

Hospitals and the Role of Nonprofit Firms

Up to this point we have focused primarily on the demand side of the industry: The demand for health, the role of uncertainty and how it gives rise to the market for insurance, the problems that insurance markets create and the role of the government and markets in resolving these problems (managed care and health savings accounts are a market response to the moral hazard problem in healthcare, the PPS in Medicaid is a regulatory response to the same problem, The emergence of Medicaid and Medicare is a regulatory response to market failure).

I want to continue our discussion of the role of market and government in shaping the healthcare industry by now turning to the supply side of the industry. In this section we will discuss hospitals and the role of not-for-profit firms in the industry.

I. Introduction

In this section we want to address the following questions:

1. Not-For-Profit Hospitals:
 - Why do private not-for-profit organizations dominate the hospital industry?
 - How do private not-for-profit hospitals differ from for-profit hospitals in their behavior?
 - Is the private not-for-profit the most efficient model for the hospital?

Note that the first 2 questions are positive questions, while the last is a normative question.

2. Hospital Competition and Mergers
 - How do hospitals compete with each other?
 - What are the pros and cons of hospital mergers?
 - Are mergers responsible for rising hospital costs?
 - What should be done with specialty hospitals and physician ownership?

A little background

Community Hospital - the dominant type of hospital in the US - “all nonfederal short-term general and other special hospitals, whose services are available to the public, currently there are around 5,000 hospitals in the US. This number declined fairly substantially in the late 1990s as there was a large merger and consolidation movement over that period.

Of these hospitals about 60% are private not-for-profit, 27% are public and 14% are for profit. There is also a growing trend for “joint venturing” where a private not-for-profit and a private for-profit will together operate a facility. Also a growing trend is joint venturing between hospitals and physician group practices (more on these to follow).

The original purpose of the hospital was to provide shelter to the poor and dying - many sponsored by religious orders. Medicine had not yet evolved to the point where there was much to do in a hospital so mostly it was a place to die for those who could not afford to die at home. Over the period 1870 to 1910 hospitals moved from the periphery to the center of medical education and practice - hospital were the workshops of doctors.

Hill-Burton Act of 1946 designed to expand rural health facilities by providing for matching grants to NONPROFIT institutions. - major factor in accounting for the rise in per-capita hospital beds between 1947 and 1970. This helped in the non-profit model being dominant in the industry.

Organizationally the US system is quite different from those in other countries. In the US the hospital board and the medical board are two separate entities - physicians gain access to hospitals without becoming employees. European hospitals, in contrast, are generally staffed by full-time, salaried medical specialists who receive patients referred by office based doctors.

Advantages of the US system:

1. Unpredictable environment of treating illness - this system gives the doctor more control.
2. Monitoring doctors is easier than monitoring hospitals. Can track a doctor's record

Disadvantages:

1. Complicated
2. Cost control is difficult.

As a result expenditures per day and per stay are considerably lower in other countries than in the US.

For example:

Country	cost/day	cost/stay
Canada	\$357	\$5,176
France	218	2,777
Germany	154	2,546
United Kingdom	202	2,546
US	839	7,961

The US has fewer beds/1000 population, lower average admission rate, shorter length of stay and lower occupancy rate. .

II. Not for profit Hospitals

The for-profit hospital is in the minority numerically in all developed countries. In the US about 60 percent of nonfederal community hospitals are not-for profit, about 26 percent are run by state or local governments, and the remaining 14 percent are for-profit. The percentage of for-profit in other countries is generally as low as in the US, but the mix of public vs. private not-for-profit varies considerably. If measured in beds, the percentage of for-profits is even lower. Although there are pockets where for-profits are dominant: San Antonio is now 70 percent for profit!

1. Legal distinctions

The main difference between for-profit and private not-for-profit lies in the distribution of accounting profit. Not-for-profits do not distribute such profit to individual equity holders but rather in the form of a dividend to its sponsors or to whomever it designates. In principle, the community, however this is to be defined, is the equity holder.

Incorporation laws do not preclude private not-for-profits organizations from paying economic rents to employees, managers, or others who may exercise control over them (such as physicians).

Private not-for-profits enjoy some government-conferred advantages, including exemption from corporate income and property taxes, somewhat better access to tax exempt bond financing, and eligibility for private donations. – However, donations to hospitals have eroded as all private hospitals and even some public hospitals have changed from largely charitable institutions to large commercial enterprises. Further, the corporate tax advantage has decreased, and for-profit hospitals have access to tax exempt bonds in the form of industrial revenue bonds. These advantages now amount to no more than 3 percent of revenue. For-profit hospitals have a substantial advantage in being able to raise equity capital through sale of stock.

Charters of private not-for-profit organizations generally contain clauses severely limiting or expressly forbidding explicit incentive compensation plans that managers have in the for-profit sector. Since there is no stock, there is no

possibility of offering stock options to managers and key employees in private not-for-profit organizations. Thus, not-for-profit firms may be at a disadvantage in their ability to line up the incentives of the manager and the firm (a principal-agent problem). Note that reputation effects among managers may be able to overcome any disincentive problems that arise. *Does this help explain the importance of credentials among health care managers and the role of ACHE?*

2. Why is the not-for-profit form dominant?

a. Contract Failure

One explanation deals with the idea of contract failure. The nonprofit sector has a useful role in cases of a particular type of contract failure. This occurs when the quantity or quality of output is not easily observable by the purchaser. The asymmetry of information between the firm and the buyer of services becomes important in explaining the nonprofit role.

To see the idea behind it: Suppose that you are motivated to contribute food and clothing to suffering people in Ethiopia. You can find a firm to deliver the care; however, it would be prohibitively costly to verify that the firm actually is delivering the desired goods to the designated population. Under these circumstances, you may prefer to employ a nonprofit firm. As a deliverer of the aid packages, a for-profit firm will be perceived to have a conflict of interest. Such a firm could increase profits by renegeing on its promise. A non-profit may have less incentive to renege.

Because not-for-profit firms are not pure profit-seekers they would not fully exploit their market power over a patient who experienced a major health shock. The argument here is that private not-for-profit hospital dominates because of lower costs of contracting with consumers.

Note that while this argument may hold some water, it does not explain why the private not-for-profit form would be dominant for some but not all types of health care providers. Many types of services, such as nursing homes and physicians' offices, are predominantly for-profit enterprises. Nursing home care does not generally involve complex technology, but given the physical and mental condition of most patients, the potential for exploitation exists. Physicians refer patients to hospitals. If the need for trust applies to hospitals, it applies with greater force to physicians.

b. Public Goods

Public goods have two characteristics: 1) nonrivalness in consumption in the sense that consumption by person A does not affect consumption by person B; and 2) nonexcludability in the sense that individuals who do not pay cannot be excluded from consuming the good or service.

Police protection is an example, or a music CD. In health care most of the goods or services are private goods (they are rival and excludable), but there may be some components of care that are public goods. Such care includes:

- services to the uninsured
- excess capacity such as in the emergency room
- various patient educational and social services

- care for particular diagnostic groups such as AIDS patients or drug addicts
- teaching and research.

A for profit firm (with only short-term profits in mind) may choose to provide less of these goods than what is socially optimal. Also what a government run agency (public hospital) would provide would reflect the median preferences of the community. Some individuals may prefer a greater level than this and, thus, have incentives to start non-profit organizations to do so.

c. Cartel Theory

The first two explanations show nonprofits as a response to market failures. This next one views nonprofits as a form of market failure. Here it is argued that not-for-profit hospitals are dominant because this is in the doctors' collective interest.

In the US, most physicians who treat patients in hospitals are not employees of these organizations. Yet through their power to admit, they potentially exercise an important influence over hospitals. If this theory holds, hospitals are operated in the interest of a physician cartel.

This rationale has some appeal for not-for-profits under local control, but is less applicable to major teaching hospitals and hospital systems. For teaching hospitals, decision-making is shared among the physicians, their departments, the medical school, and the parent university. Local members of for-profit chains report to the home office, which in turn bears responsibility conferred upon it by the firms' owners. Opposition to the growth of the latter

on the part of physicians may reflect potential loss in the ability to cartelize when the hospital is owned by a for profit chain.

d. Inertia

Because private not-for-profit organizations, including hospitals with this ownership form, have no well-defined owners, transaction converting such firms to other forms require consent of the firms' managers, who may have a personal stake in opposing such conversions. For this reason, the forces of market selection operate slowly, and the form remains dominant long after the rationale for the form has disappeared.

Which Rational is best?

It appears that none of the proposed theories for the dominance of non-profits (there are others not mentioned here) fit perfectly. Yet for the US there is something to most of the arguments.

3. What is the Objective of Not-For-Profit Hospitals?

The above discussion dealt with *why* nonprofits are dominant. We now turn to *what* nonprofits do differently than for-profits. Given that, by definition, these hospitals have no residual claimant, what is the objective of a NFP hospital?

Ideally, a NFP would make input and output decisions to maximize the welfare of the community subject to the constraints it faces. It is unclear,

however, if this is what happens. How do you define “welfare of the community”? This is a very mushy concept.

Essentially there are four potential hospital stakeholders: hospital-based physicians, hospital employees, owners (perhaps the community, or charitable organization), and nonphysician administrators. Each stakeholder has distinct and sometimes conflicting objectives

There have been many attempts by economist to model the objective of NFP hospitals. These models include

- Altruistic models where hospitals do “the right thing” by producing the result that maximizes social welfare. These are typically set up as “straw men” that are then knocked down by other theories.
- Utility maximization models where the objective of the hospital is to maximize the utility of the decision makers (trustees, hospital administrators, employees). In this case the hospital may not be run efficiently. One might see excess investment in capacity, quality, staff, etc. But note that this may not be all bad.
- Physician control model where the physicians act as the residual claimant of the hospital. In this case the hospital should run something like a for-profit firm, but those profits go to the physician.

In the end it comes down to an empirical question, comparing for-profits to not-for-profits.

See New York Times: I.R.S. Study Tries to Assess if Hospitals Earn Tax Breaks also

See Chicago Tribune: ER Doctors Condemn University of Chicago Plan to Divert Patients

III. How do private NFP differ from for-profit hospitals?

1. Costs

Costs may vary for many reasons:

- Competitive advantages conferred by governments
- Community benefits, teaching, and/or research
- Slack – inefficient activity that may increase the utility of workers
- Quality
- Casemix severity

To the extent that the residual claimant is not well defined, economists would expect that private NFP and public hospitals would be less efficient (where efficiency is measured in terms of costs).

Overall, the empirical evidence demonstrates few systematic differences in efficiency between for-profit and not-for-profit hospitals. Results vary somewhat depending on how you measure costs (accounting costs vs. economic costs which include a return on equity, what other factors are controlled for, etc.) but for the most part little difference between for-profit and not-for-profit are found.

2. Cost shifting

The notion that hospitals increase price to private payers when the government reduces the price it pays is widely accepted. Conditions for cost shifting to occur are 1) the hospital has market power in its product market and 2) such power was not fully exploited before the government reduced the price it paid hospitals. That is, the hospital did not set price at the profit-maximizing price before the government decreased price.

The intuition is that hospitals raise the price toward the profit-maximizing price to make up for the shortfall caused by the fall in the price paid for hospital care by government. One would expect nonprofit maximizing behavior from private NFPs but not for-profit hospitals.

There are tons of studies looking at this. A study by David Dranove found that a one-dollar decrease in hospital profits from government sources per

private admission led to a fifty one cent increase in price per private admission. About half of the revenue loss was recovered.

More recent data, after Medicare Prospective Payment System was enacted and managed care became important tends to find less evidence of cost shifting among either for-profits or not-for-profits.

But either way, most studies do not find much difference in this behavior between NFP and FP hospitals.

3. Uncompensated Care

Most evidence here suggests that there is not a big difference between the two types of private hospitals: NFP uncompensated care is about 4.5 percent of revenue, for-profit uncompensated care is about 4 percent. Public hospitals provide a greater portion of uncompensated care than the other two. When you add tax revenue paid by for-profits, it is even more “equal”.

4. Quality of Care

While quality is difficult to measure, the evidence here is fairly mixed and seems to indicate there is not a big difference in quality between NFP and FP hospitals.

5. Entry and Exit

If not-for-profits derive utility from greater quantity, then they will behave as if they have lower effective costs than for-profits. This would explain why NFPs appear to be less responsive to fluctuations in demand than for-profits. And suggest that NFP will also be quicker to enter in response to demand growth and less likely to exit in demand reductions.

Bottom Line:

Overall, one is struck by the similarity between private not-for-profit and for-profit performance – except in areas, such as capital structure where there must be differences for institutional reasons.

As for the differences between public and private hospitals: public hospitals clearly have a different orientation – in treating a much higher proportion of patients without insurance. Also evidence suggests that quality is lower in public hospitals. Assuming that the quality studies are accurately measuring quality these are troubling to the extent that one expects single-tier care.

Given the way most economists define efficiency, for -profits appear to perform about as well as private NFP. However, for goods like medical education and research there may be a clear difference. These are public goods that are not likely to be produced by for-profit institutions (unless, of course, there are dedicated subsidies for these activities).

IV. Hospital Competition and Mergers

1. Hospital Competition

Typically, the more firms in the industry the closer to the productively and allocatively efficient outcome. Competition drives the firms to act efficiently - the right combination of goods and services using the least cost methods of production.

However, a popular opinion in health care markets is that this is not the case in hospitals - some studies show that as the number of hospitals increase, the cost of producing the good as well as the price of the good increases. What can explain this?

Consumer-Driven Competition Regardless of the ultimate objective and behavior of a hospital, they need patients. In the presence of an inelastic demand, and third-party payers without much power, hospitals will not be too successful in competing for patients through price. Thus they may compete in non-price ways. If physicians value quality and hospitals attract business by attracting the best physicians, then hospitals may race to achieve the highest **RELATIVE** quality. This is known as the ***Medical Arms Race***.

The implication here is that competition is a bad thing since it tends to result in excess investment in technology and other equipment as well as prices and costs. Thus policy makers have argued that policies that discourage competition may be “good” for the industry:

- Certificate of Need
- Merger Policy

Payer-Driven Competition – as managed care and other insurance companies gained market power and laws were changed, insurance companies obtained the ability to

selectively contract with hospitals. This resulted in price again becoming an important variable. Under this scenario hospitals are now able to compete in prices.

Studies have looked at hospital markets prior to the rise of managed care (the mid 1980s) and found that as the hospital market becomes more competitive (more hospitals in an area) prices and costs tend to increase suggesting that competition is bad. But these same studies then look at the market after the rise of managed care (the mid 1990s) and found the opposite – more competition leads to lower prices and costs. This result suggests that competition is good for efficiency.

A few years ago, the conclusion among health economists was that, while at one point in time non-price competition among hospitals may have lead to some inefficiencies, once managed care came along the medical arms race died. Hospitals now compete in prices and, therefore, competition is good in hospitals just like it is in all other industries.

Note, however, that as managed care declines, non-price competition among hospitals may again become an important phenomenon.

A recent paper by Dana Goldman and John Romley of the RAND Corporation looked at the role of amenities in hospital demand – good food, attentive staff, pleasant surroundings, internet access, etc. using the Healthcare Market Guide, they construct an amenity index – percent of survey respondents naming each hospital as their first choice for “best amenities”.

Among Medicare fee-for-service patients with pneumonia.
A one-standard-deviation increase in amenities raises hospital demand by 38% on average, demand is much less responsive to clinical quality.

Suggest hospitals may have incentive to compete in amenities.

2. Specialty Hospitals: A new medical arms race?

Issues with Specialty Hospitals:

- Medicare Reimbursement
- Cherry Picking (or Adverse Selection)
- Physician Ownership and Conflict of Interest (Supplier-Induced Demand?)
- Differences in Quality
- Preferences of Patients – patients may prefer specialty hospital due to its convenience, and better outcomes.
- Increased competition can improve efficiency or could result in medical arms race

3. Hospital Mergers

There has been a great deal of controversy lately about the efficacy of mergers and the rise of systems among hospitals. Can we say anything here?

Reasons for Mergers and Acquisitions

- a. Mergers can increase efficiency
 - Increase in Optimal Scale. Combining firms may reduce duplication or produce other benefits (reduced management costs)
 - Synergies. Firms that merge may benefit from *economies of scope: it is less costly for one firm to perform two activities than for two specialized firms to perform them separately*
 - Improved Management. Acquiring a badly run firm and installing better management produces gains.
 - Reduce the negative effects of nonprice competition. This assumes competition is not desirable.
- b. Mergers can lower efficiency
 - Market or Political Power. The main disadvantage of a horizontal merger is that the resulting firm would face less competition and acquire additional market power.

In the end someone must make a judgment call as to whether a particular merger would lead to improved or decreased efficiency. The Department of Justice and the Federal Trade Commission both are responsible for overseeing mergers in the US. They produce guidelines under which they enforce merger policy. If the merger results in a market share that is above a certain threshold they will contest, if it is below a threshold they will not contest. If the merger is in a gray area they could go either way.

In the past there have been different standards imposed for hospitals. Based on the assumption that competition in hospitals is not efficient. Recently the FTC and DOJ have been revisiting this.

See Wall Street Journal: “Nonprofit Hospitals Flex Pricing Power”

I. Discussion Questions

1. Consider the following news brief from Modern Healthcare:

HCA loses bid to build new Va. hospital

Virginia rejected a proposal by HCA, Nashville, to build a new 180-bed hospital in the northern part of the state, citing "harmful competition and unnecessary duplication." Broadlands Regional Medical Center would have replaced two other HCA hospitals. Loudoun Hospital Center, Leesburg, Va., located five miles from the proposed site, argued a new hospital in the area would raise healthcare costs by creating excessive competition for healthcare professionals and patients. HCA has not decided whether to appeal the decision. Meanwhile, Loudoun and Inova Fair Oaks Hospital, Fairfax, Va., were denied certificates of need to add inpatient beds. -- by Tony Fong

- a. How do hospitals compete (in both theory and practice)? When is competition good for market efficiency? When is it bad?
- b. What is the logic behind certificate of need laws? What conditions must hold true for there to be excessive competition? Is this likely to be the case in Northern Virginia?
- c. Do you think the fact that HCA is a for-profit firm has any bearing on the decision? Why or why not?
- d. Should government policy move in the direction to encourage more competition (higher scrutiny for mergers and acquisitions) or discourage competition (CON, moratoriums on specialty hospitals, easy merger policy etc.)? Explain.

II. Article Review

Read and provide a summary/critique of the following article and the two comments on the article. We will discuss these at the third teleconference (March 21st, 9am)

[Pauly, Mark V, and Lawton R. Bums. "Price Transparency for Medical Devices" *Health Affairs*, November/December 2008, 27\(6\): 1544-1553](#)