or surgeon from the latest available report had approximately half the chance of dying as did those who picked a hospital or surgeon from the bottom quartile. Nevertheless, performance was not associated with a subsequent change in market share. Surgeons with the highest mortality rates were much more likely than other surgeons to retire or leave practice after the release of each report card. Other adverse effects of public reporting have been described [12,13]. If interventional cardiologists behave like surgeons, the concern is that, rather than tackle a high-risk PCI for cardiogenic shock, physicians may shun this potentially life-saving option for fear of a blemish on their publicly reported record. Preliminary evidence suggests that this type of behavior may be developing in some states that have recently adopted public reporting of PCI results.

The Next Steps

As physicians we are familiar with the principles of the Hippocratic Oath. Following these principles, physicians should always strive to provide the best quality care for our patients without the possibility an extra financial reward for high quality. Unfortunately, the idealistic goals reflected in the Hippocratic Oath can become obscured by the realities of daily practice. When we or one of our loved ones gets sick, we want the very best care possible. Our patients deserve the same. P4Q programs have potential to promote a higher quality of care for all patients if designed and executed properly. But, as they say — the devil is in the details.

Your Society is working diligently on this issue and will keep you informed. If a bill comes before Congress, SCAI will carefully evaluate its potential impact for invasive cardiologists. Please let me know what you think about this important issue and any of SCAI's other initiatives. You can contact me at *president@scai.org*.

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