Prices and Payment Systems

5

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Learning Outcomes

By the end of this chapter, you will be able to:

- Describe the importance of prices in the healthcare industry
- Explain traditional methods for paying healthcare organizations
- Calculate payment amounts under modern methods for paying healthcare organizations

Introduction

Having inpatient hospital services, outpatient hospital services, nursing facilities, and three health centers, Hendrickson Memorial is having a difficult time with pricing services and reconciling how much they charge and how much they are paid. With good cost determination processes, they calculated inpatient costs to be $2,636 per day, outpatient costs to be $703 per patient visit, skilled nursing costs to be $241 per day, and health center costs of $233 per patient visit. Like any other business, each service must have a standard set of prices, which are called *charges* in healthcare organizations. Also like any other business, each customer wants to pay a different amount. Half of Hendrickson's net patient services revenue was paid by government payers (Medicare, Medicaid, and other), with some payment amounts lower than costs. Negotiations with other major customers, insurance companies, and managed care organizations have generally resulted in payments slightly in excess of costs, leaving them with a small profit level. A small percentage of customers are insurance companies or patients without insurance who pay changes. Some patients without insurance pay nothing.

Prices set by healthcare organizations, and the resulting payments actually received, are half of the basic accounting equation. Recall that operating net income equals revenues minus expenses. It is important for healthcare organizations to realize revenues that are sufficient to cover expenses as well as to generate a level of net income that permits investment in new property, plant, and equipment to keep pace with the advancement of medical care. Effective financial management requires an understanding of how healthcare organizations are paid by government, insurance, and individual patients and how they manage the process to assure they are collecting appropriate amounts.

5.1 Prices in the Healthcare Industry

Prices and payment systems are among the most complicated and controversial aspects of the business of healthcare. To some observers, the amounts listed in hospital chargemasters and prices for physician services, nursing homes, and other healthcare organizations do not appear reasonable or related to the cost of providing services (Brill, 2013). One can argue about whether prices are reasonable or related to costs, but there's no arguing the complicated nature of prices and payment systems.

To begin an analysis of prices and payment systems, it is useful to consider the sources of financing for healthcare services. Many not-for-profit healthcare organizations owe their origin to community-based philanthropy, contributions by religious orders and other not-for-profit entities, and government appropriations, grants, and programs to support construction and operations of facilities. Investor-owned organizations are founded with investments from individuals, venture capital funds, and other private sources of funds. To augment the sources of net assets and owner's equity, healthcare organizations may also borrow funds in order to purchase the assets required to provide patient services. These sources of financing, net assets and owner's equity, and debt, cover the costs of establishing and maintaining assets—the balance sheet of the organization. Separately, the organization needs to find funds to cover the costs of providing services—the income statement of the organization. To cover the operating costs associated with providing services, healthcare organizations must largely rely upon the revenues received from patients and third-party payers.

Not-for-profit healthcare organizations may subsidize operating costs with earnings from investments and designated donations. Investment earnings and donations covered less than 1% of operating expenses for Hendrickson Memorial in 2012 (financial statement presented in the Appendix A) and 7% of operating expenses for Middaugh United in 2012 (financial statements presented in Chapter 3). These funds are valuable to health services that are supported. However, relying upon earnings from investments and donations is risky for healthcare organizations, as it places their ability to provide services at the variable returns in investment markets. Some years may be good and some years may be bad (Song, Smith & Wheeler, 2008). For-profit healthcare organizations do not have investment earnings and don't receive donations, so they must earn all revenues from the provision of medical services.

Revenues received from patients and third-party payers may come in varying amounts based upon the prices set by the healthcare organization, the ability of patients to pay their portion of prices, and prices dictated or negotiated with third-party payers. It is clear that there are differences in the levels of payments to healthcare organizations among payers (Baker, Bundorf, & Royalty, 2013). As will be discussed more extensively later in this chapter, the prices set by healthcare organizations are often dependent on the prices dictated or negotiated with third-party payers. Not-for-profit organizations that desire to cover the costs of operations through revenues from operating activities may set higher prices when confronted with payments from some payers that do not fully cover costs. This concept is called **cost-shifting**. However, just because a healthcare organization sets prices at a given level does not assure that payments at that level will be received (Worth, 2013). As an example of cost-shifting, it has been suggested that when Medicaid programs lower payments, healthcare organizations take extra efforts to negotiate higher payments from insurance companies. In practice, it is hard to determine if cost-shifting results in higher payments over time. To the extent that cost-shifting is attempted, the dollar value is likely to be small relative to the total revenues of the healthcare organization.

From the Front Lines

We apply the earnings made from our investments to half of the capital expenditures on new buildings and equipment each year. Our Board approves of our plan of holding substantial investments in order to have days cash on hand for our credit rating, and these investment earnings make our plan even more beneficial to the system.

Source: Health system chief financial officer.

Working with Insurance Companies

The percentages of net patient services revenues received at Hendrickson Memorial Health System's three major locations are presented in Exhibit 5.1. For the system as a whole, Medicare and Medicaid account for 51% of net patient services revenues. Medicare is the federal insurance program for elderly and disabled U.S. citizens. At age 65, qualifying citizens become eligible for enrollment in Medicare. Medicare has four parts: Part A for hospital services, Part B for physician and other services, Part C for all services in a combined managed care plan (Medicare Advantage Plans), and Part D for prescription drugs. Another Part C, designed to cover long-term nursing home services, was approved and then repealed before it was fully implemented (Aaronson, Zinn, & Rosko, 1994). Part A is fully paid by the federal government, while Parts B, C, and D require monthly payments from enrollees.

Exhibit 5.1 Hendrickson Memorial Health System, sources of net patient services revenues, 2012

Revenue Source	Hospital	Skilled Nursing	Clinics	Total
Medicare	37.4%	24.1%	30.4%	36.7%
Medicaid	14.3%	34.6%	8.3%	14.3%
Other federal programs	2.0%	0.0%	2.4%	2.0%
Other state and local programs	2.5%	1.9%	0.6%	2.4%
Private health insurance	38.8%	12.7%	46.5%	38.8%
Workers' compensation and other private	1.6%	0.0%	2.1%	1.6%
Patient out-of-pocket	3.4%	26.7%	9.7%	4.2%
Total sources:	100.0%	100.0%	100.0%	100.0%

Source: Author's calculations.

Medicaid is a federal-state partnership to provide health insurance to persons with low incomes. In addition to a low income, persons must also have certain characteristics (e.g., children, pregnant women, parents of Medicaid-eligible children, disabled). The specific characteristics that enable enrollment in Medicaid vary by state. With the Patient Protection and Affordable Care Act, states have the option of increasing the number of persons who qualify for Medicaid to all persons with income up to 133% of the federal poverty line. As of January 1, 2014, 24 states have opted to expand Medicaid eligibility, while 26 have opted not to expand Medicaid eligibility (Families USA, 2013).

Other federal programs include contracting with the Department of Defense and other agencies. At the state level, the State Children's Health Insurance Program (SCHIP) is the major payment source. Private health insurance represents a combination of a number of private traditional health insurance companies, preferred provider organizations, and health maintenance organizations, each of which may have a unique contract with Hendrickson for each location of service.

Analyze This

Should the Hendrickson Memorial Health system be concerned that over half of their net patient services revenue comes from governmental sources? Explain your reasoning.

Medicare, Medicaid, other federal programs, and other state and local programs are not generally sources of net patient services revenues with which a healthcare organization has an opportunity to negotiate payment amounts. Governmental programs generally have the authority to dictate payment amounts. Healthcare organizations can elect to participate in these programs—though nonparticipation is not really an option when a payer represents half of their revenues. To the extent that negotiation occurs, it is the collective negotiations and lobbying conducted by trade associations and others to benefit healthcare organizations collectively.

Although there may not be explicit negotiations that occur between governmental programs and individual healthcare organizations, the organizations may still work closely with the governmental program to assure that all proper payments are made on a timely basis. It can be helpful for healthcare organizations to employ persons with a good understanding of the payment processes of governmental programs. Even if all of the larger dollar amount items are paid according to established procedures, understanding the detailed nuances of any payment system may yield additional payments that make the difference between earning a profit and incurring a loss.

In addition to the fee-for-service programs of Medicare and Medicaid, there are managed care components as well. Under fee-for-service programs, insurance provides a payment for each medical service separately, and there are no requirements for coordination of care. Under managed care programs, there are requirements that patients use selected healthcare providers and rules about payment for providers that encourage coordination of care. Since managed care programs involve some limitation of choice among providers, there are often more services covered, and the potential for coordinated care among providers that encourages enrollment in managed care plans. Approximately one quarter of Medicare enrollees are in managed care plans (Medicare Payment Advisory Commission, 2013). Unlike the fee-for-service program, health plans bid to participate in Medicare Advantage and receive payments determined by a combination of the bid amount, a benchmark payment amount, and a plan's quality ratings. Selected health plans, in turn, negotiate payment arrangements with healthcare organizations. Similarly, Medicaid managed care programs operate in many states and replace the payment processes used in the fee-for-service Medicaid program with payment arrangements with healthcare organizations. Even though a healthcare organization may group all Medicare and Medicare Advantage revenues in one line on a financial statement, the payment amounts associated with various Medicare patients may vary.

Healthcare organizations may contract with a number of private health insurance plans, each of which may have a different method of payment and a different payment amount associated with each method. Hendrickson Memorial Health System is not unusual in having over two dozen contracts with health plans for the hospital side of their operations alone. Three major insurance companies pay for over half of the privately insured patients; nevertheless, the contract with every health plan is important to the financial viability of the organization. It is important for healthcare organizations to employ persons with good understandings of the payment processes of private insurance programs to assure that appropriate payment arrangements and amounts are negotiated at the start of a contracting period and that actual payments follow the contracts.

As with any negotiation between two companies, the results of a negotiation process between a healthcare organization and an insurance company will heavily depend on the relative market power of the two companies. Healthcare providers that have large percentages of the patients in a service area and have good quality scores and high levels of patient satisfaction will generally obtain higher payments than organizations that do not enjoy these conditions (Berenson, Ginsburg, & Kemper, 2010). In several states, there are health insurance companies with high percentages of the individual coverage insurance market, such as North Dakota, Noridian Mutual Insurance Co., 97%; South Carolina, BlueCross BlueShield of South Carolina, 93%; and Alabama, Blue Cross and Blue Shield of Alabama, 92%. On average, the leading individual coverage insurer has a 58% market share (Kaiser Family Foundation, 2012).

Healthcare Charges

Charges, or prices, are the amounts that healthcare organizations expect to be paid by patients or insurance companies that do not have prior contractual arrangements. These are the amounts that are put in the chargemaster. A common complaint against the process of developing charges is that they do not bear a close relationship between the amount an organization is typically paid for services and the costs of an organization. The former issue is often true. Typical payments may be very different from charges and vary among payers. The latter issue is not generally true. Many healthcare organizations develop their charges based upon covering their full costs.

A brief depiction of the concept of cost-based charges is developed in Exhibit 5.2. Total patient charges are the amounts that stem from the prices set by the hospital and are included in the chargemaster. For patients covered by Medicare, Medicaid, or another government programs, $465,045,055 were posted as charges. Also included in the chargemaster is the arrangement with each payer. For government payers, the payment amounts were $349,235,616 lower than charges. This amount is termed a contractual allowance or, more commonly, a discount. The net patient revenue for patients covered by the government was only 25% of the amount charged ($465,045,055 − $349,235,616 = $115,809,439). The net patient revenue for all other patients was 37% of the amount charged ($339,531,165 − $213,231,151 = $126,300,013).

Exhibit 5.2 Hendrickson Memorial Hospital, net patient revenues per patient, 2012

	Government Programs	Other Patients	Total
Patient days	52,290	38,177	90,467
Total patient charges	$465,045,055	$339,531,165	$804,576,220
Charges per patient	$8,894	$8,894	$8,894
(Less allowances and discounts)	($349,235,616)	($213,231,151)	($562,466,767)
Net patient revenues	$115,809,439	$126,300,014	$242,109,453
Net patient revenues per patient	$2,215	$3,308	$2,676

Source: Author's calculations.

Based on all patients at Hendrickson Memorial Hospital, net patient revenues are close to total patient costs. The average payment amount of $2,676 per day just covers the average cost per day of $2,636. Of course, not all payment amounts are equal. Medicare payments at Hendrickson (43.5% of total payments) are 92% of average costs ($2,435 ÷ $2,636 = 0.92), Medicaid payments at Hendrickson (14.3% of total payments) are 60% of average costs ($1,582 ÷ $2,636 = 0.60), and other government payments (2.0% of total payments) are very close to average costs ($2,620 ÷ $2,636 = 0.99). On average, government payments are $421 below costs per patient ($2,636 − $2,215 = $421).

If government payments are close to costs, why are charges so high? Part of the reason is because of how charges are calculated. Patients with private insurance and patients without insurance who pay for services directly are expected to cover their own costs, plus the costs that are not covered by government patients and the costs of patients who do not pay at all. Contracts with many private insurance companies include contractual allowances, or discounts, that may be 50% to 75% of charges.

A calculation of charges for Hendrickson Memorial Hospital is presented in Exhibit 5.3. The pricing process begins with an estimation of total patient expenses and the number of patients. In this example, total patient expenses divided by the number of patients yields the cost per patient:

$$\$2{,}636 \text{ expenses per patient} = \frac{\$238{,}471{,}012 \text{ total patient expenses}}{90{,}467 \text{ patients}}$$

Expected payments from insurance companies with predetermined payment amounts are subtracted from total patient expenses to yield the required patient revenues from all other patients. In this example, if only government programs have predetermined payment amounts, then the remaining costs must be covered by nongovernment patients:

$238,471,012 (total patient expenses) − $115,809,439 (government programs) = $122,661,573.

In addition to covering patient costs, nongovernment patients may also be charged an amount that will permit an operating profit for the hospital. If the goal for profit amount is set at a modest 1.5% of total patient expenses, the total amount of expected payments per patient will be $126,300,013 ($122,661,573 + $3,638,440 = $126,300,013). On a per patient basis, required patient revenues from nongovernment patients are $3,213, plus $95 in additional revenues for profit, for a total of $3,308 in expected patient revenues.

Exhibit 5.3 Hendrickson Memorial Hospital, charges per patient, 2012

	Total Amount	Per Patient
Total Patient Expenses	$238,471,012	$2,636
Net patient revenues, Medicare	$88,677,803	$2,435
Net patient revenues, Medicaid	$22,028,599	$1,582
Net patient revenues, other government	$5,103,037	$2,620
Less net patient revenues, government programs	$115,809,439	$2,215
Required patient revenues, nongovernment	$122,661,573	$3,213
Additional revenues for profit (1.5%)	$3,638,440	$95
Expected patient revenues, nongovernment	$126,300,013	$3,308
Required charges at 37.197% collection	$339,543,547	$8,894

Source: Author's calculations.

Up to this point, the calculations and costs per patient appear to be very reasonable. What happens next changes everything. To realize $126,300,013 in patient revenues, this amount is divided by the average percentage collection (1 − percentage discount) to yield the amount that must be charged:

$$\text{Percent collection} = 1 - 62.803\% \text{ discount}$$

$$\text{Percent collection} = 37.197\% \text{ collection}$$

$$\text{Amount charged} = \frac{\$126{,}300{,}013 \text{ net patient revenues}}{37.197\% \text{ collection}} = \$339{,}543{,}547$$

On a per patient basis:

$$\text{Charge per patient} = \frac{\$3{,}308 \text{ net patient revenues}}{37.197\% \text{ collection}}$$

$$\text{Charge per patient} = \$8{,}894 \text{ per patient}$$

From the Front Lines

Due to the move toward more individual insurance coverage and more choices by patients, we have increased the transparency of our pricing and are trying to be more patient friendly. While we previously sent bills for services and expected patients to pay us without question, we now list the expected payments for a number of common services on our website, so that patients will know what to expect ahead of time. We also have a financial assistance number that patients can call to obtain an estimate of payments before admission.

Source: Health system chief financial officer.

It is correct to observe that $8,894 per patient day is not what the organization is typically paid for services, but it is based upon the organization's costs. If contracts with insurance companies were negotiated at lower percentage discounts, for all payers, chargemaster amounts could be lowered to amounts that more closely resemble payment amounts and costs. Many leading health systems are attempting to make their prices more transparent for consumers and are renegotiating contracts and recalculating chargemaster amounts (Jacobs & Eggbeer, 2012). Further, some states are working on legislation that would not permit healthcare organizations to have high charges for individuals without insurance (Melnick & Fonkych, 2013).

Analyze This

A clinic has negotiated with 80% of the insurance companies covering its patients for an average payment amount of $100. The clinic currently sees 200 patients per week and has an average expense per patient of $110. Insurance companies for the other 20% of patients have an average discount of 50%. What amount will the clinic need to charge other insurance companies to cover their costs?

For Review:

1. Why do healthcare organizations establish charges that are so different from costs?
   Organizations seek to set charges that cover both costs and profits. Some organizations set charges that are higher than costs to earn higher profits. All organizations set charges that enable healthcare payments that exceed costs in a complex payment environment. If government contracts and other insurance companies negotiate prices that are below costs, these amounts will be reflected in overall charges and may be much higher than costs.

5.2 Traditional Healthcare Payments

Payments and payment methods for healthcare services are as varied as the services themselves. As presented in Exhibit 5.4, health insurance companies typically have 15 or more payment systems in place to cover the major types of healthcare organizations and services. This chapter focuses on the methods that Medicare and other large insurance companies use to pay healthcare organizations. Specific details of each payment method for each type of healthcare organization would cover an entire book (Casto & Forrestal, 2013). Therefore, only the main aspects of interest to a manager are highlighted.

Exhibit 5.4 Healthcare organizations with separate payment systems

Ambulatory surgical centers	Ambulance services
Anesthesiologists	Clinical labs
Critical access hospitals	Durable medical equipment
Federally qualified health centers	Home health agency
Hospice	Inpatient hospital
Outpatient hospital	Pharmacy
Physician	Rural health clinics
Skilled nursing facility	. . . and many more

Source: Author.

Methods for paying healthcare organizations include traditional and more modern methods. Traditional payment methods include:

- Charges
- Negotiated amounts
- Negotiated charge discounts
- Retrospective costs

Some modern payment methods include:

- Prospective amounts
- Per visit amounts
- Per episode amounts
- Per time period amounts

The first four methods are long-standing, traditional ways in which healthcare organizations have been paid. The last four methods are relatively new ways in which healthcare organizations are being paid. The future of payment methods will build on the last four methods, at least in the near term. Even though some of these payment methods are more common for certain types of healthcare organizations than other payment methods, every type of healthcare organization is confronted with multiple payment methods. Each payment method is briefly described, with examples that highlight common use of the method.

Charges

For each type of healthcare organization, development of a list of charges for services is required if they are paid on the basis of charges. Payment of the full amount charged may not be common for healthcare organizations, though it is the method of payment of most goods and services in the economy. Payment for healthcare goods and services is different due to the myriad of third-party payers and government involvement.

Rather than pay the amounts charged by healthcare organizations, many insurance companies negotiate payment amounts. For physician services, payments based upon **fee schedules** or **fee screens** are quite common. Fee schedules are payment amounts for services that are fixed amounts. When an insurance company receives a bill for a specific service, it uses the fee schedule for the payment amount.

Fee screens place limits on payments that are based on charges. Screens may be developed based upon **usual, customary, or reasonable charges (UCR)**. Usual amounts are often defined as the lowest amounts that a healthcare organization has listed as charges on bills submitted within the prior contract period, usually one calendar year. The use of a usual charge screen limits the rate of increase in healthcare payments as there will be a one-year lag between an increase in the charge by an organization and an increase in the payment by an insurance company.

Customary amounts are calculated by insurance companies for healthcare organizations in a particular region of the country or state. Customary amounts are sometimes also called the prevailing amount. To determine the customary amount, insurance companies first compute the distribution of charges that are included on patient bills. Insurance companies then select the median (half of the bills include charges that are higher and half of the bills include charges that are lower), the 75th percentile (75% of bills include charges lower than a specific amount), or the 90th percentile (90% of bills include charges lower than a specific amount) as the customary amount. For a midlevel, routine office visit for an established patient, the median charge might be $100, the 75th percentile might be $125, and the 90th percentile might be $150. The customary amount would be $100, $125, or $150, depending on the criteria established by the insurance company.

A charge is included on every bill a healthcare organization presents to an insurance company for having provided a patient with a service. If the charge on the bill is lower than the fee screen, then the full charge is paid. If the charge on the bill is higher than the fee screen amount, only the fee screen amount will be paid. Payments of full charges that are less than fee screen amounts are called “reasonable” amounts. These three definitions of charges are often combined such that an insurance company will have a policy of paying the lowest among usual, customary, or reasonable charges.

Negotiated Payments

Payment amounts for healthcare organizations are often the result of a negotiation process. An organization’s owner, financial manager, or designated representative will negotiate with a provider contracting representative at an insurance company. At times, the negotiation process involves a fee schedule or a fee screen created by the insurance company. At other times, the chargemaster of the healthcare organization is the foundation upon which a fee schedule is based. It is quite common for health insurance companies to negotiate healthcare

organization charges, less a specific percentage discount (e.g., 25% or 50%). Referring back to Hendrickson Memorial Hospital (Exhibit 5.2), charges to private insurance companies were $339,531,165 in 2012 and contractual adjustments and discounts were $213,231,151, a 63% reduction. For Hendrickson, some of the negotiated private insurance payments were based on charges, so there are contracts that state "charges minus 50%." Other contracts simply state payment amounts without reference to charges. Still, substantial discounts from charges are common when payments are made on the basis of negotiated payments.

An important consideration with negotiated payments is whether or not **balance-billing** is permitted. Balance-billing is the process of billing the patient for the difference between charges and the payments from insurance companies. Most negotiated payment contracts and all government payment systems prohibit balance-billing. If a provider does not accept the payment amount offered by an insurance company, and balance-billing is not permitted, they can elect not to see patients covered by that insurance company.

Retrospective Costs

Retrospective costs is the method of payment upon which the term *reimbursement* is based. Under a payment method using retrospective costs, the healthcare organization would be paid based upon actual expenses incurred in the prior year. The Medicare Cost Report, discussed in Chapter 4 as a means to calculate costs on a department basis, was originally developed for hospital payments and used by Medicare and many insurance companies. The condensed version of the retrospective cost process is that a hospital completes a cost report, which is reviewed or audited, and then receives a payment for whatever percentage of total costs is associated with their enrollees. In this manner, an insurance company would pay its proportional share of total hospital costs. If one insurance company's patients accounted for 25% of a hospital's total number of patients, the insurance company would pay 25% of the hospital's total costs. One important detail of actual payment policy is that insurance companies would pay hospitals monthly, a periodic interim payment, to assure a steady cash flow, and then have an end-of-year adjustment associated with the review of the cost report.

The advantage of retrospective costs is that they are a clear indication of the amounts that have been spent in treating patients. There is no need to develop a geographic practice cost indicator if each organization is reimbursed for its actual expenses. Some insurance companies continue to use cost reports and retrospective costs as the basis for payments, even though most have abandoned cost-based reimbursement methods and moved to prospective payment methods.

For Review:

1. Healthcare organizations sometimes have difficulty in responding to the question of how much they are paid for providing a day of care. Why would healthcare organizations have difficulty answering this question?
   Healthcare organizations may be paid on the basis of one of several different methods, each of which may have contract terms that are unique. Traditional methods include charges, negotiated amounts, negotiated charge discounts, and retrospective costs. More modern methods include prospective amounts, per visit amounts, per episode amounts, and per time period amounts. With many insurance companies paying with one or more of these methods, there may be a wide range in the amount that is being paid.

5.3 Modern Healthcare Payments

Payment on the basis of charges or some variant of charges is the typical way in which most goods and services in society are purchased. The downsides of payment based upon charges are that the method used to develop charges is not often clear, and with markets where people cannot easily shop for services, charges may be increased over time to very high levels. Payment on the basis of historical costs may be associated with greater clarity of the costs of services and yet is still associated with increasing payments. Organizations that are paid whatever costs they incur have little motivation to constrain cost growth. In attempts both to provide clarity or transparency to the payment process and to constrain payment increases, several modern methods have been developed to pay healthcare providers. A few of these methods are considered under the headings of prospective payment and specific strategies for prospective payment.

Prospective Payment

Prospective payment is a term used to distinguish modern payment methods from retrospective costs. Prospective payment means that the payment amount is known in advance of a service being provided. With this meaning, almost all other methods of payment, including charges and negotiated payments, are prospective payments. The distinguishing feature of many prospective payment systems is their use of some form of historical cost information as the basis for establishing the prospective payment amounts and the transparency of the method.

Physician Service Payment

Common methods for implementing prospective payment methods is to select the basis upon which payments will be made, ideally on a basis that provides incentives for cost containment. A commonly used method for paying physicians is through the use of a relative value unit (RVU) system. The essence of an RVU system is that physicians' time and costs associated with providing services are compiled for all services, and the relative amount of time and costs for each service is measured against the average of all services.

For physician payments, the basic service defined for an RVU is based on common procedural terminology—version 4 (CPT-4) codes. CPT® is a registered trademark of the American Medical Association. For each CPT-4 code provided, a corresponding International Classification of Diseases and Related Health Problems 10th Revision (ICD-10) must also be provided. The ICD-10 code describes the diagnosis; the CPT-4 code describes the treatment. An example of an ICD-10 code and CPT-4 code combination that may be used for a physician's services is ICD-10 code L08.9: local infection of skin and subcutaneous tissue, and CPT-4 code 11000: debride infected skin. *Debridement* is the medical term for removal of infected tissue.

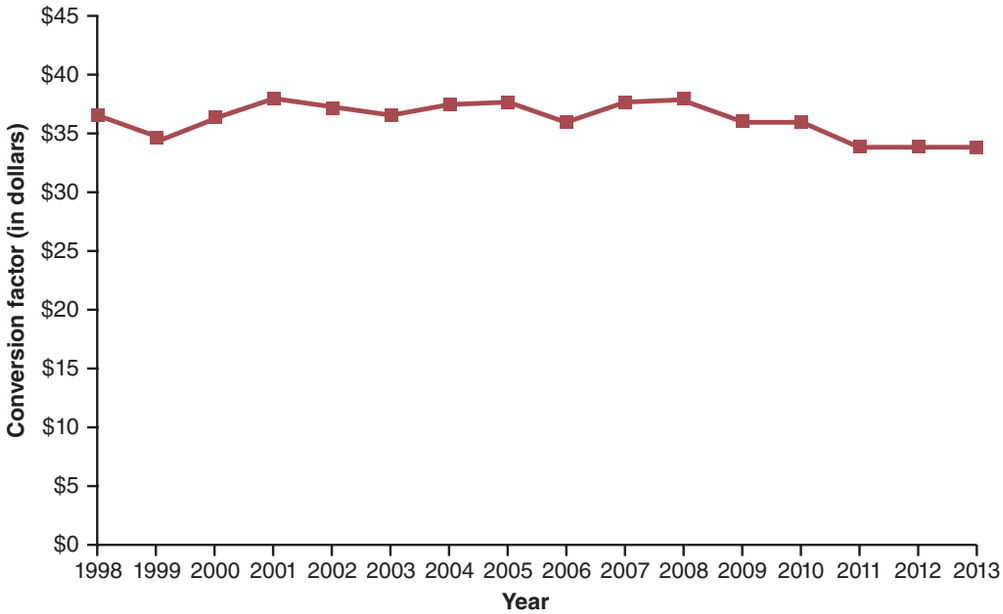
Including all of the healthcare common procedure coding system (HCPCS) codes that extend the list of physician services beyond CPT-4 codes, there are over 15,000 billing codes for physician services. An example of a HCPCS code that is not a CPT-4 code is G0444, an annual depression screening. Given the new procedures that are being developed, many changes to the list of HCPCS and CPT-4 codes are introduced every year and are available on the American Medical Association's website: http://www.ama-assn.org/ama/pub/physician-resources/solutions-managing-your-practice/coding-billing-insurance/cpt.page.

Medicare and many insurance companies use a **resource-based relative value unit system (RBRVS)** system, where the resources measured are physician work time, office practice costs, and malpractice insurance costs. Medicare calculates RVUs for each component and also calculates a geographic practice cost indicator (GPCI) for each area of the country to adjust for local cost differences. The total regulated payment for Medicare physician service payments is written as:

$$\begin{aligned}\text{RBRVS payment} = [&(\text{RVU work time} \times \text{GPCI work time})\\ &+ (\text{RVU practice costs} \times \text{GPCI practice costs})\\ &+ (\text{RVU malpractice} \times \text{GPCI malpractice})]\\ &\times \text{Conversion factor}\end{aligned}$$

The final item in RBRVS payment calculations, as well as other calculations described in the following sections, is the **conversion factor**. The conversion factor is a dollar amount paid per RVU under each system. The Medicare RBRVS conversion factor is regulated to change annually by the percentage change in an inflation factor. However, additional rules are implemented almost every year to change the conversion factors. Each year, the value of the conversion factor for Medicare payment systems is proposed by the Center for Medicare and Medicaid Services (CMS), approved by Congress in a spending bill, and finally signed by the President of the United States. The estimated number of patient visits multiplied by the number of RVUs for each visit multiplied by the conversion factor yields the total Medicare budget for physician services. When CMS, Congress, and the President change the Medicare budget for physician services, the primary means of doing so is to change the conversion factor. As demonstrated in Figure 5.1, the conversion factor of Medicare's RBRVS system has varied within a narrow range over the past 15 years.

Figure 5.1: Medicare RBRVS conversion factors, 1998–2013



Source: Author's calculations based on Centers for Medicare and Medicaid Services data (Retrieved from http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/index.html?redirect=/physicianfeesched/*)*

An example of payment under RBRVS is provided in Exhibit 5.5. A physician in Birmingham, Alabama, performed a debridement of infected skin (HCPCS 11100) in 2012. The work time involved is the same as that for an average procedure (a value of 1.000). The practice expense when performed in the physician office (as opposed to an outpatient hospital facility) is slightly less than the average procedure (0.878). The malpractice expense is less than half of the average procedure (0.474). The geographic price indices for expenses in Alabama are all lower than the national average. The national average GCPI is 1.000, by definition.

Exhibit 5.5 RBRVS payment, 2012

	Work Time	Practice Expense	Malpractice Expense	Total
RVU 11000	1.000	0.878	0.474	
GPCI—Alabama	0.60	0.94	0.05	
Product	0.600	0.825	0.024	1.449
Conversion factor				$34.0376
Payment				$49.32

Source: Author's calculation.

Following the RBRVS equation,

$$\begin{aligned}\text{RVU 11100 payment} &= [(1.000 \times 0.60) + (0.878 \times 0.94) + (0.474 \times 0.05)] \times \$34.0376 \\ &= (0.600 + 0.825 + 0.024) \times \$34.0376 \\ &= \$49.32\end{aligned}$$

Analyze This

A physician practice is considering moving from Alabama to Massachusetts where the GPCIs are higher than the national average (GPCI work time = 1.051, GPCI practice costs = 1.222, and GPCI malpractice = 1.023). For the same service, RVU 11100, what would be the new payment amount?

Charges and negotiated charge methods also use HCPCS or CPT-4 codes to determine payments. Further, many other payment systems also use RVU-based methods, though not always with the same RBRVS amounts as Medicare and frequently with different conversion factors. A survey of Medicaid plans found that, on average, Medicaid plans paid 66% of the amounts paid by Medicare in 2012 (Zuckerman & Goin, 2012). For the most common CPT-4 code, 99213, Office Visit with an Established Patient for 15 Minutes, representing one quarter of all primary care physician claims, the mean Medicaid payment was $38.20 and the range was a low of $20.64 (Rhode Island) to a high of $111.22 (North Dakota) (Zuckerman & Goin, 2012). The differences in these payment amounts are not differences in the CPT-4 code or differences in the RVUs associated with the service. The differences are primarily in the conversion factors.

Payment amounts from one particular payer may be low or high relative to charges, negotiation payments, and even amounts paid by other government programs. With prospective payments amounts that are regulated by government entities, there is no opportunity for individual healthcare organizations to negotiate different amounts. Groups of providers and organizations that represent providers, such as the American Medical Association and the American Hospital Association, may seek to provide input on the regulation process. The key to management of regulated payment amounts is to understand the rules upon which payments are determined and to be attentive to changes in the rules to assure compliance with billing procedures.

Per Visit Amounts

Paying a fixed amount for all services provided within a visit to a healthcare organization is one way to limit the costs associated with providing services. Paying a per visit amount requires a system for, first, defining a visit. Since a visit to a hospital outpatient department can vary from receiving photochemotherapy to having a repair of cardioverter-defibrillator leads, some form of adjustment to payment amounts is required. Medicare adopted the method of payment based upon **ambulatory payment classification (APC)**. The APC classification involves bundling groups of services that are involved with treating a patient into one payment amount. Although there can be several bundles of services provided in a given outpatient visit, the APC system does provide incentives for controlling the services provided with a specific APC bundle.

APC payments are similar to RBRVS payments in that they require a code (APC versus a HCPCS or a CPT-4 code) with a unique RVU, have an adjustment for geographic differences in wages and other expenses, and have a conversion factor. For APCs under Medicare, the APC weight is the RVU, based on historical cost differences between services. Also under Medicare, the wage index only applies to 60% of the APC weight, as only 60% of expenses are expected to be labor related. The nonlabor expenses that account for 40% of costs incurred by outpatient facilities are expected to be set at the national level and do not require a local nonwage index adjustment.

$$\begin{aligned}\text{APC payment} = [&(\text{APC weight} \times 60\% \times \text{Wage index})\\ &+ (\text{APC weight} \times 40\%)]\\ &\times \text{Conversion factor}\end{aligned}$$

Consider the case of a hospital outpatient facility in Washington, D.C., depicted in Exhibit 5.6. From these two examples, it is clear that there can be tremendous differences in the amounts paid for services under per visit amounts.

Exhibit 5.6 APC payments, 2012

APC	Description	APC Weight	Wage Index	Conversion Factor	Total Payment
0001	Photochemotherapy	0.5037	1.0546	$70.02	$36.42
0108	Insertion/replacement/repair of cardioverter-defibrillator leads	424.77	1.0546	$70.02	$30,716.76

Source: Author's calculations.

Following the APC equation,

$$\begin{aligned}\text{APC 0001 payment} &= [(0.5037 \times 60\% \times 1.0546) \\ &\quad + (05037 \times 40\%)] \\ &\quad \times \$70.02 \\ &\quad = \$36.42\end{aligned}$$

Analyze This

For APC 0108, confirm that the total payment is $30,716.76.

At Hendrickson Memorial Hospital, financial results for the most frequent outpatient visits are regularly evaluated, as depicted in Exhibit 5.7. For the six most frequent outpatient visits, average payments are less than average charges. For all 12 services combined, revenues exceed costs by a total of $382,927.

Exhibit 5.7 Hendrickson Memorial Hospital, top 12 outpatient visits, 2012

Outpatient Visit Description (APC Code Numbers)	Patient Claims	Average Charge	Average Payment	Average Cost
Level 2 hospital clinic visits (0605)	8,184	$124	$69	$70
Level I X-ray plain film except teeth (0260)	6,647	$203	$40	$51
Level 4 Type A emergency visits (0615)	3,862	$899	$203	$232
Level 3 hospital clinic visits (0606)	3,451	$183	$91	$103
Level 3 Type A emergency visits (0614)	2,931	$635	$127	$163
Extended individual psychotherapy (0323)	2,802	$183	$94	$103
Computed tomography without contrast (0332)	1,702	$875	$174	$59
Level IV debridement & destruction (0016)	1,028	$429	$149	$132
Lower GI endoscopy (0143)	578	$2,638	$544	$550
Level I upper GI procedures (0141)	453	$2,291	$522	$472
Cataract procedures with IOL insert (0246)	430	$4,888	$1,550	$1,224
Diagnostic cardiac catheterization (0080)	292	$8,181	$2,256	$969

Source: Author's calculations.

Analyze This

For Hendrickson Memorial Hospital, confirm that revenues exceed costs by a total of $382,927 for the most frequent outpatient visits.

There are many other types of services that have per visit or per service prospective payment amounts. For example, ambulance services are paid on a per trip basis, with adjustments for geographic cost differences and distances traveled. For skilled nursing facilities, payment is made on a per day basis, with adjustments for geographic cost differences and the condition of the patient, based on resource utilization groups (RUGS). There are 66 RUGS, with patients classified on the basis of the Resident Assessment Instrument, which is centered on the Minimum Data Set for nursing home patients. The range of Medicare payments for nursing home care is $190.61 per day for patients with minimal needs to $760.89 per day for patients with extensive needs (Centers for Medicare and Medicaid Services, 2012a). Each system has a number of unique aspects to its formation of patient groups, calculation of geographic adjustments, and calculation of conversion factors.

Per Episode Payment Amounts

To avoid the incentives associated with per visit payment amounts, namely, to provide more types of services at each visit, third-party payers have created payment systems based upon a bundle of services provided during an entire episode of patient care. The clearest example of this method of payment is the system most frequently used to pay for inpatient hospital services. Since 1983, Medicare has been paying hospitals a single payment amount for all services provided during an entire hospital stay on the basis of **diagnosis-related groups (DRGs)**. DRGs are RVUs based on the cost of providing services during a hospital stay for a specific diagnosis. DRGs are different from the RBRVS and APC RVUs, as they are based on the diagnosis of the patients, rather than the services provided.

There have been a host of changes over time in the Medicare DRG system, from incorporating capital costs along with operating costs in 1993 to expanding the number of DRGs to account for medical severity within diagnoses in 2008. Many government payment programs and private insurance companies also use DRG systems, though sometimes with different diagnosis groups, sometimes with different geographic adjustments, and often with different conversion factors. Consider the list of DRGs in the Michigan Medicaid program for selected services presented in Exhibit 5.8. Since childbirth is a much more common condition for Medicaid enrollees than Medicare enrollees, selected DRGs are refined under Medicaid programs. The DRG weights and average lengths of stay in the hospital have low and high values for the detailed DRGs under Medicaid that are similar to the average amounts for the single DRGs under Medicare.

Exhibit 5.8 Selected diagnosis-related groups for Medicaid and Medicare patients

DRG	Description	Medicaid DRG Weight	Medicaid Average Length of Stay	Medicare DRG Weight	Medicare Average Length of Stay
791	Prematurity with major problems	1.1158	9.4	3.4363	13.3
791.1	Prematurity with major problems	3.9420	21.7		
792	Prematurity without major problems	0.3985	4.5	2.0734	8.6
792.1	Prematurity without major problems	2.0846	13.2		

Sources: Medicaid: Michigan Department of Community Health: http://www.michigan.gov/documents/mdch/MSA_11-52_370063_7.pdf*; and Medicare: Center for Medicare and Medicaid Services:* http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteinpatientPPS/index.html.

The diagnosis for DRGs is a complex assignment for one of 956 clinical reasons for hospital admission based upon the principal diagnosis and additional diagnosis codes, procedure codes, patient age, gender, and discharge status (alive, dead, home, or another facility). There are annual changes to update diagnosis and procedure codes as well as the other factors in the calculation of payments. (For Medicare's processes, see http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html?redirect=/acuteinpatientpps/.)

Similar to the calculation of APC payments, the DRG payment is based upon the DRG weight, which is the RVU for hospital costs, and adjusted by a wage index. The conversion factor for inpatient hospital payments is separated for the labor and nonlabor portions of operating costs. Over time there have been several adjustments to the DRG payment formula. There have been adjustments for indirect medical education costs to recognize the additional costs associated with teaching residents and interns, adjustments for treating a disproportionate share of low income and uninsured patients, and adjustments for cases deemed to be outliers (with high lengths of stay and costs). The most recent adjustment, introduced in 2011, is a penalty for not providing quality of services information. Not providing quality of services information results in a reduction of 2% of the total payment.

The following calculation is the formula for DRG payments:

$$\begin{aligned}\text{DRG payment} = {} & (\text{DRG weight} \times \text{Wage index} \times \text{Labor standard amount}) \\ & + (\text{DRG weight} \times \text{Nonlabor standard amount}) \\ & + (\text{DRG weight} \times \text{Adjusted wage index} \times \text{Capital amount}) \\ & + \text{Additional adjustments}\end{aligned}$$

Exhibit 5.9 presents the calculations for payment to a hospital treating a Medicare patient with DRG 072 in Washington, D.C. in 2012. This is the total payment for the facility, independent of the length of stay and costs, unless costs are extremely high (in excess of $22,385) and several other criteria are met. Further, this is the total payment for the facility, even if the patient is readmitted to the hospital within 10 days of discharge for the same principal diagnosis.

Exhibit 5.9 Payments for DRG 072, nonspecific cerebrovascular disorders, without complicating conditions (CC) or major complicating conditions (MCC), 2012

DRG	Component	DRG Weight	Conversion Factor	Wage Index	Total Payment
072	Labor-related operating costs	0.7237	$3,584.30	1.0546	$2,735.59
	Nonlabor-related operating costs	0.7237	$1,624.44		$1,175.61
	Capital costs	0.7237	$421.42	1.0371	$316.30
	Total payment (before any other adjustments)				$4,227.50

Source: Author's calculations.

Using the DRG equation,

$$\begin{aligned}\text{DRG 072 payment} &= (0.7237 \times 1.0546 \times \$3{,}584.30)\\ &+ (0.7237 \times \$1{,}624.44)\\ &+ (0.7237 \times 1.0371 \times \$421.42)\\ &+ 0 \text{ additional adjustments}\\ &= \$4{,}227.50\end{aligned}$$

At Hendrickson Memorial Hospital, financial results for the most frequent inpatient hospitalizations are regularly evaluated, as depicted in Exhibit 5.10. For the top 11 groups combined, costs exceeded revenues by a total of $1,193,814.

Exhibit 5.10 Hendrickson Memorial Hospital, top 11 inpatient hospitalizations, 2012

Inpatient Description (DRGs)	Cases	Average Charge	Average Payment	Average Cost
Heart failure & shock (293-292-291)	342	$21,707	$6,446	$6,513
Psychoses (885)	299	$24,765	$5,381	$8,433
Simple pneumonia & pleurisy (195-194-193)	212	$23,582	$6,718	$6,970
Major joint replacement or reattachment of lower extremity (470-469)	205	$57,395	$12,768	$14,258
Intracranial hemorrhage or cerebral infarction (066-065-064)	187	$25,208	$7,000	$7,426
Renal failure (684-683-682)	173	$24,515	$7,023	$7,621
Acute myocardial infarction, discharged alive (282-281-280)	158	$27,251	$8,193	$7,665
Cardiac arrhythmia & conduction disorders (310-309-308)	151	$14,713	$4,927	$4,192
Esophagitis, gastroenteritis, & miscellaneous digestive disorders (392-391)	135	$15,239	$4,508	$4,523
Chronic obstructive pulmonary disease (192-191-190)	134	$18,678	$5,944	$5,263

Analyze This

For Hendrickson Memorial Hospital, can you confirm that for the most frequent inpatient hospitalizations, costs exceeded revenues by a total of $1,193,814?

Payment on the basis of DRGs is the most common method of payment for hospitals at 38.9% of net patient revenues in 2011. Hospitals also received payment on the basis of charges, with a negotiated percentage discount (19.8% of net patient revenues), negotiated fee schedules (19.0%), per day amounts (4.3%), capitation arrangements (2.5%), and other methods, including retrospective payments (8%) (Moody's Investors Service, 2013).

Per Time Period Payment Amounts (Capitation)

To avoid the incentives associated with per visit payment amounts and the incentives associated with numbers of visits, third-party payers have developed payment systems based upon a bundle of services provided during an entire period of time. Such payment systems are called **capitations**. A capitation is a single payment that provides for a defined set of services for a defined period of time, typically one month. Capitations can be narrow or broad. A narrow capitation would be a payment to a primary care physician for coordinating the care associated with a patient assigned to the physician. The physician may be paid a fee for any visits plus a small amount to cover the administrative aspects of coordinating care. This amount may be as low as a dollar or two.

A broader capitation may be a partial, primary care capitation paid to a medical group. In exchange for providing all primary care services to a panel of patients (all services associated within a limited number of CPT-4 codes), a monthly payment would be made at the beginning of the month to the group. To the extent that the cost per visit and the number of visits to the physician group can be controlled by effective care management, there may be additional profit potential for the group.

An example of a partial, primary care capitation for routine visits for established patients is presented in Exhibit 5.11. Level 1 visits, with CPT-4 code 99211, are brief visits with patients that have previously been seen at the physician's office. If the usual payment amount is $27.14 per visit, and, on average, only one tenth (10%) of patients have this type of visit in a given year, then the expected payment amount would be $2.71 ($27.10 $\times$ 0.10 = $2.71). Using the same calculation for each of the five levels of primary care visits, the total expected payment amount is $236.14 per year, or $19.68 per month. If the group can manage the medical needs of the patients for less than $19.68, per member, per month (PMPM), the group will earn a profit as compared to the expected payments.

Exhibit 5.11 Primary care capitation for an established panel of patients

Covered Visit Type—CPT-4 Code	Usual Payment Amount per Visit	Expected Visits per Year	Expected Payment Amounts
Level 1—99211	$27.14	0.10	$2.71
Level 2—99212	$59.08	0.40	$23.63
Level 3—99213	$98.18	1.00	$98.18
Level 4—99214	$145.14	0.50	$72.57
Level 5—99215	$195.22	0.20	$39.04
Annual total		2.20	$236.14
Monthly total			$19.68

The broadest form of capitation is a full, total service capitation paid to an integrated health system. In exchange for providing all services to a panel of patients, a monthly payment would be paid to the organization. In effect, the organization would accept the full medical responsibility normally taken by the insurance company. To the extent that the cost per visit and the number of visits to the health system can be controlled, the health system may earn more profits. In Exhibit 5.12, a financial analysis of a full, total service capitation agreement is presented. The expectation under this agreement is that there would be various payment arrangements made between the health system and the member hospitals, physician groups, and other providers. There is also an amount included for administration of the agreement, as it would be a significant administrative challenge for the health system.

Exhibit 5.12 Full capitation for panel of patients

Cumulative Patients Months for Year	29,423	
Service	**Annual Amount**	**Per Member, per Month Amounts**
Medical and Hospital Services		
Inpatient Services—Capitated	$334,749	
Inpatient Services—Per diem	$1,133,235	
Inpatient Services—Fee-for-service/Case rate	$2,036,252	
Subtotal inpatient services	$3,504,236	$119
Total patient days incurred	898	
Average cost per patient day	$3,902	
Primary professional services—Capitated	$1,120,970	
Primary professional services—Noncapitated	$1,069,336	
Other medical professional services—Capitated	$18,298	
Other medical professional services—Noncapitated	$412,978	
Subtotal professional services	$2,621,582	$89,100
Total member ambulatory encounters for period	26,298	
Average cost per ambulatory encounter	$100	
Noncontracted emergency room	$474,448	
Pharmacy expense—Fee-for-service	$1,109,490	
Subtotal other services	$1,583,938	$54
Total medical services	$7,709,756	$262
Administration (’000)	$836,600	$28
Total contract	$8,546,356	$290

One current healthcare reform initiative is to create **accountable care organizations (ACOs)**, or groups of physicians, hospitals, and other providers who work together to coordinate care for a panel of patients. A financial incentive for ACO development is the ability to negotiate capitation contracts. If quality care can be provided under a capitation arrangement, and care can be coordinated to reduce costs, ACOs may be able to earn additional profits. At the level of the ACO, there may be a single capitation payment from the insurance company. Within the ACO, individual providers may be paid a capitation or use any other payment method. Currently, more than 90% of ACOs use payment methods other than capitation for individual providers (Muhlestein, Croshaw, & Merrill, 2013).

There are a host of considerations of particular importance in health insurance contracts that include capitation. The benefit design of the contract is particularly important. What services are covered by the contract? Which other physicians are also participating in the health insurance plan? Is it easy to refer patients to other physicians, or do the capitated physicians have to provide more than routine primary care? How many patients are in the panel? What are the characteristics of the patients in the panel? Are the values in the table for frequency of expected visits per year adjusted for the age, gender, and health status of the patients in the panel? Analysis of these considerations is important to the financial management of the healthcare organization considering capitation payment methods.

For Review:

1. Modern payment methods largely rely upon relative value units. What are the common RVUs for physician services, outpatient services, and inpatient services? Why are different RVUs required for each type of service?
   Physician RVUs are resource-based relative value services with amounts of physician work, practice expense, and malpractice insurance. Outpatient RVUs are ambulatory patient classifications. Inpatient RVUs are diagnosis-related groups. One reason for the different RVUs is that they involve different bundles of services. RBRVS are unique for every physician service. APCs bundle services provided as a group. DRGs bundle services provided during a hospital stay.

Summary & Resources

Chapter Summary

This chapter has presented the wide range of methods used in the healthcare system to pay for services. It is important that all healthcare organizations establish a list of charges for services. Some patients and insurance companies pay on the basis of charges. For most other insurance companies, there are a number of methods used to pay healthcare organizations, many designed only for specific types of providers.

The payment methods used and the payment amounts associated with each method are sometimes dictated to the healthcare organization. Government programs use regulatory authority to determine payment methods and amounts. Similarly, large insurance companies may indirectly dictate payment methods and amounts by right of their market power. An insurance company with a 90% market share of insured patients can dictate many payment decisions

to healthcare organizations. Few healthcare organizations can avoid government programs or dominant payers, other than to limit patients treated or services offered. Of course, healthcare organizations with dominant market positions may be able to dictate terms to insurance companies. In all other market conditions, the end results come from a process of negotiation.

For many years, payment systems were termed reimbursement because they paid back healthcare organizations for expenses that were incurred. Retrospective reimbursement arrangements still exist in limited numbers. Most payments systems are now based on prospective methods. At the beginning of a contract year, the amounts that will be paid for services are set. Actual payments may be made using a number of possible methods, from a percentage discount on charges to methods that employ precisely defining a service (using a procedure code or a diagnosis code), making cost adjustments, and applying a standard payment amount, often called a conversion factor. There are a number of ways that healthcare organizations require numerous financial management skills to understand and verify that correct payments are received.

Discussion Questions

1. Healthcare organizations are widely criticized for posting high prices for services. Is there an alternative to current pricing policies? Explain your reasoning.
2. Charges and payments can vary widely in healthcare organizations. Accounting rules dictate that expected payments be used to represent the revenues of an organization. Why aren't expected charges used to represent the revenues of an organization?
3. The payment environment in healthcare has moved from retrospective costs to prospective prices. Why have third-party payers made this change in payment policy? Do you think that there will be a return to retrospective costs as a dominant method of payment? Explain your reasoning.

Exercises

1. A clinic receives an average of $150 per patient visit from Medicare patients, which represent 40% of the 1,000 patient visits per month.
   a. If clinic expenses are $155,000 per month, how much does the clinic need to receive per patient from the insurance companies covering the remaining patients?
   b. If the clinic seeks to earn a profit of $15,000 per month, how does that affect the amount the clinic needs to receive per patient from the insurance companies?

2. Some physician payment systems are much simpler than Medicare's RBRVS payment system. A physician payment system in one location may have only one RVU measure per procedure and one conversion factor. For a clinic specializing in ear, nose, and throat services, a list of its 10 most common ear services is provided in Exhibit 5.13.
   a. If the clinic receives payment on the basis of full charges, what will be the total revenue?
   b. If the clinic receives prospective payment on a RVU basis, and the conversion factor is $35, what will be the total revenue?
   c. How do the answers to 2.a and 2.b differ?

Exhibit 5.13 Common ear services

Ear Services	Code	RVU	Patients	Charge
Drain external ear lesion	69005	2.16	20	$130
Drain outer ear canal lesion	69020	1.53	120	$70
Biopsy of external ear	69100	0.81	120	$80
Biopsy of external ear canal	69105	0.85	90	$270
Remove external ear, partial	69110	3.53	20	$320
Removal of external ear	69120	4.14	10	$800
Remove ear canal lesion(s)	69145	2.70	30	$450
Extensive ear canal surgery	69150	13.61	20	$1,500
Clear outer ear canal	69205	1.21	360	$200
Remove impacted ear wax	69210	0.61	380	$50

3. An orthopedic unit in a hospital provides a large number of level 1 (low complexity) services and is paid on the basis of prospective prices for the complete procedure using APC methods. The five procedures most often provided to Medicare patients are given in Exhibit 5.14.
   a. For the five procedures, what is the expected revenue from Medicare?
   b. If patients are required to pay 20% of the payment amount, how much would the hospital expect to receive from patients, and how much would they expect to receive from Medicare?

Exhibit 5.14 Five most common orthopedic procedures

APC	Description	Patients	Payment Amount
0041	Level I arthroscopy	88	$2,074.62
0053	Level I hand musculoskeletal procedures	140	$1,202.64
0055	Level I foot musculoskeletal procedures	138	$1,546.28
0058	Level I strapping and cast application	146	$78.88
0062	Level I treatment fracture/dislocation	51	$1,830.69

4. A 100-bed skilled nursing facility provides services to residents primarily within 10 RUG categories and is paid on a prospective basis using RUGs. A list of the services used is provided in Exhibit 5.15.
   a. For the 33,274 resident days of care per year, what is the expected revenue?
   b. If the skilled nursing facility could increase its occupancy rate from 91.2% (33,274 resident days divided by 36,500 resident days at full capacity) to 93.9% by adding 1,000 resident days of care per year, which types of resident days should they attempt to increase?
   c. What would be the change in revenue associated with adding 1,000 resident days of care per year according to your response to 4.b?

Exhibit 5.15 Utilization of nursing home services

Resource Utilization Group	Resident Days of Care	Payment per Day
RHA	5,407	$341.68
RMA	4,143	$292.60
RVA	4,082	$426.88
RVB	3,398	$428.54
RHB	3,363	$388.10
RMB	3,244	$355.61
RHC	3,004	$431.21
RVC	2,602	$494.86
RMC	2,345	$378.82
RUC	1,686	$576.84
Total	33,274	

Key Terms

accountable care organization (ACO) Groups of physicians, hospitals, and other healthcare providers that provide coordinated care to designated patients.

ambulatory payment classification (APC) A system of classifying outpatient services in a consistent manner that permits payment for a bundle of services on a relative value unit basis.

balance-billing The process of a healthcare organization billing the patient for the difference between charges and the payments from insurance companies.

capitation Payment of an amount for medical services based upon the time period of enrollment of a patient, not the services used. Partial capitations cover the use of a limited number of services. Full capitations cover the use of a broad set of services.

charges Prices that a healthcare organization lists for products or services.

conversion factor A dollar amount paid per relative value unit under a payment system.

cost-shifting The act of charging higher prices when confronted with payments from some payers that do not fully cover costs.

diagnosis-related group (DRG) A system of classifying patients using inpatient services based on diagnoses (not actual services used) in a consistent manner that permits payment for services on a relative value unit basis.

fee schedule A list of prices to be paid for medical services.

fee screen A limit on the payments that may be paid for medical services, to the extent that charges are higher than screen amounts.

prospective payment Use of a method for setting payments to healthcare organizations before services are provided.

resource-based relative value unit system (RBRVS) The system used by Medicare and other insurance companies to pay physicians. The RVUs are based on resources used by physicians: physician work time, office practice costs, and malpractice insurance costs.

retrospective cost Use of a method for paying healthcare organizations their actual costs after services have been provided.

usual, customary, or reasonable charges (UCR) A method of paying healthcare organizations the lesser of previously charged amounts, a percentile level of charges paid by other healthcare organizations in a market, the amount actually charged, or another predetermined amount.

Suggested Websites

- The Social Security Administration provides a good description of the parts of Medicare coverage: http://www.socialsecurity.gov/pubs/EN-05-10043.pdf
- The Center for Medicare and Medicaid Services' reimbursement sections (http://www.CMS.gov) provide up-to-date information on governmental reimbursement methods. For outpatient services, see http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/index.html?redirect=/hospitaloutpatientpps/
- The Center for Medicare and Medicaid Services has a convenient source of information on each state's Medicaid program: http://www.medicaid.gov/