

The Privatization of Health Care and Physicians' Perceptions of Access to Hospital Services

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ACCCESS TO HEALTH CARE FOR AMERICANS WITH limited incomes has long depended on an implicit social contract between providers and the communities in which they are located. Many of the poor and near poor remain uninsured; as of 1982 over 22 million Americans with incomes less than 150 percent of the poverty line were uninsured or inadequately insured (Feder, Hadley, and Mullner 1984). Many more were covered by Medicaid programs that reimburse providers at relatively low rates. As a result, perhaps most of the poor are unprofitable, or at best marginally profitable, to treat. To deliver services to these patients, providers must draw on other resources, cross-subsidizing from other payers or drawing down institutional surpluses (Sloan and Becker 1984).

Historically, private institutions and physicians have provided much of this health care (Stevens 1982; Starr 1982). Private hospitals provide roughly 60 percent of the free care and 75 percent of the services delivered to Medicaid patients (Feder, Hadley, and Mullner 1984). There is growing concern, however, that private providers have become increasingly reluctant to offer such care (Schiff et al. 1986). The health care system in this country is perceived to be in the throes of trans-

formation, involving a set of changes in both institutional form and behavior. Various terms “commercialization,” “monetization,” or “privatization,” these changes are linked to the growth of for-profit health care facilities, the expansion of multifacility corporations and increased price competition among health care providers (Weller and Manga 1983; Starr 1982; Ginzberg 1984).

This transformation of medical care has been predicted by at least some observers to reduce providers’ willingness to care for unprofitable patients, either by increasing their concern for “the bottom line” or reducing the importance they place on “community service.” To date, these predictions have not been tested in an empirically rigorous way. There is, thus, no way to assess which of these factors has the greatest practical importance nor to estimate the extent to which access to health care will be affected if these trends persist in the future.

This article examines the impact of privatization on access to hospital services. We use “privatization” here to refer to changes in hospitals and markets that shift institutional goals away from a concern for “public,” or community-wide benefits (such as access to health care for the poor) toward more narrow, financial concerns of the hospital itself. Regression models are estimated relating the probability that a hospital is reported to restrict admissions by unprofitable patients to a set of hospital characteristics, including ownership form, system affiliation, and the extent of competition from other hospitals. These regressions also control for a variety of other factors that may affect access to care for the poor, including the generosity of Medicaid reimbursement, as well as other characteristics of the hospital and the community in which it is located. Data for this analysis are drawn from a 1984 survey of physicians conducted by the American Medical Association.

Previous Research: Ownership, Systems, Competition, and Access

The ongoing privatization of health care raises for some the spectre of seriously restricted access to care. To better evaluate these concerns, it is helpful to review the reasoning behind these predictions and assess the extent to which they have been supported by past empirical research.

Proprietary Ownership and Access to Care

During the past two decades, investor-owned facilities have greatly increased their role in the United States health care system. The proportion of services delivered by for-profit general hospitals has grown by 50 percent; between 1972 and 1983, the number of proprietary beds grew from 57,000 to 94,000. The market share of proprietary psychiatric hospitals tripled during this same period; for renal dialysis facilities and home health agencies it grew more than five-fold. Motivated at least in part by the pursuit of profits, these newly emerging proprietary facilities are thought to place greater emphasis on economic performance than do their older, nonprofit and public, counterparts (Renn et al. 1985; Pattison and Katz 1983). Some see these altered priorities as "giving an additional motive to private provider groups and institutions to engage in patient skimming and to discontinue needed but cost-ineffective services" (Nutter 1984, 918).

Empirical studies relating ownership and access to care have focused on three areas: the geographic location of facilities, the range of services provided, and the extent of care for unprofitable patients. In general, this body of research suggests that investor-owned facilities are more sensitive to financial incentives than are their nonprofit and public counterparts and are, thus, more likely to restrict access to care directly or indirectly. In particular, proprietary facilities are more likely to locate in areas with high per capita incomes, a limited number of Medicaid patients, and broad insurance coverage (Bays 1983; Homer, Bradham, and Rushefsky 1984; Marmor, Schlesinger, and Smithey 1987). Also, investor-owned facilities are significantly less likely to offer services that are unprofitable, but which generate widespread community benefits (Kaluzny et al. 1970; Cromwell and Kanak 1982; Schlesinger and Dorwart 1984; Renn et al., 1985; Shortell et al. 1986). Finally, proprietary institutions are significantly less likely to offer services to low-income patients at a reduced charge (Schlesinger and Dorwart 1984; Schlesinger 1985) and provide, on average, less uncompensated care (Sloan, Valvona, and Mullner 1986).

Although the consistency of these findings is persuasive, much past research on this topic is either dated or has serious methodological shortcomings. Much of the data used in these earlier studies was drawn from a period of time during which for-profit corporations had only recently acquired many facilities, and when health care providers

generally operated in a relatively uncompetitive environment. Under these conditions, significant ownership-related differences in performance might not be evident or might differ from those that could be expected in a more competitive environment (Schlesinger et al. 1986). In addition, a number of these studies failed to control for characteristics of the facility other than ownership or for attributes of the community that might influence willingness or ability to care for the poor. None of these studies examined the influence of system control or competition on these ownership-related behaviors.

System Affiliation and Access to Care

Paralleling the expansion of investor ownership in health care has been the growth of multifacility corporations (sometimes termed "multi-institutional organizations" or MIOs), both nonprofit and for-profit. Virtually nonexistent two decades ago, by the mid-1980s systems controlled 35 percent of all short-term general hospital beds. Multifacility corporations currently operate half the private psychiatric hospitals, 25 percent of the renal dialysis facilities, and almost 40 percent of the prepaid health plans in the country. Chain control is most pronounced among proprietary facilities; currently about 80 percent of the for-profit general hospitals and almost all of the investor-owned psychiatric hospitals are affiliated with multihospital firms. A single proprietary corporation operates over a third of the for-profit renal dialysis facilities in the country.

Observers have had mixed impressions of the consequences of system growth for access to care. On the one hand, multihospital system (MHS) hospitals are thought to be better able to subsidize unprofitable care. System-affiliated hospitals are predicted to have larger financial surpluses because they can capture economies of scale in the purchase of supplies and equipment (Brown 1982; Vladeck 1981), can more readily acquire capital (Cohodes and Kinkead 1984), and can cross-subsidize hospital services through diversification into other industries (Ermann and Gabel 1984; Coyne 1982).

On the other hand, it is often argued that MHS hospitals will, for a given level of surplus, be less willing to subsidize the care of unprofitable patients. Larger organizations are thought to have greater bargaining power in negotiations with regulators and, thus, be less affected by attempts to foster access to care through the regulatory

process (Ermann and Gabel 1985; Vladeck 1981; Desonia and King 1985). In addition, it is argued that by vesting control in corporate central offices, system affiliation could reduce the influence of the local board of trustees and, thus, the institution's commitment to causes such as provision of charitable services for the poor (Ermann and Gabel 1985; Starkweather 1971). Weinstein (1984, 87–88) suggests that this leads to a change in institutional goals:

The MIOs now seem to accept across the board the notion that the only health care they can provide in any significant way is that which returns them more revenue than their costs. Other care, whether needed or not, is relegated to some other providers or source. . . . It is no longer indiscreet or inappropriate, from the provider's viewpoint, to refuse to offer care that is not being appropriately paid for.

Thus, the net effect of system affiliation on access depends on whether the increased ability to subsidize unprofitable services is greater than the reduced willingness. If the latter factor dominates, MHS hospitals, whether for-profit or nonprofit, may limit access to care.

Past research indicates that MHS hospitals are more likely to locate in areas where hospitals have above-average profits (Mullner and Hadley 1984) and in "areas with lower Medicaid and indigent patient loads" (Ermann and Gabel 1984, 59). This evidence suggests that system hospitals are more sensitive to financial incentives and less likely to serve unprofitable patients. In contrast, however, MHS hospitals offer more services which are likely to be unprofitable (Shortell et al. 1986). Therefore, the past empirical research leaves unclear the net effect of system control on access to medical care for unprofitable patients.

Studies of payer mix in hospitals have reached equally ambiguous conclusions. Some studies indicate that MHS facilities serve a higher proportion of Medicaid patients (Sloan and Vraciu 1983; Levitz and Brook 1985), others find the reverse to be true (Bays 1977; Pattison and Katz 1983). Although a number of studies have found that system-affiliated hospitals provide less uncompensated care than do their independent counterparts, these differences tend to be small and statistically insignificant (Sloan and Vraciu 1983; Levitz and Brook 1985; Bays 1977; Pattison and Katz 1983).

These payer-mix studies also have some important methodological limitations. Again, most are based on data collected at a time when

many MHS hospitals had only recently been acquired by systems; past studies suggest that hospitals with more established affiliations may differ from those that have recently joined a chain (Becker and Sloan 1982). There have been very few studies of the effects of system affiliation on nonprofit hospitals; most have focused on proprietary facilities. Furthermore, no studies have adequately controlled for factors other than system status which might affect the willingness or ability of MHS institutions to treat unprofitable patients.

Competition and Access to Care

Given the sharp declines in hospitalization rates and lengths of stay that have occurred over the past several years, hospital administrators have become vitally concerned with attracting patients to their facilities (Cochrane 1984). At the same time, a number of trends are affecting the ways these empty beds can be filled. A variety of new organizations are offering services previously available solely through hospitals (Ermann and Gabel 1985). Purchasers of health care have become increasingly sensitive to cost. To attract their business, providers are increasingly forced to compete on the basis of price, whether through informal negotiation or formalized preferred-provider arrangements and contract bidding (Weinstein 1984; Robinette 1985; Luft 1985; Gabel and Ermann 1985).

The growing emphasis on and shifting nature of competition among hospitals may lead to reduced access for a number of reasons. First, price competition limits hospitals' ability to cross-subsidize unprofitable patients and services from paying patients (Lewin and Lewin 1984). Second, treating the uninsured or underinsured is, in economists' terms, a "public good," since the benefits are felt throughout the community, whichever particular provider delivers the service. As with any public good, there is an incentive for each provider to try to be a "free rider," that is, to do nothing and hope that other private providers pick up the slack. The greater the number of providers entering the industry, the easier it is for free rider behavior to occur. This is easiest to see by considering two extreme cases. If, as sole provider in the community, a hospital fails to offer a service or refuses to admit a patient, it is clearly denying access to care. If, on the other hand, there are many hospitals in the area, any one hospital can claim or assume that patients it turns away can simply gain access

to another institution. Finally, the growth of a competitive ethos may, in a subtle but pervasive manner, alter the extent to which a health care institution assumes a fiduciary responsibility to the community (Weinstein 1984). This can be seen most clearly in the changing standards by which boards of trustees judge the performance of hospital administrators:

To compete effectively on price, a hospital is well advised to do as little teaching as possible, limit its patient mix to as few Medicaid patients and unsponsored cases as possible, avoid offering services that are regular losers, and ship as many high-intensity, high-risk patients as possible into the referral centers. This is what is happening now in many areas . . . any hospital CEO who doesn't do all he can to fend off as many general assistance patients as he can . . . just isn't being "businesslike" and will be so judged by his board of trustees (Kinzer 1984, 8–10).

There is very little evidence to support these statements. A recently published study indicates that competition, as measured by the number of hospitals in the "neighborhood" of a facility, reduces the probability that the hospital will operate an emergency room (Luft et al. 1986), a service that appears to be a source of unprofitable patients (Sloan, Valvona, and Mullner 1986). An earlier study found, however, that a similar measure of competition did not affect hospitals' adoption of a set of services used disproportionately by the poor (Cromwell and Kanak 1982). Neither study controlled for hospital characteristics such as system affiliation. There have been, moreover, no studies of the influence of competition on aspects of access other than the array of services offered by the hospital.

Summary: Privatization and Access to Care

Though much has been written about ongoing changes in the health care system, it remains unclear what the combined effects of these changes will mean for access to care. As both nonprofit and investor-owned corporations grow larger and more pressured by competition, will they, as some assert, grow more alike in their behavior, each becoming more like large corporations in other parts of the economy, with little sense of a "mission" in health care (Kinzer 1984; Brown 1982; Barret 1982)? Or will some providers, striving to establish a

distinct niche in a competitive environment, raise high the banner of "community service" to differentiate themselves from their competitors? In the remainder of this article we attempt to assess more adequately the joint influences of competition, ownership, and system affiliation on access to hospital services.

A Regression Model of Influences on Access to Hospital Care

Dependent Variables: Measures of Access to Care

Hospitals have been documented to discourage the admission of particular types of patients through formal institutional policies, moral suasion of their medical staffs, or by providing physicians with financial incentives to avoid treating such patients. As of 1982, 14 percent of the short-term general hospitals in the United States reported that they limited the amount of uncompensated treatment they provide (Sloan, Valvona, and Mullner 1986). In this study, hospitals' attempts to restrict admissions are measured by physicians' reports that the hospital with which they were primarily affiliated discouraged admission of potentially unprofitable (Medicaid and uninsured) patients. (Though Medicaid enrollees may not, on average, be unprofitable for a hospital, because of limitations on the amount and types of hospital care that Medicaid reimburses, a patient is more likely to prove unprofitable if covered by Medicaid than if covered through Medicare or private insurance.) Such physician assessments provide, we believe, important insights into access to hospital care.

First, in addition to formal institutional policies, physicians' admitting practices can be affected by less formal administrative sanctions or moral suasion; these are not readily measured in surveys of hospital policies. Second, physicians have direct control over much of the admission and treatment process (Eisenberg 1985). The effect of hospital policies on their behavior will, thus, largely determine the extent to which access has been restricted. Finally, establishing the intent of hospital administrators, as perceived by their medical staff, may capture important differences in institutional goals and performance too subtle to identify using crude measures such as payer mix.

Surveys of physicians' perceptions have some liabilities as well.

TABLE 1
 Percentage of Respondents Reporting That Their Primary Hospital
 Discouraged Admission of Uninsured or Medicaid Patients

Hospital ownership	Type of patient	
	Uninsured	Medicaid
INDEPENDENT HOSPITALS		
For-profit	43%	15%
Private nonprofit	20	5
Public	14	3
MULTIHOSPITAL SYSTEMS		
For-profit	52	16
Private nonprofit	19	6
Public	9	3

Source: 1984 Core Survey of the AMA's Socioeconomic Monitoring System.

Definitions of "discourage" may vary with social norms, and, thus, differ from one part of the country to another. Perceptions may be influenced by the respondents' expectations of how the institutions will behave, particularly if the hospital only recently has been purchased by a corporation and there is little "track record" by which to judge the hospital's performance. (We will return to these issues in the discussion section of the article.) Despite these shortcomings, we believe that physicians' assessments offer some useful insights into ongoing changes in the health care system.

The regressions presented here use dichotomous dependent variables, which are positive if the physician answered yes to the questions: "Does the hospital [with which you are primarily affiliated in 1984] discourage admissions of Medicaid patients?" or "Does the hospital discourage admission of uninsured patients?" The hospital of primary affiliation was defined here as the hospital in which the physician reported spending the most time; doctors spent on average over 90 percent of their time in this primary hospital. Twenty-one percent of responding physicians reported that their primary hospital discouraged admission of uninsured patients; 6 percent reported restrictions on admission of Medicaid enrollees (averages across hospitals, see table 1). Using a PROBIT package, we estimate below two regressions, one for Medicaid patients and one for the uninsured, relating hospital

ownership, system affiliation, and measures of competition—as well as other characteristics of the hospital, physician, and the community in which they are located—to the probability that the responding physician reported restrictions on access. Each physician is treated as a separate observation, since each may be influenced by a different set of external factors and institutional practices.

Independent Variables: Factors Affecting Access to Care

Hospital Ownership and Control. In the regressions presented here, ownership is defined as the legal form reported by the hospital in annual American Hospital Association (AHA) surveys. Hospitals are categorized as either private nonprofit, for-profit, or nonfederal public. Affiliation with a multifacility system is also based on information reported by the hospital in AHA surveys. To detect interaction effects of ownership and system affiliation, hospitals are grouped into six categories: independent nonprofit, independent public, independent for-profit, MHS nonprofit, MHS public, and MHS for-profit. The first of these categories, the independent nonprofit form, is the omitted group in the regressions, so that the coefficients on each of the other forms of ownership represent the probability that they adopted exclusionary admissions policies, relative to private nonprofit hospitals that had no system affiliation.

Competition for Hospital Services. The extent of competition facing the hospital is measured in two ways. First, for each hospital a Herfindahl index is calculated, measuring the concentration of hospital admissions among the facilities operating in the county in which the hospital was located. This index ranges between zero and one; the closer the index is to one, the more concentrated is the market and, in principle, the less competitive the market for hospital services (Scherer 1980; Hirschman 1964). Second, since it has been argued that proprietary facilities tend to be more aggressive competitors, we have also included a variable measuring the proportion of hospitals in the county operated under investor ownership.

Other Influences on Admissions Policies. The probability that a hospital is reported to have restrictive admissions policies is also affected by a number of other considerations. These can be grouped into four broad categories: the number of patients with low income who seek admission, the hospitals' willingness or ability to serve those patients,

the generosity of the Medicaid program in the state, and other state policies which are intended to encourage access to hospital services.

The pool of patients with limited income is measured by the per capita income in the county in which the hospital is located. The proportion of these poor patients seeking care under Medicaid auspices depends on the extent to which the state restricts Medicaid eligibility (Granneman and Pauly 1983). This is measured in our regressions using two variables: the proportion of poor residents in the state who are eligible for Medicaid, and the proportion of total hospital admissions in the county paid for by Medicaid.

Hospitals' willingness to accept potentially unprofitable patients is presumed here to be a function of their dependency on such patients to fill their beds, the size of the facility's surplus or profits which can be used to fund uncompensated care and the availability of a public hospital to which unprofitable patients can be transferred. Dependency is measured here by two variables: the proportion of the hospital's admissions paid through Medicaid, and the hospital's occupancy rate. Although we have no direct data on the size of the hospital's surplus, previous research has shown this to be a function of the facility's size, number of services, and teaching status (Sloan and Becker 1984). These variables are, therefore, included in the regression equation; although they are only indirect measures of surplus, they may capture some inter-hospital differences in availability of resources to fund indigent care. The ease with which patients can be transferred to a public facility is measured by the proportion of hospitals in the county that are operated by government and by dummy variables for urban location, since transfers tend to be more common when hospitals are located in close proximity to one another (Schiff et al. 1986).

The willingness of a hospital to accept potentially unprofitable patients also depends on the methods and generosity of reimbursement under the Medicaid program. Past studies have shown that the more generous Medicaid payments are, the more willing are providers to treat Medicaid enrollees (Davidson et al. 1983; Feder, Hadley, and Mullner 1984). There are also likely to be cross-subsidies between Medicaid and uninsured patients, so that the more generous the Medicaid program, the more readily the hospital can treat the uninsured. "Generosity" involves both the monetary payments made to providers and the restrictions and administrative requirements that the state imposes on providers seeking reimbursement (Sloan 1984).

In these regressions, Medicaid reimbursement is characterized by a set of variables. The level of reimbursement is measured by the ratio of Medicaid to Medicare payments for a regular visit to a physician's office and by whether hospital reimbursement is based on costs or determined in some other manner. Administrative restrictions are measured by requirements for prior authorization for hospitalization, mandated outpatient treatment of particular conditions, and annual limits on the number of days of hospital coverage (calculated as the reciprocal of the maximum number of days of coverage per year).

Finally, states had adopted by 1984 a number of other reimbursement systems which may affect access to care. These include all-payer systems for hospital reimbursement with provisions for paying for uncompensated care (New York, Massachusetts, Maryland, and New Jersey), a selective contracting system for hospitals serving Medicaid patients (California), state-mandated insurance pools for "high-risk" individuals (seven states), and state-financed catastrophic insurance plans (Maine, Alaska, and Rhode Island). Dummy variables reflecting the presence of each of these programs are included in the access regressions.

Controlling for Biases in Physician Reporting. Reports about hospital admissions policies by physicians may also be affected by characteristics of the physician. Doctors who have more status or more options for where they can treat their patients are less likely to be pressured by hospital administrators, and, thus, less likely to be cognizant of exclusionary policies. Similarly, doctors who treat few unprofitable patients will be less likely to have experienced constraints on their admissions. Since financial incentives may substitute for exclusionary policies, physicians whose income is a function of a hospital department's revenue may be less likely to report the existence of policies designed to discourage admissions.

Variables capturing each of these factors are included in these regressions. Professional status is measured by length of time in practice; this has been shown to affect both the profitability of the physician's practice and the complexity of delivered services (Holahan et al. 1983; Sloan, Mitchell, and Cromwell 1978). Options for treating patients are measured by the number of hospitals at which the physician has admitting privileges. The payer mix of the physician's practice is measured by the proportion of patients who are either enrolled in Medicaid or are uninsured. A variable is included to represent whether the physician is reimbursed as a function of the net or gross revenues

of a hospital department. (Because this form of reimbursement is paid disproportionately to pathologists and radiologists, who are unlikely to admit patients and, thus, are less likely to encounter hospital pressure to change their behavior, the coefficient on this variable is probably biased toward zero [Reynolds and Abram 1983].)

Data Used in the Study

Data for this study are drawn from three sources: (1) the 1984 American Medical Association Socioeconomic Monitoring System (SMS) Core Survey, (2) the 1982 American Hospital Association (AHA) Annual Survey of Hospitals, and (3) the 1982 Area Resource File. The SMS is a telephone survey of a random sample of non-federal patient care physicians (excluding residents), stratified by specialty and census division. Data collected include information on physician training and demographic characteristics, income, practice expenses, visits, hours worked, payer mix, and fees (Henderson and White 1983). In 1984 the SMS also included a supplemental series of questions on physicians' relations with hospitals—developed in collaboration with the staff of the Institute of Medicine. (This survey is described in greater detail in the appendix.)

Additional characteristics of the hospital were obtained by merging data from the 1982 AHA survey (the most recent hospital survey available at the time the combined data set was constructed). This provided information on hospital ownership and system status, organizational structure, utilization, and service availability. Response rates to the overall AHA survey and to the individual questions used here average above 90 percent of United States hospitals (Mullner, Byre, and Killingsworth 1983).

The third data set, the Area Resource File (ARF) contains county-level data on the distribution of health manpower and facilities as well as the economic and sociodemographic characteristics of the population. This ARF data is a secondary data source compiled from a number of public and private data bases. Characteristics of states' Medicaid programs were obtained from a variety of government and private publications (Granneman and Pauly 1983; Bovbjerg and Holahan 1982; Sawyer et al. 1983; Desonia and King 1985). Means and standard deviations for all the variables used in the study are reported in the appendix to this article.

TABLE 2
Comparison of Hospitals by AHA Annual Survey to Those Represented by
Physicians in SMS Sample

	Hospitals represented in the AHA annual survey	Hospitals represented by physicians in the SMS sample
HOSPITAL TYPE		
Nonfederal government	28.8%	16.2%
Nongovernment not-for-profit	55.5	75.4
Nongovernment for-profit	14.7	8.4
ORGANIZATIONAL STRUCTURE		
Multihospital system (MHS)	30.0	34.3
Independent hospital (IND)	70.0	65.7
REGION		
Northeast	14.8	22.3
North central	28.7	23.0
South	37.5	33.5
West	18.9	21.2
LOCATION		
Urban	53.9	80.5
Rural	46.1	19.5
HOSPITAL SIZE		
Average bed size	168.8 beds	364.0 beds
Admissions per year	5,955.0 cases	13,563.0 cases

Source: 1982 AHA Annual Survey of Hospitals and 1984 Socioeconomic Monitoring System Core Survey.

After merging data sets, information for the access analyses was available for approximately 3,000 physicians. Because the data were drawn as a stratified random sample of physicians, they are not fully representative of the hospitals in the United States. More specifically, large urban hospitals are overrepresented in the sample (table 2). Nonetheless, because responding physicians were affiliated with over 2,200 separate institutions (roughly 38 percent of all short-term general hospitals in and distributed throughout the country), we believe that this data set accurately captures the ongoing effects of changes in organizations and markets on the delivery of health services.

TABLE 3
 Predicted Impact of Ownership, System Affiliation, and Competition on
 Probability Hospital Reported to Discourage Access

Marginal impact of: ^a	Type of patient	
	Medicaid	Uninsured
HOSPITAL OWNERSHIP^b		
Proprietary	+ 0.8	+ 7.0 ^d
Public	- 0.6 ^d	- 3.8 ^d
SYSTEM AFFILIATION^c		
Nonprofit system	- 0.3	- 1.8
Proprietary system	+ 0.3	+ 4.9 ^d
Public system	- 0.3	- 4.0 ^d
EXTENT OF COMPETITION		
Decrease Herfindahl Index from 0.75 to 0.25	+ 1.3 ^d	+ 4.1 ^d
Increase proportion of proprietary hospitals from 0.0 to 0.50	+ 2.5 ^d	+ 6.1 ^d

^a "Marginal impact" measures the change in the probability that physicians would report a restriction on admission. Overall, 5.7 percent of the respondents reported a restriction on Medicaid patients, 21 percent on uninsured patients.

^b Compared to independent private nonprofit hospital.

^c Compared to independent hospitals of the same ownership.

^d Coefficient statistically significant at 5 percent confidence level.

Note: Differences in access for both Medicaid and uninsured patients between for-profit systems, public systems, and private nonprofit hospitals are all statistically significant at a 5 percent confidence level.

Results of the Regression Analyses

The regression analyses presented here, based on dichotomous variables, are estimated using a PROBIT package. The estimated effects of hospital ownership, system affiliation, and competition on the probability that a hospital will be reported to discourage admissions are presented in table 3. (Complete regression results are included in the appendix. Comparable regressions run, using ordinary least squares, explained about 15 percent of the variation in the dependent variables.) Findings for Medicaid and uninsured patients are quite similar, though the lower prevalence of policies aimed at Medicaid patients leads to lower statistical significance for the coefficients from that equation. Substantively, the effects of ownership and system control are larger

(proportional to the mean) for uninsured than Medicaid patients. The findings from the Medicaid regression might, therefore, best be viewed as useful corroboration for the more robust results from the analysis of access for the uninsured. Curiously, however, the effects of competition seem as large or larger in the screening of Medicaid enrollees as for uninsured patients.

The coefficients on each of these regressions suggest that the growth of investor-owned hospitals will reduce access to hospital services in several ways. As some have predicted, for-profit hospitals are reported to be more likely to restrict admissions of unprofitable patients. For-profit hospitals affiliated with multihospital corporations, the fastest growing part of the investor-owned industry, are the most likely to attempt to discourage admissions of these patients. Nonetheless, restrictions on access to proprietary hospitals should not obscure the fact that private nonprofit hospitals are reported to discourage admissions for unprofitable patients significantly more often than do public facilities, and this difference in access is as large as that between private nonprofit and for-profit facilities.

One important consequence of the growth of for-profit providers has been given far less attention in the past—their competitive effect on other providers. The findings presented here indicate that the growth of the for-profit market share from 0 to 50 percent would induce additional restrictions on access in neighboring nonprofit hospitals of the same magnitude as those found in for-profit hospitals.

In the same way that competition from for-profit providers leads to reductions in access, the more competitive the market for hospital services generally (as measured by the Herfindahl index), the more likely are all hospitals in that market area to discourage admissions of Medicaid and uninsured patients. These general competitive effects, though, seem to have a smaller substantive impact than does either the influence of ownership or of for-profit competition.

Although these findings suggest a straightforward relationship between ownership, competition, and access to hospital care, the implications of the growth of multihospital systems are more complicated. Compared to their independent counterparts, investor-owned MHS hospitals are reported to be significantly more likely to restrict access by unprofitable patients. For public and private nonprofit hospitals, this pattern is reversed (though only for government-operated facilities are these differences large). The influence of system status, thus, emphasizes

TABLE 4
 Predicted Impact of State Policies on Probability Hospital Reported to Discourage Access

Marginal impact of: ^a	Type of patient	
	Medicaid	Uninsured
MEDICAID PAYMENT POLICIES		
Medicaid hospital payment other than cost-based	+ 0.5 ^b	+ 1.1
Prior authorization for hospital admission	+ 0.6 ^b	+ 3.5 ^b
Outpatient surgery required for some procedures	+ 0.8 ^b	+ 4.1 ^b
Selective contracting with hospitals (California)	- 0.7 ^b	+ 2.5 ^b
OTHER POLICIES TO PROMOTE ACCESS		
All-payers system with uncompensated care provision	- 0.6 ^b	+ 3.5 ^b
Catastrophic insurance program	- 2.5 ^b	- 7.5 ^b
Mandatory insurance pool for high-risk individuals	+ 1.5 ^b	+ 3.2 ^b

^a "Marginal impact" measures the change in the probability that a physician would report a restriction on admission. Overall, 5.7 percent of the respondents reported a restriction on Medicaid patients, 21 percent on uninsured patients.

^b Coefficient statistically significant at 5 percent confidence level.

the differences due to ownership. Hospitals operating under ownership forms associated with restricted access are likely further to discourage admissions if affiliated with a multihospital system; those with ownership encouraging more open access are, in contrast, less likely to discourage admissions if part of a system.

In addition to the effects of changing institutions and markets, reforms of state policies appear to have had significant effects on access to hospital services (table 4). Prospective reimbursement and administrative restrictions on hospital utilization under Medicaid have, as one would expect, decreased the attractiveness of admitting Medicaid patients. Perhaps more surprising, these reforms are also associated with restricted admissions for patients without insurance. This may reflect reduced hospital surpluses and, thus, less ability to cross-subsidize treatment of the uninsured. In contrast, under California's

selective contracting system, Medicaid enrollees appear to face fewer restrictions on admissions, though, here too, the uninsured seem to bear the brunt of cost-saving reforms.

As mentioned earlier, a number of states have initiated policies to enhance access to hospital services. Of these, only catastrophic insurance programs seem significantly to increase access for both Medicaid and uninsured patients. The apparently higher rates of restrictions in states with mandatory pools for high-risk individuals may result from the tendency of states with access problems to be more likely to adopt such programs, coupled with the fact that the number of individuals enrolling under these programs has been so low that they have had little effect on hospital behavior (Bartlett 1985).

The apparently mixed performance of all-payers systems with indigent care pools is perhaps the most perplexing finding. By limiting the difference in the reimbursement rates of Medicaid and private insurers, all-payers systems apparently make Medicaid enrollees relatively more attractive to admit. The higher rate of access restrictions for the uninsured in states with indigent care pools might reflect the same phenomenon discussed above for mandatory risk pools: states with the greatest problems are most likely to adopt remedial programs. Once adopted, use of these indigent care pools has been restricted by the growing competitiveness of the market for hospital services. In three of the four states (Massachusetts, New Jersey, and Maryland), the costs of uncompensated care are built into the hospital's prices for all payers. This increases the prices charged by hospitals with a substantial amount of uncompensated care, putting them at a competitive disadvantage when competing for privately insured patients. Hospitals may, therefore, seek to avoid treating the uninsured, even with indirect compensation available.

A number of other findings are consistent with findings of previous research on access to hospital services and may increase our confidence in the overall validity of our analysis (see appendix). As anticipated, the more common public hospitals in a county are, the more likely it is that other hospitals will discourage admission of unprofitable patients. Hospitals in urban areas, more likely to have poor patients seeking care and with greater opportunities to transfer such patients to other facilities, are significantly more likely to be reported to restrict admissions. The smallest, and least profitable, institutions are the most likely to discourage admission of Medicaid enrollees and patients

without insurance. Finally, physicians with more established practices appear less likely to encounter restrictions, perhaps reflecting their greater bargaining power with the hospital.

Discussion and Conclusion

The ongoing "privatization" of American medicine is likely to continue in the foreseeable future. A consensus panel of hospital administrators, public officials, and managers of insurance plans has predicted that by 1995 investors will own a quarter, and systems will own or manage over half, of this country's hospitals (Arthur Andersen and Co. 1984). Competitive pressures are likely to increase as a result of the entry of new providers, purchasers' continued sensitivity to costs, and public policies designed to encourage competition (Ermann and Gabel 1985; Gabel and Ermann 1985; Luft 1985). Our findings suggest that each of these trends may be accompanied by restrictions on access to hospital services for low-income patients. It is important to recognize both the limitations, and the broader implications of these results.

Limitations of the Study: Is Believing Seeing?

Some caution is necessary in interpreting these findings. Because our dependent variable measured physicians' perceptions of hospital behavior, these findings may be affected by physicians' expectations that may differ from actual performance. Nor do these reported perceptions tell us much about the number of patients denied access or the consequences for their health. The overall effects of for-profit ownership, system affiliation, and competition on accessibility of hospital services may be either more or less favorable than those reported here.

The reliability of physicians' perceptions is perhaps the most important of these concerns. If physicians were reporting expected rather than observed hospital behavior, then two potential problems may have occurred. First, responses could be biased by self-selection among physicians. Physicians with particular preconceptions may have chosen to affiliate with hospitals under specific forms of ownership. Differences in their responses might then reflect this self-selection process rather than actual differences in hospital behavior. One piece of evidence is reassuring on this point. Physicians were asked whether they considered

it ethical to own a share of the hospital at which they practiced. Interestingly, almost exactly the same percentage of respondents at for-profit (29 percent) and nonprofit (28 percent) hospitals believed that such ownership arrangements were unethical. Nonetheless, we cannot exclude self-selection among physicians as a possible source of bias in the study.

A second bias might be introduced if respondents indicated that for-profit hospitals restricted admissions by the uninsured simply because that was the "prevailing wisdom" among the medical profession. Again, responses to other questions on the survey suggest that physicians were not simply reporting their preconceptions. It is also the "prevailing wisdom" that for-profit hospitals will discourage admission of Medicaid patients and will be less responsive to the concerns of their affiliated medical staff (Relman 1980; Wohl 1985). Only about a third as many respondents in for-profit hospitals, however, reported that hospitals had discouraged admissions of Medicaid recipients as for the uninsured. Moreover, the surveyed physicians indicated that administrators of for-profit hospitals were actually more responsive to the concerns of their medical staff than were administrators of nonprofit facilities (93 percent of those in for-profit hospitals were reported to be "as responsive or more responsive than the average hospital," compared to 89 percent for nonprofit settings). These findings suggest that survey responses did not always follow the conventional wisdom and may be based at least to some extent on actual behavior, though, of course, some biases in reporting may remain.

Finally, as mentioned earlier in the article, physicians' perceptions of multifacility systems might be more influenced by preconceptions because system ownership is a recent phenomenon with which respondents might have less actual experience than with independent facilities. To explore this question, we compared the responses of physicians affiliated with the same hospital—roughly a quarter of the cases represented multiple physician responses for a single facility. One might anticipate that if responses were based more on expectations than on actual performance, there would be less agreement in the responses of physicians affiliated with a given institution. In fact, the agreement rates for system (64.7 percent) and independent (65.1 percent) hospitals were virtually identical.

There was a statistically significant difference in agreement rates among physicians primarily affiliated with private nonprofit (66 percent),

public (71 percent) and for-profit (46 percent) hospitals. It was anticipated, however, that physicians affiliated with for-profit institutions would be less often in agreement. Past studies have shown that investor-owned hospitals are less likely than their nonproprietary counterparts to adopt institution-wide rules (Clarkson 1972). For-profit facilities operate with a larger administrative staff, giving more discretionary authority to administrators, and are, thus, less influenced by broad rules and criteria (Carper and Litschert 1982).

As a result, we believe that our findings do reflect to some extent real differences in institutional performance. Other recent studies of the relation between hospital ownership and the provision of uncompensated care or unprofitable services are consistent with the findings reported here and, thus, lend them further credibility (Sloan, Valvona, and Mullner 1986; Shortell et al. 1986).

Implications for Public Policy

Nonetheless, because of the limitations discussed above, these findings should be viewed as indicative of the general effect of privatization on access to care rather than estimates of the effects of specific changes in ownership or control. In particular, it seems premature to single out any single factor or class of institutions as particularly threatening to access. The results reported here, however, do suggest that a number of trends in the health care system will coincide and, when taken together, may be of sufficient importance to justify attention from policy makers. The following comparison is illustrative. In our sample, roughly 16 percent of physicians affiliated with a private nonprofit hospital operating in a noncompetitive environment reported that the institution restricted access by uninsured patients. This compares with almost 40 percent of the physicians whose primary hospital was affiliated with an investor-owned system and operated in a highly competitive market. To the extent that the first scenario is typical of hospitals during the 1970s, the second of hospitals in the 1990s, access to hospital care could decline markedly.

If further research confirms that physicians are accurately reporting hospital policies, our data provide some guidance on how policy makers might respond to reduce or compensate for the impact of privatization on access to care. Currently, physicians report that access to hospital care is more limited where there have been an increased

number of administrative restrictions and a shift to prospective payment in state Medicaid programs. These findings suggest that states interested in increasing access to care should consider loosening administrative restrictions on the treatment of Medicaid patients. In addition, in adopting measures to contain costs in Medicaid, policy makers should recognize that these "spill-over" to affect access for the uninsured as well.

A number of states are experimenting with other approaches to reduce the burden of caring for low-income patients. The analysis presented here indicates that as a group these have had mixed success at best, though catastrophic insurance programs seem to have been reasonably effective at reducing restrictions on hospital admissions. The less impressive record of mandatory high-risk pools and uncompensated care pools is undoubtedly due in part to the fact that they are relatively new programs. The record of past government health policies suggests that, as these reforms evolve over time and are "fine-tuned," they will become increasingly effective (Joskow 1980). Nonetheless, we believe that these programs should be further studied and refined before being widely adopted. Finally, states may also intervene to limit specific hospital practices. Following the lead of Texas, they could prohibit or restrict hospital rules which discourage admitting particular classes of patients or which encourage dumping to other facilities (Relman 1986).

Each of these approaches holds some promise for enhancing access. To a certain extent, however, no formal regulation or policy can be directed at what is perhaps the most fundamental change accompanying the privatization of health care: a subtle but pervasive shift in the expectations and values governing the relations between medical providers and the communities in which they are located.

The name of the game is skimming, and this is no longer frowned upon. All providers are involved in this process, and only those who do it best will survive. Skimming will become an art, deeply impregnated with the highest cultural value of success (Weinstein 1984, 91).

Financial incentives alone are unlikely to compensate for these changing attitudes. It will become imperative to define a broad new social compact between providers and communities. Policy makers in

this country have relatively little experience or expertise in dealing with changes in social values, however pervasive or important in influencing behavior. To address some of the more important links between privatization and access, however, it seems incumbent on government officials, particularly at the local level, to take a more active role in defining what is expected of health providers in a community. If the implicit contracts between health care providers and communities are going to be rewritten—if private agencies are to be more explicitly rewarded when they provide public service—it seems preferable to make those negotiations a public process with open participation from the various interest groups in the community (Sigmond 1985). There are, of course, many difficult questions about how best to structure such a process and how to integrate such local negotiations with state-wide policies and regulations. To deal with many of the consequences of ongoing changes in the health care system, however, we believe that such issues must be addressed explicitly in the near future.

Appendix: A More Complete Description of the Socioeconomic Monitoring System

General Methodology

The SMS survey has been conducted quarterly since the last quarter of 1981. Each year, the second quarter is designated as a "core survey" with an expanded panel of physicians. The number of complete interviews in each core survey has ranged between 3,800 and 3,950 each year, an overall completion rate of between 60 and 65 percent of the physicians in the sampling frame. Physicians in the sample are drawn from the AMA's Physician Masterfile. The masterfile, updated quadrennially, includes all physicians involved in direct patient care who are neither residents nor employees of the federal government.

Information is collected by telephone survey, with a minimum of four call-backs. (Physicians are given the option of responding by mail.) The main questionnaire, which collects information on various aspects of the physician's practice, is repeated from one year to the next. This is supplemented by a different "special topics" section each year.

The 1984 Special Topic Survey: The Role of Profit in Medicine

The 1984 core survey included a set of questions on the role of proprietary health care. Physicians were asked the ownership of the hospital with which they were primarily affiliated (this was verified against information collected by the American Hospital Association). Respondents were also asked about their financial arrangements with the hospital (including whether they shared in the ownership of the facility), a range of hospital practices (including those involving admissions, nursing support, and responsiveness of the administration to their concerns), and their assessment of the ethics of physician ownership of the facility in which they practiced. These questions were designed through a collaboration of the authors of this article, who are affiliated with the American Medical Association, and the staff of a special study group on for-profit medicine established by the Institute of Medicine (Institute of Medicine 1986).

Response Rate for the 1984 Survey

As with earlier SMS core surveys, just over 60 percent of the physicians who were contacted completed interviews in the 1984 survey. Of these respondents, about 85 percent provided information about the admitting practices of their primary hospital. Comparing respondents and nonrespondents, the former were slightly less likely to be board-certified (64 to 68 percent) and less likely to be male (87 to 93 percent). Otherwise, there appeared to be no significant difference between respondents and nonrespondents in terms of either background or characteristics of the hospital at which they practiced.

Reporting Results from Analysis of the Data

The means and standard deviations for all the variables used in this study are presented in table A.1. Complete regression results for both uninsured and Medicaid patients are reported in tables A.2 and A.3, respectively.

TABLE A.1
Means and Standard Deviations of Variables Used in Regressions

Variable	Definition	Mean	Standard Deviation
NMPROFIT	Independent for-profit hospital	0.03	—
NMPUBLIC	Independent public hospital	0.14	—
MULTINP	System private nonprofit hospital	0.25	—
MULTIPRO	System for-profit hospital	0.06	—
MULTIPUB	System public hospital	0.03	—
PROPPRO	Proportion for-profit hospitals in county	0.14	0.19
PROPPUB	Proportion public hospitals in county	0.11	0.14
NUMSRV	Number of services offered at hospital	49.0	19.8
RESINTH	Number of residents per hospital bed	0.10	0.18
MDCDUSEH	Prop. of Medicaid inp. days in hospital	0.11	0.17
BEDSZ1	Hospital has less than 100 beds	0.12	—
BEDSZ2	Hospital has between 100 and 249 beds	0.27	—
BEDSZ3	Hospital has between 250 and 399 beds	0.25	—
ARFINCOM	County per capita income	\$5,970	\$1,139
AREAMD	Prop. of Medicaid admissions in county	0.10	0.05
DCD			
OCRATE	Hospital occupancy rate	0.77	0.12

HNADMIT	Admitting privileges (no. of hospitals)	2.14	1.62
INCENT	M.D. income related to hospital revenues	0.04	—
PRCLNGTH	Years of time in practice for M.D.	16.0	12.0
MEDICAID	Percent of M.D. revenues from Medicaid	0.08	0.12
PERPAT	Percent of M.D. revenues from uninsured	0.13	0.21
HADM	Herfindahl Index for hospital admissions	0.32	0.31
UNCPPOOL	In state with uncompensated care pool	0.16	—
RISKPL	In state with high-risk pool	0.11	—
CATCOV	In state with catastrophic insurance	0.01	—
LIMPAY	Medicaid hosp. payment not cost-based	0.36	—
MDPAY	Ratio Medicaid/Medicare office fees	0.66	0.26
PPO	In state with selective contracting (Calif.)	0.36	—
COV	Medicaid recipients as proportion of poor	0.75	0.29
PA	Prior authorization for hospitalization	0.40	—
MAX	1/(maximum annual days covered)	0.02	0.02
OUT	Outpatient surgery requirements	0.38	—
URBLTMIL	Located in SMSA under 1 million people	0.36	—
URBGTMIL	Located in SMSA over 1 million people	0.44	—

TABLE A.2
 Dependent Variable: Hospital Discourages Admissions of Medicaid Patients

Variable	Coefficient	T-ratio
CONSTANT	-7.24	-2.31
NMPROFIT	.24	1.57
NMPUBLIC	-.18	-2.69
MULTINP	-.077	-1.53
MULTIPRO	.32	3.36
MULTIPUB	-.25	-2.00
PROPPRO	1.17	9.14
NUMSRV	-.005	-4.03
RESINTH	-.02	-.17
MDCDUSEH	-.15	-1.26
BEDSIZ1	.20	2.22
BEDSIZ2	.043	.71
BEDSIZ3	.046	.84
ARFINCOM	-.0000081	-.35
AREAMDCCD	2.26	4.36
RISKPL	.44	6.18
OCRATE	.0018	.83
HNADMIT	.0044	.34
INCENT	.026	.24
PRCLNGTH	.0027	-1.62
MEDICAID	.0081	-4.80
HADM	-.73	-6.74
UNCPPOOL	-.17	-2.33
PPO	-.19	-3.37
LIMPAY	.13	2.89
MDPAY	.0028	.026
COV	.00058	-.57
PA	.17	3.65
MAX	.22	.23
OUT	.22	4.12
URBGTMIL	.18	2.63
URBLTMIL	.24	2.96
CATCOV	-.71	-3.36
PROPPUB	.48	3.21
Number of Observations:		2,970
Chi-squared for PROBIT regression:		191.0

TABLE A.3

Dependent Variable: Hospital Discourages Admission of Uninsured Patients

Variable	Coefficient	T-ratio
CONSTANT	- 21.55	- 6.46
NMPROFIT	.40	2.38
NMPUBLIC	- .22	- 3.23
MULTINP	- .10	- 1.91
MULTIPRO	.68	6.45
MULTIPUB	- .67	- 5.22
PROPPRO	.69	5.03
NUMSRV	- .43	- 3.65
RESINTH	.29	2.14
MDCDUSEH	.37	.29
BEDSIZ1	.12	1.27
BEDSIZ2	- .62	- .96
BEDSIZ3	- .14	- .25
ARFINCOM	- .28	- .11
AREAMDCD	2.07	3.79
RISKPL	.18	2.42
OCRATE	- .17	- .77
HNADMIT	.12	.86
INCENT	.20	1.77
PRCLNGTH	- .11	- 6.12
PERPAT	.46	.47
HADM	.47	- 4.13
UNCPPOOL	.20	2.61
PPO	.14	2.35
LIMPAY	.61	1.26
MDPAY	.31	2.70
COV	- .62	- 5.73
PA	.20	4.07
MAX	4.00	4.03
OUT	.23	3.97
URBGTMIL	.16	2.26
URBLTMIL	.54	6.29
CATCOV	- .43	- 1.96
PROPPUB	.19	1.21
Number of Observations:		2,930
Chi-squared for PROBIT regression:		412.7

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