When Organizations Collide: The Case of Physicians and Hospitals in the United States

Deborah A. Savage[1]

Scholars in Health Policy Program, Institution for Social and Policy Studies
Yale University

Paul L. Robertson

University College
University of New South Wales

Hierarchical organizations, in which authority is clearly defined and, for the most part, centralized, typically undertake routine operations in which the bulk of the workforce is expected to perform the same activities or groups of activities repeatedly. One of the main goals of these organizations is therefore to restrain people from exercising their individual judgment, since deviations from routine patterns may disrupt the entire flow of work. Hierarchy and centralization are inappropriate, however, when there is a substantial amount of uncertainty present in the production process. If producers must frequently make complex choices, even instruction books may be inadequate and the use of a rule-based Weberian bureaucracy [Weber, 1946, 1947] becomes impractical.

Professions provide examples of organizations whose work is highly uncertain and contingent, requiring professional practitioners to rely heavily on their individual skill and judgment within the norms of accepted practice for their particular professions. But professionals must often draw on resources that are concentrated in institutions that they do not control. While these organizations may be intended specifically to assist professionals in the independent use of their judgment and skill, they nevertheless pose problems because they are most often not owned by these professionals and their administration is not entirely under professional control. This creates the potential for conflicts between independent practitioners, who seek to preserve their authority and autonomy, and the administrators of complementary institutions, who have responsibilities of their own.

In this article, we examine the growing tension between monitoring usage of hospital-based resources and the maintenance of profession authority and autonomy in the medical profession in the United States since 1918. We show that, from the end of World War I, the professional behavior of

[1] Deborah Savage gratefully acknowledges the support of the Robert Wood Johnson Foundation. Opinions expressed are those of the authors and not necessarily those of the foundation.

BUSINESS AND ECONOMIC HISTORY, Volume Twenty-six, no. 2, Winter 1997.
 ISSN 0894-6825.

physicians was monitored on the Joint Commission Model in which boards composed of local medical practitioners sought to maintain professional standards and allocate local resources but did not inquire into cost factors at the system level. More recently, however, privately-sponsored health-care reforms as well as various government programs have led to significant changes. Now, the use of physical resources by physicians is also monitored in ways that may impinge on their authority and autonomy. We begin by describing the connection between individual and collective autonomy and authority within professions as network organizations, and then trace the development of monitoring procedures and discuss their impact on the ability of physicians to use their individual judgment in treating patients.

The Professional Mode of Production

One of the ways to differentiate among economic institutions is to identify the kinds of knowledge problems that each solves well, and to study its strengths and weaknesses in structuring production and exchange. As Jensen and Meckling [1992, p. 251] point out, economic organization must solve two different kinds of problems: "the rights assignment problem (determining who should exercise a decision right), and the control or agency problem (how to ensure that self-interested decision agents exercise their rights in a way that contributes to the organizational objective)." These two problems arise because of the need for decentralization implied by the specialization of knowledge in a complex production process. As suggested in the modern literature on the capabilities of organizations [Teece and Pisano, 1994; Langlois and Robertson, 1995], productive knowledge is not merely idiosyncratic but often sticky, since it consists principally in repertoires of tacitly understood routines and procedures. These routines and procedures are the *capabilities* of the organization [Richardson, 1972; Nelson and Winter, 1982].

Efficiency demands that the appropriate knowledge find its way into the hands of those making decisions. Markets, in the widest sense of the term, "mov[e] the decision rights to those with the knowledge" [Jensen and Meckling, 1992, p. 253]. While such an arrangement is often efficient, however, there are also potential costs to such extreme decentralization, costs that arise in the interactions among the decentralized holders of rights. These might include the familiar sorts of transaction costs arising from moral hazard and asset specificity [Alchian and Woodward, 1988]. More interestingly, however, they may arise from the need to bring otherwise decentralized knowledge together and to coordinate it [Milgrom and Roberts, 1992, chapter 4; Kogut and Zander, 1992], especially in circumstances involving learning and the generation of new productive knowledge [Langlois and Robertson, 1995].

One alternative is to organize production under common ownership in order to gain the benefits of synergies and the integration of knowledge, albeit at the cost of imperfect colocation of knowledge and decision-making, to take advantage of formal, rule-based monitoring schemes of the sort long ago discussed by Max Weber [1946, 1947]. Such organizations reflect what

Mintzberg [1979] calls Machine Bureaucracy. But when production involves uncertainty and requires highly flexible adjustment of routines to tasks, then the benefits of knowledge synergy in a hierarchy come at a cost that is large in terms both of agency and of the poor colocation of knowledge. Professional production is very much a sphere of activity in which uncertainty and task variability are important, and in which rigidly pre-programmed routines work poorly. As Arthur Stinchcombe [1990, chapter 2] so nicely puts it, professionals are information-processing systems that must wield and apply a wide repertoire of routines to fit widely varying concrete circumstances.

Fortunately, as researchers are coming increasingly to notice, markets and hierarchies do not exhaust the types of organizational form available. In particular, networks [Nohria and Eccles, 1992] are coming to be recognized as a distinct form with unique knowledge-flow and transaction-cost properties. It is our claim that professions are instances of the network form.

Although economists have written extensively about individual professions, they have not produced a theory of professions as distinct economic institutions. As a working definition of professional networks, we can think of them as communities of independent practitioners who share a core competence, and who form strategic alliances across ownership boundaries [Savage, 1993]. Professional networks identify core competences, build capabilities, share them across the membership, and internalize knowledge flows without integrating ownership. Each professional's decisions and abilities are constrained by the capabilities of the network as a whole, as well as by other institutions, and their decisions must be implemented within the system. For example, physicians have developed core competences in diagnosis and the design of treatment regimes, but their ability to gain maximum benefit from these capabilities has been constrained at various times by the availability of supporting technologies and by the absence of effective health-financing schemes like insurance. The current health care "crisis" in the USA is in part another such episode, in which changes in liability, financing, and hospital ownership have outstripped the profession's ability to respond strategically.

While individual practitioners remain independent, they make a long-term commitment of their substantial human capital to a "hubless," indeed bossless, network. A network's coordinating structure is horizontal, an organization comprising equals. Without the exchange of cash payments, members willingly exchange information and technology and collaborate in production – that is, share routines – without authoritarian supervision, and without integrating external management functions into their day-to-day operations. In fact, network members remain competitors across many dimensions, attempting to take advantage of their capabilities more quickly and ably than others. So professions operate a complicated production strategy, furthering the interests of individual members as well as the interests of the network as a whole.

As we have seen, a professional's use of his or her repertoire of routines is highly judgmental. To be sure, all members of a particular profession operate under a shared regime. Lawyers are constrained by the cumulative precedents of previous cases, most of which were decided long before the current genera-

tion entered the profession. This is true as well for physicians whose day-to-day decisions are affected by existing treatments administered to patients by other physicians. Nevertheless, professional knowledge is fungible to a variety of tasks. The exact routine employed by a professional is unique to each case: non-routine routines, if you will. In this sense, it is fruitless to try to define narrowly what a professional does, since professionals can apply their routines across a wide array of job descriptions and play several different roles simultaneously.

A further characteristic of professionals is that they have multiple responsibilities. They are responsible to their larger professions for the maintenance of set standards, and they often also are bound by law to behave in certain ways. Their primary responsibility, however, is generally to their clients. To take an obvious example, lawyers, priests, physicians and many other types of professionals may legally claim the right to withhold information communicated to them by clients, parishioners, or patients. And when clients are displeased with the service they have received, they may in most cases lodge complaints only against individual practitioners and not against a profession as a whole. In fact, it is often professional bodies that are called upon to investigate the conduct of an individual practitioner when a complaint is registered.

Standards are one mechanism used to coordinate independently executed routines while preserving professional judgment. When describing "the Professional Bureaucracy," Mintzberg [1979, p. 348] lists "[s]tandardization of skills" as the "Prime Coordinating Mechanism." Members of a given profession possess common skills that allow them to function quickly and accurately in a variety of contexts. Properly-qualified lawyers should be able to perform well in any court that employs the system of law in which they have been trained, and similar flexibility should be characteristic of pharmacists, physicians, accountants, and other professionals. (Note that this is not what is meant by standardization when the term is used by hierarchical supervisors of managed-care organizations; as we suggest below, in managed-care organizations, standardization means removing professional judgment and replacing it with short-run least-cost clinical pathways.)

Mintzberg [1979] discusses the relationship between professionals and their environments at some length. He contends that "the structure of [a Professional Bureaucracy] is essentially bureaucratic, its coordination – like that of the Machine Bureaucracy – achieved by design, by standards that predetermine what is to be done." But, he continues, "[w]hereas the Machine Bureaucracy generates its own standards – its technostructure designing the work standards for its operators and its line managers enforcing them – the standards of the Professional Bureaucracy originate largely outside its own structure, in the self-governing associations its operators join with their colleagues from other Professional Bureaucracies" [Mintzberg 1979, p. 351].

Networks thus provide a vital part of the framework in which professionals operate, but they by no means define the entire environment. Professional work often takes place in institutions such as courts of law or hospitals that professionals do not own or manage, either collectively or individually –

and that do not, in turn, employ or manage them. In this setting, an important issue for professionals is to maintain professional *autonomy* and *authority*.

Autonomy means that no one except another professional, the network's unspecified representative, can challenge the day-to-day decisions of a professional. It legitimizes judgment without managerial oversight. In medicine, as we will see, the Joint Commission Model ensures that medical practice outside of the hospital setting is almost entirely at the individual's unfettered discretion: patients are free to choose physicians, and physicians are free to choose practice settings. Physicians are responsible for a patient's care, and cannot point fingers at others for errors of omission or commission. Inside the hospital, however, physician performance is continually monitored and assessed, as is usage of common resources.

Networks prepare individuals to use their judgment independently, as well as to share routines in a complementary setting. Autonomy represents the formal recognition of their individual responsibility to do so. The mechanisms that make autonomy operational are designed to select potential entrants, and to convey to them the theory and practice of shared routines and competences. Included in these routines are incentives for individual and collective self-restraint, which help both members and nonmembers to perceive professional authority as legitimate. The multi-locational nature of practice increases the scope and incentive for individuals to develop innovative uses for existing routines, invent new ones, and share information about the external environment and the strengths and weaknesses of existing and emerging capabilities and strategies.

Authority emphasizes that professionals possess command capabilities not available to economic agents outside the professions. In this article we are obviously most interested in command over resources that the professions does not own, manage, or even make payments for the use of. Here, we can think of an attorney's use of court time and – the case at hand – physician control within a hospital. This is further complicated by the problem that hospital employees are explicitly not supervised by physicians, but physician decisions effectively allocate these as well as non-human assets. Until the advent of aggressive managed care, physicians decided which patients were eligible to enter hospitals for treatment. Such authority enables production, but does not mean that professionals have the ability to force individuals, such as clients or patients, into specific actions based on their opinion and advice. Quite the opposite, physician authority effectively conveys autonomy on patients. Coercive powers commonly belong only to the state, and actually complicate rather than enhance professional productive ability.

In a hierarchical structure, authority is delegated from the top down, from owners through managers to employees. In contrast, networks delegate authority to individuals and institutions, and have no central authority structure. Eliminating management of individuals in medicine after training avoids expending resources on monitoring the opportunistic behavior of managers. Defining ownership in terms of the right to participate in shared routines returns us to the concepts of authority and autonomy. In a sense, the autonomy

and authority that the network grants to professionals are the analogue to ownership in a market: they are a kind of quasi-ownership. The professional, who possesses the relevant localized knowledge, does get to exercise decision-making; but the right to do so is not alienable, and the exercise of decision-making is always circumscribed by the constraints of network participation.

Networks are complex mechanisms that put discretionary differences among practitioners to their best use. Each professional interacts with a large but distinct set of the network's capabilities, which enables the individual practitioner to see parts of the big picture as well as the small. Moreover, not all practitioners are equally skilled at using routines. Some accountants are better than others at dealing with the taxation authorities; some architects design buildings that are stronger or more pleasing to the eye; some surgeons have higher success rates in performing particular operations; and some lawyers are better at securing acquittals for their clients. Indeed, judgment and skill are what differentiates one member of a profession from another. This may benefit individual professionals through two channels. The first is internal to a given profession when other members recognize a person's intelligence or skill by directing difficult cases in his or her direction. This is especially valuable when, as in the case of many medical specialists, clients are normally referred to a practitioner by other professionals. When there is a realistic choice, responsible physicians do not direct their clients to surgeons with poor reputations. For specialists such as radiologists, pathologists, or anesthesiologists, who are practically anonymous as far as the general public is concerned, reputation within the larger medical profession may be by far their most important asset. Professionals view reputation as a signal of the availability of assets that other professionals can access in the execution of their own routines.

Reputations are flexible and informal review mechanisms that are particularly useful in the arena of shared non-owned assets. Evaluation occurs during direct contact, as during consultations, but also indirectly when professionals see the results of one another's work or simply talk about each other. Given institutional and geographical limitations, it is impossible to know how every practitioner is running his or her own office, but frequent contact gives clear insight into the use of shared resources. This is particularly useful in professions like medicine and academics, where post-entry specialization implies that only a few other subspecialists will be able to judge the merits of one's contributions.

In place of hierarchical supervision, networks rely on reputation as the basis for peer monitoring. One advantage of peer monitoring is that unlike contracts, it relies on self-interest rather than the availability of third party enforcement. The need to maintain one's reputation among one's peers creates disincentives and sanctions for bad behaviors. Thus, peer monitoring works to help individuals internalize norms that would be difficult to enforce or even define externally. Peers are good monitors not only because of what they know, but because they are the ones to whom good monitoring matters most. In an organization without hierarchy or ownership, residual risk is borne by all members. The members want to make sure that shared resources are not

mismanaged, whether individual members are keeping up with their fields, and whether their practice style reflects well on the network. "When agents interact to produce output, they acquire low-cost information about colleagues... Mutual monitoring systems derive their energy from the interests of agents to use internal agent markets or organizations to enhance the value of human capital" [Fama and Jensen, 1983 p. 310].

It is possible to think of many ways to monitor physicians in both their offices and the hospital setting, and managed care companies are becoming quite innovative in doing so. They attempt to collect data on billable hours, number of patients seen, patient satisfaction, number and types of diagnostic tests ordered, and a host of other factors. But in a network setting, no one cares about monitoring these measures, because the individual practitioner puts as much or as little effort into private practice as he or she wishes on behalf of patients. This is as close as professions get to the usual story of "self-employment" as a way to reduce monitoring costs.

Moreover, it is in the network's interest to discourage this kind of monitoring because it changes the focus from the network to the individual practitioner. The potential punitive uses of external monitoring would cause individual practitioners to be less likely to share information about their practices, and therefore diminish the value of shared competencies, with destructive repercussions for the network, and hence for patient choice. It is characteristic of professional networks to provide practitioners with up to date information about the latest developments in their profession, as occurs at professional meetings. But external monitoring presupposes some proprietary use of information, again lessening the incentive to share.

Professionals and Complementary Institutions

Although the independent practitioners we discuss are "bossless" in the sense that their professional actions are presumed to be correct and they are generally subject to the authority of other professionals or outsiders only when they are accused of misconduct, this does not imply that they are not associated with more formal, hierarchical organizations. For one thing, even bossless professionals may require assistants who must be supervised. Some of these assistants perform clerical jobs, others (such as nurses and paralegals) act as professional auxiliaries, and still others are themselves professionals who are still in training or whose activities involve providing professional assistance. Secondly, professional practice may require the use of buildings or items of capital equipment that are too expensive to be owned by individual practitioners. Even when the legal system relied primarily on private prosecutions, inns and courts of law were still owned either collectively or publicly. As surgeons typically devote only a few hours of each week to performing operations, it would be wasteful for all surgeons to have their own operating and recovery rooms, full-time support staff, and so on. Therefore, these professionals, who are bossless in the use of their judgment and skills,

must nevertheless frequently conduct their activities in conjunction with complementary institutions that are owned and controlled by others. And by their nature, these complementary institutions need a degree of central control to function smoothly.

Within hospitals, much of the medical staff's clout stems from the hospital's dependence on physician referrals as the most important source of patients. From the perspective of hospitals and third-party payers, which patients physicians choose to admit and which hospital resources are committed to an individual patient's care largely determines the financial viability of the institution. Hospitals hope that physicians will bring them lots of patients, but not those who are very sick. Increasingly, hospitals contract directly with several managed-care companies for in-patient and ambulatory care. Managed-care companies decline to associate themselves with hospitals whose medical staff is too "expensive," as measured by intensity of resource use. This means that hospitals may lose access to entire blocks of patients, since subscribers are forbidden or at least penalized for going to facilities outside their plans. Thus, both competitive pressures and the need to manage resources more generally mean that non-physician managers – Boards of Trustees and their paid representatives – require a balancing influence over the use of the resources they also do not own, but have the obligation to direct and protect.

On the other side, physicians are dependent on hospitals for access to technologies, facilities, specialties, and ongoing training, which are important determinants of their ability to diagnose and treat patients, and therefore to attract and keep a patient base. Because the use and quality of these inputs is so important to them, and because they are in a good position to judge the immediate quality and usefulness of these technologies and other inputs, physicians require some influence over the use of resources that they do not own. But they, too, must meet the requirements of managed-care companies or lose patients who join these plans. This puts them in a position of competition within the medical staff for resources and patients. But for all of the reasons described above, professions have neither the capabilities to nor an interest in coordinating day-to-day supporting services, and are quite happy not to expend resources playing at the administration game.

The Joint Commission Model

In this section, we provide some historical context for the current organization of hospitals and medical staffs. We show how the Joint Commission Model has evolved as an interface between autonomous, competing physicians and the administration of hospitals, in the process changing from an institution designed to monitor the quality of medical practice from within the profession to one that, even if under duress, is now called upon by external authorities to pass judgment on the way in which physicians use the resources of hospitals and other complementary institutions. As a consequence, the focus has changed from affirming the responsibility of

physicians to individual patients to monitoring the use of resources paid for by patients as a body, as represented by insurance groups and the government.

In 1918, the American College of Surgeons began a process called the Hospital Standardization Program [Roberts et al., 1987]. Its founders recognized that surgical medicine was developing quickly, but unevenly. Its modest goal was to take the small step of improving surgical practice through standardization, not, as one might think, of private or even hospital practice, but through the creation of a system of uniform medical records. With these open records, they hoped to disseminate information about and to evaluate the procedures and methods of their fellow surgeons. They instituted a policy of regular meetings at which clinical experiences were reviewed and interpreted. The process enabled them to educate themselves about the safety and efficacy of competing procedures, and to decide which to include in surgical training and continuing education.

Until this time, medical staff self governance had consisted largely in the process of deciding who should be allowed to practice at the hospital. Breaking with this tradition, the College of Surgeons – the specialty most dependent on emerging hospital capabilities – recommended that hospitals adopt an open, but defined, medical-staff model. They recognized that their future lay not in keeping fellow surgeons out, but in monitoring the quality and ensuring the cooperation of those who shared hospital resources. Closed hospitals were a form of monitoring that clearly would not serve medicine well in an era of increased physician dependence on hospitals and on emerging third-party payment schemes that provided patients with more choice of physicians. An open model came to make more sense. At this time, they also recommended abolishing the fee-splitting system that was an integral part of the closed-staff model.

So, while there is a body of literature in health policy across many disciplines that focuses on the "monopoly" aspects of medicine, it is clear that under the original conception of medical-staff self governance, competition – real rivalry – was an important goal. Physicians did not design this system as a way to control hospitals. Instead, the system was a recognition of the fact that, by World War I, any physician who hoped to have a respected practice needed to establish an ongoing relationship with at least one hospital, and, for competitive reasons, more if possible [Rosenburg, 1987]. And, of course, physicians with choice over institutions represent patients with choice as well.

By World War II, technology and financing were concentrated in hospitals, so doctors were increasingly dependent upon them. This is particularly true to the extent that certificate-of-need regulations made it increasingly more difficult to purchase equipment or set up competing private laboratories apart from hospitals. That is, when faced with the decision of whether to allow physicians to open private facilities at their own financial risk in competition with hospitals, regulators said no.

Over time, other specialties adopted similar formats, and in 1951 they merged and incorporated to form the Joint Commission of Medical Accreditation. Although they seemed to think of themselves as an educational

association, the effect of their program was to build monitoring into the production process.

At least in the abstract, this was not lost on the designers of the Medicare Act (1966). Because Medicare would finance health care, its designers wanted to have quality assurance mechanisms in place. Since external *ex post* monitoring seemed impossible, they imposed upon the Joint Commission self-governance structures the additional task of monitoring hospital-based care on their behalf. They required hospitals to have Joint Commission structures in place in order to receive Medicare reimbursement. Other third-party payers followed suit, and the Joint Commission model became a formal link between external and internal production processes. What had been self-governance was now externally imposed, institutionalized self-regulation.

The Health Care Financing Administration (HCFA), which administers Medicare, still struggles with the problem of direct regulation of quality, precisely because there is no one governance structure that leads to optimal quality, however defined. The agency was correct in identifying the Joint Commission as a particularly effective example of such as structure, but incorrect in assuming that redefining the Commission's role would not change its processes. One important change was an alteration in the focus of self governance away from the quality of local medical staff in the context of managing the joint assets of the professional network, and toward satisfying the national Joint Commission regulators. The Joint Commission became an outside agency for accrediting and regulating hospitals [Jost, 1983]. Not surprisingly, it is held in some disregard by local practitioners, who resent the "surveyors" who show up every three years to assess their procedures, take up their time, range through their records, and make suggestions that, while marginally helpful, seldom lead to significant improvements in the quality of care.

The Joint Commission for Accreditation of Health Care Organizations (JCAHO) is currently a private, non-profit structure, governed at the national level by 28 commissioners representing hospitals, nurses, physicians, surgeons, dentists, and the public. Through JC procedures, physicians are still presumed to practice self governance. JC rules specify how each individual hospital is to set up processes by which the medical staff elects its own officers and establishes procedures to carry out credentialing, privileging, reappointment, and peer review.

The processes by which credentialing, privileging, reappointment and peer review are carried out are important because they help to support and maintain physician authority and autonomy in the context of hospital production. The staff agrees to take it on because monitoring matters most to them. Every physician on the medical staff is eligible to participate, and gets just one vote. Physicians weigh the interests of the hospital and medical staff against the imperatives of their own practice (and patients) when casting it. Cartel-like behavior rarely emerges, since various specialties compete against each other for resources.

Credentialing is the process by which physicians are granted privileges to admit and treat patients in a specific hospital. Joint Commission regulations

require that the medical staff be defined, but it must remain open to potential entrants. Individual competence is demonstrated by presentation and review of credentials, including graduation from an accredited medical school, possession or eligibility for a state medical license, and, recently, the requirement that applicants reveal prior actions taken against them. Credentialing does not require that other physicians observe the practitioner in performance of daily activities. Though it is largely a formality, there is a phasing in process which contains a probationary period before full privileges are technically awarded. And, emulating the university-based division of medicine into departments, appointment is generally to a department (like internal medicine), although privileges often extend across boundaries in practice.

This is evidence that, contrary to much that is written about medicine, self regulation is not about erecting barriers to entry at the local level. The credentialing committee cannot refuse to grant privileges because they believe that the local market for, say, obstetrics, is saturated and fear that adding another physician will result in lower incomes for others in the specialty. Private practice is an entrepreneurial activity, and the successes and failures of individual practitioners provides important feedback to the professional network. Now, however, there is also pressure on credentialing committees to provide *economic credentialing,* which examines the economic efficiency of a physician's practice, and denies hospital privileges to individual physicians who practice medicine in a way deemed too expensive by managed-care companies [Blum, 1991]. Joint Commission rules explicitly forbid such evaluations, but hospitals desperate to win managed-care contracts have implemented them anyway. Several aspects of this are significant departures from the original intent of self-governance.

First, economic credentialing is not based on the medical staff's incentive to surround themselves with practitioners whose reputations and skills are complementary to their own. Particularly, but not only, when economic credentialing is done across hospital systems, the incentive is to reward uniformity in practice at the low end of the resource-use spectrum, since "savings" will be distributed to physicians who work in low-cost hospitals. This is different from the previous process of physicians conserving shared resources by internal rivalry but not concerning themselves with the level of income of other doctors. Physicians denied privileges on utilization grounds have no real recourse, and without the ability to admit patients to that hospital effectively lose the right to earn a living from their private practices. The effect on specialists is particularly chilling. In response, some states have enacted "any willing provider" laws, which would require companies to impanel any physician willing to participate under a plan's guidelines, but this does not address the ratcheting downward in general, or the effect on physician independence in particular. Ironically, it is managed care that erects barriers to entry, and the professional network that opposes it. These companies entice specialists to accept reduced reimbursement rates in exchange for a promise not to sign on other specialists within the geographic area.

Secondly, the current system is the antithesis of the open system that surgeons established in response to the problems caused by closed panels at the turn of the century. When a hospital has to meet certain aggregate cost requirement in order to be named as a provider by a particular company, even doctors who have no wish to participate in that plan are forced to abide by the changing utilization guidelines and staff cutbacks in the hospital. It means very little to have privileges in a system with exclusive managed-care contracts.

Under the original Joint Commission goals, physicians remained competitors because the barriers to getting privileges were low and uniform. Physicians did not own the hospital or pool their own capital, so they had no financial incentive to exclude competent providers. They certainly felt responsible for participating in governance mechanisms aimed at rational allocations of scarce resources, but the bottom line, profits or losses, did not come out of their pockets. High consumers of resources were dealt with in formal and informal peer review and in daily competition for resources; but the goal was not to save money in order to line one's own pockets. So the Joint Commission goals of an open panel and no kickbacks has been unraveled in less than 30 years.

Most importantly, the JC medical staff model was not supposed to be the professional version of a union. Current innovations in health care financing and delivery have put the model in the position of bargaining with hospitals and insurers, but medical staff have neither the capabilities not homogeneous interests to do this. Whereas the amount of remuneration that a physician received had depended on his or her own individual entrepreneurial abilities, boards are now pressured by insurers to design incentives structured to reward or punish individual physicians based on the whole staff's use of resources.

Moreover, the JC medical staff model was not meant to coordinate hospital finances or non-physician production. Increasingly, however, a hospital's ability to be named as a plan's preferred provider depends on physician behavior, and the distinction between self governance and responsibility to patients and the staff's role in hospital governance is further muddled. The Joint Commission model does not solve the problem of the relationship between physicians and hospital employees either. The most obvious problem is that of nurses, whose contractual obligation is to follow written hospital policy and obey supervisors who are responsible for schedules, hiring, firing, and training, but whose day-to-day responsibilities are to implement the treatment plans of physicians as ordered. Employed physicians in pathology, radiology, emergency medicine, and anesthesiology are also in increasingly uncomfortable positions. Finally, interns and residents have always been counted as employees under supervision, and have not been included in the JC self-governance structure.

Conclusion

Traditionally, the medical profession has used a network organization to provide for the training and monitoring of practitioners within a decentralized

context. The advantage of employing a network rather than a more hierarchical form of organization is that it has allowed physicians to establish and maintain standards and to disseminate new knowledge with low transaction costs. Equally importantly, networks also permit members of the profession to maintain their individual autonomy and authority and to compete against each other while preserving the ability to act collectively when necessary.

The Joint Commission Model evolved in this context as a way of monitoring individual performance without imposing excessively uniform rules on a profession in which the ability to deal with contingencies is vital. The model also opened up hospitals to a wider range of physicians, thereby increasing the options available to their patients as well. It was therefore supportive of the network because it improved the ability of the medical profession to maintain standards while augmenting the scope of opportunities potentially available to practitioners. Most significantly, this was accomplished without impinging on the ability of the network to function as a means of sharing vital information among members.

In recent decades, moves sponsored by the Health Care Financing Administration and health insurance groups have altered the operations of the Joint Commission Model. Under the new arrangements, the primary focus has shifted away from the maintenance of health care standards by individual physicians to economic credentialing in order to conserve resources. This has had a number of serious effects on the operations of the network. In particular, rather than function as complementary and open institutions as they have in the past, hospitals have increasing been obliged by insurers and the government to become more exclusive and directive in administering requests by physicians on behalf of their patients, in the process compromising both the autonomy and authority of the profession. Furthermore, the new balance of power has undermined the functioning of the professional network by destroying some of the premises on which the exchange of information within the network has been based. As a consequence, the networks may no longer be as able as in the past to perform their training and monitoring roles.

References

Alchian, Armen A., and Susan Woodward, "The Firm Is Dead; Long Live the Firm: A Review of Oliver E. Williamson's *The Economic Institutions of Capitalism*," *Journal of Economic Literature*, 26 (March, 1988), 65-79.

Blum, J. D, "Economic Credentialing: A New Twist in Hospital Appraisal Processes," *Journal of Legal Medicine*, 12 (1991), 427-476.

Fama, Eugene F., and Michael C. Jensen, "The Separation of Ownership and Control," *Journal of Law and Economics*, 26 (June 1983), 301-27.

Jensen, Michael C., and William H. Meckling, "Specific and General Knowledge, and Organizational Structure," in Lars Werin and Hans Wijkander, eds., *Contract Economics*, (Oxford, 1992), 251-74.

Jost, T.S., "The Joint Commission on the Accreditation of Hospitals: Private Regulation of Health Care and the Public Interest," *Boston College Law Review*, 24 (1983), 835-923.

Kogut, Bruce, and Udo Zander, "Knowledge of the Firm, Combinative Capabilities, and the Replication of Technology," *Organization Science*, 3 (1992), 383-397.

Langlois, Richard N., and Paul L. Robertson, *Firms, Markets, and Economic Change: A Dynamic Theory of Business Institutions* (London, 1995).

Milgrom, Paul J., and John D. Roberts, *Economics, Organization, and Management* (New York, 1992).

Mintzberg, Henry, *The Structuring of Organizations* (Englewood Cliffs, 1979).

Nelson, Richard R., and Sidney G. Winter, *An Evolutionary Theory of Economic Change.* (Cambridge, MA, 1982).

Nohria, N., and R.G. Eccles, *Networks and Organizations: Structure, Form, and Action* (Boston, 1992).

Richardson, G.B., "The Organization of Industry," *Economic Journal,* 82 (1972), 883-96.

Roberts, J.S, J.G. Coale, and R.R. Redman, "A History of the Joint Commission for Accreditation of Hospitals," *Journal of the American Medical Association,* 258 (1987), 936-940.

Rosenburg, C.E., *The Care of Strangers: The Rise of America's Hospital System* (New York, 1987).

Savage, Deborah A., *Change and Response: An Economic Theory of Professions with an Application to Pharmacy,* unpublished Ph.D. Dissertation, the University of Connecticut (1993).

Stinchcombe, Arthur L., *Information and Organizations* (Berkeley, 1990).

Teece, D.J., and G. Pisano, "The Dynamic Capabilities of Firms: an Introduction," *Industrial and Corporate Change,* 3 (1994), 537-556.

Weber, Max, *From Max Weber: Essays in Sociology,* ed. and trans. H.H. Gerth and C. Wright Mills (New York, 1946).

Weber, Max, *The Theory of Social and Economic Organization,* trans. A.M. Henderson and Talcott Parsons; ed. Talcott Parsons (New York, 1947).