United States General Accounting Office

GAO

Report to Congressional Requesters

October 2003

SPECIALTY HOSPITALS

Geographic Location, Services Provided, and Financial Performance

GAO-04-167

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SPECIALTY HOSPITALS

Geographic Location, Services Provided, and Financial Performance

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Highlights

Highlights of GAO-04-167, a report to the Honorable Bill Thomas, Chairman, Committee on Ways and Means, House of Representatives, and the Honorable Jerry Kleczka, House of Representatives

Why GAO Did This Study

The recent growth in specialty hospitals that are largely for-profit and owned, in part, by physicians, has been controversial.

Advocates of these hospitals contend that the focused mission and dedicated resources of specialty hospitals both improve quality and reduce costs. Critics contend that specialty hospitals siphon off the most profitable procedures and patient cases, thus eroding the financial health of neighboring general hospitals and impairing their ability to provide emergency care and other essential community services. Critics also contend that physician ownership of specialty hospitals creates financial incentives that may inappropriately affect physicians' clinical and referral behavior. In April 2003, GAO reported on certain aspects of specialty hospitals, including the extent of physician ownership and the relative severity of patients treated (GAO-03-683R).

For this report, GAO was asked to examine (1) state policies and local conditions associated with the location of specialty hospitals, (2) how specialty hospitals differ from general hospitals in providing emergency care and serving a community's other medical needs, and (3) how specialty and general hospitals in the same communities compare in terms of market share and financial health.

www.gao.gov/cgi-bin/getrpt?GAO-04-167.

To view the full product, including the scope and methodology, click on the link above. For more information, contact A. Bruce Steinwald at (202) 512-7101.

What GAO Found

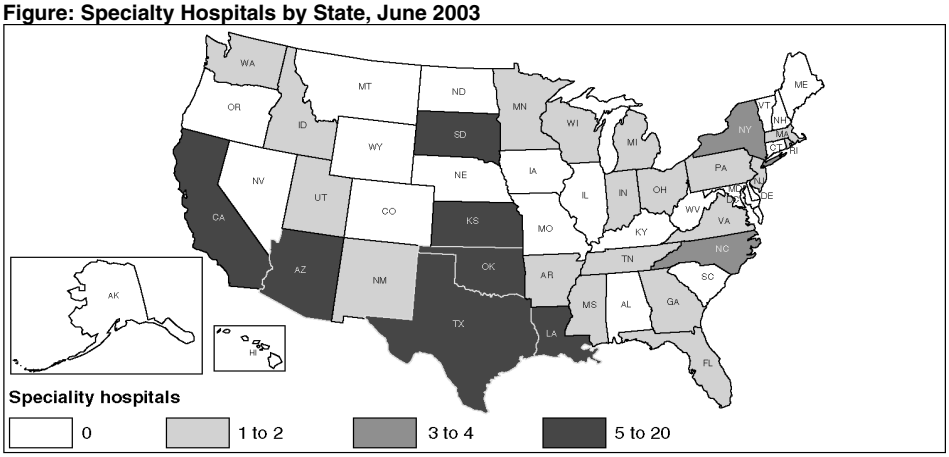
The 100 existing specialty hospitals identified by GAO—hospitals that focus on cardiac, orthopedic, or women's medicine or on surgical procedures—are geographically concentrated in areas where state policy facilitates hospital growth. Although 28 states have at least 1 specialty hospital, approximately two-thirds of the 100 specialty hospitals are located in 7 states. At least an additional 26 specialty hospitals were under development in 2003 and will tend to reinforce the existing pattern of geographic concentration. Specialty hospitals are much more likely to be found in states where hospitals are permitted to add beds or build new facilities without first obtaining state approval for such health care capacity increases.

Relative to general hospitals, specialty hospitals, as a group, were much less likely to have emergency departments, treated smaller percentages of Medicaid patients, and derived a smaller share of their revenues from inpatient services. For example, 45 percent of specialty hospitals, but 92 percent of general hospitals, had emergency departments. There were, however, important differences among the four specialty hospital types in these and other service indicators.

Although general hospitals typically have more beds than specialty hospitals, the focused mission of specialty hospitals often resulted in their treating more patients in their given fields of specialization. Financially, specialty hospitals tended to perform about as well as general hospitals did on their Medicare inpatient business. However, specialty hospitals tended to outperform general hospitals when the costs from all lines of business and the revenues from all payers were considered.

Officials from three specialty hospital organizations commented on a draft of this report. They generally agreed with the report's information and commented on key differences between specialty and general hospitals.

Figure: Specialty Hospitals by State, June 2003



Source: GAO.

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Abbreviations

AHA	American Hospital Association
AHPA	American Health Planning Association
ASHA	American Surgical Hospital Association
CMS	Centers for Medicare & Medicaid Services
CON	certificate of need
DRG	diagnosis-related group
HCR	hospital cost report
HCUP	Healthcare Cost and Utilization Project
HRR	hospital referral region
MDC	major diagnosis category
MedPAC	Medicare Payment Advisory Commission
MedPAR	Medicare Provider Analysis and Review
MSA	metropolitan statistical area
NSH	National Surgical Hospitals
OB/GYN	obstetric and gynecological
POS	Provider of Services File

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G A O
Accountability * Integrity * Reliability

United States General Accounting Office
Washington, DC 20548

October 22, 2003

The Honorable Bill Thomas
Chairman
Committee on Ways and Means
House of Representatives

The Honorable Jerry Kleczka
House of Representatives

Specialty hospitals, which tend to focus on patients with specific medical conditions or who need surgical procedures, represent a small but growing segment of the health care industry. Such hospitals are not an entirely new phenomenon, as children's and other types of specialty hospitals have existed for decades. However, the recent growth in specialty hospitals has been controversial because it has involved a new genre of hospitals. In contrast to earlier forms of specialty hospitals, this new genre is characterized by hospitals that are often for-profit and frequently owned, in part, by some of the physicians who work in them.

Advocates of these newer specialty hospitals contend that the focused mission and dedicated resources of specialty hospitals allow physicians to treat more patients needing the same specialty services than they could in general hospitals and that, through such specialization and economies of scale, the potential exists to improve quality and reduce costs.[1] In contrast, critics are concerned that specialty hospitals may concentrate on the most profitable procedures and serve patients that have fewer complicating conditions—leaving general hospitals with a sicker, higher-cost patient population. They contend that this practice of drawing away a more favorable selection of patients makes it more financially difficult for general hospitals to fulfill their broad mission to serve all of a community's needs, including charity care, emergency services, and stand-by capacity to respond to communitywide disasters. Critics have also raised concerns that physician ownership of specialty hospitals creates financial incentives that could inappropriately affect physicians' clinical and referral behavior.

[1]For the purposes of this report, general hospitals refer to those that are acute care, short-term, and nongovernmental.

In light of these concerns, you asked us to provide information about the newer genre of specialty hospitals. In response, we issued a report in April 2003[2] that provided information on four specialty hospital types—cardiac, orthopedic, surgical, and women's—regarding their share of the national hospital market, the extent to which physicians have ownership interests in these hospitals, and the patients served by these hospitals compared with those served by general hospitals, in terms of illness severity. This report provides additional information related to your request. Specifically, it examines (1) what state policies and local market conditions are associated with the location of specialty hospitals, (2) how specialty hospitals differ from general hospitals in providing emergency care and serving a community's other medical needs, and (3) how specialty and general hospitals in the same communities compare in terms of market share and financial health.

Our work focused on acute care hospitals that tended to treat patients for a limited group of diseases or conditions or that tended to perform surgical procedures. Specifically, we considered a hospital to be a specialty hospital if the diagnosis-related group (DRG) classification for two-thirds of its Medicare patients (or two-thirds of all of its patients where such data were available) fell into no more than two major diagnosis categories, such as diseases of the circulatory system (cardiac), or if at least two-thirds of its patients were classified in surgical DRGs. We excluded hospitals that specialized in providing long-term care or otherwise had missions that were largely distinct from the missions of short-term, acute care general hospitals.[3] We classified the hospitals that fit these criteria into five specialty types—cardiac, orthopedic, surgical, women's, and other specialty. The other-specialty category contained six hospitals that specialized in a variety of areas, such as eye and ear, nose, and throat procedures. Because summary statistics for such a diverse group would not be meaningful, we excluded these six hospitals from our analysis.

[2]U.S. General Accounting Office, *Specialty Hospitals: Information on National Market Share, Physician Ownership, and Patients Served*, GAO-03-683R (Washington, D.C.: Apr. 18, 2003).

[3]Thus, we excluded hospitals that specialized in providing rehabilitation or in treating mental disorders, alcohol or drug problems, respiratory conditions, or newborns and children.

The information in this report is derived from our analysis of hospital inpatient discharge data, responses to our 2003 survey of specialty hospitals, responses to our 2002 survey of general hospitals, and other data. We analyzed Medicare inpatient discharge data from all hospitals nationwide to help identify specialty hospitals. We also used Healthcare Cost and Utilization Project (HCUP) data on all patient discharges in 2000 from hospitals located in six states to help identify specialty hospitals.[4] These six states contained slightly more than one-fourth of the existing specialty hospitals that we identified nationwide. Our findings related to the percentage of each hospital's patients covered by Medicaid or Medicare, and hospitals' market shares are based on an analysis of HCUP data from urban specialty and general hospitals in these six states. Our findings related to hospitals' financial performance are based on fiscal year 2001 data that hospitals nationwide submitted to Medicare. These data include 55 of the 100 specialty hospitals we identified. (Although the 2001 data are the most recent available, many specialty hospitals were too new to be included.) Other findings in this report are based on hospitals' responses to the survey that we sent to all of the specialty hospitals that we identified or information that hospitals provided to Medicare or the American Hospital Association (AHA).[5] For more detail regarding our specialty hospital criteria and analysis methodology, see appendix I. Our work was performed from September 2002 through October 2003 in accordance with generally accepted government auditing standards.

Results in Brief

Hospitals that specialize in treating cardiac, orthopedic, or women's conditions or in performing surgery tended to be concentrated in certain geographic areas where state policy or local demographic conditions were favorable to hospital growth. Although 28 states had at least one specialty hospital, approximately two-thirds of the 100 specialty hospitals that we identified were located in seven states: Arizona, California, Kansas, Louisiana, Oklahoma, South Dakota, and Texas. The specialty hospitals

[4]HCUP is a federal-state-industry partnership sponsored by the Agency for Healthcare Research and Quality. We used HCUP's state inpatient databases from six states to include all hospitals in Arizona, California, New Jersey, New York, and North Carolina and from hospitals located in three regions in Texas.

[5]Eight existing specialty hospitals were not included in our survey either because they were not identified as specialty hospitals or because they were not identified as being among the type of specialty hospitals under consideration until after April 2003. However, we did contact these eight hospitals and the specialty hospitals that did not respond to our survey to obtain certain information, such as whether they had an emergency department.

that are planned to open over the next few months or years will reinforce this pattern of concentration. Approximately 60 percent of the 26 specialty hospitals under development that we identified as of June 2003 were located in California, Louisiana, and Texas. Of the 10 states that had one or more specialty hospitals under development, 9 already had at least 1 existing specialty hospital. All of the specialty hospitals under development, and 96 percent of those that opened in 1990 or later, are located in states where hospitals may add beds or build new facilities without first obtaining state approval for the hospital bed capacity increase.[6] Counties with populations that grew the fastest from 1990 through 2000 were somewhat more likely than slower growing counties to have had a specialty hospital open since 1990. However, there did not appear to be a consistent relationship between specialty hospital location and a relative abundance or shortage of local health care resources, as measured by physicians per capita or hospital beds per capita.

Relative to general hospitals, specialty hospitals, as a group, were much less likely to have emergency departments, treated smaller percentages of Medicaid patients, and derived a smaller share of their revenues from inpatient services. However, there were important differences among the four specialty hospital types in these and other service indicators. Seventy-two percent of the cardiac hospitals, 50 percent of the women's hospitals, 39 percent of the surgical hospitals, and 33 percent of the orthopedic hospitals reported having emergency departments. In contrast, 92 percent of general hospitals had emergency departments. Among specialty hospital types, there were substantial emergency department differences in terms of numbers of patients served, variety of conditions treated, and physician staffing. For example, of the hospitals that responded to our survey question on emergency department staffing, all of the cardiac hospitals—but only about one-third of the orthopedic and surgical hospitals—reported having a physician in the emergency department around the clock. Compared to general hospitals in the same urban areas, specialty hospitals in our HCUP sample tended to treat a lower percentage of Medicaid patients among all patients with the same types of conditions. For example, Medicaid patients constituted 3 percent of the cardiac patients at cardiac hospitals, but 6 percent of the cardiac patients at area general hospitals. The results were more mixed for Medicare patients. Cardiac hospitals in our HCUP sample treated a higher percentage of Medicare patients relative to area general hospitals, while the percentage

[6]About half of all states did not have such regulations.

of Medicare patients at other specialty hospital types was lower or about the same relative to area general hospitals. Differences also appeared in the mix of inpatient and outpatient services. Cardiac and women's hospitals derived the majority of their revenues from inpatient services, while orthopedic and surgical hospitals derived the majority of their revenues from outpatient services. Overall, inpatient services accounted for about 46 percent of revenues at specialty hospitals and about 57 percent of revenues at general hospitals.

In many cases, specialty hospitals in our HCUP sample treated more patients than the comparable departments at many area general hospitals. For example, one cardiac hospital treated 4,000 cardiac patients in 2000, approximately double the median number of cardiac patients treated at the 26 general hospitals in the same urban area. Each of the other 6 cardiac hospitals also treated more cardiac patients than were treated at the median general hospital in its area. The vast majority of orthopedic and women's hospitals in the HCUP sample were also larger than at least half of the relevant general hospitals' departments in the same urban areas. However, two of the three surgical hospitals in our HCUP sample treated relatively few cases. Although there was substantial variation in the market share of individual specialty hospitals, the median cardiac hospital was responsible for 15 percent of the cardiac cases treated in its urban area. Orthopedic, surgical, and women's hospitals had median market shares that ranged from 4 percent (surgical hospitals) to 8 percent (women's hospitals). The financial performance of specialty hospitals tended to equal or exceed that of general hospitals in fiscal year 2001. The 55 specialty hospitals with available financial data tended to perform better than general hospitals when revenues and costs from all lines of business and all payers were included. When the focus was limited to Medicare inpatient business only, specialty hospitals appeared to perform about as well as general hospitals.

We obtained comments from officials representing the American Surgical Hospital Association (ASHA)—a specialty hospital association—and from officials representing the MedCath Corporation and National Surgical Hospitals (NSH)—two major specialty hospital chains. The officials generally agreed with the information in our report and offered their views on reasons for key differences between specialty and general hospitals. Their comments largely pertained to our findings regarding hospital location, presence and utilization of emergency departments, and hospitals' financial performance.

Background

Specialty hospitals have become a subject of debate among health care policymakers. One issue concerns physician ownership of specialty hospitals and whether such ownership might inappropriately affect physicians' clinical decision-making and referral behavior. A related issue concerns the potential for specialty hospitals to benefit financially by treating patients who are less severely ill, and therefore less costly, while leaving general hospitals responsible for a mix of patients who need more care and are more expensive to treat. Our April 2003 report provided information on both issues: the extent of physician ownership at specialty hospitals and the relative severity of patients' illnesses at specialty and general hospitals.[7]

Physician Self-Referral Law and Hospital Payment Rules Provide Context for Issues Regarding Specialty Hospitals

Much of the concern about specialty hospitals centers on physician ownership issues. Federal law generally prohibits physicians from referring Medicare patients for specific health care services to facilities in which they (or their immediate family members) have financial interests.[8] This prohibition, a key component of the Medicare self-referral or Stark law (named after its chief sponsor in the House of Representatives, Representative Pete Stark) was enacted after several studies found that physicians with ownership interests in separate clinical laboratories, diagnostic imaging centers, or physical therapy providers tended to make more referrals to them and order substantially more services at higher costs.[9]

The Stark law contains an exception that is relevant in the case of referrals to specialty hospitals. The law includes an exception that permits physicians who have an ownership interest in an entire hospital and who also are authorized to perform services there to refer patients to that hospital.[10] The premise is that any referral or decision made by a physician who has a stake in an entire hospital would produce little personal economic gain because hospitals tend to provide a diverse and large group

[7] GAO-03-683R.

[8] 42 U.S.C. § 1395nn(a)(1)(A) (2000).

[9] U.S. General Accounting Office, *Medicare: Referrals to Physician-Owned Imaging Facilities Warrant HCFA's Scrutiny*, GAO/HEHS-95-2 (Washington, D.C.: Oct. 20, 1994). Jean Mitchell and Elton Scott, "Physician Ownership of Physical Therapy Services," *Journal of the American Medical Association*, vol. 268, issue 15 (Oct. 21, 1992).

[10] 42 U.S.C. § 1395nn(d)(3) (2000).

of services. However, the Stark law does prohibit physicians who have ownership interest only in a hospital subdivision from referring patients to that subdivision. With respect to specialty hospitals, the concern exists that, as these hospitals are usually much smaller in size and scope than general hospitals and closer in size to hospital departments, the exception to Stark could allow physician owners to influence their hospitals'—and therefore their own—financial gain through practice patterns and referrals.

The question of favorable patient selection—the contention that specialty hospitals treat a more financially favorable selection of patients as compared to general hospitals—has added to the debate about the advantages and drawbacks of specialty hospitals. This issue is linked to the way hospitals are paid. The fixed-rate, lump-sum payments that Medicare and many other health care payers typically make to hospitals for inpatient care for patients with a given diagnosis, regardless of the costs of serving particular patients, are designed to promote efficiency by discouraging hospitals from providing unnecessary services as a way to boost revenues. However, these lump-sum payments foster undesirable incentives, as hospitals may gain financially by serving a disproportionate share of lower-cost patients with the same diagnoses. Medicare's hospital payment system rules illustrate this principle.

Under its system of prospective payments, Medicare pays a predetermined rate for each hospital discharge, based on the patient's diagnosis and whether the patient received surgery. In other words, the payments reflect an average bundle of services that the beneficiary is expected to receive as an inpatient for a particular diagnosis. Discharges are classified according to a list of DRGs. DRG payment rates are based on the expected cost of the diagnosis group's typical case compared with the cost for all Medicare inpatient cases. The DRG payment is not adjusted for within-DRG differences in severity of illness.[11] Therefore, hospitals have a financial incentive to treat as many patients as possible whose costs are low relative to the costs of the average patient in each DRG.

Our April 2003 study found that 21 out of 25 specialty hospitals treated a lower percentage of patients who were severely ill compared with patients

[11]An "outlier" policy exists to make additional payments to hospitals when their costs for a particular patient are extraordinarily high compared with the DRG rate for that patient's diagnosis group.

in the same diagnosis categories treated at general hospitals in the same urban areas. For example, in an urban area in Texas, 3 percent of an orthopedic hospital's patients with that hospital's most common diagnoses were classified as severely ill, as compared with 8 percent of patients with the same diagnoses treated by the area's more than four dozen general hospitals. In an urban area in Arizona, about 17 percent of a cardiac hospital's patients with that hospital's most common diagnoses were classified as severely ill, as compared to 22 percent of patients with the same diagnoses treated by the area's more than two dozen general hospitals. Not all specialty hospitals treated patients who were, by comparison, less sick. Two of the 25 specialty hospitals treated a higher percentage of severely ill patients and two others treated about the same percentage as area general hospitals. In examining the illness severity differences between specialty and general hospitals, we did not determine the clinical or economic importance of these differences.

Specialty Hospital Types Vary in Ownership Arrangements and Medicare Spending

For-profit status is a salient characteristic of specialty hospitals we identified. More than 90 percent of the specialty hospitals that have opened since 1990 were for-profit. Overall, 74 percent of specialty hospitals are for-profit, as compared to about 20 percent of all general hospitals. (See table 1.) For-profit status varied somewhat by specialty type, ranging from 78 percent of orthopedic hospitals to 65 percent of women's hospitals.

Table 1: Percentage of For-profit and Nonprofit Hospitals, 2003

	Specialty hospitals	Specialty hospitals opened 1990-2003	General hospitals
For-profit	74.0	92.8	20.1
Nonprofit	26.0	7.2	79.9

Sources: AHA, Centers for Medicare & Medicaid Services (CMS), and GAO.

Note: We determined each hospital's profit status from AHA's Annual Survey (2001) and the CMS Provider of Services File (POS) (2003). If these sources did not include information on a specialty hospital's profit status, we contacted that hospital's administrator.

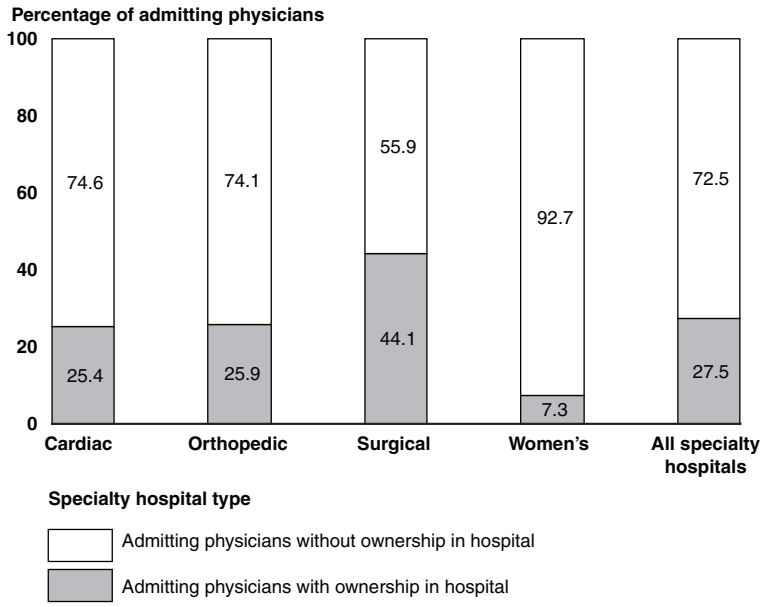
In our April 2003 report, we found that 70 percent of the more than 100 specialty hospitals in existence or under development had some degree of physician ownership.[12] Among specialty hospitals with any degree of physician ownership, physicians' combined ownership shares averaged slightly more than 50 percent of the hospital. Physicians' combined ownership tended to be somewhat smaller at cardiac hospitals (31 percent) and larger at surgical hospitals (70 percent). The degree of individual physician ownership varied by hospital, but was generally low. At approximately half of all specialty hospitals with physician ownership, the average share owned by an individual physician was less than 2 percent. The share of a specialty hospital owned in the aggregate by the physicians in a revenue-sharing group practice could be much higher. At more than half of the specialty hospitals with physician owners, physicians in a single group practice owned more than 25 percent of the hospital.

The majority of physicians who worked in specialty hospitals had no ownership interest in the facilities. Overall, approximately 73 percent of physicians with admitting privileges to specialty hospitals were not investors in their hospitals.[13] (See fig. 1.) The percentage of admitting physicians who were investors varied by specialty hospital type, ranging from about 7 percent at women's hospitals to about 44 percent at surgical hospitals.

[12]Physician ownership information was self-reported by hospitals and does not reflect ownership by physician family members.

[13]Available data did not provide information on the proportion of patients admitted by owners compared with those admitted by nonowners.

Figure 1: Median Percentage of Admitting Physicians with Ownership in Specialty Hospitals, by Specialty Hospital Type, 2003



Source: GAO.

Note: Data are from GAO's specialty hospital survey (2003).

We identified three basic business structures for specialty hospitals. Our survey results indicated that about one-third of specialty hospitals were independent. Most of these hospitals were orthopedic or surgical and 76 percent had some degree of physician ownership. Approximately one-third of specialty hospitals were owned in part by a specialty hospital chain. Among this group, most hospitals were cardiac or orthopedic and 76 percent had some degree of physician ownership. The remaining one-third of specialty hospitals were owned or operated in part by local general hospitals. Almost half (48 percent) of the hospitals in this last group, which varied in specialty type, had some degree of physician ownership.

In 2001, specialty hospitals accounted for approximately $871 million, or 1 percent, of Medicare's spending on hospital inpatient services. Nearly two-thirds of this amount went to cardiac hospitals. (See table 2.)

Table 2: Medicare Inpatient Spending at Specialty and General Hospitals, by Hospital Type, Fiscal Year 2001

	Number of hospitals	Total Medicare inpatient spending (millions)	Distribution of Medicare inpatient spending at specialty hospitals (percentage)
Specialty hospitals	78	$870.8	100.0
Cardiac	15	540.5	62.1
Orthopedic	31	159.3	18.3
Surgical	16	76.2	8.7
Women's	16	94.8	10.9
General hospitals	4,908	88,507.2	NA

Source: CMS.

Notes: Medicare spending data are from the CMS Medicare Provider Analysis and Review (MedPAR) file for fiscal year 2001. Some of the 100 specialty hospitals that we identified opened too recently to be included in this data file.

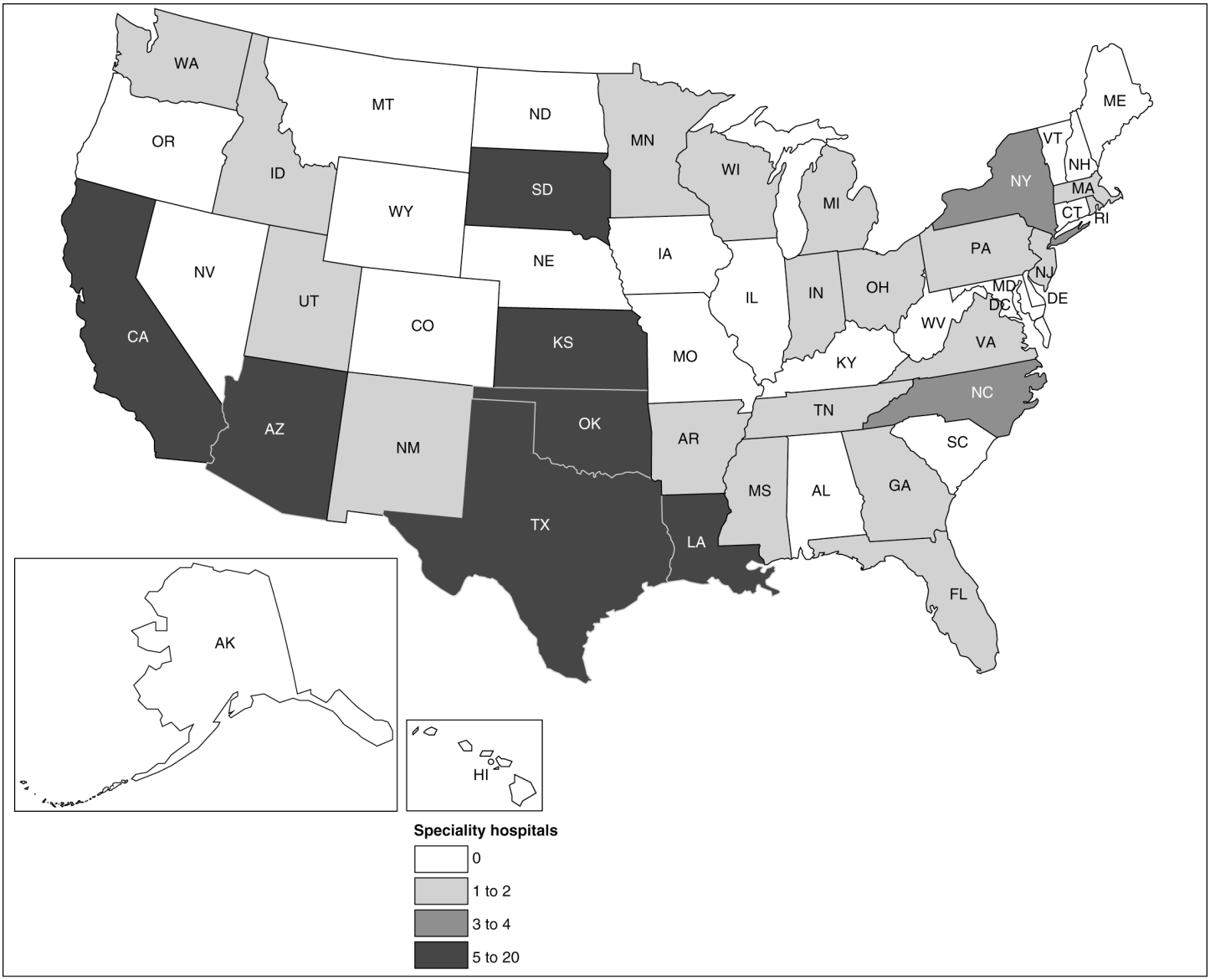
Specialty Hospitals Clustered in Areas Where State Policy and Local Demographic Conditions Favor Growth

Although 28 states had at least one existing specialty hospital, about two-thirds of the 100 specialty hospitals we identified were located in 7 states. The specialty hospitals that are planned to open over the next few months or years will reinforce this pattern of concentration. Specialty hospital location was associated with regulatory and demographic conditions that may facilitate or encourage hospital development.

Specialty Hospitals Exist in Particular States

Specialty hospitals are concentrated in seven states: Arizona, California, Kansas, Louisiana, Oklahoma, South Dakota, and Texas. Texas, with 20 specialty hospitals, had almost twice as many specialty hospitals as the state with the second highest number of specialty hospitals, California, with 11. States such as Oklahoma (9), Kansas (8), and South Dakota (7), although smaller in area and population than California, had nearly as many specialty hospitals. The remaining 21 states with specialty hospitals had between 1 and 4 specialty hospitals each. (See fig. 2.)

Figure 2: Specialty Hospitals by State, June 2003



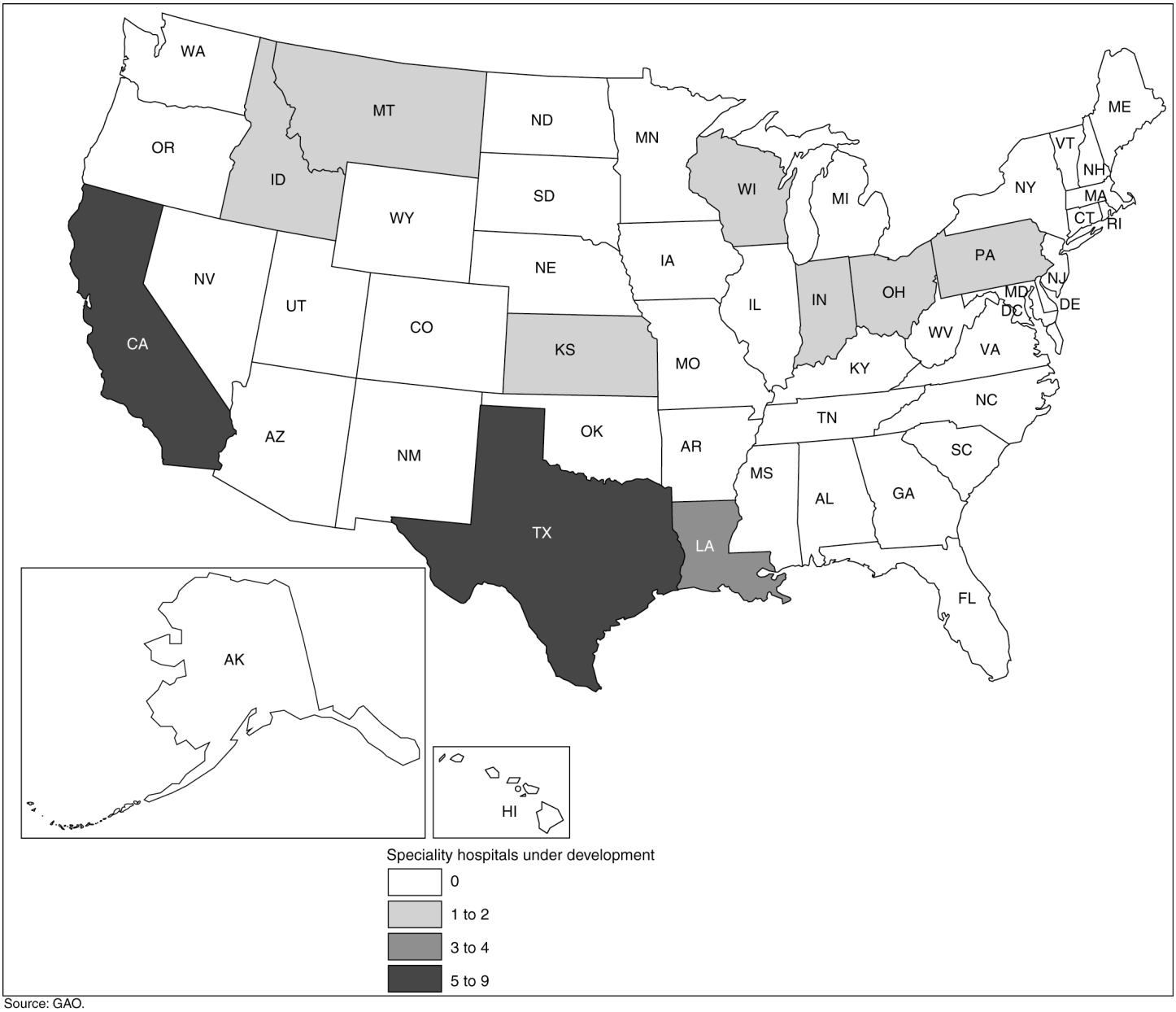
Sources: CMS, GAO, and HCUP.

Note: Data are from HCUP (2000), the CMS MedPAR file for fiscal year 2001, and GAO contacts with industry groups and specialty hospital chains.

The specialty hospitals that are planned to open over the next few months or years will tend to reinforce the existing pattern of geographic concentration. In June 2003, at least 26 specialty hospitals were under development in 10 states. (See fig. 3.) Nine of the 10 states that had one or more specialty hospitals under development already had at least 1 existing specialty hospital. About 60 percent of specialty hospitals under development were located in three states: Texas had 7; California, 5; and Louisiana, 4. Seven other states had 1 or 2 specialty hospitals that were under development as of June 2003. Based on the specialty hospitals known to be under development, the number of surgical hospitals will increase by 65 percent and the number of cardiac hospitals will increase by approximately 40 percent in the next few months or years. Seven cardiac hospitals, 2 orthopedic hospitals, and 17 surgical hospitals are under development.[14]

[14]We did not have access to information that would enable us to determine the number of women's hospitals under development, if any.

Figure 3: Specialty Hospitals under Development by State, June 2003



Source: GAO.

Note: Data are from GAO contacts with industry groups and specialty hospital chains.

Specialty Hospitals Tend to Locate in States That Do Not Restrict Hospital Growth

The location of specialty hospitals is strongly correlated to whether states allow hospitals to add beds or build new facilities without first obtaining state approval for such health care capacity increases. All of the specialty hospitals that are under development and 96 percent of the specialty hospitals that opened from 1990 to June 2003 are located in such states. (See table 3.) State requirements for prior approval to increase health care capacity are commonly referred to as certificate of need (CON) laws or requirements. Federal legislation enacted in 1975 to promote comprehensive planning and development of hospitals and other health care resources conditioned funding to states on their establishment of CON requirements.[15] At that time, many policymakers contended that CON requirements could prevent the construction of unnecessary capacity and help control health care costs. CON opponents argued that such requirements could stifle competition and lead to higher health care costs. Whether CON requirements achieved their objectives was inconclusive,[16] and in 1986 the federal legislation was repealed.[17] Subsequently, several states dropped their CON requirements.[18] In 2002, 37 states maintained CON requirements to varying degrees.[19] Overall, 83 percent of all specialty hospitals, 55 percent of general hospitals, and 50 percent of the U.S. population are located in states without CON requirements.[20]

[15]National Health Planning and Resources Development Act of 1974, Pub. L. No. 93-641, 88 Stat. 2225 (1975).

[16]Joshua M. Weiner, The Urban Institute, *Controlling the Supply of Long-Term Care Providers at the State Level* (Washington, D.C.: December, 1998).

[17]Health Care Quality Improvement Act of 1986, Pub. L. No. 99-660, § 701(a), 100 Stat. 3784, 3799.

[18]Maine Department of Human Services, *Certificate of Need Project Report* (Augusta, Maine, March 2001). http://www.state.me.us/dhs/ (downloaded July 1, 2003).

[19]Includes the District of Columbia. Approximately 30 different types of CON requirements were present in state regulations in 2002, such as those for acute-care beds, nursing homes, and magnetic resonance imaging scanners. In 2002, 27 states had CON requirements for acute-care beds.

[20]Population data are from the 2000 U.S. Decennial Census.

Table 3: Percentage of Hospitals and Population, by State CON Requirement Status, June 2003

	Specialty hospitals	Specialty hospitals opened 1990-June 2003	Specialty hospitals under development	General hospitals	U.S. population
Non-CON states	83	96	100	55	50
CON states	17	4	0	45	50

Sources: American Health Planning Association (AHPA), AHA, GAO, and the U.S. Census Bureau.

Specialty Hospital Location Associated with Population Density and Growth

Eighty-five percent of specialty hospitals are located in urban areas,[21] a distribution that is roughly proportional to that of the U.S. population. An urban location was slightly more prevalent among women's hospitals (90 percent) and slightly less prevalent among cardiac hospitals (78 percent).

Specialty hospitals also tended to locate in counties where the population growth rate from April 1990 through April 2000 far exceeded the national average of 11.1 percent. About 43 percent of specialty hospitals that opened in 1990 or later are located in counties where the population grew by 20 percent or more between the 1990 and 2000 decennial censuses.[22] There did not appear to be a consistent relationship between specialty hospital location and a relative abundance or shortage of local health care resources, as measured by physicians per capita or hospital beds per capita.[23]

[21]Areas within federally designated metropolitan statistical areas (MSA) were considered urban; areas outside of MSAs were considered rural.

[22]These rapid-growth counties account for 25 percent of the U.S. population.

[23]*The Dartmouth Atlas of Health Care*, "Chapter Two Table: Acute Care Hospital Resources and the Physician Workforce by Hospital Referral Region," (Hanover, N.H.: Center for Evaluative Clinical Sciences, Dartmouth Medical School, 1996), http://www.dartmouthatlas.org/tables/99table2.xls (downloaded June 1, 2003).

The Four Specialty Hospital Types Differed from General Hospitals in Size and Scope but Also Differed from One Another

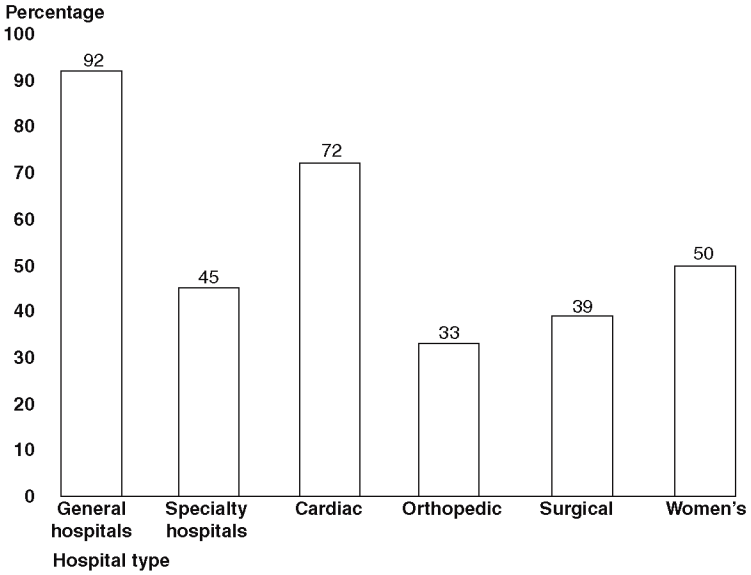
Relative to general hospitals, specialty hospitals, as a group, were much less likely to have emergency departments, saw fewer patients in their emergency departments, treated smaller percentages of Medicaid patients, and derived a smaller share of their revenues from inpatient services. However, there were important differences among the four specialty hospital types in these and other service indicators, such as the extent to which hospitals' emergency departments focused on certain medical conditions or procedures.

Hospitals Differed in the Provision of Emergency Care

Several differences with respect to emergency departments highlight the contrast between specialty hospitals and general hospitals and also the contrast among the four types of specialty hospitals. The four specialty hospital types were less likely than general hospitals to have emergency departments, but the prevalence of emergency departments varied by specialty hospital type.[24] Overall, 45 percent of specialty hospitals had emergency departments, compared with 92 percent of general hospitals. (See fig. 4.) The prevalence of emergency departments in specialty hospitals ranged from 72 percent of the cardiac hospitals to 33 percent of the orthopedic hospitals.

[24]Whether a hospital has an emergency department may depend, in part, on whether a facility is obliged to have an emergency department under state hospital licensing requirements, which vary by state.

Figure 4: Percentage of Specialty and General Hospitals with Emergency Departments, 2003



Sources: AHA, CMS, and GAO.

Note: Data for general hospitals are from AHA's Annual Survey (2001). Specialty hospital data are from GAO's specialty hospital survey (2003), GAO's contacts with hospital administrators, and the CMS POS file (2003).

The emergency departments at specialty hospitals treated less than one-tenth the median number of patients treated at the emergency departments of general hospitals. (See table 4.) The number of patients treated at general hospitals' emergency departments remained greater when hospital size was accounted for: the median number of patients treated per bed per month was about 12 at general hospitals' emergency departments and slightly less than 3 at specialty hospitals' emergency departments.

Table 4: Emergency Department Utilization at Specialty and General Hospitals

	Median number of patients per month	Median number of patients per bed per month	Median percentage of emergency department visits in field of specialization
Specialty hospitals	225.0	2.9	75
Cardiac	329.0	4.8	57
Orthopedic	87.0	1.4	95
Surgical	15.0	1.4	93
General hospitals	2,636.1[a]	12.3[b]	NA

Source: GAO.

Notes: Data for specialty hospitals are from GAO's specialty hospital survey (2003). Data for general hospitals are from GAO's general hospital survey (2002), conducted for H*ospital Emergency Departments: Crowded Conditions Vary Among Hospitals and Communities*, GAO-03-460 (Washington, D.C.: Mar. 14, 2003), which included general hospitals in MSAs that had emergency departments in 2000. Of the 45 specialty hospitals that reported having emergency departments, 28 (62 percent) provided information on the number of patients treated. Because of the low response rate among women's hospitals (30 percent), the table reports the median number of emergency department patients only for 11 cardiac hospitals (85 percent responded), 6 orthopedic hospitals (50 percent responded), and 8 surgical hospitals (80 percent responded). The percentage of emergency department visits in the hospital's field of specialization is based on responses from 10 cardiac hospitals (77 percent responded), 6 orthopedic hospitals (50 percent responded), and 6 surgical hospitals (60 percent responded).

[a]Based on responses from 1,471 general hospitals.

[b]Based on responses from 1,271 general hospitals.

Based on the responses to our 2003 survey, the emergency departments at specialty hospitals often appeared to have missions that were focused on certain medical conditions or procedures. For example, 95 percent of the patients at orthopedic hospitals' emergency departments were orthopedic patients, and 93 percent of the patients at surgical hospitals' emergency departments were surgical patients. The median percentage of emergency department patients who fit within the hospital's field of specialization was lower at cardiac hospitals (57 percent).

Specialty hospital types varied in how many had a physician around-the-clock in their emergency departments. Overall, 63 percent of specialty hospitals that had emergency departments, and that responded to our staffing questions, reported having a physician staffing the department 24 hours a day. (See table 5.) Cardiac hospitals were the most likely to have 24-hour physician staffing. Eleven of the 13 cardiac hospitals responded to our survey question. All 11—100 percent—indicated that they had 24-hour physician staffing of their emergency departments. Response rates to the staffing question were far lower among other specialty hospital types—

approximately 60 percent of the orthopedic and surgical hospitals with emergency departments, and 30 percent of the women's hospitals with emergency departments, answered the staffing question. Among the surgical and orthopedic hospitals with emergency departments that did respond, one-third or less reported having a physician in the department 24 hours per day. Two of the three women's hospitals that provided staffing information reported having a physician in their emergency departments 24 hours per day.

Table 5: Physician Staffing in Emergency Departments at Specialty Hospitals, 2003

	Number of hospitals with emergency departments	Number of hospitals that provided emergency department staffing information	Number of hospitals with physicians in the emergency department 24 hours per day
Specialty hospitals	45	27	17
Cardiac	13	11	11
Orthopedic	12	7	2
Surgical	10	6	2
Women's	10	3	2

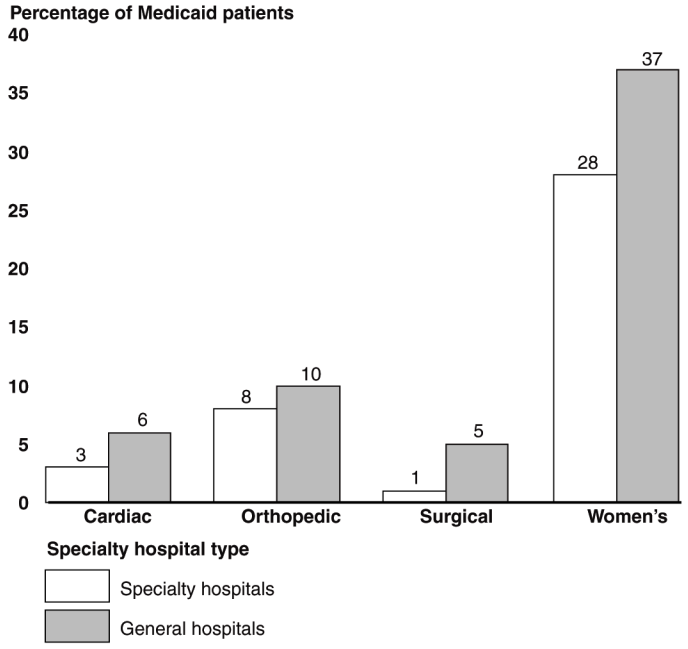
Source: GAO.

Note: Data are from GAO's specialty hospital survey (2003). Twenty-seven of the 45 specialty hospitals that reported having emergency departments answered the survey questions pertaining to emergency department staffing.

Hospitals Differed in Share of Public Patients Served and Revenue Generated from Inpatient Services

The contrast between specialty and general hospitals was also marked with respect to the share of public program inpatients treated and inpatient services provided. Relative to general hospitals in the same urban areas, specialty hospitals in our HCUP sample tended to treat a lower percentage of Medicaid inpatients among all patients with the same types of conditions. (See fig 5.) For example, Medicaid beneficiaries constituted 28 percent of obstetric and gynecological (OB/GYN) patients at women's hospitals, but 37 percent of the OB/GYN patients at area general hospitals.

Figure 5: Percentage of Patients Covered by Medicaid at Specialty and Area General Hospitals for Services in the Same Field of Specialization, 2000

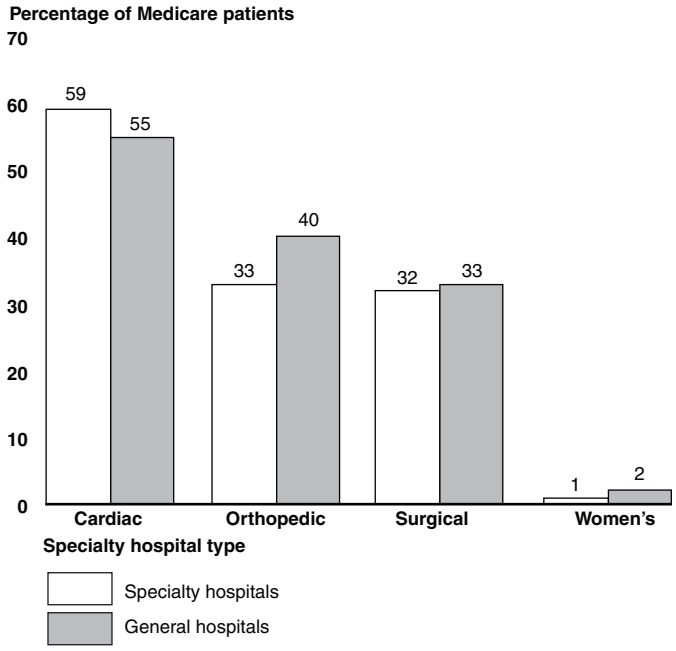


Sources: AHA, CMS, and GAO.

Note: Analysis based on HCUP data from six states. General hospitals in the same market areas as each type of specialty hospital were the basis for comparison.

The pattern for Medicare inpatients served differed somewhat from that for Medicaid patients. Relative to area general hospitals, cardiac hospitals tended to have larger shares of Medicare cardiac patients. (See fig. 6.) Medicare patients constituted similar shares of surgical patients at surgical specialty and area general hospitals and of gynecological patients at women's specialty and area general hospitals. In contrast, orthopedic hospitals served a lower percentage of Medicare orthopedic inpatients than did area general hospitals.

Figure 6: Percentage of Patients Covered by Medicare at Specialty and General Hospitals for Services in the Same Field of Specialization, 2000

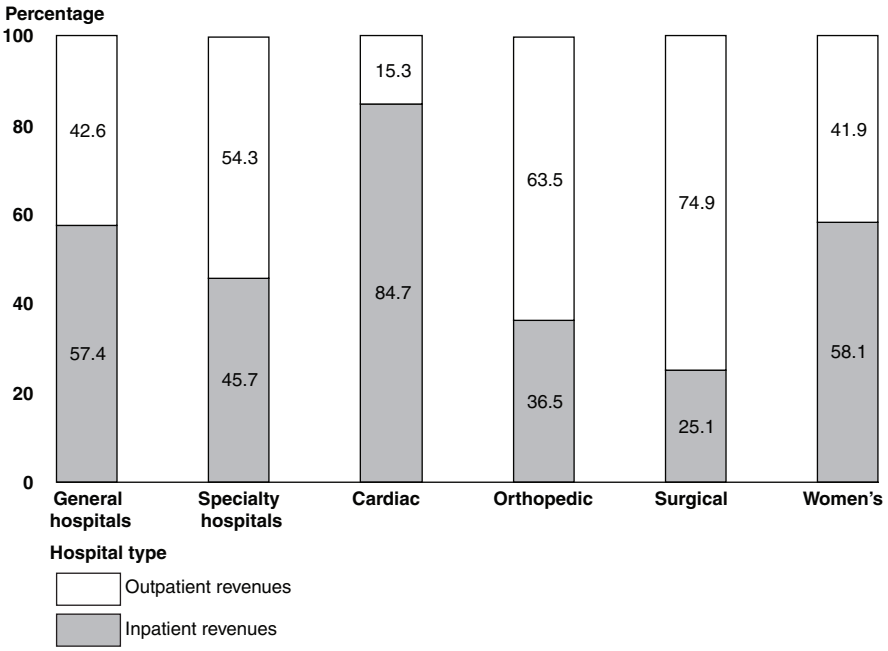


Source: HCUP.

Note: Analysis based on HCUP data from six states. General hospitals in the same market areas as each type of specialty hospital were the basis for comparison.

Dissimilarity between specialty and general hospitals was noticeable in the mix of inpatient and outpatient revenues. For the four specialty hospital types, hospitals that responded to our survey reported that inpatient revenues accounted for about 46 percent of their total revenues, compared with about 57 percent of total revenues for general hospitals. (See fig. 7.) However, percentage of inpatient business varied substantially by specialty hospital type. For example, about 25 percent of surgical hospitals' revenues were derived from their inpatient business. Their mix of services may, in part, reflect the fact that some of these hospitals started as ambulatory surgical centers—distinct facilities that perform outpatient surgery exclusively—and later added inpatient capacity. The percentage of inpatient revenues at orthopedic hospitals (approximately 37 percent) was somewhat higher than the percentage at surgical hospitals. Inpatient revenues made up about 58 percent of total revenues at the women's hospitals, which was similar to the proportion at area general hospitals (57 percent). In contrast, cardiac hospitals derived 85 percent of their revenues from their inpatient business.

Figure 7: Average Percentage of Inpatient and Outpatient Revenues at Specialty and General Hospitals, 2003



Sources: AHA and GAO.

Note: Data are from AHA's Annual Survey (2001) and GAO's survey of specialty hospitals (2003).

Specialty Hospitals Rivaled General Hospitals in Certain Market Share Measures and Financial Performance

Although a general hospital typically had more beds than a specialty hospital had, the focused mission of a specialty hospital often resulted in its treating more patients with a given condition. Financially, specialty hospitals overall tended to perform about as well as general hospitals did on their Medicare inpatient business. However, for-profit specialty hospitals did not do as well, on average, as for-profit general hospitals. When the costs from all lines of business and the revenues from all payers were considered, specialty hospitals tended to outperform general hospitals.

Within Their Fields of Expertise, Specialty Hospitals Often Treated More Patients Than Many General Hospitals

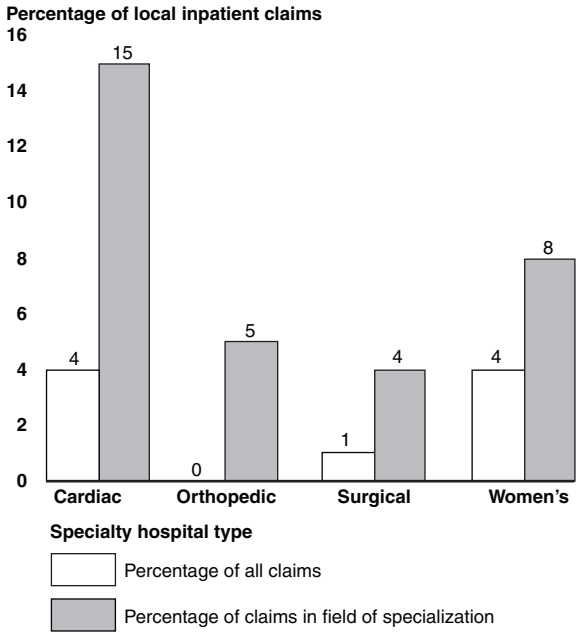
Specialty hospitals in our HCUP sample were generally not small relative to general hospitals when the comparison was based upon the number of patients treated for specific conditions. For example, 1 cardiac hospital treated nearly 4,000 cardiac patients in 2000. Among the 26 general hospitals that also treated cardiac patients in the same urban area, the median number treated was approximately 2,000. Each of the 7 cardiac hospitals in our HCUP sample treated more patients than the median general hospital's cardiac practice in the specialty hospitals' market areas. A similar relationship to general hospitals existed among the HCUP orthopedic and women's hospitals. Six of the 8 orthopedic hospitals and 6 of the 7 women's hospitals treated more patients than were treated in the comparable departments of the median general hospitals in their markets. In contrast, 2 of the 3 surgical hospitals performed fewer inpatient surgical procedures relative to the general hospitals in their markets.

In some cases, a specialty hospital treated far more patients with certain conditions than did any of the general hospitals in the same urban area. For example, 1 orthopedic hospital in our HCUP sample treated approximately 7,400 orthopedic patients in 2000. In contrast, the largest number of orthopedic patients treated at any of the 73 general hospitals in the same urban area was just over 3,000. In all, 4 of the 25 HCUP specialty hospitals—1 cardiac, 2 orthopedic, and 1 women's—had higher patient volumes than did the comparable departments at all of the general hospitals in their markets. These hospitals represent the extreme end of the relative size spectrum. The median cardiac and orthopedic hospitals treated somewhat more than twice the number of patients treated in the comparable departments of the median general hospital in their markets. The median women's hospital was about 80 percent larger in patient volume than the median comparable department at general hospitals in the area.

Specialty hospitals' market shares, measured as the percentage of inpatient claims in an urban area, were much higher when only claims within a particular specialty field were included instead of all inpatient claims. (See fig. 8.) In markets that had from 5 to 26 general hospitals that treated cardiac patients, cardiac hospitals had a median market share of 15 percent of the cardiac patients. The median market share was 8 percent among women's hospitals, in markets that contained from 7 to 86 general hospitals, and 5 percent among orthopedic hospitals, in markets that contained from 10 to 86 general hospitals. Surgical hospitals' median market share of 4 percent was the smallest among the four specialty hospital types. However, there was wide variation in the market shares of individual hospitals—especially among women's hospitals. For example, 1

women's hospital had a 2 percent market share while another had a 47 percent market share.

Figure 8: Median Percentage of Local Market Share, 2000



Source: HCUP.

Notes: Analysis based on HCUP data from six states. The percentage of all claims at orthopedic hospitals was less than 0.5.

Financial Performance of Specialty Hospitals Tended to Equal or Exceed That of General Hospitals

Financially, specialty hospitals tended to perform about as well as general hospitals did on their Medicare inpatient business in fiscal year 2001—the most recent year for which this information is available. Medicare inpatient margins—which are used to gauge a hospital's financial performance on Medicare inpatient business—averaged 9.4 percent at specialty hospitals and 8.9 percent at general hospitals.[25] (See table 6.) Among for-profit hospitals—both specialty and general hospitals—average Medicare inpatient margins were higher. However, for-profit general hospitals had average Medicare inpatient margins (14.6 percent) that exceeded those at for-profit specialty hospitals (12.4 percent).

[25]Medicare inpatient margins are computed as the ratio of Medicare inpatient revenue in excess of the cost of treating Medicare patients to Medicare inpatient revenue.

Table 6: Medicare Inpatient and Total Facility Margins at Specialty and General Hospitals, Fiscal Year 2001

	Medicare inpatient margins		Total facility all payer margins	
	Specialty hospitals	General hospitals	Specialty hospitals	General hospitals
All hospitals	9.4	8.9	6.4	3.1
For-profit hospitals	12.4	14.6	9.7	9.2

Source: CMS.

Note: Data are from CMS's Hospital Cost Report file, fiscal year 2001.

When revenues and costs from all lines of business and all payers were included, the average financial performance of specialty hospitals exceeded that of general hospitals. Total facility margins—constructed similarly to Medicare inpatient margins—averaged 6.4 percent among all specialty hospitals and 3.1 percent among all general hospitals. Among both specialty hospitals and general hospitals, the average total margin at for-profit hospitals was higher than the total margin among all hospitals.

Comments from Organizations Representing Specialty Hospitals and Our Evaluation

We obtained comments from officials representing ASHA—a specialty hospital association—and from officials representing the MedCath Corporation and NSH—two major specialty hospital chains. The officials generally agreed with the information in our report and offered their views on reasons for key differences between specialty and general hospitals. Their comments, summarized below, largely pertained to our findings regarding hospital location, presence and utilization of emergency departments, and hospitals' financial performance. Unless otherwise noted, the following comments reflect the positions of all three organizations.

In response to our finding that, on average, the number of physicians per capita and the number of hospital inpatient beds per capita are the same in communities with and without specialty hospitals, MedCath officials said that they have a national strategy in which they project communities' health care needs several years into the future and use the results to help them choose potential locations for new cardiac hospitals. MedCath officials said that this explains why specialty hospitals tend to locate in areas experiencing rapid population growth. An ASHA official said that, among the association's members, the decision to build a specialty

hospital begins with physicians in a community and their perception of the community's health care needs.

Specialty hospital representatives stressed that the existence and utilization of an emergency department is primarily a function of the mission of a particular hospital. They said that a specialty hospital might not include an emergency department if the hospital's intended role in a community does not call for one. NSH officials noted that nonprofit general hospitals receive tax advantages in return for providing certain community services, including emergency care. MedCath officials said that, because nonprofit hospitals are required to fulfill certain social needs, our comparisons involving emergency departments and treatment of Medicaid patients should have been made between for-profit specialty hospitals and for-profit general hospitals. ASHA officials added that state law may dictate whether a hospital has an emergency department.

MedCath officials noted that our results showed that, on average, specialty hospitals' margins are similar to for-profit general hospitals' margins. They said that this financial performance was the result of a business model that emphasizes efficiency and cost control in the delivery of quality health care.

Overall, MedCath officials said that our findings showed that specialty hospitals should be no cause for concern. Specifically, the officials said that there are relatively few specialty hospitals, specialty hospitals account for a very small fraction of total Medicare inpatient hospital spending, such hospitals are concentrated in a few states and in areas where there is a need for such hospitals, and their business model leads to profits that are similar to the profits earned by for-profit general hospitals. Representatives from all three organizations, while generally agreeing with the information in our report, emphasized the important role that specialty hospitals play in efficiently providing quality health care.

We agree that, on a national level, specialty hospitals have a small presence. However, in the communities in which they locate, specialty hospitals may treat a relatively large share of patients who have specific medical conditions or need specific medical procedures. For the share of the market that those patients represent, specialty hospitals are often among the larger competitors that general hospitals face. In addition, the number of specialty hospitals is growing rapidly. In the next few months or years, the number of specialty hospitals that we identified is expected to increase by at least 25 percent.

The policy issue regarding emergency care may be one that is focused more on access to such care and less on whether every specialty hospital should have an emergency department. Although some specialty hospitals—especially cardiac hospitals—provide at least a limited amount of emergency care, individuals who need emergency care typically must obtain treatment at general hospitals. Critics of specialty hospitals are concerned that such facilities may erode the financial health of general hospitals and impair their ability to provide emergency care and meet other basic community needs, such as stand-by capacity to respond to communitywide disasters. In this report, we did not attempt to determine the financial effect that specialty hospitals may have on neighboring general hospitals.

Finally, we previously reported that the 25 urban specialty hospitals that we studied in six states tended to treat patients who were less severely ill relative to patients treated at neighboring general hospitals. Because we did not analyze the economic impact of such a pattern, we cannot determine the extent to which the financial performance of specialty hospitals may be due to patient mix, the efficient delivery of health care, or other factors.

We are sending copies of this report to appropriate congressional committees and other interested parties. We will also make copies available to others upon request. This report will be available at no charge on GAO's Web site at http://www.gao.gov.

If you or your staffs have any questions, please call me at (202) 512-7101 or James Cosgrove at (202) 512-7029. Other contributors to this report include Hannah Fein, Zachary Gaumer, and Ariel Hill.

A. Bruce Steinwald
Director, Health Care—Economic
and Payment Issues

Appendix I: Scope and Methodology

This appendix provides additional information on the key aspects of our analysis. First, it lists the criteria we used to define specialty hospitals and the process we followed to identify them. Second, it discusses the survey used to collect a variety of information from the universe of specialty hospitals. Third, it describes key data sources and methodological approaches used in each subanalysis. Finally, it address issues related to data reliability and limitations.

Specialty Hospital Definition and Identification

Although a standard definition for a specialty hospital does not exist, a reasonable approach is to define specialty hospitals as those that predominately treat certain diagnoses or perform certain procedures. For this report, we classified a hospital as a specialty hospital if the data indicated that

- two-thirds or more of its inpatient claims were in one or two major diagnosis categories (MDC) or
- two-thirds or more of its inpatient claims were for surgical diagnosis-related groups (DRG).

Because our study focused on private, short-term acute care hospitals, we eliminated from consideration hospitals that were government-owned and those that tended to provide long-term care or otherwise had missions very different from those of short-term, acute care general hospitals. Thus, we excluded

- government-owned hospitals;
- hospitals for which the majority of inpatient claims were for MDCs that related to rehabilitation, psychiatry, alcohol and drug treatment, children, or newborns; and
- hospitals with fewer than 10 claims per bed per year.

Of the hospitals that met our criteria, 100 could be classified into four specialization categories: cardiac, orthopedic, surgical, and women's.[1] Twenty-six specialty hospitals were also identified as under development

[1]We eliminated hospitals that initially appeared to be specialty hospitals, but informed us through our survey that they did not meet our criteria for a specialty hospital.

and scheduled to open in the next few months or years.[2] An additional 6 hospitals specialized in a variety of other areas—such as eye or ear, nose, and throat procedures—but were not included in this analysis. For this report, we focused on the specialty hospitals in the four major categories listed above.

We applied our criteria to inpatient discharge data from two different data sources: the 2001 Medicare Provider Analysis Review (MedPAR) file and the 2000 Healthcare Cost and Utilization Project (HCUP) state inpatient data from six states.[3] Medicare and HCUP data both have distinct advantages and disadvantages. The MedPAR file contains patient information from virtually all of the nation's hospitals, but only for Medicare patients. Patients covered by Medicare are predominately age 65 or older. Consequently, some conditions—such as those that affect women of childbearing age—may be underrepresented, or not represented at all, in the MedPAR file. Thus, it is likely that an identification based on the MedPAR file undercount the number of hospitals that specialize in treating such conditions.

In contrast to Medicare data, HCUP data provide information on all of a hospital's patients. However, HCUP data are available for hospitals in only 29 states, and each state's data must be purchased separately. We obtained HCUP data from the following six states: Arizona, California, New Jersey, New York, North Carolina, and Texas.[4] These states were selected because Medicare data identified them as having potentially large concentrations of specialty hospitals.

To identify specialty hospitals that opened too recently to be included in the Medicare or HCUP data, we obtained information from the American Surgical Hospital Association, the American Federation of Hospitals, and

[2]The total number of identified specialty hospitals—both existing hospitals and those under development—is somewhat higher that the number we reported in April 2003. New industry information identified an additional 12 specialty hospitals—6 in existence and 6 under development. Also, 2 of the 18 hospitals originally classified as "other specialty" were reclassified as women's hospitals and included in our universe of existing hospitals. Specialty hospitals identified after April 2003 were not included in our survey, but we did obtain information on their location, profit status, and whether they had emergency departments.

[3]HCUP is a federal-state-industry partnership sponsored by the Agency for Healthcare Research and Quality.

[4]We obtained HCUP data on hospitals in three of Texas's five regions.

two national specialty hospital chains: National Surgical Hospitals and MedCath Corporation. These organizations also provided information on the 26 specialty hospitals that are under development.

2003 Specialty Hospital Survey

From January 2003 through March 2003, we conducted a survey of 100 cardiac, orthopedic, surgical, and women's hospitals that we identified as being operational. The survey gathered basic hospital address information and posed questions pertaining to the types of services offered at each hospital, hospital size, physician ownership, partnership structure, and the extent of emergency department services. Eighty percent of the specialty hospitals that received our survey responded.

Data Sources and Methodological Approach by Topic

Physician Ownership Information

Information pertaining to physician ownership of specialty hospitals was drawn from hospital responses to our 2003 specialty hospital survey. Among the questions related to physician ownership, hospital representatives were asked about the number of physician owners, the overall percentage of the hospital owned by physicians, the largest share owned by a single physician, the overall number of admitting physicians, and the largest combined percentage of the hospital owned by physicians in a single revenue-sharing group practice.

Business Structures

Information pertaining to the business structure of each specialty hospital was drawn from responses to our 2003 specialty hospital survey. Hospitals were grouped into one of three categories-independent freestanding hospitals, hospitals associated with a hospital chain, or hospitals associated with a local general hospital—based on their responses to questions regarding hospital affiliation.

Hospital Location

We identified state, county, and zip code location of existing specialty hospitals and those under development through a four-part process. First, we identified the name and identification number of each specialty hospital by using the Centers for Medicare & Medicaid Service's (CMS) MedPAR file or the HCUP dataset. Second, we located these names and

identification numbers in CMS's Medicare Provide of Services File (POS), because it contains the most current location information available. If these hospitals were not found in POS , we used the American Hospital Association's (AHA) 2003 Annual Survey for the same purpose. Third, when specialty hospitals were not found in the CMS or AHA databases, we located as much information as possible using the Internet or direct telephone contact. Fourth, our specialty hospital survey (2003) provided county location information and other missing address or location information.

Certificate of Need Requirements

Data from the American Health Planning Association (AHPA) were used to determine which states require hospitals to obtain state approval before they may add beds or build new facilities. State regulations that require prior approval for state health care capacity increases are commonly referred to as certificate of need (CON) requirements. AHPA's document, "2002 Relative Scope and Review Thresholds of CON Regulated Services," listed 37 states that have one or more of the approximately 30 different types of CON requirements. For the purposes of this report, we considered a state to have CON requirements if it required prior approval for new acute care beds.[5]

Health Care System Resources

We used data from the Dartmouth Atlas of Health Care to determine the number of available beds per capita and physicians per capita in a hospital referral region (HRR).[6] HRRs represent regional health care markets for tertiary medical care. Each HRR contains at least one hospital that performed major cardiovascular procedures or neurosurgery. We analyzed the overall relationship between specialty hospital location and health system resources by comparing the average number of beds and physicians per 1,000 people in HRRs with and without specialty hospitals.

[5]Examples of other types of CON regulated services include magnetic resonance imaging scanners, long-term care services, and organ transplant centers.

[6]*Dartmouth Atlas of Health Care*, "Chapter Two Table: Acute Care Hospital Resources and the Physician Workforce by Hospital Referral Region" (Hanover, N.H.: Center for Evaluative Clinical Sciences, Dartmouth Medical School, 1996), http://www.dartmouthatlas.org/tables/99table2.xls (downloaded June 1, 2003).

Provision of Emergency Care

We relied on several data sources to obtain information pertaining to the provision of emergency care at specialty and general hospitals. To determine whether a specialty hospital had an emergency department, we primarily relied upon the hospital's response to our specialty hospital survey. When that information was missing, we used the information contained in CMS's POS file or contacted the hospital's administrator. As a result, our finding regarding the percentage of specialty hospitals with emergency departments is based on data from all of the 100 specialty hospitals that we identified. The information pertaining to the existence of emergency departments at general hospitals was drawn from AHA's 2003 Annual Survey of Hospitals. Emergency department utilization data for specialty hospitals were obtained from hospital responses to the specialty hospital survey, while utilization data for general hospitals were drawn from our 2002 general hospital survey.[7] We obtained information on specialty hospitals' staffing of emergency departments from our specialty hospital survey. Comparable staffing information for general hospitals was not readily available.

Payer Sources

To determine the mean percentage of Medicare and Medicaid patients at specialty and general hospitals, we analyzed 2000 HCUP data from Arizona, California, New Jersey, New York, North Carolina, and three of five regions in Texas. Our analysis of HCUP data for these six states identified 25 specialty hospitals and 396 general hospitals in 18 urban areas.[8] For each specialty hospital type, we first computed the percentage of specialty hospital claims within that type's field of specialization that were paid by Medicaid. For example, we calculated the percentage of cardiac hospitals' cardiac claims that were paid by Medicaid. We then computed the percentage of general hospital claims in the same field of specialization that were paid by Medicaid. Only general hospitals located in urban areas with a relevant specialty hospital were included. Continuing the previous example, we calculated the percentage of cardiac claims paid by Medicaid at general hospitals located in urban areas with a cardiac hospital. We followed a similar process for computing the percentage of Medicare claims at specialty and general hospitals.

[7]U.S. General Accounting Office, *Hospital Emergency Departments: Crowded Conditions Vary Among Hospitals and Communities*, GAO-03-460 (Washington, D.C.: Mar. 14, 2003).

[8]One specialty hospital was excluded because it was located in a rural area and we could not readily identify a set of general hospitals that could serve as the comparison group.

Market Share

Using 2000 HCUP data, we computed a local inpatient market share for each of the 25 urban specialty hospitals in our six HCUP states. The number of inpatient claims at each specialty hospital was divided by the total number of inpatient claims at all hospitals—both specialty and general—in the same metropolitan statistical area (MSA) . We then determined the median market share for specialty hospitals, by specialty type. We followed a similar process to determine the local market shares of specialty hospitals within their fields of specialization. For example, we compared the number of cardiac claims at a cardiac hospital to the total number of cardiac claims at all hospitals within the same MSA.

Hospital Margins

We used data from CMS's 2001 Hospital Cost Report (HCR) to calculate Medicare and total margins for specialty and general hospitals. Although not yet complete, the 2001 HCR file includes information from 55 specialty hospitals and approximately 84 percent (5,166) of the individual hospital records contained in the 1999 HCR file. To calculate the profit margins of specialty and general hospitals, we utilized a formula created by the Medicare Payment Advisory Commission (MedPAC).[9]

Data Reliability

We used a variety of data sources in our analysis; the three primary sources were our 2003 specialty hospital survey, 2000 HCUP data for six states, and CMS's 2001 HCR file. In each case, we determined that the data were sufficiently reliable to address the report's objectives.

Overall, 80 percent of specialty hospitals responded to GAO's 2003 survey, although response rates for certain questions were sometimes lower. In cases where question responses were unclear, we contacted the hospital administrators to resolve any ambiguity. Because we did not independently verify the information, the report identifies data from the survey as self-reported. HCUP data are widely used for research purposes. Although the HCUP data we used represent a subset of the available HCUP data, the subset contains one-quarter of all of the specialty hospitals that we identified nationwide. HCR data are routinely used by the MedPAC to estimate hospital margins and recommend updates to Medicare's hospital payment rates. We followed the same procedures used by the MedPAC to estimate hospital margins from these data. The 2001 file we used was 84

[9]A margin is calculated by dividing the difference between revenues and costs by revenues. Medicare margins are based on Medicare-allowed costs and revenues.

percent complete at the time of our analysis. We compared these data to data from prior years and consulted with MedPAC experts to determine that this degree of completeness would produce reliable margin estimates.

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