

# UC Berkeley

## UC Berkeley Previously Published Works

### Title

The changing boundaries of the American hospital

### Permalink

<https://escholarship.org/uc/item/3dg7b1hb>

### Journal

The Milbank Quarterly, 72(2)

### ISSN

0887-378X

### Author

Robinson, James C

### Publication Date

1994

Peer reviewed

# WILEY



The Changing Boundaries of the American Hospital

Author(s): James C. Robinson

Source: *The Milbank Quarterly*, Vol. 72, No. 2 (1994), pp. 259-275

Published by: Wiley on behalf of Milbank Memorial Fund

Stable URL: <http://www.jstor.org/stable/3350296>

Accessed: 26-05-2016 22:13 UTC

## REFERENCES

Linked references are available on JSTOR for this article:

[http://www.jstor.org/stable/3350296?seq=1&cid=pdf-reference#references\\_tab\\_contents](http://www.jstor.org/stable/3350296?seq=1&cid=pdf-reference#references_tab_contents)

You may need to log in to JSTOR to access the linked references.

---

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at

<http://about.jstor.org/terms>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).



Wiley, Milbank Memorial Fund are collaborating with JSTOR to digitize, preserve and extend access to *The Milbank Quarterly*

# The Changing Boundaries of the American Hospital

JAMES C. ROBINSON

*University of California, Berkeley*

**T**HE ACUTE CARE HOSPITAL IS UNDERGOING A process of rapid and fundamental change. Long the central institution of the health care delivery system, the hospital is being challenged by important developments in epidemiology, technology, and economics. Individually and collectively, these changes threaten to push the hospital to the margins of the system, leaving most medical services and dollars controlled by “accountable health partnerships” that emphasize outpatient, home health, and subacute care. Alternatively, these environmental changes could provide a window of opportunity for the hospital to embark on a new mission as a health care center without walls. Already, many hospitals have diversified into ambulatory diagnostic and surgery centers, home health agencies, nursing-home facilities, and myriad other services that have few direct links to acute inpatient care. The delivery system of the 21st century might remain centered around the hospital, albeit in a vertically integrated system where acute care beds play only a modest role.

The recent expansion of the hospital into related services is not uncontested. On the contrary, hospitals are encountering vigorous competition from multispecialty physician practices, independent surgical centers, freestanding diagnostic radiology units, nursing-home chains, community-based home health agencies, and numerous other organizations. Free

---

The Milbank Quarterly, Vol. 72, No. 2, 1994  
© 1994 Milbank Memorial Fund. Published by Blackwell Publishers,  
238 Main Street, Cambridge, MA 02142, USA, and 108 Cowley Road,  
Oxford OX4 1JF, UK.

from the bureaucratic inertias, technological imperatives, high wages, and regulatory controls of large hospital institutions, these organizations emphasize accessibility, economy, and often a more intimate setting. Through chain affiliations, franchise contracts, and other network linkages, they are able to achieve many economies of scale and scope without incurring heavy investments in hospital plant and equipment.

The hospitals' financial and political environment is also changing rapidly. Public and private purchasers increasingly seek to negotiate with health care organizations capable of providing all services for a predetermined capitation payment. Some of these integrated organizations will be created by hospital systems or will acquire hospitals, but others will prefer to avoid the risks inherent in hospital ownership and will contract for inpatient services. In economic parlance, they will "buy" rather than "make" acute inpatient care.

In this article, I will analyze hospital integration into outpatient, home health, and subacute care services through the conceptual framework of transactions cost economics. Between 1972 and 1990, acute care facilities diversified rapidly, but significant areas of health care remain outside the boundaries of the hospital organization. This raises important questions concerning the limits of market contracting and, conversely, the limits of vertical integration. Contrary to experiences in the manufacturing and other nonhealth sectors of the economy, investments in specialized physical assets cannot explain vertical integration by hospitals. Decisions to expand into outpatient, home health, and subacute services serve as controls on potentially opportunistic and uncooperative behavior by independent firms in an era of prospective payment and heightened public concern over quality and accessibility of services.

### A Pattern of Selective Expansion

The dynamics of change are everywhere to be seen. Epidemiological patterns continue to shift the burden of disease from acute episodes requiring hospitalization to chronic conditions most effectively treated in outpatient settings, the patient's home, or subacute care facilities. Dramatic developments in diagnostic and therapeutic technologies are permitting an ever-increasing portion of health care procedures to be done noninvasively, eliminating the need for overnight stays. Many common forms of surgery have abandoned the hospital altogether, and those that

remain are being managed with ever fewer preoperative and postoperative days in bed.

These epidemiological and technological developments pale in comparison to the new financial and quality-review threats to the dominant position of the acute care hospital. Aroused by insupportable rates of cost escalation, public and private insurers have targeted the hospital. Utilization review and second surgical opinion programs seek to reduce admissions to the hospital, minimize intensity of treatment, and ensure a speedy discharge. Health maintenance organizations (HMOs) and other health plans reimbursed on a capitated basis have a strong financial incentive to find alternatives to inpatient care.

Despite steady growth in the general population and explosive growth in the number of aged persons, the volume of acute inpatient services is shrinking. Inpatient days climbed from 236 million in 1972 to 263 million in 1982 and then fell sharply to 206 million in 1990. As evident in tables 1 and 2, however, these reductions in acute inpatient utilization

TABLE 1  
Utilization of Acute, Subacute, and Outpatient Services in  
Acute Care Hospitals, 1972-90

	1972	1982	1990
Number of hospitals	5,843	5,801	5,384
Acute inpatient services			
Beds	859,344	968,807	867,361
Days	235,608,458	262,549,209	206,134,770
Surgeries	—	—	10,844,916
Subacute inpatient services			
Units	503	737	1,129
Beds	24,900	46,094	60,694
Days	7,218,598	15,493,884	19,836,883
Outpatient services			
Departments	1,503 <sup>a</sup>	2,237 <sup>b</sup>	4,309 <sup>c</sup>
Visits	166,983,161	248,123,640	301,328,762
Surgeries	—	—	11,069,952

<sup>a</sup>Of 5,456 hospitals responding.

<sup>b</sup>Of 5,313 hospitals responding.

<sup>c</sup>Of 5,056 hospitals responding.

Source: American Hospital Association: *Hospital Statistics*, various years.

TABLE 2  
 Percentage of Acute Care Hospitals Offering Outpatient,  
 Home Health, and Subacute Services, 1972-90

Services	1972	1982	1990
<b>Outpatient</b>			
Surgery	NA	NA	94.5
Clinic	27.5	42.4	85.2
Rehabilitation	6.9	32.7	51.4
Alcohol/chemical dependency	NA	12.2	20.5
Hemodialysis	NA	23.2	26.6
Patient education	NA	NA	86.4
Community health promotion	NA	NA	77.1
Worksite health promotion	NA	NA	53.9
Outpatient psychiatry	11.1	14.0	19.7
Psychiatric consultation/education	10.2	22.4	30.4
<b>Home health</b>			
Home health	6.2	12.5	35.5
Hospice	NA	8.5	16.1
<b>Subacute inpatient</b>			
Nursing-home unit	8.6	12.7	21.0
Psychiatric partial hospitalization	8.1	10.4	13.5

*Abbreviation:* NA, not available.

*Source:* American Hospital Association: *Hospital Statistics*, various years.

have not caused a commensurate shrinkage in the hospital as an institution. Hospitals have integrated rapidly into outpatient facilities that diagnose patients prior to admission, into subacute care facilities that shelter patients after discharge, and into many forms of health care that are not directly linked to acute inpatient care at all. Diversification into ambulatory care to the extent of providing a formal outpatient department increased from 28 percent of hospitals in 1972, to 42 percent in 1982, and then doubled to 85 percent by 1990. Whereas inpatient days exceeded hospital outpatient visits by 41 percent in 1972, outpatient visits exceeded inpatient days by 46 percent in 1990. In 1982 surgeries performed on an outpatient basis in U.S. hospitals were too rare to merit separate enumeration; eight years later all but 5 percent of U.S. hospitals maintained outpatient surgery services, and the procedures per-

formed there outnumbered those carried out on an inpatient basis. The integration into community settings is equally striking. Hospitals with home health programs grew from 6 percent in 1972 to 36 percent in 1990. Integration into inpatient subacute care proceeded apace, with 9 percent maintaining a nursing-home unit in 1972 and 21 percent doing so in 1990. Subacute care days more than doubled between 1972 and 1982 and increased by an additional third through 1990.

Dramatic though the evidence is of hospital expansion into nontraditional activities, it is important to emphasize the types of expansion that are not occurring. We do not observe backward integration of even the largest hospital chains into the manufacture of pharmaceuticals, radiological equipment, or surgical instruments, much less into the production of more humble components such as bandages, linen, and diapers. The types of integration we do observe are often only partial: some hospitals decide to buy a service through market contract, whereas others decide to offer the service themselves through unified ownership and control. This selectivity in hospital integration determines the boundaries of the institution and requires explanation. We can be satisfied neither with a theory that predicts hospitals will invariably fail in efforts to move beyond their acute care core nor with one that predicts hospitals will expand without limits in pursuit of empire.

### The Limits of the Hospital

Some medical care services are invariably found in hospitals, some are never found in hospitals, and others are found both inside and outside of hospital settings. Moreover, the distribution of services has changed markedly over time, and is rapidly shifting now. As a first step toward a theory capable of explaining the changing boundaries of the hospital, it is illuminating to pose two sets of questions, inspired by Coase (1937).

First, why are any medical services owned by hospitals, beyond some technologically required core? Why do some hospitals own alcohol and drug dependency programs, nursing-home beds, and other services that can be and often are found in independent, free-standing organizations? Even for facilities that must be geographically proximate to hospitals, such as radiology units, why do we observe unified ownership rather than contractual relations between independent entities? Why do some HMOs own their own hospitals even when a primary organizational goal

is to substitute outpatient for inpatient services? Generally, what is the limit to market procurement that leads to unified ownership of many disparate services by the hospital?

Second, and conversely, why are not all medical care services owned by hospitals? Why is not every hospital organization integrated fully into all forms of outpatient, home health, and long-term-care services? Why must not all HMOs acquire their own inpatient facility? What is the limit to unified ownership that leads to market contracting by the hospital?

The conventional explanation for diversification into related services is the pursuit of economies of scope. Two services are subject to economies of scope if the integrated production of both is cheaper than their production independently (Willig 1979). Textbook examples include the joint production of mutton and wool, milk and cheese, and automobiles and trucks.

The limits of this technological explanation are clear: economies of scope are neither a necessary nor a sufficient condition for multiproduct diversification by a particular firm. Teece (1980) shows that scope economies by themselves are not a sufficient explanation for diversification by posing the question of the contractual alternative. If the technology necessary to produce one service is not fully utilized, and could be employed to produce another service as well, why must this excess capacity be used by the firm itself (through diversification) rather than leased to another firm? For example, a hospital with excess capacity due to declining admissions for acute care services need not open its own subacute care unit. In principle, it could contract with an independent firm (e.g., a nursing-home chain) to develop a subacute care facility in the unused space. By extension, hospitals are not prevented by technology alone from contracting for rather than owning radiology, laboratory, and other clinical services directly related to inpatient care, to say nothing of comparatively unrelated ambulatory surgery and home health services. The explanation for hospital ownership of these services must be sought in contractual, not merely technological, directions (Mick and Conrad 1988).

Even more important, perhaps, is the fact that economies of scope are not a necessary condition for diversification into new services. This is evident in the case of conglomerate diversification, where corporations simultaneously pursue technologically independent product lines. Especially striking are cases of diversification in the face of diseconomies of scope, where producing two services simultaneously is more expensive than pro-



ducing independently. Input costs are likely to be higher for hospital-owned outpatient, home health, and nursing-home services than for comparable nonhospital organizations. Wage rates are more generous for nurses, technicians, clerical workers, janitors, and other staff in hospital-owned facilities than in independent physician offices, nursing homes, and home health agencies. Hospitals tend to employ a more intensive style of practice than independent nursing homes and physician offices, and thus experience higher costs, even after taking wages and other input prices into account. There is considerable policy debate over the potential "medicalization" of long-term care if it falls under the control of acute care hospitals. Furthermore, bureaucratic organization often attenuates incentives and reduces performance. This is the reason for the franchising rather than unified ownership of auto dealerships, chain restaurants, and many other service networks. Efforts to introduce marketlike compensation mechanisms into vertically integrated and diversified firms may lead to undesirable responses, such as overuse of capital equipment owned by the parent firm and disputes over appropriate internal pricing and accounting (Williamson 1985). The potential for opportunistic cost and revenue accounting is very strong between the inpatient and outpatient or subacute care divisions of a diversified hospital organization.

### Transactions Cost Economics

Transactions cost economics interprets the limits of both the market and the firm in terms of the relative efficiency of each organizational type in producing and distributing the services in question. External procurement through markets and internal production within firms are viewed as alternative modes of accomplishing a similar set of tasks. Organizational forms are interpreted as governance structures that offer various remedies for and protections against the pervasive uncertainty and opportunism of economic relations. Particular types of transactions come to be handled under particular organizational forms, depending on the relative costs of so doing. These costs are determined not only by technological factors, but also by the legal structure, tax and regulatory incentives, and cultural patterns.

MacNeil (1978) and Williamson (1985, 1989) emphasize three types of governance modes in modern economic relations: arms-length and

anonymous “spot contracting” through competitive markets, internal production through vertical integration and diversification, and an intermediate, hybrid set of forms that include franchising and long-term “relational” contracting. Many of the interesting new developments in health care organization fall within the third category of complex contractual relations, eschewing both unified ownership and spot contracting. To understand the boundaries of the acute care hospital, however, it is sufficient to focus on the basic dichotomy between market procurement and unified ownership, leaving the distinction between the two types of market contracting to other analyses.

Transactions cost economics emphasizes nonredeployable investments in specialized assets as the explanation for vertical integration and its absence, market relations. Specialized assets include types of physical equipment and human skills that have significantly greater value when used in a particular economic relationship, in contrast with generalized equipment and skills that do not lose their value when redeployed to new relationships. These investments can lead to costly haggling if supply or demand factors change for unexpected reasons because the option of terminating the relationship is so unattractive. Moreover, one side may seek to change the terms of the agreement after the specialized investments have been made. As the degree of asset specificity deepens, the potential for such opportunism increases. It eventually becomes more economical for the two firms to merge or for one of the firms to expand independently into the domain of the other. Conversely, vertical disintegration occurs when technological and environmental developments reduce the benefits of investments in specialized assets, thereby increasing the relative attractiveness of market procurement. Stable boundaries between different types of firms are caused by a lack of further economies from specialized assets. Pencils are essential to accounting firms, but individual firms do not require unique pencil specifications, and we do not observe backward integration of accounting firms into the production of pencils or forward integration by pencil producers into accounting services.

### Specialized Physical Assets

The most thoroughly studied and extensively cited causes for vertical integration in the transactions cost literature are nonredeployable invest-

ments in specialized physical equipment. Firms supplying component parts to automobile producers, for example, must meet precise specifications that vary considerably from assembler to assembler. Physical asset specificity has been found to be a major determinant of "make or buy" decisions in these contexts (Monteverde and Teece 1982). More generally, Chandler (1977) emphasizes investments in specialized physical equipment in his explanation for the rise of the large, vertically integrated corporation.

It is possible to identify some examples of specialized physical assets in hospital care. The dominant feature of the equipment used in the hospital and in health care more broadly, however, is its generalized, nonspecialized nature. Individual hospitals do not require their own unique types of CAT scanners, syringes, bandages, and medicines in the same way that Ford and Toyota demand unique types of auto bodies and crankshafts. Hospitals are content to rely on market contracting for ambulances, adjustable beds, extra-wide elevators, implantable cardiac pacemakers, surgical gowns, radioisotopes, and most of the other objects so commonly associated with hospital care. Specialized physical assets, the most important explanation for observed patterns of vertical integration in manufacturing, constitute the least important explanation for the observed pattern of vertical integration in hospital care.

### Site-Specific Assets

Some technologically distinct processes are performed most efficiently when placed immediately adjacent to one another, leading to economies of time and transportation costs. Because they are technologically distinct, they can be under separate ownership, yet connected through market contracting. The physical location, however, which reduces contracting costs with the proximate firm, nevertheless increases the costs of contracting with all others. This creates risks from opportunistic behavior. The difference between the cost of production when contracting with the adjacent firm, rather than a nonadjacent one, can be expropriated by the adjacent firm through price increases or changes in other contractual terms. Site-specific assets of this type frequently result in unified ownership. Where vertical integration is impossible for legal or other reasons, stable, long-term contractual relations often occur (Joskow 1985).

The process of production for acute inpatient care can be conceptualized as the sequencing of numerous services for individual patients, including tests from the clinical laboratory, units of blood from the blood bank, and drugs from the pharmacy. Time pressures during medical emergencies dictate that these ancillary services be geographically adjacent to the core functions of the hospital, but do not require them to be under hospital ownership. The transactions cost hazards of spot contracting for ancillary services are clear, however. Independent owners of blood banks, clinical laboratories, and pharmacies could extract enormous profits by raising prices during medical emergencies. In lieu of independent ownership and spot contracting, therefore, we tend to observe vertical integration and nonprice allocation of resources. Prices do not rise during times of exceptional demand. Rather, there emerges a complicated system of queuing and nonprice rationing (Harris 1977).

Site specificity, stemming from the need to economize on time, has historically figured prominently in extending the hospital boundaries to encompass the ancillary services necessary for acute inpatient care. In large urban areas, it will probably play less of a future role. Location of outpatient, home health, and subacute services geographically adjacent to the acute care facility creates few efficiencies and may induce inefficiencies in input costs and practice styles. Transportation time will continue to exert an important influence on hospital boundaries in rural areas, however, because these areas support only one or two hospitals and one or two health plans. Health plans and hospitals are inevitably engaged in a process of small numbers bargaining or, at the extreme, of bilateral monopoly. Each is essential to the other, creating the basis for cooperation. However, each has different interests in the allocation of available resources between inpatient and other services, creating the potential for mutually destructive conflict.

In instances of true bilateral monopoly, the legal specifics of the relationship between the hospital and the health plan will be relatively unimportant. Long-term contracting and unified ownership will achieve similar results because each entity is similarly situated. In this context, one would expect the hospital to diversify unopposed into outpatient, home health, and subacute care to the extent that there exists adequate consumer demand for these services. Hospitals in noncompetitive rural markets have not progressed as far down the path of technological duplication and wage inflation as their urban counterparts (Robinson and Luft 1988; Robinson 1988), and thus suffer fewer diseconomies of scope

when diversifying into nontraditional services. The paucity of outpatient, home health, and nursing-home alternatives eliminates any advantages a health plan might have gained from selective contracting and price competition. The local medical culture may reinforce a cooperative, rather than a competitive, attitude among the various types of health care services. Empirical research is clearly needed, but the following hypothesis seems reasonable: Whereas hospitals in urban areas will be more diversified than rural hospitals in absolute terms, owing to the larger population base they serve, they will comprise smaller relative shares of the local markets for outpatient, home health, and subacute care.

### Reputational Assets

Consumers purchase many goods and services whose quality they are unable to evaluate directly. Prior to purchase, most of us are unable to measure meaningfully the quality of electronic equipment, fresh fruit, and medical care. If convinced of high quality, we are generally willing to pay a higher price than we would otherwise. Producers often find it profitable to invest resources in developing a reputation for high quality. This investment in reputational or "brand name" capital raises costs but also revenues. It need not shed direct light on the features of a particular commodity, but may reinforce the consumer's image of the producer as unlikely to shade quality whenever detection is unlikely. These investments serve as commitments to continued high-quality service because the value of the investment would be lost if consumers encountered shoddy products (Klein and Leffler 1981).

Firms not only make investments to build up a reputation for quality, but they also seek opportunities to gain new marketing advantages from preexisting reputational capital. Firms with established reputations in one product line can add a new one and enjoy the benefits of a higher consumer confidence than is achievable by an unknown producer. Of course, the newly integrated firm must take actions to ensure the quality of its new product line because the value of its original reputation is at stake. The cost of these actions, however, may be considerably lower than the cost of achieving a comparable reputation for an independent firm. Franchising is a means for a firm with an established reputation to guarantee the quality of a particular product, such as the service offered

by a local outlet, while maintaining the performance incentives of independent ownership. Franchisers risk having their reputation undermined by franchisees, so they institute detailed controls on price, quality, and amenities (Hadfield 1990).

The past 20 years have witnessed concern in policy circles over the rapid diffusion and “duplication” among hospitals of high-cost inpatient services such as open heart surgery, cardiac catheterization, and advanced radiological technologies. Some economists have sought to explain the dynamics of inpatient service diffusion through the model of the “medical arms race” (Luft et al. 1986). Hospitals compete for patients indirectly by competing for physician staff affiliations, which is accomplished through the acquisition of specialized clinical technologies. This model can be interpreted in terms of hospital investments in reputational or brand-name capital. Individual technologies may be acquired for the overall cachet of technological preparedness they offer to the hospital, rather than solely for the admission of patients who actually will use these services. Acquisition of an open-heart surgery facility may increase admissions for cholecystectomy.

Reputation effects may explain much of hospital diversification into ambulatory and home health services. The hospital can use its established reputation for quality in inpatient care as a credible commitment to maintaining quality in outpatient care. As the intensity of treatments offered on an outpatient basis has increased, so has consumer concern about quality. When integrating into ambulatory and home health services, the hospital is placing its entire reputation at stake, and thereby announces a commitment to monitor and control the quality of its new services. This perspective suggests that hospitals will not seek ownership of services for which, although quality problems are of concern, the hospital has no effective means to monitor and control performance, as in the case of some forms of home health care.

### Dedicated Capacity

Unpredictable fluctuations in supplies and consumer demand create problems of inventory and capacity utilization. Vertically integrated firms can maintain excess capacity in one unit to absorb sudden increases in output from other units, but find this costly. Nonintegrated firms can contract with other entities to maintain excess capacity for their needs,

benefiting from the comparative advantage of these entities in managing inventory. This capacity need not be specialized in any physical sense to the specifications of one supplier, but is contractually reserved or "dedicated" general capacity. Dedicated assets expose both buyers and sellers to opportunistic hazards, and in some cases lead to vertical integration. The firm that maintains the excess capacity will lose the revenue it could otherwise have obtained by selling that capacity to other users, if the contracting user finds some excuse to renege on its agreement. The firm that contracts for the capacity will be forced to pay a higher spot-market price for other space if the contracting seller opportunistically reallocates the space to another bidder. Dedicated capacity problems are particularly evident in integrated production processes where interruptions caused by insufficient capacity at the next stage are costly (Goldberg and Erickson 1987).

Hospital care is in many ways an integrated production process. Patients are often evaluated on an outpatient basis, treated in the acute inpatient facility, and then transferred to subacute care in a nursing home or hospice. Lack of available subacute beds causes patients to be held in the acute care beds, which carry much higher daily costs. Hospital lengths of stay are longer in metropolitan areas with few nursing-home beds than in areas with many nursing-home beds (Kenney and Holahan 1991). As long as hospitals were paid on a retrospective basis, the high costs of acute bed utilization by candidates for subacute care could be passed on to insurance companies and Medicare. With the advent of prospective payment and hospital utilization controls, however, the costs of insufficient nursing-home capacity must be absorbed by the hospital.

Hospitals and nursing homes have opposite incentives to maintain excess subacute care capacity. Hospitals need to have subacute care beds available on precisely the day when patients can be discharged from the acute care facility. Nursing homes, however, are profitable only when they maintain full utilization of capacity. In principle, this divergence of interest could be handled by agreements for the nursing home to maintain full bed utilization but to discharge a resident whenever the hospital needs a subacute bed. Such arrangements are very difficult, however. First, the hospital is not responsible financially for the cost of nursing-home care under either public or private insurance programs, and so cannot agree to special payment penalties if it does not fill up the subacute care beds the nursing home reserves for its use. An explicit, contractual commitment by a nursing home to discharge patients to accommodate

the financial needs of a hospital could easily be interpreted as medical malpractice, even if it is widely believed that nursing homes otherwise retain patients for excessive periods to ensure full capacity utilization. Discharge agreements of this kind may function most effectively when made on an informal, unwritten basis. This informality increases the risk of opportunistic breach, however, and thereby strengthens the drive toward unified ownership. The future of hospital integration into subacute care will depend in large part on the trade-off between the transactions cost economies of integration and the diseconomies associated with the extension of hospital wages and practice styles into affiliated subacute care units.

### The Organizational Coordination of Health Care

Hospital diversification has been caused partly by the simultaneous decline in demand for acute inpatient services and the increased demand for outpatient, home health, and long-term-care services. Hospital-based organizations have enjoyed some first-mover advantages stemming from existing investments in human and physical capital. This expansion could be temporary, however, as nonhospital organizations emerge to compete for these lucrative markets. No data are available concerning the changing shares of outpatient, home health, and long-term-care markets controlled by hospitals. The figures in tables 1 and 2 documenting increased absolute involvement by hospitals in these markets could be consistent with stable or even declining relative shares.

Hospitals' retention of a large share of outpatient, home health, and nursing-home services will be the result of transactions cost economies of governance. The importance of mechanisms to coordinate patient flows among technologically distinct health care services has been growing rapidly; they have the potential to reward organizations with the capability of performing the coordinating function. This is most evident in the case of services traditionally provided on an inpatient basis but now found in other settings. Medicare's diagnosis related groups (DRGs) system and other prospective methods of reimbursement give strong incentives for hospitals to unbundle the acute inpatient episode, shifting preoperative diagnostic workups to outpatient clinics and postoperative recovery to subacute care facilities or the patient's home. HMOs promote a continual search for the most cost-effective settings because they are paid on a



capitation basis. Analogous effects are produced by nonprice mechanisms, such as preadmission certification and length-of-stay protocols. Patients are admitted later and sicker and then are discharged sooner and sicker. The financial and health-status consequences of coordination failures, be they caused by mistakes or opportunism, are enormous.

This leaves open the central question, however. Shall the coordination of care be performed by the hospital itself, through diversification into related services, or by some other organizational entity, which relates to the hospital through contracts rather than unified ownership? The importance of continuity and coordination rules out arms-length spot contracting for particular services, but leaves very much open the possibility that complex, relational contracting mechanisms will outperform vertical integration. The obvious alternative locus of coordination is the managed care organization, which can control patient flows through its selective contracting, gatekeeper, and referral mechanisms, but which need not make the heavy investments in hospital plant and personnel.

Organizational boundaries will evolve into the configuration that minimizes coordination costs only if the larger institutional framework rewards efficiency. Governmental entities, such as legislatures, regulatory agencies, and the Health Care Financing Administration, are not concerned primarily with economic efficiency, however, but rather with responsiveness to politically important constituencies. It is unclear at present whether governmental interventions will on balance encourage or discourage hospital diversification. Examples can be found on both sides. Medicare's policy of paying hospital-affiliated nursing-home units a higher rate than that accorded to nonhospital facilities encourages further hospital penetration of the long-term-care market (Health Care Financing Administration 1991). The growing political pressure on physicians to divest ownership of outpatient diagnostic services and clinical laboratories may permit hospitals to acquire those units at fire-sale prices. On the other hand, certificate of need (CON) programs have traditionally discriminated against hospitals and encouraged the migration of expensive clinical technologies to independent organizations.

## Conclusion

The U.S. health care system faces a massive restructuring, and boundaries are changing both for hospitals and for every other organizational type. It is impossible to give a full account of the hospital's role in out-

patient services, home health, and long-term care without analyzing the turbulent events enveloping other participants, particularly physicians and insurers. This larger discussion, when it occurs, must benefit from the rapidly evolving interdisciplinary science of organization, which draws heavily from economics, sociology, political science, and law. We need a more robust positive theory of how health care organizations evolve in response to changes in epidemiology, payment incentives, and the larger political environment. As I have argued here, contractual as well as technological factors will play major roles. Most important, we need a convincing normative framework to guide public policies concerning reimbursement mechanisms, licensing and accreditation standards, criteria for evaluating quality, and methods for ensuring access to services. We must be willing to rethink the system and not accept as self-evident the existing boundaries, which evolved during a period when the institutional environment rewarded professional dominance, cost-insensitive consumer choice, and organizational hypertrophy.

## References

- Chandler, A.D., Jr. 1977. *The Visible Hand: The Managerial Revolution in American Business*. Cambridge: Harvard University Press.
- Coase, R.H. 1937. The Nature of the Firm. *Economica* 4:386–405.
- Goldberg, V.P., and J.R. Erickson. 1987. Quantity and Price Adjustment in Long-Term Contracts: A Case Study of Petroleum Coke. *Journal of Law and Economics* 30:369–99.
- Hadfield, G.K. 1990. Problematic Relations: Franchising and the Law of Incomplete Contracts. *Stanford Law Review* 42(4):927–92.
- Harris, J.E. 1977. The Internal Organization of Hospitals: Some Economic Implications. *Bell Journal of Economics* 8:467–82.
- Health Care Financing Administration. 1991. Medicare Program; Schedule of Limits for Skilled Nursing Facility Inpatient Routine Service Costs. *Federal Register* 58(62):13317–31.
- Joskow, P.L. 1985. Vertical Integration and Long-Term Contracts: The Case of Coal-Burning Electric Generating Plants. *Journal of Law, Economics and Organization* 1:33–80.
- Kenney, G., and J. Holahan. 1991. Nursing Home Transfers and Mean Length of Stay in the Prospective Payment Era. *Medical Care* 29: 589–605.
- Klein, B., and K.B. Leffler. 1981. The Role of Market Forces in Assuring Contractual Performance. *Journal of Political Economy* 89:615–41.

- Luft, H.S., J.C. Robinson, D.W. Garnick, S.C. Maerki, and S.J. McPhee. 1986. The Role of Specialized Clinical Services in Competition among Hospitals. *Inquiry* 23:83-94.
- MacNeil, I. 1978. Contracts: Adjustments of Long-Term Economic Relations under Classical, Neo-classical, and Relational Contract Law. *Northwestern University Law Review* 72:854-906.
- Mick, S.S., and D. Conrad. 1988. The Decision to Integrate Vertically in Health Care Organizations. *Hospital and Health Services Administration* 33:345-60.
- Monteverde, K., and D. Teece. 1982. Supplier Switching Costs and Vertical Integration in the Automobile Industry. *Bell Journal of Economics* 13:206-13.
- Robinson, J.C. 1988. Market Structure, Employment, and Skill Mix in the Hospital Industry. *Southern Economic Journal* 55:315-25.
- Robinson, J.C., and H.S. Luft. 1988. Competition, Regulation, and Hospital Costs, 1982-1986. *Journal of the American Medical Association* 260:2676-81.
- Teece D.J. 1980. Economies of Scope and the Scope of the Enterprise. *Journal of Economic Behavior and Organization* 1:223-47.
- Williamson, O.E. 1985. *The Economic Institutions of Capitalism*. New York: Free Press.
- . 1989. Transactions Cost Economics. In *Handbook of Industrial Organization* (vol. 1., 135-82), eds. R. Schmalensee and R.D. Willig. Amsterdam: North Holland.
- Willig, R.D. 1979. Multiproduct Technology and Market Structure. *American Economic Review* 69:346-51.

---

*Acknowledgment:* This research was supported by the King's Fund and the Milbank Memorial Fund through their Hospitals and Health Services policy review.

*Address correspondence to:* James C. Robinson, PhD, Associate Professor, School of Public Health, University of California, Berkeley, CA 94720.