CHAPTER

2

Agency Problems and Agency Costs

Learning Objectives

After reading this chapter,the student should be able to:

1. Define agency relationships and agency costs.
2. Explain how agency relationships can generate agency costs.
3. List and explain some of the common agency relationships that exist in health care settings, and recognize them in health care settings.
4. Explain the special agency problems that managed care contracts create.
5. Explain how health care organizations can ameliorate their agency costs.

Key Terms

Agency cost
Agency problem
Agency relationship
Financial engineering
Hospital revenue bond

One visits a physician (or dentist or physical therapist) because one trusts her to deliver healing or preventive services in the patient's, and only the patient's, interest. One expects a hospital to have the range of services one needs, without regard to whether or not each of those services is profitable. One expects one's insurance carrier to pay one's bills quickly and without argument. Those are not the expectations one has about relationships with plumbers and mechanics.

The principal distinguishing features of health care organizations are the number, complexity, and importance of the **agency relationships** that exist within those organizations. Agency relationships, more than anything else, are what distinguish financial management in health care organizations from financial management in other settings (Arrow, 1963).

An agency relationship exists when one party, an agent, acts on behalf of another party, a principal (McLean, 1989). A physician acts as her patient's agent when prescribing some treatment or when admitting the patient to a hospital. An insurance carrier acts as the patient's agent when processing payment for services rendered. A medical group's administrator acts as an agent for the physicians in the group when negotiating a contact with a medical supply firm or health plan (Dranove & White, 1987). The agent need not be an employee of the principal. Generally, an agency relationship exists when any party can pursue his or her own interest while contractually obligated to represent the interests of another.

Agency relationships offer the opportunity for the agent to act in his own self-interest. Those opportunities, whether exercised or not, are known as **agency problems** (Barnea, Haugen, & Senbet, 1985). A physician can order tests that have no diagnostic value but for which she will collect a fee. An insurance carrier can refuse (or substantially delay) payment by interpreting the terms of the insurance contract at substantial cost to the patient. A hospital chief executive officer can take advantage of the absence of the board of trustees to consume perquisites on the job, such as leasing a large automobile rather than an equally serviceable, but smaller, one.

Agency costs are losses in market value (or health status) due to the presence of agency problems. If a physician orders a test whose outcome has no diagnostic value, the loss in the patient's wealth (being unmatched by any gain in the patient's health) is an agency cost to the patient. If an insurance carrier's slowness in paying claims causes physicians to bill directly those patients insured by that carrier, the interest costs to those patients (from having their funds tied up while awaiting reimbursement) is an agency cost to the patients. If lenders demand an interest premium for fear that the hospital's cash flows are diverted to managerial perquisites, the additional interest payments incurred are agency costs to the hospital.

TYPES OF AGENCY PROBLEMS

Economic and financial theory identifies five types of agency problems (Barnea, Haugen, & Senbet, 1985). First, agents may take advantage of their situations to enjoy excessive perquisites at the expense of their principles. The administrator who leases a Cadillac when a Chevrolet would do, or who takes home floppy disks for private use because no one is counting is generating such a problem. The first type of agency problem is most often found when the agent has much to gain and when the agent's behavior is difficult to monitor. Health care organizations provide both potential gains and monitoring difficulties. Indeed, in private, not-for-profit organizations, there may be no one with an incentive to monitor administrators' use of resources. Boards of trustees are seldom present to monitor management. Also, in not-for-profit organizations the trustees, unable to receive any share of profit, have little incentive to monitor management or staff. Monitoring physicians is notoriously difficult because it is hard for nonphysicians to determine which tests and treatments are appropriate and which are not.

The second class of agency problems includes situations in which equity holders decide to undertake projects that are "too risky," that is, projects whose risks will not be adequately rewarded. The rationale for this type of agency problem lies in option pricing theory. Equity holders have the equivalent of an option to buy (a call option) the full value of the firm from lenders. The option can be exercised by paying off the face value of the firm's outstanding debt. The option expires on the day the outstanding debt matures (the day the outstanding principle and debt are due). Option pricing theory says that call option values rise when the riskiness of the underlying assets rises (Black and Scholes, 1973). Thus equity holders can increase the values of their shares by undertaking risk in excess of that which the market will reward. Further, because the holders of debt securities will bear at least some of any losses that the equity holders' risky decisions produce, it is the firm's bondholders who bear this type of agency cost. This type of agency problem is most likely to appear when shareholders are in control of the organization's management, and when there is a substantial amount of debt outstanding. Such a situation is typical of a medical group practice that has borrowed to finance equipment and facilities or of for-profit organizations that are closely held (have few shareholders) and are deeply in debt.

In a third type of agency problem, stockholders reject potentially profitable investments. Chapter 10 will develop the proposition that the organization should undertake any investment whose net present value is greater than zero. Organizations that have substantial amounts of debt, like many health care organizations, will not always do that. If the value of debt claims exceeds the net present value of assets, bondholders will gain a share of the increase in value from any investment. Because shareholders will not receive all of the gain from an investment, some profitable projects will be ignored. The result may be, especially for hospitals in financial distress, socially undesirable reluctance to invest.

A fourth type of agency problem occurs when organizations are in sufficient financial distress to enter formal bankruptcy proceedings. Some of the claimants to a share of the organization might, out of concern for "getting their share," demand

legal proceedings and liquidation. Those proceedings and the liquidation process reduce the value of the organization that can be realized by all claimants.

The last type of agency problem is due to informational asymmetry. If managers have information that others do not, several undesirable outcomes can occur. In some cases, managers can benefit at the expense of stakeholders by acting on their superior information (as in selling securities just before public announcements of bad news). In other cases, when managers cannot inform other stakeholders of the desirability of some course of action, desirable actions may be forgone. That is, the cost of providing (for example) trustees with enough information for the trustees to know that a new product line is justified may be so high as to eliminate the benefit of a new product line. In health care organizations, important expert knowledge is not widely shared. Trustees typically have less knowledge of market conditions and of emerging technologies than do managers and physicians. That informational asymmetry may cause important projects to be abandoned.

COST CONTROL AND AGENCY PROBLEMS

A hospital, like any production unit, must control its costs. Failure to keep costs within the limits implied by revenues causes losses that, if continued, mean bankruptcy and closure. When the federal government imposed fixed reimbursement rates for each diagnosis-related group (DRG) for patients covered by Medicare beginning in 1983, the pressure to control costs intensified as never before. A set of important agency relationships severely limits the ability of any hospital to control its costs.

Although cost control is usually considered a financial concern, operating decisions actually determine the majority of hospital costs. In hospitals, who is responsible for the decisions that determine the level of most operating costs? In the hospital, then, several agency relationships can lead to cost control difficulties. Management's consumption of perquisites is difficult to monitor. Not only can physicians consume perquisites; they can, with the same effect, use the resources of the organization to perform tests and procedures beyond what is medically "necessary." Physicians' behavior and the outcomes of tests and procedures are notoriously difficult to monitor. Physicians have strong incentives to engage in cost-inflating practices, both to serve their patients' needs (at the hospital's expense) and to avoid legal liabilities.

AGENCY PROBLEMS IN HEALTH CARE FINANCE

There are many agency problems in health care organization beyond cost control. Some of these have serious *financial* repercussions. Consider first the familiar relationship between the physician and the patient. The physician acts as the patient's agent in a variety of ways. The patient, because of legal restrictions and lack of expert knowledge, can neither diagnose his or her ailments nor prescribe his or her medication. The patient contracts with the physician to perform those services. The physician *can* use this relationship to perform (and to charge for) unnecessary services. The present value of all of the *unnecessary* services for any given patient is the agency cost to that patient. In any particular physician-patient relationship,

that agency cost can vary from zero to some extremely high number. It is no surprise to those who understand agency theory that when the physician is liable for the cost of the services provided, as in the case of a physician-owned health maintenance organization, the utilization of some services decreases.

The physician is also the agent of the patient in selecting a hospital and in prescribing hospital services. Although the physician will receive no direct compensation for the services provided by the hospital, those services can enhance the physician's own productivity and can reduce the probability of the physician's being subject to a professional liability suit. Thus the physician may overprescribe in this aspect of the relationship as well.

Not only is the physician the patient's agent in the selection of a hospital and in ordering hospital services, but the physician is also an agent for the hospital in managing the utilization of the hospital's resources (Pauly, 1980). The medical staff make decisions as to resource utilization: for admissions, for tests, for the use of operating suites, even for the delivery of special dietary services. Whereas trustees and management may determine what product lines are offered, within product lines the staff physicians command the organization's resources. Except in rare cases, staff physicians are not hospital employees but are independent contractors (Harris, 1977). The implications for cost control and for the profitability of hospitals is profound. Cost control will be more rigorous either when physicians are employees (as in the military and in the Department of Veterans Affairs) or when physicians own a stake in the hospital (as in so-called proprietary hospitals).

In their own practices, however, managed care has given some physicians strong incentives to alter their behavior. McLean (1989) argues that the cost-saving incentives for HMO panel members are due to their becoming principles, as well as agents, in their treatment relationships. Consider the physician who agrees to accept $50 per month to act as primary care physician (PCP) for Patient X. He is responsible for all medical services to that patient and (typically) suffers a penalty for all referrals to specialists. Patient X then "presents" with unusual or conflicting symptoms. What are the physician's incentives with regard to referrals, costly tests, and continuous monitoring? The patient relies on the physician to ignore the financial incentives, and to act in his best interest. Loss of wealth and deteriorating health status are (potentially) the agency costs to the patient. But, by ordering such tests, the physician potentially loses wealth.

In the same situation, the health plan is also both principal and agent, agent to the patient, and principal in its own sphere. Consider the case in which the PCP refers Patient X for surgery, for which the plan is obligated to pay. What is the plan's incentive? Feldstein (1998, especially Chapter 9) argues that competition among health plans will ameliorate the possible agency costs. To be effective in that, however, the competition must be at the level of choice of the consumer, or that of an employer that is a perfect agent for its employees.

The management of a hospital acts as the agent of the equity holders of the hospital. Managers have varying degrees of opportunity to consume perquisites at work at the expense of the bottom line. The Cadillac rather than the Chevrolet, for the chief executive officer, the club membership, or the lavish continuing education budget all represent situations in which management may be imposing agency

costs on the equity holders. In investor-owned organizations, the threat of corporate takeover can discipline managements and prevent extravagant perquisite consumption. In private, not-for-profit hospitals, on the other hand, there is no threat of corporate takeover and little incentive for the trustees who represent the (nonexistent) equity holders to police management's perquisite consumption. Agency costs due to management perquisite consumption ought, then, to be greater in the not-for-profit than in the investor-owned sector.

Equity holders and managers are, at various times, the agents of bondholders. Many health care organizations have very high ratios of debt-to-equity financing. Equity holders, then, have strong incentives to undertake risky activities, which have the possibility of enriching equity and have the possibility of wiping out the claims of bondholders. The financing decisions, the project selection (capital budgeting) choices, and the risk level (strategic financial management) choices of health care organizations, then, are affected by this type of agency problem.

RESOLVING AGENCY PROBLEMS

Health care organizations are rife with agency relationships and potential agency costs. Agency costs are the reductions in the market value of the organizations that are the result of investors' reluctance to invest in organizations in which agency relationships are important. When investors are aware of agents' (especially managements') abilities to pursue their own interest, the organization can acquire outside financing only at high cost, if at all. When agency relationships threaten to undermine the value of an organization or to interfere with the access to financial capital, principals and their agents can arrange complex contracts to shift incentives to eliminate those agency costs. These contracts are designed to make principals' and agents' incentives coincide. Those contracts can change the agents' incentives to prevent their doing what investors fear. Health care organizations have developed several complex contracts to alleviate the agency costs that are so common in the health care sector. Some of these complex contracts are so familiar that their role in reducing agency costs is not obvious.

In investor-owned organizations, the resolution of some types of agency problems is relatively simple. Paying professionals and managers for their performances (the determination of which, one must recognize, requires effective monitoring), profit sharing (not allowed in not-for-profit organizations), and partial ownership are all means of aligning the interests of agents and principals. A fairly recent innovation in the compensation of medical practice managers, for example, is the inclusion of the managers as partners in the practice's net income.

Financial engineering is the term applied to the formation of contracts that have unusual cash flow patterns (Financial Management Association, 1988). Mortgage pass-through securities, in which the investor receives a monthly payment based on receipts of payments against a pool of mortgages, were among the first popular examples of financial engineering. More recently, securities whose periodic payments to investors are based on collections of hospital patient accounts have been engineered into the marketplace. Most of the examples of financial engineering that health care organizations (and their financial advisers)

have introduced are intended to alleviate investors' fears of agency costs and thus to reduce the cost of capital to the issuing organization.

In many parts of the United States, hospitals owned by units of local government receive only a small amount of their resources from the public treasury. Rural hospitals owned by county governments in many states, for example, receive little or no assistance from county tax revenues. When these organizations need external financing to acquire long-term assets, they can go to several sources. Local banks are one source of external financing. Another is mortgage financing, with a mortgage loan secured by the asset in question (an off-site clinic or a mobile piece of equipment, for example). The municipal bond market usually offers financing at lower cost than either bank or mortgage loans due to the tax advantages that holding municipal debt confers on the investor. Municipalities *could* issue general obligation bonds (municipal bonds whose payment obligations are backed by the general tax revenues of the issuing unit of government) to finance public hospital capital needs; in fact, they almost never do so.

In place of general obligation financing, almost all municipal bonds issued to support hospital facility construction and equipment purchases are **hospital revenue bonds.** Hospital revenue bonds are guaranteed only by the revenues of the hospital for whose benefit they are issued. General obligation bonds would carry much less default risk (less risk that the hospital would not meet in principal and interest payments) than hospital revenue bonds. After all, they would be backed by local tax revenues *and* by hospital revenues. Why then are hospital revenue bonds almost always the preferred financing mechanism?

The answer lies in the agency relationships that surround municipally owned hospitals. The senior managements of those organizations are agents of the units of government that own them. Were those managers relieved of the duty of meeting their debt obligations by the taxing authority's promising to pick up the tab, they would be free to make the "wrong" capital investment decisions. They could invest in pet projects (their own or those of their medical staffs) that would not generate sufficient cash flows to meet their debt obligations. Were general obligation bonds used to fund hospital projects, hospital managements would not be subject to the discipline of the capital market.

Note that this special type of financial contract, the hospital revenue bond, is only necessary in organizations like public hospitals. Other public projects (street improvements, for example) can be funded by general obligation bonds, as city and county governments do not expect streets to generate revenues. Investor-owned health care corporations do not need to issue bonds for specific projects because the firm as a whole is under the discipline of the financial marketplace, and managers who ignore the need to generate cash flows can be fired. It is the agency relationships in public organizations that generate the need for hospital revenue bonds.

SUMMARY

One of the distinguishing characteristics of health care organizations is the multiplicity of agency relationships that exist within them. In health care organizations,

unlike other types of firms, financial agency relationships are complicated by agency relationships in the market for the service provided. Thus in health care, as in any setting, managers are agents of equity holders and equity holders and managers are both agents of debt holders. In health care organizations, however, physicians are agents of patients, as are third-party insurance carriers.

The professional relationships that are so important in the delivery of health care create complicated agency relationships of their own. Nonphysician professionals (nurses, medical technologists, the various allied health therapists who deliver much of hospital care) all become agents of physicians in the delivery of care. Managers and boards of trustees become agents of the medical staff in their selection of product lines and equipment, even though the medical staff are not actually principals in any meaningful way in the hospital.

All of these agency relationships (and all of the agency costs they can generate) have profound implications for financial management and for the financial aspects of the strategic management of health care organizations. Obtaining external financing often requires financial engineering to alleviate investors' fears of agency costs. Capital acquisition decisions are often conditioned by complex interprofessional agency relationships. Beginning with Part Three, agency relationships will dominate many of the topics that follow.

Discussion Questions

1. Define *agency relationship.* In what agency relationships are you now involved?
2. Can there be agency relations in which there are no agency problems? Explain.
3. What is the role of monitoring in ameliorating agency costs? What are some of the difficulties involved in monitoring the behavior of managers and health care professionals?
4. How has the ability to issue hospital revenue bonds changed the risk /return position of hospital lenders? Of hospital borrowers?
5. Cite an example of financial engineering (from health care or any other business setting) and explain how it helped resolve an agency problem.
6. Explain how managed care contracts change agents' incentives to control costs. What agency costs are eliminated, and what new ones are created?

CONTINUING CASE

Most mornings, Henry Kirk is happy to go to work. Mr. Kirk is both the chief executive officer of Physicians' Clinic and chief operating officer of its parent, PCI. He has performed well for his employer over the **years** and hopes someday to convince the board of PCI that he should be allowed to purchase shares and should be promoted to CEO. For the time being, however, Mr. Kirk is well paid to see that the clinic is properly managed and that its interests are represented in local affairs.

After breakfasting with Kate, his wife of 20 years, Henry drives to work in the Buick Park Avenue that the clinic provides him. It was 3 years ago that he convinced the executive committee that he needed a company car for his trips about town and that the Chevrolet Impala that Dr. Whatley's brother offered to sell to PCI would not be adequate for the task. Kate has recently suggested, several times, in fact, that when the lease on the Park Avenue expires (next month) a Ford Expedition sport-utility vehicle would be a nice replacement. Not only does Henry sometimes need to pick up office and medical supplies for the clinic ("they would fit so nicely in the back of a big SUV, dear"), but the large vehicle would be more comfortable for Henry, Kate, the two boys, and Sasha (their intimidating, but good-natured, German shepherd) on their annual vacation.

After a 10-minute drive to the clinic, Henry settles into his comfortable office. A check of e-mail on his Palm Pilot reveals nothing, and he decides to read the *Wall Street Journal* and to scan this week's issue of *Modern Healthcare.* The rollers on his big leather chair have an annoying tendency to sink into the pile carpet ("make a note to have Jerry in maintenance get a plastic floor pad for me"), and Henry spends a few seconds adjusting his seating. A memo from Dr. Jackson is on top of *Modern Healthcare,* and Henry's pulse quickens when he sees it again. It's been festering on the desk for several weeks, and the executive committee will want a response soon.

Dr. Jackson is both the largest single shareholder in PCI and the senior-most partner in the clinic's largest tenant. When Dr. Jackson speaks or writes a memo, Henry Kirk listens. Jackson's most recent idea could make all of the shareholders in PCI rich (again, Henry thinks how good it would be to be the first nontenant shareholder in PCI). He wants PCI to enter into a joint agreement with the Jackson Group. PCI would borrow heavily from a big Dallas bank that has been trying to drum up high-quality loan business in Clearwater County. With the funds, PCI would open a fully equipped outpatient imaging center on the site of a defunct convenience store, one block from Memorial Hospital.

The Jackson Group would put up none of its own capital for the imaging center but would staff it 16 hours per day. The gist of Dr. Jackson's memo is that there is little risk to PCI, as the bank loan would be secured by the equipment in the center. If things don't work out, PCI could walk away from the assets, its local reputation and credit rating intact. "Stick it to those Dallas bankers," is how Dr. Jackson put the matter privately.

Henry is not so sure about the limited risk exposure of PCI. Dr. Jackson has responded that he would not put PCI at risk, as he holds the largest

single interest in the holding company. Henry is unaccustomed to thinking about creative finance, but the executive committee wants a response. It's enough to worry about for most of the morning.

Lunch offers a nice diversion. PCI holds a corporate membership in the Clearwater Golf Club, and Henry often eats there. The buffet is excellent, and Henry uses the time to visit with his broker.

After lunch, Henry meets with Janet Fowler, the controller of PCI and of the clinic. There's a problem with rent collections again, and this time the situation is very delicate. The Jackson Group has been slow with its rent check. Dr. Jackson says that he's instructed his office manager to hold cash as long as possible and that he wishes Janet would learn to do the same. Besides, why should Jackson take money out of his Jackson Group pocket to put into his PCI pocket? If the Group doesn't pay today, the clinic will have to tap its line of credit at CCB Bank to meet the week's payroll. Henry agrees, reluctantly, to call the Group's office manager. He also tells Janet to alert the bank; no use taking chances.

CASE QUESTIONS

1. Identify the agency problems that PCI and Physicians' Clinic need to resolve.
2. Identify the agency costs that PCI shareholders suffer.
3. How might some of those agency costs be reduced?
4. What agency problems will be involved if PCI goes though with the joint venture that Dr. Jackson has proposed?
5. What sort of financial contracts might the Dallas bankers require of PCI so that they don't suffer the agency costs that Dr. Jackson is willing to impose on them?

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