A critical appraisal of physician-hospital integration models

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The economic environment and the current health care debate have prompted a critical reevaluation of previous and current physician-hospital integration models. Even though the independent, self-employed, private practice, medical staff remains the most common model, surgical specialists such as vascular surgeons are increasingly being employed and integrated into health care delivery systems. The degree of integration varies from minimal to full integration or full employment. This review defines the forces driving these changes and analyzes the strengths and weaknesses of each employment model from the physicians’ point of view. Strategies for the successful implementation of a 21st century integrative employment model are discussed. (J Vasc Surg 2010;51:1046-53.)

One of the most tenuous and capricious relationships in health care is that between physicians and hospitals. It is a symbiotic relationship based on necessity. Hospitals cannot function without physicians, but not all physicians need to work at a hospital. Those physicians that utilize hospitals have choices about the type of affiliation they want with the hospital or health care system. Physician practice models range from the self-employed practitioner to the full-time hospital employee, with an array of employment models in between.

The economic environment and the national health care debate have only accelerated the reevaluation of the wide assortment of practice models for primary care physicians (PCPs) and specialists. A perceptible recent shift has occurred in the number of hospitals employing physicians. During the past 4 or 5 years, Merritt Hawkins reports an almost 300% jump in the number of hospital searches for physicians with a corresponding increase in searches by specialists for salaried jobs.1

This article will consider the forces that are driving integration of physicians and hospitals and the current state of affairs with particular emphasis on the effect on vascular surgeons. We will discuss the basis of various models of physician employment, both past and present. Finally, from a physician perspective, we lay out objectives of any integration and factors important for success. To be sure, most physicians are still practicing independently, although many have enough interaction with hospitals and health care systems that this discussion will be relevant to them.

INTEGRATION AND ALIGNMENT

Many have described the practice of medicine as the prototypical cottage industry, with each practice an independent unit. Before discussing hospital-physician integration, we need to look at the way physician practices have changed. The Center for Studying Health System Change (CSHSC) reported that the number of solo or two-surgeon practices declined from 47.8% in 1996 to 1997 to 37.5% in 2004 to 2005 (P< 0.01).2 The theme of employment rather than ownership was also confirmed by declined from 61.6% to 54.4% in the proportion of physicians with an ownership stake in their practice.

In contrast to PCPs, the survey reported more movement of surgical specialists to alternative settings such as hospital-owned centers and academic institutions, presumably because of a downward spiral in reimbursement and operational efficiencies and in an attempt at achieving economies of scale. Because private practice groups have difficulty meeting the demands of new graduates, deep-pocketed hospitals are better positioned to make offers or assist their loyal physician groups with hiring. Indeed, Merritt Hawkins Associates reports that 45% of their physician search assignments in 2008 and 2009 were for hospitals, up from 23% in 2005 and 2006.3

Why integration? “Markers of integration include strong physician-hospital links, coordinated systems of care, geographic reach, quality management, contractual capabilities, utilization controls, financial strength, organized oversight and economy of scale.”4 The more markers
present, the higher the degree of integration. From a physician perspective, benefits may include “cost-effective administration, improved access to other providers and support systems, access to a broader range of support services, financial strength and security, increased customer satisfaction, access to educational resources, ownership potential, increased market share, increased access to data and information systems, group purchasing discounts, strategic planning, and enhanced image in the community.”

From a health care system point of view, integration is difficult, time consuming, and expensive, prompting the question: Why do hospitals want integration? Physicians tend to think it is all about control, but the reasons are complex and many. First, is the prospect of a piece-by-piece loss of profitable revenue streams such as to freestanding ambulatory surgery, endoscopy, and imaging centers. Outpatient surgical volumes have grown at an annual compounded growth rate of >6%, whereas hospital outpatient growth is flat.5

Vascular surgeons are a particular worry for hospitals. The chronic disease market is vital for long-term growth of hospital margins. The prime reasons for hospitals employing cardiovascular specialists are securing volumes, incentivizing them to meet quality and cost goals, prevent them from partnering with competitors, and to minimize the impact of anti-kickback and Stark laws.4 The average hospital net revenue per full-time employee physician is $1.5 million for all specialists and $2 million for vascular surgeons.1,5

Second, in an era of increasing competition, the hospital is responding to pressures from payers, consumer organizations, and the government to have a seamless, continuous, quality-conscious system and is therefore looking for increasing efficiencies: operational, clinical, and strategic as well as advantages in innovation and expansion of its mission.6

Table I. Pros and cons of physician-hospital integration models (from physician viewpoint)

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<th>Model</th>
<th>Pros</th>
<th>Cons</th>
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| Independent medical staff (no integration)| 1. Physician keeps independence and autonomy  
2. Hospitals compete for referrals and admissions | 1. No compensation support from hospital  
2. Little input into hospital policy and operations  
3. Hospital may hire and employ physicians to compete |
| Partnership (minimal to medium integration)| 1. May get access to new patients and increased revenue  
2. No loyalty guaranteed  
3. Access to hospital expertise/support services  
4. Retain some independence | 1. Not as profitable as other options  
2. Usually no compensation guarantees  
3. Legal headaches and costs  
4. Usually management not strong |
| True joint venture (medium integration)   | 1. Provides access to hospital capital and access to technical revenue  
2. Learning vehicle for future joint vehicles  
3. New markets may be tapped | 1. Capital contribution/risk necessary  
2. Legally complex  
3. Duration dependent on reimbursement shifts |
| Clinic model (full integration)           | 1. Clinical leaders govern patient care enterprise, role in governance  
2. Physicians own entity and maintain practice infrastructure  
3. Could transition to leadership role  
4. Income from ancillaries maintained  
5. Work-life balance may be better | 1. Hospital owns group practice  
2. Integration may not be easy  
3. Shared decision making  
4. Physicians responsible for management |
| Foundation model (full integration)       | 1. Could transition to leadership role  
2. Income from ancillaries maintained  
3. Access to management skills/capital/ordinated strategy  
4. Work-life balance may be better | 1. ‘System’ owns subsidiary  
2. Integration (fit) may not be ideal |
| Full employment (hospital-based group practice; total integration) | 1. Free from most office operational stresses  
2. Stable income, lower liability costs  
3. Work-life balance may be better  
4. Generally has physician leadership  
5. Access to capital and management expertise  
6. Edge in recruiting | 1. Little independence, loss of efficiency  
2. Lifespan entirely dependent on hospital  
3. Compensation negotiations stressful  
4. If not employed through subsidiary, income from ancillaries may be at risk |

*Includes physician-hospital organizations, managed service organizations, leasing, gainsharing, medical directors, part-time employment, etc.

JOURNAL OF VASCULAR SURGERY
Volume 51, Number 4
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logic advances, and capital has to be invested into making their offices and electronic medical records compatible with the health care system. However, as mentioned, the hospitals also understand the significant revenues generated by surgical specialties.

**Physician barriers to integration.** The benefit of hospital employment is primarily driven by economics. Reimbursements are trending downward, overhead expenses keep rising, practices are unable to compete with deep-pocket hospitals for new recruits, and the regulatory environment seems to become more complex. Coupled with insufficient capital for major technologic upgrades and an increasing lack of interest in running the business, physicians are looking for security of income. Younger physicians want to work fewer hours for predictable compensation.

There is also unhappiness over the inefficiencies and unresponsiveness of hospitals, however. Press Ganey surveyed 27,000 physicians at >300 hospitals in 2007 and reported some valuable perspectives. The number one issue for physicians was how the administration responded to their ideas, needs, and concerns. Surgeons were the least satisfied of all specialties: on a scale of 0 to 100, with vascular surgeons scoring 67.5, compared with 70.5 for all other surgeons, 73 for other medical specialists, and 75.2 for employed physicians. Older surgeons who are used to their clinical and operational autonomy will be resistant to being answerable to a hospital administrator. Also, other than the physician enterprise model to be discussed later, because employment contracts are most often year to year, if hospitals decide to let physicians go, they have to start all over again, with their patients now belonging to the hospital and being restricted by legal covenants.

**INTEGRATION MODELS**

The models to be discussed all share some degree of integration ranging from low or minimal to full or total integration (Fig).

**Minimal integration**

The mainstay of the physician-hospital relationship for decades has been the voluntary or independent medical staff model, which involves no integration of the physicians and hospitals. In this model, the hospitals provide technology and support that affords the physician an opportunity to perform procedures and other services that they could not otherwise provide through their own offices or clinics. In return, as part of the medical staff compact, the physicians develop loyalty to “their” hospital by voluntarily serving on hospital committees, providing on-call coverage to the emergency department, referring their patients to the facility for care, and teaching at hospitals with training programs.

Physicians maintain their autonomy and independence, and the hospitals must essentially compete for referrals and admissions. Such independence, however, comes at a cost. This model does not allow any direct financial support from the hospital at a time when physician income has not kept
pace with inflation. The physicians have very little input into the operation of the hospital and policy decisions. The hospital may decide to hire its own physicians and set them in direct competition with the voluntary staff, especially if there are conflicts between administration and the physicians. The hospitals hope that the reputation of their physicians is of such magnitude in the community to drive other referrals to their facility.\textsuperscript{9,10}

From a hospital perspective, this model may have the unfortunate result of creating an oversupply or undersupply of some specialties, which affects referral patterns and hospital revenue but has no effect on the physicians. Furthermore, this model does not incentivize physicians in assisting the hospital in achieving key operational targets related to costs, quality, efficiencies, and patient satisfaction.\textsuperscript{9} Hospitals must continually develop programs and policies to engender physician loyalty to their hospitals, and inadvertent adversarial behavioral practices can slowly erode physician support, impel the independent physician to autonomous outpatient centers or ambulatory surgery centers (ASCs), or result in migration to other facilities. In addition, independent physicians are increasingly resentful that reimbursement for the technical portion of a service to the facility for the patients that they refer far exceeds the professional reimbursement to the physician. Although this paradigm is waning, it remains the primary model being practiced.\textsuperscript{9}

**Part-time medical directors.** This is one of the most common arrangements, in which a usually independent physician agrees to provide part-time administrative services to a section such as the vascular laboratory for a set fee. The fee may be negotiated based on national surveys published by the Medical Group Management Association. A step further is when a physician or group of physicians agrees to manage a department or section of the hospital for a fee. A rural hospital, for example, may arrange to compensate an independent vascular surgeon a fixed amount to interpret noninvasive images and then collect global fees. The reverse, when a physician group engages the hospital to do the same, such a professional billing, is less common.

**Transition to medium integration**

In the 1990s the medical landscape was significantly affected by the advent of capitation and managed care.\textsuperscript{10} In his book *The Social Transformation of American Medicine*, Paul Starr suggests that it was Richard Nixon who gave impetus to managed care with the passage of the Health Maintenance Organization Act of 1973, making health maintenance organizations (HMO) the first form of managed care.\textsuperscript{11,12}

Capitation is a method of fixed payment to a physician or hospital per plan enrollee for specified care. Managed care was intended to reduce the costs of medical care while improving the quality of care delivered.\textsuperscript{13} Although physicians and hospitals in this country were widely exposed to these new concepts, lasting penetration was variable, with California, Oregon, and Minnesota being regions where managed care thrived.\textsuperscript{14}

Groups of PCPs contracted to manage the risk of these new managed care contracts were designated gatekeepers. Anticipating that the managed care model of capitation with PCPs as the gatekeepers would become the dominant model for health care, the hospitals began to purchase primary care practices and hire the physicians, at great expense, as a primary strategy to procure an adequate number of covered lives.\textsuperscript{10} Unfortunately, even though multiple managed care models were developed, few survived due to several reasons:

First, there was a common perception that the for-profit companies that developed many of the managed care plans were more interested in profits than providing quality health care.

Second, many consumer advocacy groups contended that patients were being denied medical care for the sake of limiting costs, and new standards for managed care were enacted that drove the costs even higher.\textsuperscript{15}

Although managed care products remain plentiful, capitation as the preferred model of reimbursement has waned. Specialists, in particular, began to again embrace fee-for-service payment,\textsuperscript{12} and hospitals began to divest themselves of their employed primary care practices in an attempt to minimize further financial losses.\textsuperscript{10}

There are many physician practice models with this level of integration. The physician gains access to new patients, generates more revenue, and has access to hospital expertise and support services while retaining some degree of independence. These models may not be as profitable as other models that will be discussed later, and there usually are no compensation guarantees.

**Physician-hospital organization.** The physician-hospital organization (PHO) arose for the purpose of jointly contracting with managed care organizations. Although no revenue is generated or assets are owned, the PHO is a conduit for the distribution of funds from managed care products to the physicians and hospitals.\textsuperscript{9} Costs are shared in this partnership, and administrative, management, and marketing resources are provided.\textsuperscript{9} There has been a slow but steady decrease in this practice model since 1999 due to high startup costs, legal complexities, and failure to achieve increased physician reimbursement.\textsuperscript{9} A newer form of PHO has arisen based on pay-for-performance incentives for the delivery of quality care.\textsuperscript{15} Physician reimbursement is tied to key quality indicators of care, and these improvements in quality may lead to increased contracts with other payers.

**The managed service organization.** The managed service organization (MSO) is another form of integration that is owned by the hospital but provides practice management services to the physicians. The MSO provides access to accounting, billing, coding, legal advice, collections, and payroll resources.\textsuperscript{3} The physicians are still afforded their independence and control of their medical practices. The anticipated cost reduction through economy of scale was not realized because practice costs continued to rise due to higher billing and coding compliance standards and added...
hospital administrative bureaucracy. For this reason, the MSO has also fallen into disfavor.

However, a revenue-oriented MSO has more recently been developed to improve revenue through pricing, volume, and service mixture at the same time containing other costs. This model has led to an increase in physician alignment with some health systems, resulting in a substantial increase in patient market share. When integrated delivery systems were first formed, practice acquisition, PHOs, and MSOs were common vehicles, but they did little to enhance a lasting relationship. In summary, these vehicles failed to fulfill their potential because the main driver was to create a structure rather than to develop objectives or the desired outcome of integration.16

Independent contractor relationships. Independent contractor relationships involve an agreement between hospitals and physicians or groups where the latter provide services on behalf of the hospital.

Leasing arrangements. A number of leasing arrangements between physicians and hospitals have been developed to improve the relationship and at the same time provide an enhancement of the physician’s income. Space, equipment, and personnel are usually involved in the leasing arrangement. When physicians lease these assets from the hospital, the hospital benefits by having a fixed lease income. The physician must maintain the space or equipment and also does the billing. In return, the physician now receives the technical share of the reimbursement, which can lead to a considerable increase in income.1

Hospitals may also lease from the physicians as in an ancillary lease in which the hospital leases ancillary equipment from a physician-owned leasing company. This avoids the need for the hospital to actually buy the expensive equipment. The physicians can still get the technical fee, but such relationships are drawing increasing scrutiny from government regulators. To try to negate this risk, hospitals are encouraging physicians to agree to the lease payment for use of the equipment only, allowing the hospital to keep the technical fee.

Joint venture models. Equity joint ventures allow for increased integration between physicians and hospitals whereby the parties enter into a financial partnership, usually by forming a limited liability corporation. The joint venture is not limited in scope and may range from an outpatient imaging or dialysis access center to an entire hospital. The physicians share equally in costs, revenue, and governance. “Of all the models, equity joint ventures offer physicians the greatest autonomy, but they can create conflict between hospital and physician groups or potentially lead to a domino effect where all procedural specialists want their own similar ventures.”17

Physicians have a substantial capital contribution at the onset, and if the venture fails, all investment could be lost. Because a joint venture is a legal entity, there are high startup and legal costs. Stark and anti-kickback laws must not be violated. Other types of joint ventures include leasing arrangements, purchased services agreements, contracting outpatient services for clinical comanagement services, and gainsharing. Physician interest in joint ventures has faded recently due to reduced Medicare reimbursement in ASCs primarily due to hospital lobbying efforts, volume losses from economic hardship, and significant pressure on reimbursement for imaging technologies.

Gainsharing. In the gainsharing model, physicians and hospitals target cost reductions by providing physicians with financial incentives to reduce costs. “Under gainsharing agreements, physicians and hospital administrators craft product usage protocols with the aim of reducing costs while maintaining high clinical quality. The cost savings are shared between physicians and hospitals based on a predetermined formula.”15 Because they feared that physicians would forgo quality care by using cheaper, substandard products, the Office of the Inspector General (OIG) determined that such arrangements were illegal. Newer gain-sharing models have since been developed following several more OIG Advisory Opinions in 2005 and 2007, as long as they maintain quality care and patient satisfaction.18,19 Significant investment in information systems is required along with added legal and consulting expenses.

Participating bond transactions. In lieu of the usual tax exempt bonds, these higher-interest bonds are issued to finance joint ventures, but they are not sold to the general public and have no public market and therefore carry more risk. In addition, specialists like vascular surgeons may seek higher returns in outpatient centers or ASCs where they do not share revenues with hospitals.

High integration models

Clinic or foundation model. The clinic or foundation model provides an opportunity for physicians and hospitals to be fully integrated. The Cleveland and Mayo Clinics best represent this model. The physicians are employed by a foundation, which is a not-for-profit, wholly owned subsidiary of the health system. The physicians remain in a separate corporate entity that provides them all of their compensation through a professional service agreement. The start-up costs to the health system are quite substantial as they procure practices, including both tangible and intangible assets, and hire new graduates. Once in place, however, physician retention is extremely high due to income security and job satisfaction.

The foundation model significantly eases the severe legal restrictions between the hospital and the physician regarding the transfer of income. Physician compensation is maintained at or above market standards, thereby attracting the best practitioners. The initial establishment of the tax-exempt status is very costly and time-consuming. Compensation may be based on a fixed fee or a percentage of collections but is at the discretion of the physicians. Furthermore, this model allows the best integrated systems to control costs and provide the best pricing to payers through consistent alignment of the physicians and health care system in rewarding financially the delivery of cost-efficient care. Importantly, the physicians have equal representation in the governance of the entity, and in most cases, the chief executive officer is a physician. The physician groups main-
tained control over practice standards and the distribution of income allotted to them as a unit, rather than being at the mercy of the health care system. All contracting with payers is surrendered to the health care system. The health system is also free to infuse capital as necessary to enhance practice success.

The staff model. The staff model, which also allows the opportunity for full integration, is best represented by Kaiser Permanente, the largest nonprofit health care system in the United States. There is full vertical integration of all components in this health care model, including physicians, administrators, nurses, physician-extenders, and other health care providers. Kaiser is unique among health care models because it is both a provider and a payer. It consists of three distinct entities. The payer, Kaiser Foundation Health Plans, contracts exclusively with the Permanente Medical Groups and the Kaiser Foundation Hospitals, which are the physician and hospital providers, respectively. Rather than the system purchasing practices, the hospital forms a physician enterprise that employs physicians full time as partners and compensates them for both clinical and administrative functions.

Unlike the foundation model, physicians have little control over compensation. All physicians receive a straight salary that is competitive in the market place and determined by the health care system. The physicians still make all decisions regarding clinical care. The system is free to infuse capital as necessary to develop and support practices as well as physician compensation. The health care system undertakes all administrative duties, freeing the physicians of that burden, and the physicians are provided stable work hours and call schedules. Protocols of care are derived from evidence-based medicine that drive the system to uniform, high-quality, cost-effective care across the system. Younger physicians who put a higher premium on quality of life are increasingly attracted to the staff model.

The advantage over other models is the degree of leadership and the physician-centric environment that allows physicians to retain ownership of their practices, have a better work-life balance, retain their patients, employees and records, as well as the freedom to return to their private practices at the end of their employment, if they wish. This allows the physicians to continue as owners and maintain incentives for production. To avoid anti-kickback problems, safe harbor contracts and appropriate fair market values are put in place.

LEGAL CHALLENGES TO INTEGRATION

Stark law. This statute specifically applies only to physicians and prohibits them or their immediate families from referring patients for certain designated health services to entities with which they have ownership or compensation relationships, unless these actions fall under specific exceptions. Almost every facet of any relationship between physicians and hospitals has to be examined to see if it fits under one of these exceptions.

Anti-kickback statutes. This criminal statute makes it illegal for anyone to pay or receive anything of value in exchange for inducing referrals under the Medicare or Medicaid program. The law allows some common and necessary interaction to occur under safe harbors.

Inurement issues. Almost all academic hospitals and 60% of community hospitals are not-for-profit tax-exempt hospitals. Their tax-exempt status is in jeopardy, for example, if any benefits accrue to a private rather than a public interest. Therefore, any physician-related transactions have to be at arm’s length and tied to fair market value. The Internal Revenue Service considers it a private inurement issue if an insider, such as a physician on the board, benefits from a transaction.

DISCUSSION

Studies about the causes of stress and burnout among surgeons have elicited varied responses, but generally include “lack of autonomy, difficulty balancing personal and professional life, excessive administrative tasks, and high patient volume.” It has generally been reported that loss of autonomy is one of the important factors that leads surgeons to contemplate retiring or changing occupations. Perceived control over the practice environment was the single most important factor in a study of 608 Kaiser Permanente physicians. Why then would physicians give up the thing they prize the most to work for a health care system or hospital?

Although patient relationships (50%), intellectual stimulation (40.7%), and professional and collegial relationships (18%) are the three most satisfying parts of medical practice, reimbursement issues (54.2%), insurance hassles (51.6%), and malpractice and defensive medicine issues are increasingly forcing solo and small-group physicians to reconsider giving up their autonomy for security, piece of mind, and better work-life balance. Two-thirds of the membership of the Society for Vascular Surgery consists of private practitioners with or without teaching affiliations. Although some of the members may be employed by hospitals, a large number of vascular surgeons in private practice like the independence, knowing that their success is directly related to their own hard work and not having to answer to a series of administrators or an academic hierarchy.

When a physician does consider employment with a health care system, there is no one-size-fits-all perfect model. It depends on current entrenched interest groups, past history of trust between parties, size of the physician group, location, health system resources and board commitment, practice and referral patterns, and the economic climate in the community (Table II). The current economic climate does present opportunities for financially strong systems to purchase physician businesses that are under reimbursement pressures.

One area that does not lend itself well to physicians sharing governance with hospitals is the state-owned, academic medical center. Even though physicians are positioned as chairs, deans, or senior administrators, the rank and file faculty may not perceive them to be representing their interests. These physicians often wear too many hats that inexorably tie them to administrative agendas. Only
significant political lobbying and a ground swell of physician faculty demanding an equal voice in governance will lead to newer models of integration.

What is sometimes not evident to some leaders in health systems is that developing a model with the aid of a few employed physicians and then selling it to the rest of the physicians is a prescription for failure. No successful long-term relationship can proceed in this scenario, even if it saves time.

The key to successful integration for a health care system is to first define objectives and make sure that they fit the corporate strategy as well as meeting the needs of the physician or the group. This then defines the relationship and makes it easier to measure performance against set goals and objectives. The physicians, for example, may indicate several important objectives such as lifestyle issues, maintenance of income, top-quality patient service, effortless and easy use of facilities, and patient records or access to the best technology. A common mistake is to have protracted discussions about the exact structure or what the new system will look like. Next, integration strategies should be laid out consistent with the objectives. Function over form should be emphasized. Discussions about governance, which is often the most contentious issue, should follow.

Surgical specialties are generally the least satisfied with hospital operations compared with other specialties in terms of patient care, ease of practice, and relations with hospital leaders. Therefore, sharing governance is a very important goal of any integration effort. Token representation on a board or governing body or placement of known partisans is easily spotted.

It is also important to realize that no strategy will eliminate all differences between the two parties but to come up with ways to leverage the differences. Finally, none of this is easy, and setting artificial deadlines is a mistake. Instead, the parties should work on the differences and allow time to resolve the differences that truly are obstacles to achieving the objectives.

**AUTHOR CONTRIBUTIONS**

Conception and design: BS, PV
Analysis and interpretation: BS, PV
Data collection: BS, PV
Writing the article: BS, PV
Critical revision of the article: BS, PV
Final approval of the article: BS, PV
Statistical analysis: BS
Obtained funding: N/A
Overall responsibility: BS, PV

**REFERENCES**


Submitted Oct 27, 2009; accepted Nov 1, 2009.