



The Society for Cardiovascular Angiography and Interventions

SCAI President's Page

Public Reporting of Cardiovascular Care: An Opportunity to Shape the Future

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It is increasingly uncommon for someone to make an expensive purchase or choose a contractor for a major project without some thoughtful research. Decisions about health care and who provides it should be no different, but reliable information about the quality of health care services has been difficult to find. Enter public reporting.

HISTORICAL BACKGROUND

The unstated rationale for public reporting is that this information impacts on market forces, payers and practitioners to improve health care quality and reduce costs. In one of the first public reporting efforts, the Health Care Financing Administration (HCFA) published hospital mortality rates for Medicare patients undergoing coronary artery bypass graft surgery (CABG) [1]. These data, derived from administrative and claims information, were not originally intended for this use and the report was criticized by hospitals and providers because they feared that the risk adjustment models were inadequate. Although adjustments were made, the usefulness of these reports has never been established, and many express negative opinions about these data [2].

The HCFA experience led to the development of several private quality improvement registries and public state-wide reporting systems, such as the Northern New England Cardiovascular Study Group and the Society of Thoracic Surgeons (STS) National Adult Cardiac Surgery Database [3]. New York, Pennsylvania, Massachusetts, and California subsequently developed public reporting mechanisms for cardiac surgical outcomes [4–7]. Some states even report physician-specific data and have expanded reporting to include percutaneous coronary interventions (PCI) [8].



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In 2005, the Centers for Medicare and Medicaid Services (CMS) launched the Hospital Compare website to publicly report hospital quality information derived from several sources [9]. Certain core measures are reported for cardiac patients along with risk-adjusted mortality and readmission rates for acute

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myocardial infarction and heart failure derived from Medicare enrollment and claims data. The site also reports the results of patient surveys about their hospitalization and is considering adding measures from the Hospital Value Based Purchasing Program.

The number of resources currently devoted to public reporting is unknown, but public reporting initiatives continue to proliferate with additional state initiatives, reports from payers that focus on costs, and reports from business consumer groups [10]. There are now several internet-based forums where patients can report their individual experiences with physicians, both good and bad, in an unregulated and nonscientific manner. This, in turn, has resulted in some physicians requiring patients to agree to not participate in such activities before any treatment is provided.

In January 2011, under the authority of the Patient Protection and Affordable Care Act of 2010 (PPACA), CMS implemented the Physician Compare website [11]. Several benchmarks for this effort were established: 1) providing information on the performance of

physicians (and other health care providers) enrolled in Medicare, 2) reporting to Congress on the plans to use these data for value-based purchasing and consumer choice and 3) demonstrating how financial incentives will be applied to beneficiaries who use "high-quality physicians".

OUR PRINCIPLES OF PUBLIC REPORTING

The concept of public reporting makes many physicians uncomfortable. This is an understandable reaction, but the fact is that public reporting is already occurring and there is substantial pressure from many sectors for it to expand.

Recognizing this growing role of public reporting, the American College of Cardiology Foundation (ACCF) developed a health policy statement in 2008 [12] that emphasizes six core principles of public reporting that are intended to foster accuracy, completeness, and usefulness in any public reporting process. These principles emphasize that the purpose should be for quality improvement, the process must be scientifically valid, should include physician partnership, have standardized data elements, ensure accountability, and have a formal review process [12].

CONCERNS RELATED TO PUBLIC REPORTING

The early experience reporting CABG outcomes in New York was deemed a success, but unintended con-

sequences were reported. For example, it is now known that high-risk patients from New York were being referred out of state [13]. Their expected and subsequently observed mortality rate was higher, leading to speculation that the apparent improvements in New York were simply attributable to the migration of high-risk patients. Following the initiation of a similar program in Pennsylvania, 59 percent of cardiologists reported increased difficulty finding surgeons willing to perform CABG in severely ill patients and 63 percent of cardiac surgeons reported that they were reluctant to operate on such patients [14].

Public reporting of PCI data has a shorter history, but similar observations are now being made. Moscucci et al. studied the influence of public reporting by comparing the demographics, indications, and outcomes of patients undergoing PCIs in Michigan, which does not have public reporting, with patients from New York, where public reporting exists [15]. Patients in Michigan more frequently underwent PCIs for acute myocardial infarction and cardiogenic shock than those in New York and had a higher prevalence of certain comorbidities. The unadjusted in-hospital mortality rate was lower in New York than in Michigan, but after adjustment for comorbidities, there was no difference in mortality between the two groups. The authors concluded that a propensity to avoid intervention on higher-risk patients in New York might be related to the fear of public reporting of high mortality rates.

This was confirmed in a separate retrospective study of the SHOCK (Should We Emergently Revascularize Occluded Coronaries for Cardiogenic Shock?) registry comparing the outcomes of patients from New York with those from other states [16]. In New York, patients presenting with cardiogenic shock were less likely to receive angiography, PCI, or CABG. In addition, in-hospital mortality among these patients was 1.5 times higher, suggesting that perhaps life-saving treatments are withheld to avoid reporting adverse outcomes. Survey data from New York physicians confirmed this, with 83 percent of practitioners agreeing that patients who were at high risk were denied PCI because of fear of public reporting [17]. Similar concerns have been raised in Massachusetts [18].

To minimize this unintended consequence, some reporting efforts now specifically exclude extremely high-risk and salvage patients. In addition to concerns that risk-adjustment methods currently available are suboptimal, there has been a suggestion that mortalities be adjudicated to determine if they were truly procedure-related rather than the consequence of severe disease. A blinded review estimated that about 80 percent of the mortalities at one Massachusetts hospital were not directly related to the procedure but rather to the

natural history of disease [18]. Meanwhile, payers have been more focused on cost profiling physicians.

The accuracy of these methods has been questioned: a systematic exploration of the effect of public reporting on quality of care concluded that there is little evidence either way or that there lacks a rigorous evaluation of many major public reporting systems [19]. The review found evidence suggesting that public release of performance data stimulates quality improvement activity at the hospital-level, but the overall effect of public reporting on effectiveness, safety, and patient-centeredness remains uncertain.

The most compelling justification for the public reporting of clinical outcomes is the public's right to know about the care that they are likely to receive from hospitals and physicians. The intent is that such transparency should enable patients to make more informed decisions about their health care. There also is a growing interest in changing reimbursement models to reflect the quality of care, rather than quantity of care, and in developing more performance measures endorsed by the National Quality Forum (NQF). The challenge moving forward is to ensure that public reporting occurs in a fair, accurate, and meaningful way that benefits patients and minimizes the possibilities of negative unintended consequences.

OPPORTUNITIES FOR REGISTRIES AND PROFESSIONAL SOCIETIES

Beginning in September 2010, the STS in partnership with *Consumer Reports* started publicly reporting key performance metrics for isolated CABG surgery using data derived from the STS Database [20]. The STS Database receives information from more than 90 percent of the cardiac surgery groups in the United States. These data have been used internally for improving the outcomes of cardiovascular surgery, but have not previously been available to the public. The *Consumer Reports* – STS project is a lauded voluntary effort that uses clinical rather than administrative data [21].

The American College of Cardiology (ACC), The Society for Cardiovascular Angiography and Interventions, and The Heart Rhythm Society have recently approved a carefully crafted plan for implementing public reporting, using the large resource of data from the National Cardiovascular Data Registry® (NCDR). We are indebted to Dr. Gregory J. Dehmer for chairing and leading this effort among the three organizations, to Dr. Joseph Drozda, chair of the ACC Clinical Quality Committee, to the NCDR Management Board, and the many volunteers and staff from our three organizations. Only metrics from the CathPCI Registry® and ICD Registry™ that are endorsed by NQF will be reported. Three additional metrics, also

NQF-endorsed, will require case matching of NCDR Registry data with external databases such as the national death index file. As part of this plan, facilities will have the opportunity to view a sample report of their data well before it is released for public reporting thereby providing an opportunity to correct any deficiencies before agreeing to the release of future reports into the public domain. At this point, only hospital-level reporting is planned and the NCDR has identified the CMS Hospital Compare website as the vehicle for data reporting. The NCDR public reporting plan is compliant with the principles outlined in the ACCF health policy statement [12].

There are several important advantages to using registry data rather than administrative or claims data. First, registry data more directly reflect clinical care than claims data and thus are more directly linked to the science upon which measures are based. If accurately collected and adjudicated, registry data are more reflective of actual performance than are data derived solely from claims information. These clinical data can also be appropriately risk-adjusted, avoiding inaccurate conclusions about practitioners or hospitals that perform high-risk procedures; an adjustment that cannot be made if public reporting utilizes billing data. Registries also include all patients rather than just Medicare beneficiaries. Second, registries can provide close to real-time data which can be used by providers to construct practice and provider-level quality improvement activities, the results of which can be measured in subsequent data submissions. Third, data for submission to registries can be incorporated into provider workflow with software that queries many common electronic medical records. Finally, registry data submission, quality, and analysis can be overseen by medical specialty societies that focus on education, quality, and advocacy, and which are still the trusted allies of provider members.

IT IS TIME TO ENGAGE

The *Consumer Reports*-STS collaboration and the CMS “Physician Compare” initiative are examples of what the public will expect in the future when faced with critical health care decisions. Cardiovascular specialists should be proud of what our profession has accomplished by creating comprehensive data registries and successful national quality efforts like the *Door-to-Balloon* initiative. However, health care will be changing dramatically in the United States, and cardiovascular professionals face a future likely to be quite different from the past. The future will include more public reporting of inpatient and outpatient quality measures, ultimately at the provider-level. Making sure such programs are accurate, fair and rooted in quality improvement is the challenge that lies ahead.

Cardiovascular specialists can prepare themselves for these developments by continuing to strive for the highest possible quality in their practices, using evidence-based medicine as their guide and becoming actively engaged in the reporting of registry results.

Beginning this year at the hospital-level, facilities participating in the CathPCI Registry will be able to voluntarily participate in the public reporting of "30-Day Risk-Standardized Unplanned Hospital Readmission Rate following PCI," a measure developed by the Yale New Haven Hospital-Center for Outcomes Research and Evaluation. Endorsed by the NQF, this measure is consistent with the ACCF's public reporting policy and adds to the readmission measures already on Hospital Compare. It is unique, however, in that it is risk-adjusted to more accurately reflect clinical case mix. As noted earlier, additional metrics for public reporting will be added for the CathPCI and ICD Registries in the future.

Finally, to help physicians monitor and track their own performance, the NCDR will release later this year a physician-level dashboard using data included in the CathPCI Registry. This information will provide clinically-based standardized reports using ACC-developed algorithms, and will not be publicly reported at this time. The dashboard, which is confidential, will be available only to the individual physician via secure log-on to CardioSource.org. It will, for the first time, allow an individual physician to compare his or her performance on selected metrics to the national benchmarks defined within the CathPCI Registry. We encourage physicians to engage with this program, take ownership of their own reports to ensure that the registry data is accurate. These reports can be used to not only raise awareness of performance, but also to meet educational needs through education with continuing medical education or self-directed practice improvement models (PIMS) for Maintenance of Certification (MOC) Part IV.

Armed with valid and robust data, meaningful performance measures, and a commitment to continuous improvement, cardiovascular specialists and the care teams that assist them will be well-prepared to thrive in an era of public reporting and to lead the way toward a more transparent, and healthier, health care system.

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