

## Chapter 5

# Revenue Determination

### LEARNING OBJECTIVES

After studying this chapter, you should be able to do the following:

1. Define basic methods of payment for health care firms.
2. Understand the general factors that influence pricing.
3. Define the basic health care pricing formula.
4. Determine if prices are defensible.
5. List some of the important considerations when negotiating a managed-care contract.

### REAL-WORLD SCENARIO

Gary Bentham, CFO of Bartlett Community Hospital, is preparing for contract negotiation with his largest nongovernmental payer, Antrim Healthcare. Antrim currently accounts for approximately 30 percent of all patient-care revenue at Bartlett and this percentage is growing. The current contract has been in force for three years and expires on June 30th of this year. Gary has given Antrim the required 180-day notification of his intent to terminate, but is alarmed by the position taken by Antrim's chief negotiator, Alice Mullins. Alice told Gary that Antrim is unwilling to increase its present payment schedule beyond five percent. Currently, Antrim pays for inpatient care on a DRG basis, using the relative weights employed by CMS. The base payment for a case with weight of 1.0 is \$2,600. Gary knows that Medicare currently pays the hospital \$4,800 for a case with a weight of 1.0. While the outpatient payment from Antrim is more reasonable, Gary is concerned about the hospital's long-term financial position if the Antrim inpatient rate cannot be increased substantially.

Alice told Gary that she believes the current inpatient rate is reasonable because Medicare patients are much more resource intensive than Antrim's younger health management organization (HMO) patient population. To test this hypothesis, Gary compared the average charge by DRG for Medicare traditional patients and Antrim's HMO patients. Gary was amazed at the similarity when the data analysis was completed. He discovered that on average an Antrim patient consumed 94.5 percent of the resources of a traditional Medicare patient. Gary further concluded that since the average cost of a traditional Medicare patient with a case weight of 1.0 was \$4,600, he would need a payment of \$4,347 ( $.945 \times \$4,600$ ) from Antrim to break even. If Alice is serious about her company's maximum rate increase of five percent, then the best rate that Gary could expect would be \$2,730 ( $1.05 \times \$2,600$ , which is well below his estimated cost).

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Even after Gary shared his cost analysis with Alice, Alice remained firm in her position. The best inpatient rate that Antrim will offer is \$2,730. Alice told Gary that any rate higher will compromise Antrim's market position and either destroy its margins or lead to a loss of market share.

Gary must now determine what position his hospital system should take with Antrim. He knows that his system controls about 40 percent of the capacity in their market, with the remaining 60 percent controlled by a competitive system. Both systems have some excess capacity, but that excess capacity has narrowed in the last few years as both hospitals have purchased smaller hospitals and consolidated them into their operations. There are also two major health plans that compete with Antrim. Both of these plans, as well as Antrim have contracts with both systems. Gary knows that his present rates of payment from the other health plans are higher than Antrim's. He is also fairly certain that Antrim's rate of payment to his competitor is higher.

Gary is attempting to answer the following questions before his next scheduled meeting with Alice: What is his marginal or incremental cost for the Antrim book of business? Could his competitor handle his present Antrim volume, and at what cost? If Gary's system were not in Antrim's network, what percentage of his present Antrim volume would he retain? These issues and others are central to his negotiation posture with Alice and have profound implications for his hospital system.

### LEARNING OBJECTIVE 1

Define basic methods of payment for health care firms.

### PAYMENT METHODS AND THEIR RELATIONSHIP TO PRICE SETTING

In Chapter 3 we discussed four generic methods of payment for health care firms: historical cost, bundled services, billed charges, and capitated rates. Table 5-1 presents a scheme for categorizing payment plans by their payment basis and the unit of payment used for reimbursement. There are three payment-determination bases: cost, fee schedule, and price related. A cost-payment basis simply means that the underlying method for payment will be the provider's cost. A fee-schedule basis means that the actual payment will be pre-determined and will be unrelated to either the provider's cost or the provider's actual prices. Usually these fee schedules are negotiated in advance with the payment party or are accepted as a condition of participation in programs such as Medicare and Medicaid. A

price-related payment basis means that the provider will be paid for services based upon some relationship to its total charges or price for the services delivered to the patient. These three payment bases may have two different units of payment, either bundled services or specific services. For example, many managed-care contracts often pay for inpatient services on a per diem or DRG basis. Payment is fixed in advance, based upon an agreed fee schedule—for example, \$1,000 per day to cover all services provided—and is a bundled unit of payment because the provider does not receive additional payment for provided ancillary services. This same contract may also make payment for outpatient services based upon a discount from billed charges, for example, 75 percent of billed charges. This outpatient provision is related to the provider's prices and it is based upon the prices of specific services that constitute the total claim for the patient, including radiology procedures, lab tests, and other procedures provided to the patient.

In many cases, managed-care contracts will have elements that may appear in more than one of the six cells displayed in Table 5-1. Many contracts that pay hospitals on a DRG basis will have a separate provision for outliers. Payment for outliers is often related

**Table 5–1** Health Care Payment Methods

<i>Payment-Determination Basis</i>			
<i>Unit of Payment</i>	<i>Cost</i>	<i>Fee Schedule</i>	<i>Price Related</i>
Specific services	<ul style="list-style-type: none"> <li>• high-cost drugs</li> <li>• devices</li> </ul>	<ul style="list-style-type: none"> <li>• RBRVS</li> <li>• APCs</li> </ul>	<ul style="list-style-type: none"> <li>• no contract</li> <li>• self pay</li> </ul>
Bundled services	<ul style="list-style-type: none"> <li>• critical-access hospitals</li> </ul>	<ul style="list-style-type: none"> <li>• DRGs</li> </ul>	<ul style="list-style-type: none"> <li>• outpatient</li> </ul>
		<ul style="list-style-type: none"> <li>• per diem</li> <li>• OP surgery groups</li> </ul>	<ul style="list-style-type: none"> <li>• outliers</li> </ul>

to charges. For example, a contract may stipulate that for all claims in excess of \$75,000 in billed charges, the payer will pay the claim not on a DRG basis, but at 80 percent of billed charges. Assume that a claim had a DRG payment of \$15,000, but the patient incurred total charges of \$90,000. The payer in this case would not pay \$15,000, but 80 percent of \$90,000, or \$72,000. An interesting case is a health plan that has not negotiated a contract with a provider. In that situation, the payment method would be billed charges and it would be related to the specific services provided. The apportionment of payment responsibility between the patient and its plan would need to be worked out because the patient may have gone out of network, but the hospital in this case would expect payment based upon billed charges.

Health care providers have three major ways that they can control their revenue function in today's economic climate. First, they can set their prices in a manner to generate the required level of revenue that they need to sustain their operations. Pricing by health care firms is still a very important element of the revenue function even though the majority of revenue may not be related to prices. For example, a nursing home may have 80 percent of its revenue derived from Medicare and Medicaid that make payments on a fixed-fee-schedule basis that is unrelated to specific prices. The remaining 20 percent of the nursing home's business is affected by its set prices, and these prices may well mean the difference between a profit and a loss. Second, contract negotiation is a critical activity for all health care firms that derive substantial portions of their revenue from commercial insurers. Any provider that negotiates rates that are lower than its costs is digging itself a deep hole from which it may not be able to recover. Finally, billing and coding issues are very

important in the current world of health care payment. Providers that fail to include delivered services on a claim will not be paid for those services. For example, if an injectable drug is administered to a patient, but the drug administration for that drug is not coded, lost payment will result. In a similar fashion, if secondary diagnosis codes are not included on a hospital claim, then the claim may be assigned to a lower-weighted DRG, resulting in lost payment.

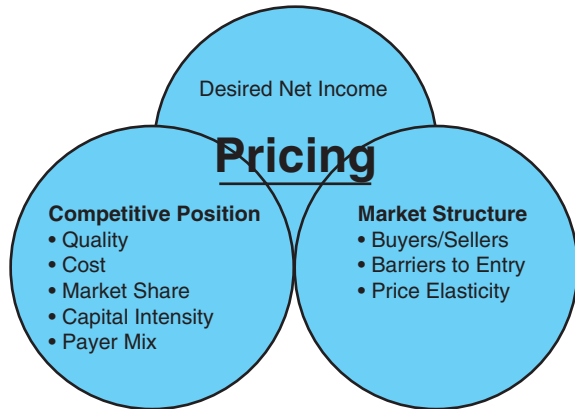
While coding and billing issues were addressed in Chapter 2, our focus now is on the first two areas of revenue determination: pricing and managed-care contract negotiation. Improving performance in these areas will have a very positive impact on the firm's total revenue function.

### LEARNING OBJECTIVE 2

Understand the general factors that influence pricing.

### GENERIC FACTORS OF PRICING

Figure 5–1 provides a schematic depicting the generic factors that influence pricing in any business. The three identified factors are: desired net income, competitive position, and market structure. All of these factors influence how a firm can change its prices and to what extent they are likely to control their pricing function. The first factor, desired net income, is the starting block for most short- and long-term pricing decisions. Every business must be able to generate enough revenue through its sales of products and services to sustain its operations and provide for the



**Figure 5-1** Factors Influencing Pricing

replacement of its physical assets, as well as provide a return to its investors. Failure to realize adequate levels of pricing will result in eventual business failure. Deficiencies in levels of net income can be tolerated for short time frames, but long-term continuation of inadequate pricing will eventually result in business termination.

The position of a business relative to its competitors has a significant influence upon pricing policy. One of the most important factors in any business, but especially health care, is the perceived quality of the firm's products and services. Firms with higher perceived levels of quality can often price their products and services at a slightly higher level. Specific health care providers that are perceived as quality leaders in a market place often can realize higher prices in several ways. First, these firms may be able to negotiate more favorable payment terms with major health plans in the area. Second, if the general community perceives one provider to be higher quality, employers may desire to have that provider in the plan's network of providers. It is also likely that the provider can establish prices that are above its local competitors because it knows that it has a premium quality advantage.

Lower-cost providers can afford to sell their products at lower prices and still generate adequate levels of profit, or they can sell their products at a competitive price and realize even higher profits. In either case, it usually means market expansion for the lower-cost provider. If they establish lower prices, then they should be able to increase their market share. If they maintain competitive prices, the realization of greater profit may lead to expansion in the marketplace be-

cause of better access to capital, and as a result they may even be in a position to acquire local competitors.

Market share is a critical determinant of price for any business. Most health care markets are regional in nature, and there are travel limits beyond which most consumers will not venture. Greater market share leads to greater leverage when negotiating managed-care contracts. For example, if a hospital controlled 85 percent of the acute-care capacity in the region, virtually every health plan would be required to include that hospital in its network. This gives the hospital tremendous leverage when negotiating payment terms.

Capital intensity can also have an influence on pricing. Firms that are heavily capital intensive often have higher levels of fixed costs. It is also likely that their variable cost of production as a percentage of total cost may be lower, which may lead to marginal cost pricing in markets that have excess capacity. This behavior was seen in many urban hospital markets in the early days of managed-care growth. Many hospitals would sign agreements with health plans at payment levels below their average total cost, but above their variable or marginal cost. These hospitals were afraid that they might be excluded from a plan's network and lose critical volume so they agreed to payment levels that just barely covered their variable costs.

Of all the factors discussed to this point, none has a more pervasive influence on prices than does payer mix, at least in the health care market place. Providers with heavy percentages of Medicaid and uninsured patients will usually experience large losses on these patients no matter how efficiently they produce health care services. These providers must then be in a situation where they can increase prices paid by other patients to offset losses from Medicaid and uninsured patients. This point will be emphasized later in this chapter.

The market structure in which a firm exists also influences pricing in a variety of ways. The number of buyers and sellers is a key dynamic that impacts pricing. Increasing the ratio of providers to health plans reduces the pricing flexibility of the provider. A worst-case scenario for a provider would be to be located in a market with many providers and only one buyer. In most health care markets, the government is the major buyer through its Medicare and Medicaid programs. Providers have virtually no control over payment terms. Their only choice is either to participate in the program and accept the payment rates, or to exit and

seek business with non-government patients. Given the sheer size of the Medicare and Medicaid programs, this is not a choice for many providers. It is the private market that represents the major area for pricing discretion. Ideally, providers would like to operate in a market where there were no or few other providers and many small health plans. Most health care markets are not like this, and there are usually a limited number of both providers and health plans. As health plans merge and consolidate, most providers feel a similar need to merge with other provider to maintain a level negotiation playing field.

Most businesses would ideally like to operate in an environment in which significant barriers to entry exist, thus protecting them from new competitors. Large capital investment often serves as a barrier to entry. The actual level of investment required to either buy or build a hospital in an existing market can be more than \$100 million. This level of capital will cause many potential competitors to think twice before entering a market in which present excess capacity exists. Certificate-of-Need regulations can also prevent new health care providers from entering a market, as well as restrict growth for existing providers. Certificate-of-Need (CON) programs are utilized by approximately 37 states to help maintain quality of care, to control a portion of the health care costs of communities, and to promote rational distribution of certain health care services. CON regulations require that individuals or health care facilities seeking to initiate or expand services submit applications to the State. Approval must be obtained before initiating projects that require capital expenditures above certain dollar thresholds, introduce new services, or expand beds or services.

The final factor affecting pricing under the market-structure umbrella is price elasticity. The concept of price elasticity describes the relationship between a change in price and demand for the service or product. Products or services for which ultimate demand is strongly influenced by price are said to be price elastic. Most products or services have some degree of price elasticity. Consumers will usually purchase fewer goods or services as prices increase. For example, if the price of coffee rises, consumption would be expected to fall. Health care services, while not immune from the pressures of price elasticity, are usually less affected than other products. When someone needs to have his appendix removed, he is concerned less about price than he would be about the cost of a cup of coffee. The

presence of health insurance has further insulated many from the effects of price in health care markets. The cost of many procedures is either completely paid or is subject to relatively small deductibles and co-payments. The rise of consumer-directed health plans has begun to affect price elasticity in health care markets. Many of these plans call for large initial deductibles of \$1,000 or more. Patients in these types of plans are no longer insulated from the cost of health services, and price can become a more important factor in the decision to seek medical services.

### LEARNING OBJECTIVE 3

Define the basic health care pricing formula.

## PRICE SETTING FOR HEALTH CARE SERVICES

Health care firms must set rates at levels sufficient to maintain their financial viability. Prices must be set to cover the individual areas identified in Figure 5–2. Failure to develop pricing to cover all of these areas will result in eventual failure.

It hardly seems necessary to state that any price must be set to cover the average cost of producing the product or service. If it costs \$500 to perform a specific-imaging procedure, pricing that service at \$400 would be a sure-fire formula for insolvency. We discussed earlier that on some occasions, firms may price a product at less than cost, but more than average marginal cost. In our imaging-procedure example, the marginal cost of producing the image might be \$250. In this case, the firm might price the procedure at \$250 or slightly more. This price would cover the marginal cost of production, but would not cover the fixed costs of operation, such

- Average costs
- Losses on third-party fee-schedule payments
  - Medicaid
  - Medicare
  - Other
- Write-offs on billed-charge patients
  - Self-pay
  - Commercial
- Reasonable return on investment
  - Sustainable growth

**Figure 5–2** Four Elements of Pricing

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as depreciation, interest expense on debt, and administrative costs. So-called marginal-cost pricing would, however, cover the incremental cost of production, assuming excess capacity would contribute something to the coverage of fixed costs. In the long run, however, prices must be established to cover full costs of production.

In setting health care prices, one must also recognize that some payers may pay values less than full or average cost. For example, Medicaid may pay a nursing home \$80 per day when the cost of one day of care is \$100. Any price that is set not only must cover the cost of providing the service, but also must cover losses incurred on other patients such as Medicare and Medicaid. It is not just governmental programs that may have payment rates below cost. A number of major health plans may have contracts that call for payment at levels below full cost. All of the collective losses incurred on these patients must be included in the price which is finally set. Losses incurred on patients create an additional layer of cost, which ultimately raises the overall set price.

Prices must also reflect discounts from billed charges that may be granted to health plans or uninsured patients. For example, a health plan may agree to pay a provider 85 percent of billed charges. A patient's claim with \$100 of charges would therefore be paid 85 percent or \$85. If \$100 was needed to cover costs and losses from other third-party payers, the provider would need to set a price at \$117.65, which when paid at 85 percent of billed charges, would equal \$100. Uninsured patients are a growing problem for many health care providers, especially hospitals. Most hospitals in the United States collect only a small percentage of the billed charges for these patients, usually five percent or less. The vast majority of the charges are written off as either charity care or bad debt. These patients create the same type of pricing issue that was just discussed. Uninsured patients are really patients who pay on a discount from billed charges, except their discount is usually very large.

The last requirement that needs to be included in price setting is some factor for profit. Health care providers with either tax-exempt or taxable status need some return to insure their financial survival. A nursing home that only recovered the historical cost of its plant and equipment through depreciation expense would be unable to replace its plant and equipment if the replacement prices of those assets increased. In ad-

dition, all businesses need to cover so-called working capital costs, which are not recognized as expenses in a financial statement. Collections for many health care providers average 60 days or more, but payroll expenses and supply payments to vendors are paid on a more frequent basis. This difference, though not an accounting cost, must be financed, adding another element for required profit. Ultimately, any firm needs to generate a return on investment (ROI) that will meet its requirement for sustainable growth. We will talk more about this topic in Chapter 10.

With this background on how prices should be set, let's examine a simple example to incorporate the four requirements for pricing just listed. We will use the data in Table 5-2 to illustrate the methodology of pricing. Note at the outset that we must set a price that will generate \$105,000 of revenue, \$100,000 of cost and \$5,000 of profit. We also know, given the current estimates of volume by payer and present payer rates, that we will receive \$38,000 from Medicare ( $400 \times \$95$ ), \$7,500 from Medicaid ( $100 \times \$75$ ), and \$33,000 from Managed Care Plan # 1 ( $300 \times \$110$ ). The total of these three fixed-fee schedule payers is \$78,500. This means that we need to recover \$26,500 from the two remaining payers that pay on a price or billed-charge basis. Managed Care Plan # 2 has 100 patients that will pay 80 percent of billed charges and the 100 uninsured patients will pay 10 percent of billed charges. Another way to look at the billed-charge payers would be to state that we will have 80 patients from Managed Care Plan # 2 that will pay 100 percent of their charges and 20 patients who will pay nothing. We also have 10 uninsured patients who will pay 100 percent of the charges and 90 who will pay nothing. Viewed from

**Table 5-2** Price-Setting Example

Total cost	\$100,000
Total volume	1,000
Average cost	\$100
<b>Payer volumes</b>	
Medicare (payment rate = \$95)	400
Medicaid (payment rate = \$75)	100
Managed Care # 1 (payment rate = \$110)	300
Managed Care # 2 (pay 80% of charges)	100
Uninsured (pay 10% of charges)	100
Total all payers	1,000
Desired net income	\$5,000

this perspective, we will have 90 (80 + 10) patients who must cover the \$26,500 of remaining financial requirement. Dividing the \$26,500 by 90 yields a required price of \$294.44. Table 5-3 shows an income statement that proves the accuracy of our calculations.

The actual method for pricing can be reduced to a formula that is presented in Figure 5-3. The formula states that the average required price is derived from a series of computations. First, the price must be set to include the average cost of production. Figure 5-4 inserts the value of \$100 into the average cost field using the example of Table 5-2. Second, the required level of net income must be defined, which was \$5,000 in our example. Third, the total loss incurred on fixed-fee-schedule patients must be calculated. The loss on fee schedule patients is \$1,500 and is derived as follows:

- Loss on Medicare = 400 patients × \$5.00 per patient is \$2,000
- Loss on Medicaid = 100 patients × \$25.00 per patient is \$2,500
- Gain on Managed Care Plan # 1 = 300 patients × \$10.00 is \$3,000

It is important to note that the \$3,000 gain from the managed-care plan offsets the \$4,500 loss incurred on Medicare and Medicaid patients. The total loss on the three fixed-payer groups is thus \$1,500 and is inserted in Figure 5-4. In some situations, this term can be negative, which means that there is no overall loss, but a gain on fixed-fee-schedule patients. When this situation occurs, the actual required price that must be set can be decreased because the fixed-fee payers make a contribution toward the required profit level. The next step is to determine the number of total patients who pay on a charge basis. In our example, this value is 200, 100 managed-care plan #2 patients and 100 unin-

sured patients. The final step is to derive the actual discount that is experienced on charge-paying patients. This figure is defined by weighting the proportion of charge patients in a specific payer category to total charge patients by the appropriate discount rate of that charge payer. The value for our example is .55 and its computation is shown below:

$$[(100/200) \times .20] + [(100/200) \times .90] = .55$$

The formula yields a required price of \$294.44, as we have previously determined. In this example, note that our markup from cost is 294 percent, which simply means that our charges (\$294.44) are 2.94 times our average cost (\$100). This seems like a very high markup and would cause many people to think that the health care firm is making an excessive amount of profit, when in fact their margin is fairly small: \$5,000 on a total cost of \$100,000 (5%).

The formula of Figure 5-3 helps us to understand the effects of critical drivers on a health care firm's prices. In general, prices will increase when:

1. costs increase.
2. governmental programs pay less than cost.
3. managed-care plans adopt fee schedules that do not pay at levels above cost.
4. the firm's required profit increases because of financial needs, such as debt-service obligations or capital replacement.
5. the proportion of charge-paying patients drops.
6. levels of uninsured patients increase.

It might be useful to see the effects of a system where every payer except the uninsured patients paid 100 percent of billed charges. If this were the situation, the required price in our example would fall to

**Table 5-3** Income Statement for Case Example

<i>Revenue</i>	<i>Computation</i>	<i>Amount</i>
Medicare	400 × \$95	\$38,000
Medicaid	100 × \$75	7,500
Managed Care # 1	300 × \$110	33,000
Managed Care # 2	100 × 80% × \$294.44	23,555
Uninsured	100 × 10% × \$294.44	<u>2,944</u>
Total		\$105,000
less Costs		<u>100,000</u>
Profit		\$5,000

**Figure 5-3** Pricing Formula

$$\text{Price} = \frac{\text{Average cost} + \frac{\text{Required net income} + \text{Loss on fee-schedule payers}}{\text{Volume of charge payers}}}{1 - \text{Average discount experienced on charge payers}}$$

\$115.38. This of course means that Medicare, Medicaid, and all managed-care plans would pay 100 percent of billed charges, and we would still experience a 90 percent write-off on the uninsured patients. Figure 5-5 shows the computation of price in this revised payment scheme.

The results in our example are painfully obvious to every health care executive. Health care firms that lose money on Medicare, Medicaid, and managed-care contracts must raise rates sharply to a limited charge-related payer base. Large write-offs or discounts to the charge-related payer base can and often do escalate prices to levels that are well above costs. This is the nature of the economic environment facing health care firms today. Wishing it were not so will not change the facts. Unless major payment system changes take place, prices will always be a large multiple of costs. Health care providers must educate the public that these high prices are the result of payer methodology and are not related to provider profiteering.

#### LEARNING OBJECTIVE 4

Determine if prices are defensible.

#### JUSTIFYING HEALTH CARE FIRM PRICES

The rising visibility of health care firm prices in general, and hospital prices in particular have focused attention on how best to both communicate and justify prices to the general public. There has been a dramatic increase in hospital prices over the last 20 years. Figure 5-6 demonstrates that the relationship between hospital cost and hospital price has changed markedly during the period 1996-2004. From our earlier discus-

$$\text{Price} = \frac{\$100 + \frac{\$5,000 + \$1,500}{200}}{1 - .55} = \$294.44$$

**Figure 5-4** Pricing Formula

sion of pricing we learned that actual cost is but one factor that impacts price. Payer-mix variables such as percentage of billed-charge patients, level of uninsured patients, losses on Medicare and Medicaid, and payment patterns of managed-care plans have a much more pervasive influence on prices than costs. This of course explains why the level of markups (price divided by cost) in the hospital industry has increased from 1.6 in 1996 to 2.20 in 2004.

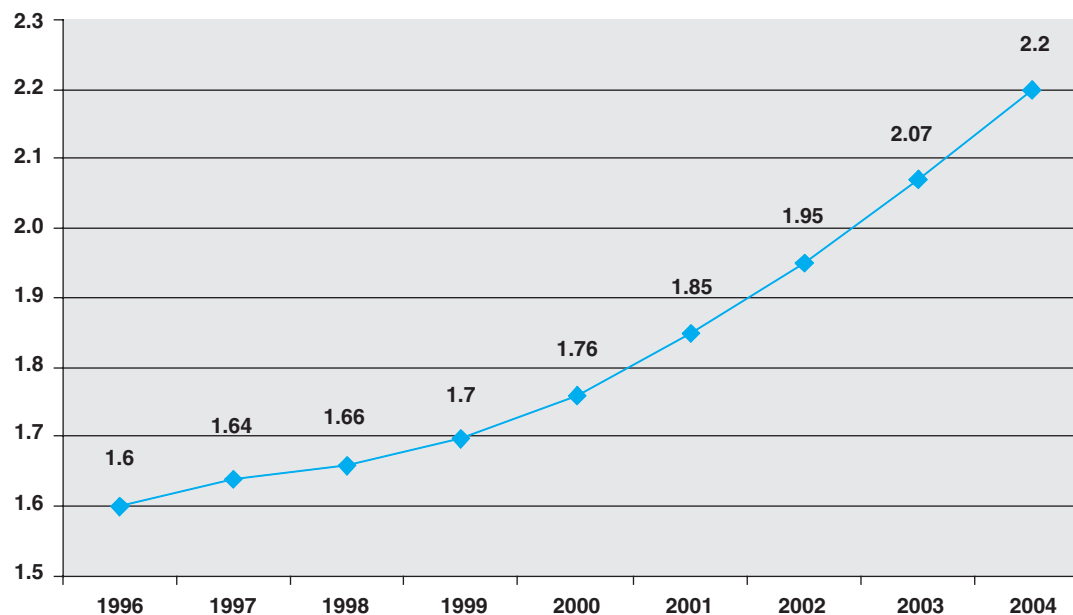
The term “reasonable charges” is used by many people when they review health care firm pricing. Oftentimes, there is disagreement about the issue of reasonableness when the underlying data is the same. It is critical to bring a structured framework that may be used to assess the issue of reasonableness as it pertains to health care pricing. There are two generic ways that reasonableness of charges or prices has been used in the health care industry:

1. **Return-on-investment adequacy.** Most public utility regulatory models permit the earning of a reasonable rate of return on investment to ensure that capital can be replaced. Without adequate rates of return, capital will not be available to replace and renovate plant and equipment. Health care firms have a heavy investment in plant and equipment and must maintain and/or replace it periodically to keep pace with advances in medical technology.

In addition, health care firms have sizable working capital needs that are not recognized as expenses, but require cash outlays. For example, most health care firms pay employees on a bi-weekly basis, but collect patient receivables on a 60-plus-day basis. Health care firms must set prices to generate a reasonable level of profit that will permit them to replace their capital-asset

$$\text{Price} = \frac{100 + \frac{5,000}{1,000}}{1 - .09} = \$115.38$$

**Figure 5-5** Pricing Formula for Revised Payment Scheme



**Figure 5–6** Median Hospital Mark-Ups 1996–2004

Source: Cleverley & Associates

bases in a timely manner and to provide for working capital needs.

## 2. Comparison with other health care firms.

Oftentimes both payers and health care firms will assess the reasonableness of health care charges based upon comparisons with similar and/or other health care firms in the same geographic region. A number of states and local communities have reporting mechanisms for health care firms to report charges for either specific procedures or some aggregate measure of hospital output, such as discharges. One of the difficulties with comparing hospital charges is that they may vary significantly across hospitals, not necessarily because of operating cost differences, but because of payer differences. Hospitals with heavy percentages of Medicare, Medicaid, and indigent patients will need to have higher prices in order to realize minimal levels of profitability. Size, complexity, and teaching status will also impact charges.

Using the two methods described above, the following section will include a specific hospital example with which to develop a framework for assessing the reasonableness of charges.

## REASONABLENESS OF CHARGES FOR CASE HOSPITAL – ROI METHOD

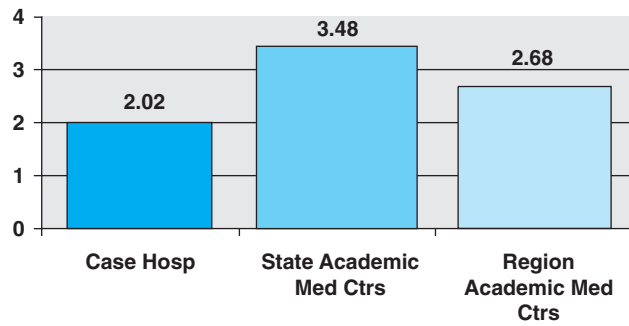
Historically, many public utility rates were based upon the fair-return-on-fair-value concept, manifested in an 1898 Supreme Court decision (*Smyth vs. Ames et al.*). Implicitly, this permits a reasonable profit on the firm's underlying investment.

$$\text{Return on Investment} = \frac{\text{Revenue} - \text{Cost}}{\text{Investment}}$$

Using the above model to assess the reasonableness of Case Hospital's charges, we will address three issues:

- Is the return on investment (ROI) at Case Hospital reasonable?
- Are costs at Case Hospital reasonable?
- Is investment at Case Hospital reasonable?

The first question to be raised is whether returns at Case Hospital are high in relation to hospital industry averages. Case Hospital is a major academic medical center, and it will be compared with two peer groups of academic medical centers, one being a state group and the other a regional group. Figures 5–7 and 5–8 display values derived from Medicare Cost Reports for

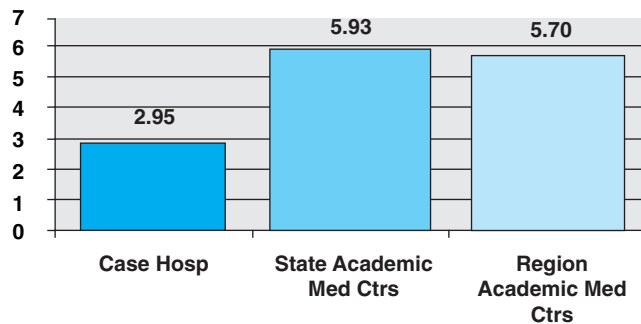


**Figure 5-7** Return on Assets (Net Income/Assets) 5-Year Average - 2000-2004

two comparative groups and Case Hospital for the period 2000-2004. The data suggest that Case Hospital has not realized excessive levels of profit based upon values reported here.

The second question to be answered is the reasonableness of costs at Case Hospital. In general, there are two methods of assessing hospital cost at the facility level. One method uses an adjusted-patient day or adjusted-discharge method. A second method relies on individual assessment of cost for inpatient and outpatient services. In our opinion, the second method provides superior accuracy for reasons that we will discuss later in Chapter 10. The methodology for defining a facility-wide measure of hospital cost involves weighting two measures:

1. Medicare cost per discharge (MCPD) - Case-mix- and wage-index adjusted
2. Medicare cost per outpatient claim (MCPC) - relative-weight and wage-index adjusted



**Figure 5-8** Return on Equity (Net Income/Equity) 5-Year Average - 2002-2004

The hospital cost index (HCI) is then constructed as follows:

$$\text{HCI} = \% \text{ Inpatient revenue} \times \frac{\text{MCPD}}{\text{U.S. avg}} + \% \text{ Outpatient revenue} \times \frac{\text{MCPC}}{\text{U.S. avg}}$$

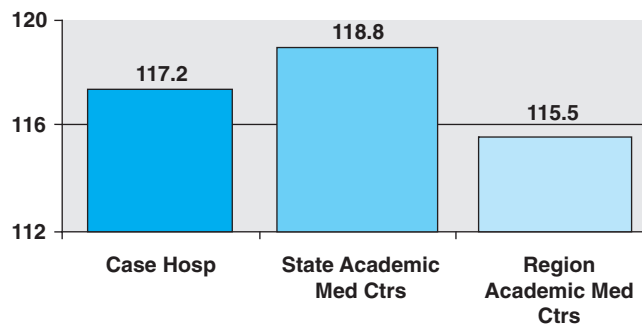
Values for these cost measures are presented in Figures 5-9, 5-10, and 5-11. The data in Figure 5-9 show that Case Hospital has an overall cost structure that is very similar to that of the state academic medical centers and the median value for regional academic medical centers. Case Hospital appears to have slightly higher inpatient costs, as seen in Figure 5-10, but its outpatient costs are considerably lower than those of the comparison groups. We can conclude that Case Hospital is providing health services at levels of cost consistent with expected values. Therefore, based on this analysis, we can conclude that Case Hospital's costs are reasonable.

The third and final question relates to investment levels at Case Hospital. Review of investment levels shows Case Hospital to have above-average efficiency with respect to investment in plant, property, and equipment (see Figure 5-12).

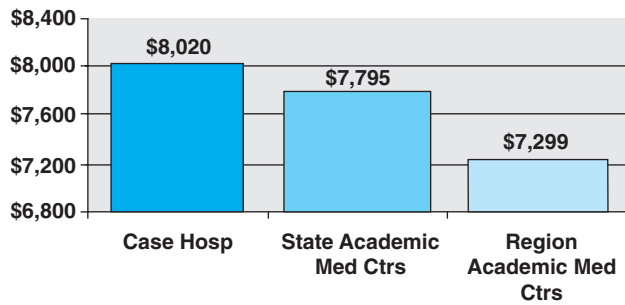
All of these data indicate the following:

1. Case Hospital is not realizing excessive profits.
2. Costs at Case Hospital are consistent with expected values and are reasonable.
3. Investment at Case Hospital is reasonable and not excessive.

These three points show clearly that revenue and prices at Case Hospital are reasonable. This does not



**Figure 5-9** Hospital Cost Index - 2004

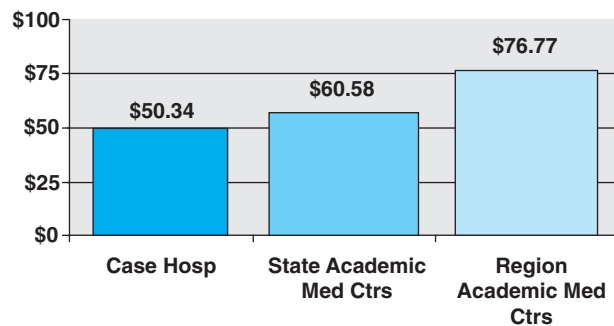


**Figure 5–10** Medicare Cost per Discharge (CMI & WI Adj) – 2004

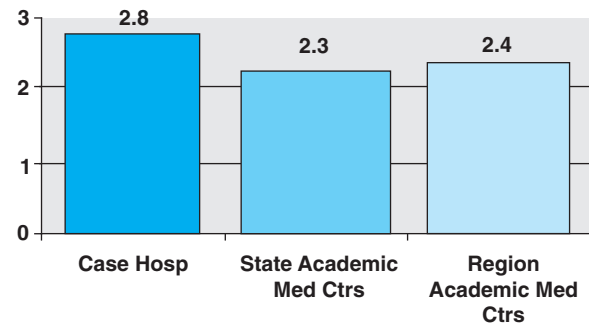
mean that its individual prices for some services will not be higher than those at local, comparative hospitals. Hospitals can have different levels of Medicaid and indigent-care, or managed-care contracts with differences in payment. Whatever the underlying cause or causes, however, it is clear that Case Hospital's charges are reasonable.

#### REASONABLENESS OF CHARGES FOR CASE HOSPITAL – COMPARISON-OF-CHARGES METHOD

Frequently, both payers and hospitals will assess the reasonableness of their prices based upon comparisons with similar hospitals and/or other hospitals in the same geographic region. A number of state and local communities have mechanisms for hospitals to report charges for either specific procedures or some aggregate measure of facility output, such as discharges. Most recently, some states, including California, have made portions of hospital Charge Description Masters publicly available. One of the difficulties with compar-



**Figure 5–11** Cost per Medicare Visit (RW & WI Adj) – 2004



**Figure 5–12** Fixed Asset Turnover (Revenue/Net Fixed Assets) – 2004

ing hospital charges is that they may vary significantly across hospitals, not necessarily because of operating cost differences but because of payer differences. Hospitals with heavy percentages of Medicare, Medicaid, and indigent patients will have higher prices in order to realize minimal levels of profitability, as we previously discussed.

To provide some basis for comparison of charges at Case Hospital, we selected all academic medical centers in Case Hospital's state. We also included the regional average for academic medical centers, adjusting for cost-of-living differences. Academic medical centers often have both higher costs and charges because their patients are often more severely ill. Medicare has recognized this reality and provides greater levels of payment to compensate them for their greater costs.

We examined the relative level of charges at Case Hospital from a global facility-level basis, using the same construction discussed earlier for costs. These comparisons are presented in Figures 5–13, 5–14, and 5–15. The data reflected in these three graphs show charges at Case Hospital to be above those of the comparative groups. We believe that Case Hospital's charges are above the comparative groups because of its higher level of care provided to Medicaid and indigent patients. To see the effects of this patient mix on charges, refer to Figure 5–16, which shows the Medicare inpatient disproportionate (DSH) percentage for Case Hospital and the two comparative groups. High values for the ratio indicate the relationship of Medicaid and Medicaid-eligible days to total days. The DSH percentage at Case Hospital is 26 percent above the state academic medical center average and 80 percent above the regional academic medical center average.

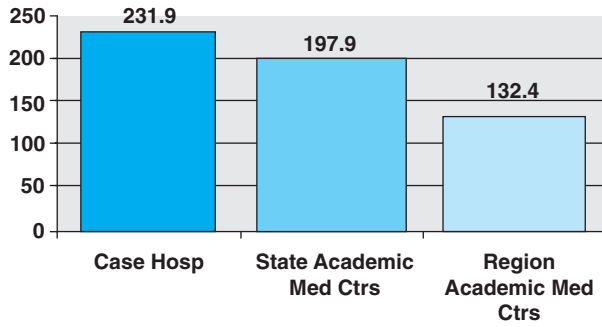


Figure 5-13 Hospital Charge Index – 2004

In summary, we believe Case Hospital’s charges are reasonable when compared to similar hospitals after payer-mix differences are considered.

**LEARNING OBJECTIVE 5**

List some of the important considerations when negotiating a managed-care contract.

**MANAGED-CARE CONTRACT NEGOTIATION**

Having discussed pricing, we will now focus our attention on the last area of revenue management, the negotiation of managed-care contracts. This particular type of negotiation has become much more intense in recent years. When managed-care plans were in their infancy in the early and mid-1980s, many providers would sign contracts that covered less than their full costs, but greater than their marginal cost to gain market share and foster competition among health care plans. Blue Cross/Blue Shield plans were the dominant

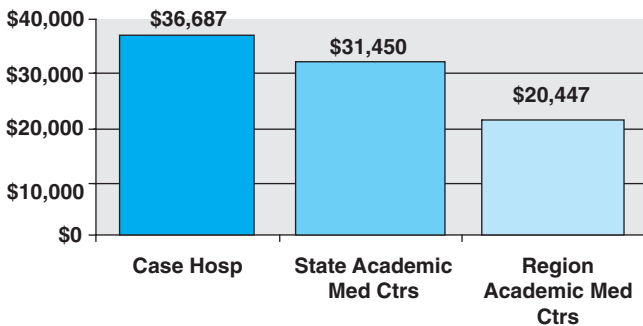


Figure 5-14 Medicare Charge per Discharge (CMI & WI Adj) – 2004

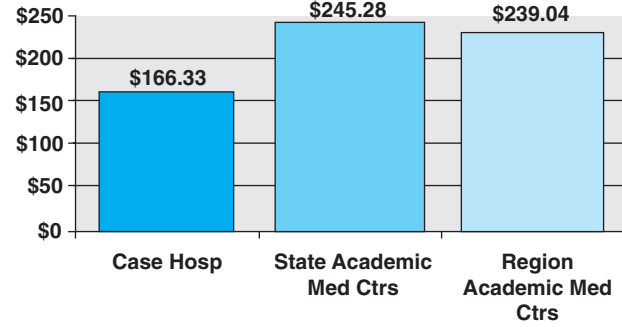


Figure 5-15 Average Charge per APC (RW & WI Adj) – 2004

health insurers at that point and were perceived by many providers as the enemy. As managed-care plans grew and gained market share, they began to consolidate as a result of a number of acquisitions and mergers. Table 5-4 shows the consolidation of the health care insurance market in recent years.

After the surge in payer merger activity, providers began to feel significant financial pressures that resulted from managed-care contracts that were perceived as one sided. To counter these pressures, many provider groups, including hospitals and medical groups, began to consolidate themselves through mergers, affiliation arrangements, and outright acquisitions. Without provider consolidation, many managed-care plans would threaten to exclude them from their provider networks if they did not accept the terms established by the managed-care plans. In economic terminology, the existence of health care plan oligopolies produced health care provider oligopolies. This balance of market power has made it more difficult for both providers and insurers to walk away from contract negotiations. Providers must contract with the smaller

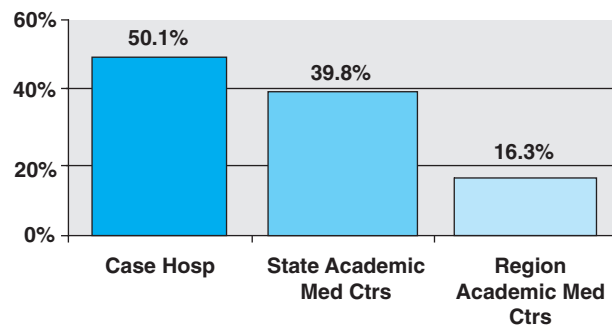


Figure 5-16 Medicare Inpatient Disproportionate (DSH) % Average Value – 2001-2004

**Table 5–4** Health Maintenance Organizations (HMOs) and Enrollment, 1976–2003

	<i>Number of HMOs</i>	<i>HMO Enrollment (millions)</i>
1976	174	6.0
1980	235	9.1
1990	572	33.0
1995	562	50.9
1998	651	76.6
1999	643	81.3
2000	568	80.9
2001	541	79.5
2002	500	76.1
2003	454	71.8

Source: Center for Medicare and Medicaid Services (CMS)

number of payers, and payers must contract with the smaller number of providers if they are to maintain market presence.

In any managed-care contract, there are two critical elements. First, there is the payment schedule, which describes the basis of payment and actual payment/fee schedules. Second, there is the actual contract language, which describes the administration of the contractual arrangement that determines how services are provided and paid. Most attention is focused on the actual payment schedules, but the actual administrative language is becoming more important. In the remainder of this section, we will describe ten important areas of managed-care contract language.

1. **Remove contract ambiguity.** It seems that a hallmark of many business relationships is to establish written agreements that no one except attorneys can understand. If contract language is unclear, it should be clarified.
2. **Eliminate retroactive denials.** It has become increasingly common for health plans to deny claims for services that were either directly or indirectly approved by the plan. Contract clauses which permit retroactive denials should be removed from contract documents. An example of a retroactive denial clause follows:

The Company, on its behalf and on behalf of other payers, reserves the right to perform utilization review (including retrospective review) and to adjust or

deny payment for medically inappropriate services.

3. **Establish a reasonable appeal process.** Medical necessity of services is a key element in payment approval. When services have been approved by the plan or the plan has been notified and did not protest the provision of services, claims should be paid. This is the basis of “retroactive denials,” which we just discussed. In some cases, services may be provided because the member’s physician believed they were necessary, but the plan protested. In these cases, a reasonable appeal process should be established that is not one-sided. The following contract language came from an actual managed-care contract and does not provide for any provider representation. These types of appeal arrangements should be modified to include both provider and plan representation on any appeal board.

#### Level 1 Appeal

*Part 1:* The matter will be reviewed by a physician selected by ABC. If the physician determines that the decision to deny payment is in error, payment of the Claim will be authorized. If the decision to deny payment is affirmed by the physician, the Case will then automatically proceed to Part 2 of the Level 1 Appeal procedure.

*Part 2:* The matter will be reviewed by a physician selected by ABC, who is currently practicing in a specialty relevant to the Case in question. If the physician determines that the decision to deny payment is in error, the payment of the Claim will be authorized. If the decision to deny payment is affirmed by the physician, no payment will be made.

#### Level 2 Appeal

If HOSPITAL continues to dispute the payment decision, a Level 2 Appeal shall be available within the same time frames

as set forth above. The matter will be reviewed by a physician selected by ABC, who is practicing in a specialty relevant to the Case in question and who was not involved in the Level 1 Appeal. If this reviewing physician determines that the decision to deny payment is in error, the payment of the Claim will be authorized. If the decision to deny payment is affirmed by the physician, no payment will be made. This level of appeal shall become final and binding upon both parties.

4. **Define clean claims.** In most managed-care contracts, providers are required to submit claims on a standard form, usually an HCFA 1450 or UB-92 for institutional providers, or an HCFA 1500 for medical professionals. Some health plans often reject claims and return them to the provider for reasons that are not material to claim payment. For example, the claim may be missing the provider's address or it might have an incorrect patient zip code. While the claims may be paid eventually, it can cause cash flow hardships for providers. Many states have legislation requiring health plans to make payment for "clean claims" within specified time periods, for example 30 days. Claim denial for missing data is sometimes used as a stalling tactic.

The following is language from a typical contract. Notice that it is the plan that determines if the claim is complete, and no specific standards are identified.

Any amount owing under this agreement shall be paid within thirty (30) days after receipt of a complete claim, unless additional information is requested within the thirty (30) day period.

5. **Remove most favored nation (MFN) clauses.** Some managed-care contracts contain provisions that preclude a provider from contracting with any other health plan at rates lower than those defined in the current contract. This is commonly referred to as a "most favored nation" clause. These provisions are very hard to enforce and impair the provider's ability to conduct its business affairs in a reasonable manner.

A simple response to the inclusion of a MFN clause in a contract is to make it reciprocal and require the health plan not to pay more for services to any other provider. While the health plan may argue this would be a violation of antitrust, it does point out the inequity of a one-sided MFN clause. The MFN clause can make it very difficult to negotiate new contracts. To illustrate this, assume a provider has just negotiated a new three-year contract with a sizable price increase. If the new prices are above existing contract provisions in other older managed-care contracts, the inclusion of a MFN could roll back payment terms to an existing old contract. MFN clauses are also very difficult to test. Payment terms are usually not identical across plans. One plan may pay on a per-diem basis and another on a case basis. The following actual contract language illustrates the difficulty of administration of MFN clauses.

Except as provided herein, during the term of this Agreement and any renewal thereafter, HOSPITAL agrees that it will not accept a Modified Rate from an Other Payer. Hospital will conduct annual audits of its agreements to determine whether a Modified Rate has inadvertently been accepted with an Other Payer. Except as provided herein, if a Modified Rate is accepted, HOSPITAL agrees to concurrently give written notice to ABC of the acceptance of the Modified Rate and offer the same Modified Rate to ABC and the Modified Rate shall become the new ABC Rate and shall be weighted across all networks.

6. **Prohibit silent PPO arrangements.** A common practice in the health care insurance marketplace is the leasing of networks. One health insurance plan may lease or rent its network to another plan for a sum of money. Members in that plan may then present themselves for medical services at the provider and claim the negotiated payment rate of the leased network. This will often extend payment discounts to a much larger group than originally intended. There should be specific contract language prohibiting this ar-

rangement. Without specific language, it is inferred that the lease arrangement is valid. The contract language below extends the definition of the “Plan” to a potentially broad group, thereby allowing a large number of individuals access to favorable rates.

*Plan.* Any health benefit product or plan issued, administered, or serviced by the company or one of its affiliates, including but not limited to HMO, preferred provider organizations, indemnity, Medicaid, Medicare, and Workers’ Compensation.

7. **Include terms for outliers or technology-driven cost increases.** Ideally, the contract will contain provisions allowing for increases in payments as time passes and costs increase. Sometimes market forces or technology-driven changes in medical practice can cause major increases in costs. The use of stents in angioplasty is an example of a technology-driven change. Stents are used in most angioplasty cases today, but were seldom used in the past. One possible way to objectively link payment increases to costs is to relate actual payment to Medicare fee schedules. Payments for outliers should also be included to avoid the losses that result from treating catastrophic cases.
8. **Establish ability to recover payment after termination.** Most managed-care contracts will establish a term for the contract, usually three to five years. After that term, the contract will automatically renew for a year unless terminated. Termination in the initial term is often difficult unless there is a default or breach of the contract. After the initial term, either party can usually terminate the contract without cause, provided proper notification is given. A critical question to address is: How will payment be made to the providers after the contract period? Providers must be careful to ensure that payment terms in the contract are not carried forward for a prolonged period of time after termination. The following contract language permits the plan to utilize existing payment terms for up to a full year in certain circumstances. This is not an ideal situation for the provider because it permits the plan an opportu-

nity to seek other providers for their network without creating additional cost and it keeps members content because existing patient/provider relationships can be maintained.

*Upon Termination.* Upon termination of this Agreement for any reason, other than termination by Company, Hospital shall remain obligated at Company’s sole discretion to provide Hospital Services to: (a) any Member who is an inpatient at Hospital as of the effective date of termination until such Member’s discharge or Company’s orderly transition of such Member’s care to another provider; and (b) any Member, upon request of such Member or the applicable Payer, until the anniversary date of such Member’s respective Plan or for one (1) calendar year, whichever is less. The terms of this Agreement shall apply to all services.

9. **Preserve the ability to be paid for services.** Health plans are naturally interested in shielding their members from additional medical costs that are associated with services that were not medically necessary. The critical question is: How will services that were deemed not medically necessary or not covered by the plan’s benefits be paid? We have already discussed the importance of removing the plan’s ability to retroactively deny claims. In some situations, pre-certification by the plan for a member’s treatment has been clearly denied. The provider in these situations should be free to provide services if requested by the patient and bill the patient directly. The following contract language appears to limit the provider’s ability to do this without unnecessary bureaucracy. These kinds of clauses should be modified to maintain patient protection, but not destroy the legitimate right of the provider to be paid for services provided to the patient when consent is granted.

HOSPITAL may seek payment from the Covered Individual for Health Services which are not provided in the Covered Individual’s Health Benefit Plan when

the non-coverage is due to reasons other than lack of Medical Necessity. HOSPITAL may seek payment from the Covered Individual for Health Services which are non-Covered Services because the services have been deemed not Medically Necessary, only if the Covered Individual has requested the Health Services to be provided notwithstanding Plan's determination, and only if HOSPITAL has provided Covered Individual notice in writing prior to the rendition of services of the approximate cost said Covered Individual will incur, and Covered Individual has agreed to the rendition of the service having had the benefit of said information. In such event, HOSPITAL may bill the Covered Individual at its customary rate for such services.

10. **Minimize health plan rate differentials.** It is an interesting economic twist that providers seem to reward the worst-paying customers and punish their best-paying customers. The health plan that has negotiated the best rate or largest discount has a cost advantage over other health plans in the market. This should enable them to gain market share and drive out competitive plans. In turn, this gives the plan more negotiating leverage in establishing even steeper discounts, which further enhances the plan's market position. The plans with smaller discounts—which means higher payments to providers—are forced out. Rather than continue this cycle, it may make sense for providers to establish a rate structure for all plans and grant discounts for administrative efficiencies only. This, of course, is much easier said than done, especially where a provider is facing financial ruin if 20 percent of its business is lost. Payment equity across plans is a goal, however, and should be pursued where economically feasible.

### MANAGED-CARE PAYMENT SCHEDULES

From most providers' perspectives, the key element in a managed-care contract is the payment or compensation schedule. Table 5–5 presents a 2005 summary of

over 200 managed-care contract payment provisions for U.S. hospitals. The numbers presented are an average for all plans that make payments based upon the unit identified. For example, the average percentage of billed charges paid for hospital inpatient services was 78 percent. Hospitals that were paid on a billed-charge basis would most likely not have any separate payments on a per-diem or case basis. The data in Table 5–5 state that the average payment per case or DRG was \$5,457 for a case weight of 1.0. For hospitals, the predominant unit of payment for inpatient care is usually a per-day basis. Sometimes a mix of the two may be present. For example, the plan may pay a per-diem rate for all inpatients except a case rate for selected DRGs; most often these are high-cost surgical cases, such as DRG 107 (coronary artery by-pass). Outpatient care is often paid on either a fee-schedule or discount-from-charges basis. Again, a mix of the two may be present, and selected surgical and radiology procedures may be fee schedule, with all others being discounted charges.

Many hospital contracts have outlier or stop-loss provisions. This provision specifies that the hospital may pay on a basis other than per diem or case if charges exceed a specific limit. For example, Table 5–5 states that the average stop-loss threshold is \$77,856, and any inpatient claim that has more than \$77,856 would be paid at a discount from billed-charge basis. In some cases, the entire claim would be paid as a discount from billed charges, for example, 66 percent. In other cases, only the charges that exceed the threshold would be paid at a billed-charge basis. For example, assume a claim with \$100,000 of charges and a stop loss at \$70,000 with payment at 70 percent of excess charges. Payment for this claim would consist of the original DRG fee and then an additional stop-loss payment of \$21,000 [ $70\% \times (\$100,000 - \$70,000)$ ].

Many managed-care contracts that provide for payment of claims on a discount from billed charges include rate-increase-limit clauses. The overall objective of a price-increase-limit provision is fairly straightforward. The price-increase-limit provision is intended to prevent a hospital from raising its prices beyond reasonable levels. Significant increases in prices could cause a payer to lose large sums of money on existing negotiated contracts with employers and weaken the health plan's financial viability. In most cases, the presence of a price-increase limit can modify the historical discount from billed charges contained in the contract. The key contract provision is the allowed rate

**Table 5-5** HMO/PPO Contract Comparison (All U.S.)

\*213 Comparison Plans

	<i>Average Value*</i>
<b>Inpatient Rates</b>	
All Services % of Billed Charges	78%
DRG Base Rate	\$5,457
<b>Per Diem Rates</b>	
Medical	\$1,562
Surgical	\$1,189
Med/Surg 1 Day Stay	\$2,893
TCU/Telemetry	\$1,799
ICU/CCU	\$2,447
PTCA	\$4,057
Cardiac Surgery 1st Day	\$3,671
Cardiac Surgery Add'l Days	\$3,798
Psych	\$667
Alcohol/Chemical Dependency	\$598
SNF	\$579
Rehab	\$1,032
<b>Case Rates</b>	
PTCA	\$6,366
Pacemaker Implant	\$12,517
Cardiac Cath	\$4,272
Cardiac Surgery	\$18,243
Cardiac Surg - CARVE OUT (% BC)	74%
Lithotripsy	\$4,378
DRG 104	\$29,164
DRG 105	\$24,445
DRG 106	\$27,076
DRG 107	\$24,708
DRG 108	\$23,698
DRG 109	\$21,577
DRG 110	\$20,536
DRG 111	\$17,609
DRG 116	\$11,829
DRG 124	\$5,788
DRG 125	\$4,475
DRG 209	\$11,819
DRG 210	\$16,837
DRG 471	\$13,903
DRG 496	\$25,672
DRG 497	\$18,976
DRG 498	\$16,882
DRG 499	\$9,247
DRG 500	\$7,264
DRG 493	\$6,397
DRG 494	\$5,940
DRG 514	\$27,758
DRG 515	\$25,625
DRG 516	\$11,034
DRG 517	\$9,343

DRG 518	\$17,420
DRG 526	\$12,856
DRG 527	\$1,992

\*213 Comparison Plans

	<i>Average Value*</i>
<b>OB/Nursery</b>	
Normal Vag. Del. Case Rate (or 2 Day Stay)	\$3,185
1 Day Stay or PD	\$1,905
3 Day Stay	\$5,255
Add'l Days	\$1,264
C-Section Case Rate (or 3 Day Stay)	\$4,576
1 Day Stay or PD	\$2,502
2 Day Stay	\$3,800
4 Day Stay	\$6,223
Add'l Days	\$1,242
Nursery Level 1 - Boarder	\$510
Nursery Level 2	\$1,536
Nursery Level 3	\$1,858
Nursery Level 4 - NICU	\$2,113
<b>Outpatient Rates</b>	
All Services % of Billed Charges	73%
Emergency Department (% BC)	76%
Flat Fee	\$492
Level 1	\$155
Level 2	\$274
Level 3	\$626
Level 4	\$788
Level 5	\$944
Observation (% BC)	67%
Obs Flat Fee Case Rate	\$612
Physical Therapy (% BC)	69%
PT Flat Fee Per Hour	\$112
Occupational Therapy (% BC)	77%
OT Flat Fee Per Hour	\$118
Speech Therapy (% BC)	70%
ST Flat Fee Per Hour	\$120
MRI (% BC)	67%
MRI Case Rate	\$778
CT Scan (% BC)	74%
CT Scan Case Rate	\$518
Outpatient Surgery % of Billed Charges	73%
Surgery Group - Case Rate	\$2,145
Group 1- Case Rate	\$1,032
Group 2- Case Rate	\$1,269
Group 3- Case Rate	\$1,687
Group 4- Case Rate	\$2,023
Group 5- Case Rate	\$2,833
Group 6- Case Rate	\$2,388
Group 7- Case Rate	\$3,275
Group 8- Case Rate	\$3,324

*continues*

## 118 CHAPTER 5 REVENUE DETERMINATION

Table 5-5 continued

*213 Comparison Plans	Average Value*
Group 9- Case Rate	\$5,285
Ungrouped Case Rate	\$1,799
Ungrouped (% BC)	73%
PTCA Case Rate	\$5,064
Cardiac Cath Case Rate	\$4,550
Cardiac Cath (% BC)	74%
Lithotripsy Case Rate	\$3,420
Other (% BC)	71%
Stop Loss: Threshold	\$77,856
Total Charges Paid At:	66%
Excess Charges Paid At:	66%
Rate Increase Limit %	6%

Source: Cleverley & Associates

of increase. The allowed rate of increase is used in conjunction with the actual rate of increase to determine whether an adjustment in the discount is necessary, and if so, to what extent. The usual payment adjustment can be stated as follows:

$$\text{New payment \%} = \frac{1 + \text{Allowed rate increase}}{1 + \text{Actual rate increase}} \times \text{Present payment \%}$$

To illustrate this methodology, assume a present contract provides for payment at 70 percent of billed charges. The contract has a price-increase limit of 5 percent, and the hospital has put a 10 percent rate increase into effect. The revised payment percent would be 66.82% ( $1.05/1.10 \times 70\%$ ). To see the actual effect of the adjustment, assume a present procedure is priced at \$1,000 and its price is increased to \$1,100 (a ten percent increase). The hospital would have been paid \$700 under the old arrangement (70 percent of \$1,000). It will now be paid \$735 ( $\$1,100 \times 66.82\%$ ). The actual payment increase is \$35 or a 5 percent increase from the original \$700 base payment, which is the maximum price increase allowed under the contract.

Medical groups are often paid on a fee-schedule basis, with capitation arrangements sometimes being used. The fee schedules are usually by CPT and, in some cases, are directly related to Medicare's Resource-Based Relative Value Scale (RBRVS) payment system. The health plan often contracts to pay some percentage, for example, 110 percent of Medicare RBRVS rates. A sample schedule of fees for an OB/GYN medical group is presented in Table 5-6.

Table 5-6 Sample Fee Schedule for OB/GYN Medical Group

Procedure Code	Description	Amount
99201	Off Vst/New	\$ 34.50
99202	Off Vst/New	54.20
99203	Off Vst/New	75.60
99204	Off Vst/New	110.40
99205	Off Vst/New	138.00
99212	Off Vst/Est	30.00
99213	Off Vst/Est	41.40
99214	Off Vst/Est	63.10
99215	Off Vst/Est	97.30
99384	New Prevent Vst	112.00
99385	New Prevent Vst	106.40
99386	New Prevent Vst	129.50
99387	New Prevent Vst	141.40
99394	Est. Prevent Vst	98.00
99395	Est. Prevent Vst	93.50
99396	Est. Prevent Vst	104.70
99397	Est. Prevent Vst	116.60
59425	Prenatal Exam	324.50
59426	Prenatal Exam	556.90
19000	Aspiration of Breast	54.70
57500	Cervical biopsy	65.70
57452	Colposcopy	71.40
57454	Colposcopy	101.20
57460	Colposcopy	188.20
57522	LEEP w/Tray	269.80
57505	ECC	77.70
59000	Amniocentesis	92.70
59812	D&C-Incompl	277.60
59820	D&C-Missed	311.30
90780	IV Therapy 1	42.40
90781	IV Therapy *--	21.40
59025	Non-Stress Te	43.70
76818	Biophysical P	110.60
76805	Echo	142.50
76810	Echo-Multi Ge	284.20
76815	Echo-Limited	95.80
76700	Abdominal Sc	126.90
76857	Echo (Limited)	64.60
76856	Pelvic Scan	102.20
76830	Vaginal Scan	102.20
76831	Hysterosonography	103.40
51772	Pressure Profile	96.60

## SUMMARY

The critical driver of any firm's financial solvency is usually its ability to generate reasonable levels of

profit, which can provide for the replacement and growth of capital in the firm. Because profit is simply the difference between revenue and cost, careful attention must be directed at both revenue management and cost control. This chapter has focused on revenue management, leaving the area of cost control to later chapters. Revenue management is directly affected by three key areas: pricing, managed-care contract negotiation, and billing and coding. Our focus in this chapter has been on pricing and managed-care contract negotiation. Prices are currently receiving a lot of exposure in the health care industry, and the public is concerned about the relationship of prices to cost. We have seen

that health care firm prices are a function of four basic factors: costs, payment provisions of large third-party payers, levels of care provided to the uninsured, and required levels of profit. Because of inadequate payments from large governmental programs and the rising levels of uninsured patients, many health care firms have prices that are multiples of cost, but profit levels are only marginal. Managed-care contract negotiation can be a primary means to profit enhancement if reasonable rates of payment can be negotiated. It is also important, however, to examine specific contract language because reasonable payment rates mean very little if significant numbers of claims are denied.

## ASSIGNMENTS

1. You have been asked to comment on the reasonableness of a health care firm's prices using the return on investment (ROI) methodology described in this chapter. Your review has determined that the firm's costs are in line with industry averages and its overall investment is similar to other comparable health care firms, but its level of return on investment is 20 percent higher than industry averages. Are there any factors which the firm might use to justify its higher-than-average rate of profitability?
2. You are trying to determine the average discount rate for charge payers to be used in the formula described in Figure 5-3. You have the following three payers with different discount rates: 200 uninsured patients who pay on average 5 percent of charges, 300 managed-care patients who pay 85 percent of billed charges, and another block of 500 managed-care patients who pay 75 percent of billed charges. What is the average discount rate that should be used in Figure 5-3?
3. Quality is usually described as a key factor in pricing. How can a health care firm with perceived higher levels of quality of care benefit from higher quality if 75 percent of its business is derived from Medicare and Medicaid patients who pay on a fixed-fee basis that does not adjust for quality differences?
4. Consumer-driven health plans rely on large deductibles that are often funded via a health savings account framework. How might the presence of a large deductible affect price elasticity for health services?
5. In negotiating a managed-care contract, why is it important to spell out precisely what constitutes a clean claim?
6. Your hospital has a contract with a large national health insurer that provides very favorable payment terms to the insurer. Under the terms of this contract, the insurer may extend its contract terms to other plans when it leases its network to them. Why might it be desirable to remove this provision from your contract?
7. Using the example of Table 5-2, assume that the average cost has jumped from \$100 to \$105. All other factors in the example will remain the same. What will be the new required price?
8. Modifying the example in #7, assume that all fixed payers will raise their payment levels 5 percent. Medicare will pay \$99.75, Medicaid will pay \$78.75, and Managed Care Plan # 1 will pay \$115.50. If costs have still increased 5 percent to \$105, what rate would now be required?
9. Using the data of Table 5-2, assume that a new managed-care plan has approached you with an opportunity to sign a contract with them that would pay on a fixed-fee schedule. The rate of payment would be \$95 per unit and 200 new patient units would result. It is also assumed that the additional 200 new units would increase total cost from \$100,000 to \$112,000. This means that the marginal or variable cost per unit is \$60. If the present price cannot be changed and will remain at \$294.44 as determined in Table 5-3, what will be the effect on the firm's total profit? Should this contract be signed?

## SOLUTIONS AND ANSWERS

1. The best way to review the adequacy of current profit is to examine current and projected uses for the firm's profit. For example, a not-for-profit firm located in a growing market may need to earn above-average levels of profit to provide for larger capital expenditures to meet replacement and growth needs. A firm might also have a very high level of current debt financing, which calls for large payments of debt principal in the short term. Other possible areas might include a need to build current cash reserves because of present inadequacies. Major delays in claim payment might also cause a firm to increase profit levels to finance the larger balances of accounts receivable.
2.  $[(200/1000 \times .95) + [(300/1000) \times .15] + [(500/1000) \times .25] = .36$ . The average discount rate to be used for the three payers is 36 percent or, alternatively, the average rate of payment would be 64 percent.
3. Two possible benefits of higher quality still exist. First, higher quality may drive more patients to the firm. If the payment from Medicare and Medicaid patients exceeds the marginal cost of service delivery, the incremental profit will go up. Second, higher quality may permit the firm to negotiate more favorable payment rates from the remaining payers in either better managed-care contract terms or higher prices.
4. Large deductibles place the initial cost of many health services upon the patient as opposed to traditional health insurance coverage, which provides payment for many health services. Because payment for health services is now coming directly from the patient and is not being paid by an insurance plan, many patients may delay or avoid seeking health care services or actively seek out the lowest-cost provider.
5. Without a definition of the requirements for a clean claim, payers can delay or avoid completely paying what is otherwise a legitimate claim.
6. This provision is often referred to as a silent PPO arrangement and extends the potential network far beyond the original expected patient population. The original payment terms may have included very low inpatient rates but provided for percentage-of-billed-charge payment for outpatient services. If the insurer's network were leased to a patient population with a much higher inpatient utilization experience, the relative profitability of the contract could be eroded.
7. Note that the increase in average cost will have two effects upon the resulting price. First, it will raise average cost to \$105, and second it will increase the loss on fee-schedule payers. The original loss on fee-schedule payers was \$1,500, but with the \$5.00 increase in average cost, the new loss on fee-schedule payers becomes \$5,500 (the original loss of \$1,500 + \$5.00  $\times$  800 units of Medicare, Medicaid, and Managed Care Plan # 1). The new required price is \$350, 18.9 percent above the original price of \$294.44.

$$\text{Price} = \frac{\$105 + \frac{\$5,000 + \$5,500}{200}}{1 - .55} = \$350.00$$

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8. The increase in fixed-fee schedules will impact the loss on fee-schedule payers as follows:

$$\text{Medicare Loss} = 400 \times (\$105.00 - \$99.75) = \$2,100$$

$$\text{Medicaid Loss} = 100 \times (\$105.00 - \$78.75) = \$2,625$$

$$\text{Managed Care Loss} = 300 \times (\$105.00 - \$115.50) = -\$3,150$$

The total loss is now \$1,575, which is added to the required net income of \$5,000. The new required price is \$306.39, 4.1 percent above the original \$294.44.

$$\text{Price} = \frac{\$105 + \frac{\$5,000 + \$1,575}{200}}{1 - .55} = \$306.39$$

9. Because the contract calls for payment at a rate of \$95, which is greater than the marginal cost (\$60), we know that the contract will produce more profit, as Table 5–7 shows below. The firm will generate \$7,000 in new profit (\$12,000 less the original level of profit \$5,000). Alternatively, the new profit is simply marginal revenue (\$95 per unit) less marginal cost (\$60 per unit) times the 200 new units. On the surface this seems like a favorable contract, but it might have negative long-term effects. Most specifically, perhaps the present managed-care plan that pays \$110 and provides 300 patient units may discover this payment arrangement and demand a similar rate.

**Table 5–7** Income Statement for Case Example

<i>Revenue</i>	<i>Computation</i>	<i>Amount</i>
Medicare	400 × \$95	\$38,000
Medicaid	100 × \$75	\$7,500
Managed Care # 1	300 × \$110	\$33,000
Managed Care # 3	200 × \$95.00	\$19,000
Managed Care # 2	100 × 80% × \$294.44	\$23,555
Uninsured	100 × 10% × \$294.44	<u>\$2,944</u>
Total		\$124,000
less Costs		<u>\$112,000</u>
Profit		\$12,000