Specialty Cardiac Hospitals
How Special Are They?

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pecialty hospitals, owned and operated by physicians with an expertise in a particular medical condition, offer the opportunity to design a utopian care environment for optimal delivery of care. In fact, the concept of specialty heart hospitals dates back to the mid-19th century in England, with the opening in 1857 of London’s National Hospital for Diseases of the Heart and Paralysis. The institution of specialty hospitals in the United States underwent acceleration by the mid-1990’s.1 Many confluent factors explain the development of specialty cardiac hospitals in the United States, including significant advances in cardiovascular technology, dramatic increases in the cost (and profitability) of cardiovascular care, and, most important, the perceived financial constraints on both hospitals and practicing physicians from health plans and payers, which results in a perception of reduced practice autonomy by physicians and hospitals.2,3 Presently, >100 specialty hospitals exist in the United States, with many focusing on cardiac care. Although specialty hospitals have the potential to improve care by focusing considerable clinical expertise and resources for the care of a limited spectrum of disease, empirical evidence that demonstrates improved outcomes is minimal or potentially biased because of challenges of adequate risk adjustment for the somewhat debated presence of lower-risk patients treated by specialty hospitals compared with their general hospital counterparts.4–6

In the absence of substantial data justifying better outcomes, or detailed economic analyses of value, significant issues surrounding specialty cardiac hospitals include: (1) Do specialized facilities lower costs, increase quality, or both? (2) Do specialty facilities have a negative financial impact on the surrounding community’s “general” hospitals? and (3) Do specialty cardiac hospitals increase or decrease access to care?

Critics of specialty hospitals have claimed that specialty hospitals may solicit or “cherry pick” more profitable cases, concentrating on patients with private insurance and leaving the sicker and poorer patients to be treated in community hospitals.7,8 Because cardiac services can account for 25% to 40% of a hospital’s net revenue, the consequences of specialty cardiac hospitals selecting financially desirable cases can potentially have a negative financial impact on surrounding community hospitals.7 Thus, in the absence of data, public policy has been split, predominantly along party lines, as to whether the specialty hospital trend should be nurtured or outlawed. In general, Republicans promote market-based solutions, unfettered by government constraints, whereas Democrats and the general hospital community share the belief that the self-referral of patients by physician-owners to specialty hospitals represents unfair competition and should be strictly limited and controlled, if not prohibited.9

Forced to deal with this issue in the absence of adequate data, Congress, in the Medicare Prescription Drug, Improvement, and Modernization Act of November 2003, imposed an 18-month moratorium on the development of new specialty hospitals; this act was subsequently further extended through the recommendation of the Medicare Payment Advisory Commission (MedPAC).10 During this time, a MedPAC study found that specialty hospitals do not have lower costs per case than community hospitals, that specialty hospital providers concentrate on certain diagnosis-related groups and treat relatively low-severity patients within them, and, most important, that the specialty hospital proliferation has had little adverse impact thus far on community hospitals. Thus, although MedPAC noted that “specialty hospitals may be an important competitive force that promotes innovation and may be an appropriate response to physician frustration with hospitals’ responsiveness and desire for control,”9,10 MedPAC recommended a number of changes to the Medicare inpatient payment system to reduce incentives for patient selection. These included the creation of diagnosis-related group rates that more accurately reflect the costs of caring for patients of varying illness severity and monitoring of “gain-sharing arrangements” (ie, arrangements where hospitals and physicians agree to share in cost savings that arise from efforts to modify system changes in reengineering clinical care) to embody patient safeguards to protect quality of care and minimize incentives for referrals.10 The political story continued in August 2006, when the Centers for Medicare and Medicaid Services released their report, required by the Deficit Reduction Act, to address key issues related to physician investment in specialty hospitals.1 In that report, the Centers for Medicare & Medicaid Services proposed better alignment of payments with costs of care, implementation of demonstration programs to support better hospital–physician collaboration, provision of emergency services for patients regardless of ability to pay, transparency in hospital investment, enforcement of Stark and antikickback rules for improper investment, and enforcement of the previous 18-
month Medicare Prescription Drug, Improvement, and Modernization Act moratorium. Although potential abuses of the investment arrangements by physician-owners might have included the proportionality of investment return, lack of evidence of bona fide investment, and limited provision of care to Medicaid and uninsured patients (charity cases) by specialty hospitals, the Centers for Medicare and Medicaid Services discovered no significant abuses, although they did note that community hospitals were more likely to offer emergency services and provide a higher level of charity and Medicaid care than specialty hospitals. Remarkably, the majority of these reports to date fail to fully address the assessment of the quality of care delivered by specialty hospitals through meaningful patient outcomes and ideally, from a health policy viewpoint, the cost-effectiveness or value of care at such facilities.

**Quality of Care at Specialty Cardiac Hospitals**

Until this issue of *Circulation*, examination of the quality of delivered care at specialty cardiac hospitals has focused on procedural outcomes without attention to the more complex disease management of acutely ill patients. Even given the presence of marked national variation in the use of revascularization procedures, appropriateness of revascularization has also not been scrutinized. As to evaluation of revascularization procedures, appropriateness of revascularization outside of their use for primary reperfusion of acute myocardial infarction and high-risk acute coronary syndromes (not reported in the present paper), revascularization procedures have never been scrutinized. As to evaluation of procedural outcomes, Cram and colleagues conducted a retrospective cohort study of 42,737 Medicare patients undergoing percutaneous coronary intervention and 26,274 undergoing coronary-artery bypass grafting (CABG) during 2000 and 2001 in specialty and general hospitals in the United States. They found that patients treated at specialty hospitals were less ill, with lower predicted risks of death (2.1% versus 3.1% for percutaneous coronary intervention and 5.0% versus 5.8% for CABG; $P<0.001$ for both comparisons) and similar risk-adjusted mortality after percutaneous coronary intervention (0.89, $P=0.39$), although a slightly reduced mortality rate for CABG was observed (odds ratio 0.84, $P=0.05$). However, when hospitals were stratified according to CABG volumes, even this modest difference in outcomes dissolved, echoing the failure of specialty hospitals to improve the outcomes after CABG and the potential of these hospitals to have worse outcomes in patients with more severe comorbid disease. Thus, until now, the important public policy discussions have taken place with minimal data to support an advantage of specialty hospital care over that provided by general hospitals.

In this issue of *Circulation*, Nallamothu and colleagues have provided initial data about more complex disease management (acute myocardial infarction and congestive heart failure), as opposed to procedures alone, and its association with 30-day survival. Using 2003 Medicare data and state-of-the-art statistical methods, the authors constructed hierarchical regression estimates of 30-day standardized mortality ratios and risk-standardized mortality rates for congestive heart failure and acute myocardial infarction at 16 cardiac and 121 peer general hospitals. Congruent with previous studies, they found that the burden of illness and comorbidity was substantially less at specialty as compared with general hospitals, which suggests that specialty hospitals are able to capture a “healthier” patient population from the community. Yet even after adjustment with a widely accepted risk adjustment model, they found that, on average, specialty hospitals had better 30-day mortality than their general hospital peers. Importantly, however, the authors found substantial overlap between the standardized mortality ratios of specialty and general hospitals, which suggests that no clear generalizations about the quality of care, based solely on the specialty designation of the hospital, can be made.

Some may legitimately argue that the observed differences may be caused by limitations in potential risk adjustment from administrative data. In fact, because myriad observed differences favor a better 30-day survival at specialty hospitals, even more prognostically important factors likely exist that were not measured and adjusted for. Yet, if we assume for the moment that differences in outcomes exist independent of patient characteristics, then it seems important to determine what it is that the specialty hospitals were doing to account for their better observed outcomes. Is it their processes of care (not examined in the present report), the motivation of their physicians, the training of their staff, or some other characteristic of care? An important opportunity for the authors would be to extend their study to include process-of-care measures associated with higher quality of care to examine whether these account for some of the observed differences, although previous studies have suggested a limited association of these measures with short-term survival. Identifying the mediators of improved outcomes at better-performing hospitals and sharing them with poorer-performing hospitals may be an important opportunity to improve care for all. In fact, Congress or MedPAC may consider participation in national efforts to benchmark and improve care through registry participation as a prerequisite for compensating care at specialty hospitals.

If the findings of a trend toward better outcomes at specialty hospitals are true, an important issue still remains about the actual value or “cost effectiveness” obtained in purchasing care from these providers. Substantially greater resources may be expended in providing care to these patients, such as higher rates of surgical and percutaneous revascularization. Outside of their use for primary reperfusion or high-risk acute coronary syndromes (not reported in the present paper), revascularization procedures have never been shown to improve short-term, 30-day survival. Were Nallamothu and colleagues to fully examine procedure use during acute myocardial infarction and heart failure hospitalizations, they would be able to provide crude comparisons between the resource utilization that provided the better outcomes. This is important because the “benefits,” or value, of more resource-intensive care is unclear, and although the outcomes may be better, the costs may be such that redirecting those resources to better secondary prevention and cardiac rehabilitation access to all patients may be a better public policy investment than the proliferation of specialty hospitals.

Thus, given the potential for specialty hospitals to improve patient care, demonstrated through the modestly encouraging evidence presented by Nallamothu and colleagues, public policy officers now need to develop more evidence-based decision making with regard to the regulation of specialty
facilities. We would propose, armed with the present findings, that no clear reason exists not to allow specialty hospitals to be developed. However, we would strongly encourage Congress to mandate that such hospitals contribute actively to quality improvement initiatives whereby they would participate in national studies through registries that seek to identify what components of specialty care at these hospitals most contribute to their outcomes. Such registries should prospectively collect detailed clinical data so that better risk adjustment for the unquestionably better health profile of patients treated at specialty hospitals can be more accurately accounted for in analyses. Use of appropriateness criteria related to cardiovascular imaging or coronary revascularization such as those developed by the American College of Cardiology and related professional societies to evaluate of the appropriateness of care could further offer opportunities for accurate assessment of quality and efficiency of care.\textsuperscript{13,14} Congress should also authorize studies that seek to determine the costs of care at specialty hospitals so that the true value of care at these institutions can be more objectively defined.

Finally, we all need to recognize that good care can and does occur at general hospitals, just as poorer care can also occur at specialty hospitals. The stakes related to the proliferation and growth of specialty heart hospitals are high, not only with the potential realignment of our national healthcare delivery system but also importantly for the cardiovascular clinical outcomes of our nation’s cardiac patients. Prospective tracking of the processes of care, appropriateness, and outcomes, and then sharing successful approaches broadly will allow the best opportunity to ensure better cardiovascular care for all Americans.

Disclosures

None.

References


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