Alternative Models of Hospital-Physician Affiliation as the United States Moves Away from Tight Managed Care

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DURING THE 1990S, MANY U.S. HOSPITALS RUSHED to affiliate tightly with physicians by purchasing practices and funding the creation of Independent Practice Associations (IPAs) and Physician Hospital Organizations (PHOs) (Burns, DeGraaff, and Singh 1999; Burns and Thorpe 1993; Morrissey et al. 1996). Expectations were high for the national growth of capitated “full-risk” and “shared-risk” contracting. These contracting models were already prevalent in California and were found in a number of cities around the United States. Risk contracting was supposed to reward physicians and hospitals that could work together to control costs. It was commonly believed that “systems will either migrate to full integration or decline to . . . secondary status . . . vertically integrated systems enjoy irresistible economic advantages” (Governance Committee 1993, xiv). Hospital-physician integration appeared to be an idea whose time had come. But when risk contracting failed to spread and financial and operational problems developed in hospital-based IPAs and PHOs and in the physician practices that hospitals had purchased (Burns et al. 2000; Burns and Pauly 2002; Peters 1999), the prevailing wisdom changed. It now seemed that hospitals should divest themselves of these practices, withdraw from the IPAs, and shut down their PHOs (Cain Brothers 2000; Johnson 1999).

Does this mean that hospital-physician relationships are reverting from tighter forms of affiliation to the medical staff model that

predominated before managed care, an era during which physicians were relatively independent of hospitals (Starr 1982; Stevens 1989) and used them as “the physicians’ workshop” (Pauly and Redisch 1973)? A recent report by the Community Tracking Study shows that in 2000, 65 percent of the major hospitals in the 12 metropolitan areas studied continued to employ primary care physicians and 50 percent continued to own or share ownership of an IPA or PHO (Lake et al. 2003). Possibly hospitals simply need more time to unwind these relationships. But the more tightly integrated forms of hospital-physician relationship may also have advantages that offset their liabilities, even in a noncapitated environment. In this article we describe three models of hospital relationships with physicians who practice in the community. These range from the least integrated (the medical staff model) to the most integrated (the hospital-owned practice model), with hybrid models (PHOs and hospital-affiliated IPAs) in between. IPAs are organizations through which physicians in independent practice contract jointly with HMOs. Most IPAs are owned by physicians, but hospitals may share ownership or contribute support in other ways that link the IPA to the hospital. PHOs are jointly owned physician-hospital organizations through which physicians and hospitals jointly negotiate with HMOs.

We borrowed concepts from transaction cost economics and resource dependence theory to describe the advantages and disadvantages of each of the three models during three eras of U.S. medical care, which we termed the *pre-managed care*, *tight managed care*, and *loose managed care* eras. We illustrate these concepts using case studies of four quite different hospital systems in two contrasting metropolitan areas: New York City, where risk contracting is uncommon and most physicians work by themselves or in small group practices, and San Diego, where risk contracting is common and many physicians are organized into large IPAs and group practices.

Three Eras in U.S. Medical Care

Hospitals may want to affiliate more tightly with physicians for one or more of four reasons: to coordinate care, to gain leverage with health plans, to bring in more admissions, and/or to share in any savings in the costs of hospital care incurred under full- or shared-risk contracting (Budetti et al. 2002; Robinson 1999; Shortell et al. 1996; Zuckerman et al. 1998). These pressures for tighter hospital affiliation with

TABLE 1
Pressures for Hospital Affiliation with Physicians During Three Eras of U.S.
Medical Care

	Pre-Managed Care	Tight Managed Care	Loose Managed Care
Control cost of care	0	++	+
Improve quality of care	0	Anticipated	Anticipated
Gain leverage with health plans	0	++	++
Compete for admissions	+	++	+
Share savings from controlling utilization in risk contracting or per diem or per case payment	0	++	0

Note: The values assigned to each cell are intended to illustrate the relative relationship among the pressures.

physicians changed during the three eras of U.S. health care (table 1). Coordinating care becomes important when hospitals receive additional income for controlling the costs of care and/or for improving quality (Mark et al. 1998). Gaining leverage with health plans becomes important when plans can contract selectively with only certain hospitals, particularly if the plans are able to sell health insurance products that provide relatively limited hospital networks. Bringing in more admissions has always been important to hospitals but is particularly so when operating margins are low, bed capacity is excessive, and competing hospitals are located nearby. Sharing in any savings achieved under full- or shared-risk contracting is important when Health Maintenance Organizations (HMOs) pass on all or part of the financial risk for the costs of patient care to physicians and/or hospitals.

Throughout most of the 20th century, physicians and hospitals were paid a fee for each service they provided. Health insurers' and Medicare's payment rates were based on costs or the prices historically charged by individual hospitals and on the physicians' fees prevalent in their geographic area. Since payment rates were not negotiated and patients could choose any hospital for care, gaining negotiating leverage with payers was not relevant. Since hospitals received more for providing more services, controlling the costs of care was not important. Since quality was not measured, improving quality was not important in financial terms. Winning physicians' loyalty and bringing in more admissions

were important, but competition for admissions was somewhat muted by the fact that the generous payment system ensured that most hospitals were doing well financially.

By the early 1990s, the growth of “tight” managed care dramatically altered the pressures on hospitals. Negotiating leverage with health plans became important because payment rates to hospitals were now determined by negotiations with Health Maintenance Organizations (HMOs) and Preferred Provider Organizations (PPOs). These types of health plans were growing rapidly and were contracting selectively with hospitals, and it was anticipated that they would limit their networks in the near future. Working with physicians to control costs by managing the type, amount, and timing of hospital services provided became important as hospitals were increasingly paid via capitation, case rates, per diem rates, and (not related to tight managed care but coinciding with it in time) the Medicare Prospective Payment System (PPS) for inpatient care. Hospitals were not yet being paid more for scoring well on quality measurements but expected that they would be in the near future, so coordination with physicians appeared important for this reason as well. Hospitals’ competition for physicians intensified because of the financial pressures of the new payment methods. Also, because HMOs required that patients receive care through primary care physician “gatekeepers,” hospitals that did not secure large numbers of tightly linked primary care physicians risked being excluded from the health plans’ networks or simply losing admissions to hospitals favored by these physicians.

During the era of tight managed care, risk contracting posed both another threat to hospitals and another reason to affiliate tightly with physicians. Some large medical groups, particularly in California, used risk contracting to earn income at the hospitals’ expense by reducing the number of admissions and the length of their patients’ hospital stays (Robinson and Casalino 1995). Hospitals that shared such risk contracts with their employed primary care physicians or tightly linked IPAs or PHOs could share in any savings achieved under risk contracting. Hospitals competed to purchase primary care practices and to create hospital-affiliated IPAs and PHOs.

By the late 1990s, the strong backlash against managed care halted the growth in HMO enrollment and led to a retreat from risk contracting and the requirement that patients access care through primary care gatekeepers. HMOs’ and PPOs’ ability to threaten hospitals with exclusion from their networks also declined as patients and their employers

demanded broader networks. But these developments have not meant a return to the conditions of the pre-managed care era. In the current era of "loose managed care," payment rates between hospitals and health plans continue to be decided through negotiations, so leverage remains important. Although the decline of risk contracting has somewhat reduced the pressure on hospitals to control costs, they still are paid mainly on a per diem or case rate by health plans and through the PPS system by Medicare, making coordination with physicians to manage care an issue of continuing importance. Compared with the era of tight managed care, anticipation that hospitals will be paid for scoring well on quality measures has increased, also making coordination with physicians important. Competition for admissions continues to be intense, given the financial pressures on hospitals, although it is somewhat diminished by the weakening of the gatekeeper physician model and, in some metropolitan areas, by the recognition that excess hospital capacity has decreased.

Three Models of Hospital-Physician Affiliation

We have based our discussion of the advantages and disadvantages of each model (summarized in table 2) on the literatures of organizational economics (Mick 1990; Robinson 1997) and resource dependence theory (Pfeffer and Salancik 1978), on recent research on hospital-physician relations (Alexander et al. 2001; Bazzoli et al. 1999; Budetti et al. 2002), and on interviews with more than 70 leaders of hospitals, health plans, and physician groups conducted in California and in the New York metropolitan area from 1999 to 2001.

The medical staff, IPA/PHO, and hospital-owned practice models of hospital-physician affiliation correspond to three basic forms of organization described in organizational economics: arm's-length, hybrid, and firm/hierarchy (Williamson 1993). This literature suggests that individuals (in this case, physicians) have more incentive to be productive and have maximal flexibility to adjust their actions to changing conditions when they deal with one organizations (in this case, hospitals) at arm's length rather than being employed by an organization. However, the more tightly affiliated hybrid models or a tighter linkage in one firm/ownership structure may be advantageous when close coordination

TABLE 2
Potential Advantages and Disadvantages of Three Forms of
Physician-Hospital Affiliation

	Medical Staff	Hybrid (PHO, IPA)	Hospital-Owned Community Practice
Offers incentives for physicians to maximize practice revenue and minimize expenses	++	+	0
Avoids internal politics	++	0	0
Gains admissions	0	+	++
Is inexpensive to create and maintain	++	+	0
Gains leverage with plans	0	+	++
Coordinates care with physicians	0	+	++

Note: The values assigned to each cell are intended to illustrate the relative relationship among the forms of organization. Thus, for example, the "0" in the medical staff row for "gains admissions" does not indicate that this model does not or cannot increase admissions but that the PHO, and especially the employed physician, models are better able to do so. The viewpoint adopted is that of the hospital—for example, the hospital wants to gain admissions, and the hospital will suffer financially if physicians in an owned practice no longer have strong incentives to be productive. Hospitals also may try to strengthen incentives for physicians by paying them based on revenue and expenses, rather than guaranteeing salaries.

is required. Resource dependence theory, a sociological theory of organization, focuses more on strategy than on efficiency; it suggests that organizations try to gain control of those scarce resources necessary to their survival. Under perfectly competitive market conditions, only the efficiency arguments of organizational economics would be important, but to the extent that markets are imperfect—for example, to the extent that negotiating leverage is important—the strategic arguments of resource dependence theory also are important.

The Medical Staff Model

The medical staff model of hospital-physician relations was by far the most common model before the advent of managed care. In this model, physicians own their own practices and admit patients to one or more hospitals on whose medical staff they serve. The requirements for medical staff membership are few—having a license to practice medicine and avoiding criminal actions and egregious instances of malpractice—and

the responsibilities also are few—occasionally attending a medical staff meeting and occasionally taking call for patients who must be admitted from the emergency room to the hospital.

Although the medical staff model is not a typical market relationship—the hospital and the physicians do not buy services from each other—the physicians and hospital do exchange the physicians' use of the hospital's facilities for their carrying out their responsibilities as part of the medical staff. The physician-hospital relationship in the medical staff model has the advantages and disadvantages of the arm's-length, market-based relationships described in the transaction cost economics literature. These relationships are flexible, as both physicians and hospitals retain the ability to act independently and to change direction rapidly. Since they are fully responsible for both the revenue and the costs that determine their incomes, physicians have strong incentives to be productive and to operate their practices efficiently.

During the pre-managed care era, when physicians and hospitals were each paid a fee for every service they provided and quality was not measured, close hospital-physician coordination was not needed. The disadvantages of the medical staff model were not important because hospitals had little incentive to invest in organizational structures that might be expensive to create, might increase costs, and might decrease physicians' productivity. Although hospitals using the medical staff model needed to cultivate good relations with physicians in order to secure their loyalty and attract admissions, the political and economic costs of doing so—for example, consulting with physicians about major decisions and providing key physicians with "perks" such as desirable operating room times—were low compared with those of the hybrid and ownership models. In the medical staff model, hospitals do not have to invest in creating new organizations (IPAs and PHOs) or in purchasing physician practices, and they do not have to deal with the internal politics of allocating revenues and costs between the hospital and physicians. For example, when a hospital purchases a physician's practice, it may decide to charge part of the cost of administrative staff based at the hospital to the practice and give the revenue from ancillary services performed in the physician's office to the hospital.

Transaction cost economic theory argues that arm's-length relationships like the medical staff model have disadvantages in an environment, such as tight managed care, in which close coordination between a hospital and physicians is important to containing the costs of care. In the

medical staff model, physicians do not benefit if a hospital achieves cost savings, and have no incentive to cooperate with the hospital in designing processes intended to shorten patients' length of stay and avoid the provision of unnecessary services. Nor can hospitals compel cooperation using the managerial authority that is present in an employment relationship. Hospitals also lack an incentive to invest in helping physicians develop better computerized information systems in their offices to link with the hospital's system to coordinate care because their investment will be lost if physicians begin taking their admissions to another hospital.

During the pre-managed care era, hospitals also lacked strategic reasons to affiliate more closely with physicians. Negotiating leverage was irrelevant, and primary care gatekeeping had not yet been invented, so physicians were not viewed as scarce resources with whom hospitals should tightly affiliate.

The Hospital-Owned Physician Practice Model

During the 1990s many hospitals paid large sums of money for physicians' practices, particularly those of primary care physicians, and then to employ the physicians (Burns, DeGraaff, and Singh 1999). In the spectrum of affiliation, the hospital-owned physician practice model is at the opposite end from the medical staff model. Compared with the arm's-length relationships of the medical staff model, firms in general, including hospitals that employ physicians, can try to compel cooperation through managerial authority. In theory they can move quickly in whatever direction the leadership decides on. For example, employed physicians should be more likely than independent medical staff members to cooperate with a hospital to improve the quality and/or to manage the costs of care for patients covered by capitated contracts. Furthermore, for a hospital competing intensely with other hospitals, employing physicians is more likely to secure admissions than is merely having them as members of the medical staff.

Owning physician practices may also increase a hospital's negotiating leverage with health plans. Physicians and hospitals linked only by a medical staff relationship are legally barred from negotiating jointly with health plans, but hospitals can negotiate on behalf of the physicians it employs, and health plans understand that failure to reach an agreement will result in the loss of both the hospital and the physicians from the provider network it offers to consumers. Although some

economists argue that vertical integration—such as hospital-physician integration—rarely if ever increases negotiating leverage (Posner 2001), there is no conclusive empirical evidence either for or against this hypothesis in health care (Gaynor and Haas-Wilson 1999). Some economists (Gal-Or 1999) and most of the physicians, hospital, and health plan executives whom we interviewed believed that hospitals and physicians were stronger negotiating together than negotiating separately, and they planned their strategies accordingly.

Hospitals have found, however, that it is very expensive to purchase or create and to maintain employed physician practices and that the employed physician model suffers from two bureaucratic costs common to large firms: diminished individual incentives and internal politics (Milgrom and Roberts 1992). Physicians employed by large organizations tend to be less productive than self-employed physicians are and to pay less attention to the costs of operating their practice (Ray and Kirz 2000). The power of managerial authority is limited: firms are composed of individuals and groups with divergent interests who struggle with one another to increase their share of the benefits the firm can provide (Alchian and Demsetz 1972). The larger and more diverse the organization is, the more that individual incentives are likely to be diminished, and the greater the costs of internal politics will be. As many hospital executives have learned to their chagrin, the bureaucratic costs of “integrated” delivery systems including community physicians and hospitals may be very high (Gillies et al. 2001).

The IPA/PHO Model

Hybrid organizations like PHOs and hospital-affiliated IPAs are attempts to obtain the benefits of integration while avoiding the hospital-owned practice model’s start-up costs and lack of physicians’ incentives to be productive. Obtaining the best of both worlds is difficult, however, and hybrid organizations may produce the worst of both worlds. PHOs and IPAs can be just as subject to internal disputes over the allocation of revenues and costs as integrated firms are, but in these jointly owned hybrid organizations no one has the authority to make and implement decisions expeditiously. And even though members of a PHO or IPA have the same incentive to work productively and attend to the financial health of their own practices as do other independent physicians, they lack strong incentives to work for the success of the larger organization.

Unlike the hospital-owned practice model, in which the hospital negotiates on behalf of itself and the physicians it employs, PHOs and IPAs enhance hospitals' (and physicians') negotiating leverage with health plans only to the extent that the many competing physicians involved are willing to maintain a united front with one another and with the hospital even when a health plan threatens to terminate negotiations.

Case Studies of Four Hospital Systems

The foregoing theoretical considerations suggest an approach to the case studies that uses the following concepts: a hospital is likely to seek tighter affiliation with physicians to the extent that (1) it has incentives to increase the quality and/or to control the costs of inpatient care; (2) risk contracting is prevalent in its market; (3) it has excess capacity and faces strong competition from other hospitals for physicians' loyalty; and (4) it wants to strengthen its negotiating leverage with health plans beyond what it would have on its own. As is generally the case when applying transaction cost economic and resource dependence theories, they are not very helpful in predicting whether hospitals are likely to seek tight affiliation through the hospital-owned practice model or looser affiliation through hybrid forms like PHOs and IPAs, although they do suggest that the greater the extent is to which these four conditions are present, the tighter the affiliation will be that hospitals seek.

Between 1997 and 2001 we conducted case studies of four hospital systems in two geographic markets: Scripps Health and Sharp HealthCare in San Diego, California, and Montefiore Medical Center and Continuum Health Partners in New York City. We chose these four organizations because they represented a spectrum from very integrated (Montefiore) to relatively unintegrated (Continuum), and they were located in markets in which risk contracting was prevalent (San Diego) and uncommon (New York). The few case studies presented here are not sufficient to test our hypotheses, but they do illustrate the variety of reasons that hospitals may choose to develop or maintain close affiliations with physicians even while the United States is moving from tight to loose managed care. The case studies also show the barriers to successful affiliation. For our case studies, we conducted more than 70 interviews with hospital executives and physician group leaders in the four systems and in competing systems, and with health plan executives knowledgeable about

the hospitals and their relationships with physicians. Information from the health plan interviewees and from competing hospitals and physician groups provided a useful perspective on the information we obtained directly from the four systems (Yin 1994).

Continuum Health Partners

Continuum, the third largest hospital system in Manhattan, was formed in 1997 by a merger of Beth Israel and St. Luke's-Roosevelt Hospitals, followed by the addition of Long Island College Hospital in Brooklyn and the New York Eye and Ear Infirmary. During the late 1990s, as New York's hospitals began a round of consolidations to deal with the increased financial pressure and the anticipated arrival of tight managed care, the competition for physicians became more intense. Beth Israel, Continuum's flagship hospital, is located very near several other major hospitals and so must compete vigorously for physicians. Although the hospital did not try to create a closely integrated physician-hospital care system, it did try to employ physicians directly, offering generous contracts to well-known Manhattan specialists who were willing to move their practices to Beth Israel and guaranteeing the salaries of newly hired physicians in nearby primary care and specialist practices. In 1999 Continuum purchased DOCS, a string of urgent care centers located in Manhattan and several other boroughs. In 2001, when HIP, a local staff model HMO, wanted to sell a clinic whose physicians had been sending most of their admissions to Continuum, the system purchased the clinic and hired 25 of its primary care physicians rather than risk losing the physicians and their admissions to another hospital.

The acquisition of DOCS illustrates some of the problems that may occur when hospitals purchase physician practices. By 2001 DOCS had 120 physicians and 300,000 annual patient visits, but even though it had been profitable before it was purchased, it had begun losing money. Ownership by Continuum raised the operating costs of the DOCS clinics and led to conflict between the hospital and the physicians over the distribution of revenues and costs. "The main reason DOCS changed from profitable to unprofitable," stated one hospital executive, is "the administrative albatross: the staff are now unionized; there are questions about how the hospital accounts for costs and revenues; and the indirect administrative cost charges from the hospital are quite high." Given the lack of profitability, Continuum closed those DOCS clinics outside

Manhattan that were too far away to routinely send patients to the system's main hospitals.

Tight managed care never arrived in Manhattan. Continuum's physician strategy appears to be aimed at affiliating with physicians so as to bring in admissions and, to a lesser extent, to gain negotiating leverage with health plans. That is, Continuum's strategy appears aimed more at affiliating with physicians as strategic resources rather than at increasing hospital-physician coordination. Continuum has used risk contracting as a means (short of employment) of binding physicians closer to its hospitals, rather than primarily as a strategy likely to be profitable in itself or as a means of coordinating care. Risk contracting offered Continuum two ways to affiliate more closely with physicians. First, the hospitals and 1,500 physicians—virtually their entire medical staffs—negotiated jointly with health plans for full-risk contracts through Benchmark, a Management Service Organization (MSO) created by Continuum in 1997 (Robinson and Casalino 2001). Second, Benchmark arranged for these contracts to include a supplemental capitation fee paid by the plans to primary care physicians who agreed to contract with HMOs exclusively through the MSO. The Continuum hospitals funded this supplement by agreeing to accept lower HMO payment rates for hospital services. Continuum's leaders were concerned that if Continuum were to end its supplement, a substantial number of primary care physicians would switch their admissions to nearby Lenox Hill Hospital, which also offered a capitation supplement. "The only way hospitals can get physicians to move their admissions from a rival hospital is to offer them money," argued one hospital executive, "and this is legal only through employment or through a capitation supplement."

By 2000, Benchmark had 48,000 globally capitated patients. Although it was profitable at first, it soon began encountering financial difficulties (in part because of \$4 million in disputed claims with its largest HMO contractor). In 2001, Continuum's administration, which had never been enthusiastic about supporting the Benchmark infrastructure or making decisions in this hybrid arrangement jointly with the Benchmark leadership, refused to continue contracting with HMOs through Benchmark. Without the hospitals' support, the organization disappeared almost immediately. Continuum then created in its place a hospital-owned and -controlled IPA and continued to use risk contracting and to fund the capitation supplement as a means of securing its primary care physicians' loyalty.

Montefiore Medical Center

Montefiore is a large academic medical center located in the Bronx. Twenty-five percent of all admissions and 40 percent of tertiary care admissions of patients live in that borough. During the 1980s, as the economic climate in the Bronx deteriorated, Montefiore began to build clinics and to staff them with hospital-employed primary care physicians whom it brought into the community. Montefiore's hospital-owned physician practice approach did not stem from the need to deal with risk contracting (which has always been uncommon in New York), from the need to compete with other hospitals for physicians, or from a need to gain negotiating leverage with health plans (even though the Bronx has five other hospitals, one health plan executive explained that "Montefiore is the Bronx"). Rather, Montefiore employed physicians because offering them a practice infrastructure and a guaranteed income was the only way to persuade them to practice in the low-income area. A Montefiore executive explained: "If we didn't employ physicians, we wouldn't have had them practicing near us in the Bronx. No physicians, no admissions, no hospital."

In California, medical groups and HMOs cooperated to make shared and, later, full-risk contracting common, but in the New York City area, which had few medical groups and where HMOs contracted directly with individual physicians, this model never became common. Nevertheless, Montefiore, like Continuum, actively sought risk contracts, but to a much greater extent. Whereas Continuum engaged in just enough risk contracting to make it a useful mechanism for tying physicians closer to the hospital, Montefiore began seeking full-risk contracts believing that because it was already employing large numbers of primary care physicians, it could create an integrated hospital-physician system that could manage care so as to both improve quality and benefit from savings generated by reducing unnecessary services. "You can't manage care unless you own the system," one Montefiore executive contended. Montefiore's management believes that the Bronx's mainly poor and working-class population is likely to choose the less expensive premiums offered by HMOs. In addition, Montefiore has been particularly interested in attracting Medicare HMO patients because of the relatively high payments from Medicare to HMOs in the Bronx. Capitated contracts also reduced the threat that patients from the Bronx would seek care in Manhattan, since those enrolled with a Montefiore physician through a capitated

contract would be required by their health plan to remain within the Montefiore system. Finally, capitated patients would use Montefiore's radiology, lab, and home care services rather than those of national vendors contracting with HMOs to provide these services.

During the 1990s, Montefiore expanded the Montefiore Medical Group (MMG), creating 31 satellite clinics with 165 employed primary care physicians and 12 obstetricians. In 1996 Montefiore created another organizational structure for risk contracting, the Montefiore Independent Provider Association (MIPA), which includes the MMG physicians, the Montefiore academic faculty, and 200 contracted community physicians (mainly specialists). MIPA is managed by the Contract Management Organization (CMO), a subsidiary of the hospital. By 2000 the CMO was managing the care of 50,000 globally capitated patients. In 2001, when HIP sold its medical groups, Montefiore picked up the leases of HIP's three large clinics in the Bronx, offered employment to many of the physicians, and took contractual responsibility for the clinics' 110,000 capitated patients. Before their acquisition by Montefiore, the HIP clinics had been sending 50 percent (4,000 annually) of their admissions to other hospitals.

Even though MMG and MIPA patients used fewer hospital days than the average for HMO patients in the area, Montefiore interviewees did not claim that the organization was fully integrated or optimally able to coordinate care. The organization must contend with conflicts among the MMG physicians, the academic faculty, and the hospital. By 2001 Montefiore Medical Center was breaking even or making a slight profit on its capitated contracts, but Montefiore's accounting described the primary care clinics component as losing money. Nevertheless, Montefiore maintained ownership of the clinics because without them, many clinic physicians would leave the area, depriving the hospital of a primary care base. Furthermore, Montefiore management believed that with properly designed incentive payment systems, its employed physicians' productivity could approach that of independent physicians.

Sharp HealthCare

Sharp Hospital, located in San Diego, was able to make itself the largest hospital system in the area through horizontal integration (Sharp HealthCare now owns five hospitals) and aggressive affiliation with physicians. In 1985, just before capitation contracting began its rapid

growth in California, Sharp persuaded the Rees-Stealy Medical Group to switch from a competing hospital. Rees-Stealy currently has 285 physicians practicing at 12 sites and caring for 140,000 capitated patients. California's ban on the corporate practice of medicine prohibits hospitals from employing physicians directly, but Sharp owns Rees-Stealy's clinic facilities, employs its nonphysician staff, and has long-term management and professional services agreements with the physicians. In 1991, Sharp created a similar arrangement with the 65 physicians and 50,000 capitated patients in the Sharp Mission Park Medical Group in the northern part of San Diego County. Also in 1991, Sharp financed the creation of an IPA, the Sharp Community Medical Group (SCMG), which has 600 physicians and 175,000 capitated patients. SCMG is jointly owned by the physicians and the hospital system.

Sharp affiliated with these three physician groups in order to bring in more admissions, to create an integrated system for risk contracting, and to increase leverage with health plans. By 2001, these objectives appeared to have been partly, but not completely, met. Sharp was the dominant hospital system in San Diego. But contrary to expectations, the Sharp Mission Park physicians tended not to admit their patients to Sharp hospital facilities, which are some distance away from the Mission Park clinics. Like other providers in California, Sharp and its affiliated physicians did succeed in reducing hospital utilization, but purchasers responded by reducing premium payments to the plans, which in turn reduced capitation rates, making capitated contracting a much riskier business for providers. Like many California physician organizations during the past few years, both the medical groups and the IPA have had financial difficulties, and like many hospitals, Sharp has become considerably less sanguine about the likelihood of profiting from risk contracting (Robinson 2001). Nevertheless, it has continued to participate in risk contracts, at least in part in order to accommodate its affiliated groups, particularly the Sharp Community Medical Group IPA, which, without risk contracting, would lose its reason for existence.

Sharp experienced the problems predicted by transaction cost economics for large organizations that employ physicians: the employed physicians saw fewer patients per day than did physicians in private practice; care was coordinated less than anticipated; and there was conflict in the system over the allocation of revenues and costs. For example, should Rees-Stealy or the hospital pay for investments in organized processes to improve quality and to control costs such as anticoagulation

clinics and case management programs for chronically ill patients? It appears that the ability to negotiate on behalf of many physicians and hospitals increased Sharp's negotiating leverage with health plans, but it is possible that the hospital system, the medical groups, and the IPA each are large and popular enough to have significant leverage on its own.

Scripps Health

The Scripps Clinic and the five-hospital Scripps Health system, centered just north of San Diego in La Jolla, have had an on-and-off ownership relationship since their founding in 1924. The clinic became independent in 1946, was purchased by Scripps Health in 1991, became independent again in 1996, and rejoined Scripps Health in 2000. With more than 300 physicians and a long-standing national reputation for specialty care and research, the clinic has traditionally preferred to maintain its independence from the hospital system. It rejoined the system in 2001 mainly to gain access to needed capital, but clinic leaders saw other potential advantages as well, including better coordination of patient care and greater leverage with health plans. The hospital system, for its part, wanted to ensure that the clinic's financial problems would not cause it to fail or to affiliate with another hospital, either of which would have cost Scripps Health a large number of admissions. Scripps Health wanted virtually all Scripps Clinic admissions. For example, before Scripps Health's recent repurchase of the clinic, its physicians were sending many capitated obstetrical patients to Sharp hospitals, which charged lower rates against the risk pools that the clinic shared with the HMOs.

Unlike Rees-Stealy and Sharp, the specialist-oriented Scripps Clinic and Scripps Health System initially were not enthusiastic about risk contracting. But as risk contracting became more common and as some California medical groups reaped significant profits from these contracts, both Scripps Clinic and Scripps Health also turned to them. During the late 1990s, Scripps Health tried to combine the IPAs at three of its hospitals into an umbrella PHO—the Scripps Physicians Organization—which it hoped would both strengthen its negotiating leverage with health plans and bind its physicians to Scripps hospitals through risk contracting. Although this attempt failed—the individual IPAs were not willing to give up their autonomy in a merged organization—Scripps nevertheless continued to receive substantial numbers of admissions from the IPAs.

After reaffiliating in 2001, Scripps Clinic and the Scripps Health hospital system began cooperating more than they had in recent years, but conflicts now began to be negotiated within the system rather than between two independent entities. For example, when the clinic was independent and accepting risk contracts from health plans, the amount it would pay the system for hospital services for its patients was always a point of contention. Even when the clinic became part of Scripps Health, this question did not go away—it simply became a debate over how costs and revenues should be assigned between the physician group and the hospital.

Discussion

For several years the United States has been moving away from tight managed care—in which the expectation, if not the reality, of risk contracting, limited provider networks, primary care gatekeeping, and tight control of medical costs predominated—toward loose managed care, with little risk contracting, broad provider networks, no gatekeepers, and little utilization management. Given the generally poor financial results of hospital-owned practices and the disappearance of tight managed care as a reason for close physician-hospital affiliations, a return to predominance of the medical staff model of hospital-physician relations might be expected. Hospital-owned physician practices have repeatedly been reported to be less productive and more expensive to operate than independent practices, and both the hospital-owned practice model and hybrid relationships through IPAs and PHOs have been beset by hospital-physician conflict and failure to achieve coordination adequate to improve quality or control costs. The medical staff model is relatively inexpensive to implement, avoids the additional internal politics of the hybrid and hospital-owned practice models, and leaves physicians in their own independent practices, in which their incentives to be productive and efficient are strongest. In this model, hospitals can try to attract physicians by providing good service and the latest technological capabilities and by a variety of ad hoc perquisites tailored to the individual physician's desires, like "basic blocking and tackling, one doc at a time; each physician has different needs that the hospital may be able to help with," as a Continuum interviewee put it.

As expected, during the past few years many hospitals have divested themselves of the physician practices that they purchased during the 1990s. Yet the case studies presented here, as well as other recent research (Lake et al. 2003), suggest that many hospitals may continue to employ physicians and/or to affiliate with them through some form of hybrid model, as the four hospital systems described in this study have done. At present, the main reason for affiliation appears to be the intense competition for admissions among hospitals in many markets, itself likely a product of a less munificent financial environment for hospitals and of hospital consolidation. Recent research indicates that hospitals are more likely to own physician practices in areas where hospital competition is intense, particularly in markets in which consolidation among hospitals is far advanced (Lake et al. 2003). This conclusion deserves further research, including case studies of hospitals that have little competition because they are the only or by far the strongest hospital in a market. All other factors being equal, such hospitals would not be expected to employ physicians in community practices or to share ownership in IPAs or PHOs.

The reasons for hospitals to affiliate tightly with physicians are now weaker than they were in the tight managed care era, but they are stronger than they were in the pre-managed care era (table 1). The broad provider networks of loose managed care have alleviated hospitals' fear of being excluded from health plans' networks, but they still must negotiate payment rates with the plans. Owning physician practices or contracting with health plans through a PHO or a hospital-affiliated IPA gives a hospital a credible threat to deprive a plan of both hospital and physician services if acceptable contractual terms cannot be reached. If, as expected, the pressure increases for hospitals to improve the quality of their care, the coordination advantages of the hybrid and hospital-owned practice models may become more important.

Hospitals will seek physician affiliation arrangements that are tighter than the traditional medical staff model to the extent that they must negotiate payment rates with health plans; are paid via case rates, per diem, or capitation rather than fee-for-service; are rewarded according to measurements of quality; and must compete with other hospitals because they have excess capacity and are located in an area where physicians can easily switch their referrals from one hospital to another. Rather than going back to relying exclusively on the medical staff model, hospitals and physicians are likely to continue to experiment with alternative

structures of affiliation that promote coordination and achieve other strategic objectives.

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Acknowledgments: We are grateful for support from a grant from the Health Care Financing and Organization program of the Robert Wood Johnson Foundation. We also thank the many medical groups, IPAs, hospitals, and health plan leaders who shared their time and insights.

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