



Antitrust Health Care Chronicle

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Chair's Report

Robert F. Leibenluft, Washington, D.C.

The Antitrust Section follows essentially a school calendar year, so the summer marks the time when we review the past year, acknowledge those who are “graduating” to other endeavors, and welcome those who will take their place in the committee leadership.

This past year has been a particularly productive one for the Health Care Committee. We sponsored half a dozen brown bags, including programs on the FTC decision in *North Texas Specialty Physicians*, health plan mergers, the Evanston Northwestern hospital merger case, and the state action exemption. At the Spring meeting, we hosted two very successful programs—one on antitrust developments in the pharmaceutical industry and another one marking the Tenth Anniversary of the *Statements of Antitrust Policy in Health Care*. We continued our effort to cover more closely developments in the pharmaceutical and medical device industries by beginning work on an extensive handbook in that area. And perhaps most significantly, we substantially expanded and gave a new look to the *Antitrust Health Care Chronicle*.

Two of our Vice-Chairs are completing their 3-year terms this summer and are rotating off their leadership positions. David Balto has been instrumental in organizing numerous brown bag programs over the past 3 years, particularly several devoted to the pharmaceutical industry. He also has taken the lead in disseminating new developments to our listserv — a role which we hope he will continue with in the future. Howard Ullman has overseen the health care revisions to the ALD5 Annual Supplement, as well as work on a new primer on the “messenger model.”

Joining the Committee leadership as new Vice-Chairs are two individuals who have extensive professional experience in both private practice and the government, as well as in the Section leadership. Mary Lou Steptoe is a former FTC Bureau of Competition Acting Director and is currently Of Counsel at Skadden. Phil Nelson is a former Assistant Director for Competition Analysis at the FTC’s Bureau of Economics and is currently a Principal at Economists, Inc. Both have served as Chairs and Vice-Chairs of a number of Section Committees over the years. They will be joining Mark Botti, Dara Diomande and Seth Silber who will continue as Vice-Chairs.

During the summer we will be planning the year ahead. While we already have some ambitious plans for programs, the *Antitrust Health Care Chronicle*, publications and the website, we are always on the look out for both new ideas and volunteers who wish to get more involved. If you’re interested, we would love to hear from you. ■

An Economic Model of Competition Between General Hospitals and Physician-owned Specialty Facilities

by David A. Argue, Ph.D.*
Economists Incorporated

I. INTRODUCTION



A spirited debate continues over the nature of competition between general full-service hospitals and specialty limited-service hospitals and ambulatory surgery centers, especially when the latter are physician-owned. General hospitals accuse specialty hospitals and ambulatory surgery centers of various culinary infractions like “cream skimming” and “cherry picking” as the specialty hospitals and ambulatory surgery centers use allegedly unfair advantages to attract general hospitals’ most profitable patients. Specialty hospitals and ambulatory surgery centers (“specialty facilities”) view general hospitals’ conduct as unfairly hindering competition from a more efficient rival. Often, actions taken by both general hospitals and specialty facilities are consistent with pro-competitive conduct and with anti-competitive conduct. Analyzing the competitive impact of hospitals’ actions is best done with many of the same economic tools that are used in antitrust analyses in other industries. Despite the value of using a common economic toolbox for many industries, however, certain

economic issues that are central to an antitrust analysis are rendered more complex, both conceptually and practically, by institutional features of the healthcare industry in general and the hospital services industry in particular. Among these institutional features are the role of third-party payers, inherent difficulties of measuring prices and quality, cross-subsidization from profitable to unprofitable services, and the role of government as the largest purchaser and an involved regulator. A more subtle complexity, but one that is especially important to competition between hospitals and physician-owned specialty facilities, is the mutual dependence of hospitals and physicians on each other and the lack of a market mechanism to facilitate the production and exchange of beneficial services between hospitals and physicians.

This paper offers a framework for analyzing the issue of competition between general hospitals and physician-owned specialty facilities that incorporates these non-market features. From this model, inferences can be made regarding the competitive implications of each party’s conduct. As is true in most analyses, a framework is an important starting point, but consideration of the

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* David A. Argue is Corporate Vice President of Economists Incorporated in Washington, D.C. He has analyzed antitrust economics issues in numerous health care sectors including hospitals, ambulatory surgery centers, physician services, and health insurance. He recently completed “Competition in Utah Health Care Markets,” a study of market structures and contracting practices in several health services markets throughout Utah, on behalf of the Utah state legislature. Among his other health care matters, he was involved in the antitrust analysis for the defendant in *Gordon v. Lewistown Hospital*. Dr. Argue thanks Barry Harris, Jeff Miles and Bob Leibenluft for comments on this article and discussions of the topic.

Editor's Report

Seth C. Silber, Washington, D.C.

This issue of the *Chronicle* offers the views of three practitioners on a diverse array of health care and pharmaceutical issues.

■ COMPETITION IN HOSPITAL MARKETS

– Dave Argue of Economists Inc. provides an in-depth review of competition between general hospitals and physician-owned specialty hospitals. His article provides a framework for analyzing competition between these hospitals, and inferences that can be drawn from the competitive implications of each party's conduct.

■ MEDICAL DEVICE MERGERS

– Scott Sher of Wilson Sonsini Goodrich & Rosati has prepared an excellent review of recent merger consents involving medical device transactions – in particular, discussing in detail the FTC consents in Hologic/Fischer, Allergan/Inamed, and Boston Scientific/Guidant. He provides additional insights on how the analysis of medical device deals compares to pharmaceutical mergers, and how these mergers are treated by the EC.

■ AUTHORIZED GENERICS

– John Roberti of Mayer Brown Rowe & Maw provides a thorough analysis of the FTC's forthcoming study of authorized generics. He outlines the competitive issues raised by authorized generics, describes the information being sought by the FTC via subpoena, and the potential impact of the study.

Our next issue will likely be published in October. If you have ideas for articles please contact me at ssilber@ftc.gov or 202-326-3121, or our Articles Editor James Yoon at james.yoon@oag.state.ny.us at 212-416-8822. ■

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facts unique to each situation is necessary to reach a valid conclusion.

II. BACKGROUND

A useful starting point is to outline the perspectives of general hospitals and specialty facilities as they compete to provide facility services. General hospitals attempt to meet the demands of payers, patients and physicians for the full range of services that can only be provided in a full-service facility such as a general hospital or an academic medical center. Among the services provided at a full-service facility are some such as those furnished by burn centers or trauma centers that often are unprofitable. The "on-call" costs of maintaining these facilities is high relative to the revenue that intermittent demand generates. In addition, government regulations require hospitals to provide some services like emergency departments that are often unprofitable.¹ In addition, some patients, such as indigent or Medicaid-insured patients, are typically unprofitable or marginally profitable. Again, government regulations prohibit hospitals from "dumping" indigent or other low-paying patients. Hospitals often receive revenue, such as charitable donations or additional government payments, that help fund unprofitable services and patients. In addition, hospitals often cross-subsidize the unprofitable services and patients with profits from the more profitable services and patients.² From a general hospital's perspective, limited-service facilities "skim the cream" of the most profitable patients, undermining general hospitals' ability to provide the full panoply of services demanded by communities and the government.

Specialty facilities offer an alternative to general hospitals for certain services. Many physicians will state that they established their own specialty facility because

general hospitals were unresponsive to their needs, especially in terms of operating room facilities, equipment purchases, and scheduling. These specialty-facility owners argue that their facilities are more efficient and have more control over costs because they are smaller and less bureaucratic. The lack of emergency and trauma cases helps these facilities adhere to surgical schedules, turn over operating rooms more rapidly, and thus improve physicians' and the facility's efficiency. Patient satisfaction is improved at specialty facilities due to the more predictable scheduling, less bureaucratic atmosphere, and more patient-friendly setting. For physician-investors, specialty facility fees also provide additional income. From a specialty facility's perspective, general hospitals' responses to physician ownership is heavy-handed and, in many cases, harmful to competition.

Although there may be good clinical reasons for a physician to prefer a specialty facility for a particular patient, economic incentives created by physician ownership of specialty facilities are unambiguous. Physician-investors share in the profit from the facility fees, providing a financial incentive for physician-investors to increase facility profits. Individual physicians typically own small portions of a specialty facility (1% to 5%), though that can vary substantially.³ Small ownership shares may suggest that any individual physician has a small financial incentive as well. The error in that thinking is two-fold, however. First, most hospitals have large fixed costs (depreciation, interest, administration, etc.) but comparatively low variable costs (supplies, pharmaceuticals) for each additional patient. Thus the incremental profit of an additional patient can be very high. Assuming a variable contribution margin of 60% of incremental revenue, a patient yielding \$10,000 in additional revenue can provide \$6,000 in incremental profit.⁴ Second, an individual

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¹ See, for example, U.S. Department of Health and Human Services, Office of Inspector General, "The Emergency Medical Treatment and Labor Act, Survey of Hospital Emergency Departments," January 2001, OEI-09-98-00220 at 1.

² "Hospitals historically have taken it upon themselves to fill some of the gaps in the U.S. health insurance system by treating uninsured patients and then charging more to those who can pay to offset the costs. This practice, known as cost shifting, distinguishes the hospital sector from nearly all other sectors of the economy." (Joyce Mann et al., "Uncompensated Care: Hospitals' Responses to Fiscal Pressures," HEALTH AFFAIRS, Spring 1995 at 263.)

³ Medicare Payment Advisory Commission, Report to the Congress: Physician-owned Specialty Hospitals, March 2005 ("MedPAC Report") at Table 1, p. 20.

⁴ General hospitals typically have variable contribution margins of 60%. Specialty hospitals' overall cost structure does not appear to be substantially different from general hospitals' cost structure, so a 60% margin is likely a reasonable approximation.

AN ECONOMIC MODEL OF COMPETITION,
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investor receives not only his or her share of the profits on his or her own patients at the specialty facility, but he or she also receives a share of the profits on all other patients. The group share is important because specialty facilities are typically created with commitment and investments of a significant portion of potential referral sources. Without that joint commitment, specialty facilities may be viewed as too risky.⁵ One extra patient from a 5% investor may yield an incremental profit of \$6,000 to the hospital, giving the investor \$300 in his profit share. But if nine other 5% investors also admit one extra patient each, the facility gets \$60,000 in incremental profit, giving each investor a \$3,000 share.

The evidence regarding the impact of the financial incentive on the choice of facility at which physicians treat patients is mixed, but generally indicates that physicians respond to their financial incentives through their referral patterns. A study by the Center for Medicare and Medicaid Services (CMS), which focuses on Medicare patients only, found that “the empirical evidence supports the hypothesis that ownership has some effect in directing patients to specialty hospitals, although the effect appears to be weak.”⁶ The CMS Report also found that for some hospitals, referral rates by owners are significantly higher than for non-owners, but for other hospitals, there is no

significant difference.⁷ It is not clear why this difference exists. The CMS Report also found “a mildly positive correlation between the size of the physician’s ownership share and the percentage of his or her patients treated at the specialty hospital.”⁸

Some evidence also exists in a study by the Medicare Payment Advisory Commission (MedPAC) of a significant correlation between physician ownership and the mix of patient by insurance coverage. Like the CMS Report, the MedPAC Report is also based on a small sample of specialty hospitals, but its information includes non-Medicare patients. The MedPAC Report found that physician-owned orthopedic and surgical specialty hospitals treated primarily privately insured patients.⁹ Likewise, the Medicaid patient mix at specialty hospitals was substantially lower than for community hospitals regardless of the acuity mix.¹⁰

An additional study focused on discharges at two physician-owned heart hospitals in Arizona. This study concluded that patient characteristics, such as payer type and case complexity, determined where physician-owners treated each patient.¹¹

The opening of competing physician-owned specialty facilities can be a significant business issue for general hospitals. Two studies show that the increase in specialty facility patient volume mirrors the decrease

in patient volume at the competing hospital, at least initially.¹² Other studies have found similar results.¹³ The loss of surgical volume can result in margin losses of \$1,000 per case.¹⁴ Logically, one would expect that to the extent the revenue shortfalls compel hospitals to reduce the provision of services, they will cut the least profitable services first and continue the most profitable services. In principle, service reductions may be mitigated by other sources of funding including Medicaid DSH payments and charitable contributions, but those sources are not likely to increase in lockstep with reduced patient revenue.

Shifts in payer mix also have a financial impact on hospitals even if overall patient volume does not decline. One study estimates that for each \$1.00 of hospital costs, private health insurance payers paid \$1.22 in 2002.¹⁵ In contrast, Medicare paid about \$0.95 per dollar of costs and Medicaid paid about \$0.92 per dollar of costs (including DSH payments and other supplements). Privately insured patients account for 37.5% of total costs and Medicaid and Medicare together account for 52.8% of hospital costs. With total hospital costs in 2004 of \$481 billion, the cost-shift subsidy by private payers amounts to \$32.5 billion.¹⁶ Another study estimates

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⁵ See MedPAC Report at 9 for a discussion of the importance of physician ownership to the development of a specialty facility.
⁶ Center for Medicare and Medicaid Services, “Study of Physician-owned Specialty Hospitals Required in Section 507(c)(2) of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003,” May 2005 (“CMS Report”) at 26. Two caveats related to the CMS Report are that it is based on Medicare patients only and that it covers a small number of specialty hospitals. The absence of commercially insured patients is especially important since they are generally considered to be the most profitable.
⁷ CMS Report at 26.
⁸ CMS Report at 26 and Tables 4.1 to 4.4.
⁹ MedPAC Report at 17.
¹⁰ MedPAC Report, Tables 6 and 7.
¹¹ Jean M. Mitchell, “Effects of Physician-Owned Limited-Service Hospitals: Evidence from Arizona,” HEALTH AFFAIRS – Web Exclusive, published at www.healthaffairs.org on October 25, 2005, W5 481-490.
¹² William J. Lynk and Carina S. Longley, “The Effect of Physician-owned Surgicenters on Hospital Outpatient Surgery,” HEALTH AFFAIRS, vol. 21, no. 4, July/August 2002; David A. Argue et al., “Competition in Utah Health Care Markets,” Utah Legislature, Task Force on Privately Owned Health Care Organizations, May 2006.
¹³ “The Impact of Physician-owned Limited-Service Hospitals: A Summary of Four Case Studies,” McManis Consulting, February 2005; “Impact of Physician Investment in Limited Service Facilities: Selected Areas in Texas,” Texas Hospital Association, February 2005.
¹⁴ Based on conversations with hospital executives.
¹⁵ Dobson et al., “The Cost-Shift Payment ‘Hydraulic’: Foundation, History, and Implications,” HEALTH AFFAIRS, vol. 25, Jan/Feb 2006, 22-33. This study is based on Medicare cost reports data which includes allocations of overhead as well as exclusions of certain costs are required by Medicare for reporting data.
¹⁶ www.aha.org/resource_center/fastfacts.

the amount by which commercially insured patients subsidize uncompensated hospital care at \$28 billion in 2005.¹⁷

A more complete assessment of the impact of specialty facilities on general hospitals should control for overall differences affecting general hospitals. The MedPAC Report attempted such an analysis and found that general hospitals tend to be less profitable than specialty hospitals overall, but that there is no significant difference in the profitability of general hospitals that compete with specialty hospitals and those that do not.¹⁸ If lack of a statistically significant difference in profitability proves to be robust over time and across markets in future studies, the fear of an adverse financial impact of physician-owned facilities on general hospitals might be overstated. MedPAC warns, however, that its analysis is based on a comparatively small number of recently established facilities. The impact might be substantially different when measured over more facilities and a longer time period.

III. An Economic Model of Hospital-Physician Interaction

To evaluate competition among general hospitals and physician-owned specialty facilities, it is helpful to build an economic model that describes hospital-physician interaction. A basic building block for the economic model is recognition of the complementarity of hospital and physician services. Typically, the two sets of services are consumed together. Inpatient hospital services are obviously provided in tandem with physician services, and outpatient hospital services are also provided with or under the direction of a physician.

The complementarity of hospital and physician services results in a mutual dependence between hospitals and physicians. Physicians desire hospital privileges because that allows them to treat patients who need hospital facility services.

Without privileges, many physicians likely would be unacceptable to patients and not included in payers' networks. Physicians capture the benefits of their acceptability to patients and payers regardless of the extent to which they actually practice at the general hospital. Hospitals, for their part, depend on patient referrals through the physicians on their staffs. Hospitals capture the benefits of extending physician privileges when the physicians' patients are admitted and consume hospital services. What is unusual about this relationship from an economic perspective is that neither the hospital nor the physician pays the other for the benefits received. In other words, both hospitals and physicians generate positive "externalities" for which they receive no direct compensation. Physicians are not paid by the hospital for referring patients, and hospitals are not paid by physicians for granting admitting privileges (though privileged physicians typically are required to serve on hospital administrative committees and provide call coverage).

Economists' jargon for receiving the benefit of a good or service without paying for it is "free-riding." Economists generally view free riding as a market failure resulting in an economically inefficient outcome or a non-optimal allocation of resources.¹⁹ The resource allocation is non-optimal in the sense that too little of the good or service is produced and too much is consumed because consumers do not bear the full costs of production. In a world without transaction costs (or legal barriers to making certain transactions), this type of free-riding in hospital and physician services would be eliminated by hospitals paying physicians for referrals and physicians paying hospitals for privileges.²⁰ In principle, hospitals would be willing to pay physicians up to the value to the hospital of the patients the physicians admit. Likewise, physicians would be willing to pay hospitals up to the value of the privileges of providing a setting in which they could perform certain services and thus

in attracting patients to the physician. Such payments, however, are considered by many to be unethical and are proscribed by law in any event.

In reality, a "second-best" outcome is reached when both hospitals and physicians implicitly internalize the costs of their own free riding. Each does this to some extent by allowing the other to free ride. Physicians "pay" for hospital privileges by admitting patients to the hospital. Hospitals "pay" for admissions by giving physicians the right to practice at the hospital. An important part of the second-best solution is the symmetry between hospitals' and physicians' perspectives. This is not to say that the implicit payments for referrals and privileges necessarily results in full compensation for the external benefits produced resulting in zero "net free riding." If, however, the net free riding is zero, an economically efficient outcome has been achieved, absent any other market imperfections. The hospital would choose a service level that maximizes its profits inclusive of the implicit payment it makes to physicians for referrals. Analogously, physicians would provide a service level that maximizes their profits inclusive of the implicit payment they make to the hospital for receiving privileges. In other words, if both the hospital and the physicians fully internalize the costs of producing their services, they will choose economically efficient levels of output.

If, on the other hand, the net free riding is non-zero, then both parties are producing at economically inefficient levels. For example, if only the physicians were free riding, their output would be inefficiently high because they would be receiving benefits from the hospital without incurring the cost to pay for them (i.e., their accounting costs would be lower than their economic costs). Conversely, the hospital's output would be inefficiently low because it would not be paid for some of the economic benefits it generates. The same conclusion holds if some free riding exists for both physicians

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¹⁷ Families USA, "Paying a Premium: The Added Cost of Care for the Uninsured," June 2005. Another perspective on cross-subsidization comes from the Department of Justice complaint in *U.S. v. United Healthcare and PacifiCare*. The Justice Department emphasizes the importance of commercially insured patients in asserting that "many physicians use their commercial health insurance business to compensate for lower revenue earned from Medicare and Medicaid business." The complaint does not specifically allege that Medicare and Medicaid patients are unprofitable to physicians, but rather that they are less profitable than commercially insured patients. (*U.S. v. United Healthcare and PacifiCare*, Civil Action No. 1:05CV02436, Complaint issued December 20, 2005).

¹⁸ MedPAC Report at Table 4.

¹⁹ See generally, Dennis W. Carlton and Jeffrey M. Perloff, *MODERN INDUSTRIAL ORGANIZATION*, 4th ed., 418-424.

²⁰ See Ronald H. Coase, "The Nature of the Firm," *ECONOMICA*, November 1937, for a discussion of the impact of transaction costs on reaching efficient outcomes.

and hospitals, but it is not evenly balanced to produce zero net free riding.

It is not clear how to determine whether net free riding is zero or favors either the physicians or the hospital, although the ends of the spectrum can be identified. If net free riding is sufficiently in favor of the hospital, it is logical to expect that physicians would practice without hospital privileges. As is discussed below, this outcome seems to occur with eye surgery centers and endoscopy centers, in particular. In those instances, the physician may need little more from the hospital than emergency back-up coverage, which some state regulations require hospitals to provide in any event. If net free riding is sufficiently in favor of the physicians, hospitals may choose to employ the physicians and capture that benefit directly. Certain hospital-based physicians such as emergency room physicians, who do not provide the hospital with referrals or admissions but benefit from the hospital's reputation and market position as a desirable facility for patients, fall into this category. Most physicians fall somewhere in between.

If the mutual free riding that leads to the second-best outcome breaks down, net free riding shifts from an assumed zero balance to become non-zero, and the economic inefficiency of the free-rider distortion arises.²¹ Introducing physician ownership of competing specialty facilities changes the model by creating that breakdown. Physicians who invest in a competing specialty facility but retain general hospital privileges continue to receive the benefits of free riding on the hospital, but are able to reduce hospital free riding and the cost to themselves of "paying" for those benefits with referrals. Physicians are able to reduce hospitals' free riding because they have the incentive, knowledge and ability to refer the most profitable patients to their own facilities:

Incentive: Physician-owners' personal financial incentives are aligned with their facilities' financial incentives. Physicians benefit financially from treating patients at their own facility.

Knowledge: Physicians have unique knowledge to identify in advance which patients are likely to generate the most profitable facility services. Commercially insured patients are typically more profitable than government-insured or uninsured patients. In addition, many payment systems insufficiently differentiate between high-cost and low-cost episodes of care. That is, low-cost episodes receive payment that is comparable to payments received for high-cost episodes.²²

Ability: Physicians have the ability to refer patients to their own facilities because they serve as "agents" for patients in making medical decisions. This agency relationship gives physicians at least some influence (and many assert that it is a significant influence) on the choice of facility in which a patient receives services. The agency relationship is not necessarily bad, even in the context of the financial incentives of physician-owned facilities. A patient may be equally well off in either facility, or the patient may have chosen the physician-owned facility regardless of the physician's influence. The agency problem that potentially arises in this context is that the physician may refer the patient to a facility that benefits the physician, but that the patient would not otherwise have chosen.

Once the emergence of a physician-owned specialty facility has disrupted the free-rider balance, the question arises as to how the general hospital might restore the balance. The hospital can re-internalize costs through at least three different mechanisms: economic credentialing, exclusive or bundled-discount managed care contracting, and vertical integration of hospitals and physicians. From a competition standpoint, each of these actions has potentially different implications.

Economic Credentialing

Economic credentialing refers to a hospital de-credentialing, refusing to renew, or

refusing to approve the initial application for admitting privileges of a physician because he or she has an ownership interest in a competing facility. It is not uncommon for hospitals to de-credential a physician for quality-of-care reasons. Since the only criteria for economic credentialing is the physician's ownership of a competing facility, however, economic credentialing is, by definition, unrelated to quality of care. Economic credentialing induces a physician-investor to internalize the cost of his or her free riding on the general hospital by compelling the physician to forgo ownership of a competing facility in order to receive the benefits of hospital admitting privileges. If the physician chooses not to bear the cost of a lost opportunity to invest in a competing facility, then he or she would lose the benefit of having hospital privileges.

Managed Care Contracting

A second approach to internalize costs for physician privileges and hospital admissions is through contracting arrangements with managed care plans. Managed care contracts with a hospital may include restrictions on the plan not to contract with a competing physician-owned facility (an exclusive contract) or to receive a lower discount from the hospital if the plan contracts with such a facility (a bundled-discount contract). Both types of contracts force the physician-investors to internalize some of the costs of competing with a hospital at which they also have privileges. This is accomplished by precluding the payer's patients from using the physician-owned facility or allowing patients to use that facility only as part of a higher-cost network.

Vertical Integration of Hospitals and Physicians

A third approach for internalizing costs is for the hospital and its admitting physicians to integrate vertically. When the hospital owns or employs its physicians, it bears the cost of acquiring referrals through the salaries it pays to those physicians, and it captures the benefits of those referrals. When physicians own the hospital (as might be the case if the

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²¹ For purposes of this discussion, net free riding is generally assumed to be zero.

²² Inadequate payment differentiation by Medicare among episodes of care is a significant factor in the growth of specialty hospitals. The Center for Medicare and Medicaid Services has recently proposed revisions in Medicare payment rates to address this issue. See MedPAC Report at 25-35 and "Prepared Statement of the Federal Trade Commission Before the Subcommittee on Federal Financial Management, Government Information, and International Security of the Committee on Homeland Security and Governmental Affairs, U.S. Senate on New Entry into Hospital Competition," May 24, 2005 at 4-5.

physician-owned specialty facility expanded to become a full-service hospital), the physicians bear the cost and reap the gains of the external benefits generated by the hospital. In essence, common ownership of the hospital and all of its referring physicians eliminates the uncompensated externalities and fully aligns financial incentives. With no free riding on either side, net free riding would be zero. Some vertically integrated systems, like the original Kaiser system in California or parts of the Geisinger Health System in central Pennsylvania, maintain hospitals and physicians under common ownership and do not allow non-employed physicians to have hospital privileges.

Having discussed physician ownership of facilities and hospital employment of physicians, it is useful to recognize some historical differences in the two situations. In the 1990s, many general hospitals acquired practices of primary care physicians, in part to induce more referrals to the hospitals. Many of these arrangements have since been unwound because they proved to be unprofitable for the hospitals. In contrast, physicians who invest in specialty hospitals are usually surgeons rather than primary care physicians. Thus far, physician ownership of specialty hospitals has generally proven to be profitable because of the referrals generated.²³ In an apparent reversal of the trend, however, Carilion Health System in southwestern Virginia recently announced its plan to convert itself from a non-profit hospital system that employs about 300 physicians to a physician-run clinic with a full complement of hospitals. Carilion's move is motivated in part by a stated desire to "wipe out inefficient, crippling competition between powerful doctors and hospitals."²⁴

IV. COMPETITIVE CONSIDERATIONS OF THE MODEL

The standard antitrust framework provides a useful guide for evaluating the competitive considerations of actions of a general hospital in response to competition by a physician-owned facility. The economic model discussed above adds a perspective about the efficient allocation of resources given the absence of a market mechanism to do so. These efficiencies may offset

some competitive concerns. Some stylized examples help illustrate this point.

Example 1: Free Riding with Physician-owned Facility

Suppose, for example, that physicians with privileges at a general hospital open an ambulatory surgery center, but that they need to retain their hospital admitting privileges for the surgery center to be viewed by patients as an acceptable outpatient surgery location. Under those circumstances, economic credentialing by the general hospital to eliminate unilateral free riding could on its own result in the closure of the surgery center. Whether the general hospital gained market power as a result of the surgicenter's departure can be ascertained by evaluating factors like the availability of alternative providers of ambulatory surgery services and the ease of entry into the ambulatory surgery business. Consideration should also be given, however, to the closure of the surgery center restoring the implicit payment from the physicians to the general hospital for the benefit they receive from having privileges. Presumably, prior to the surgicenter's opening, the implicit payment produced as efficient an allocation of resources as a second-best, non-market mechanism can reach. If so, the reduction of the implicit payment from the physician to the hospital that derives from the physician-owned center opening means that too few hospital services were being produced. Consequently, competitive issues arising from the closure of the ambulatory surgery center should be offset at least partially by the efficiency gains produced by the restoration of the second-best solution.

Example 2: Free Riding without Physician-owned Facility

Suppose instead that the competing facility was not physician-owned. If the competing facility did not have physician owners (e.g., another general acute care hospital), then its competition with the hospital at issue does not generate a free-riding imbalance. Actions by the hospital that result in the facility's closure would still be subject to the same antitrust scrutiny, but they would have no offsetting advantage of addressing a market imperfection.

These two stylized examples illustrate some important differences among the possible actions of the general hospital. By its nature, economic credentialing is directed toward physician-owned competitors and is not relevant for other competitors. Economic credentialing thus is as an unambiguous attempt to address the free-rider market imperfection even though it may nevertheless create adverse competitive consequences. Exclusive or bundled-discount managed care contracts, in contrast, are not restricted to competing physician-owned facilities. Rather, these types of contracts are commonly used in competition among general hospitals where no free-rider issue exists. Thus exclusive and bundled-discount contracts may, but do not necessarily, address the free-rider market imperfection, yet they, too, may have competitive consequences.

The third action considered previously, vertical integration of physicians and hospitals, differs from the other two as well. Employment of physicians enables hospitals to internalize the cost of acquiring patient referrals on their own. Likewise, physician ownership of a hospital allows physicians to internalize the cost of the external benefits associated with hospital privileges. In both instances, market imperfections are eliminated without involving any action that directly affects a competing facility. Some competitive impact of hospitals' employment of physicians may arise, but that is generally considered in the context of a market for professional physician services. It may, however, have some indirect bearing on competition by a competing physician-owned facility.

Like much market conduct, any of the three approaches to inducing physicians to internalize the cost of their free riding on hospitals for privileges has the potential to create harm to competition. The competitive process often results in one supplier losing out to another, to the benefit of consumers. Harm to competition, however, refers to actions that injure the process of competition itself. Such harm arises when actions result in consumers paying higher prices or receiving lower quality than they would in competitive markets. Analyses of

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²³ MedPAC Report at 9.

²⁴ Melanie Evans, "Putting on a Clinic in Va.," MODERN HEALTHCARE, June 26, 2006 at 6-7.

potential harm to competition can be done in a traditional framework of market definition, identification of alternatives, assessment of entry, consideration of competitive effects, and evaluation of business justifications and efficiencies. The DOJ/FTC Horizontal Merger Guidelines is an example of such a framework.²⁵

The traditional framework of competition analysis indicates that harm to competition from the three approaches discussed previously is likely only if certain conditions prevail. These conditions include (1) that the physician-owned specialty facility is a significant competitive constraint on the hospital, (2) that the constraint is eliminated or substantially limited by the actions of the hospital, and (3) that entry by another competitor is unlikely. In this context, a binding competitive constraint on the general hospital refers to a competitor that forces the general hospital to provide competitive prices and quality and without which the hospital would have above-competitive prices or below-competitive quality. An individual physician-owned specialty facility is not likely to be a binding competitive constraint on a general hospital if other general hospitals or other specialty facilities in the market also constrain the general hospital. With regard to elimination or significant limitation on the competitive constraint, a physician-owned specialty facility may continue to constrain the general hospital's price and quality if it remains in the market despite the hospital's actions. That is, the physician-owned specialty facility may receive sufficient patient volume even without the physician having hospital privileges or in the face of exclusive or bundled-discount managed care contracts. In such cases, the specialty facility continues to constrain the hospital's offering of the same services provided by the specialty facility and, as a potential entrant into the provision of other services, it constrains the hospital's provision of other services, including inpatient services.

Case Studies: Economic Credentialing

Several recent cases reveal how some courts have treated these issues. Some of these cases do not involve antitrust issues and, of course, none of the court decisions is couched in terms of net free riding. Nevertheless, some of their analyses are consistent with the model.

*Mahan et al. v. Avera St. Luke's*²⁶

In *Mahan*, a group of orthopedic surgeons owned an ambulatory surgery center that competed with Avera St. Luke's, the defendant hospital. Shortly after the surgery center opened, St. Luke's closed its medical staff for physicians seeking privileges in three types of spine surgery. St. Luke's rationale was that the neurosurgeon that it had recently recruited would need a certain volume of orthopedic spine surgery work to maintain a practice. As a result of St. Luke's closing its staff, the owners of the competing orthopedic specialty hospital who brought the law suit could continue to practice at St. Luke's, but could not add partners intending to provide spine surgery services. The South Dakota Supreme Court ruled in favor of Avera, citing, among other things, that St. Luke's had a legitimate business justification in its interest in ensuring adequate neurosurgery coverage and, more generally, its stated need to cross-subsidize its unprofitable services with its profitable ones. The Court also cited conflict-of-interest issues for physician-owners of one facility to be on the staff of another.

Some of the Court's reasoning in *Mahan* is consistent with the free-rider model. The Court accepted St. Luke's argument that the lack of sufficient orthopedic spine surgery cases would be an impediment to maintaining neurosurgeons in a community of its size because neurosurgery patient volume alone was insufficient. The decision also noted that the competing physician-owned orthopedic specialty facility quickly captured a large amount of surgical volume and threatened the profitable neurosurgical services that cross-subsidized other

unprofitable services. These arguments suggest that net free riding by the physician-investors in the specialty facility would reduce the general hospital's provision of neurosurgical services. The Court's discussion of the hospital's need to cross-subsidize its unprofitable lines of business is also consistent with net free riding by physician-investors leading to a reduction in hospital services offered.

*Gordon v. Lewistown Hospital*²⁷

In *Gordon v. Lewistown Hospital*, Dr. Gordon, who owned and operated a successful ophthalmic surgery center near Lewistown Hospital in Pennsylvania, lost his hospital privileges at the defendant hospital in what he argued was an act of economic credentialing. In ruling in defendant's favor, the court did not agree with Dr. Gordon's assertions that the credentialing decision was based on economic grounds. Nevertheless, the case provides some additional insights into the free-riding issue. Since almost all ophthalmic surgery procedures (mostly cataract extractions with lens replacements) are performed on an outpatient basis and referrals come from local optometrists, eye surgery centers like Dr. Gordon's are not highly dependent on a local hospital. In Dr. Gordon's case, the ambulatory surgery center had much higher surgery volume than the defendant hospital's outpatient surgery department and it provided a viable alternative for patients. It continued to remain viable even after Dr. Gordon was removed from the hospital's staff.

The lack of referrals from Dr. Gordon to Lewistown Hospital indicates that the hospital received few free-rider benefits from Dr. Gordon. Dr. Gordon's arguments suggest that he believed that he received free-rider benefits from the hospital by increasing his attractiveness to patients. Yet the continued success of Dr. Gordon's surgery center after he lost his hospital privileges indicates that few free-rider benefits flowed to Dr. Gordon from having privileges at Lewistown Hospital. Thus had the court focused on

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²⁵ See Horizontal Merger Guidelines of the U.S. Department of Justice and Federal Trade Commission, 1992 and updated in 1997. For a discussion of the use of the Merger Guidelines in non-merger contexts, see Greg Werden, "The 1982 Merger Guidelines and the Ascent of the Hypothetical Monopolist Paradigm," June 2002, www.doj.gov/atr/hmerger/11256.pdf.

²⁶ *Mahan v. Avera St. Luke's*, 621 N.W.2d 150 (S.D. 2000).

²⁷ *Gordon v. Lewistown Hospital*, 272 F.Supp.2d 393 (M.D.Pa. 2003).

economic credentialing, the absence of much free riding behavior implies that few efficiency gains could have been expected from the hospital eliminating the competing physician-owned facility.²⁸ Conversely, the absence of free riding also indicates that economic credentialing would have little, if any, competitive impact.

*Baptist Health v. Murphy*²⁹

The Arkansas Supreme Court ruled in *Baptist Health* in favor of Dr. Murphy and his Little Rock Cardiology Clinic partners who were investors in Arkansas Heart Hospital. Baptist Health had adopted an economic credentialing policy in which any physician who invested in a competing hospital was ineligible for new or renewed admitting privileges at Baptist Health hospitals. The Court ultimately agreed with the state circuit court that such a policy would cause “irreparable harm arising out of the disruption of the physicians’ relationships with their patients and with referring physicians, and with the physicians’ ability to provide proper healthcare to their patients, to the detriment of the doctor-patient relationship.”

The Court’s decision shows that unlike in *Gordon*, the physicians in *Baptist Health* benefited from having privileges at Baptist Health hospitals. For the Court’s reasoning about the physician-patient relationship being disrupted by the physician’s loss of privileges to be credible, it must be the case that the physician’s ability to practice at the hospital was important to the patient in the first place. In contrast, Dr. Gordon’s surgery center continued to attract patients even after his privileges were terminated. Essentially, the decision found that Baptist Health would not be allowed to use economic credentialing to mitigate the shift in the net free riding toward the physicians.

Little noticed in the *Baptist Health* decision, however, is a reference to Baptist Health having exclusive contracts with payers for “many of appellees’ patients” for treatment at Baptist Health hospitals. The litigation did not involve Baptist Health’s contracting

policies, although those policies may also have been intended to address the physician-favorable shift in net free riding. It is possible that Baptist Health attempted to use economic credentialing in addition to exclusive managed care contracting to re-balance the free riding. A strategy of supplementing its managed care contracting approach with economic credentialing would have made economic sense for Baptist Health because a large majority of its cardiac cases are Medicare patients who are not subject to any exclusive contracting, and these cases can be highly profitable. Consequently, contracting practices alone would be only partially effective. The profitability of these Medicare cases is part of what has fed the growth in specialty heart hospitals nationwide. The prevalence, profitability, and non-exclusivity of Medicare cases is another reason why eye surgery centers such as Dr. Gordon’s are able to compete with general hospitals even without physician-investors having privileges at a general hospital.

Case Studies: Managed Care Contracting

*Rome Ambulatory Surgery Center v. Rome Memorial Hospital*³⁰

Plaintiff Rome Ambulatory Surgery Center alleged that the defendant hospital offered MVP Health Plan discounts on all hospital services contingent on an exclusive arrangement for outpatient surgery. Plaintiff alleged that terms of this bundled-discount contract were “exceptionally favorable” to MVP Health Plan. Another managed care plan, Blue Cross, allegedly had non-bundled contracts with the defendant and contracted with plaintiff as well for the first two years. Apparently, a bundled-discount contract with the defendant hospital was not essential for a managed care plan to market its products. The defendant’s discounts with Blue Cross presumably were not as favorable as its discounts with MVP Health Plan, but Blue Cross at least was not excluded from contracting with the plaintiff. After two

years, Blue Cross entered into an exclusive contract with defendant, ostensibly at “significant discounts on all services.” The defendant argued that overall terms with payers were not unusually favorable to any one payer. Rome Ambulatory Surgery Center eventually left the market.

It is possible that the terms of Rome Memorial’s contracts were unrelated to physician ownership of the competing surgicenter and would have been the same even if no physicians on its staff invested in the surgicenter. Physician investment in the surgicenter suggests, however, that its presence in the market shifted the net free-rider effect to the physicians’ advantage. Thus Rome Memorial’s contracting policy may have been an attempt to compel the physicians to internalize the cost of the benefits they received by having admitting privileges at Rome Memorial Hospital. If so, the potential exists that the contracts had these specific efficiency-enhancing effects.

*Surgical Care Center of Hammond v. Hospital Service District No. 1 of Tangipahoa Parish*³¹

In *Surgical Care Center of Hammond*, the defendant hospital (North Oaks Medical Center) allegedly offered managed care payers that contracted exclusively with the hospital for outpatient surgical services a substantial discount on prices for inpatient services. The court noted that despite the exclusive contracts being in place, plaintiff’s ambulatory surgery center (St. Luke’s Surgicenter) was able nevertheless to capture nearly 25% of ambulatory surgery cases in North Oaks’ service area in its first full year of operation. The court also noted that North Oaks had 42-44% of ambulatory surgery cases in its service area. Presumably, its share was smaller in a properly defined geographic market.³² Plaintiff’s expert evidently admitted that North Oaks would have “very limited ability” to raise prices above competitive levels even if St. Luke’s left the market.

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²⁸ A similar finding may be likely in *Williamson v. Sacred Heart Hospital of Pensacola et al.* (1993 U.S. Dist. LEXIS 20853, affirmed (11th Cir. 1195) 1995-1 Trade Cas. (CCH) ¶170,905.). In that case, plaintiff alleged that she was denied privileges because she competed with outpatient cancer treatment services offered by the defendant hospitals. In ruling in favor of the defendants, the court noted that Dr. Williamson’s clinic continued to be very successful, resulting in a five-fold increase in her income. In addition, plaintiff almost never used the defendant hospitals even when she was able to do so.

²⁹ *Baptist Health v. Murphy et al.*, No. 04-430, 2006 Ark. LEXIS 58 (Ark. February 2, 2006).

³⁰ *Rome Ambulatory Surgery Center v. Rome Memorial Hospital et al.*, 339 F.Supp.2d 389 (N.D.N.Y. 2004).

³¹ *Surgical Care Center of Hammond v. Hospital Service District No. 1 of Tangipahoa Parish*, 2001-1 Trade Cas. (CCH) ¶173,215 (E.D.La. 2001).

³² The court’s decision hinged in large part on plaintiff’s failure to define the geographic market properly when it alleged that the market comprised North Oaks’ service area.

North Oaks' bundled-discount contracting practice appears to have been designed to compel physicians who invested in St. Luke's Surgicenter to internalize the cost of their free riding on the hospital. If the policy were more broadly targeted at general hospital competitors, it would likely have been directed at exclusivity for all hospital services rather than just outpatient surgery services. To the extent that the policy was intended to influence physician-investors, some efficiency gains would have been produced to offset competitive losses. The court evidently believed, however, that market conditions in the area rendered the likelihood of competitive harm arising from the contracting practice to be remote. The court found that even in the inappropriately narrow market defined by plaintiff, North Oaks' share "was not dominant" and that North Oaks could not price above competitive levels in any event. The court also found that at least two payers did not contract with North Oaks on an exclusive basis, and one of them ultimately ceased contracting with North Oaks altogether. Clearly St. Luke's was not a binding competitive constraint on North Oaks.

Case Studies: Hospital/Physician Vertical Integration

Few examples exist of common ownership of hospitals and physicians being litigated on competitive grounds, perhaps because it is less likely to have a competitive effect. Nevertheless, several hospital systems employ physicians and some physician-owned specialty facilities have expanded to offer multiple service lines. One specific example is especially illustrative.

Cache Valley Specialty Hospital and Intermountain Health Care, Logan, Utah

A group of orthopedic surgeons formed Western Surgical Center for ambulatory surgery services in Logan, Utah in the 1990s. These physicians had privileges at Logan Regional Hospital, a general hospital owned by Intermountain Health Care in the same community. In 2001, the physicians expanded into the provision of overnight acute care hospital services with the opening of Cache Valley Specialty Hospital. In subsequent years, Cache Valley Specialty Hospital expanded its services to attract more patients and payers, though it continued not to compete for all of the services offered by Logan Regional.

Throughout this period, Intermountain's vertically related health plan (now known as SelectHealth) contracted exclusively with Logan Regional for hospital services

in the area. Select Health's motivation for contracting exclusively with the Intermountain hospital can be seen as an attempt to get the Cache Valley Specialty Hospital physician-investors (many, if not all, of whom had privileges at Logan Regional) to bear the cost of their free riding on Logan Regional. Intermountain had also acquired a large, multi-specialty physician group in Logan, adding to the several hundred it employed throughout the state at the time. This physician group accounted for a significant number of referrals to Logan Regional. Intermountain's physician acquisition in Logan can also be interpreted as an effort to internalize the costs and capture the external benefits of offering admitting privileges. Likewise, Cache Valley Specialty Hospital and its physician-investors internalized some of the cost of having hospital privileges as well as the external benefits of providing referrals to a hospital. Although common ownership of hospitals and physicians in Logan is not complete (non-Intermountain physicians—including Cache Valley investors—remain on the staff of Logan Regional and non-investor physicians are on the staff of Cache Valley Specialty Hospital), both actions were consistent with efforts by hospitals and physicians to eliminate free-rider market imperfections.

V. CONCLUSION

An economic model of hospital-physician interaction that takes into account the complementarity of their services and their mutual dependence helps frame some of the struggle over economic credentialing, exclusive or bundled-discount contracting, and hospital-physician vertical integration. No market mechanism exists for physicians to pay for the external benefits they receive from the hospital when being granted privileges, and no market mechanism exists for hospitals to pay from the external benefits they receive from physicians for extending them privileges. Yet mutual free riding by physicians and hospitals diminishes the economic inefficiencies arising from the lack of a functional market. Economic credentialing, managed care contracting, and vertical integration can be seen as attempts to restore the free-riding balance that is upset by physician ownership of specialty facilities competing with hospitals that offer privileges to the physician-investors. These actions have potentially significant antitrust implications, but to the extent that they also enhance economic efficiency, such gains should also be considered. ■