SEVENTH EDITION

INTRODUCTION TO THE Financial Management of Healthcare Organizations

MICHAEL NOWICKI

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GATEWAY TO HEALTHCARE MANAGEMENT

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I dedicate this book to my parents who, by their actions more than their words, instilled in me the value of lifelong learning. From my mother, I learned that effort is a reward in itself. From my father, I learned that correct answers count, always.

BRIEF CONTENTS

DETAILED CONTENTS

Part III: Working Capital

PREFACE

Introduction to the Financial Management of Healthcare Organizations is intended to be the primary textbook in introductory courses in healthcare financial management at both the undergraduate and graduate levels as well as a reference book for program graduates and other practicing healthcare managers. The purpose of this book is to introduce students and managers in positions other than finance to the fundamental concepts and skills necessary to succeed as managers in an increasingly competitive employment environment.

For instance, program graduates find employment in a variety of healthcare settings. Therefore, the focus of this book—as well as the title of the book—extends beyond the hospital. Program graduates consistently report a deficiency in quantitative skills; this book includes problems representing key concepts. Traditional-age students report a need to apply the quantitative skills introduced in financial management. To address both of these concerns, this book includes mini-case studies within chapters, practice problems at the ends of many chapters, and a comprehensive case study at the end of the book.

Introduction to the Financial Management of Healthcare Organizations is part of Health Administration Press's Gateway to Healthcare Management series. The textbooks in this series are geared specifically to students who are new to healthcare management.

In this edition, Part I includes an overview of financial management; the organization of financial management, including updated information on job responsibilities and salaries; financial analysis and management reporting; and the tax status of healthcare organizations, including the most recent court cases differentiating for-profit and not-for-profit hospitals.

Part II includes information about third-party payers and payment methodologies; Medicare and Medicaid, including updated laws pertaining to these public programs as

well as federal government settlements with providers on fraud and abuse allegations; cost accounting and analysis; and reimbursement, including charge setting.

Part III covers the management and financing of working capital; the management of the revenue cycle, including the distinction between the revenue cycle and accounts receivable; and materials management.

Part IV focuses on resource allocation and includes strategic, strategic financial, and operational planning; budgeting; and capital budgeting.

Finally, Part V provides an analysis of trends that will affect healthcare organizations in the future, including healthcare cost projections and the need for entitlement reform. The Affordable Care Act (ACA) of 2010 and the Medicare Access and CHIPS Reauthorization Act (MACRA) of 2015 are discussed throughout the book but more prominently in Parts II and V.

Each part of the book includes its own recommended reading list. A running glossary of important terms accompanies each chapter and is compiled at the end of the book; a list of acronyms used in the text is also included at the end of the book. At the end of every chapter, important points and discussion questions encourage students to summarize what they are learning and put it into their own words. The chapters are modular to allow instructors to either delete specific chapters or assign the chapters in an order based on individual preference or classroom requirements.

I hope you find *Introduction to the Financial Management of Healthcare Organizations* relevant, current, and easy to understand.

Acknowledgments

I would like to gratefully acknowledge those who assisted me in this seventh edition: my wife, Tracey, and our kids, Hannah and David, who have often sacrificed time with Dad so that I could write; my many students over the years, who have challenged me to find a better way to explain, teach, and evaluate the understanding of difficult concepts; Thamarai Selvi Sundararajan, my graduate assistant, who helped proofread the book and provided the valuable supplemental materials; Texas State University for continuing to support faculty research efforts; and Dick Clarke, president emeritus of HFMA, who in ways too numerous to mention has always supported my academic career. Finally, special thanks to those at Health Administration Press who have made this seventh edition what it is.

—Michael Nowicki

Instructor Resources

This book's instructor resources include a test bank of multiple choice questions; additional short-answer and fill-in-the-blank questions; PowerPoint slides in both outline and Socratic formats; and answer guides for the in-book discussion questions, mini-cases, and end-of-book case.

For the most up-to-date information about this book and its instructor resources, go to ache.org/HAP and browse for the book by its title or author name.

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PART I

FINANCIAL MANAGEMENT

CHAPTER 1

FINANCIAL MANAGEMENT IN CONTEXT

No matter where you are in the healthcare finance arena, there are opportunities to move things forward, to act, to resist complacency, to refuse to allow yourself to think that things won't ever change. As finance professionals we all have strengths that will serve our organizations well in these times of change.

Debora Kuchka-Craig, 2011 chair of the Healthcare Financial Management Association

Learning Objectives

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

- Understand the purpose of healthcare organizations
- Relate the purpose of healthcare financial management to the purpose of the organization
- Understand the objectives of healthcare financial management
- Apply quality assessment to healthcare financial management
- Apply organizational ethics to healthcare financial management
- Examine the value of healthcare financial management to the management functions and the changing face of healthcare
- Review background accounting, economics, and statistics information (appendixes 1.1, 1.2, and 1.3)

Introduction

Successful organizations, whether for-profit, not-for-profit, or governmental, have two things in common: (1) a congruent and well-understood organizational purpose, and (2) a functional management team. The purpose of this introductory chapter is to describe financial management in healthcare organizations within the context of organizational purpose and a competent management team.

Organizational Purpose

Organizational purpose is often determined by the owner. While a community-owned, not-for-profit healthcare organization's purpose is to provide healthcare services to the community, a corporate-owned (via stockholders) for-profit healthcare organization's purpose is to provide profit for the owner.

By necessity, most organizations have more than one organizational purpose. For instance, even though a not-for-profit healthcare organization's purpose is to provide healthcare services to the community, the organization must survive economically—meaning that it must generate sufficient revenue to offset expenses and allow for growth. A for-profit healthcare organization's purpose is to provide profit for the owner; however, the organization must meet its customers' needs—meaning it must keep the physicians, patients, employers, and insurance companies satisfied.

Most healthcare organizations also have secondary purposes—for example, many government-owned healthcare organizations provide large-scale medical education programs.

To maintain congruence, the management team must communicate the organizational purpose or purposes not only to the employees but also to owners, customers, and other important constituents. When multiple purposes are present, the management team must prioritize the purposes.

Healthcare Management Team

In its broadest context, the objective of healthcare management is to accomplish the organizational purposes. Doing so is not as simple as it sounds, especially if the healthcare organization's purposes are "to provide the community with the services it needs, at a clinically acceptable level of quality, at a publicly responsive level of amenity, at the least possible cost" (Berman, Kukla, and Weeks 1994, 5). Healthcare managers must identify, prioritize, and often resolve these sometimes contradictory purposes in a political environment that involves the organization's governing board and medical staff; in a regulatory environment that involves licensing and accrediting agencies; and in an economic environment that involves increasing competition, resulting in demands for lower prices and higher quality.

management functions The key functions of a manager, including planning, organizing, staffing, directing, and controlling.

Competent healthcare managers attempt to accomplish the organizational purposes by planning, organizing, staffing, directing, and controlling (called the **management**

functions) and through communicating, coordinating, and decision making (called the **management connective processes**). For more information on the management functions and connective processes, see *Dunn and Haimann's Healthcare Management* (Dunn 2016).

management connective processes Management functions that connect elements of the healthcare organization, including communicating, coordinating, and decision making.

With the exception of nursing home administrators, no licensure requirements are needed to be a practicing healthcare manager. However, facility-accrediting organizations such as **The Joint Commission** require healthcare managers to possess such education and experience as required by the position. Moreover, formal educational programs for healthcare management do exist at both the undergraduate and graduate levels. Undergraduate programs can seek program review and approval from the Association of University Programs in Health Administration. Graduate programs can seek program review and accreditation from the Commission on Accreditation of Healthcare Management Education. Furthermore, healthcare managers can seek membership and certification in professional associations, including the American College of Healthcare Executives (ACHE), which has more than 48,000 members, more than 9,000 of whom are certified as Fellows of the American College of Healthcare Executives (FACHE) (ACHE 2016a).

The Joint Commission The primary accrediting body for healthcare organizations.

Purpose of Healthcare Financial Management

The purpose of healthcare financial management is to provide accounting and finance information that helps healthcare managers accomplish the organization's purposes. No licensure requirements are needed to be a practicing healthcare financial manager. Facility-accrediting organizations such as The Joint Commission rarely provide requirements for healthcare financial managers; they often hold the organization's chief executive officer (CEO) responsible for financial management.

Formal educational programs for healthcare financial management are not common and usually exist as postgraduate certificate programs. The chief financial officers of most large healthcare organizations possess a master's degree in business administration, a bachelor's degree in accounting, and a certificate in public accounting and have healthcare experience. For formal continuing education and certification in healthcare financial management, healthcare financial managers can seek membership and certification in healthcare professional associations, including the **Healthcare Financial Management Association (HFMA)**. HFMA has more than 40,000 affiliates, including 1,332 certified healthcare financial professionals (CHFPs) and 1,663 members certified as fellows of the Healthcare Financial Management Association (FHFMA) (HFMA 2016b).

Healthcare Financial Management Association (HFMA) Association of healthcare financial managers; confers four certifications: certified revenue cycle representative, certified technical specialist, certified healthcare financial professional, and fellow of the Healthcare Financial Management Association.

Accounting

Accounting is generally divided into two major areas: *financial accounting* and *managerial accounting*. The primary purpose of **financial accounting** is to provide accounting information, generally historical in nature, to external users, including owners, lenders, suppliers, the government, and insurers.

financial accounting A type of accounting that provides historical accounting information to external users.

CRITICAL CONCEPTS
Measurements

Healthcare financial managers monitor many measurements. Among the most common are the following:

- *Admissions*: The number of patients, excluding newborns, accepted for inpatient service
- *Average daily census*: The average number of inpatients, excluding newborns, receiving care each day during the reporting period
- *Average length of stay (ALOS)*: Derived by dividing the number of inpatient days by the number of admissions
- *Occupancy rate*: The ratio of average daily census to the average number of statistical (set up and staffed for use) beds

Accounting information prepared for external use must follow formats established by the American Institute of Certified Public Accountants (AICPA) and other, similar organizations and must follow generally accepted accounting principles used for standardization. The 1996 *AICPA Audit and Accounting Guide for Health Care Organizations* (AICPA 1996) established four basic financial statements that hospitals should prepare for external users:

1. A consolidated balance sheet
2. A statement of operations
3. A statement of changes in equity
4. A statement of cash flows

managerial accounting
A type of accounting that provides accounting information, generally current or prospective in nature, to internal users.

The primary purpose of **managerial accounting** is to provide accounting information, generally current or prospective in nature, to internal users, including managers. Such accounting information supports the planning and control management functions. In this way, managerial accounting is the link between financial accounting and the manager. Managerial accounting, or accounting information prepared for internal use, requires no prescribed format and therefore varies greatly among organizations. Managerial accounting

topics such as budgeting and inventory control require knowledge of economics, statistics, and operations research.

Many managerial accountants believe that **cost accounting**—the study of costs, including methods for classifying, allocating, and identifying costs—is either synonymous with or a subset of managerial accounting. Others argue that cost accounting includes all managerial accounting and also requires some financial accounting. Cost accounting and managerial accounting also include topics that could be considered finance.

cost accounting
The study of costs, including methods of classifying, allocating, and identifying costs.

ratio analysis
Evaluation of an organization's performance by computing the relationships of important line items in the financial statements.

capital analysis
A process to determine how much a capital expenditure will cost and what return it will generate.

Finance

Historically, the purpose of finance has been to borrow and invest the funds necessary for the organization to accomplish its purpose. Today, the purpose of finance is to analyze the information provided by managerial accounting to evaluate past decisions and make sound assessments regarding the future of the organization (Finkler 2003). Finance uses techniques such as **ratio analysis** and **capital analysis** and requires knowledge of financial and managerial accounting (see appendix 1.1), economics (see appendix 1.2), statistics (see appendix 1.3), and operations research. Exhibit 1.1 shows the relationship of finance to the aforementioned supporting disciplines.

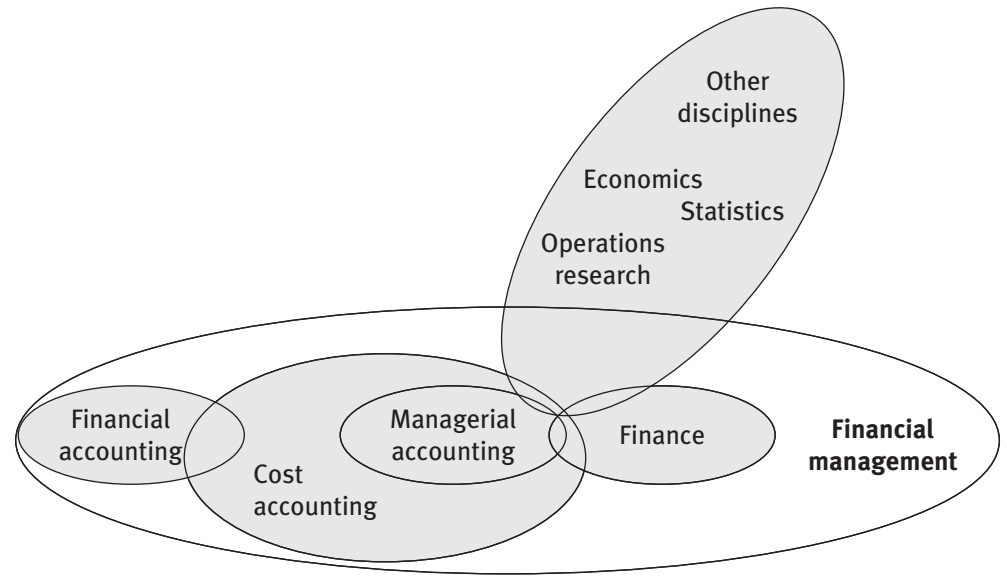


Exhibit 1.1
Financial Management Relationships

Major Objectives of Healthcare Financial Management

In this section, we will examine six major objectives of healthcare financial management: (1) to generate income, (2) to respond to regulations, (3) to facilitate relationships with third-party payers, (4) to influence the method and amount of payment, (5) to monitor physicians, and (6) to protect tax status.

Generate Income

While the purpose of healthcare financial management is to provide accounting and finance information that assists healthcare management in accomplishing the organization's objectives, all organizations have at least one objective in common: to survive and grow. Organizations in other industries might refer to this objective as maximizing owners' wealth; healthcare organizations typically refer to it as maintaining community services. In either event, the organization will be of little use if it cannot afford to continue to operate.

Therefore, the most important objective of healthcare financial management is to generate a reasonable **net income** (i.e., the difference between collected revenue and expenses) by investing in assets and putting the assets to work.

net income
The difference between collected revenues and expenses; a reasonable amount is considered the most important objective of healthcare financial management.

Respond to Regulations

Although financial management in healthcare organizations has similar objectives to that of organizations in other industries, different objectives also exist. The government regulates healthcare to a significant degree because healthcare organizations are in a position to take advantage of the sick and the elderly; regulation protects individuals who cannot protect themselves. Federal, state, and local governments pay more than 55 percent of all health insurance expenditures and therefore have a vested interest in ensuring that government money is well spent (Martin et al. 2016). Healthcare organizations must also be accredited or certified to qualify for reimbursement from many third-party payers and to qualify for loans from certain lenders. Therefore, the second objective of healthcare financial management is to respond to the myriad of regulations in a timely and cost-effective manner.

third-party payer
An agent of the patient (the first party) that contracts with a provider (the second party) to pay all or a portion of the bill to the patient.

Facilitate Relationships with Third-Party Payers

The third objective of healthcare financial management is to facilitate the organization's relationship with each **third-party payer**, such as an insurance company, that will pay all or a portion of the bill. Private health insurance, Medicare, and Medicaid account for more than 82 percent of all personal health consumption expenditures (Martin et al. 2016). Financial management must be responsive to third-party payers and in many ways must treat third-party payers as customers because the third party pays the bill. At the same time,

financial management must be attentive to the patient because the patient has influence over the third-party payer and in some cases may be partially responsible for the bill.

Influence Method and Amount of Payment

The fourth objective of healthcare financial management is to influence the method and amount of payment chosen by third-party payers. Third-party payers are becoming increasingly aggressive in asking healthcare organizations for discounts if they provide large numbers of patients. In certain cases, healthcare organizations are discounting prices below costs to maintain market share.

Some third-party payers, such as Medicare, are asking healthcare organizations to assume part of the financial risk for the patient by agreeing to a **prospective payment**, or, in other words, agreeing in advance to a price for providing care to a patient. Healthcare organizations lose money if they provide care that costs more than the prospective payment.

Some third-party payers are asking healthcare organizations to assume risk by agreeing to a **capitated price** (i.e., a price per head or subscriber) before the subscriber actually needs care. Capitated prices put healthcare organizations at risk for the cost of care, if needed.

prospective payment
A payment system in which a healthcare organization accepts a fixed, predetermined amount to treat a patient, regardless of the true ultimate cost of that treatment. Diagnosis-related groups (DRGs) are one type of prospective payment; Medicare pays hospitals a fixed amount for an episode of treatment based on that treatment's DRG.

capitated price
A healthcare payment system in which an organization accepts a monthly payment from a third-party payer for each individual covered by that payer's plan, regardless of whether a given individual is treated in a given month. Also known as *capitation*, it provides a financial incentive to a healthcare organization to keep its population from using more healthcare services than necessary because the organization profits only if the total cost of treating the specified population falls below the total capitated price provided by the third-party payer.

Monitor Physicians

The fifth objective of healthcare financial management is to monitor physicians and their potential financial liability to the organization. In 2015 (the most recent year for which data were available at time of publication), professional services including physicians, dentists, and other professionals accounted for 30.9 percent of all personal healthcare expenditures (Martin et al. 2017). However, physicians influence much of the healthcare spending that is not directly attributed to them. For example, physicians order the patient admission, the diagnostic testing and treatment for the patient, and the patient discharge. Healthcare financial management must ensure through the utilization review process that physician ordering patterns are consistent with what the patient needs. In addition, healthcare financial management must ensure through the credentialing process and the risk management process that the healthcare organization using more healthcare has minimized its exposure to legal liability for a physician's possible negligent actions.

Protect Tax Status

The sixth major objective of healthcare financial management is to protect the organization's tax status. For-profit healthcare organizations seek ways to reduce their tax liability, and not-for-profit healthcare organizations try to protect their tax-exempt status. Protecting tax-exempt status has become more difficult as state and local governments seek new

MINI-CASE STUDY

Suppose you were recently hired to manage a new primary care physician's office. The physician's office will be located downtown in a major metropolitan area with significant competition. You need to establish the organization's purpose and financial objectives. What items should you consider in establishing the organization's purpose? What organizational purpose should you suggest to the physician owners? What should the financial objectives of the organization be?

revenue sources, and tax-exempt status has come under judicial and public scrutiny (see chapter 4).

Quality Assessment and Healthcare Financial Management

The healthcare industry has long had difficulty with defining quality:

> Quality . . . you know what it is, yet you don't know what it is. But that's self-contradictory. But some things are better than others. That is, they have more quality. But when you try to say what that quality is, apart from the things that have it, it all goes poof! There's nothing to talk about. But if you can't say what quality is, then for all practical purposes, it doesn't exist at all. But for all practical purposes it does exist. What else are the grades based upon? Why else would people pay fortunes for some things and throw others in the trash pile? Obviously, some things are better than others . . . but what's the 'betterness?' . . . So round and round you go, spinning mental wheels and nowhere finding any place to get traction. (Pirsig 1974, 179)

Since the 1970s, healthcare organizations have responded to serious pressure to define quality. In the early 1970s, accrediting agencies and third-party payers applied this pressure. In the late 1970s and early 1980s, the consumer movement added pressure. In the late 1980s through the present, competition has added pressure. Economists predict that the pressure will continue as competition drives prices to their lowest—and relatively equal—point, and the market will force healthcare organizations that survive to compete on quality in addition to price. Healthcare organizations have responded to this pressure with two contrasting strategies: either a proactive strategy that attempts to adopt a comprehensive view of quality or a reactive strategy that attempts to limit views of quality to views developed by others.

Proactive Strategy

Healthcare organizations that have adopted a proactive strategy have developed multiple measures of quality, including direct and indirect measures that go beyond the minimum measures required by accrediting organizations (Conrad and Blackburn 1985). Direct measures of quality assume that the organization can define and measure quality itself. These measures include the following:

1. *Goal-based measures* assess quality by the progress made toward the goals of the strategic and operating plans. The key advantage of goal-based measures is that they focus attention on success or failure.
2. *Responsive measures* assess quality by customer opinion. The key advantage of responsive measures is that they understand quality from the customer's point of view.
3. *Decision-making measures* assess quality by evaluating decisions. The key advantage of decision-making measures is that they direct accountability to the decision maker.
4. *Connoisseurship measures* allow quality to be assessed by expert opinion, such as accreditation. The key advantage of connoisseurship measures is that they inspire high credibility.

Indirect measures of quality assume that the organization cannot define and measure quality itself but can define and measure the results of quality. These measures include the following:

1. *Resource measures* assume that price reflects quality. The key advantage of resource measures is that they provide quantitative data that are readily available.
2. *Outcome measures* assume that results reflect quality. The key advantage of outcome measures is the emphasis on results.
3. *Reputational measures* assume that public perception reflects quality. The key advantage of reputational measures is that they produce ratings for the public.
4. *Value-added measures* assume that process reflects quality. The key advantage of value-added measures is that, after adjusting for input and output, they focus on process, which the organization can control.

Reactive Strategy

Healthcare organizations that have adopted a reactive strategy have responded in several ways to accrediting agencies and quality consultants, including

- ensuring quality by centralizing quality efforts in a quality assurance department, then decentralizing quality efforts to clinical departments, and then further decentralizing quality efforts to all departments;

- ensuring quality by studying clinical outcomes, then studying clinical processes, then studying all outcomes and all processes, and finally studying key outcomes and key processes;
- improving quality by continuous attention and total management; and
- assessing quality by identifying key processes and desired outcomes.

Since 1986, The Joint Commission has focused on quality, the customer, work processes, measurements, and improvements. To its primary goal of accrediting healthcare organizations, The Joint Commission added the goal of developing and implementing a national performance measurement database. For a description of the current requirements regarding performance measures and performance measure data, consult the chapter "Performance Measurement and the ORYX Initiative (PM)" in the Joint Commission's *Comprehensive Accreditation Manual for Hospitals* (Joint Commission 2016).

In response to the Institute of Medicine's report *To Err Is Human* (IOM 1999) that as many as 98,000 Americans die each year as a result of errors in hospitals, The Joint Commission announced a new set of patient safety and medical error reduction standards that took effect July 1, 2001 (Joint Commission 2001). The IOM report was reinforced by three 2006 studies that measured not only deaths caused by hospital-acquired infections but also the increased costs associated with preventable hospital errors (Conn 2006). The Joint Commission standards required accredited hospitals (Lovern 2001) to

- make their doctors tell patients when they receive substandard care or care that differs significantly from anticipated outcomes;
- implement an organization-wide patient safety program with procedures for immediate response to medical errors;
- report to the hospital's governing body at least once annually on the occurrence of medical errors; and
- revise patient satisfaction surveys to ask patients how the organization can improve patient safety.

In July 2002, The Joint Commission approved the first **National Patient Safety Goals (NPSGs)** for hospitals. The NPSGs help accredited organizations address specific areas of concern regarding patient safety. Each goal includes a number of evidence- or expert-based requirements. Each year the goals are reevaluated, and the goals may be continued or replaced based on new patient safety priorities. The 2016 Joint Commission NPSGs for hospitals include the following (Joint Commission 2016):

National Patient Safety Goals (NPSGs)
A set of goals established by The Joint Commission to address safety areas of special concern for hospitals.

- Improve the accuracy of patient identification.
- Improve the effectiveness of communication among caregivers.

- Improve the safety of using medications.
- Reduce the harm associated with clinical alarm systems.
- Reduce the risk of healthcare-associated infections.
- Identify safety risks inherent in the hospital's patient population.

National Patient Safety Goals for other types of healthcare providers can be accessed via The Joint Commission website at www.jointcommission.org/standards_information/npsgs.aspx.

In conjunction with the NPSGs, The Joint Commission also introduced the Universal Protocol for Preventing Wrong Site, Wrong Procedure, and Wrong Person Surgery. The Universal Protocol applies to all surgical and invasive nonsurgical procedures and requires that hospitals conduct a preprocedure verification process, mark the procedure site, and perform a time-out before the procedure (Joint Commission 2016).

The Joint Commission's 2016 hospital accreditation manual featured a new chapter entitled "Patient Safety Systems," the stated intent of which was "to provide health care organizations with a proactive approach to designing or redesigning a patient-centered system that aims to improve quality of care and patient safety, an approach that aligns with the Joint Commission's mission and its standards." The new chapter reflects the Joint Commission's understanding that patient safety and quality are "inextricably linked" (Joint Commission 2016, PS-1).

Effects of Quality on Profitability

Deming and others have long argued that quality improvements lead to higher profitability. Deming introduced the following chain reaction analogy: Improvements in quality (fewer errors) lead to improvements in productivity, which lead to lower costs, which lead to lower prices, which lead to improved market position, which leads to increased volumes, which lead to increased profit (Deming 1982).

Significant evidence shows that improved quality has led to improved profitability in healthcare. Solucient ranked the nation's top 100 hospitals using clinical measures (now ranked by Truven Health Analytics—an IBM Company). In 2003, *Modern Healthcare* for the first time reported financial data for the top 100 hospitals. These hospitals consistently outperformed their peer group hospitals on both the clinical and financial measures.

MINI-CASE STUDY

Suppose that you are the administrator of a nursing home owned by a for-profit parent corporation that owns 30 nursing homes. You have been asked by the board of directors of the parent corporation to explain how your quality initiatives will improve profitability. What is your presentation?

Organizational Ethics and Healthcare Financial Management

The Joint Commission and healthcare professional associations such as ACHE and HFMA

MINI-CASE STUDY

Imagine that you manage a four-physician office practice in a competitive neighborhood. Vendors often bring lunches and gifts for your staff and samples of prescription medications that the physicians then give to patients. Could any of these practices pose a problem? If so, why?

have long emphasized organizational ethics. Several Joint Commission standards require healthcare organizations to have mechanisms in place to address ethical issues related to such topics as patient rights and management responsibilities. Ethical issues concerning patient rights include informed consent, patient confidentiality, and the patient's right to participate in care decisions and end-of-life decisions. Ethical issues concerning management responsibilities include resource allocation, conflicts of interest, and patient billing practices.

Resource allocation decisions by managers often conflict with the decisions made by physicians and other clinicians. Managers typically represent a utilitarian view of ethics, best represented by the phrase "the greatest good for the greatest number." This view allows managers to sacrifice the use of resources for one patient to maintain resources for other patients, given the assumption that resources for the healthcare organization are limited. Clinicians typically represent a *deontological* view of ethics, which means that their decisions are governed by their duties to patients, which take precedence over the ends-based decision making of the manager. This continuous conflict seems to keep resource allocation decisions somewhat balanced.

Conflicts of interest occur when an individual owes duties to two or more persons or organizations and when meeting a duty to one somehow harms the other (Darr 2011). Perhaps the worst examples of conflict of interest involve the conflict between a manager's duties to the organization and a manager's duties to self, such as when managers use their positions of authority for personal gain. Even the perception of impropriety may cause a loss of credibility (Nowicki and Summers 2001). This is especially true in financial management, where contracts for services and products are awarded to vendors who may attempt to buy influence with a lunch or a gift.

For the most part, patient billing practices, especially for Medicare and Medicaid, are covered by law; however, even certain legal practices have ethical ramifications. For instance, how long should a healthcare organization hold a patient's deposit after the insurance company pays in full? State law on this issue and overpayments by commercial insurance companies is nonexistent or varies widely. Although a healthcare organization may be under no legal obligation to refund overpayments by insurance companies, is keeping someone else's money ethical? Many healthcare organizations use ethics committees to provide answers to these and other billing questions. Although healthcare organizations are not required to organize ethics committees, committees are a useful way to solicit community input on billing issues.

Value of Healthcare Financial Management

Healthcare financial management provides accounting information and financial techniques that allow managers to perform the management functions and the management connective processes and therefore accomplish the organizational objectives. In addition, healthcare financial management also has direct value to these functions, as explained in the following list of management functions (Dunn 2016).

- *Planning*: After the governing body completes the strategic plan and senior management completes the operating plan, financial management is often responsible for completing the operating budget and capital budget. The operating budget often provides the incentives to plan properly.
- *Organizing*: Financial management provides a chart of accounts based on the organizational chart that identifies revenue centers and cost centers. Together with the organizational chart, this chart of accounts provides the basis for responsibility accounting, which is the ability to hold department managers responsible for their revenues and expenses.
- *Staffing*: Financial management often staffs a variety of departments and processes important to the healthcare organization. Departments such as medical records and information systems are currently being placed under the supervision of financial management, in addition to departments such as accounting, admitting, and materials management, which have been traditionally under financial management. The increasing importance of nontraditional departments in the billing process appears to justify this trend.
- *Directing*: Financial management provides rewards and penalties to motivate others to accomplish the organization's purposes.
- *Controlling*: Perhaps the responsibility closest to the overall function of financial management, the control of the budget, financial reports, financial policies and procedures, and financial audits allows financial management to monitor performance and take the appropriate corrective action when performance is unsatisfactory.

These management functions mean little without the management connective processes to integrate the functions.

Communicating and coordinating are important to financial management for both reporting and advising. Also important is coordinating the relationships between, for example, revenue and expenses, capital budgets and operating budgets, and volumes and prices and collected revenues.

Decision making is important to financial management as a direct measure of quality. Governing boards, CEOs, and outside sources such as independent auditors often judge the quality of financial management on the basis of the decisions and recommendations made by financial management. The advantage of this view of quality is that it holds the decision maker accountable. The disadvantage is that it assumes rational decision making. Decisions made in healthcare financial management are often based on politics or other criteria that are unknown to the evaluator of the decision. Therefore, a decision may be evaluated as bad on the basis of the known facts, but it may be evaluated as good on the basis of other criteria unknown to the evaluator.

Effect of Financial Management on the Changing Face of Healthcare

Many observers say that financial management is the most important predictor of whether healthcare organizations will survive in the current competitive climate and beyond. Healthcare is one of several industries that society has allowed to grow beyond the industry's ability to produce efficiently—other industries include agriculture during the 1970s, the auto industry during the 1980s, the petroleum industry during the 1990s, the financial services industry during the first decade of the twenty-first century, and higher education during the 2010s. The recession that began in 2008 affected healthcare organizations as much as it affected many other industries, and the passage of the Affordable Care Act in 2010 created entirely new financial challenges. The implications of this reform on healthcare finance may not be fully known for many years, but at least three elements of the legislation were expected to profoundly affect the financial situation of healthcare organizations: the increase in the number of individuals with health insurance; the changing reimbursement structures; and the explicit linking of reimbursement with quality measures.

Clearly, only the well-managed healthcare organizations will survive this changing situation; financial management will be instrumental in their survival.

Chapter Key Points

- Whereas an organization may have more than one organizational purpose, the financial purpose of the organization is to provide accounting and finance information that helps healthcare managers accomplish the organization's purposes.
- Among the major objectives of financial management relevant to any healthcare manager (to generate income, to respond to regulations, to facilitate relationships with third-party payers, to influence the method and amount of payment, to monitor

physicians, and to protect tax status), the one objective all organizations' financial managers have in common is to survive and grow.

- Understanding the impact of quality on profitability can turn good managers into great managers.
- Sound ethical reasoning should affect every decision, even financial decision making.

Discussion Questions

1. Why is financial management important to the organization?
2. What is the distinction between the purpose of healthcare management and the purpose of healthcare financial management?
3. How would you prioritize the major objectives of healthcare financial management?
4. What are the major ethical theories, and how do they apply to the role of a healthcare manager?
5. Why should financial managers be concerned with quality initiatives in the healthcare organization?
6. How would you predict that financial management and the management functions will be important as healthcare changes in the future?

Appendix 1.1
Financial Accounting Outline

I. Financial accounting is the science of preparing financial statements for use by individuals and organizations external to the organization.

II. Accounting equation
Total assets = Liabilities + Net assets

III. Objectives of financial accounting
   A. Provide information that is useful to present and potential investors, creditors, and other decision makers.
   B. Provide information about the economic resources of the healthcare organization, the claims to those resources, and the effects of transactions, events, and circumstances that change those resources.
   C. Provide information about a healthcare organization's performance.
   D. Provide information about how a healthcare organization generates and expends cash, about its loans and repayment of loans, and about its capital expenditures.
   E. Provide information about how a healthcare organization has discharged its stewardship duties to its owners.

IV. Accounting concepts
   A. Entity—The healthcare organization stands apart from all other organizations and is capable of taking on economic transactions.
   B. Reliability—Accounting records must be based on information that is verifiable from an independent source.
   C. Cost valuation—Assets and services are recorded at actual, historical cost.
   D. Going concern—The entity will operate long enough to recover the cost of its assets.
   E. Stable monetary unit—This is the basis for ignoring the effects of inflation in short-term transactions.

V. Accounting principles
   A. Accrual accounting—Revenue is recorded when it is realized (i.e., billed), and expense is recorded when it contributes to operations.
   B. Cash accounting—Revenue and expenses are recorded when cash is actually received or paid.
   C. Accounting period—This is a defined fiscal year or month.
   D. Matching—Related revenue and expense should be reported in the same accounting period.
   E. Conservatism—Uncertainty dictates understating revenues and volumes that lead to revenues, and overstating expenses.
   F. Full disclosure—All economic transactions should be recorded.

G. Industry practices—Accounting principles are relatively unique to the healthcare industry.
   1. Fund accounting—This allows not-for-profit and governmental healthcare organizations to establish separate entities for specified activities. Typical funds include operating or general funds, specific-purpose funds, plant-replacement funds, and endowment funds. Each fund is self-balancing in that assets equal liabilities added to net fund balance.
   2. Contractual allowances—This is the revenue account that records the difference between billed charges and the price a customer has agreed in advance to pay via contract.
   3. Depreciation—This is the expense account that records the estimated cost of an expiring asset.
   4. Funded depreciation—This is the amount saved to replace assets at the end of their useful life.
   5. *AICPA Audit and Accounting Guide for Health Care Organizations*
      a. There were major changes in the 1990 edition.
         1) On the statement of revenues and expenses, operating revenue is reported net of contractual allowances.
         2) On the statement of revenues and expenses, operating revenue is reported net of charity care; however, the healthcare organization's policy for charity care, in addition to the level of charity care, must be in the footnotes.
         3) On the statement of revenues and expenses, bad debt expense is reported as an expense based on price.
         4) On the statement of revenues and expenses, donated assets are reported at fair market value as of the date of the gift.
         5) On the statement of revenues and expenses, donated services are reported as an expense, and a corresponding amount is reported as a contribution, but only if the services are significant and measurable.
      b. There were major changes in the 1996 edition.
         1) Changes were made to the basic financial statements.
            a) Balance sheet (consolidated)
            b) Statement of operations
            c) Statement of changes in equity
            d) Statement of cash flows
         2) The balance sheet reports net assets.
            a) Unrestricted
            b) Temporarily restricted
            c) Permanently restricted

3) Statement of operations reports performance indicator.
   a) Revenues over expenses
   b) Earned income
   c) Performance earnings

c. There were major changes in the 2010 edition.
   1) Update on the hierarchy of generally accepted accounting principles
   2) Omnibus change to the consolidation and equity method guidance for not-for-profit organizations
   3) Determining fair value when the volume and level of activity for the asset or liability have significantly decreased
   4) Interim disclosure about fair value of financial investments
   5) Recognition and presentation of other-than-temporary impairments
   6) The hierarchy of generally accepted accounting principles for state and local governments
   7) Land and other real estate investment by endowments
   8) Charity care remains a note to the financial statements but must be reported at full cost with the method used to determine cost.

d. There were major changes in the 2011 edition.
   1) Conforming to changes resulting from the *ASB Clarity Project*
   2) Reporting relationships with other entities
   3) Reporting and measuring noncash gifts
   4) Expiring donor-imposed restrictions
   5) Reporting program-related investments and microfinance loans
   6) Reporting net assets and related disclosures
   7) Accounting for contributions and receivables
   8) Accounting for investments
   9) Auditing net asset classification and revenue and expense recognition
   10) Healthcare entities that recognize a significant amount of patient services revenue at the time the services are rendered, even though the entity does not assess the patient's ability to pay, shall present that portion of bad debt as a deduction of revenue and shall report its policy for assessing collectibility in determining the timing and amount of patient service revenue by payer.

e. The Financial Accounting Standards Board (FASB) Accounting Standards Update 2016-02 (published February 2016) addresses leases (Topic 842). FASB is issuing this update in the spirit of transparency and comparability of financial statements among

organizations. Leasing often allowed an organization to gain access to assets without providing the full presentation of the leasing transaction on the financial statements. This is especially true with operating leases. Generally speaking, Update 842 requires the lessee to present the lease liability (lease payments) and lease asset (right-of-use) for operating leases over 12 months. Update 842 is effective for fiscal years beginning after December 15, 2018, for public business entities and not-for-profit entities that have issued securities that are traded or quoted on an exchange or an over-the-counter market. For all other entities, Update 842 is effective for fiscal years beginning after December 15, 2019 (FASB 2016; see https://asc.fasb.org/imageRoot/47/77977547.pdf for more information).

VI. Sarbanes-Oxley Act of 2002
   A. This federal corporate accountability legislation was passed in the aftermath of Enron's downfall and intended to improve governance and corporate practices. The legislation includes the following standards.
      1. Accounting firms are prohibited from providing certain nonaudit services to a client contemporaneously with an audit.
      2. Accounting firms are required to "timely report" to the board's audit committee material communications between the auditor and management.
      3. Principal executive and financial officers are required to certify financial reports, subject to civil and criminal penalties.
      4. Eligibility for audit committee membership, including no affiliation with the company or its subsidiaries, and specific duties of the audit committee are established.
      5. The Securities and Exchange Commission (SEC) is directed to establish "minimum standards of professional conduct" for lawyers whose practice includes SEC matters.
      6. Personal loans to directors and executive officers are prohibited.
      7. Companies are required to maintain an internal control structure and procedures for financial reporting.
      8. Companies are required to disclose whether they have a code of ethics for senior financial officers.
      9. Disclosure of off–balance sheet transactions is required.
      10. New record retention rules and penalties are established.
   B. The act applies only to public companies, though many states are considering adopting similar legislation for nonprofits (e.g., New York).
   C. Some nonprofits are holding themselves voluntarily to Sarbanes-Oxley standards.

Appendix 1.2
Economics Outline

I. Economics is the science of producing, distributing, and consuming material goods and services to make better decisions in a world of limited resources.
II. Economic systems
    A. Capitalism is based on private property rights with distribution decisions made by the free market based on ability.
        1. Adam Smith's theory was that an "invisible hand" guides the free market economy. Individuals who pursue their own self-interests actually produce economic results beneficial to society as a whole (Smith 2009 [1776]).
        2. The government's role
            a. National defense
            b. Administration of justice
            c. Facilitation of commerce
            d. Provision of certain public works
    B. Socialism is based on private and government property rights with distribution decisions made by the government based on effort.
        1. Karl Marx defined socialism as a transitory stage between capitalism and communism. Socialism is classified by government ownership of all important property, and means of distribution of surplus by the government based on the formula "from each according to ability, to each according to need" (Marx 1998 [1848]).
        2. The government's role: "dictatorship of the proletariat" during an economic class struggle
    C. Communism is based on public property rights with distribution decisions made by the public based on need.
        1. Karl Marx classified communism as the final and perfect goal of historical development characterized by (1) a classless society in which all people live by earning and no person lives by owning; and (2) the abolition of the wage system so that all citizens live and work based on the formula "from each according to ability, to each according to need."
        2. The government's role: no government
III. Free markets under capitalism
    A. Characteristics of free market
        1. There is a large number of buyers and sellers, each with a small share of the total business so that no single participant can affect market price.
        2. Buyers and sellers are unencumbered by economic or institutional restrictions, and they possess full knowledge of market prices and alternatives. As a result, they enter or leave markets whenever they wish.

B. Functions of free market
   1. Competitive prices through the law of supply and demand are established.
   2. Efficient use of resources is encouraged.

C. Theories of free market
   1. Classical—At market equilibrium (supply equals demand therefore price remains constant), the economy attains full employment; supply creates its own demand; flexibility exists in wages, prices, and interest rates; and savings are invested.
   2. Demand side—At market equilibrium, the economy does not attain full employment, demand creates its own supply, wages and prices are "sticky," and savers and investors are separate groups of people, with each group having specific motivations.
   3. Supply side—At market equilibrium, the economy does not attain full employment; supply creates its own demand; flexibility exists in wages, prices, and interest rates; and savings are invested.

D. Policy implications of free-market theories
   1. Classical—Market is self-correcting; no policies are needed.
   2. Demand side—Market self-correction is possible; however, it may take a long time. Therefore, government intervention is necessary to stimulate the economy by regulating demand through large-scale government spending programs supported by increased taxes or increased money supply.
   3. Supply side—Market self-correction is possible; however, it may take a long time. Therefore, government intervention is necessary to stimulate the economy by stimulating supply (production) through tax reductions, nonmonetization of government deficits, and deregulation of certain industries.

E. Supply-side economics—Did it work during the 1980s?
   1. Efficiency
      a. The inflation rate fell from an annual average of 10.3 percent under President Carter to 3.9 percent under President Reagan.
      b. The unemployment rate fell from an annual average of 7.5 percent under Carter to 5.3 percent under Reagan.
      c. Per capita disposable income rose from $9,800 under Carter to $11,000 under Reagan.
      d. Interest rates declined from 12.5 percent under Carter to 8.5 percent under Reagan.
   2. Growth—The gross national product rose from an annual average of 2.7 percent under Carter to 3.0 percent under Reagan.

3. Deregulation—Modest gains were achieved under Reagan; most notable was the airline industry.
4. Equity—Families living in poverty increased from 11.9 percent under Carter to 13.7 percent under Reagan.
5. Stability—Deficits increased from an annual average of $60 billion under Carter to $190 billion under Reagan.

F. Regulation in the free market
1. Costs of regulation (Weidenbaum and DeFina 1981)
a. Direct costs = $10 billion per year
b. Indirect costs, or compliance costs = $200 billion per year
2. Economic justifications for regulation
a. Public interest theory—to protect the public
b. Industry interest theory—to protect the industry
c. Public choice theory—to protect government

IV. Healthcare economics
A. External effects on healthcare economics
1. Federal debt (in billions) and as a percent of GDP (US Department of Treasury 2016b; US Department of Commerce Bureau of Economic Analysis 2016)

2006 = $8,506, 61.4 percent
2007 = $9,007, 62.2 percent
2008 = $10,024, 68.1 percent
2009 = $11,909, 82.6 percent
2010 = $13,561, 90.6 percent
2011 = $14,790, 95.3 percent
2012 = $16,066, 99.5 percent
2013 = $16,738, 102.8 percent
2014 = $17,824, 102.5 percent
2015 = $18,150, 106.3 percent

2. Federal budget surpluses (in billions) (US Department of Treasury 2016a)

2006 = ($249)
2007 = ($160)
2008 = ($458)
2009 = ($1,413)
2010 = ($1,294)
2011 = ($1,299)
2012 = ($1,086)
2013 = ($680)
2014 = ($648)
2015 = ($583)

3. Aging population (Ortman, Velkoff, and Hogan 2014)

   1960 = 9.3 percent aged 65 years or older

   1995 = 13.0 percent aged 65 years or older

   2030* = 20.7 percent aged 65 years or older

   *projected

B. Internal effects on healthcare economics

1. Health expenditures by population aged 65 years or older (CMS 2016a)

   1960 = 23.6 percent

   1995 = 33.0 percent

   2030* = 52.5 percent

   *projected

2. Health expenditures (in billions) and as a percentage of the gross domestic product (CMS 2016a)

   1960 = $27.2, 5.0 percent

   1970 = $74.6, 6.9 percent

   1980 = $255.3, 8.9 percent

   1990 = $721.3, 12.1 percent

   2000 = $1,369.7, 13.3 percent

   2005 = $2,024.2, 15.5 percent

   2006 = $2,156.5, 15.6 percent

   2007 = $2,295.6, 15.9 percent

   2008 = $2,399.0, 16.3 percent

   2009 = $2,494.6, 17.3 percent

   2010 = $2,596.4, 17.4 percent

   2011 = $2,687.9, 17.3 percent

   2012 = $2,795.4, 17.3 percent

   2013 = $2,877.6, 17.2 percent

   2014 = $3,029.3, 17.4 percent

   2015 = $3,205.5, 17.8 percent

3. Health expenditures per person (CMS 2016a)

   1960 = $146

   1970 = $355

   1980 = $1,108

   1990 = $2,843

   2000 = $4,857

   2005 = $6,855

   2006 = $7,233

   2007 = $7,628

2008 = $7,897
2009 = $8,141
2010 = $8,404
2011 = $8,638
2012 = $8,915
2013 = $9,110
2014 = $9,515
2015 = $9,990

4. Selected health expenditures by type of service, 2015 (Martin et al. 2017)
   Hospital care, 32.3 percent
   Professional service, 26.2 percent
   Prescription drugs, 10.1 percent
   Nursing homes, 4.9 percent
   Medical equipment and supplies, 3.4 percent
5. Health expenditures by source of funds, 2015 (Martin et al. 2017)
   Private health insurance, 33.4 percent
   Medicare, 20.2 percent
   Private out of pocket, 10.6 percent
   Medicaid, federal, 10.7 percent
   Medicaid, state, 6.3 percent
   CHIP, DOD, VA, 3.8 percent
   Other third party, 10.2 percent
   Investment, 4.8 percent
6. Health expenditures by percentage increase from previous year (CMS 2016a)

1990 = 11.7 percent
1991 = 9.5 percent
1992 = 8.6 percent
1993 = 7.3 percent
1994 = 5.5 percent
1995 = 5.4 percent
1996 = 5.2 percent
1997 = 5.4 percent
1998 = 4.8 percent
1999 = 5.6 percent
2000 = 6.3 percent
2001 = 8.5 percent
2002 = 6.4 percent

2003 = 8.2 percent
2004 = 7.9 percent
2005 = 7.4 percent
2006 = 6.7 percent
2007 = 6.3 percent
2008 = 4.6 percent
2009 = 4.0 percent
2010 = 4.1 percent
2011 = 3.5 percent
2012 = 4.0 percent
2013 = 2.9 percent
2014 = 5.3 percent
2015 = 5.8 percent

Appendix 1.3
Statistics Outline

I. Statistics is the science of collecting, organizing, presenting, analyzing, and interpreting numbers to make better decisions in a world of uncertainty.
II. Descriptive statistics
    A. Descriptive statistics are used to describe various features of a data set.
    B. Measures of central tendency
        1. *Mean*, *or average*, is derived by summing the observations and dividing by the number of observations.
        2. *Median* is derived by arranging the observations from smallest to largest and selecting the midpoint observation.
        3. *Mode* is derived by selecting the observation that occurs most often.
        4. *Modified mean* is derived by deleting the smallest and the largest observations.
        5. *Weighted mean* is derived by multiplying each observation by a volume, summing the results, and then dividing by the total volume.
    C. Measures of dispersion and shape
        1. *Range* is the difference between the largest and smallest observation.
        2. *Variance* is the average of the squared differences between each observation and the mean.
        3. *Standard deviation* is the square root of the variance.
        4. Shape
            a. Symmetrical—Mean and median are the same.
            b. Right or positive skewed—Mean exceeds the median.
            c. Left or negative skewed—Median exceeds the mean.
    D. The index number is derived by calculating the number in current year divided by the number in base year times 100.
III. Inferential statistics
    A. Inferential statistics are used to infer the characteristics of a sample to the characteristics of the population.
    B. Probability
    C. Hypothesis testing
    D. Linear regression and correlation are used to predict future events and the strength of the association between variables.
    E. Tests of significance
        1. The t-test is used to determine how likely it is that two mean scores differ by chance.
        2. Analysis of variance is used to determine whether a significant difference exists between two or more means.

3. Analysis of covariance is used to determine whether there is a significant difference between two or more means for groups that are initially unequal.

IV. Healthcare statistics
   A. *Adjusted average daily census* is derived by dividing the number of inpatient day equivalents (also called *adjusted inpatient days*) by the number of days in the reporting period.
   B. *Adjusted expenses per admission* is derived by removing expenses incurred for the provision of outpatient care from total expenses and then dividing by the total admissions in the reporting period.
   C. *Adjusted expenses per inpatient day* is derived by dividing total expenses by inpatient day equivalents (also called *adjusted inpatient days*).
   D. *Admissions* include number of patients, excluding newborns, accepted for inpatient service.
   E. *Average daily census* is the average number of inpatients, excluding newborns, receiving care each day during the reporting period.
   F. *Average length of stay* is derived by dividing the number of inpatient days by the number of admissions.
   G. *Expenses* includes all expenses for the reporting period.
      1. *Payroll expenses* includes all salaries and wages.
      2. All professional fees and those salary expenditures excluded from payroll are defined as *nonpayroll expenses* and are included in total expenses. *Labor-related expenses* is defined as payroll expenses plus employee benefits. *Nonlabor-related expenses* includes all other nonpayroll expenses. In accordance with the *AICPA Audit and Accounting Guide for Health Care Organizations* (AICPA 1996), *bad debt* has been reclassified from a "deduction from revenue" to an expense. However, for historical consistency purposes, expense totals may not actually include bad debt expense.
   H. *Full-time equivalent personnel* is derived by adding the number of full-time personnel to one-half the number of part-time personnel.
   I. *Inpatient day equivalents* is derived by multiplying the number of outpatient visits by the ratio of outpatient revenue per outpatient visit to inpatient revenue per inpatient day, and adding the product (which represents the number of patient days attributable to outpatient services) to the number of inpatient days (can also be used to adjust patient days for skilled nursing facilities, rehabilitation, home care, etc.).
   J. *Occupancy rate* is the ratio of average daily census to the average number of statistical (set up and staffed for use) beds (AHA 1985).

K. Revenue—*Gross patient revenue* (inpatient and outpatient) is revenue from services rendered to patients, including payments received from or on behalf of individual patients. *Net patient revenue* is derived by subtracting contractual adjustments and charity care from gross patient revenue. Net patient revenue represents what the organization actually intends to collect. *Net total revenue* is net patient revenue plus all other revenue, including contributions, endowment revenue, government grants, and all other revenue not made on behalf of patients.

CHAPTER 2

ORGANIZATION OF FINANCIAL MANAGEMENT

One of the signs of excellence in a manager is the ability to anticipate problems, not just react to them.

Sir Liam Donaldson, former chief medical officer of National Health Service, England (1995)

Learning Objectives

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

- Understand how healthcare organizations are organized
- Understand how chief financial officers receive their authority regarding the financial matters of the organization
- Identify the roles and responsibilities of the key financial managers
- Examine the alternative corporate structures available to healthcare organizations

Introduction

The successful accomplishment of organizational purposes requires a sound organizational structure. After the governing body has established a healthcare organization's purposes, management must determine the best way to accomplish them. To do so, management must identify and assign tasks to employees, departments, and divisions. In other words, management must organize. According to Dunn (2016), organizing includes

- *specialization*: dividing tasks into manageable categories and assigning the categories to employees with the appropriate skills;
- *departmentalization*: dividing employees into groups or teams that have similar responsibilities;
- *defining the span of management*: determining the optimum number of employees that a manager can manage, based on the nature of the tasks and the background of the employees;
- *defining authority*: determining the amount of authority to delegate to employees so that they can perform their assigned tasks;
- *defining responsibility*: determining the obligation necessary to perform assigned tasks;
- *establishing a unity of command*: appointing one manager to be responsible for a group of employees; and
- *defining the nature of relationships*: determining whether managers and employees have a line or staff relationship in the organization. In a line relationship, the manager or employee is directly responsible for resources, such as employees and supplies. In a staff relationship, the manager or employee acts in an advisory capacity without direct control over resources.

Most healthcare organizations are organized as legal entities called *corporations*. Corporate status is granted by the state and provides advantages for the healthcare organization. Corporate status provides limited liability, meaning that the owners of the corporation are seldom found to be personally liable for the contracts or negligence of the corporation. Another advantage of corporate status is its continuity of existence, meaning that the corporation continues even after the death of an owner. The third advantage of corporate status is the increased ability to raise capital, because the risk of investing in a corporation is only financial. In the case of for-profit corporations, a fourth advantage of corporate status is that shareholders are free to sell their shares at any time. For further discussion of these advantages, refer to *The Law of Healthcare Administration* (Showalter 2017).

This chapter provides a comprehensive description of the organization of financial management in healthcare organizations.

Governing Body

The governing body of a healthcare organization is responsible for the proper development, utilization, and maintenance of all resources in the organization. The governing body typically delegates the authority for accomplishing this duty to the organization's CEO. However, the governing body maintains legal responsibility for the organization. Because of this fact, courts continue to stress the importance of the governing body's duty of responsibility in selecting a competent CEO.

The governing body uses organized committees to monitor the CEO's performance. Although committee structures vary from organization to organization, an **executive committee** of the governing body typically monitors all committees and includes the chairs of all the committees as members. The **finance committee** monitors the CEO's performance in financial affairs. This committee includes governing body members with a financial interest or occupation. In smaller organizations, the duties of the finance committee also include audit responsibilities; in larger organizations, audit responsibilities may be monitored by an audit committee. Generally, the CEO and/or the chief operating officer (COO) and chief financial officer (CFO) attend finance committee meetings ex officio and also serve as staff support to those committees. Exhibit 2.1 identifies these relationships.

The governing bodies of healthcare organizations with corporate status cannot be held personally liable for either the contracts of the corporation or the negligence of the corporation's employees or agents (i.e., physicians). However, the governing body can be held collectively liable for a breach of its duty to act as a **fiduciary**, which means its duty

executive committee
A committee of the governing body of an organization that monitors all the other committees.

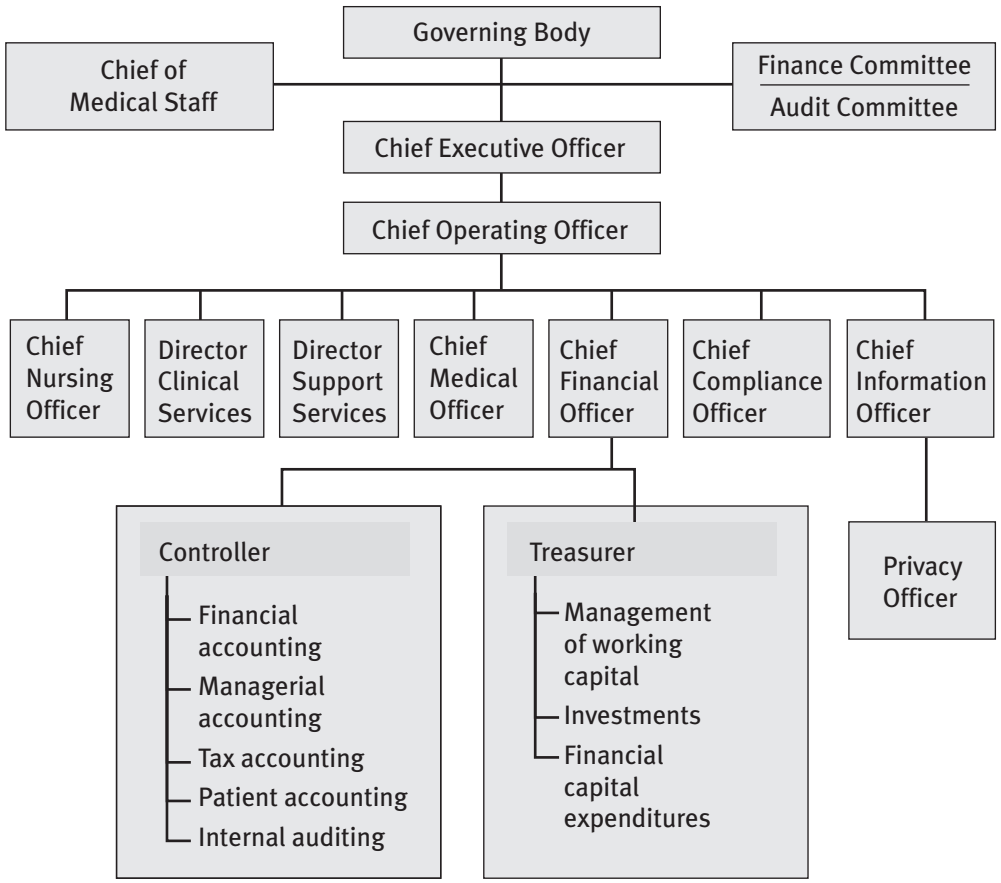
finance committee
A committee of the governing body of an organization that monitors the CEO's performance in financial affairs.

fiduciary
A person, or governing body, in a position of great trust and confidence. The term is typically used to describe the duty of an entity to be loyal and responsible.

CRITICAL CONCEPTS
The Trustees' Responsibility

The governing body of a healthcare organization is responsible for hiring a competent CEO. Of course, that does not always happen. When a board fails in that regard, it can be in legal trouble. In *Reserve Life Insurance Company v. Salter* (1957), one of the first cases establishing this duty, the court was severe in its finding: "Failing to appreciate their duties and responsibilities led these trustees to feel, according to their testimony, that they had discharged their duties by picking as administrator, Salter, a former school teacher, apparently as ignorant of operating a hospital as they themselves were."

Exhibit 2.1
Financial Organization



to act as a person in a position of great trust and confidence. The legal duties of a fiduciary include loyalty and responsibility. *Loyalty* requires fiduciaries to act in the best interests of the healthcare organization and to subordinate their personal interests to those of the organization. *Responsibility* requires fiduciaries to act with reasonable care, skill, and diligence in accomplishing their duties as members of the governing body (Showalter 2017).

After the Enron bankruptcy, the federal government passed strict corporate accountability standards known as the Sarbanes-Oxley Act of 2002 (SOX; see appendix 1.1 in chapter 1). While the standards only apply to publicly held, for-profit organizations, many not-for-profit organizations are attempting to comply with the standards. New York and California passed Sarbanes-Oxley–like state legislation in 2005, and in those states it applies to not-for-profits. Concerned that SOX compliance costs would force not-for-profits out of business in a sluggish economy, other states have been reluctant to pass comprehensive legislation. However, several states have established audit thresholds typically holding larger not-for-profits to stricter audit standards (Cohen 2012).

Financial Organization

In November 2003, Richard Scrushy, founder and former chair of for-profit HealthSouth, was indicted for 85 counts of conspiracy, fraud, and money laundering. The indictment alleged that Scrushy was the mastermind of a wide-ranging scheme to inflate the rehabilitation and outpatient-care company's earnings to meet Wall Street expectations. The indictment further alleged that Scrushy added at least $2.7 billion in fictitious income to HealthSouth's books during a multiyear conspiracy dating back to 1996. Scrushy became the first CEO (and as a result, healthcare became the first industry) indicted under Sarbanes-Oxley, which holds the CEO personally liable for financial misreporting. In what was characterized as healthcare's trial of the century, the jury in the five-month Scrushy trial acquitted Scrushy of all federal charges after 21 days of deliberation. Even though five of HealthSouth's CFOs testified against Scrushy, the jury chose to favor the defense's portrayal of Scrushy's character. Legal analysts also criticized the prosecution's strategy to prove 85 counts over a six-month trial.

Both federal regulatory agencies and bond rating firms are paying special attention to the healthcare industry since the HealthSouth trial (Piotrowski 2003a). In 2015, Standard & Poor's issued 83 credit upgrades and 46 downgrades in the healthcare sector, largely as a result of changing criteria and consolidation (Ellison 2016).

Chief Financial Officer

In larger healthcare organizations, the CEO delegates the authority for accomplishing the duties related to financial management to the CFO. However, the CEO has become increasingly involved in financial matters in recent years. In fact, in a 2015 survey conducted by the American College of Healthcare Executives (ACHE 2016b), CEOs ranked financial concerns as their top concern for the fourteenth consecutive year.

The Committee on Ethics and Eligibility Standards of the Financial Executives Institute has provided the following classic definition of the CFO's duties (Berman, Kukla, and Weeks 1994):

1. Establish, coordinate, and maintain, through authorized management, an integrated plan for the control of operations. Such a plan would provide cost standards, expense budgets, sales forecasts, profit planning, and programs for capital investments/financing to the extent required in the business.
2. Measure performance against approved operating plans and standards, and report and interpret the results of operations to all levels of management. This function includes the design, installation, and maintenance of accounting policy and the compilation of statistical records as required.
3. Measure and report on the validity of the objectives of the business and on the effectiveness of its policies, organization structure, and procedures in

attaining those objectives. This function includes consulting with all segments of management responsible for policy or action concerning any phase of the operation of the business as it relates to the performance of this function.

4. Report to government agencies as required and supervise all matters relating to taxes.
5. Interpret and report on the effect of external influences on the attainment of the objectives of the business. This function includes the continuous appraisal of economic and social forces and of government influences as they affect the operations of the business.
6. Provide protection for the assets of the business. This function includes establishing and maintaining adequate internal control and auditing and ensuring proper insurance coverage.

A profile of the average hospital and system CFO, according to information provided by the Healthcare Financial Management Association (HFMA), is shown in exhibit 2.2.

All six surveys that make up exhibit 2.2 include compensation comparisons by gender. In 2011, women CFOs earned an average of $62,400 less than men, up from a difference of $42,900 reported in 2009. In an attempt to determine the differences in salary between men and women, regression studies in 2001 and 2003 found that most of the differences were determined by other factors such as job tenure, total number of reporting employees, net patient revenue of the organization, the area's wage index, possession of a certified public accountant (CPA) certificate, eligibility for bonus or profit sharing, and

Exhibit 2.2 Hospital CFO Profile: Characteristics of Survey Respondents

	2005	2007	2009	2011	2013	2015
Average annual compensation	$172,000	$196,000	$209,800	$224,500	$236,600	$266,000
Average age	48	49	50	51	53	53
Percent male	77	78	71	71	72	70
Percent with master's degree	46	46	50	51	51	55
Percent with CPA	47	43	47	50	47	52
Percent with HFMA certification	19	15	24	27	28	28

Source: Data from HFMA (2016a).

bed count; however, gender still accounted for $14,000 of the reported difference in 2001 and $15,000 of the reported difference in 2003.

At an average age of 53 in 2015, hospital and system CFOs are relatively young. This means that organizations and associations such as HFMA will need to find new ways to motivate CFOs who have reached the top of their career ladder at a young age (the 1995 CFO profiles reported that only 8 percent of the surveyed CFOs aspired to be the CEO). Although only 16 percent of the CFOs were women in 1995, that percentage has increased steadily over the years, and it will continue to increase as women who graduate from business schools gain the prerequisite experience to be CFOs. Fifty-five percent of the CFOs have advanced degrees, usually in business administration. Most CFOs have undergraduate degrees in accounting, and 52 percent are certified in public accounting.

Many CFOs with multiple certifications would argue that HFMA certification is the most meaningful certification for CFOs in the healthcare industry. However, many CFOs received their public accounting certification shortly after graduation and believe additional HFMA certification is unnecessary. Only 28 percent of the CFOs in the 2015 survey were HFMA certified.

At the 2003 CFO Exchange sponsored by HFMA's CFO Forum, HFMA President Dick Clarke introduced a healthcare financial competency model that demands new, more complex roles for healthcare CFOs in addition to more traditional roles as identified in exhibit 2.3. Reaction to the competency model was mixed, and there has been little follow-up.

Exhibit 2.3
Roles of the CFO

Time Frame	Past Present → Future →		
Roles	Financial expert	Business adviser	Enterprise leader
Competencies	Technical expertise	Decision support	Strategic leadership
	Results oriented	Compliance oversight	System influence
	Supervisor	Coach/teacher	Mentor
	Internal focus	Internal/external	External focus
	Risk minimizer	Risk quantifier	Risk accepter

CRITICAL CONCEPTS
Who Makes a Good CFO?

Successful CFOs require a broad range of traits and skills. As we headed into the twenty-first century, one survey of healthcare CFOs (Doody 2000) identified five traits possessed by born leaders that CFOs must nurture:

1. Strategic thinking
2. Ability to adjust to change
3. Personal integrity
4. Vision
5. Ability to be a team player

The CFO survey also identified six acquired leadership skills:

1. Communicate clearly
2. Provide leadership in day-to-day operations
3. Manage resources and finances
4. Build coalitions
5. Create a positive organizational culture
6. Maintain strong physician relationship

Accompanying the 2005 HFMA Compensation Survey is a list of characteristics necessary for CFOs to be successful in the future. The following characteristics were added to the characteristics already discussed (HFMA 2005):

- *Case management*: Fixed reimbursements will drive CFOs into operations to lower costs via case management.
- *Sales*: Lowering costs will necessitate CFOs selling new ways of doing things to the hospital and medical staffs.
- *Education*: New ways of doing things will mean CFOs must educate the managers in non-finance positions on how their operations affect the financial position of the organization.

The old way of getting things done was *transactional*, which means that CFOs exerted their authority—they told people what to do. As organizations get larger and more bureaucratic, CFOs are going to have to become *transformational* managers: They're going to have to get things done by winning people over (HFMA 2005).

Do CFOs and accountants have personalities conducive to these expanded roles demanding new competencies? Using Myers-Briggs personality typing, several studies have shown that the predominant personality types of accountants are

- introversion (I) (versus extroversion),
- sensing (S) (versus intuitive),
- thinking (T) (versus feeling), and
- judging (J) (versus perceiving).

MINI-CASE STUDY

Suppose you are the chief financial officer of Smithsville Hospital, and you have recently implemented a budget reduction throughout the hospital. You want to ensure that your actions are accepted among the hospital department managers. What would be the best way to communicate with these department managers? If there is resistance, what should you do?

A classic study by Laribee (1994) reported that 37.3 percent of the study sample were STJs (significant compared with 20.5 percent found in the general population), and 56.0 percent were I types (significant compared with 40.1 percent found in the general population). The consistency among the findings of the personality studies on accountants is remarkable considering when the studies were conducted (from 1980 to 1997) and where the studies were conducted (United States, United Kingdom, and the Netherlands).

ISTJs represent 11 to 14 percent of the American population and are serious, responsible, sensible, and trustworthy, and they honor their commitments. Practical and realistic, they are matter-of-fact and thorough. They are painstakingly accurate and methodical and have great powers of concentration. They value and use logical and impersonal analysis and are organized and systematic in getting things done on time (Myers & Briggs Foundation 2016).

Do CFOs have the same personalities as accountants, or do only the extroverted accountants become CFOs? In a survey of healthcare senior financial executives (which includes not only CFOs but also vice presidents of finance) conducted by HFMA and Texas State University, it was reported that 37.8 percent of the sample were STJs (compared with 37.3 percent found in the accountant sample and 20.5 percent found in the general population), and 57.0 were I types (compared with 56.0 found in the accountant sample and 40.1 percent found in the general population), confirming that healthcare CFOs in the early twenty-first century had personalities similar to those of accountants (Nowicki 2003). A healthcare finance executive study published in 2015 found a significant shift from introversion to extroversion as well as higher levels of sensing (Lieneck and Nowicki 2015).

controller
The chief accounting officer of an organization.

treasurer
The person responsible for managing the capital of an organization.

Controller and Treasurer

Reporting to the CFO are the **controller** and the **treasurer**. The controller is the chief accounting officer of the healthcare organization and is usually responsible for financial accounting, managerial accounting, tax accounting, patient accounting, and internal

auditing. The treasurer is responsible for managing working capital, the healthcare organization's investment portfolio, and the financing of capital expenditures. In smaller organizations, the controller function and the treasurer function may be combined into one position, or they may be integrated with the CFO's responsibilities. According to the 2015 HFMA Compensation Survey (shown in exhibit 2.4), average compensation for controllers was $111,300 (HFMA 2016a).

Corporate Compliance Officer

Most organizations have a corporate compliance officer (CCO) in their senior management team. The final compliance program guidelines for hospitals issued by the US Department of Health and Human Services (HHS) Office of Inspector General (OIG) in 2003 list the appointment of a CCO as a critical element of any corporate compliance plan. Section 6401 of the Affordable Care Act (ACA) requires every healthcare entity to have a corporate compliance plan and officer; however, specific deadlines for every entity have not been published in federal regulations (HOLC 2010). Healthcare compliance officers usually report directly to the CEO or board and are traditionally seen as peers of the CFO (Doody 1998). CCOs are typically responsible for conducting compliance reviews (to assess how well the organization complies with fraud and abuse laws), investigating potential fraud and abuse problems, and

Exhibit 2.4 Healthcare Middle Manager Compensation Trends

	2005	2007	2009	2011	2013	2015
Director/manager of finance	$98,800	$111,300	$114,600	$121,200	$122,200	$127,600
Director/manager of managed care	$100,300	$110,800	$115,400	$122,300	$128,100	$134,900
Director/manager of reimbursement	$98,200	$100,500	$109,500	$113,800	—	$127,000
Controller	$95,400	$104,600	$109,000	$109,600	$111,300	$123,900
Director/manager of patient financial services	$86,300	$92,200	$99,400	$105,700	$101,900	$113,000
Director/manager of accounting	$73,200	$83,900	$88,000	$95,000	$100,400	$112,700
Director/manager of decision support	—	—	$108,200	$113,700	—	$126,200

Source: Data from HFMA (2007, 2016a).

examining relationships and contracts for possible illegal provisions. In organizations that do not have a CCO, COOs, staff or retained attorneys, or CFOs perform these functions. Because no education, certification, or licensure is required for CCOs, CEOs have tended to seek individuals who understand the legal issues involved with compliance and exhibit the following personal characteristics that might support the compliance functions (Doody 1998):

- Analytical, inquisitive, persistent
- Detail-minded
- Skilled in dealing with people
- Dispassionate and objective
- Courageous
- Discreet
- Has a strong moral sense

In its 2015 survey of compliance officers, the Health Care Compliance Association found that more than 60 percent of compliance officers had an advanced degree, including 18 percent with a JD degree, and that the average total compensation for compliance officers was $133,677 (HCCA 2015).

Chief Information Officer

Given the increasing importance of clinical information systems, the role of the chief information officer (CIO) is growing. Typically reporting directly to the CEO, the CIO is responsible not only for providing management oversight to all information processing and telecommunications systems in the organization but also for assisting senior management in using information in management decision making (Smaltz, Glandon, and Slovensky 2013). The responsibilities of CIOs include e-commerce, e-health, and other web-based and multimedia technologies; business-service formats to respond tactically to strategic business initiatives; and outsourcing of all or a portion of the information technology departments. As CIOs become an accepted part of the executive team, leadership skills will become more important and technology skills will become less important. In fact, CIOs have delegated many of their technology responsibilities to chief technology officers.

Privacy Officer

The **Health Insurance Portability and Accountability Act of 1996 (HIPAA)** mandated privacy and security regulations for the healthcare industry. HHS's final rule on privacy, which

Health Insurance Portability and Accountability Act of 1996 (HIPAA) Legislation that mandated privacy and security regulations for the healthcare industry.

was issued in 2002 and became effective in 2003, requires that an "entity must designate a privacy official who is responsible for the development and implementation of the privacy policies and procedures of the entity" (CMS 2004). HHS's final rule on security, which was issued in 2003 and became effective in 2005, requires that the "security responsibility be assigned to a specific individual or organization . . . for the management and supervision of the use of security measures to protect data and of the conduct of personnel in relation to the protection of data" (CMS 2004). The American Health Information Management Association (AHIMA) makes a good case that health information management (HIM) professionals should have the training and experience to handle most of the skills required for privacy officers, and in 2002 AHIMA introduced a certification in healthcare privacy, which subsequently became a certification in healthcare privacy and security (CHPS).

HIM professionals should have the following traits (Dennis 2001):

- HIPAA competency
- Knowledge of how confidential information is used
- Knowledge of how confidential information is disclosed
- Knowledge of information technology
- Knowledge of state and federal laws on information
- The ability to promote unpopular positions

Independent Auditor

Independent auditors are retained by the healthcare organization to ensure that the financial reports sent to external agencies are in the correct accounting format. Examples of external agencies include the state and federal government, commercial insurance companies, and lenders. The correct accounting format means that the healthcare organization used generally accepted accounting principles (GAAP) in preparing the report. However, use of GAAP does not guarantee that the healthcare organization is financially sound. The American Institute of Certified Public Accountants in 1997 issued Statement on Auditing Standards (SAS) No. 82, Consideration of Fraud in a Financial Statement Audit, which requires independent auditors to obtain reasonable assurance that financial statements are free of material misstatements caused by error or fraud. While SAS No. 82 provides guidelines for independent auditors to use to help detect and document risk factors related to potential fraud, it does not expand their detection responsibility. Therefore, healthcare organizations and independent auditors should discuss thoroughly the scope and focus of the audit as it relates to the organization's compliance efforts (Reinstein and Dery 1999).

Independent auditors typically audit the healthcare organization once each year. The duration of the audit partially depends on the size of the organization. At the end of the audit, the independent auditor produces an audit report made up of three paragraphs:

1. The *introductory* paragraph identifies the financial statements audited, management's responsibilities in preparing the financial statements, and the auditor's responsibilities in expressing the audit opinion.
2. The *scope* paragraph describes the criteria used in the audit (for instance, GAAP).
3. The *opinion* paragraph includes the auditor's statement about whether the financial statements are in the correct accounting format.

A fourth paragraph, the *explanatory* paragraph, is included only if GAAP were not used in preparing the financial statements or if any uncertainty exists regarding how the financial statements were prepared. The *AICPA Audit and Accounting Guide for Health Care Entities* (2010) provides examples of audit reports, including the four types of opinions referenced next.

The opinion paragraph is the heart of the audit report. Independent auditors use four types of opinions in rendering their reports:

1. An *unqualified opinion* means that, in all material respects, the financial statements fairly present the financial position, results of operations, and cash flows of the organization in conformance with GAAP. An unqualified opinion may have an additional explanatory paragraph, but an explanatory paragraph does not affect the opinion. Auditors use an explanatory paragraph when they are basing their opinion in part on the work of another external auditor, or when they need additional information to prevent the audit report from being misleading when uncertainties exist that they cannot reasonably resolve by the publication date of the audit report.
2. A *qualified opinion* means that the financial statements fairly present, in all material respects, the financial position, results of operations, and cash flows of the organization in conformance with GAAP, except for matters identified in additional paragraphs of the report. Auditors use a qualified opinion when there is insufficient evidentiary matter, when the organization has placed restrictions on the scope of the audit, or when the financial statements depart in a material, though not substantial, manner from GAAP.
3. An *adverse opinion* means that the financial statements do not fairly present the financial position, results of operations, and/or cash flows of the

organization in conformance with GAAP. Auditors use additional paragraphs after the opinion to describe the reasons for an adverse opinion.

4. A *disclaimer of opinion* means that the auditor does not express an opinion on the financial statements, usually because the scope of the audit was insufficient for the auditor to render an opinion.

Internal Auditor

Internal auditors differ from independent auditors in a number of ways. Whereas an independent auditor is typically a large accounting firm that has a contract with the healthcare organization, an internal auditor is an employee of the organization who usually reports to the controller. The independent auditor's primary concern is the financial reporting needs of external entities, and the internal auditor's primary concern is protecting the organization's assets from fraud, error, and loss. The independent auditor's responsibilities are limited primarily to financial matters; the internal auditor's responsibilities include both financial and operational matters. The independent auditor is only incidentally concerned with identifying fraud (i.e., the independent auditor is not looking for fraud but is duty-bound to report any fraud found in the organization to the party that engaged the auditor's services); the internal auditor is directly concerned with identifying fraud.

corporate restructuring
A legal strategy involving the establishment of subsidiaries or related corporations in order to maximize the economic position of a healthcare organization.

Alternative Corporate Structures

As previously mentioned, healthcare organizations are chartered as corporations by the state. Prior to the late 1970s, most healthcare corporations consisted of one corporation or a limited number of corporations. Beginning in the late 1970s, a legal strategy called **corporate restructuring** became popular in response to increasing economic pressures on healthcare organizations. The purpose of corporate restructuring was to maximize the economic position of the healthcare organization by developing new corporations (see Stromberg 1982).

Typically, healthcare organizations restructure for one or more of the following four reasons, which dictate the corporate restructuring model:

foundation
A not-for-profit corporation, usually a subsidiary of a for-profit organization, that facilitates education and research or otherwise undertakes charitable projects.

1. Healthcare organizations that need to facilitate the development of a new service may develop a wholly controlled subsidiary corporation. For example, a for-profit healthcare organization may develop a wholly controlled subsidiary not-for-profit corporation, called a **foundation**, to facilitate education and research. The foundation structure also allows the for-profit healthcare organization to shelter some income from taxes by using the income for purposes that are tax-exempt.

2. Healthcare organizations that need to protect assets may develop a parent holding corporation. For example, for-profit healthcare organizations may develop several parent corporations to layer their liability in the event of malpractice suits. Courts allow only the assets of the organization, and not the assets of the parent corporation, to be introduced during deliberations regarding damage awards.

3. Healthcare organizations that need to maximize patient care and other operating revenues and even nonoperating revenues may develop a quasi-independent sister corporation. In this model, the healthcare organization can control no more than 49 percent of the governing body of the sister corporation. For example, a healthcare organization, either for-profit or not-for-profit, may develop a gift shop whose governing body usually uses the income to benefit the healthcare organization. The healthcare organization believes that the perception of independence on the part of customers, both in terms of who controls the governing body and who controls the employees or volunteers, gives the gift shop an advantage in generating revenue. Customers are more likely to buy gifts in an "independent" corporation than to buy gifts from the healthcare organization that sends them a bill.

4. Healthcare organizations that need to attract additional funds through philanthropy may develop a wholly independent corporation. In this model, the healthcare organization cannot control any of the governing body. For example, a healthcare organization may develop a foundation whose governing body raises money using relationships established by the healthcare organization. The governing body of the foundation usually uses the income to benefit the healthcare organization, much in the same way that university alumni associations, which are independent from the universities, use their income to benefit universities.

MINI-CASE STUDY

Mr. Jones, an 87-year-old widower who lives alone, was admitted to the hospital through the emergency room for shortness of breath and swollen ankles. After an extensive interview, the admitting physician discovered that Mr. Jones had been admitted two weeks earlier with the same symptoms and had been diagnosed with congestive heart failure. At that time he spent four days in the hospital and then was transferred to a skilled nursing facility, where he spent three days before being discharged with a prescription for a diuretic to help reduce fluid buildup. The admitting physician discovered that no one at the hospital or the skilled nursing facility had explained to Mr. Jones the importance of maintaining a low-sodium diet (high-sodium diets cause fluid retention). Mr. Jones had attended a birthday party and eaten several hot dogs before his latest symptoms appeared. Who should be financially responsible for the costs related to Mr. Jones's latest admission? Should Medicare, or any insurer, pay for readmissions related to errors in discharge instructions? Would it be different had Mr. Jones received instructions for a low-sodium diet but chosen to ignore them?

Although corporate restructuring was popular in the late 1970s and 1980s, both Medicare and the Internal Revenue Service (IRS) have increased their interest in the resulting corporations. For instance, Medicare's position has been that a portion of the income generated by quasi-independent corporations such as the previously described gift shop should be deducted from the amount Medicare owes the healthcare organization under cost-based reimbursement. Medicare reasons that a portion of the gift shop sales is attributable to Medicare patients and their visitors.

The IRS's position is that corporate restructuring that allows a corporation to avoid paying taxes should be reviewed to ensure that the primary purpose of the corporate restructuring is legitimate. Areas of concern include the unrelated business income generated by wholly controlled subsidiary corporations (e.g., parking garages, adjacent hotels, catering services). Chapter 4 provides an overview of the tax status of corporations and reviews in detail the tax-exempt organization.

integrated delivery system
A system of healthcare providers capable of accepting financial responsibility for and delivering a full range of clinical services.

physician–hospital organization (PHO)
A joint venture between a hospital organization and physicians that is capable of contracting with managed care organizations.

accountable care organization (ACO)
An organization that coordinates care among healthcare organizations and physicians. A key element of an ACO is that some portion of its reimbursement is tied to accountability.

Organizations Designed to Integrate Care

Physicians historically have not worked for hospitals. Rather, most are independent practitioners who use the hospital facilities to treat their patients. However, healthcare organizations have been attempting to integrate physicians into the organizational setting for decades. Many healthcare leaders and payers, such as Medicare and Medicaid, believe integrating the delivery and financing of care into one organization would result in higher-quality healthcare delivered at a lower cost. However, many physicians and other professional providers are accustomed to practicing with a great deal of autonomy and have resisted efforts to coordinate and integrate their care.

In the early 1980s, employers began to seek an **integrated delivery system**—a system of healthcare providers capable of accepting financial responsibility for and delivering a full range of clinical services. These systems promised higher quality at lower costs by reducing errors (one study found that the cost of medical errors in the United States reached $19.5 billion in 2008, resulting in 2,500 preventable deaths and 10 million lost days of work [Society of Actuaries 2010]). The US government spends an estimated $12 billion per year on potentially preventable hospital readmissions, according to the Medicare Payment Advisory Commission, or MedPAC (Winslow and Goldstein 2009).

To better coordinate care, many hospitals have initiated a **physician–hospital organization (PHO)**, a joint venture capable of contracting with managed care organizations. Both integrated delivery systems and the more recent physician–hospital organizations have had limited success in coordinating and integrating healthcare.

In 2005, MedPAC reported that future government reimbursement for health services should be based on four criteria—one of which was high-quality, cost-effective care (MedPAC 2005). In 2006, President George W. Bush signed an executive order asking federally sponsored health plans, including Medicare, to adopt the four criteria. The concept of an **accountable care organization (ACO)**, which emphasizes coordinated care and

mandates provider accountability, was born in 2007 (Fisher et al. 2007). The ACO concept includes financial incentives for organizations that take responsibility for the quality and cost of patient care to a defined population. In 2009, MedPAC recommended that Medicare encourage the development of ACOs, and Section 3022 of the Affordable Care Act of 2010 encouraged the voluntary development of ACOs (Tuma 2010). By the end of 2015, 838 ACOs existed (Muhlestein and McClellan 2016).

Chapter Key Points

- The governing body of a healthcare organization has several duties, including proper development of resources and monitoring of the CEO's performance.
- If a governing body breaches its duty, it may be legally liable.
- The CFO is responsible for financial management of the organization, a responsibility that requires the skills of a supervisor and intrinsic traits.
- The CCO's duty is to ensure that the organization supports compliance functions.
- The CIO is responsible for information processing and telecommunications systems of the organization.
- Other management positions in an organization include the privacy officer, internal auditor, and independent auditor.
- Corporate structures include wholly controlled subsidiaries, parent holding corporations, quasi-independent sister corporations, and wholly independent corporations.
- Organizations designed to integrate patient care include integrated delivery systems, physician–hospital organizations (PHOs), and accountable care organizations (ACOs).

Discussion Questions

1. How would you explain the meaning of corporate status in relation to healthcare organizations? What are the advantages corporate status provides?
2. What is the role of the governing body? How does the governing body use organized committees to monitor the performance of the CEO?
3. What are the responsibilities of the CFO? What are the characteristics and traits of a successful CFO?
4. Although both the corporate compliance officer (CCO) and the chief information officer (CIO) report to the CEO, what are the primary aspects of their individual roles that distinguish these positions?

5. How would you compare the roles of the internal auditor and the independent auditor? What must the independent auditor include in the audit report?
6. How would you describe organizational models that attempt to integrate patient care, including the differences among them?

CHAPTER 3

FINANCIAL ANALYSIS AND MANAGEMENT REPORTING

There is much more cognizance and awareness of the capital aspects of the balance sheet and a better understanding of the credit markets so you can decide where to invest cash, how to eke out investment returns on excess cash, and how to position the organization for the future.

Robert Hemker, chief financial officer of Palomar Health, San Diego, California (who went on to become Palomar's president and chief executive officer)

Learning Objectives

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

- Identify and understand the major components of financial statements
- List in order and explain each step in the financial analysis process
- Explain the principles in preparing good financial reports

Note: Terms shown in **boldface** in this chapter are defined in the margins and appear in the glossary. Terms in ***boldface italic*** also appear in the glossary.

Introduction

Financial analysis and management reporting are integral parts of the management functions of control and financial management. Financial analysis includes methods used by investors, creditors, and management to evaluate the past, present, and future financial performance of a healthcare organization. On completion of the analysis, the information is reported to the appropriate stakeholders, inside and outside the organization, at which time the stakeholders take action in the form of decisions.

Steps in Financial Analysis

Financial analysis includes the following three steps:

1. Establish the facts about the organization.
2. Compare the facts about the organization over time and with facts about similar organizations.
3. Use perspective and judgment to make decisions regarding the comparisons.

Financial analysis by management can occur at any level—departmental, divisional, or organizational—within the organization.

horizontal analysis Evaluation of the trends in an organization's finances by focusing on percentage change over time.

At the organizational level, establishing the facts (the first step) usually relates to a review of the organization's key financial statements, including the balance sheet, statement of operations, statement of changes in net assets, and statement of cash flows. As recommended by the American Institute of Certified Public Accountants (AICPA), healthcare organizations with permanent controlling financial interests in other healthcare organizations should prepare consolidated financial statements to properly report the relationship (AICPA 2012). Before they undertake financial analysis, investors and creditors may require that independent auditors review the financial statements to confirm their accuracy.

vertical analysis Evaluation of the internal structure of an organization by focusing on a base number and showing percentages of important line items in relation to the base number.

The second step, comparing the facts about the organization over time and with facts about other, similar organizations, includes ratio analysis, horizontal analysis, and vertical analysis. *Ratio analysis*, which was introduced in chapter 1, evaluates an organization's performance by computing the relationships of important line items found in the financial statements. There are four kinds of ratios: liquidity, profitability, activity, and capital structure.

Horizontal analysis evaluates the trend in the line items by focusing on the percentage change over time. **Vertical analysis** evaluates the internal structure of the organization by focusing on a base number and showing percentages of important line items in relation to the base number. When ratio analysis, horizontal analysis, and vertical analysis have been completed, the organization can compare present ratios, trends, and percentages to its past ratios, trends, and percentages. The organization can also develop industry comparisons

that compare the organization's present ratios, trends, and percentages to those of other, similar organizations.[1]

The third step of financial analysis, using perspective and judgment to make decisions, takes into account the information obtained in the first two steps, in addition to information derived from the decision maker's unique perspective and judgment, to make the decision. Decisions that may at first appear to be contrary to the information provided in the first two steps may make perfect sense based on pressures from internal and external constituents, including medical staff, employers, regulators, donors, and others.

The example of a fictional facility, Bobcat Hospital, will be used to illustrate the financial analysis concepts in this chapter.

Balance Sheet

The ***balance sheet*** shows the organization's financial position at a specific point in time, typically at the end of an accounting period (see exhibit 3.1). The balance sheet presents the organization's assets, liabilities, and net assets (or shareholders' equity in for-profit organizations) and its relationships, which are reflected in the following accounting equation:

$$\text{Assets} = \text{Liabilities} + \text{Net Assets}$$

assets
Economic resources that provide or are expected to provide benefit to the organization.

Assets are economic resources that provide or are expected to provide benefit to the organization. ***Current assets*** are economic resources that have a life of less than one year (i.e., the organization expects to consume them within one year). Current assets are listed on the balance sheet in order of liquidity. ***Cash*** is money on hand and in the bank that the organization can access immediately. ***Temporary investments*** consist of money placed in securities with maturities up to one year, such as commodities and options. The category ***receivables, net***—made up of patient accounts receivable, net of allowances for contractual allowances, charity care, and bad debt—represents money due to the organization from patients and third parties for services already provided. ***Inventory*** is the cost of food, fuel, drugs, and other supplies purchased by the hospital but not yet used or consumed. ***Prepaid expenses*** are expenditures made by the hospital for goods and services not yet consumed or used in hospital operations (sometimes referred to as *deferred expenses*), such as rent and insurance premiums.

Noncurrent assets are economic resources that have a life of one year or more (i.e., the organization expects to consume them over a span longer than one year). ***Plant and equipment, net*** consists of economic resources, such as land, buildings, and equipment, minus the amount that has been depreciated over the life of the buildings and equipment (which is called *accumulated depreciation*). ***Long-term investments*** are economic resources that the hospital owns, such as corporate bonds and government securities, and intends

Exhibit 3.1
Bobcat Hospital Balance Sheet as of December 31, 2016 and 2017 (in thousands)

	2017	2016
ASSETS		
Current assets		
Cash	$ 124	$ 280
Temporary investments	45	30
Receivables, net	3,536	3,717
Inventory	175	140
Prepaid expenses	32	40
Total current assets	3,912	4,207
Noncurrent assets		
Land, plant, and equipment	6,980	6,580
Accumulated depreciation	–1,730	–1,660
Plant and equipment, net	5,250	4,920
Long-term investments	609	990
Other noncurrent assets	113	109
Total noncurrent assets	5,972	6,019
Total assets	9,884	10,226
LIABILITIES AND NET ASSETS		
Current liabilities		
Accounts payable	$ 302	$ 370
Notes payable	345	335
Accrued expenses payable	871	408
Deferred revenues	10	15
Estimated third-party adjustments	137	224
Current portion of long-term debt	184	178
Total current liabilities	1,849	1,530
Noncurrent liabilities		
Long-term debt, net of current portion	3,600	3,500
Total liabilities	5,449	5,030
NET ASSETS		
Unrestricted net assets	3,285	3,896
Temporarily restricted net assets	750	700
Permanently restricted net assets	400	600
Total net assets	4,435	5,196
Total liabilities and net assets	$9,884	$10,226

to hold for more than one year. ***Other noncurrent assets*** include assets limited as to use (by contracts with outside parties) and goodwill, which represents the amount above fair market value based on an entity's future earning potential.

liabilities
Economic obligations, or debts, of the organization.

Liabilities are economic obligations, or debts, of the organization. ***Current liabilities*** are economic obligations, or debts, that are due within one year. ***Accounts payable*** are amounts the organization owes to suppliers and other trade creditors for merchandise and services purchased from them, but for which the organization has not yet paid. ***Notes payable*** are short-term obligations for which a formal contract has been signed, such as a short-term loan. ***Accrued expenses payable*** are liabilities for expenses that have been incurred by the hospital but for which the hospital has not yet paid, such as compensation to employees. ***Deferred revenue*** is money received by the hospital but not yet earned by the hospital, such as registration fees for an educational program not yet provided. ***Estimated third-party adjustments*** are approximations of how much money the organization will be required to return to third-party payers due to overpayments to the organization. ***Current portion of long-term debt*** is the amount of the organization's long-term debt (not including interest) that is expected to be paid within one year.

Long-term liabilities are economic obligations, or debts, that are due in more than one year. ***Long-term debt, net of current portion*** is an economic obligation, or debt, that is due in more than one year, minus the amount that is due within one year.

net assets
The difference between assets and liabilities in a not-for-profit organization, which represents the owner's and others' financial interests in the organization.

Net assets is the current AICPA-approved term for the difference between assets and liabilities in not-for-profit healthcare organizations[2] and represents the owner's (community's or religion's) and others' (donors external to the organization) financial interest in the organization. ***Unrestricted net assets*** include net assets that have not been externally restricted by donors or grantors, such as the excess of revenues to expenses from operations. Unrestricted net assets include net assets that are contractually limited by the governing body, such as proceeds of debt issues, funds deposited with a trustee and limited to use by an indenture agreement, and funds set aside under self-insurance arrangements and statutory reserve requirements. ***Temporarily restricted net assets*** include donor-restricted net assets that the organization can use for the donor's specific purpose after the organization has met the donor's restriction, such as the passage of time or an action by the organization. ***Permanently restricted net assets*** include donor-restricted net assets with restrictions that never expire, such as endowment funds. In fiscal years beginning after December 15, 2017, organizations will be expected to present net assets in two categories instead of three: "net assets without donor restrictions" and "net assets with donor restrictions." Generally accepted accounting principles (GAAP) will require organizations to disclose the amount, purpose, and type of board restrictions for net assets without donor restrictions, and GAAP will require organizations to disclose the nature and amount of donor restrictions for net assets with donor restrictions (Connor and Mosrie 2016).

Shareholders' equity is the current AICPA-approved term for the difference between assets and liabilities in for-profit healthcare organizations; it represents the ownership interest of stockholders in the organization. Shareholders' equity is also called *stockholders' equity*, *owners' equity*, or *net worth* and comprises common stock and retained earnings. ***Common stock*** is money invested in the organization by its owners. ***Retained earnings*** result from income earned by the organization from operations minus *dividends* (distributions of earnings paid to stockholders based on the number of shares of stock owned).

Explanatory notes for the balance sheet and the other financial statements should identify extraordinary events, as well as certain required provisions, and should be presented following the financial statements. In fiscal years beginning after December 15, 2018, public organizations and not-for-profit organizations that have issued securities that are traded or listed on an exchange or over-the-counter market will be expected to present the effects of all leases on the balance sheet (the deadline for all other organizations is fiscal years beginning after December 15, 2019). ASU 2016-02, Leases (Topic 842) intends to increase transparency and comparability among organizations by requiring all organizations, not just healthcare organizations, to present the effects of both financial leases and operating leases on the balance sheet (historically, organizations have not presented the effects of operating leases on the balance sheet). The organization should recognize a liability (lease payments) and a right-of-use asset on the balance sheet (Connor and Mosrie 2016).

Statement of Operations

The ***statement of operations***, called the *income statement* in for-profit organizations, summarizes the organization's net revenues, expenses, and excess of net revenues over expenses (called *income before taxes* in a for-profit organization) over a period of time (see exhibit 3.2). The relationship of the statement of operations to the balance sheet can be best expressed by the following expanded accounting equation:

$$\text{Assets} = \text{Liabilities} + \text{Net Assets} + (\text{Net Revenue} - \text{Expenses})$$

where the permanent accounts of the balance sheet, which are accounts that carry balances forward to the next year, relate to the temporary accounts of the statement of operations, which are accounts that zero out at the end of each year. To zero out the net results of the statement of operations at the end of the year, the net results are transferred to unrestricted net assets on the balance sheet (or to retained earnings on the balance sheet of a for-profit organization).

revenues
The amounts earned by the organization or sometimes donated to it.

Revenues are the amounts earned by the organization or sometimes donated to it. ***Gross patient services revenue*** is the total amount of charges for patients utilizing the hospital, regardless of the amount actually paid. Deductions from gross patient services

Exhibit 3.2
Bobcat Hospital Statement of Operations (in thousands) through December 31, 2016 and 2017

	2017	2016
REVENUES		
Gross patient services revenue (non-GAAP)	$13,031	$12,610
Provision for contractual adjustments (non-GAAP)	–4,209	–4,083
Provision for charity care (non-GAAP)	–420	–408
Net patient services revenue	8,402	8,119
Provision for bad debt allowance	–600	–4,763
Net patient services revenue less provisions for bad debt	7,802	7,643
Premium revenue	400	0
Other operating revenue	440	447
Total operating revenue	$ 8,642	$ 8,090
EXPENSES		
Salaries, wages, and benefits	4,980	5,278
Supplies, drugs, and purchased services	3,080	2,956
Depreciation and amortization	471	443
Interest	113	109
Total operating expenses	8,644	8,786
OPERATING INCOME	–2	–696
NONOPERATING INCOME		
Investment income	$ 95	$ 85
EXCESS OF REVENUE OVER EXPENSES	93	–611
Unrestricted net assets	3,285	3,896
Temporarily restricted net assets	750	700
Permanently restricted net assets	400	600
CHANGES IN NET ASSETS		
Total changes in net assets	4,435	5,196

revenue include amounts deducted from total charges to account for contractual allowances and charity care.

Net patient services revenue is money generated by providing patient care minus the amount the organization will not collect as a result of discounting charges per contractual agreement and providing charity care. For financial reporting purposes, patient services revenue does not include provisions for charity care because charity care was never intended to result in cash flow. GAAP in 2010 required that organizations report the amount of charity care recorded at cost along with the method of determining cost and the organization's

charity care policy in notes to the financial statements. (*Bad debt* is the accounting recognition of how much money the organization has billed but will not collect; the amount reported must be based on charges. Bad debt should not be confused with charity care. ***Bad debt expense*** reflects the amount for which the organization provided services with the expectation of payment. *Charity care* reflects services the organization provided with no expectation of payment.)

Net patient services revenue minus provisions for bad debt includes net patient service revenue minus the amount the organization will not collect as a result of bad debt. In 2012 GAAP moved bad debt from an operating expense to a deduction of revenue to account for the patient's inability to pay deductibles for high-deductible health policies (which the organization knows at time of service). In 2016 the AICPA Revenue Recognition Task Force for Healthcare proposed, but did not require, new guidance for presenting bad debt. After recording revenue at the amount the organization expects to be paid, bad debt would then be recognized in two categories: *classic bad debt* (the organization believes the patient is able to pay, but the patient does not pay) would be recorded as a bad debt expense under operating expenses; and an *implicit price concession* (the organization believes the patient is unable to pay, but the patient is not eligible for charity care, and the organization recognizes a write-off based on internal policy). The proposed new guidance for presenting bad debt would allow organizations to group patients with similar characteristics, such as true self-pay or high deductible (Connor and Mosrie 2016).

Premium revenue is money generated from capitation arrangements that must be reported separately from patient services revenue because premium revenue is earned by agreeing to provide care, regardless of whether care is ever delivered. ***Other operating revenue*** is money generated from services other than health services to patients and enrollees. It may include revenue from rental equipment and office space, sales of supplies and pharmaceuticals, cafeteria and gift shop sales, and so on. Often the test for whether revenue is considered other operating revenue or nonoperating revenue is whether the revenue was generated in support of the organization's mission statement. Why is it important to distinguish between operating and nonoperating revenue? Because for a not-for-profit hospital, income derived from operations is not taxed, but income from unrelated businesses, such as the gift shop, may be taxed as unrelated business income. ***Net assets released from restrictions used for operations***, while not reflected in Bobcat Hospital's statement of operations, consist of money previously restricted by donors that has become available for operations.

expenses
Amounts of resources used by the organization.

Expenses are the amounts of resources used by the organization. The category of ***operating expenses*** represents resources used on operations to generate revenue in support of the organization's mission statement. These expenses can be listed by functional classification (organizational division), such as nursing department and support department, which is useful for internal purposes, or by natural classification, under such categories as *salaries*, *wages*, *and benefits* or *supplies*, *drugs*, *and purchased services*, as is the case with Bobcat Hospital's statement of operations, which is useful for external purposes.

The category ***depreciation and amortization*** reflects the expensing of long-term assets over time to show their declining value. ***Interest*** is the expense incurred with borrowed money. ***Other operating expenses*** are miscellaneous expenses that have not been reported elsewhere.

Operating income is the money earned from providing patient care services and includes the total revenue, gains, and other support minus the total operating expenses. ***Nonoperating income*** is the money earned from non–patient care services, such as *investment income*, as shown on Bobcat Hospital's statement of operations.

operating income Money earned from providing patient care services. It includes the total revenue, gains, and other support minus the total operating expenses.

Excess of revenues over expenses (or *net income* in for-profit organizations) is the operating income plus the nonoperating income minus total expenses. For not-for-profit organizations, AICPA requires excess of revenues over expenses to be reported as the performance indicator that reflects the results of operations. Not-for-profit organizations must report the performance indicator in a statement of operations that also presents the total changes in unrestricted net assets. The notes to the financial statements should provide a description of the nature and composition of the performance indicator (AICPA 2012).

excess of revenues over expenses Operating income plus nonoperating income minus total expenses.

Statement of Changes in Net Assets

The ***statement of changes in net assets***, called the *statement of equity* in a for-profit organization, shows the reasons why net assets changed from the beginning of the statement period to the end of the statement period as reported in summary fashion on the balance sheet. Because AICPA requires not-for-profit organizations to report changes of unrestricted net assets on the statement of operations, many organizations also include changes in temporarily restricted and permanently restricted net assets on the statement of operations, which eliminates the need for a separate statement of changes in net assets. This statement is important in showing how the changes in the excess of revenues over expenses affect the net asset, or equity, position of the organization (as was shown in the example in exhibit 3.2).

Unrestricted net assets come directly from the statement of operations and have already been explained in that section. The category *temporarily restricted net assets* presents the changes in temporarily restricted net assets during the statement period. Within this category (and not shown in exhibit 3.2) are several subcategories. The subcategory *contributions for charity care* represents money donated to the hospital for the provision of charity care. *Net realized and unrealized gains on investments* reflects an increase in the value of the investment (unrealized until sold) and an increase in cash (realized through dividends or interest). *Net assets released from restrictions* includes money previously restricted by donors that has become available for use. *Increase (decrease) in temporarily restricted net assets* presents the total changes in temporarily restricted net assets during the statement period.

The category *permanently restricted net assets* presents the changes in permanently restricted net assets during the accounting period. Within this category (and not shown in exhibit 3.2) are several subcategories. *Contributions for endowment funds* includes money

received from donors with permanent restrictions on the principal and interest. *Net realized and unrealized gains on investments* represent an increase in value of the investment and an increase in cash.

The final ***total changes in net assets*** is the difference between total net assets at the beginning of the year and total net assets at the end of the year. In exhibit 3.2, this line shows an increase in Bobcat Hospital's total net assets.

Statement of Cash Flows

The ***statement of cash flows*** shows the organization's *cash flow*—that is, the amounts of cash receipts and where they came from and the amounts of cash disbursements and where they went during the statement period (see exhibit 3.3; notes for the statement are shown in exhibit 3.4 that follows). In a not-for-profit organization, the statement is divided into cash flow from operations, cash flow from investments, and cash flow from financing, including restricted income and contributions. For-profit organizations do not divide the cash flows into categories, but the bottom line is the same—net increase (decrease) in cash.[3]

Cash flow from operating activities begins with the change in net assets (this figure comes from the statement of changes in net assets or is computed from the difference in total net assets between statement periods) and then includes the changes in cash between statement periods for providing patient care services. Information from the statement of operations was prepared using accrual accounting, as required by GAAP. This means that revenues were recorded when the services were billed, not when the bills were paid. Expenses were recorded when they contributed to operations, not when they were paid. Revenues and expenses must be adjusted as well as noncash events, such as depreciation. The remainder of this section of the statement of cash flows makes the necessary adjustments.

Cash flow from investing activities includes the changes in cash between statement periods for investing in fixed assets, such as property and equipment, and for selling fixed assets. *Cash flow from financing activities* includes the changes in cash between statement periods for financing activities—such as debts, endowments, grants, and transfers—to and from parent organizations.

Net increase (decrease) in cash and cash equivalents is computed by adding the net cash from operating, investing, and financing activities.

Cash and cash equivalents, beginning of year corresponds with the cash and cash equivalents, end of year for the previous year. *Cash and cash equivalents, end of year* is computed by adding the net increase (decrease) in cash and cash equivalents to the cash and cash equivalents, beginning of year, and corresponds to cash and cash equivalents on the balance sheet for the same statement period.

Exhibit 3.3
Bobcat Hospital Statement of Cash Flows, 2017

	2017
Cash flow from operating activities	
Change in net assets	$ (384)
Adjustments to reconcile change in net assets to net cash provided by operating activities	
Extraordinary loss from extinguishment of debt	
Depreciation and amortization	471
Net realized and unrealized gains on investments	0
Transfer to parent	0
Provisions for bad debt	600
(Increase) decrease in:	
Patient accounts receivable	181
Trading securities	0
Other current assets	27
Other assets	47
Increase (decrease) in:	
Accounts and notes payable	–58
Accrued expenses payable	463
Estimated third-party settlements	–92
Other current liabilities	6
Other liabilities	100
Net cash flow from operating activities	1,361
Cash flow from investing activities	
Purchase of investments	
Capital expenditures	–1,413
Net cash flow from investing activities	–1,413
Cash flow from financing activities	
Transfers to parent	0
Proceeds from restricted contributions and restricted investments income	95
Payments on long-term debt	–184
Payments on capital lease obligations	0
Proceeds from issuance of long-term debt	0
Net cash flow from financing activities	–89
Net increase (decrease) in cash and cash equivalents	–141
Cash and cash equivalents, beginning of year	310
Cash and cash equivalents, end of year	169

Exhibit 3.4
Bobcat Hospital Notes to Financial Statements, 2017

1. **Organization and Nature of Operations**
   Bobcat Hospital is a 120-bed, nonprofit hospital offering the following services: inpatient, outpatient, emergency, long-term, rehab, and home care.
2. **Community Benefit and Charity Care**
   Bobcat Hospital provides healthcare services through various programs that are designed to enhance the health of the community. Bobcat Hospital provides emergent and urgent care to persons who cannot afford health insurance because of inadequate financial resources. Bobcat Hospital's financial assistance policy provides care to patients regardless of their ability to pay, and all uninsured patients are eligible for discounts based on their income up to 400% of the federal poverty level. The amount of charity care provided is based on this policy, and the cost of charity care is calculated based on the charges for such services multiplied by the hospital's cost-to-charges ratio (0.66334). The cost of charity care provided in 2017 was $134,400. Not included in this amount, but still considered a community benefit, is the loss to the Medicaid program.
3. **Bad Debt**
   The amount of bad debt is based on the GAAP principle of revenue recognition, and the amount recognized in 2017 was $600,000 based on charges.
4. **Net Patient Services Revenue**
   Patient services revenue is reported at estimated net realizable amounts for services rendered. The amount is net of provisions for contractual allowances ($4,209,000) in addition to provisions for charity care ($420,000) and bad debt ($600,000). Provisions for contractual allowances recognized discounts provided based on agreements with Medicare, Medicaid, other government programs, and major insurance companies.

Ratio Analysis

ratio
A comparison between two or more financial facts, such as income to assets or assets to liabilities.

A **ratio** is a comparison between two or more financial facts, such as income to assets or assets to liabilities. Ratios are useful because they help an organization compare a period's results to previous periods or to the results of other, similar organizations.

Ratios emerge from facts located on the financial statements, which report an organization's financial position at a point in time and its financial operations over a period of time. Investors and creditors analyze financial statements, primarily through ratio analysis, to predict future earnings and the ability to service debt. Managers use ratio analysis to predict the future and to plan strategies that will influence the future. Financial statement analysis concentrates on four classifications of ratios: liquidity, profitability, asset efficiency, and capital structure (see exhibit 3.5 for Optum medians for all hospitals reporting in 2017 for 2015 fiscal years).

Exhibit 3.5
Selected Financial Ratios, Optum Medians, 2015

Ratios	Optum Median 2015
Liquidity	
Current ratio	2.18
Collection period	47.30
Days cash on hand, all sources	70.50
Days cash on hand, short-term sources	27.40
Average payment period	54.10
Profitability	
Operating margin (%)	1.43
Total margin (%)	3.80
Return on net assets (%)	7.00
Asset efficiency	
Total asset turnover	.99
Age of plant (years)	11.48
Fixed asset turnover	2.54
Current asset turnover	3.72
Inventory turnover	53.10
Capital structure	
Net asset financing (%)	55.20
Long-term debt to capitalization	23.70
Debt service coverage	3.37
Cash flow to debt (%)	22.40

Source: Adapted from Optum (2017). Used with permission.

Liquidity Ratios

Liquidity ratios are ratios that measure an organization's ability to meet short-term obligations. Measuring an organization's liquidity is important in evaluating an organization's financial performance.

liquidity ratios
Ratios that measure an organization's ability to meet short-term obligations.

- **Current Ratio**

$$\frac{\text{Total current assets}}{\text{Total current liabilities}}$$

The *current ratio* is the basic indicator of financial liquidity, which is an organization's ability to meet its obligations. It is nondirectional; higher values mean better debt-paying

capacity, but a ratio that is too high may mean that the organization could invest excess current assets more wisely. The primary disadvantage of the current ratio is that it does not take into account the relative liquidity of the particular types of current assets.

- **Collection Period**

$$\frac{\text{Net receivables}}{\text{Net patient services revenue} / 365}$$

The *collection period* is also called *days in accounts receivable* and is a measure of how long the average patient (or payer) takes to pay the bill after discharge. It is directional; higher values indicate that the organization is collecting its bills slowly, which may indicate liquidity problems; lower values indicate more rapid collections, which lead to more available cash.

- **Days Cash on Hand, Short-Term Sources**

$$\frac{\text{Cash} + \text{Temporary investments}}{(\text{Total expenses} - \text{Depreciation expenses}) / 365}$$

Days cash on hand, *short-term sources* is a measure of how long an organization could meet its obligations from cash and temporary investments. Higher values indicate short-term liquidity.

- **Days Cash on Hand, All Sources**

$$\frac{\text{Cash} + \text{Temporary investments} + \text{Unrestricted long-term investments}}{(\text{Total expenses} - \text{Depreciation expenses}) / 365}$$

Days cash on hand, *all sources* is a measure of how long an organization could meet its obligations if cash, temporary investments, and unrestricted long-term investments were discontinued. Higher values indicate short-term liquidity.

- **Average Payment Period**

$$\frac{\text{Total current liabilities}}{(\text{Total expenses} - \text{Depreciation expenses}) / 365}$$

Average payment period is a measure of how long the organization takes to pay its obligations. Lower values indicate liquidity and are preferable.

Profitability Ratios

Profitability ratios reflect an organization's ability to exist and grow by measuring the relationship of revenues to expenses. Profitability is a double-edged sword for not-for-profit healthcare organizations in that too much profit brings criticism from the community (and possibly the Internal Revenue Service) and too little profit brings criticism from the governing body.

profitability ratios Ratios that measure an organization's ability to exist and grow.

- **Operating Margin**

$$\frac{\text{Operating income}}{\text{Total operating revenue}} \times 100$$

Operating margin is operating income divided by total operating revenue and reflects profits from only operations. Higher values indicate profitability.

- **Total Margin**

$$\frac{\text{Excess of revenues over expenses}}{\text{Total operating revenue}} \times 100$$

Total margin is the excess of revenues over expenses divided by total operating revenue and reflects profits from both operations and nonoperations (typically investment income). Higher values indicate profitability.

- **Return on Net Assets**

$$\frac{\text{Excess of revenues over expenses}}{\text{Net assets}} \times 100$$

Return on net assets (or *equity* for for-profit organizations) is the basic measure of profit in relationship to investment. Higher values reflect profitability.

Asset Efficiency Ratios

Asset efficiency ratios reflect an organization's ability to be efficient by measuring the relationship between revenue and assets. For purposes of these ratios, total revenue includes net nonoperating gains.

asset efficiency ratios Ratios that measure efficiency by comparing revenue to assets.

- **Total Asset Turnover**

$$\frac{\text{Total operating revenue + Other income}}{\text{Total assets}}$$

Total asset turnover is the basic measure of how efficiently an organization is using its assets in relation to making revenue. Higher values usually indicate higher efficiency; however, older facilities with assets that are mostly depreciated may appear to be efficient because of a low numerator. W. Cleverley, J. Cleverley, and Song (2010) recommend calculating the age of plant ratio to determine whether efficiency or an older facility is causing a high total asset turnover ratio. The formula to determine the average age of a facility is

$$\frac{\text{Accumulated depreciation}}{\text{Depreciation expense}}$$

Lower values are preferable.

- **Fixed Asset Turnover**

$$\frac{\text{Total operating revenue} + \text{Other income}}{\text{Net fixed assets}}$$

Fixed asset turnover is a subset of the total asset turnover in that it measures how efficiently an organization is using its fixed assets (usually land, plant, and equipment) in relation to generating revenue. Higher values indicate higher efficiency.

- **Current Asset Turnover**

$$\frac{\text{Total operating revenue} + \text{Other income}}{\text{Net fixed assets}}$$

Current asset turnover measures how efficiently an organization is using its current assets in relation to generating revenue. Higher values indicate higher efficiency and can be obtained by increasing revenue proportionately more than current assets or decreasing current assets proportionately more than total revenue.

- **Inventory Turnover**

$$\frac{\text{Total operating revenues} + \text{Other income}}{\text{Inventory}}$$

Inventory turnover measures the number of times an organization turns over its inventory relative to total operating revenue and other income. Low values usually indicate overstocking.

Capital Structure Ratios

Capital structure ratios reflect the organization's long-term liquidity by measuring a variety of relationships to capital. Capital structure ratios are used by banks and bond rating agencies to determine creditworthiness.

capital structure ratios Ratios that measure an organization's long-term liquidity by measuring a variety of relationships to capital.

- **Net Asset Financing**

$$\frac{\text{Net assets}}{\text{Total assets}} \times 100$$

Net asset financing (or *equity financing* for for-profit organizations) measures the relationship between assets owned by the organization (i.e., assets minus liabilities) and total assets. This ratio is nondirectional; higher values are usually preferable. However, high-performing hospitals use debt financing, which lowers this ratio, but not excessively.

- **Long-Term Debt to Capitalization**

$$\frac{\text{Long-term debt}}{\text{Long-term debt} + \text{Net assets}} \times 100$$

Long-term debt to capitalization measures the relationship between long-term debt and assets owned by the organization. Lower values are preferable, whereas higher values imply a greater reliance on debt financing and may indicate a reduced ability to take on additional debt.

- **Debt Service Coverage**

$$\frac{\text{Excess of revenues over expenses} + \text{Depreciation expense} + \text{Interest expense}}{\text{Debt principal payment} + \text{Interest payments}}$$

Debt service coverage measures the ability to meet long-term debt obligations. Higher values indicate an organization's ability to meet long-term debt obligations. Principal payments are found as payments on long-term debt on the statement of cash flows.

- **Cash Flow to Debt**

$$\frac{\text{Excess of revenues over expenses} + \text{Depreciation expense}}{\text{Current liabilities} + \text{Long-term debt}} \times 100$$

CRITICAL CONCEPTS
Creating a Financial Analysis

Imagine that you are the financial manager of Clark Pediatrics Center and you have a meeting with the board of directors in a month. You need to create a financial analysis of the organization. You have also been asked to compare Clark Pediatrics to other pediatric healthcare organizations in the area to create a trend comparison. What must you do to complete a financial analysis? What information do you need for both horizontal analysis and vertical analysis? What sources can you use for comparison? What kind of decisions can be made regarding this information?

Cash flow to debt measures the ability to meet both short-term and long-term obligations. Higher values indicate an organization's ability to meet both short-term and long-term obligations, and lower values indicate a possible problem in meeting long-term obligations. W. Cleverley, J. Cleverley, and Song (2010) indicate that the cash flow to debt ratio is one of the best predictors of financial failure in organizations.

Operating Indicators

In addition to ratio analysis using information found in the financial statements, management may also analyze the following *operating indicators*, which are important measures of financial performance in relation to operations. Operating indicator information is not usually found on the financial statements, but it should be readily available on a variety of reports used by management.

- **Average Length of Stay**

$$\frac{\text{Patient days}}{\text{Discharges}}$$

The *average length of stay (ALOS)* measures how long patients stay in the hospital on average. Because a high percentage of hospital patients either reimburse the hospital per case or are on a capitated arrangement, lower ALOSes that hold down costs are preferable. However, hospital management should be aware of the incremental costs associated with keeping patients longer before developing rigorous discharge policies to lower their ALOS. Median ALOS for all hospitals reporting to Optum (2017) for 2015 was 4.50. Hospital

management should also be aware that ALOS varies for a variety of reasons, including case mix. Adjusted ALOS usually means that ALOS has been adjusted for case mix. Median ALOS adjusted for case mix for all hospitals reporting to Optum (2017) for 2015 was 2.7.

- **Occupancy Rate**

$$\frac{\text{Patient days}}{365 \times \text{Licensed beds}}$$

Occupancy rate measures capacity, or the percentage of the hospital that is being used. Higher values are typically preferable unless a large portion of the hospital's business is represented by capitation agreements. The median occupancy rate for all hospitals reporting to Optum (2017) for 2015 was 55.3.

Financial Analysis and Annual Reports

For-profit organizations prepare *annual reports*, which include financial and other information, and send them to their stockholders. Only recently have not-for-profit organizations begun to prepare annual reports as a vehicle of communication and accountability to the community.

There are several principles for preparing good reports, including annual reports:

- *Audience and purpose*: Management should prepare reports with the audience and purpose as the central focus. Preparing reports that readers will not understand is always dangerous. For instance, executive management should use a different level of detail in preparing a report for department managers than in preparing a report for the governing body. In addition to audience, management should always keep in mind the primary reason for the report. For instance, annual reports for for-profit organizations that have selling stock as a primary purpose will attract attention by using lots of color. Not-for-profit organizations, which must be more concerned about costs incurred, should provide an austere, yet functional, annual report.
- *Timeliness*: Reports designed to provide control within the organization, such as budget reports, must be prepared and distributed in a timely manner to maximize the effects of any necessary corrective action.
- *Accuracy*: Accuracy in reporting information is more important than timeliness. Reports with mistakes are detrimental to the organization because they create credibility problems.

- *Clarity*: Reports should be clear and concise to the audience and should leave little room for misinterpretation.
- *Comparability*: Reports should maintain formats to accommodate easy comparisons from statement period to statement period and among different organizations.
- *Commentary*: Reports should provide explanations when necessary. Even financial statements should provide explanations in the form of notes to the financial statements.
- *Meaningfulness*: Reports should be used for better decision making, which can only happen if the information is needed by the decision maker.

Annual reports provide accountability of the organization to the stockholders and act as a vehicle to sell more stock.

Chapter Key Points

- Financial analysis includes three steps: (1) establish the facts about the organization, (2) compare facts about the organization over time and with facts about similar organizations, and (3) use perspective and judgment to make decisions regarding the comparisons.
- The balance sheet represents the organization's assets, liabilities, and net assets.
- The statement of operations summarizes the organization's net revenues, expenses, and excess of net revenues over expenses.
- The statement of changes in net assets is the equity in a for-profit organization.
- The statement of cash flows categorizes an organization's cash flows.
- Ratio analysis compares facts about an organization over time and compares this information with facts about similar organizations.
- Operating indicators measure the financial performance in relation to operations.

Discussion Questions

1. How would you explain the three steps in financial analysis at the organizational level?
2. What is the purpose of creating a balance sheet? List the three general classifications of the balance sheet and possible categories under these classifications.

3. What is the purpose of the statement of operations? List the main classifications and the possible categories under the classifications.
4. What types of organizations use the statement of changes in net assets, and why?
5. What is the statement of cash flows? The statement is divided into three segments; list each category.
6. What are the four classifications of ratios on which the financial statement analysis focuses?
7. What are the operating indicators used to analyze the financial performance of an organization?
8. What must an annual report include to be considered a good report?

Notes

1. Acquiring ratio, trend, and percentage data on specific competitors may be impossible. However, several services sell data in the aggregate for comparable organizations, and some data are published by Moody's Investors Service, Dun & Bradstreet, and Troy.
2. In the 1996 *AICPA Audit and Accounting Guide for Health Care Organizations*, the term "net assets" replaced the term "fund balance" in not-for-profit healthcare organizations for external reporting purposes. Prior to 1996, not-for-profit organizations established numerous self-balancing funds consisting of assets, liabilities, and fund balances. AICPA, and more specifically Financial Accounting Standards Board (FASB) Statement No. 117, concluded that some not-for-profit organizations did not always present information about the fund balances on external reports. Although the AICPA and FASB Statement No. 117 do not preclude not-for-profit healthcare organizations from using fund accounting for internal reporting purposes, since 1996 those organizations have been required to classify all fund balances into three broad categories and report the categories on the balance sheet.
3. Statements of cash flows can be prepared using either the indirect method or the direct method. The indirect method of computing cash flows is based on accrual accounting changes in various assets and liabilities. The direct method is based on the actual changes in cash accounts for revenues and expenses. The direct method, which is recommended by FASB Statement No. 95, focuses on the primary sources of cash, such as patients and third-party payers, and uses of cash, such as salaries and supplies. The computation of the direct method is a complex process because of the number of accruals in each line item. In fiscal years beginning after December 15, 2017, organizations may present cash flow using either the direct or the indirect method (Connor and Mosrie 2016).

Ratio Analysis

Ratio Analysis Practice Problem

Using the financial statements for Bobcat Hospital in chapter 3, calculate the following ratios for 2016:

Current ratio

Collection period ratio

Days cash on hand, all sources, ratio

Days cash on hand, short-term source, ratio

Average payment period ratio

Operating margin ratio

Total margin ratio

Return on net assets ratio

Total asset turnover ratio

Age of plant ratio

Fixed asset turnover ratio

Current asset turnover ratio

Inventory ratio

Net asset financing ratio

Long-term debt capitalization ratio

Debt service coverage ratio

Cash flow to debt ratio

Ratio Analysis Practice Problem Solution

Current ratio

$$\frac{\text{Total current assets}}{\text{Total current liabilities}} = \frac{\$4{,}207}{\$1{,}530} = 2.75$$

Collection period ratio

$$\frac{\text{Net receivables}}{\text{Net patient service revenue/365}} = \frac{\$3{,}717}{\$7{,}643/365} = 177.507$$

Days cash on hand, all sources, ratio

$$\frac{\text{Cash + Temporary investments + Unrestricted long-term investments}}{\text{(Total expenses – Depreciation expenses)/365}}$$

$$= \frac{\$280 + \$30 + \$85}{(\$8{,}786 - \$443)/365} = 17.281$$

Days cash on hand, short-term sources, ratio

$$\frac{\text{Cash + Temporary investments}}{\text{(Total expenses – Depreciation expense)/365}} = \frac{\$280 + \$30}{(\$8{,}786 - \$443)/365} = 13.562$$

Average payment period ratio

$$\frac{\text{Total current liabilities}}{\text{(Total expenses – Depreciation expense)/365}} = \frac{\$1{,}530}{(\$8{,}786 - \$443)/365} = 66.935$$

Operating margin ratio

$$\frac{\text{Operating income}}{\text{Total operating revenue}} \times 100 = \frac{\$-696}{\$8{,}090} \times 100 = -8.603\%$$

Total margin ratio

$$\frac{\text{Excess of revenues over expenses}}{\text{Total operating revenue}} \times 100 = \frac{\$-61}{\$8{,}090} \times 100 = -7.553\%$$

Return on net assets ratio

$$\frac{\text{Excess of revenue over expenses}}{\text{Total net assets}} \times 100 = \frac{\$-611}{\$5{,}196} \times 100 = -11.759\%$$

Total asset turnover ratio

$$\frac{\text{Total operating revenue + Other income}}{\text{Total assets}} = \frac{\$8{,}090 + \$85}{\$10{,}266} = 0.799$$

Age of plant ratio

$$\frac{\text{Accumulated depreciation}}{\text{Depreciation expense}} = \frac{\$1{,}660}{\$443} = 3.747$$

Fixed asset turnover ratio

$$\frac{\text{Total operating reveune + Other income}}{\text{Net fixed assets}} = \frac{\$8{,}090 + \$85}{\$4{,}920} = 1.662$$

Current asset turnover ratio

$$\frac{\text{Total operating revenue + Other income}}{\text{Total current assets}} = \frac{\$8{,}090 + \$85}{\$4{,}207} = 1.943$$

Inventory turnover ratio

$$\frac{\text{Total operating revenue + Other income}}{\text{Inventory}} = \frac{\$8{,}090 + \$85}{\$140} = 58.393$$

Net assets financing ratio

$$\frac{\text{Total net assets}}{\text{Total assets}} \times 100 = \frac{\$5{,}196}{\$10{,}226} \times 100 = 50.812$$

Long-term debt to capitalization

$$\frac{\text{Long-term debt}}{\text{Long-term debt + Net assets}} \times 100 = \frac{\$3{,}500}{\$3{,}500 + \$5{,}196} \times 100 = 40.248\%$$

Debt service coverage ratio

$$\frac{\text{Excess of revenues over expenses + Interest expense + Depreciation}}{\text{Interest + Principal payments}}$$

$$= \frac{\$-611 + \$443 + \$109}{\$178 + \$109} = -0.206$$

Cash flow to debt ratio

$$\frac{\text{Excess of revenues over expenses + Depreciation}}{\text{Current liabilities + Long-term debt}} \times 100$$

$$= \frac{\$-611 + \$443}{\$1{,}530 + \$3{,}500} \times 100 = -3.340$$

Ratio Analysis Self-Quiz Problem

Using the financial statements for Bobcat Hospital in chapter 3, calculate the following ratios for 2017 and indicate whether they are better or worse than the 2016 ratios. Indicate whether the 2017 ratios are better or worse than the benchmarks using the Optum medians for each ratio (see exhibit 3.5):

Current ratio

Collection period ratio

Days cash on hand, all sources, ratio

Days cash on hand, short-term sources, ratio

Average payment period ratio

Operating margin ratio

Total margin ratio

Return on net assets ratio

Total asset turnover ratio

Age of plant ratio

Fixed asset turnover ratio

Current asset turnover ratio

Inventory ratio

Net asset financing ratio

Long-term debt to capitalization ratio

Debt service coverage ratio

Cash flow to debt ratio

CHAPTER 4

TAX STATUS OF HEALTHCARE ORGANIZATIONS

Nonprofit hospitals have historically played and continue to play a key role in the financing and delivery of healthcare in the United States because they are bound by their missions to do good for the benefit of the communities they serve.

Greg Pope, chief mission and ministry officer for the Saint Thomas Health Services Foundation, Nashville, Tennessee

Learning Objectives

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

- Analyze the rationale for tax-exempt status and apply the rationale to healthcare
- Appreciate the value of tax-exempt status
- Identify the steps necessary to qualify for tax-exempt status
- Relate the importance of community benefit to tax-exempt status in healthcare
- Examine judicial challenges to tax-exempt status
- Examine IRS challenges to tax-exempt status
- Examine legislative challenges to tax-exempt status

Introduction

As discussed in chapter 2, healthcare corporations are granted legal status as corporations by the state. Although the state can allow a variety of tax designations for corporations, only two general designations are discussed in this chapter: for-profit corporations and not-for-profit corporations.

Rationale for Tax-Exempt Status

As a general rule, for-profit corporations pay taxes: federal and state income taxes on income; state and local sales taxes on purchased goods and, in some states, services; and local real estate and personal property taxes on land, buildings, and major equipment. Not-for-profit corporations pay no taxes; they are therefore **tax-exempt**. To be tax-exempt, corporations must meet certain criteria established by the federal government through the Internal Revenue Service (IRS) and state and local governments. Most state and local governments use either the same or similar criteria to those established by the IRS.

tax-exempt
The status that allows an organization to pay no taxes, including sales tax, income tax, and property tax. Tax-exempt organizations may also raise capital by selling tax-exempt bonds, for which they can pay lower interest than comparable taxable bonds.

Why does the government grant tax-exempt status to corporations? The first reason is to relieve the government of the burden of providing the services itself. For instance, states grant healthcare organizations tax-exempt status, and in exchange the organizations provide healthcare services to state residents who cannot afford healthcare services. In the absence of this arrangement, the government presumably would provide these healthcare services itself. The second reason the government grants tax-exempt status to corporations is to reward the corporation for performing services that enhance community values and goals. For instance, governments reward healthcare organizations with tax-exempt status because the organizations provide uncompensated health-promotion programs to the community, which benefit the overall well-being of the community.

Value of Tax-Exempt Status

Although the potential exposure of a corporation to taxes and fees depends on a number of variables, including accounting practices, Witek, Milligan, and Ryan (1993) made the following general comments regarding valuing tax-exempt status. Federal income tax payments (approximately 34 percent, applied to net income) are generally the largest tax liability. State income tax payments average 6 percent, though not all states have a state income tax. Real estate and personal property taxes are significant tax liabilities; they are based on fair market value for land and appraised value for buildings and major equipment. In addition to eliminating tax liabilities, tax-exempt status also exempts the organization from paying most business fees and licenses. One of the most valuable benefits of tax-exempt status is the ability to issue tax-exempt bonds, whose yields are 4 to 5 percent below taxable bond yields.

Therefore, the value of tax-exempt status is the total value of taxes and business licenses and fees exempted and the value of access to tax-exempt bond markets. In 2013, these exemptions amounted to $12 billion for the nation's approximately 5,000 community, tax-exempt hospitals (Rosenthal 2013).

MINI-CASE STUDY

Imagine that you are a tax attorney and consultant to Doctors' Hospital, a for-profit, physician-owned hospital. You are scheduled to give a presentation to the board regarding the advantages related to converting the hospital to not-for-profit tax status. What are your arguments? What are the board's likely arguments to remain for-profit?

Qualifying for Tax-Exempt Status

The IRS has developed the primary criteria for a corporation with tax-exempt status, designated under Section 501(c)(3) of the tax code. To qualify for tax-exempt status, corporations must

1. operate exclusively for charitable, scientific, or educational reasons;
2. serve public rather than private interests, in that the organization's income does not benefit individuals; and
3. not engage in prohibited transactions, including but not limited to
    - participating in political campaigns,
    - attempting to influence legislation,
    - lending any part of the organization's income without receiving adequate security and interest,
    - paying compensation in excess of reasonable salary levels,
    - making investments for more than adequate consideration,
    - selling an asset for less than adequate consideration,
    - subverting in any other manner substantial portions of its income or assets, or
    - making any part of its services available on a preferential basis.

charitable organization An organization that provides community benefit or serves the public interest. In the case of healthcare, a hospital is a charitable organization if it provides care to people who cannot pay for their care or provides community health benefits.

community benefit A term used by taxing authorities such as the Internal Revenue Service that refers to specific actions required from a tax-exempt organization to maintain tax-exempt status.

In 1956, the IRS established that not-for-profit healthcare organizations qualified for tax-exempt status as charitable organizations under Revenue Ruling 56-185. In effect, this ruling established that healthcare organizations, in order to retain their tax-exempt status, are required to provide care to those unable to pay. This ruling was difficult to administer, and the term **charitable organization** was redefined in 1959 to include a concept of **community benefit** or public interest that was broader than just the provision of care to those

unable to pay (Kuchler 1992). The standard has changed several times in the decades since, and today tax-exempt status in general and the community benefit standard specifically are under scrutiny from research, judicial, congressional, executive, and public sectors. As the next section explains, the community benefit standard remains the primary IRS test for designating tax-exempt status.

Community Benefit and Tax-Exempt Status

Hospitals obviously benefit the community. However, do not-for-profit hospitals benefit their communities more than for-profit hospitals do? In the late twentieth century, this question was raised in public in an exchange in the *New England Journal of Medicine* between Arnold Relman, the journal's editor, and Michael Bromberg, president of the American Federation of Hospitals, an association of for-profit hospitals.[1] Relman wrote an article warning his readers of the medical-industrial complex—"a large and growing network of private corporations engaged in the business of supplying health-care services [exclusive of supplies and pharmaceuticals] to patients for a profit—services heretofore provided by nonprofit institutions or individual practitioners" (Relman 1980, 963). Relman worried that the medical-industrial complex would put the interests of stockholders before the interests of the community.

Answering Relman's claims, Bromberg wrote that for-profit hospitals provided capital that funded a technology boom; that for-profit hospitals paid significant taxes that supported social programs at the local, state, and federal levels; and that for-profit hospitals competed with not-for-profit hospitals, which would be good for the community by reducing costs and improving quality. Bromberg also criticized some of the early research that seemed to support Relman's claim. This research found that for-profit hospitals charge more per patient day; perform more ancillary tests per patient day; and "skim the cream," meaning that for-profit hospitals serve only paying patients and provide only profitable services (Bromberg 1983).

This issue has been studied many times since the Relman–Bromberg discussion. In 1987, an article in the *Harvard Business Review* found that little difference existed between community benefit provided by hospitals in for-profit systems and those provided by hospitals in not-for-profit systems.

> For-profits do not deny access to care. In fact, we found the for-profits gave slightly more access to patients who carry little or no health insurance than did the nonprofits. The reasons are straightforward: hospital costs are mostly fixed, and the marginal costs of an additional patient generally are low. Even an indigent patient contributes somewhat to covering the hospital's fixed costs.
>
> For-profits do not "cream" the affluent patients who have insurance coverage. There is no difference in accessibility between for-profits and nonprofits to the affluent patient.

> While nonprofit hospitals receive more social subsidies than for-profits (exemptions from taxes, business fees and licenses, as well as access to tax-exempt bonds), they do not achieve better social results. They are not more accessible to the uninsured and medically indigent, nor do they price less aggressively. (Herzlinger and Krasker 1987, 103)

Subsequent to the Herzlinger and Krasker study in 1987, Witek, Milligan, and Ryan (1993) reported that if taxes could be included in the definition of *community benefit* (local taxes are used for schools and roads), then for-profit hospitals might actually provide more community benefit than not-for-profit hospitals or county hospitals that receive direct tax support.

In mid-2004, Richard Scruggs, an attorney who had successfully won billions of dollars in class-action lawsuits against asbestos manufacturers and the tobacco industry, began to seek class-action status in 49 lawsuits accusing 370 not-for-profit hospitals of overcharging the uninsured and using aggressive collection methods against poor patients. The lawsuit against the Providence Health System, which operates several hospitals in Washington and Oregon, is representative. Citing the Providence mission to provide "universal access to health care, social justice and compassion for all members of our society" with "special concern for the poor and vulnerable," Scruggs (2004) argued the following:

> In fact, contrary to these representations, Providence discriminates against the very patients who are supposed to benefit most from its charity care by engaging in a pattern and practice of charging inordinately inflated rates to its uninsured patients, including Plaintiffs and the Class they seek to represent, that are far higher than the rates it charges its insured patients for the same services.
>
> Providence publicly represents itself as a "not-for-profit medical care provider," and it receives millions of dollars each year in tax exemptions under Section 501(c)(3) of the federal tax code, 26 U.S.C. §501(c)(3), as a charitable, "nonprofit" organization that is required by law to engage in exclusively charitable purposes. Providence Oregon is similarly exempt from Oregon property taxes based on its charitable, "nonprofit" status.
>
> In fact, again contrary to its representations, Providence is extremely profitable. For example, in 2002, which is the most recent year for which data is available, Providence Oregon obtained over $1.2 billion in revenue, it held over $250 million in cash and investment securities, and the cost of its physical plant (land, buildings and equipment) was over $1.1 billion.
>
> The same year, Providence Oregon's President and CEO, Henry G. Walker, received over $1.4 million in compensation and benefits, its four Vice Presidents received an average of over $565,000 in compensation and benefits, and the average compensation and benefits of its five highest paid employees other than officers and directors was $460,000.

In 2006, Providence Health System, along with Legacy Health System and Sutter Health, settled the uninsured billing cases while denying wrongdoing. As part of Providence's settlement, the system agreed to refund or adjust $1 million in past bills (Becker 2006).

In response to the increasing public pressure caused in part by the Scruggs lawsuits, the healthcare industry initiated a flurry of activity related to increasing community benefit. However, industry efforts to establish a voluntary standard for both the amount and what counts as community benefit stalled as the American Hospital Association (AHA) and the Catholic Health Association (CHA) offered competing proposals. The AHA proposal counted the cost of bad debt and Medicare losses in addition to the cost of charity care and Medicaid losses as community benefit. But CHA argued that the costs associated with bad debts and Medicare losses should not be counted (*Modern Healthcare* 2006).

In December 2006, the Congressional Budget Office (CBO) released a report on the provision of community benefit by not-for-profit hospitals. Both for-profit and not-for-profit hospitals in five states—California, Florida, Georgia, Indiana, and Texas—were examined (N = 1,057). Acknowledging the lack of industry consensus on what constitutes community benefit and how such benefits should be measured, the CBO report defined *community benefit* as the provision of uncompensated care, the provision of services to Medicaid patients, and the provision of certain specialized services that have been traditionally identified as unprofitable. In general, comparing for-profit and not-for-profit hospitals produced mixed results. The CBO found, on average, that not-for-profit hospitals provided higher levels of uncompensated care and were more likely to provide unprofitable specialized services. For-profit hospitals provided care to more Medicaid patients as a percentage of their total patient population and were found to operate in areas with lower average incomes, higher poverty rates, and higher rates of uninsurance (CBO 2006).

A study published in the *New England Journal of Medicine* (Young et al. 2013) found that community benefit averaged 7.5 percent of operating expenses in community, not-for-profit hospitals, and that 85 percent of the community benefit reported were charity care. The study also found great variation among hospitals in the amount of community benefit provided, ranging from 1 percent to 20 percent of operating expenses.

The CBO report also provided the results of the Joint Committee on Taxation, which valued the total 2002 tax exemptions for the nation's not-for-profit hospitals at $12.6 billion, with exemptions from federal taxes accounting for about half of the total (CBO 2006).[2]

Judicial Challenges to Tax-Exempt Status

The previously mentioned research findings question the community benefit standard; courts have also reviewed the appropriateness of tax-exempt status. Since the 1980s, state attorneys general have challenged the tax status of many healthcare organizations. Here are some examples:

- A case in Utah (Utah State Tax Commission 1990) argued that not-for-profit hospitals had evolved to a position in the marketplace from which it was virtually impossible to distinguish them from their for-profit counterparts. The court ruled:

  > Tax exemptions confer an indirect subsidy and are usually justified as the quid pro quo [consideration] for charitable entities undertaking functions and services that the state would otherwise be required to perform. A concurrent rationale used by some courts is the assertion that the exemptions are granted not only because charitable entities relieve government of a burden, but also because their activities enhance beneficial community values and goals. Under this theory, the benefits received by the community are *believed to offset the revenue lost by reason of the exemption* [emphasis added by author].

  Under this court's rationale, the amount of community benefit provided by the not-for-profit hospital should equal or exceed the amount of the tax exemption. In this case, community benefit did not equal the tax exemption, and the court required the not-for-profit hospitals to pay the difference in taxes.

  Critics of this decision have argued that the community benefit standard is too lenient. The standard defined *community benefit* as indigent care, community education and service, medical discounts, and donations of time, money, or services made by hospital employees acting as private individuals (Utah State Tax Commission 1990). In 2001, in Salt Lake County, the Board of Equalization voted to maintain tax exemption for four Intermountain Health Care facilities, but not before it required the system to once again present its case for exemption (Bellandi 2001).

- A case in Boise, Idaho, stated that a not-for-profit hospital was not sufficiently supported by donations; donations accounted for less than 2 percent of the hospital's total revenues. (Dutton 2013).

- A hospital in Pennsylvania lost its tax-exempt status because the courts felt it had a profit motive, as evidenced by the CEO's $400,000 salary (in 1994), the fact that surpluses were sent to the corporate parent, and the fact that the hospital forced physicians to sign noncompete agreements (Thompson Powers LLC 1999).

- A hospital in New Hampshire had its tax-exempt status revoked because its collection policy stipulated that it receive full payment for all services whenever possible; it provided only 2.9 percent of total revenue in charity care; and it used its surpluses to fund a for-profit subsidiary (Taylor 2001).

MINI-CASE STUDY

Suppose that you are the president and CEO of St. Michael's Hospital for Children. You arrive at work to find TV cameras and news reporters in your office. A national news story had aired the previous evening calling into question the tax-exempt status of nonprofit hospitals related to the Illinois case referenced in the list of examples (Pressey 2010). You feel compelled to address the issues raised in the Illinois case in particular and the general principles of tax-exempt hospitals from the local perspective. What does your press release say?

- The attorney general of Connecticut sued a hospital for hoarding $37 million in charitable funds in order to generate interest income instead of spending the funds to provide indigent care (Piotrowski 2003b).
- A clinic in Wisconsin lost its property tax exemption when the court ruled its property was not used exclusively for benevolent purposes as defined by state law (Taylor 2003).
- A healthcare system in Texas was challenged by the IRS for its joint venture status (a joint venture between a not-for-profit entity and a for-profit entity). After several appeals, the trial court ruled in the system's favor and the IRS decided to not appeal (Nowicki 2008).
- A medical center in Illinois lost its tax-exempt status because of aggressive patient-collection tactics and because the organization had contracted with several for-profit entities to fulfill key hospital functions (Pressey 2010).
- A New Jersey tax court ordered a health system to pay $15 million in back property taxes on the gift shop and other operations that were operated for a profit (Judge 2016).

IRS Challenges to Tax-Exempt Status

In 1987, in response to public pressure to reduce federal budget deficits, the IRS began to audit tax-exempt organizations, including healthcare organizations. By the end of 1992, the IRS had audited 233 tax-exempt healthcare organizations. Most frequently reported irregularities included inappropriate physician recruiting arrangements and taxable unrelated business income. For instance, in 1994, a hospital in Houston agreed to pay nearly $1 million in federal income taxes and penalties in response to IRS allegations that the hospital had offered lucrative physician recruitment and retention incentives, including signing bonuses, income guarantees, free office space, malpractice insurance, equipment loans, and loan guarantees (Wang and Wambsganns 1997).

In 1991, the IRS initiated an audit program for tax-exempt healthcare systems called the coordinated examination program (CEP; now known as the Coordinated Industry Case program). Using an interdisciplinary audit team of specialists in corporate restructuring,

pensions, payroll taxes, income taxes, and tax-exempt bond financing, CEP audits examine the following (HFMA 1992):

- *Community benefit standard*: Auditors check composition of the governing board, amount of charity care provided, and complaints of **patient dumping** (denying care to or transferring a patient based on the patient's inability to pay).
- *Unreasonable compensation and private* **inurement**: Auditors check physician relationships to identify prohibited instances of private benefit, unreasonable compensation, improper disclosure, and inappropriate physician recruiting practices.
- *Financial analysis*: Auditors check all affiliated entities to detect the presence of prohibited proprietary purposes, inurement, serving of private interests, unrelated business income (i.e., income from business activities that is unrelated to the organization's tax-exempt purposes and therefore must be reported as taxable income), or lobbying activities.
- *Joint ventures*: Auditors check each **joint venture** (a relationship established between two business entities—for example, a hospital and radiologist purchasing and operating a computed tomography scanner together) to determine whether the venture violates prohibitions on private benefit, inurement, or kickbacks.
- *Independent contractors*: Auditors check hospital contracts to determine whether contractors should be treated as contractors or employees for tax purposes.

patient dumping
Denying care to or transferring a patient based on the patient's inability to pay.

inurement
Providing an employee benefit, such as salary, that is greater than the value of the employee's work.

joint venture
A relationship between two business entities entered into for a specific purpose and period of time.

In 2009, the IRS released its final report on a study of nonprofit hospitals that began in 2006 (IRS 2009). The report was based on a survey sent to 500 nonprofit hospitals in four community settings: high-population urban, other urban and suburban, critical access hospitals, and other rural hospitals. The community benefit findings included substantial variation in the amount of community benefit provided by nonprofit hospitals. For instance, the report found that 20 percent of the survey hospitals accounted for 78 percent of the aggregate community benefit:

- There is considerable diversity in the demographics, community benefit activities, and financial resources among the hospitals in the sample.
- The average and median percentages of total revenues reported spent on community benefit activities were 9 percent and 6 percent, respectively, with the lowest percentages reported among the rural hospitals.

- Uncompensated care was the largest reported community benefit expenditure, accounting for 56 percent, followed by medical education and training at 23 percent, research at 15 percent, and community programs at 6 percent.
- The average excess profit margin for the sample was 5 percent, though 21 percent of the sample reported losses.
- The average and median total compensation amounts paid to the top management official were $490,000 and $377,000, respectively. Nearly all of the amounts were determined to be reasonable compensation by the IRS.

Legislative Challenges to Tax-Exempt Status

At the federal level, significant activity related to the tax privileges of tax-exempt organizations has taken place in the late twentieth and early twenty-first centuries. Representative Brian Donnelly (D-MA), who served from 1979 to 1993, led legislative efforts to require tax-exempt hospitals to provide specific levels of charity care. In President Bill Clinton's health reform bill, tax-exempt healthcare organizations would have been required to assess the health needs of the community on an annual basis and develop plans to meet those needs (Blankenau 1994). The Taxpayer Bill of Rights II, which indirectly addresses tax-exempt issues, was signed into law in 1996. The act provides the IRS with intermediate sanctions prior to revoking an organization's tax-exempt status. According to Wang and Wambsganns (1997), the act also

- requires tax-exempt organizations to disclose excess benefit transactions (i.e., unreasonable compensation or any other transaction in which payment or benefit exceeds the value of the transaction) and excise taxes paid for such transactions on Form 990, which requires all not-for-profit organizations to substantiate their tax-exempt status;
- expands public access to Form 990; and
- subjects executives responsible for an excess benefit transaction, rather than the organization, to a 10 percent tax on the amount of excess benefit if corrected and reported, and a 200 percent tax on the amount of excess benefit if executives fail to correct a transaction in which they personally benefited.

Former Representative Charles B. Rangel (D-NY), who at the time chaired the House Ways and Means Committee's panel on select revenue measures, held hearings in 2005 on tax-exempt status and voiced concerns that existing law regarding tax-exempt status was too lenient and too difficult to enforce.

In 2005, Senator Chuck Grassley (R-IA), the ranking member of the Senate Finance Committee, sent letters to the nation's largest tax-exempt hospitals asking them for clarification of community benefit reported. In 2006, Senator Grassley convened hearings to release hospital responses to the 2005 letters and to investigate hospital executive compensation. In 2007, he released a draft of legislative reforms for tax-exempt hospitals and held roundtables to discuss the reforms. In 2008, he followed up with more letters to hospitals, and he requested a report from the Government Accountability Office. Partly in response to the community benefit controversy, in 2008 the IRS added Schedule H to Form 990 for tax-exempt hospitals. Schedule H has six parts addressing how tax-exempt hospitals provide community benefit to their communities. Part 1 is the most important part and represents several types of financial assistance. The six parts are as follows (IRS 2016):

Part 1: Financial Assistance and Certain Other Community Benefits at Cost
Part 2: Community Building Activities
Part 3: Bad Debt, Medicare, and Collection Practices
Part 4: Management Companies and Joint Ventures
Part 5: Facility Information
Part 6: Supplemental Information

In 2009, Senator Grassley convinced the Democratic majority to include many of the reforms in the Affordable Care Act (ACA) of 2010 (Grassley 2010):

> Tax-exempt hospitals don't have many measures of accountability for their special status. The law hasn't given them much direction, and so they've defined standards for themselves. Sometimes that's resulted in providing very little charitable patient care or other community benefits, failing to publicize charitable care to patients, charging indigent, uninsured patients more than insured patients, and using very aggressive collection practices. The Government Accountability Office and others, including the former IRS commissioner, have said for a long time that there is often no discernible difference between the operations of taxable and tax-exempt hospitals. These new provisions are modeled after principles and policies that the Catholic Health Association has had in place for years.

The ACA imposes four requirements for tax-exempt hospitals (AHA 2010):

1. Complete a community health needs assessment and implementation strategy every three years and make it available to the public. Needs that are identified and not addressed with resources must be explained.
2. Develop, implement, and publicize financial assistance policies that include criteria for financial assistance, methods of applying for assistance, the basis

for determining the amount charged to patients, permissible debt collection actions for patients on financial assistance, and the availability of emergency care regardless of the patient's ability to qualify for assistance.

3. Limit charges to patients eligible for assistance to no more than the lowest amount billed to insured patients.
4. Avoid extraordinary billing and collection activities until eligibility for financial assistance is determined.

Regarding these requirements, the Treasury Department and the IRS issued final regulations referred to as IRS Section 501(r) Regulations that went into effect for taxable years after December 29, 2015. Generally speaking, the IRS can fine noncompliant hospitals $50,000, tax all of the organization's revenue for one or more years, or rescind the hospital's tax-exempt status (AHA 2015).

Projecting the effects of the ACA on hospital charity care is difficult. Both the individual mandate and the expansion of Medicaid eligibility in many states will replace charity care patients with insured patients. However, undocumented workers who are not covered under the ACA and individuals and small businesses who opt for the federal fines in lieu of purchasing coverage were expected to continue to seek charity care at hospitals (Chazin et al. 2010). Between 2013 and 2014, hospital admissions for uninsured patients in states that expanded Medicaid dropped 44 percent, while hospital admissions for uninsured patients in states that refused to expand Medicaid increased 6 percent (Rudowitz and Garfield 2015). Uncompensated care costs were estimated to be $5.7 billion lower in 2014 due to the provisions of the ACA (DeLeire, Joynt, and McDonald 2014).

Former Representative Charles W. Boustany (R-LA), who at the time chaired the Subcommittee on Oversight of the Committee on Ways and Means, held hearings in 2012 to review the IRS oversight of tax-exempt organizations including hospital compliance with the ACA (House Committee on Ways and Means 2012).

The state level has also shown significant activity related to the tax privileges of tax-exempt organizations, and 39 states have passed legislation that challenges—or at least defines more narrowly—tax-exempt status and requires either voluntary or mandated reporting of community benefit (Nelson, Tan, and Mueller 2015). For example, the 1993 Texas Charity Care Law requires tax-exempt healthcare organizations to provide a certain amount for community benefit and develop a mission statement and community benefit plan for serving the community's healthcare needs.

MINI-CASE STUDY

Related to the earlier case regarding St. Michael's Hospital for Children, do you as the CEO have additional arguments against taxing authorities attempting to revoke a hospital's tax-exempt status in lieu of the Affordable Care Act? Does the board have a different position based on the ACA?

Community benefit is narrowly defined to include the cost of charity care and uncompensated Medicaid costs (or the hospital's loss to the Medicare program). The plan must be based on a community-wide needs assessment and must contain mechanisms for measuring the plan's effectiveness, including measurable objectives and a budget. The budget must include an amount for community benefit at least equal to one of the following (Texas Tax Code 1993):

- 4 percent of the hospital's net revenue
- 100 percent of the hospital's state and local tax exemptions
- An amount that is reasonable in relation to community needs, available resources, and the hospital's state and local tax exemptions

As of 2015, 25 states required nonprofit hospitals to provide community benefit (definitions of *community benefit* vary greatly among the states); however, only Illinois, Nevada, Pennsylvania, Texas, and Utah required nonprofit hospitals to provide a specific amount of charity care (Nelson, Tan, and Mueller 2015).

Chapter Key Points

- Tax-exempt status has several advantages for healthcare organizations.
- Tax-exempt organizations must meet several criteria, including the provision of community benefit.
- Legislatures, courts, and the IRS have challenged tax-exempt organizations, including hospitals.
- The Affordable Care Act of 2010 provides national criteria for nonprofit hospitals.

Discussion Questions

1. How would you explain the rationale for granting organizations tax-exempt status?
2. What are the benefits and the burdens of tax-exempt status for hospitals?
3. What are the steps necessary to qualify for tax-exempt status?
4. What are the bases of legislative, judicial, and IRS challenges to tax-exempt status?
5. Is the Affordable Care Act of 2010 being viewed as friend or foe to tax-exempt hospitals? Why?
6. Under the ACA, if more people are covered by insurance and fewer people need charity care, how will nonprofit hospitals justify their tax-exempt status?

Notes

1. For an informative history of the for-profit healthcare industry, see *Columbia/HCA: Healthcare on Overdrive*, by Lutz and Gee (1998).
2. The charity care issue is not limited to hospitals. While physicians are typically not required or obligated to provide charity care, charity care provided by physicians showed a steady decline between 1996 and 2005, according to a 2006 study by the Center for Studying Health System Change. According to the study, 68 percent of physicians provided free care in 2004–2005, down from 72 percent in 2001–2002 and 76 percent in 1996–1997. The number of hours of free care provided was also substantially down, according to the study (Romano 2006).

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PART II

OPERATING REVENUE

CHAPTER 5

THIRD-PARTY PAYMENT

It is anyone's guess how much of our revenue will be at risk five years from now, but it will be more than it is today. To be paid for value, we have to be adept at creating and maintaining value—that is a requirement.

Juan Serrano (2014), former senior vice president of payer strategy and operations, Catholic Health Initiatives

Learning Objectives

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

- Review the history of third-party reimbursement
- Classify managed care organizations
- Examine new methods of financing and delivering healthcare
- Identify methods of payment, including bad debt and charity care
- Compute cost-shifting and cost-cutting problems

Note: Terms shown in **boldface** in this chapter are defined in the margins and appear in the glossary. Terms in ***boldface italic*** also appear in the glossary.

Introduction

Third-party payers are agents of patients who contract with providers (the second party) to pay all or a part of the bill to the patient (the first party). The most common third-party payers are insurance companies and the government (through Medicare and Medicaid). Third-party payers have had an important effect on healthcare organizations since the 1920s. As mentioned in chapter 1 and illustrated in exhibit 5.1, third-party payment—including payments from the federal government, private insurance, and state and local government—represented 84.0 percent of total personal healthcare expenditures in 2014 (CMS 2016a).

History of Third-Party Payment

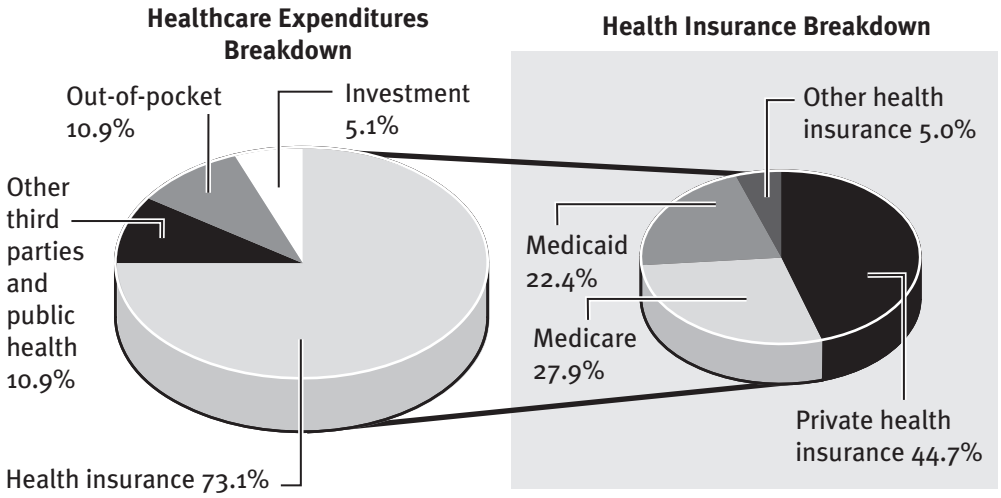
Third-party payment started in the 1920s, but not without significant opposition. Labor unions supported health insurance for their members as early as 1915, but their efforts failed as a result of opposition by the American Medical Association (AMA) and the antisocialist mood of the country during and after World War I. Physicians were wary of approving a payment system that would change the **second-party payment** system—patients paying their own bills, rather than an insurance company paying the bills—already in place (see exhibit 5.2).

second-party payment Payment for healthcare that comes from the person receiving the service (i.e., patients paying their own bills).

Emergence of Prepaid Medical Care

The second-party payment system was economically efficient in that patients sought only the amount and quality of care they could afford. However, the second-party payment system created ethical concerns because some patients who needed care could not afford it, which

Exhibit 5.1 Percentage of Total Healthcare Expenditures in the United States by Source of Funds, 2014, and Percentage of Total Health Insurance by Source of Funds, 2014



Source: CMS (2016a).

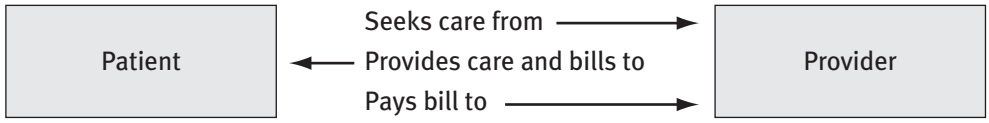


Exhibit 5.2
Second-Party Payment

prompted some employers to pay providers directly for the care received by their employees. The second-party system also created bad-debt concerns because some patients sought emergency care and could not afford to pay the bill after the care was provided. This latter concern in 1929 prompted Baylor University Hospital in Dallas, Texas, to offer schoolteachers prepaid hospital care for $6 per year. Over the next few years, several other hospitals offered similar arrangements to remain competitive with the Baylor plan, which later became the first Blue Cross plan. In 1933, Dr. Sidney Garfield began to provide prepaid medical care to employees who worked on the California aqueduct system, and in 1938 he provided prepaid medical care to workers on the Grand Coulee Dam. Garfield's plan evolved into the Kaiser-Permanente health plan; Henry J. Kaiser was the employer who contracted with Dr. Garfield (Starr 1982).

The Great Depression in the 1930s made it difficult for employers to pay providers directly for the care received by their employees and for hospitals like Baylor to accept the risk associated with offering prepaid plans. The AMA softened its position on voluntary health insurance during the mid-1930s, but the organization stipulated that hospital benefits (such as the charge for the hospital room) and medical benefits (such as the doctor's fee) be separate. For example, Blue Cross provided hospital benefits, and Blue Shield later provided medical benefits. The AMA remained adamantly opposed to **compulsory health insurance** and helped defeat proposals to include compulsory health insurance in President Franklin Delano Roosevelt's Social Security Act in 1935.

compulsory health insurance
A legal requirement that everyone have health insurance.

Growth of Health Insurance

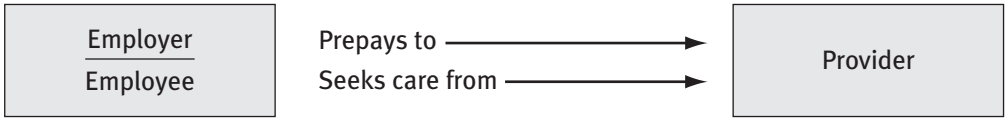
The defeat of compulsory health insurance in 1935 under President Roosevelt and again in the late 1940s under President Harry S. Truman meant that health insurance in the United States would be largely voluntary and private. The type of early plan offered by Baylor University Hospital and Henry J. Kaiser was called a **direct service plan** (employers prepaid specific hospitals and physicians to provide care to their employees) and was characteristic of most health insurance plans through the 1940s. Direct service plans were really an extension of second-party payment, in that the employer prepaid the provider on behalf of the employee (see exhibit 5.3).

direct service plan
An arrangement whereby an employer prepays specific hospitals and physicians to take care of employees.

In the mid-1940s, a type of plan called a **commercial indemnity plan** allowed employers and/or employees to prepay an insurance company, which would reimburse a hospital or physician of the employee's choosing. Commercial indemnity plans initiated the concept of the third-party payer, because the insurance company was relatively independent from both the employer/employee and the provider (see exhibit 5.4).

commercial indemnity plan
An arrangement whereby an employer pays an insurance company, which in turn reimburses hospitals and physicians chosen by the employees.

Exhibit 5.3
Direct Service Plans



Between 1945 and 1949, group commercial indemnity plans increased from 7.8 million subscribers to 17.7 million subscribers, and individual commercial indemnity plans increased to 14.7 million subscribers. By 1953, commercial insurance plans, which were for-profit, provided coverage to 29 percent of Americans. Blue Cross, which was a not-for-profit plan, provided coverage to 27 percent of Americans. Through the 1950s, use of commercial indemnity plans grew steadily, often at the expense of the less aggressive Blue Cross plans (Starr 1982).

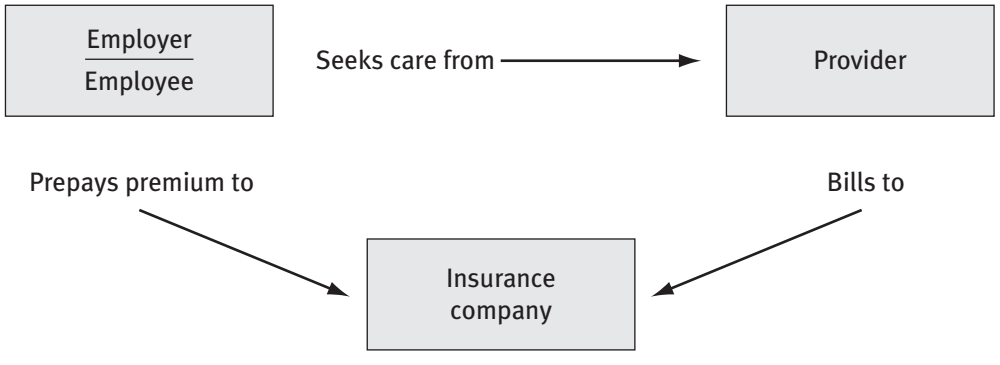
community rating
A premium-setting method in which all groups covered by an insurance company pay essentially the same premiums, regardless of their health risks.

Blue Cross typically set premiums using **community rating** (all groups paid essentially the same premium, resulting in low-risk groups subsidizing high-risk groups). Commercial insurance companies such as Prudential and Metropolitan, which had had significant histories in life insurance, set premiums using **experience rating** (groups paid different premiums based on their risk). Commercial insurance companies often solicited low-risk Blue Cross groups by offering lower premiums.

experience rating
A premium-setting method in which different groups covered by an insurance company pay different premiums based on their risk.

By the late 1950s, 66 percent of Americans had some form of health insurance; it was usually provided by the employer. Part of this increase is attributable to a 1954 Internal Revenue Service (IRS) tax ruling that confirmed that employers' contributions to health insurance plans were tax-exempt (Starr 1982). Medicare and Medicaid were introduced in 1966 (Medicare is discussed in more detail in chapter 6, Medicaid in chapter 7); the percentage of covered Americans subsequently increased to 87 percent by 1968 (Harris 1975). Changes in federal Employee Retirement Income Security Act (ERISA) laws during the early 1980s allowed large employers to self-insure and gain the full benefit of any reductions in costs. Some of these reductions were actually a transfer of costs to employees.

Exhibit 5.4
Commercial Indemnity Plans



With the Deficit Reduction Act of 1984, the federal government began to limit the amounts employers could deduct for health benefits. In 1987, the federal government began to track healthcare spending by sponsor to determine the financial burdens placed on three sponsors: households, private businesses, and governments. In effect, most healthcare spending originates with these three sponsors. In the case of households, healthcare spending is composed of out-of-pocket spending (deductibles and copayments), premiums (both private and public), and payroll taxes for public healthcare programs. In 2015, households paid for 27.7 percent of total healthcare spending, and the trend has been decreasing. In 2015, private businesses paid for 19.9 percent of total healthcare spending, and the trend has been decreasing. In 2015, governments paid for 45.7 percent of total healthcare spending, and that trend has been increasing (CMS 2017b).

Managed Care Organizations

Although the Baylor and Kaiser experiences with direct service plans were limited in the healthcare services they delivered, they were the first *managed care organizations* (MCOs). A **managed care organization** is an organization that controls the cost of healthcare, the quality of healthcare, and the access to healthcare. One way to classify MCOs is Kongstvedt's continuum, shown in exhibit 5.5 (Kongstvedt 2013).

managed care organization
An organization that controls the cost and quality of and access to healthcare.

At one end of the continuum is the commercial indemnity plan (shown in exhibit 5.5 as *managed indemnity*), which requires precertification of elective admissions and case management of catastrophic illnesses. *Service plans*, like the typical Blue Cross plans, add contractual relationships with providers that often include maximum fee schedules and prohibitions on balance billing (i.e., providers cannot bill the patient for amounts over

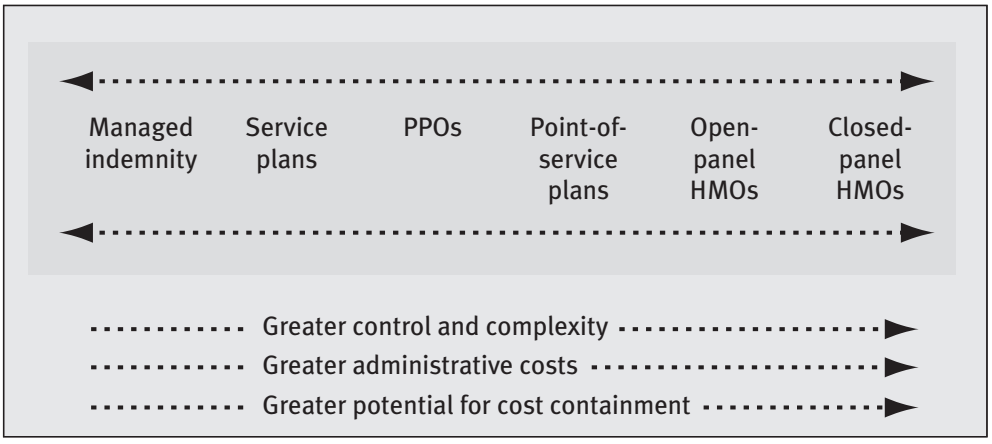


Exhibit 5.5
Managed Care Continuum

Source: Adapted from Kongstvedt (2013).

preferred provider organization (PPO) An organization that provides discounted healthcare services to insurance carriers and employers.

health maintenance organization (HMO) An organization that integrates the financing and delivery of healthcare into one organization.

the fee schedules agreed to with the service plan). Next along the continuum are *PPOs*. A **preferred provider organization (PPO)** provides discounted provider services to insurance carriers and employers.

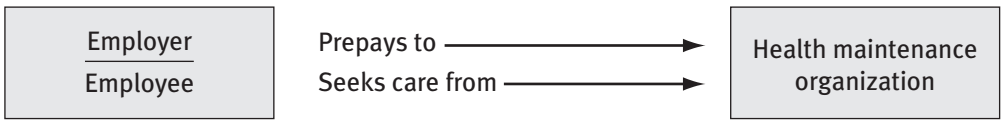
Point-of-service plans, shown next along the continuum, will be discussed later in this section. The final two categories along the continuum are types of *HMOs*, or *health maintenance organizations*. Providers usually agree to discount their prices in exchange for large volumes of patients. A **health maintenance organization (HMO)** integrates the financing and delivery of healthcare into one organization (see exhibit 5.6). Financial risk, and opportunity, shifts from the employer/employee as under the commercial indemnity plan (i.e., the employer/employee pays for inappropriate use through increased premiums) to the HMO (i.e., under prepayment, the HMO assumes the financial risk, and opportunity, for inappropriate use).

In response to a growing anti–managed care sentiment and in the face of possible legislation designed to hold managed care companies legally accountable for directly managing care through preadmission authorizations and utilization review, managed care companies such as UnitedHealthcare pursued new methods to finance and deliver improved care while holding down costs. One method is *evidence-based case management*, in which managed care companies partner with providers to determine the best, and thereby the most efficient, way to manage a case based on current evidence. For instance, in the late 1990s, Anthem Blue Cross and Blue Shield collaborated with physicians and hospitals in Indiana, Ohio, and Kentucky and established a goal of administering ACE (angiotensin-converting enzyme) inhibitors to 60 percent of health plan members diagnosed with congestive heart failure. In Indiana hospitals from 1998 to 2001, the use of ACE inhibitors increased from 52 percent to 60 percent. Hospitals and physicians who met the targets were reimbursed more than hospitals and physicians who did not meet the targets (Nowicki 2003).

Another method designed to give health plan members choices in coverage that also seems to save money is the move toward high-deductible health plans. As the cost of healthcare continues to rise, employers are passing more of the cost to their employees or not providing healthcare at all. This economic phenomenon occurs at the same time as a demographic phenomenon—a large portion of the population, the baby boomers, are in their 60s and need more healthcare. High-deductible health plans allow consumers to select the coverage they need or want and pay the corresponding premiums (Millenson 2003).

Humana, one of the nation's largest health plans, may have been the first to try a consumer-driven plan with its own employees. Humana's chief executive officer, Michael McCallister, said, "I'm a big believer that the most powerful player in understanding and

EXHIBIT 5.6 Health Maintenance Organizations



managing costs is going to be the individual consumer. When people are spending their own money, given good and actionable information, they're going to do much better at controlling costs than the current model" (Rauber 2003). From July 2001, when Humana replaced its traditional coverage with consumer-driven coverage for its Louisville-area employees and their dependents, through June 2002, Humana saved more than $2 million from its anticipated health benefits' costs.

To manage increased risk, MCOs contain costs with aggressive methods of controlling utilization that include carefully selecting subscribers and providers, providing physician incentives, and providing subscriber/employer incentives. Eastaugh (1992) reported that HMOs, the most aggressive form of MCOs, used 37 percent fewer hospital days (341 days per 1,000 enrolled) for their nonelderly enrolled populations than commercial indemnity plans, which used 542 days per 1,000 enrolled.

Historically, MCOs have been classified on the basis of the degree of control they have over their physician providers. *Point-of-service (POS) plans* are MCOs that exert minimal to no control over their physician providers because they allow enrollees to seek care from providers not on contract with the POS plans (i.e., out of network). Although POS plans reimburse the provider's fees, the POS plan usually requires the enrollee to pay out-of-network providers larger deductibles and coinsurance, as well as higher premiums to the POS plan, for the privilege of going out of network.

In 2016, the Kaiser Family Foundation reported that POS plans represent about 8 percent of all covered workers, while PPOs represent the majority of covered workers, 48 percent. About 15 percent of the employed population chose HMOs, 29 percent were covered by high-deductible health plans (discussed later in this chapter), and fewer than 1 percent chose conventional indemnity plans (Kaiser Family Foundation 2016).

HMOs

There are several types of HMOs, as will be discussed in the following section, including open-panel HMOs, closed-panel HMOs, and network HMOs.

Open-Panel HMOs

An ***open-panel HMO*** exerts moderate control over physician providers; it contracts with physicians to provide care for enrollees in the physicians' offices. Open-panel HMOs include the *direct-contract* model and the *independent practice association (IPA)* model. Direct-contract HMOs contract with individual physicians to provide care, and IPAs contract with associations of physicians. Member physicians are not employees of the association. IPAs may be previously existing associations of physicians that contract with multiple HMOs, or the HMO may organize the association to provide physician services. In either model, as well as in the direct-contract model, physicians see both their own patients and HMO

patients. The open-panel HMO reimburses the physicians either on a fee-for-service basis, often with a discount, or by capitation (Kongstvedt 2013).

Closed-Panel HMOs

A ***closed-panel HMO*** exerts maximum control over physician providers because the HMO contracts with or employs physicians to provide care for enrollees on an exclusive basis. Closed-panel HMOs include the *group* model and the *staff* model. Group-model HMOs contract with a multispecialty group of physicians to provide all physician care to enrollees, typically for a capitated price. In the group-model HMO, physicians are employed by the group, not the HMO. Staff-model HMOs employ individual physicians to provide all physician care to enrollees; primary care physicians are always employed, and some specialty and subspecialty physicians may actually be on contract. Closed-panel HMOs provide incentive payments to physician providers based on performance (Kongstvedt 2013).

Network HMOs

A ***network HMO*** exerts moderate to maximum control over physician providers because it contracts with physician groups to provide care for enrollees. Network HMOs may be either open-panel or closed-panel HMOs. Typically, the network HMO relies on groups of primary care physicians and reimburses the groups for a capitated price. The primary care groups are often responsible for referring and reimbursing referrals to specialty physicians (Kongstvedt 2013).

Post–Managed Care

When the managed care industry had a tough few years in the late 1990s—with declining enrollments, poor public relations, and threatened anti–managed care legislation—many observers were predicting managed care's demise (Clarke 2000). The managed care industry adjusted with a "softer image" and more popular methods of controlling costs. Managed care continues to be a reliable method for payers, including employers and the government, to control healthcare costs. However, employers and the government continue to investigate new ways to control costs, such as defined-contribution plans, direct contracting, a more generous interpretation of consumer-driven plans than previously mentioned, and high-deductible health plans. Depending on the configuration, these new ways of controlling healthcare costs might be considered under the managed care umbrella of products.

Defined-Contribution Plans

Employers—faced with the reality that employees who experience no personal economic consequences regarding healthcare spending will want, but not necessarily need, more healthcare and higher-quality healthcare—are turning from *defined-benefit plans* to *defined-contribution*

plans. Under a **defined-benefit plan**, the employee receives a defined-benefit package, and the employer/employee pays the premium, which is adjusted each year based on experience. Employers have absorbed large, unpredictable premium increases for several years under these plans. Under a **defined-contribution plan**, employees typically choose from a variety of healthcare options, with a specified amount of the premium paid for by the employer. Any healthcare costs above this amount are paid for by the employee. Defined-contribution plans shift more of the financial responsibility to the employee, who becomes more aware of usage and price as a result (Emery 2001).

defined-benefit plan
A health plan in which the employer pays the premium, or an established part of the premium, regardless of the cost.

defined-contribution plan
A health plan in which the employer pays a set amount toward the cost of the premium and the employee pays the rest. Thus, if an employee chooses an expensive plan, the employee pays more than if a less expensive plan were chosen.

Direct Contracting

Direct contracting occurs when large employers make contractual agreements directly with integrated delivery systems or systems of healthcare providers capable of accepting a financial risk and delivering a full range of healthcare services. Direct contracting reduces the administrative costs of insuring employees because the third-party insurer is cut out of the deal. Direct contracting also stimulates competition between integrated delivery systems and encourages local control and innovation (Burrows and Moravec 1997).

direct contracting
The practice of an employer making a contractual agreement directly with an integrated delivery system to deliver health services to employees.

Consumer-Driven Plans

Consumer-driven health is a movement that includes empowering healthcare consumers with control, choice, and information (Herzlinger 2004). A **consumer-driven plan** helps individuals wisely choose their healthcare providers, and financial incentives encourage them to request only the appropriate amount of healthcare services. Consumer-driven plans come in two primary models: *spending-account* models and *tiered* models. Spending-account models include some type of health reimbursement account, such as a health savings account, which provides consumers with a fund (typically tax sheltered) to spend on healthcare expenditures. After a consumer has depleted the account, and for some expenses not eligible to be reimbursed from the account, a high-deductible health plan (discussed in the next section) is required by the IRS. Tiered models allow the consumer to customize cost-sharing parameters, such as the amounts of deductible and coinsurance, with commensurate adjustments to the amount of premiums paid by the consumer (Rosenthal, Hsuan, and Milstein 2005).

consumer-driven plan
A health plan that provides information and incentives to encourage enrollees to make wise healthcare choices.

High-Deductible Health Plans

A **high-deductible health plan** shifts expenditures to the patient while lowering premiums. In theory, high-deductible health plans should save money in the short run by making patients more selective in the care they seek; however, these plans could result in long-run adverse consequences due to patients delaying necessary care to save money. To reduce the effect of adverse consequences and consistent with the Affordable Care Act requirements,

high-deductible health plan
A health insurance plan with higher deductibles and lower premiums than traditional health plans.

MINI-CASE STUDY

Suppose that, as the new benefits manager at Riley Industries, you have decided to implement a high-deductible health plan for the employees. You have heard high-deductible health plans have many benefits, such as substantial cost savings resulting from employees taking charge of their health. You have also heard there are disadvantages. For instance, employees are unaware of how to manage these plans. How should you educate the employees of Riley Industries on high-deductible health plans? What if the employees want to keep their previous insurance plans instead? Discuss the other advantages of high-deductible health plans to both the employer and the employees, including how employees are able to promote better health through these plans. Name some other disadvantages of the plans, including the inability to save for possible deductible costs. What is your opinion on companies moving toward high-deductible health plans?

many high-deductible health plans pay for the complete cost of such preventive services as routine checkups, screenings, immunizations, prenatal care, and contraception. A high-deductible health plan can be part of a consumer-driven health plan as discussed in the previous section, or it can be sold by an insurance company or provided by an employer as a free-standing product.

Many consumer-driven plans, whether they are spending-account or tiered models, are now categorized as high-deductible health plans. These are the fastest-growing plans on the market, increasing from 4 percent of all managed care enrollees in 2006 to 29 percent of all managed care enrollees in 2016 (Kaiser Family Foundation and Health Research and Educational Trust 2016).

State Healthcare Reform

As healthcare is increasingly viewed as a social good and right, businesses and states are looking to the federal government to provide for that right under some type of national health insurance. Some businesses see national health insurance funded by taxes as a more equitable way of financing and a more comprehensive way of delivering healthcare than the current method of coverage provided by employers and individuals as mandated by the Affordable Care Act (ACA). Businesses are hoping that spreading the tax burden for national health insurance would result in their tax increases being less than their healthcare costs now, which would make American business more competitive in an increasingly global economy (Salb 2008). However, other businesses see national health insurance as too expensive and lacking appropriate cost controls (US Chamber of Commerce 2010). While the US Chamber of Commerce accepted the ACA, it continued to fight the employer mandate as too expensive for small businesses and the additional taxes mandated by the ACA as unaffordable (Zigmond 2014).

At the same time, state governments are concerned about their increasing Medicaid costs and about providing healthcare to uninsured people who are not eligible for Medicaid. Massachusetts passed legislation in 2006 to address some of these concerns. By 2010, the percentage of uninsured in Massachusetts had dropped to 6.3 percent from 10.9 percent in 2006. However, the deliberate absence of cost controls imposed by the state resulted in per capita health spending that was 15 percent higher than the national average (Kaiser Family Foundation 2012b).

Driven by increased Medicaid spending by the states, state governments are encouraged to experiment with new delivery and financing mechanisms by filing a 1115 Medicaid waiver with the Centers for Medicare & Medicaid Services (CMS). In the waiver application, the state can ask permission for a demonstration project (typically for five years) that allows the state to fund or deliver care to Medicaid patients in that state in a unique way intended to improve access, quality, or both at a reduced cost (CMS 2016b).

While the ACA originally mandated that all states expand the eligibility for Medicaid from 100 percent of the poverty level to effectively 138 percent of the poverty level, the US Supreme Court ruled that mandate unconstitutional in 2012. To encourage states to expand Medicaid eligibility, the federal government offered to pay for 100 percent of the expansion cost for three years and 90 percent of the expansion cost thereafter. As of mid-2016, 31 states and the District of Columbia had accepted the offer (Kaiser Family Foundation 2017a).

National Healthcare Reform

In March 2010, President Barack Obama signed into law the ACA and the Health Care and Education Reconciliation Act (HCERA), which made important modifications to the ACA. The law followed a century of debate on universal healthcare coverage and months of legislative maneuvering by Democrats and Republicans.

The ACA is intended to provide insurance coverage to 32 million Americans who otherwise would be uninsured, leaving about 6 percent of the nation uninsured (about 20 million were insured under the ACA through the 2016 open enrollment period ending in February 2016 [HHS 2016a]). The original cost estimate for the act was $940 billion over ten years. Later 2013 CBO estimates put the ten-year cost at $1.363 trillion (CBO 2014). While a more detailed analysis of the reform law is provided in chapters 6 and 16, a brief review of payment reform provided by the Kaiser Family Foundation (2013a) includes the following:

- Beginning in 2010, provisions in the law reduced the annual Medicare updates for inpatient and hospital services, long-term care hospitals, inpatient rehabilitation facilities, and psychiatric hospitals. The American Hospital Association (2016a) has estimated that hospitals alone have absorbed $136 billion in federal cuts to reimbursement in a variety of ways.
- Beginning in 2011, provisions in the law reduced the "donut hole" in Medicare Part D (outpatient drug benefit) established by the 2003 Medicare Modernization Act.
- In 2012, provisions in the law allowed providers to organize as accountable care organizations (ACOs) and share Medicare savings as a result. Also in 2012, provisions established a **Hospital Value-Based Purchasing Program** for hospital payments based on performance, and provisions under the **Readmission Reduction Program** reduced payments to hospitals for patients

Hospital Value-Based Purchasing Program A program initiated by CMS in 2012 that rewards hospitals with incentive payments for high-quality care delivered to Medicare patients. Other payers have initiated similar programs.

Readmission Reduction Program A CMS program designed to reduce payments to hospitals for patients who return to the hospital with certain diagnosed conditions within 30 days of their prior admission for the same condition.

who return to the hospital with certain diagnosed conditions within 30 days of their prior admission for the same condition.

- In 2013, provisions in the law allowed for demonstration projects in bundled payment under the **Bundled Payments for Care Improvement (BPCI) initiative**. (Bundled payment projects demonstrated improved quality at reduced expense and therefore were extended to all hospitals for joint replacements in 2016.) Also starting in 2013, provisions reduced **Disproportionate Share Hospital** payments.
- Under the provisions of the law, starting in 2014, Medicare Advantage Plans were required to have medical loss ratios no lower than 85 percent, and payments to hospitals with hospital-acquired infections were reduced.

Bundled Payments for Care Improvement (BPCI) initiative
A program developed by CMS in 2013 to better coordinate care across providers by replacing fee-for-service payments to multiple providers with a single payment for an episode of care that multiple providers must share.

In April 2015 President Obama signed into law the Medicare Access and CHIP Reauthorization Act (MACRA), which affected physician reimbursement under Medicare Part B in the following significant ways:

- It repealed the sustainable growth rate (SGR) established under the Balanced Budget Act of 1997. CMS used the SGR to determine annual Part B increases.
- It developed two tracks for Part B reimbursement beginning in 2019: The first track will provide Part B increases (or decreases) based on a Merit Incentive Payment System (MIPS), which will include criteria for quality, advancing care information (use of the electronic health record), clinical practice improvement, and cost. The second track will provide Part B increases (or decreases) based on the physician's use of CMS-certified Alternative Payment Models (APMs), which are intended to move physicians away from low-risk fee-for-service toward risk-assuming methods of payment, such as capitation. To be CMS-certified, the APMs must provide **two-sided risk** (*one-sided risk* means the provider enjoys only incentives whereas *two-sided risk* means the provider also assumes penalties).

Disproportionate Share Hospital
A CMS designation initiated in 1985 for a hospital that serves a disproportionately high percentage of low-income patients and therefore receives payments from Medicare and Medicaid to cover the increased cost of providing care to low-income patients.

two-sided risk
A risk model that allows the provider to share savings with the payer if costs are below a negotiated target and to lose Medicare reimbursement if costs are above a negotiated target.

Methods of Payment

Third parties and patients use a variety of methods to pay providers for healthcare services. Methods of payment to healthcare organizations and other providers can be classified according to the amount of financial risk assumed by the healthcare organization.

Charges

Every healthcare organization has a list of **charges** (also called *prices* or *rates*) for care provided to patients. The organization may set charges based on the care provided; several other methods of setting charges are discussed in chapter 8. If the healthcare organization sets charges correctly, and if the third party or patient pays the charges, the organization assumes no financial risk—it provides the service, it gets paid. Using set charges as the method of payment provides no financial incentive for the healthcare organization to provide only what is medically appropriate.

charges
The amount patients are expected to pay for services; also called *prices* or *rates*.

Charges Minus a Discount

Healthcare organizations sometimes offer discounted charges to third parties. For example, if an insurance company provides a large volume of patients to a healthcare provider, the provider may reward the insurer with a discount. If the healthcare organization does not discount its charges below its costs, it assumes little financial risk with this arrangement. As with charges, a healthcare organization that offers charges minus a discount has little financial incentive to provide only care that is medically appropriate.

Cost

In the "cost" form of payment, healthcare organizations receive the cost for care provided to the patients of third-party payers, plus a small percentage that allows the organization to develop new services and products. Typically, the healthcare organization bills charges to the third party, which reimburses the organization for the projected cost, often expressed as a percentage of the charges. At the end of the year, the third party audits the healthcare organization to determine actual cost and adjusts accordingly what it has reimbursed to the organization. In this system, no incentive exists for the healthcare organization to contain costs. If the third party recognizes and approves the costs of the organization, the organization assumes little financial risk accepting this method of payment. However, in many cases, the third-party payers do not recognize the full costs incurred by healthcare organizations. As a result, organizations that accept the "cost" form of payment do assume some financial risk for the patient and must pass on losses to other third parties and patients who pay more than cost (usually those paying charges and discounts from charges).

Per Diem

In this payment system, healthcare organizations receive a per-day reimbursement for care provided to the patients of third-party payers. Because the third-party payer sets the

per diem rate
A method of paying for healthcare in which the hospital is paid a flat fee per day, regardless of the service delivered on any given day.

per diem rate prospectively, or prior to the provision of care, per diem provides financial risks and financial incentives to the healthcare organization. If the organization provides care for a cost greater than the per diem rate, the organization loses money. If it provides care for a cost less than the per diem rate, the organization makes money. However, if the healthcare organization unnecessarily extends lengths of stay, and the third-party payer does not protest, the provider can make more money than it is truly entitled to. Because per diem rates are generally the same for each day of a stay, this method of reimbursement assumes that costs are the same for each day. This assumption is true for many extended care organizations, but not for acute care organizations. In acute care organizations, the patient usually incurs a greater proportion of the costs during the early days of the admission.

Per Diagnosis

per diagnosis rate
A method of paying for healthcare in which the hospital is paid a flat fee for each given diagnosis, regardless of the actual service provided.

Healthcare organizations using this system receive reimbursement from the third-party payer based on the diagnosis of the patient. The **per diagnosis rate** provides financial risks and financial incentives for the healthcare organization. The better the organization controls costs, the more profit it makes. However, there is no way an organization can "pad the bill" the way it can in a per diem system (by extending the length of stay), since the third-party payer is reimbursing by the diagnosis instead of by the day.

Capitated Price, or Capitation

Under ***capitated price***, or *capitation*, healthcare organizations receive a fixed amount of money each month for every person enrolled in the plan, regardless of whether a given person receives care. Capitation as a payment method provides the greatest financial risk and opportunity to the healthcare organization because the fixed amount is based on the cost of care projected to be used by the covered population, rather than the cost of care actually used. If the costs to care for the covered population fall below the capitated price, the healthcare organization makes money. If the costs exceed the capitated price, the organization does not profit.

The other payment methods mentioned previously provide financial incentives to healthcare organizations to contain costs *after* the patient seeks care, primarily by controlling use, but capitation also provides financial incentives to healthcare organizations to contain costs *before* the patient seeks care, primarily by encouraging prevention. Third-party payers and healthcare organizations negotiate capitated payments, often called *premiums*, based on their perceptions of the actuarial experience of the covered population. Whether the healthcare organization realizes a profit or incurs a loss depends on its ability to project demand for care by the covered population and negotiate the appropriate capitation, and then to contain costs when a member of the enrolled population—a subscriber—seeks care.

Bad Debt and Charity Care

Although they are not methods of third-party payment, bad debt and charity care are important concepts to discuss in this context because the amounts are substantial in healthcare organizations.

Bad Debt

Bad debt refers to unpaid healthcare bills. Healthcare organizations that use accrual accounting incur bad debt expense when they receive no payment or partial payment on an invoice and then write off all or part of the account. The *AICPA Audit and Accounting Guide for Health Care Entities* (2010) required that healthcare organizations report bad debt expense as an operating expense based on charges, not costs. While reporting charges overstates the value of bad debt, hospitals can uniformly report charges for bad debt, whereas hospitals would have some difficulty reporting costs for bad debt because of the variety of ways to determine cost. The *AICPA Audit and Accounting Guide for Health Care Entities* (2012, 170) requires that a

bad debt
Patient bills that the patient can but is unwilling to pay based on the hospital's collection policy.

> health care entity that recognizes significant amounts of patient services revenue at the time the services are rendered even though it does not assess the patient's ability to pay should present all of the following as separate line items on the face of the statement of operations:
>
> a. Patient services revenue (net of contractual allowances and discounts)
> b. The provision for bad debts (the amount related to patient services revenue and included as a deduction from patient services revenue)
> c. The resulting net patient services revenue less the provision for bad debts

AICPA is considering a proposal to include classic bad debt as an operating expense based on rates and to include bad debt determined at time of service due to the hospital's financial assistance policy or the patient's high and unaffordable insurance deductible as an implied price concession as a deduction from revenue.

Charity Care

Healthcare organizations incur **charity care** expense when they provide care to patients who they know are unable to pay. *The AICPA Audit and Accounting Guide for Health Care Entities* (2010) requires that healthcare organizations not report charity care as revenue, a deduction from revenue, or an operating expense. Rather, it requires that healthcare organizations report the level of charity care (at full cost) in a note to the statement of

charity care
Care provided to patients who the organization knows cannot pay for the care.

CRITICAL CONCEPTS
Charity Care

Imagine that you are the CEO of Kind Heart Hospital, which is located in a low-income area and has spent millions of dollars over the years on charity care patients. Unfortunately, this practice has placed your hospital in a tough financial position, because Medicare and Medicaid continue to reduce reimbursements for their patients, and your percentage of commercial insurance patients (or patients who pay more than your cost) continues to decline. Discuss what you can do to continue to provide care to the needy but reduce the amount of the loss. Will national health reform laws help your reimbursement or hinder it?

operations in the annual report, along with the organization's policy for providing charity care and the method used to determine cost.

Uncompensated Care

According to American Hospital Association (AHA) data for 2014 and 2015 (see exhibit 5.7), hospital spending for *uncompensated care*, which is the total of bad debt and charity care, showed a decline in 2014 for the first time since 2001; the decline continued in 2015 (AHA 2016c). Uncompensated hospital care was $435.7 billion in 2015 and represented 4.2 percent of hospital total expenses (AHA 2016a). Medicaid expansion in 31 states likely caused the reduction in uncompensated care. Hospitals often attempt to shift uncompensated care costs along with Medicare and Medicaid shortfalls to paying patients through increased charges. To the extent they cannot shift these costs, hospitals cut costs in other areas.

Cost Shifting

cost shifting
The practice of transferring costs to some payers to offset losses from other payers.

Cost shifting is the practice of transferring costs to some payers to offset losses from other payers. It occurs in every industry, usually to offset losses from bad debt. Evidence of cost shifting in healthcare is based on the fact that different payers pay different prices (charges minus a negotiated discount) for similar services. For instance, in 2015 Medicaid paid an average of 90 percent of the hospital's costs for caring for Medicaid patients, Medicare paid an average of 88 percent of the hospital's costs for caring for Medicare patients, while private payers paid an average of 144 percent of the hospital's costs for caring for private-pay patients. Employers believe that cost shifting is unfair, and the elimination of cost shifting is the primary reason that large employers favor an "all payer" system where each payer pays the same price for similar services (AHA 2016d).

Exhibit 5.7
Uncompensated Hospital Care and Medicare and Medicaid Losses

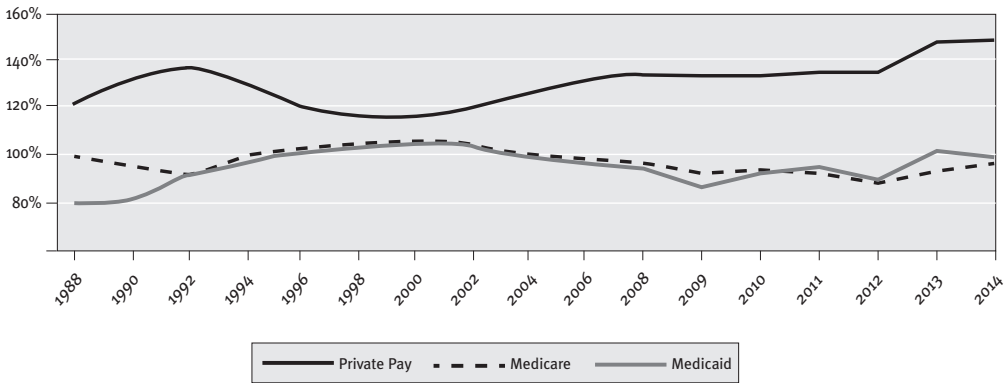
Year	Uncompensated Care (in billions)	Percentage of Total Expenses	Medicare Loss (in billions)	Medicaid Loss (in billions)
1997	$18.5	6.0		
1998	$19.0	6.0		
1999	$20.7	6.2		
2000	$21.6	6.0		
2001	$21.5	5.6		
2002	$22.3	5.4		
2003	$24.9	5.5		
2004	$26.9	5.6		
2005	$28.8	5.6	$15.5	$9.8
2006	$31.2	5.7	$18.6	$11.3
2007	$34.0	5.8	$21.5	$10.4
2008	$36.4	5.8	$22.0	$10.4
2009	$39.1	6.0	$25.2	$11.3
2010	$39.3	5.8	$20.1	$7.8
2011	$41.1	5.9	$23.8	$6.0
2012	$45.9	6.1	$42.3	$13.7
2013	$46.4	5.9	$37.9	$13.2
2014	$42.8	5.3	$37.2	$14.1
2015	$35.7	4.2	$41.6	$16.2

Source: Data from American Hospital Association (AHA 2016b, 2016c, 2016d).

Recent evidence shows that cost shifting was on the decline in the late 1990s as healthcare organizations lowered their costs in response to the Balanced Budget Act of 1997 and as competition lowered prices to private payers, thus making it more difficult for healthcare organizations to shift large losses to private payers. However, in the first two decades of the twenty-first century, as Medicare margins declined for hospitals, cost shifting increased again, as shown in the most recent years in exhibit 5.8.

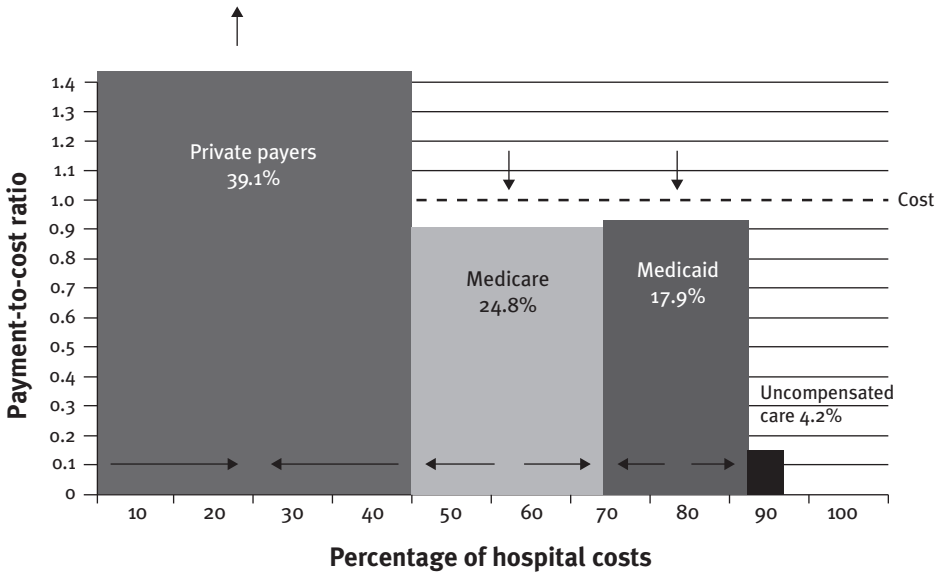
Exhibit 5.9 demonstrates the impact of the cost shift in what is described as the *cost-shift payment hydraulic* for the average hospital. The cost shift is predominantly from Medicare, Medicaid, and uncompensated care (about 47 percent of a hospital's reimbursement) to private health insurance (about 39 percent of a hospital's reimbursement). Not included in this analysis is other payers (about 14 percent of a hospital's reimbursement) (CMS 2017b). As payments for Medicare, Medicaid, and uncompensated care decrease below cost, the charges to private payers (including patients not covered by insurance) must increase to avoid a loss to the hospital. The amount of the increase to private payers is a function of not only the below-cost reimbursement the hospital receives from certain payers but also the number of payers available and the amount of operating margin desired by the hospital.

Exhibit 5.8
Aggregate Hospital Payment-to-Cost Ratios for Private Payers, Medicare, and Medicaid, 1988–2014



Source: Data from American Hospital Association (AHA 2016b, 2016c).

Exhibit 5.9
Cost-Shift Payment Hydraulic



Sources: Adapted from Dobson, DaVanzo, and Sen (2006); CMS (2017b).

In the event that hospitals cannot shift the costs of uncompensated care and government program losses to private payers either because the private payers refuse to pay increased charges (by using competitors instead) or because the private payers refuse to pay for costs unrelated to their patients, the hospital must cut costs. Problem 5.1 demonstrates cost shifting first and then cost cutting. The following problems project how much cost must be shifted or cut. The actual shifting takes place in the pricing of the products and services that make up a patient day and will be discussed in chapter 9 on setting charges (see appendix 9.1, Cost-Shift Pricing).

PROBLEM 5.1
Cost-Shifting/Cost-Cutting Problem

Cost Shifting

Next year, ABC Healthcare Organization will serve 100 patients in the following manner:

30 Medicare patients who pay $850 per diagnosis
20 Medicaid patients who pay $900 per diagnosis
15 managed care patients who pay charges minus a 20 percent discount
15 managed care patients who pay $700 per subscriber per year
5 private insurance patients who pay charges
5 self-pay patients who pay charges
5 bad debt patients who pay nothing
5 charity care patients who pay nothing

Next year, ABC's costs will be $1,000 per patient.

Calculate the charge necessary to recover ABC's cost (called cost-led pricing).

Step 1:
Calculate the total projected loss by assuming the charge per patient equals the cost per patient.

Financial Class	No.	Costs	Charges	Collections	Profit
Medicare	30	30,000	30,000	25,500	–4,500
Medicaid	20	20,000	20,000	18,000	–2,000
Managed care (MC) #1	15	15,000	15,000	12,000	–3,000
MC #2	15	15,000	15,000	10,500	–4,500
Private	5	5,000	5,000	5,000	0
Self-pay	5	5,000	5,000	5,000	0
Bad debt	5	5,000	5,000	0	–5,000
Charity	5	5,000	5,000	0	–5,000
Total	**100**	**100,000**	**100,000**	**76,000**	**–24,000**

(continued)

PROBLEM 5.1
Cost-Shifting/Cost-Cutting Problem *(continued)*

Step 2:
Calculate the charge necessary to recover ABC's cost by dividing the loss by the number of patients who will pay an increased charge, or portion thereof, and then add the cost per patient to the answer.

$$\frac{24{,}000}{15(.80)+5+5}+1{,}000=\$2{,}091$$

Step 3:
Check the answer by calculating the loss using the new charge.

Financial Class	No.	Costs	Charges	Collections	Profit
Medicare	30	30,000	62,730	25,500	–4,500
Medicaid	20	20,000	41,820	18,000	–2,000
MC #1	15	15,000	31,365	25,092	10,092
MC #2	15	15,000	31,365	10,500	–4,500
Private	5	5,000	10,455	10,455	5,455
Self-pay	5	5,000	10,455	10,455	5,455
Bad debt	5	5,000	10,455	0	–5,000
Charity	5	5,000	10,455	0	–5,000
Total	**100**	**100,000**	**209,100**	**100,002**	**2**

Note: The table produced in Step 3 can also be used to calculate contractual allowances (charges minus collections) for Medicare, Medicaid, and managed care. The total profit should be zero; "2" is due to a rounding error.

Cost Cutting
For the previously referenced cost-shifting problem, assume that those payers that pay charges, or charges minus a discount, limit ABC's charges to $1,070 per patient. Calculate the amount of costs that ABC will need to cut, or cover with additional revenues, to *break even* (i.e., realize no profit or loss).

PROBLEM 5.1
Cost-Shifting/Cost-Cutting Problem *(continued)*

Step 1:
Calculate the total costs to be cut by using the new charge per patient to determine profit/loss.

Financial Class	No.	Costs	Charges	Collections	Profit
Medicare	30	30,000	32,100	25,500	–4,500
Medicaid	20	20,000	21,400	18,000	–2,000
MC #1	15	15,000	16,050	12,840	–2,160
MC #2	15	15,000	16,050	10,500	–4,500
Private	5	5,000	5,350	5,350	350
Self-pay	5	5,000	5,350	5,350	350
Bad debt	5	5,000	5,350	0	–5,000
Charity	5	5,000	5,350	0	–5,000
Total	**100**	**100,000**	**107,000**	**77,540**	**–22,460**

Step 2:
Step 1 showed that the hospital needs to cut $22,460 to break even. This cost cutting can be accomplished by reducing the total patient costs to the total amount collected, $77,540. Calculate a new cost per patient day by dividing the total amount collected by the number of patients, 100. That calculation results in $775.40. Check the answer by calculating the profit/loss using the new cost per patient.

Financial Class	No.	Costs	Charges	Collections	Profit
Medicare	30	23,262	32,100	25,500	2,238
Medicaid	20	15,508	21,400	18,000	2,492
MC #1	15	11,631	16,050	12,840	1,209
MC #2	15	11,631	16,050	10,500	–1,131
Private	5	3,877	5,350	5,350	1,473
Self-pay	5	3,877	5,350	5,350	1,473
Bad debt	5	3,877	5,350	0	–3,877
Charity	5	3,877	5,350	0	–3,877
Total	**100**	**77,540**	**107,000**	**77,540**	**0**

Chapter Key Points

- Third-party payments come from federal, state, and local government programs and private insurance.
- Blue Cross was the first prepaid health insurance plan.
- Managed care organizations control costs and monitor quality and access to healthcare.
- HMOs allow for integration of the finance and delivery of healthcare.
- Other developments that help control healthcare costs are defined-contribution plans, direct contracting, consumer-driven plans, high-deductible health plans, and state and national health insurance plans.
- Third parties and patients pay (or do not pay) providers in a variety of ways, including charges, cost, per diem, bad debt, and charity care.
- Cost shifting allows providers to offset losses from certain payers by charging other payers more.

Discussion Questions

1. Discuss the differences between second-party payment and third-party payment. What led to the creation of the third-party payment system?
2. Which groups were considered the first managed care organizations? How does one distinguish a managed care organization (MCO), a preferred provider organization (PPO), and a health maintenance organization (HMO)?
3. Why did employers prefer managed care organizations? How have MCOs changed over the years?
4. What are some of the differences between open-panel HMOs and closed-panel HMOs?
5. What are the benefits to the employer of a defined-contribution plan?
6. How would you describe the two models of consumer-driven plans: spending account models and tiered models?
7. What are the different forms of payment to providers?
8. Why do organizations choose to shift costs to other payers?

Cost Shifting/Cost Cutting

Cost-Shifting Practice Problem

Next year, XYZ Healthcare Organization will serve 100 patients analyzed in the following manner:

20 Medicare patients, who pay $950 per diagnosis
30 Medicaid patients, who pay $900 per diagnosis
25 managed care patients, who pay charges minus a 15% discount
10 managed care patients, who pay charges minus a 25% discount
5 private insurance patients, who pay charges
5 charity care patients, who pay nothing
5 bad debt patients, who pay nothing

Next year, XYZ's costs will be $1,000 per patient. Calculate the charge necessary to recover XYZ's costs.

Cost-Shifting Practice Problem Solution

Step 1: Calculate the total projected loss by assuming the charge per patient equals the cost per patient.

Payer	No.	Costs ($)	Charges ($)	Collections ($)	Profit ($)
Medicare	20	20,000	20,000	19,000	–1,000
Medicaid	30	30,000	30,000	27,000	–3,000
MC #1	25	25,000	25,000	21,250	–3,750
MC #2	10	10,000	10,000	7,500	–2,500
Private insurance	5	5,000	5,000	5,000	0
Charity	5	5,000	5,000	0	–5,000
Bad debt	5	5,000	5,000	0	–5,000
Total	**100**	**100,000**	**100,000**	**79,750**	**–20,250**

Step 2: Calculate the charge necessary to recover XYZ's cost by dividing the loss by the number of patients who will pay an increased charge, or portion thereof, and then add the cost per patient to the answer.

$$\frac{\$20{,}250}{25(.85) + 10(.75) + 5} + \$1{,}000 = \$1{,}600$$

Step 3: Check the answer by calculating the profit/loss using the new charge.

Payer	No.	Costs ($)	Charges ($)	Collections ($)	Profit ($)
Medicare	20	20,000	32,000	19,000	–1,000
Medicaid	30	30,000	48,000	27,000	–3,000
MC #1	25	25,000	40,000	34,000	9,000
MC #2	10	10,000	16,000	12,000	2,000
Private insurance	5	5,000	8,000	8,000	3,000
Charity	5	5,000	8,000	0	–5,000
Bad debt	5	5,000	8,000	0	–5,000
Total	**100**	**100,000**	**160,000**	**100,000**	**0**

Cost-Cutting Practice Problem

Using the practice problem on cost shifting, assume that those payers that pay charges, or charges minus a discount, limit XYZ's charges to $1,050 per patient. Calculate the amount of costs that XYZ will need to cut, or cover with additional revenues, to break even (realize no profit or loss).

Cost-Cutting Practice Problem Solution

Step 1: Calculate the total costs to be cut by using the new charge per patient to determine the profit/loss.

Payer	No.	Costs ($)	Charges ($)	Collections ($)	Profit ($)
Medicare	20	20,000	21,000	19,000	–1,000
Medicaid	30	30,000	31,500	27,000	–3,000
MC #1	25	25,000	26,250	22,313	–2,687
MC #2	10	10,000	10,500	7,875	–2,125
Private insurance	5	5,000	5,250	5,250	250
Charity	5	5,000	5,250	0	–5,000
Bad debt	5	5,000	5,250	0	–5,000
Total	**100**	**100,000**	**105,000**	**81,438**	**–18,562**

Step 2: Check the answer by calculating the profit/loss using the new cost per patient:

$$\frac{\$100{,}000 - \$18{,}562}{100} = \$814.38$$

Payer	No.	Costs ($)	Charges ($)	Collections ($)	Profit ($)
Medicare	20	16,288	21,000	19,000	2,712
Medicaid	30	24,431	31,500	27,000	2,569
MC #1	25	20,360	26,250	22,313	1,953
MC #2	10	8,144	10,500	7,875	–269
Private insurance	5	4,072	5,250	5,250	1,178
Charity	5	4,072	5,250	0	–4,072
Bad debt	5	4,072	5,250	0	–4,072
Total	**100**	**81,439**	**105,000**	**81,438**	**–1**

Cost-Shifting Self-Quiz Problem

Assume your organization has 100 patients analyzed in the following manner:

15 Medicare patients, who pay $2,000 per diagnosis
25 Medicaid patients, who pay $1,800 per diagnosis
20 managed care patients, who pay charges minus a 20% discount
10 managed care patients, who pay charges minus a 25% discount
10 private insurance patients, who pay charges
10 charity care patients, who pay nothing
10 bad debt patients, who pay nothing

Your organization's average cost per patient is $2,000. Calculate the charge necessary to recover your cost.

Cost-Cutting Self-Quiz Problem

Using the data from the self-quiz problem on cost shifting, assume those who pay charges will allow a maximum charge of $2,100. Calculate the amount of costs you will need to cut to break even.

CHAPTER 6

MEDICARE

When President Lyndon B. Johnson signed Medicare and Medicaid into law on July 30, 1965, millions of Americans and about half our nation's seniors lacked health care coverage, unable to afford basic health care services or weather a medical emergency. The signing of Medicare forged a promise with older Americans—that those who have contributed a lifetime to our national life and economy can enjoy their golden years with peace of mind and the security of reliable medical insurance . . . . Forty-five years later, we must ensure this inviolable trust between America and its citizens remains stronger than ever.

Barack Obama, 45th anniversary of Medicare and Medicaid, July 30, 2010

Learning Objectives

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

- Understand the history of Medicare
- Identify the current benefits of and financing for Medicare
- Analyze legislative attempts to control Medicare costs
- Understand the important provisions of the fraud and abuse laws and regulations

Introduction

President Lyndon B. Johnson and the 89th Congress changed the philosophy of healthcare in the United States from an individual responsibility to a social responsibility and changed access to healthcare from a privilege to a right for some Americans. The country's empathy after the assassination of President John F. Kennedy in 1963 and President Johnson's adroit legislative skills facilitated the passing of 12 major pieces of health legislation by Congress as part of President Johnson's Great Society[1] (Hepner and Hepner 1973). President Johnson signed Medicare and Medicaid into law as part of the Social Security Amendments of 1965 (P.L. 89-97). This chapter discusses Medicare, and the next chapter discusses Medicaid.

Many observers believe that President Johnson's Great Society was built on the backs of future generations. When President Johnson assumed office in 1963, the economy was projected to soar to extraordinary levels by the end of the century. This projected growth in the economy would pay later for the "guns and butter" agenda of the president. This agenda included escalating the conflict in Vietnam while initiating significant social programs in the United States—a costly agenda funded without significant tax increases. President Johnson thought that proposing tax increases would have forced Congress to choose between fighting the Communists in Southeast Asia and fighting poverty in the United States (Peterson 1996).

Medicare was initially passed as two parts, Part A for hospital care and Part B for outpatient care, including physician care. The Balanced Budget Act of 1997 introduced Medicare Part C, which folded Parts A and B into a voluntary managed care program called Medicare+Choice (later changed to Medicare Advantage). The Medicare Modernization Act of 2003 introduced Part D, which included outpatient prescription coverage. The federal healthcare reform legislation that was signed into law by President Obama in March 2010 was made up of two specific laws: the Patient Protection and Affordable Care Act (signed into law on March 23) and the Health Care and Education Reconciliation Act of 2010 (HCERA, signed into law on March 30), collectively referred to as the healthcare reform laws and the Affordable Care Act (ACA). President Obama subsequently signed into law the Medicare Access and CHIPS Reauthorization Act of 2015 (MACRA) designed to substantially alter Part B reimbursement.

Eligibility

Medicare, or Title XVIII of the Social Security Amendments of 1965, is a federally funded program that provides health insurance to Americans at age 65. Medicare was expanded in 1972 to include coverage for people younger than 65 with disabilities who qualify for Social Security disability benefits and those with end-stage renal disease. Within the context of balancing the federal budget, considerable discussion has taken place regarding increasing

Medicare
A federally funded program that provides health insurance to Americans at age 65.

the eligibility age of Medicare in a fashion similar to Social Security (people born in 1960 or later cannot collect full Social Security benefits until they reach age 67).[2]

Benefits

In 1966, Medicare covered seven basic services, including inpatient hospital services, outpatient diagnostic services, physician and other medical services, and outpatient therapeutic services. Since 1966, a large number of services have been added, including some preventive services, hospice coverage, and skilled nursing facility coverage (see exhibit 6.1 for details).

Exhibit 6.1
What Does Medicare Cover?

Part A (Hospital Insurance, or HI)
Helps cover inpatient care in hospitals, including critical access hospitals, rehabilitation hospitals, and long-term care hospitals, and helps cover hospices, home health care services, and skilled nursing facilities not for custodial care or long-term care.

Part B (Supplemental Medical Insurance, or SMI)
Helps cover physician services and outpatient care, and helps cover some preventive services to maintain health and to keep certain illnesses from getting worse.

Part C (Medicare Advantage)
An expanded set of options for the delivery of healthcare under Medicare. While all Medicare beneficiaries can receive benefits through the original fee-for-service program, most beneficiaries enrolled in HI and SMI can now choose to participate in a Medicare Advantage plan instead. Medicare Advantage plans include health maintenance organizations (HMOs), preferred provider organizations (PPOs), private fee-for-service plans, special needs plans, and Medicare medical savings account plans. Organizations that contract as Medicare Advantage plans must meet specific organizational, financial, and other requirements. Primary types of Advantage plans include

- coordinated care plans, including (HMOs), provider-sponsored organizations (PSOs), and (PPOs), as well as other coordinated care plans certified by Medicare;
- private, unrestricted fee-for-service plans that allow beneficiaries to select certain private providers; and
- medical savings account (MSA) plans that provide benefits after a single, high deductible is met.

Most Medicare Advantage plans offer prescription drug coverage negating the beneficiary from enrolling in Medicare Part D.

Part D
Provides outpatient prescription coverage. Part D is voluntary, and the premium for Part D is paid for by the beneficiary.

Financing

Medicare was initially financed by assessments on employers for Part A (0.35 percent of payroll up to $6,500), by a coinsurance of $3 per month paid by beneficiaries for Part B, and by general revenue allocations to Part B (Harris 1975). Initial Medicare expenditures had been grossly underprojected, however. President Johnson reportedly believed that Medicare spending would run about $500 million a year (Peterson 1996). Yet actual Medicare expenditures were $4.2 billion in 1967, the first full year of the program (Helbing 1993). The growth of Medicare expenditures was also grossly underprojected. Even critics of the program underestimated—they guessed that Medicare would cost $1 billion by the end of the twentieth century; in fact, it cost $205 billion per year by 2000. In 2014, Medicare spending was $618.7 billion, and it is expected to surpass $1 trillion by 2022 (Keehan et al. 2016).

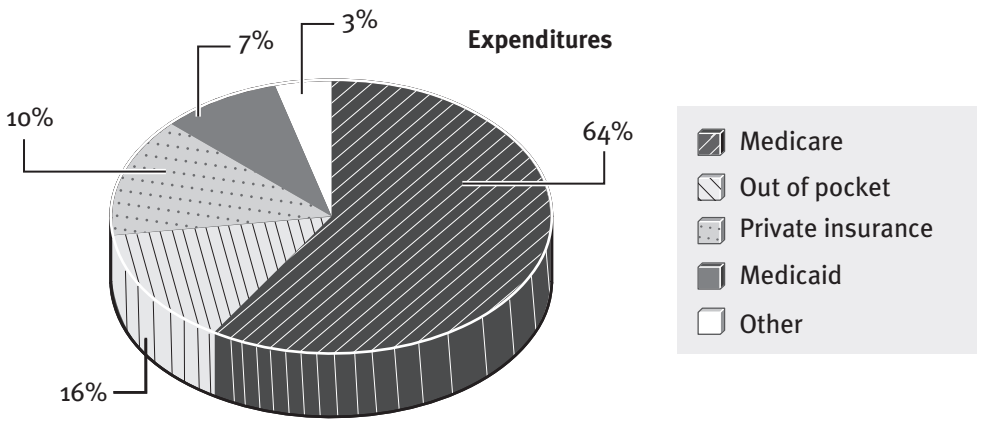
In 2015, Medicare was financed from three primary sources—general revenues (41 percent), payroll tax contributions (38 percent), and beneficiary premiums (13 percent)—with other sources accounting for 8 percent. The parts are funded as follows (Kaiser Family Foundation 2016):

- Part A is financed through a 2.9 percent tax on earnings. This tax is split evenly between the employer and the employee; it accounts for 87 percent of all Part A revenue. The ACA increased the payroll tax contributions to 3.8 percent starting in 2013 for individuals earning more than $200,000 and couples earning more than $250,000.
- Part B is financed through general revenues (73 percent), beneficiary premiums (25 percent), and interest (2 percent). Beneficiaries earning more than $85,000 per individual and $170,000 per couple pay a higher premium related to their income. The ACA froze the income limits at 2010 levels through 2019.
- Part D is financed through general revenues (74 percent), beneficiary premiums (15 percent), and state payments for Medicare beneficiaries also eligible for Medicaid (11 percent). As with Part B, beneficiaries with higher incomes pay a larger share of the cost of Part D coverage.

Note that Medicare does not pay for all of a beneficiary's healthcare expenditures. For instance, in 2012 (the most current year for which data have been analyzed), Medicare beneficiaries spent $18,988 on healthcare, of which Medicare paid 64 percent (CMS 2014; see also exhibit 6.2).

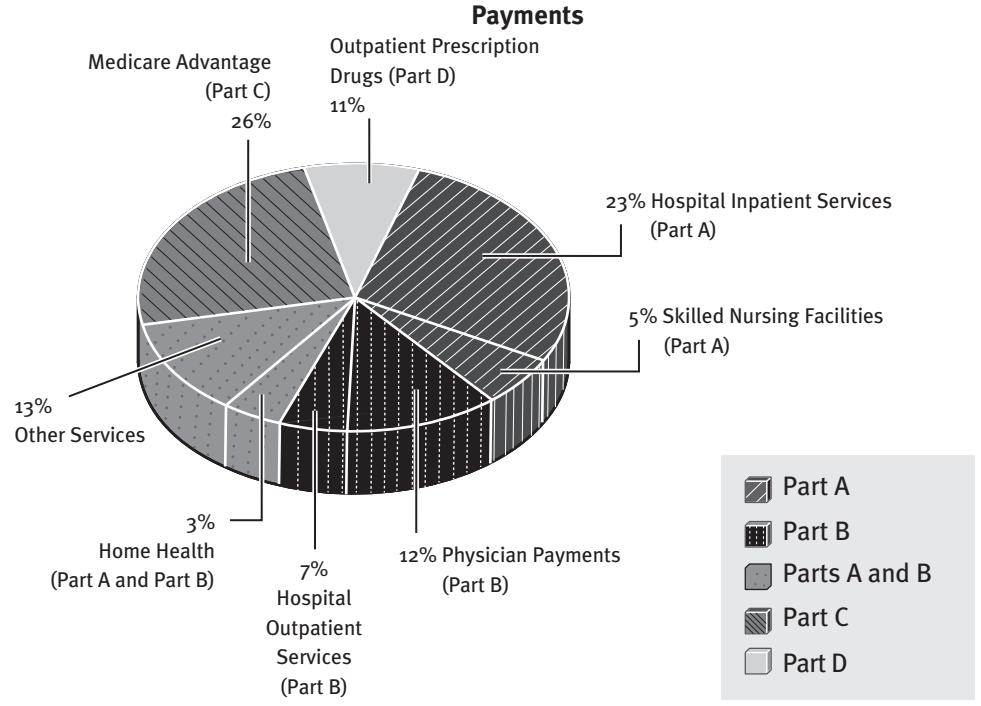
Total Medicare payments for 2014 were $618.7 billion (CMS 2015b). Twenty-six percent of that money paid for Medicare Advantage, 23 percent paid for hospital inpatient services, and 12 percent paid physicians (see exhibit 6.3).

Exhibit 6.2
Personal Healthcare Expenditures for Medicare Beneficiaries, by Source of Payment, 2012



Source: CMS (2014).

Exhibit 6.3
Medicare Benefit Payments by Type of Service, 2014



Source: CMS (2015b).

Slowing the growth of Medicare spending is particularly important in relation to the "graying of America"—the increasing proportion of the population that is aged 65 years or older. This demographic phenomenon is caused by the baby boom population (those born between 1946 and 1964) that makes up approximately 26 percent of the existing US population. In 2011 this age segment began turning 65 and began drawing Medicare benefits.

The healthcare reform laws of 2010 have substantially improved the financial outlook for Medicare; it is now projected to remain solvent through 2028. The improvement in future Medicare financing is based on increased tax contributions by the wealthy as well as reduced payment updates for most Medicare goods and services. To accommodate the reduced payment updates, the federal government is assuming that productivity growth in healthcare can match the productivity growth in the overall economy. To facilitate this growth in productivity, the healthcare reform laws provide for demonstration projects in delivery and payment systems to improve efficiency (Social Security and Medicare Trustees 2016).

Reimbursement to Providers

Funded by the federal government, Medicare Part A reimbursed hospital services based on retroactive, reasonable cost—that is, cost-based reimbursement—from 1966 until 1983. Recognizing that hospitals charged more than cost, Medicare reimbursed hospitals a percentage of the charge at the time of service and then made adjustments based on cost reports that it required hospitals to file. To ensure quality, Medicare required hospitals to either pass a Joint Commission accreditation visit, called *deemed status*, or undergo a Medicare certification visit. This certification visit was thought by most observers to be more difficult by design; Medicare did not want to be in the inspection business and preferred that hospitals seek deemed status provided by The Joint Commission. Medicare Part B reimbursed physician and outpatient services based on "reasonable and customary charges," which allowed physicians to realize a profit by providing services to Medicare patients since the charge for a service is always more than its cost.

President Ronald Reagan introduced the first significant reimbursement reform in his Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982. While the act reduced taxes in response to President Reagan's campaign promise, it also contained significant reimbursement reform for Medicare. Specifically, the act introduced cost limits per case and cost limits per year (known as TEFRA limits). The act directed the US Department of Health and Human Services (HHS) to develop a prospective payment system (PPS) for hospitals (for a definition of *prospective payment*, see the glossary and the discussion in chapter 1). It also introduced the option of managed care plans to beneficiaries and made Medicare the secondary payer when beneficiaries had additional insurance.

President Reagan signed into law the Social Security Amendments of 1983, which included provisions for prospective payment. Prospective payment applied to Part A

reimbursement only, and it was intended to replace cost-based reimbursement. The amendments established prospective payment rates for each **diagnosis-related group (DRG)**, or grouping of similar cases that should require similar resource consumption.[3] Hospitals that provided care for a lower cost than the established rate for a DRG realized a profit. Hospitals that provided care for a higher cost than the established rate realized a loss. Because the DRG system gave hospitals a financial incentive to provide less service to Medicare patients, the federal government relied on **peer review organizations (PROs)**, established under the TEFRA legislation, to ensure that Medicare beneficiaries were receiving appropriate care.[4]

diagnosis-related group (DRG) A grouping of similar healthcare cases that should require similar resource consumption. DRGs are used by Medicare to calculate prospective payments.

Medicare implemented the PPS over a three-year period to give hospitals time to adjust their costs. During that time, Medicare used hospital-specific data to establish the DRG rates. At the end of the three-year period, hospitals were subject to a national rate with an adjustment for labor costs, which varied between regions. Currently, three national rates exist: a teaching hospital rate, an urban hospital rate, and a rural hospital rate (though most rural hospitals opt for cost-based reimbursement).[5]

peer review organizations (PROs) Organizations that ensure that providers give appropriate care to Medicare recipients.

Medicare used the DRG rate schedule to provide incentives and penalties for certain physician ordering patterns. For instance, hospitals that performed open-heart surgery before trying angioplasty were punished with a low rate of reimbursement, whereas hospitals that performed successful angioplasty without open-heart surgery were rewarded with high reimbursement.

Capital costs were not initially affected by the DRG system. Prior to 1990, Medicare had reimbursed capital costs based on reasonable cost, meaning that Medicare reimbursed its share of capital costs regardless of use. For instance, if Medicare patients were responsible for 35 percent of the hospital's operating costs based on the cost report, Medicare would reimburse 35 percent of the hospital's capital costs.

The Omnibus Budget Reconciliation Act (OBRA) of 1990 folded capital costs into the DRG rate over a ten-year period, which meant that hospitals risked losing substantial reimbursement if their buildings and equipment were not sufficiently used by Medicare patients. For instance, Medicare now reimburses hospitals their CT scanner capital costs based only on those DRGs for which a CT scan is medically necessary. If hospitals provide CT scans that are unnecessary for a certain DRG, the hospital's costs for that DRG would exceed the reimbursement and the hospital would lose money. Hospitals that had overextended their capital (that is, acquired more capital costs than would be reimbursed based on their DRGs) were forced to consolidate their assets through a sale or a joint venture (joint ventures with for-profit organizations were popular because the for-profits had access to additional sources of capital).

resource-based relative value scale (RBRVS) A Medicare reimbursement system that provides a flat, per-visit fee to physicians rather than reimbursing them according to their customary charges.

The Health Care Financing Administration (HCFA) **resource-based relative value scale (RBRVS)** of 1992 changed the way Medicare reimbursed physicians under Part B. Prior to 1992, Medicare had reimbursed physicians on the basis of "reasonable and customary" charges. By reimbursing physicians on an RBRVS, Medicare established a prospective, flat fee per visit, similar to DRGs for hospitals. Physicians who provided care for a lower cost than the established rate realized a profit; those who provided care for a higher cost than the established

rate realized a loss. Furthermore, Medicare used the RBRVS rate schedule to provide incentives and penalties for certain medical specialties. Visits to primary care physicians resulted in favorable reimbursement, but visits to specialists resulted in unfavorable reimbursement.

The Balanced Budget Act (BBA) of 1997 reduced Medicare reimbursements to providers by $115 billion over five years (Ernst & Young 1997; see also exhibit 6.5 later in this chapter for details), established the Children's Health Insurance Program (CHIP), and introduced the sustainable growth rate (SGR), a method used by Medicare to determine annual updates (increases) in payment for physician services. The Balanced Budget Refinement Act (BBRA) of 1999 provided approximately $16 billion in Medicare relief over five years after the government discovered that the BBA of 1997 had cut two to three times more than the $115 billion originally intended. The Medicare, Medicaid, and State Children's Health Insurance Program (SCHIP) Benefits Improvement and Protection Act (BIPA) of 2000 provided $35 billion in reimbursement relief over five years by increasing certain Medicare and Medicaid provider payments; adding preventive benefits and reducing beneficiary cost sharing under Medicare; and improving insurance options for low-income children, families, and seniors (HFMA 2000).

The Deficit Reduction Act (DEFRA) of 2005 achieved $8.3 billion in savings from Medicare and $4.7 billion in savings from Medicaid, including the SCHIP, over five years and addressed the calculation of a hospital's disproportionate share adjustment (HFMA 2006).

The Tax Relief and Health Care Act of 2006 included provisions to prevent a 2007 cut in Medicare physician payments mandated under DEFRA of 2005 (AHA 2006).

In 2007, President George W. Bush signed into law the Medicare, Medicaid, and SCHIP Extension Act of 2007, which extended funding for SCHIP and provided a 0.5 percent Medicare payment increase for physicians.

In 2008, Congress overrode President Bush's veto of the Medicare Improvements for Providers and Patients Act of 2008, which replaced a planned 10.6 percent cut in Medicare payments to physicians based on the SGR with a 1.6 percent increase in Medicare payment to physicians.

The American Recovery and Reinvestment Act of 2009 was signed by President Barack Obama and was intended to provide federal spending to stimulate an economy in recession. The law provided $150 billion to healthcare, including $87 billion in Medicaid assistance to the states, $25 billion for extended Consolidated Omnibus Budget Reconciliation Act (COBRA) benefits, and $19 billion for information technology (Lubell 2009).

The ACA, signed by President Obama in 2010, was projected to reduce growth in Medicare spending to 5.8 percent per year by reducing the growth in Medicare payments to providers and Medicare Advantage plans, establishing several new programs and policies designed to reduce costs and improve quality of patient care, and establishing the Independent Payment Advisory Board to recommend Medicare spending reductions if projected spending exceeds targets. Healthcare reform laws also increased payroll taxes for high-income taxpayers to help fund Part A and increased Part B and Part D premiums for high-income beneficiaries (Kaiser Family Foundation 2010). Although President Donald

Trump has promised to repeal and replace the ACA, some parts of the ACA are likely to remain due to bipartisan support: children remaining on a parent's policy through age 26 and insurance reforms to prohibit denied coverage for certain preexisting conditions.

The Budget Control Act of 2011 reduced discretionary spending by the federal government by $1.2 trillion over the next ten years by capping per-year discretionary spending. If spending caps are exceeded, an automatic across-the-board cut, called *sequestration*, takes place. The act also maintained spending for fraud and abuse investigations and created a 12-member committee to recommend additional and specific ways to reduce the deficit.

The *fiscal cliff* was a term used to describe the fiscal conundrum faced at the end of 2012 due largely to the provisions of the Budget Control Act of 2011. In addition to the possibility of sequestration, many of the provisions of the Affordable Care Act of 2010 were due to begin. In response to the pending fiscal cliff, Congress passed and President Obama signed the American Taxpayer Relief Act of 2012 that delayed sequestration for two months; raised taxes for wealthy Americans, increasing federal revenue by $600 billion over ten years; and suspended for one year a 26.5 percent cut in Medicare Part B reimbursement to physicians mandated by the SGR formula (the 26.5 percent cut was the accumulated effect of physician reimbursement increasing more than the SGR mandated each year since 2002).

In April 2015, Congress overwhelmingly passed and President Obama signed the Medicare Access and CHIPS Reauthorization Act of 2015.[6] The act repealed the SGR, reduced physician reimbursement by reducing the Medicare updates each year to 0.5 percent for three years, and proposed a value-based purchasing concept for Part B reimbursement starting in 2019. CMS projected that the act would save close to $3 trillion over the next 75 years (CMS 2015a).

Expenditures

The cost of the Medicare program has been a problem for Congress from the very beginning (exhibit 6.4). Use was underprojected, and revenue sources, particularly those projected through economic growth, were overly optimistic. Attempts have been made to control costs through federal legislation (which is discussed in the next section), increased assessments to employers and employees, increased cost sharing to beneficiaries, and increased program allocation from general revenues. Even with these attempts, HHS—which has the overall responsibility for administering the Medicare program—projects that the Medicare Trust Fund will go bankrupt in 2028 (Social Security and Medicare Trustees 2016).

The low average growth rate in Medicare expenditures from 1996 to 2000 stands in stark contrast to previous years, which averaged more than 10 percent growth. The 1996 to 2000 rate can be attributed to the implementation of the BBA of 1997, the intense efforts to identify and correct fraud and abuse in the Medicare program, and the low rate of general and Medicare inflation (Foster 2000). The 9.6 percent rate of increase from 2006 to 2010 also needs further explanation. The rate of increase for 2006 was 18.7 percent, reflecting the costs of a fully implemented Medicare Prescription Drug, Improvement and Modernization Act

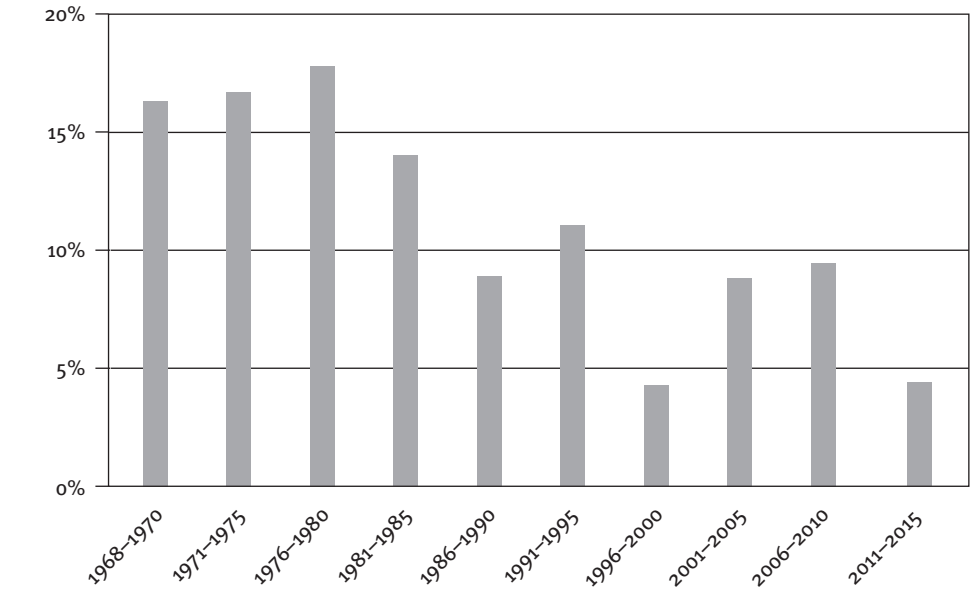


Exhibit 6.4
Average Annual Percentage Increase in Total Medicare Expenditures

Sources: Data from Medicare 2017 (2017) and Keehan et al. (2016).

(MMA) of 2003, which provided outpatient prescription medication coverage to Medicare recipients. But the rate of increase for 2010 was a more moderate 4.3 percent. The 4.4 percent rate of increase from 2011 to 2015 includes a 2 percent reduction in payments in 2013 as a result of the Budget Control Act of 2011 and resulting sequestration (Keehan et al. 2016).

The "graying of America" has special significance to healthcare organizations, because the population aged 65 or older uses healthcare services at a higher rate than the population younger than 65, making its healthcare expenditures disproportionately high. Although 12.9 percent of the total population was aged 65 or older in 2009 (US Census Bureau 2010), this segment represented 34 percent of all personal health spending in 2004 (the latest year data are available; Hartman et al. 2008). Baby boomers began turning 65 in 2011 (an estimated 7,918 baby boomers will turn 65 each day until 2029), and the US Census Bureau projects that 20.7 percent of the total population will be 65 years or older in 2029, when all of the baby boomers will have reached age 65 (US Census Bureau 2010).

Legislative Attempts to Control Healthcare Costs

The federal government discovered early that Medicare use and resulting costs had been underprojected and that retroactive, cost-based reimbursement to hospitals and charge-based reimbursement to physicians were inflationary. As early as 1971, the federal government attempted to control healthcare costs while maintaining benefits—and in some cases, improving benefits—through legislation and regulation. Exhibit 6.5 lists these attempts.

Exhibit 6.5
Federal Legislation and Regulation to Control Healthcare Costs

Wage and Price Controls of 1971	Imposed wage and price controls in an attempt to deal with inflation throughout the economy. In the healthcare industry, price increases were limited according to federal price guidelines through 1974.
Social Security Amendments of 1972	Authorized price controls in the healthcare industry and directed the Department of Health, Education, and Welfare to develop a prospective payment method of reimbursement.
Professional Standards Review Organizations (PSROs) of 1972	Established a peer-review program to determine appropriateness and quality of care delivered in hospitals to beneficiaries of federal programs. Inappropriate admissions, lengths of stay, or surgeries resulted in reductions in reimbursements.
National Health Planning and Resource Development Act of 1974	Established certificate-of-need regulations, which required hospitals to obtain approval for capital expenditures and improvements that cost more than $100,000.
Omnibus Budget Reconciliation Act (OBRA) of 1980	Eliminated the "prior hospitalization" requirement for home health services reimbursement and eliminated the limitation on the total number of home health services visits.
Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982	Placed rate-of-increase limits on inpatient hospital services; replaced PSROs with peer review organizations (PROs); extended Medicare coverage to hospice care for those certified as terminally ill; made Medicare the secondary payer for working beneficiaries covered by their employers.
Social Security Amendments of 1983	Introduced hospital prospective payment based on DRGs to replace retroactive, cost-based payment; required federal workers to pay Medicare hospital insurance payroll tax (federal workers had been exempt from the tax prior to 1983).

Exhibit 6.5
Federal Legislation and Regulation to Control Healthcare Costs
(continued)

Deficit Reduction Act (DEFRA) of 1984	Froze physician fees and established the Participating Physician and Supplies program, which allowed physicians to accept assignment (i.e., physicians would accept the Medicare-approved charge as full payment and would not balance-bill the Medicare beneficiaries). In return, Medicare would list physicians in a directory available to beneficiaries and expedite billing.
Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985	Made Medicare coverage mandatory for state and local government employees hired after 1985; directed HHS to develop a prospective payment system for physicians. As part of COBRA, Section 9121, or the Emergency Medical Treatment and Active Labor Act (EMTALA), also known as the *antidumping law*, requires that hospitals with emergency departments (1) provide a medical screening examination to anyone requesting such examination in order to determine whether the individual is in an emergency medical condition; (2) provide medical treatment to stabilize the condition if the hospital determines that the individual is in an emergency condition; and (3) must not transfer individuals in emergency medical conditions unless (a) the patient requests the transfer after knowing the hospital is obligated to continue treatment or (b) the transfer is medically appropriate. Hospitals and emergency room physicians that violate EMTALA can be fined up to $50,000 each per violation. Placed maximum allowable actual charge limits on the amounts physicians could bill Medicare beneficiaries above the Medicare-approved charge.
Medicare Catastrophic Coverage Act of 1988	Expanded Medicare benefits to include outpatient prescriptions, placed a cap on patient costs for catastrophic expenses, and expanded skilled nursing facility coverage. Funded by increases in the Part B premium and a new supplemental income premium.

(continued)

Exhibit 6.5
Federal Legislation and Regulation to Control Healthcare Costs *(continued)*

Medicare Catastrophic Coverage Act Repeal of 1989	Restored benefits to previous levels and canceled new premium; directed HHS to develop a PPS for physicians.
Omnibus Budget Reconciliation Act (OBRA) of 1989	Introduced new fee schedule for physician services and limited the amount above the fee schedule that physicians could bill beneficiaries; tied increases in fee schedule to volume performance standards. Prohibited physician referrals under Medicare for clinical lab services when the referring physician has a financial relationship (known as *self-referral*) with the lab unless the terms of certain statutory or regulatory exceptions are met (known as Stark I regulations, named after the bill's sponsor, Congressman Pete Stark [D-CA]).
Omnibus Budget Reconciliation Act (OBRA) of 1990	Increased Part B deductible to $100; moved the reimbursement for inpatient hospital capital costs from cost-based reimbursement to prospective reimbursement based on DRGs.
HCFA Resource-Based Relative Value Scale (RBRVS) of 1992	Introduced a prospective payment system for physicians over a three-year implementation period.
Omnibus Budget Reconciliation Act (OBRA) of 1993	Removed cap on wages subject to Medicare Part A payroll tax. Introduced new tax on Social Security benefits above certain incomes. Expanded Stark I prohibitions on physician self-referrals to include additional designated health services: physical therapy; occupational therapy; radiology, including MRI, CT, and ultrasound; radiation therapy; durable medical equipment and supplies; parenteral and enteral nutrients; orthotics and prosthetic devices; home health services; outpatient prescription drugs; and inpatient and outpatient hospital services (known as Stark II). Final rules, published in January 2001,

Exhibit 6.5
Federal Legislation and Regulation to Control Healthcare Costs
(continued)

Omnibus Budget Reconciliation Act (OBRA) of 1993 *(continued)*	"generally permit" self-referrals as long as compensation paid to the physician with an ownership interest is not more than would be paid to a physician who did not have an ownership interest.
Personal Responsibility and Work Opportunity Reconciliation Act of 1996	Made restrictive changes to welfare eligibility that in turn restricted eligibility to Medicaid.
Health Insurance Portability and Accountability Act (HIPAA) of 1996	Protected currently insured people from losing coverage because of job change or family illness; required insurers who offer small-group coverage to make policies available to all small groups; allowed for a pilot study of medical savings accounts or insurance accounts for the self-employed and small employers that would allow the beneficiaries substantial rebates if use is low; mandated standardized, electronic billing by 2000; allowed the self-employed to increase their tax deduction for health insurance costs from 30 percent to 80 percent of the cost by 2006; and tightened fraud and abuse rules.
Balanced Budget Act (BBA) of 1997	Cut Medicare program expenditures by $115 billion over five years; froze disproportionate share hospital payments in 32 states and cut payments in 18 states; gave states the option to require Medicaid beneficiaries to enroll in managed care; allowed patient safety organizations to bid on Medicare and Medicaid business; and introduced SCHIP, which provided funding to expand health coverage for children. Also introduced the sustainable growth rate (SGR) used to determine Medicare updates for physician reimbursement.
Balanced Budget Refinement Act (BBRA) of 1999	Recognized as BBA relief, restored Medicare program expenditures by $16 billion over five years.

(continued)

Exhibit 6.5
Federal Legislation and Regulation to Control Healthcare Costs
(continued)

Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act (BIPA) of 2000	Recognized in part as BBA relief, restored Medicare program expenditures to hospitals by $35 billion over five years. The $109 billion appropriations bill included increased funding for the National Institutes of Health's medical research; increased funding for the Centers for Disease Control and Prevention; increased funding for Ryan White CARE Act; and increased funding for independent children's hospitals to train pediatricians.
Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003	Introduced prescription drug benefits; provided $25 billion in payment improvements for providers with incentives for hospitals to report quality data and bonuses to underserved areas; imposed an 18-month moratorium on new specialty hospitals; replaced Medicare+Choice with Medicare Advantage; allowed people with high-deductible policies to shelter some income from taxes in health savings accounts (HSAs); and allowed drug importation from Canada.
Deficit Reduction Act (DEFRA) of 2005	Cut $8.3 billion from Medicare and $4.7 billion from Medicaid, including SCHIP, over five years. Also provided for reductions in Medicare payments for services provided as a result of certain hospital-acquired infections beginning in 2008; addressed the calculation of hospital Medicare disproportionate share hospital adjustments; and lowered the reimbursement to ambulatory surgical centers (ASCs) if the ASC payment exceeds the hospital outpatient department fee schedule.
Tax Relief and Health Care Act of 2006	Delayed a planned 5.1 percent cut in Medicare physician reimbursement for one year; provided a 1.5 percent incentive payment if physicians report on quality measures; and expanded the amount that individuals may contribute to HSAs.

Exhibit 6.5
Federal Legislation and Regulation to Control Healthcare Costs
(continued)

Medicare, Medicaid, and SCHIP Extension Act of 2007	Extended funding for SCHIP and provided 0.5 percent Medicare payment increase for physicians.
Medicare Improvements for Providers and Patients Act of 2008	Overriding a presidential veto, the act replaced a pending 10.6 percent cut in Medicare reimbursement to physicians with a 2.0 percent increase for quality reporting; improved low-income assistance; reduced payments to Medicare Advantage plans that were paid in excess of fee-for-service counterparts; and improved payments to sole community hospitals, critical access hospitals, and ambulance services.
Affordable Care Act (ACA) of 2010	Provided comprehensive healthcare reform phased in over eight years and intended to provide insurance access to 32 million Americans, to make the healthcare delivery system more efficient, and to reduce the rate of increase in healthcare spending.
Health Care and Education Reconciliation Act (HCERA) of 2010	Amended the ACA to include provisions of the House bill on healthcare reform.
Medicare and Medicaid Extenders Act of 2010	Delayed for one year a 25 percent reduction in Medicare physician payments due to take effect on January 1, 2011.
Budget Control Act of 2011	Reduced and capped federal discretionary spending by $1.2 trillion over ten years. If caps are exceeded, across-the-board spending cuts, called *sequestration*, occur. (Sequestration did occur in March 2013, reducing Medicare payments to hospitals by 2 percent.)
American Taxpayer Relief Act of 2012	Increased taxes for wealthy Americans, suspended a pending cut in Medicare reimbursement to physicians for one year, and delayed sequestration until March 2013 (the 2014 federal budget delayed the pending cut in Medicare reimbursement to physicians for three months and reduced some of the defense spending cuts ordered by sequestration).

(continued)

Exhibit 6.5
Federal Legislation and Regulation to Control Healthcare Costs
(continued)

Protecting Access to Medicare Act of 2014	Extended expiring program authorizations and appropriations including the SGR for physician reimbursement under Medicare. Also introduced the Skilled Nursing Facility Value-Based Purchasing Program to become effective in 2019.
Medicare Access and CHIPS Reauthorization Act of 2015	Repealed the SGR used to determine Medicare updates for physician reimbursement. Provided a 0.5 percent annual update for five years. Developed two tracks for physician reimbursement starting in 2019: Merit Incentive Payment System (MIPS) and Alternative Payment Models (APMs). Starting in 2018, increases Part B premium to beneficiaries who make more than $133,500.

Health Insurance Portability and Accountability Act of 1996

The Health Insurance Portability and Accountability Act (HIPAA) of 1996 was designed to improve the availability of health insurance to working families and their children. HIPAA includes important protections for an estimated 25 million Americans who move from one job to another, who are self-employed, or who have preexisting medical conditions. The law also provided administrative simplification standards intended to identify and secure protected health information (PHI).

HIPAA Administrative Simplification Standards

As mandated by HIPAA, HHS has published final rules on five standards (transactions and code sets, national provider identifiers, national employer identifiers, privacy, and security) that make up the *administrative simplification program*, a program to streamline the processing of healthcare claims, reduce the volume of paperwork, and save the healthcare system billions of dollars while providing better service for providers, insurers, and patients. The costs incurred in implementing the standards are significant; it would follow that savings will not occur until after hospitals are fully compliant. Even after compliance is attained, healthcare organizations must report breaches of security or privacy to the Office for Civil Rights (OCR). Breaches of 500 or more records are reported on the HHS.gov website, and hospitals are subject to significant civil monetary penalties (HHS 2017a).

Privacy and Security Under HIPAA

The HIPAA privacy standard is a set of federal rules to protect the privacy of patients' medical records and other health information maintained by providers such as hospitals and physicians, health plans, and insurance companies. The privacy standard provides patients with access to their medical records while safeguarding the release of protected health information. Compliance with the privacy standard was required by 2003 for most entities. Complaints regarding the privacy standard are investigated by the OCR. The HIPAA security standard is a set of federal rules to protect the security of electronic protected health information. Compliance with the security standard was required in 2005 for most entities; however, authority to administer and enforce the standard was not transferred to the OCR until 2009.

Through February 2017, OCR had received 150,507 complaints. HHS has resolved more than 98 percent of complaints received through investigation and enforcement, with 2 percent of the cases still pending. Among the 147,826 complaints resolved, 63 percent were not eligible for enforcement (OCR lacked jurisdiction, the complaint was untimely or withdrawn, or the complaint did not violate HIPAA rules); in 13 percent, OCR intervened early and offered technical assistance; in 8 percent, OCR determined that no violation had occurred; and in 47 cases OCR settled for fines amounting to $67,210,982. The most frequent compliance issues investigated, in order of frequency, were the following: impermissible use and disclosure of PHI; lack of safeguards of protected health information; lack of patient access to their own protected health information; lack of administrative safeguards of electronic protected information; and use or disclosure of more than the minimum necessary protected health information. The most common types of covered health entities that OCR has required to take corrective action to be in compliance, in order of frequency, are the following: private practices, general hospitals, outpatient facilities, pharmacies, and health plans (HHS 2017b).

Most violations do not require a resolution agreement or a civil monetary penalty because the recipient of the complaint is willing to comply voluntarily. The first case requiring a resolution agreement and a fine of $100,000 was for Providence Health Services. During 2005 and 2006, several subsidiaries of Providence Health Services left backup tapes, optical disks, and laptops unattended. The media and laptops were lost or stolen, and the health information of 386,000 patients was compromised. The case was resolved in 2008.

In 2009, CVS Caremark agreed to a $2.25 million settlement for failing to maintain protected health information in a secure manner. The OCR found that CVS failed to implement policies and procedures related to the disposal of protected patient information and failed to properly train employees in the disposal process after protected patient information was disposed in dumpsters accessible to the public (HHS 2009).

In 2013, the managed care company WellPoint agreed to pay HHS $1.7 million to settle potential violations of privacy and security standards. The OCR's investigation

found that WellPoint did not adequately implement appropriate policies and procedures for authorizing online access. As a result, WellPoint could have potentially disclosed electronic PHI for 612,402 individuals by allowing unauthorized access to its application database (HHS 2013).

In 2016, HHS announced that St. Joseph Health had agreed to settle potential violations related to unsecured data publicly available from 2011 to 2012. The hospital agreed to pay a settlement of $2.14 million (HHS 2016b). Also in 2016, Advocate Health Care Network agreed to pay a settlement of $5.55 million (the largest settlement to date against a single entity) in a case that involved multiple potential violations dating back to the inception of the Security Rule (HHS 2016c).

Recovery Audit Contractor Demonstration Projects

recovery audit contractor (RAC)
A private business that detects and recovers improper Medicare payments to providers.

The Medicare Modernization Act of 2003 established a three-year demonstration project for a type of business known as a **recovery audit contractor (RAC)**. RACs detect and correct past improper payments from CMS to providers in order to prevent future improper payments by CMS (CMS 2017a). The demonstration project identified almost $1 billion in improper payments in the three states reviewed—the most common improper payment was for surgical procedures provided in the wrong setting (inpatient instead of outpatient). Because of this success, in 2007 the federal government authorized RAC audits in every state. State RAC audits have identified and collected $10.2 billion in improper payments since the beginning of the program (CMS 2016a).

Affordable Care Act of 2010

When President Obama signed the Affordable Care Act of 2010, the predicted cost was $940 billion over ten years, and the predicted additional insurance coverage was 32 million Americans, increasing health insurance coverage to 94 percent of the population (Lubell and DoBias 2010). Specifically, the law was intended to do the following (AHA 2010):

- Expand coverage to 32 million people through a combination of public program and private-sector insurance expansions
- Reduce the rate of increase in Medicare and Medicaid spending through reduced payment updates, decreases in disproportionate share hospital payments, and financial penalties for unnecessary hospital readmissions and hospital-acquired infections
- Adopt several delivery system reforms to better align reimbursement with improved coordination of patient care and quality

- Provide grants and loans to improve workforce education and training on healthcare issues
- Include provisions to reduce waste, fraud, and abuse in Medicare and Medicaid
- Impose new reporting requirements for tax-exempt hospitals
- Place significant restrictions on the expansion of physician-owned hospitals and prohibit new physician-owned facilities

In 2012, the Supreme Court (in *NIFB v. Selebius*, 5–4 decision) determined that the ACA was constitutional as a tax, but the requirement for states to expand eligibility for Medicaid or lose federal funding was unconstitutional. Reacting to this finding, the federal government offered significant incentives to states in return for eligibility expansion. At the end of 2016, 31 states and the District of Columbia had expanded Medicaid coverage (Kaiser Family Foundation 2017b).

In 2015, the Supreme Court (in *King v. Burwell*, 6–3 decision) determined that insurance subsidies in states that used the federal insurance exchanges were constitutional.

As of 2016, the newest cost estimate for the law is $1.34 trillion over the first ten years, and the number of increased insured attributable to the law is 22 million: 13 million under the Medicaid expansion and a net of 9 million through health insurance (CBO 2016).

Fraud and Abuse

One of the most significant initiatives by the federal government to control healthcare costs has been the recent emphasis on enforcing fraud and abuse statutes (see exhibit 6.6). **Fraud** is an intentional misrepresentation of fact designed to induce reliance by another. **Abuse** is an unintentional misrepresentation of fact. Typical examples of fraud include physician kickbacks for referral and intentional billings for services not rendered. Typical examples of abuse include unintentional billing and coding errors.

fraud
An intentional misrepresentation of fact designed to induce reliance by another.

abuse
An unintentional misrepresentation of fact.

Fraudulent or abusive practices can result in criminal and civil liability and administrative sanctions. Criminal liability under the Fraud and False Statements Act can result in fines and imprisonment. Civil liability under the False Claims Act can result in fines of $10,000 for each false claim plus three times the total amount of the loss by the government. Civil liability under the False Claims Act extends to those who submit the fraudulent claim and to those who have knowledge that the claim is fraudulent. *Knowledge* is defined as either actual knowledge or reckless disregard for the claim's validity. Therefore, the government does not have to prove that false claims were submitted with the intent to defraud (i.e., the healthcare organization knew) but that the false claims were submitted in an environment that was likely to produce false claims (i.e., the healthcare organization

Exhibit 6.6
Government Initiatives on Fraud and Abuse

Health Insurance Portability and Accountability Act (HIPAA) of 1996	Appropriates a new trust fund to pay for expanded investigations and broadens the authority of the FBI in investigations.
Operation Restore Trust	A two-year pilot program initiated in 1995 to detect and punish fraud and abuse in the home health agencies, nursing homes, and durable medical equipment (DME) companies in five states (Texas, California, Florida, New York, and Illinois), which represent more than 50 percent of all Medicare business (HFMA 1997). This program was replaced by the recovery audit contractors (RAC) program in 2003.
Diagnosis-Related Group (DRG) Payment Window (72-Hour Rule)	Prohibits a hospital from billing for outpatient services provided by a controlling entity within 72 hours of an admission.
Billings for Teaching Physicians	Prohibits a hospital from billing for teaching physician services when the teaching physician is not actually present at the time of service.
Qui Tam Provisions	Protects and rewards (15 to 25 percent of the total recovery) whistleblowers who identify instances of fraud and abuse to the federal government (HFMA 2000). The Department of Justice takes court action on about 5% of whistleblower complaints filed (HFMA 1999).
Voluntary Disclosure	Limits liability for healthcare organizations that discover, identify (to the federal government), and correct billing errors and other fraudulent or abusive practices.
Federal Safe Harbors	Identifies payment practices to physicians that are safe from federal prosecution under the Anti-Kickback Act (see appendix 6.1).
Medicare Integrity Program	Permits HHS to contract with private organizations to decrease fraud and abuse.
Hospital Outpatient Lab Project	Prohibits a hospital from improper unbundling and double-billing of laboratory tests.
Prospective Payment System Patient-Transfer Project	Prohibits a hospital from billing for a discharge when the patient was, in fact, transferred and only eligible for a per diem of the DRG at discharge. Hospitals typically receive greater reimbursement for a discharge than for a transfer. Medicare has specific conditions for both discharge billing and transfer billing. A discharge occurs when a patient is formally released from the hospital, dies

Exhibit 6.6 Government Initiatives on Fraud and Abuse *(continued)*

Prospective Payment System Patient-Transfer Project *(continued)*	in a hospital, or is transferred to a non–prospective payment system (PPS) hospital or facility. A transfer occurs when a patient is moved from one PPS hospital or facility to another, to a non-PPS hospital that is under a statewide cost-control project or demonstration project, or to a PPS hospital whose first PPS cost-reporting period has not yet begun.
Pneumonia Upcoding Project	Detects hospitals that upcode simple pneumonia to complex pneumonia to receive greater reimbursement (see Gundling 1998).
Corporate Integrity Agreements	Usually required between the Office of Inspector General and healthcare organizations as part of a settlement in a civil fraud investigation. Such agreements identify how the organization will ensure that compliance occurs after the settlement.
Medicare Fraud Strike Force	Analyzes Medicare billings to determine whether there is any fraudulent billing. Initiated in South Florida in 2007, this multi-agency effort has been expanded to other states under the acronym HEAT, loosely equivalent to Health Care Fraud Prevention Enforcement Action Team. The team is jointly directed by the secretary of HHS and the attorney general.

should have known). Furthermore, the government must prove its case in civil cases by a preponderance of evidence, unlike in criminal cases, where the burden of proof is "beyond a reasonable doubt" (Russo 1997).

Violations of the Anti-Kickback Act, which is a criminal statute, can result in criminal fines up to $25,000 and civil fines up to $50,000 as well as five years in prison. Administrative sanctions can result in possible exclusion from federal programs. The Anti-Kickback Act was passed in 1972 and prohibits anyone from knowingly or willfully soliciting or accepting any type of remuneration to induce referrals for health services that are reimbursed by the federal government.

The Stark law is similar to the Anti-Kickback Act and as a result is often confused with the Anti-Kickback Act. The Stark law is a federal civil statute passed in 1989 (Stark I) with amendments passed in 1993 (Stark II). It prohibits physicians from referring patients to an entity with which the ordering physician has an ownership interest or compensation arrangement if patient payments come from either Medicare or Medicaid (Watnik 2000). Final rules on Stark II were released in January 2001, after years of vigorous debate between the American Medical Association and the federal government. While prohibiting physician self-referral to most organizations that they own in whole or in part, the final rules "generally permit" self-referrals as long as compensation paid to the physician with

an ownership interest is not more than would be paid to a physician who did not have an ownership interest (Romano 2001). The ACA made some changes to the Stark law, including a requirement that physician-owners of in-office ancillary services notify the patient in writing that the patient can obtain ancillary services elsewhere; it also imposes limitations on the scope of the whole-hospital exception to physician investments in whole hospitals that existed on or before December 31, 2010 (AHA 2010).

Violations of the fraud and abuse statutes appear to be both widespread and serious. Citing widespread violations in 1995, the HHS Office of Inspector General (OIG) identified 4,660 hospitals (approximately 80 percent of all hospitals) that had violated the DRG payment window (OIG 1995). Citing representative serious actions, in 2007, Medtronic's spine subsidiary, formerly known as Kyphon, agreed to pay $75 million to settle a False Claims Act allegation that the company's marketing efforts caused hospitals and physicians to bill Medicare for inpatient kyphoplasty procedures that should have been completed and billed on an outpatient basis (Biesch 2009). In 2009, Pfizer and Pharmacia & Upjohn agreed to pay $2.3 billion (the largest fraud settlement in history) to settle both civil and criminal liability arising from the illegal promotion of certain pharmaceutical products (OIG 2009). In 2010, FORBA Holdings, which manages a nationwide chain of pediatric dental clinics, agreed to pay $24 million plus interest to settle allegations that it performed unnecessary and often painful dental services on children on Medicaid (OIG 2010b). In 2013, Abbott Labs agreed to pay $1.5 billion to resolve allegations that it violated the False Claims Act by improperly marketing and promoting the drug Depakote for uses not approved by the Food and Drug Administration (OIG 2013). In 2015, oncologist Farid Fata was sentenced to 45 years in prison and ordered to forfeit more than $17 million after pleading guilty to charges of health fraud, conspiracy to pay or receive kickbacks, and money laundering, for treating 553 patients with aggressive cancer therapies when in fact the patients did not need cancer treatments (OIG 2015).

The OIG reported $2.77 billion in expected receivables in the first half of 2016 and excluded 1,662 individuals and entities from participation in federal healthcare programs. The OIG also reported 428 criminal actions and 383 civil actions during this period (OIG 2016).

The 2007 action against Medtronic and the 2009 action against Pfizer indicated an OIG willingness to investigate physicians. Lewis Morris, chief counsel to HHS, said, "Under the anti-kickback statute and Stark self-referral law, it takes two to tango. When we're doing our analysis of the fraud problem, we have come to recognize we're only going to get our arms around this if we address both parties to the scheme" (Biesch 2009, 1). That means that the OIG is investigating physicians on the receiving end of kickbacks or referral relationships and CEOs and compliance officers who approved the relationships. In the Medtronic case, sales representatives promised physicians using their products that Medtronic would promote their practices and use of kyphoplasty to referring physicians. In the Pfizer case, the OIG alleged in the criminal complaint that Pfizer subsidiary Pharmacia held about 100 inappropriate "consultant" meetings for physicians from 2001 to 2003. Physicians at these meetings, which were held in the Bahamas, Virgin Islands, and elsewhere,

received free airfare and resort accommodations, were entertained with golf outings and massages, and were paid honoraria of up to $2,000 per day (Biesch 2009).

Because fraud and abuse violations appear to be both widespread and serious, and because HHS Inspector General June Gibbs Brown declared in September 1997 a policy of "zero tolerance for fraud" (HFMA 1997), most healthcare executives are seeking ways to prevent and detect fraud in their organizations.

In 1991, the US Sentencing Commission (USSC) issued guidelines for federal judges to use in sentencing corporations that had been found guilty of criminal misconduct, including fraud and abuse. The guidelines allow for lighter sentences for corporations that have corporate compliance programs in place (USSC 1991):

> An effective program to prevent and detect violations means a program that has been reasonably designed, implemented, and enforced so that it generally will be effective in preventing and detecting criminal conduct. . . . The hallmark of an effective program to prevent and detect violations of the law is that the organization exercised due diligence in seeking to prevent and detect criminal conduct by its employees and other agents.

The guidelines provide seven requirements for an effective compliance program (Eiland 1996):

1. Establishes reasonable compliance standards and procedures that are organization-specific and that address the areas of greatest risk of liability, such as patient billing and medical record coding
2. Appoints a high-level employee, typically called a *corporate compliance officer*, who is charged with overseeing compliance with established standards and procedures
3. Exercises due care in delegating discretionary authority so that discretionary authority is not delegated to employees likely to engage in wrongdoing
4. Communicates compliance standards and procedures to employees through training programs on an initial and ongoing basis
5. Designs, implements, and monitors auditing systems to detect wrongdoing by employees, and has a system for employees to report suspected wrongdoing
6. Enforces compliance standards and procedures on a consistent basis through appropriate disciplinary mechanisms, including disciplining employees who fail to detect wrongdoing
7. Responds to wrongdoing in a consistent and timely manner, including disclosure of the wrongdoing to the appropriate government officials

HHS has published model corporate compliance plans for clinical laboratories, hospitals, home health agencies, third-party medical billing companies, durable medical equipment suppliers, hospices, Medicare Advantage plans, and nursing facilities. All model compliance plans are based on the following seven core elements (Federal Register 1998):

1. Implementation of written policies, procedures, and standards of conduct
2. Designation of a compliance officer[7]
3. Development of training and educational programs
4. Creation of a hotline or other measures for receiving complaints and procedures for protecting callers from retaliation[8]
5. Performance of internal audits to monitor compliance
6. Enforcement of standards through well-publicized disciplinary directives
7. Prompt corrective action in response to detected offenses

Corporate compliance with the core recommendations reduces the incidence of fraud and abuse and protects an organization from liability and administrative sanctions.

Chapter Key Points

- Knowing the history of Medicare is important to understanding the current problems in both programs.
- Understanding the current benefits and financing of Medicare is relevant to any healthcare manager.
- Analyzing legislative attempts to control costs in Medicare helps place current legislative efforts in perspective.
- Understanding the important provisions of fraud and abuse laws is relevant to any healthcare manager.

Discussion Questions

1. How would you describe the history of Medicare, emphasizing the increasing cost of the program?
2. What was the purpose of offering Medicare Advantage to Medicare beneficiaries?
3. Why was the year 2011 important in terms of Medicare viability?

4. What are the major provisions of HIPAA?
5. What are the major provisions of the Affordable Care Act, and which provisions might be kept under the Trump administration?
6. What are the differences between fraud and abuse?
7. What are the major provisions of MACRA?

Notes

1. The purpose of President Johnson's legislative program was to eradicate poverty in the United States. While most health legislation in general—and Medicare in particular—was not aimed at those living in poverty, health legislation is often included in the Great Society. President Johnson benefited from a robust economy set in motion by President Kennedy's economic policies and by a liberal majority in Congress.
2.

Those born in	*Can retire with full Social Security benefits at age*
1937 and before	65
1938–1942	65 plus 2 months for every year after 1937
1943–1954	66
1955–1959	66 plus 2 months for every year after 1954
1960 and later	67

3. In *Who Will Tell the People*, Greider (1992) reports that the federal government used unaudited cost reports during the phase-in period, and as a result hospitals were grossly overpaid.
4. PROs replaced professional standards review organizations (PSROs) established by the Social Security Amendments of 1972. Whereas PSROs were intended to protect the Medicare beneficiary from overuse rewarded under retroactive cost-based reimbursement, PROs were intended to protect the Medicare beneficiary from underuse rewarded under prospective DRG-based reimbursement.
5. Rural hospitals lost money under PPS for two reasons. First, the federal government set the rural hospital rate lower than the urban hospital rate, reflecting what it believed to be lower healthcare costs in the rural community. Second, rural hospitals were reimbursed a per diem rate of the final DRG rate if they transferred the patient. Because the majority of hospital costs occur in the first few days of hospitalization, a per diem rate seldom fully reimbursed a rural hospital for the costs incurred during the first few days.
6. The Medicare Access and CHIPS Reauthorization Act of 2015 passed by a vote of 392–37 in the House and 92–8 in the Senate. Members of the ultraconservative Tea Party

movement within the Republican Party indicated support but voted against the bill because the accumulated effect of physician reimbursement would exceed the SGR mandate by $200 billion, increasing the federal deficit by $140 billion.

7. The OIG recommends that the chief compliance officer not be the chief financial officer or anyone else who might have a conflict of interest pertaining to the billing process. When pressed on this point, the OIG has recommended that the director of nursing or the director of medical records be the chief compliance officer.
8. Centralized billing operations present special problems for healthcare systems that must find a way to respond to patient complaints regarding billing problems at each institution.

Appendix 6.1
Federal Safe Harbors

The following 1989 safe harbors address the types of business and payment practices to physicians that are safe from federal prosecution when certain conditions are met:

- *Investment interests*. Protects payment to an investor that is a return on an investment interest if the investment is either (a) in an entity with assets greater than $50 million, of which payments are based solely on the amount of the investment interest, or (b) in a smaller entity where the activities of the investors are limited.
- *Space rental*. Protects payment by a lessee to a lessor for the use of space if the payment is set in advance and not based on referrals or business between the parties.
- *Equipment rental*. Protects payment by a lessee of equipment to a lessor for the use of the equipment if the payment is set in advance and not based on referrals or business generated between the parties.
- *Personal services and management contracts*. Protects payment by a principal provided by the agent if the compensation is set in advance and not based on referrals or other business generated between the parties.
- *Sale of practice*. Protects payment to a practitioner by another practitioner for the sale of the former practitioner's practice.
- *Referral services*. Protects payment for the cost of operating the referral service made to an entity serving as a referral service.
- *Warranties*. Protects payment or exchange of anything of value under a warranty provided by a manufacturer or supplier to a buyer.
- *Discounts*. Protects a discount or other price reduction on a good or service received by a buyer if the discount is related to the purchase of a specific good or service and the discount is reported on a claim for payment.
- *Employment relationships*. Protects payments by an employer to an employee for employment in the furnishing of any item or service.
- *Group purchasing organizations*. Protects payments by a vendor of goods or services to a group purchasing organization as part of an agreement to furnish goods or services to an individual entity.
- *Waiver of beneficiary coinsurance and deductible amounts*. Protects the reduction or waiver of any coinsurance or deductible amount either by a hospital if the reduction is not related to the beneficiary's stay and is not made as part of a price reduction or to an individual if the patient qualifies for certain subsidized services.

The 1993 safe harbors address the types of business or payment practices to physicians that are safe from federal prosecution in managed care settings when certain conditions are present, such as

- increased coverage, reduced cost-sharing amounts, or reduced premium amounts offered by health plans to beneficiaries, and
- price reductions offered by health plans to beneficiaries (OIG 2017).

The following 1999 safe harbors address the types of business and payment practices to physicians that are safe from federal prosecution when certain conditions are met (Glasser and Bloomquist 2000):

- *Investments in ASCs*. Protects certain investment interests in four categories of freestanding Medicare-certified ASCs: surgeon-owned ASCs, single-specialty ASCs, multispecialty ASCs, and hospital/surgeon-owned ASCs (hospital investors must not be in a position to influence referrals).
- *Joint ventures in underserved areas*. Relaxes several of the conditions of the 1991 Investment Interest safe harbor if the joint venture is in an underserved area as defined by OIG regulations.
- *Practitioner recruitment in underserved areas*. Protects recruitment payments made by entities to attract needed physicians and other healthcare professionals to rural and urban *health professional shortage areas* (HPSAs). This safe harbor requires that at least 75 percent of the recruited practitioner's revenue be from patients who reside in the HPSA, and this safe harbor limits the duration of payments to three years.
- *Obstetrical malpractice insurance subsidies in underserved areas*. Protects a hospital or other entity that pays all or a portion of the malpractice insurance premiums for practitioners engaging in obstetrical practices in HPSAs. This safe harbor requires that at least 5 percent of the affected practitioner's patients be from the HPSA.
- *Sale of physician practices to hospitals in underserved areas*. Protects hospitals in HPSAs that buy and hold the practice of a retiring physician until a new physician can be recruited. This safe harbor requires that the sale be completed within three years and that the hospital engage in good-faith efforts to recruit a new practitioner.
- *Investments in group practices*. Protects investments by physicians in their own group practices, if the group practice meets the physician self-referral (Stark) law definition of a group practice.
- *Referral arrangements for specialty services*. Protects certain arrangements when an individual or entity agrees to refer a patient to another individual or entity for specialty services in return for the party receiving the referral to refer the patient back at a certain time and under certain conditions.

- *Cooperative hospital services organization*. Protects *cooperative hospital service organizations* (CHSOs) that qualify under section 501(e) of the IRS Code. CHSOs are organizations formed by two or more not-for-profit hospitals, known as patron hospitals, to provide specifically enumerated services, such as purchasing, billing, or clinical services solely for the benefit of patron hospitals.

The following 2006 safe harbor addresses the types of information technology that can be donated to physicians by healthcare organizations that are safe from federal prosecution when certain conditions are met (Conn 2006):

- *Information technology donations to physicians*. Protects certain arrangements when hospitals and other healthcare organizations donate e-prescribing, electronic health records technology, and related support services to physicians. (This safe harbor was amended in 2013 to clarify exactly which information technology could be donated to physicians and excludes laboratory companies from making such donations.)

The 2007 safe harbor addresses certain practices in federally qualified health center arrangements, including clarification of remuneration (OIG 2010a).

The 2016 safe harbor provides protection for certain cost-saving waivers including the following (Federal Register 2016):

- Pharmacy waivers for financially needy beneficiaries
- Emergency ambulance services
- Certain remuneration between Medicare Advantage and Federally Qualified Health Centers
- Manufacturer discounts under Medicare Coverage Gap Discounts

CHAPTER 7

MEDICAID

The number of uninsured individuals in the United States has declined from 49 million in 2010 to 29 million in 2015. This is by far the largest decline in the uninsured rate since the creation of Medicare and Medicaid five decades ago. . . . States that decided to expand their Medicaid programs saw larger reductions in their uninsured rates from 2013 to 2015.

Barack Obama (2016)

Learning Objectives

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

- Understand the history of Medicaid
- Identify the current benefits of and financing of Medicaid
- Analyze legislative attempts to control Medicaid costs
- Understand the important provisions of the Medicaid expansion

Introduction

Medicaid, Title XIX of the Social Security Amendments of 1965 signed into law by President Lyndon B. Johnson, provides health insurance to the *medically indigent* (individuals who may be able to pay for normal living expenses but cannot afford healthcare expenses).[1] Historically, eligibility for Medicaid has been linked to eligibility for two federal cash assistance programs: Aid to Families with Dependent Children (AFDC) and Supplemental Security Income (SSI). The Omnibus Budget Reconciliation Act (OBRA) of 1986 expanded eligibility for low-income pregnant women, children, and infants, regardless of their eligibility for a state's AFDC program. The Medicare Catastrophic Coverage Act of 1988 required states to pay Medicare premiums, coinsurance, and deductibles for the elderly who earned less than the state's poverty limit.

Medicaid
A program created by the federal government, funded by the federal and state governments, and administered by the state government, to provide free or low-cost healthcare to low-income recipients.

The Balanced Budget Act (BBA) of 1997 provided $23.4 billion over five years to the Children's Health Insurance Program (CHIP; now known as the State Children's Health Insurance Program, SCHIP), a program to expand health coverage for children whose parents' income was too high to qualify for Medicaid but too low to afford private insurance (Ernst & Young 1997). In 2009, President Barack Obama signed the Children's Health Insurance Program Reauthorization Act, which expanded CHIP to an additional 4 million children and pregnant women, including coverage for the first time for legal child immigrants.

In 2010, President Obama signed the healthcare reform laws, which expanded Medicaid eligibility for adults. The program had covered adults living at 100 percent of the poverty level; as of 2014, the Affordable Care Act (ACA) encouraged states to increase the Medicaid eligibility from 100 percent of the poverty level to 138 percent of the poverty level.

Until 2014, states were required to extend Medicaid benefits to children younger than 6 living in families with incomes up to 138 percent of the poverty level and to children aged 6–18 living in families with incomes up to 100 percent of the poverty level (Kaiser Commission on Medicaid and the Uninsured 2010). As of 2016, 70 million people were enrolled in Medicaid and SCHIP, and 6.5 million of them were as a direct result of the ACA (Obamacare Facts 2016).

Benefits

Although the federal government finances 50 to 83 percent of Medicaid costs in any given state, each state has significant authority in administering its Medicaid program. Each state is allowed considerable discretion in establishing its own income and resource criteria for program eligibility; determining the amount, duration, and scope of optional services beyond the mandatory services required by the federal government; and determining provider reimbursement methodologies. Optional services vary by state (HCFA 1996). Every state has its own eligibility requirements for Medicaid based on income, age, gender, the number of dependents, and other specific requirements.

Financing

The Medicaid program has two categories of costs: *costs for provider services*, which are determined by formula (see note 1); and *costs for administrative services*, which are shared equally by the federal and state governments. The federal portion of costs is financed from general revenues. The state portion of costs for provider services may be financed from state and local revenues; however, the state's portion must be at least 40 percent. The state portion of costs for administrative services is financed by state revenues (HCFA 1996).

Reimbursement to Providers

The Medicaid program operates as a *vendor payment program*—that is, providers are reimbursed directly by the state. Reimbursement is subject to federal conditions that all states must satisfy. First, reimbursement must be such to recruit a sufficient number of providers. Second, participating providers must accept the Medicaid reimbursement as payment in full. Third, reimbursement to providers must be conditional on appropriate efficiency, economy, and quality standards. Each state has significant authority over reimbursement methods and rates, with the following exceptions (HCFA 1996):

- Reimbursements to institutions cannot exceed amounts that would be paid for similar services under the Medicare program.
- Disproportionate share payments cannot be more than the total cost of uncompensated care.
- For hospice services, Medicaid reimbursements cannot be lower than Medicare reimbursements.

From the beginning, most states used reimbursement methodologies either identical to or similar to the reimbursement methodologies used by Medicare (described in chapter 6). For reimbursement to institutional providers, this meant that most Medicaid programs used cost-based reimbursement. As use and costs grew, most Medicaid programs implemented the same reimbursement controls as Medicare. During the late 1970s, many Medicaid programs were more aggressive than Medicare in recognizing "reasonable" costs.

As Medicare moved into prospective reimbursement methodologies in the early 1980s, most Medicaid programs adopted methodologies based on case mix, or diagnosis-related groups (DRGs), similar to Medicare methodologies. However, some Medicaid programs set payment levels based on the historical costs of each institution. This practice had the effect of rewarding providers whose costs had historically been high and penalizing providers who had been cost-conscious in the past (Berman, Kukla, and Weeks 1994). Some Medicaid programs also deviated from Medicare's case-mix methodology, using other prospective methodologies, such as rate-of-increase and negotiated budget methodologies.

For reimbursement to physician providers, Medicaid programs used either *fee schedules* or *reasonable charges* methodologies. Medicaid programs using fee schedules set a flat maximum reimbursement for each service. Medicaid programs using reasonable charges limit reimbursement to the lowest of the physician's actual charge, the physician's customary charge for similar services, or the prevailing physicians' charges in the area.

A few Medicaid programs have requested permission, via Section 1115 research and demonstration waivers, to develop managed care programs for their Medicaid beneficiaries (HCFA 1996). The BBA of 1997 effectively eliminated this waiver requirement by giving states the option to require Medicaid beneficiaries to enroll in managed care plans. The act permitted managed care plans to bid on Medicaid business, which presumably could be capitated (Ernst & Young 1997).

The ACA, via the 2012 US Supreme Court decision, encourages states to expand eligibility from 100 to 138 percent of the federal poverty level. The federal government was to reimburse all of the costs associated with the expansion for the first seven years and 75 to 90 percent of the costs during the following three years.

Expenditures

In the first two decades of the twenty-first century, the Medicaid program experienced average annual expenditure increases of 9 percent (see exhibit 7.1). State governments were concerned with the rate of Medicaid cost growth and the impact on state budgets.

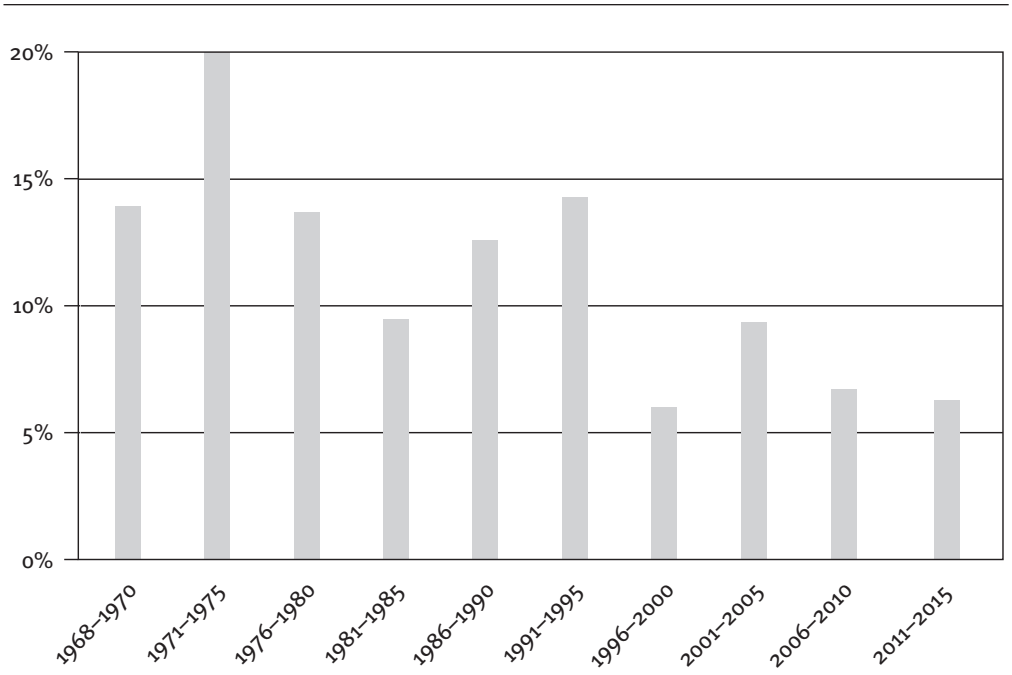
Reflecting this concern, total federal and state Medicaid spending increased only 4.7 percent in 2008—the slowest rate of increase in ten years. Medicaid spending for hospitals, which represents 36 percent of all Medicaid spending, increased only 2.7 percent, as payments to hospitals and other providers were reduced (Hartman et al. 2008). The 6.7 percent projected annual rate of increase from 2011 to 2015 continues at a moderate pace as states shift beneficiaries to managed care. However, in 2014, with the expansion of eligibility in some states, Medicaid expenditures increased 11.0 percent and were projected to increase 10.7 percent in 2015 (Keehan et al. 2016).

An analysis of the Medicaid beneficiary cost by eligibility grouping indicates that a relatively small proportion of Medicaid beneficiaries are responsible for the majority of Medicaid costs (see exhibit 7.2). For instance, while the elderly and people with disabilities represent 24 percent of all Medicaid beneficiaries, they account for 64 percent of all Medicaid payments (Kaiser Family Foundation 2013a).

Expansion

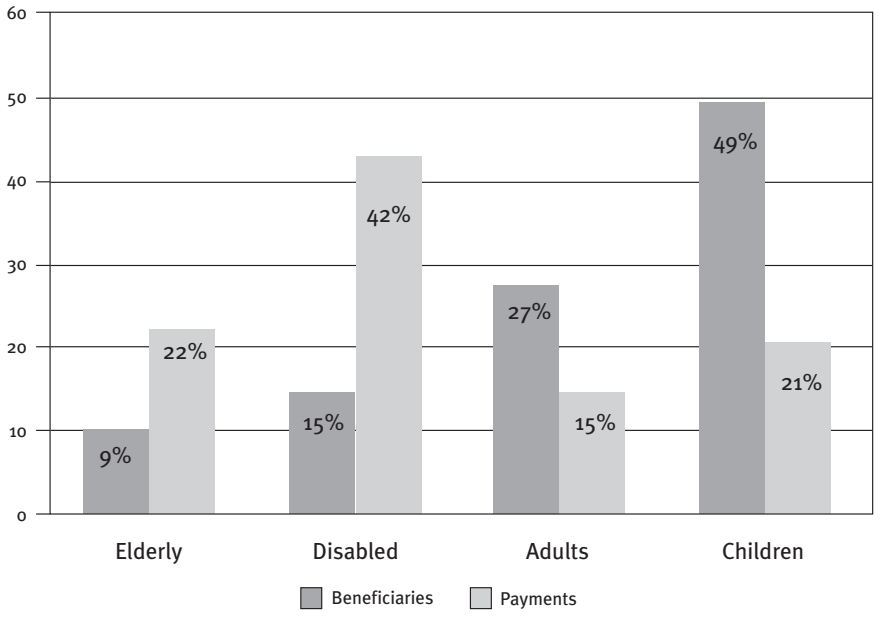
The ACA originally required states to expand Medicaid eligibility from citizens making 100 percent of the federal poverty level to citizens making 138 percent of the poverty level (in 2016, $16,243 for individuals and $33,465 for a family of four) or risk losing all federal

Exhibit 7.1
Average Annual Percentage Increase in Total Medicaid Expenditures



Sources: Data from Medicare 2017 (2017) and Keehan et al. (2016).

Exhibit 7.2
Medicaid Beneficiaries and Payments by Medicaid Eligibility Category, 2010



Source: Data from Kaiser Family Foundation (2013b).

funding for Medicaid. However, the first US Supreme Court decision on the ACA (*NIFB v. Sebelius*, 2012) ruled that provision unconstitutional; therefore, the federal government now encourages states to expand eligibility to 138 percent by promising to pay 100 percent of the expansion costs for the first three years and 90 percent of the expansion costs until 2022. As of January 1, 2017, 31 states and the District of Columbia had expanded Medicaid, and 19 states had not expanded Medicaid (Kaiser Family Foundation 2017a, 2017b).

States that did not expand Medicaid created a **Medicaid coverage gap** between people who qualify for Medicaid and those who qualify for marketplace subsidies. Some states have very limited eligibility requirements. As of 2015, most of the states that had not expanded Medicaid had zero percent eligibility for childless adults. As of 2016, the median income eligibility limit for parents was only 44 percent of the federal poverty level. Nationally, more than 2.5 million poor uninsured adults fall into the coverage gap (Garfield and Damico 2016).

Medicaid coverage gap A hole in insurance coverage created by states that did not expand Medicaid (for example, an eligibility income limit of 44 percent of the federal poverty level) and subsidized insurance on the exchanges that starts at 100 percent of the federal poverty level.

States that did not expand Medicaid put forth three arguments: First, the Medicaid program is fundamentally flawed, and block grants to the states would resolve those flaws; second, even though states would benefit from the 90–10 split in funding the expansion, the cost of the expansion at the federal level would be deficit financed and would drive the country into deeper debt; and third, the federal government has used funding as a way to encourage states to adopt federal programs that infringe on states' rights under the US Constitution (Preston 2016).

Healthcare providers generally support Medicaid expansion because the expansion provides Medicaid insurance coverage to patients who might be charity care patients otherwise.

Fraud and Abuse

Because Medicaid receives federal funds, there is little distinction between Medicare fraud and abuse (discussed in chapter 6) and Medicaid fraud and abuse. However, the volume of improper payments to providers representing potential fraud or abuse is substantially different between Medicare and Medicaid. According to the *2015 National Training Program* published by CMS, Medicare processes more than 1 billion fee-for-service claims from providers each year for $357 billion, with an improper payment rate of 10.1 percent, or $36 million in improper payments. The Government Accountability Office (GAO) defines an *improper payment* as "any payment that should not have been made or that was made in an incorrect amount [including overpayments and underpayments] under statutory, contractual, administrative, or other legally applicable requirements" (CMS 2015c, 9). By comparison, each year Medicaid processes more than 3.9 billion fee-for-service claims representing $430 billion, with an improper payment rate of 5.8 percent, or $14.4 billion in improper payments (CMS 2015c).

Chapter Key Points

- Knowing the history of Medicaid is necessary to understanding the current problems with Medicaid.
- Understanding the current benefits and financing of Medicaid is relevant to any healthcare manager.
- Medicaid expansion has had various impacts on patients, providers, state governments, and the federal government.

Discussion Questions

1. In many states, Medicaid expenditures are the largest line item in the state budget. Why have Medicaid expenditures increased, and what can states do to contain Medicaid costs?
2. What are the advantages of Medicaid expansion to patients, potential patients, providers, states, and the federal government?
3. The federal government is financing most of the cost of the Medicaid expansion. What is the government's rationale?
4. Ultimately, states will be responsible for 10 percent of the cost of expansion in their states. How will the states handle this cost?
5. Some states argue for block grants from the federal government to the states in lieu of federal money for expansion. What are the advantages and disadvantages of this argument?

Note

1. Both the federal and state governments fund Medicaid. The state contribution ranges from 17 to 50 percent depending on the poverty status of the state (Gurny, Baugh, and Davis 1992) based on the following formula (Tudor 1995):

$$\text{State share} = (\text{State per capita personal income} / \text{National per capita personal income}) \times 0.45$$

CHAPTER 8

COST ACCOUNTING

Value is defined as the relationship of quality to cost. High quality at inappropriately high cost does not produce value. Likewise, low quality at low cost also does not produce value. Relentlessly driving toward both high quality and low cost is what produces value.

Richard L. Clarke, former president of the Healthcare Financial Management Association

Learning Objectives

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

- Explain the methods of classifying costs
- Explain the methods of allocating costs
- Explain the methods of assembling costs
- Understand the relationship of costs to volume and revenue

Note: Terms shown in **boldface** in this chapter are defined in the margins and appear in the glossary. Terms in ***boldface italic*** also appear in the glossary.

Introduction

Cost accounting is the analysis of costs, including methods for classifying costs, allocating costs, assembling costs, and determining product costs. The purpose of cost accounting is to provide management with cost information for a variety of reasons, including cost management, setting charges, and profitability analysis.

Cost accounting in healthcare increased in importance and degree of sophistication with the advent of prospective payment in 1983 and the rapid growth of managed care in the mid-1980s, both of which required cost information by product. With a fixed charge set by the government for diagnosis-related groups (DRGs) and by the managed care organizations for contracts, healthcare organizations need to know the cost of providing a service so they can determine profitability. Prior to 1983, the only cost accounting system available to hospitals was the Medicare cost report, which provided only aggregate data; most insurance companies paid the full amount hospitals charged for a service, regardless of how much a service cost the hospital.

Methods of Classifying Costs

The first part of cost accounting involves understanding the various methods in which costs can be classified and defined. These costs are not mutually exclusive, and the same examples can be used for different cost classifications.

Accounting Function

Costs can be classified by accounting function:

- ***Financial accounting costs*** (also simply called *accounting costs*) are a measurement in monetary terms of the amount of resources used for a certain purpose. Technically, cost is a value placed on goods or services. When the value expires, the cost becomes an expense. Historical costs derived directly from the financial statements are an example of accounting costs.
- ***Managerial accounting costs*** (i.e., financial costs) are present and future costs that help management make better decisions. Costs derived from budget reports are an example of managerial costs.

Management Function

Costs can be classified by management function:

- ***Operating costs*** are associated with producing the product or providing the service. For example, supply costs associated with a patient visit to the emergency room would be considered operating costs.

- ***Nonoperating costs*** are associated with supporting the production of a product or the provision of a service. For example, costs associated with borrowing money for the equipment in the emergency room would be considered nonoperating costs.

Traceability

Costs can be classified by traceability:

- ***Direct costs*** are costs that can be traced directly to a department, product, or service, such as labor and supplies.
- ***Indirect costs*** (also known as *overhead costs*) cannot be traced directly to a department, product, or service. An example is costs associated with heating and cooling.
- ***Full costs*** include both direct and indirect costs.
- ***Average costs*** are full costs divided by the number of products or services.

Behavior

Costs can be classified by behavior in relation to volume of products or services and include the following:

- ***Variable costs*** change directly and proportionately in response to changes in volume. For example, the cost of supplies is directly proportional to volume, so supply cost is a variable cost.
- ***Fixed costs*** remain constant in relation to changes in volume. The cost of heating and cooling a clinic is the same whether there are many patients or just a few, so that cost is a fixed cost.
- ***Semivariable costs*** change incrementally in response to changes in volume. For example, a hospital may not hire one more housekeeper if patient volume increases 1 percent, because the current housekeeping staff can probably handle the extra cleaning required as a result of that small increase. However, if patient volume jumps 5 percent, the hospital may decide to hire one more housekeeper. Thus, housekeeping staff costs are semivariable—they only go up when patient volume increases by a certain increment.
- ***Marginal costs*** are the costs of producing one more unit of something. In most cases, the marginal costs are simply the variable costs of each additional unit. For example, a medical lab may determine that if it performs 100 urinalysis tests per

day, the cost per unit—which is the fixed cost plus the variable costs, divided by 100—is $10 per test. However, if it performed 101 tests on a given day, the marginal cost of that one additional test would be less than $10, since it would only be the variable cost associated with that one test (such as the supplies).

Relevance to Decision Making

Costs can be classified by relevance to control and management decision making and include the following:

- ***True costs*** are hypothetical costs that are the most accurate representation of full costs that can be determined by management.
- ***Controllable costs*** are costs under the manager's influence, such as labor.
- ***Uncontrollable costs*** are costs that cannot be influenced by the manager. Utility costs, for example, probably cannot be influenced by the manager, and thus they are uncontrollable.
- ***Differential costs*** (also known as *incremental costs*) are the difference in costs between two or more alternatives.
- ***Sunk costs*** are costs that have already been incurred and thus will not play a role in future decisions. For example, if a CEO spends $1 million to open a new neighborhood clinic, that money is a sunk cost. If a year later it turns out that the clinic is not profitable and should be closed, the CEO should not let the fact that he already invested $1 million affect his decision to close the clinic. The CEO might regret that he spent that $1 million, but there's no legitimate business reason to keep the clinic open just because he made that financially unwise decision in the beginning.
- ***Opportunity costs*** are potential revenues forgone by rejecting an alternative. The opportunity cost of spending $1 million in opening a new clinic is the money that $1 million would have earned in another investment, such as by buying government bonds or buying a new X-ray machine.
- ***Relevant costs*** are costs that are important to a decision at hand. If the CEO in the previous example is deciding whether he should close his failing neighborhood clinic, the $1 million he spent when opening the clinic is not relevant to his decision, because that money is a sunk cost. However, the cost of keeping the clinic open is a relevant cost, because that's how much he'll be spending if he doesn't choose to close the clinic.

- ***Actual costs*** are the historical costs incurred. If a CEO budgeted $750,000 for bonuses to her nursing staff but ended up paying only $650,000, her actual cost of the bonuses was $650,000.
- ***Standard costs*** are estimated or budgeted costs used for comparison. For example, an ophthalmology practice manager may determine that the standard cost of performing a Lasik surgery is $400. If one of the practice's physicians routinely spends $450 for each Lasik operation (perhaps because he uses more supplies and technician time than the other physicians), the manager may ask this physician to watch his costs.

Methods of Allocating Costs

As is the case with most organizations, healthcare organizations do not send a bill for every product or service they sell. For example, healthcare organizations do not send patients a bill for heating or cooling the hospital room. Instead, the organization will *allocate* (assign) the costs of heating and cooling to a department that does generate patient bills, such as radiology and lab.

The process of allocating these indirect costs, and some direct costs, to departments that generate charges is called **cost allocation** (also called *cost finding* or *cost analysis*). The primary purpose of cost allocation is to assign the indirect costs and some direct costs in a way that ensures that patients are paying for only the costs of the services and products they received. Prior to choosing the best method of cost allocation, healthcare organizations must complete the following five prerequisite steps (Berman, Kukla, and Weeks 1994).

cost allocation
Assigning indirect costs, and some direct costs, to departments that generate charges. Also called *cost finding* or *cost analysis*.

Organizational Chart

First, the healthcare organization must have an organizational chart and a commensurate chart of accounts. The organizational chart identifies who is responsible for each functional area, usually a department, in the organization. The chart of accounts identifies each **cost center** and **revenue center** that corresponds to the organizational chart. (Every department is a cost center, but only departments that make money are revenue centers.) This step is the basis for responsibility accounting, which means that the organization has identified and holds someone responsible for each revenue and cost center in the organization.

cost center
A department; from an accounting standpoint, a department that consumes money.

Revenue Center Identification

Second, the healthcare organization must identify the cost centers that generate revenue and segregate them from the cost centers that do not generate revenue. The cost centers that do not generate revenue must allocate their costs to the cost centers that do generate revenue.

revenue center
A cost center (department) that generates money.

Accounting System

Third, the healthcare organization must have an accounting system that accurately and promptly assigns costs and charges to the appropriate cost and revenue centers.

Workload Statistics

Fourth, the healthcare organization must have a comprehensive information system that generates accurate, nonfinancial statistics for every department. Each department should have a workload statistic that best reflects the work performed in the department. For instance, the workload statistic for the laundry department is usually pounds of laundry; for the personnel department, the statistic is usually number of employees in the organization; for the health information department, the statistic is usually discharges adjusted for outpatient visits; and for housekeeping, the statistic is usually square footage.

Cost Allocation Methods

Fifth, the healthcare organization must have a predetermined cost allocation method. Several methods of cost allocation are used in healthcare organizations, including direct apportionment, step-down apportionment, double apportionment, and multiple apportionment, each of which is discussed in the sections that follow.

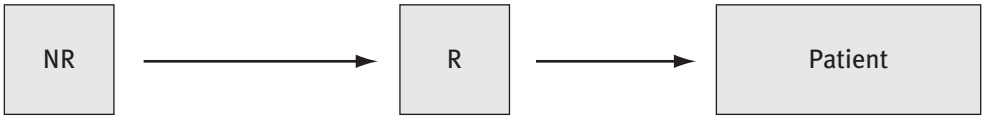
Direct Apportionment

direct apportionment A cost allocation method that moves costs from departments that do not generate revenue to departments that do generate revenue.

Direct apportionment is the easiest method of cost allocation. It involves a onetime allocation of all costs from departments that have costs but do not generate revenue (NR), such as the housekeeping department, to cost centers of departments that do generate revenue (R), such as the laboratory (see exhibit 8.1).

The main advantage of direct apportionment is its simplicity; the main disadvantage is that it does not take into account the costs of nonrevenue departments doing work for other nonrevenue departments. For instance, housekeeping does work for health information management. Because of this disadvantage, most third-party payers do not accept direct apportionment as a method of cost allocation.

Exhibit 8.1 Direct Apportionment



Note: NR = department that does not generate revenue
R = department that generates revenue

Step-Down Apportionment

Step-down apportionment involves a twotime allocation and takes into account the disadvantage of direct apportionment. It involves a onetime allocation of all costs from cost centers of departments that do not generate revenue to cost centers of other departments that do not generate revenue, and then a onetime allocation of all costs to cost centers of departments that do generate revenue (see exhibit 8.2).

Step-down apportionment has two advantages: (1) it considers the costs of departments that do not generate revenue doing work for other departments that do not generate revenue before the final allocation to departments that do generate revenue, and (2) although burdensome, it can be performed by hand, without a computer. The disadvantage of step-down apportionment is that it does not consider revenue-generating departments doing work for other revenue-generating departments. For instance, the lab department may take cultures in radiology to determine the source of infections (in most healthcare organizations, this would result in an *interdepartment charge*, or a charge between departments).

step-down apportionment
A cost allocation method that allocates costs from non-revenue-generating cost centers to other non-revenue-generating cost centers (as appropriate) and then to revenue-generating cost centers.

Double Apportionment

Double apportionment also involves a twotime allocation and takes into account the disadvantage of step-down apportionment. Double apportionment involves a onetime allocation of all costs from cost centers of departments that do not generate revenue to cost centers of other departments that do not generate revenue. It also involves a simultaneous onetime allocation of costs between cost centers that do generate revenue to cost centers of other departments that do generate revenue before a onetime allocation of all costs to cost centers of departments that do generate revenue (see exhibit 8.3).

double apportionment
A cost allocation method that allocates costs from non-revenue-generating cost centers to other non-revenue-generating cost centers (as appropriate), then allocates costs from revenue-generating cost centers to other revenue-generating cost centers (as appropriate), and then allocates costs from non-revenue-generating cost centers to revenue-generating cost centers.

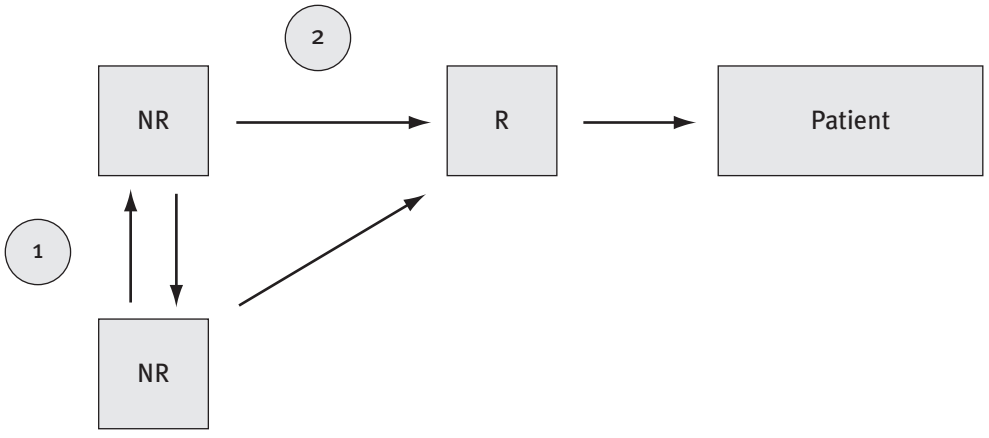
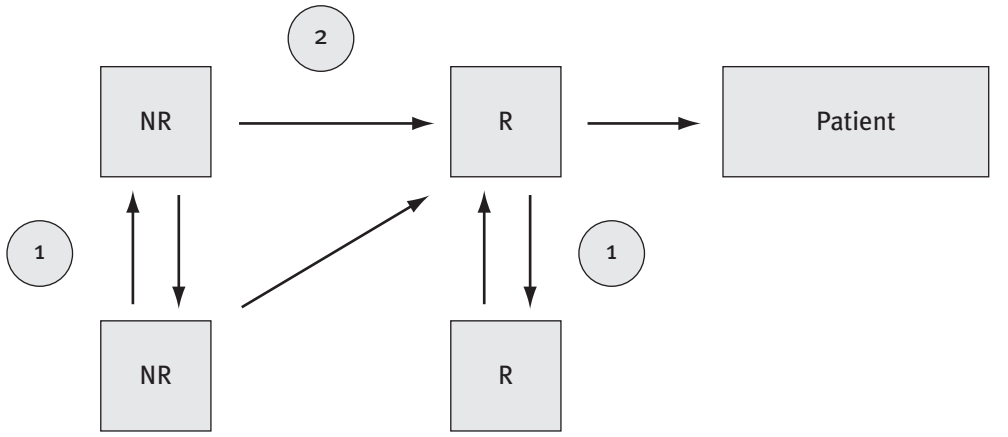


Exhibit 8.2
Step-Down Apportionment

Note: NR = department that does not generate revenue
R = department that generates revenue

Exhibit 8.3
Double Apportionment



Note: NR = department that does not generate revenue
R = department that generates revenue

Double apportionment has two advantages: (1) it takes into account the costs of revenue-generating departments doing work for other revenue-generating departments before the final allocation to revenue-generating departments; and (2) considering *value*, or accuracy divided by cost, double apportionment is the most practical method of cost allocation because it maximizes accuracy in relation to cost. The disadvantage of double apportionment is that it requires significant computer time, which may make it cost-prohibitive for smaller healthcare organizations.

Multiple Apportionment

multiple apportionment
A two-step cost allocation method that makes multiple, simultaneous apportionments during the first step. Also known as *algebraic apportionment*.

Multiple apportionment (sometimes called *algebraic apportionment*) also involves a two-step allocation, but it takes into account multiple, simultaneous apportionments during the first step (see exhibit 8.4).

The more allocations the organization makes in the first step, the more accurate will be the costs reflected in the patient's bill. The advantage of multiple apportionment is that it is the most accurate method. The disadvantages are that multiple apportionment requires significant computer time using a computer with significant memory.

Methods of Assembling Costs

After the healthcare organization has allocated the indirect costs and some direct costs by a method that ensures that patients are paying for only the costs of the services and products they received, the organization develops methods of assembling costs in ways that are meaningful for management. Three methods exist; most organizations use more than one method. These methods are responsibility costing, full costing, and differential costing.

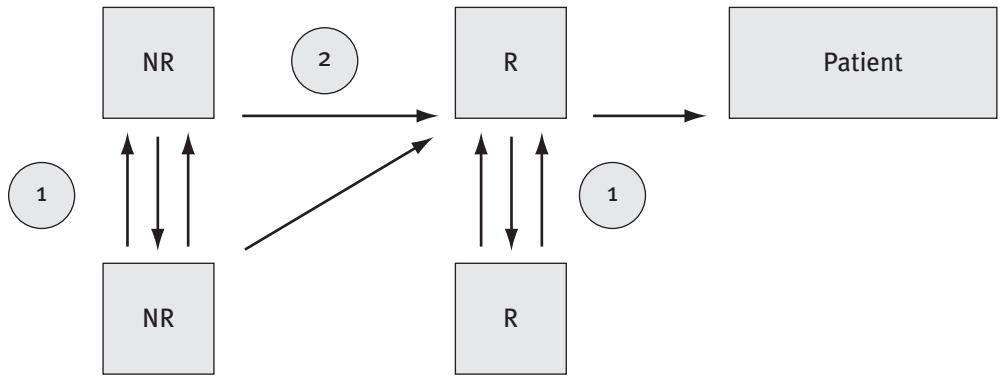


Exhibit 8.4
Multiple Apportionment

Note: NR = department that does not generate revenue
R = department that generates revenue

Responsibility Costing

Responsibility costing is a method of assembling costs by responsibility center (cost center or department). In this way, the healthcare organization can hold managers responsible for the controllable costs of the organization.

responsibility costing
A method of assembling costs by cost center or department.

Full Costing

Full costing is a method of assembling direct costs and an allocated share of indirect costs to a product or service for the purpose of determining its profitability.

full costing
A method of assembling direct and indirect costs to a product or service to determine its profitability.

CRITICAL CONCEPTS
How Cost Apportionment Works

Mrs. Shepard was a patient at Citizens Hospital, where she was admitted complaining of stomach pains. Tests revealed that Mrs. Shepard had an inflamed appendix, and surgery was indicated. Once the surgery was completed, Mrs. Shepard spent one day recovering in the hospital. The surgery was routine and there were no complications; discharge was as planned. Using the following four departments as an example, explain how the various cost apportionment methods would work:

Human Resources	Surgery
Housekeeping	Laboratory

Explain the advantages and disadvantages of each method as they relate to the case.

Differential Costing

differential costing A method of assembling costs and sometimes revenues to alternative decisions. Also known as *incremental costing* or *relevant costing*.

Differential costing (sometimes called *incremental costing* or *relevant costing*) is a method of assembling costs and sometimes revenues to alternative decisions (Siegel and Shim 2006). In this method, sunk costs (i.e., costs that have already occurred) are not relevant; incremental or differential costs (i.e., costs that differ between the alternative decisions) are relevant. Generally, such an analysis involves the following four steps, which are further explained in problem 8.1:

1. Gathering all costs and revenues associated with each alternative
2. Identifying and dropping all sunk costs
3. Identifying and dropping all costs and revenues that do not differ between the alternatives
4. Selecting the best alternative based on the remaining cost and revenue information

PROBLEM 8.1
Differential Cost Analysis

Last week the ABC Clinic bought a piece of lab equipment for $100,000. The piece of equipment will perform 100,000 tests over its useful life. Total variable costs are $3 per test, and the clinic is planning to charge $5 per test. This week a competing lab equipment manufacturer introduced a similar piece of equipment for the same price. In effect, the introduction of this new piece of equipment made the resale or trade-in value of the existing piece of equipment $0. Total variable costs for the new piece of equipment are $1 per test. Using differential cost analysis, should ABC Clinic keep the existing piece of equipment or should the clinic buy the new piece of equipment?

Step 1:
Gather all costs and revenues associated with each alternative.

	Keep Existing Equipment	Buy New Equipment
Revenue	$500,000	$500,000
Fixed cost		
Old	100,000	100,000
New		100,000
Variable costs	300,000	100,000
Full cost gain/(loss)	$100,000	$200,000

PROBLEM 8.1
Differential Cost Analysis *(continued)*

Step 2:
Identify and drop all sunk costs (drop the $100,000 fixed cost for old equipment, since it has been spent already).

	Keep Existing Equipment	Buy New Equipment
Revenue	$500,000	$500,000
Fixed cost		
Old	~~100,000~~	~~100,000~~
New		100,000
Variable costs	300,000	100,000

Step 3:
Identify and drop all costs and revenues that do not differ between the alternatives (since that figure is the same for both).

	Keep Existing Equipment	Buy New Equipment
Revenue	~~$500,000~~	~~$500,000~~
Fixed cost		
Old		
New		100,000
Variable costs	300,000	100,000

Step 4:
Select the best alternative based on the remaining cost and revenue information.

Differential cost	($300,000)	($200,000)

Conclusion:
Using differential cost analysis, ABC should buy the new piece of lab equipment because it has a lower differential cost ($200,000) than the old piece of equipment ($300,000).

Methods of Determining Product Costs

After the healthcare organization has assembled costs in ways that are meaningful for management, the organization develops methods of determining product costs, or costs

by products, such as DRGs, patient days, and outpatient visits. Product costs obviously cut across functional (department) lines of responsibility. Product costs are important in determining profitability in prospective payment arrangements, such as Medicare and managed care, where charges are published before the healthcare organization delivers products and services. Several methods of determining costs exist; organizations may use more than one. The following methods of determining costs are presented in order from what are generally agreed to be the least accurate to the most accurate methods.

ratio of cost to charges
A method of determining product cost by relating its cost to its charge. This ratio is usually calculated by dividing an organization's total operating expenses by the gross patient revenue. The resulting percentage is then applied to any product's charge in the organization to calculate the product's cost.

Ratio of Cost to Charges

Ratio of cost to charges is a method of determining product cost by relating its cost to its charge. This ratio is usually calculated by dividing an organization's total operating expenses by the gross patient revenue (obtained from the worksheet for the statement of operations). The resulting percentage is then applied to any product's charge in the organization to calculate the product's cost. Ratio of cost to charges was the predominant method of calculating product cost during the cost-based reimbursement years prior to 1983. For instance, if an organization's total operating expenses are $50,000 and the total gross patient revenues are $100,000, the ratio of cost to charges would be 0.50. Applying that ratio to a computed tomography (CT) scan with a charge of $1,000 would produce a product cost for each CT scan of $500.

This method has a serious flaw. It assumes a consistent relationship between cost and charge that simply does not exist because of the numerous ways healthcare organizations have set charges since the mid-1970s (see chapter 9). For example, to remain competitive, healthcare organizations may price a product or service below the actual cost of providing the product or service.

process costing
A method of determining product cost by dividing the full costs of the organization or department during a given accounting period by the number of products or services produced or provided during the given accounting period.

Process Costing

Process costing is a method of determining product cost during a given accounting period. This number is usually calculated by dividing the full costs of the organization or department during a given accounting period by the number of products or services produced or provided during the given accounting period. For instance, if the full costs of an imaging department are $10 million and the imaging department performs 10,000 procedures, the product cost of each procedure would be $1,000. This method of determining product cost might be appropriate in an organization or department that produces products similar in resource consumption. However, assuming similar resource consumption for most products in healthcare organizations is inappropriate. For instance, a CT scan in the radiology department consumes more resources than a knee X-ray does. Process costing would consider each procedure in the radiology department identical and therefore would assign both procedures the same cost.

Job-Order Costing

Job-order costing is a method of determining product cost by sampling the product's actual direct costs and developing a relative value unit (RVU)—a measure of resources consumed by each product—in varying amounts for each product. Total direct costs and indirect costs are then assigned to the product on the basis of the relationships established by the RVU. Problem 8.2 demonstrates the process of developing an RVU and determining product costing using the RVU.

job-order costing
A method of determining product cost by sampling the product's actual direct costs and developing a relative value unit (RVU)—a measure of resources consumed by each product—in varying amounts for each product.

PROBLEM 8.2
Job-Order Costing

XYZ Diagnostic Center is developing an RVU and product cost for the following CT procedures, given the projected volumes and sample direct costs. Projected total costs for the CT department are $10 million ($6 million in direct costs and $4 million in indirect costs). Calculate the cost per procedure using job-order costing.

Procedure	Projected Volumes	Labor Expense	Supply Expense
A: CT scan	1,000	$60	$30
B: Upper GI	2,000	50	20
C: Chest X-ray	4,000	25	10
D: Hand X-ray	5,200	20	5

Step 1: Calculate the RVU for each procedure.
Divide total sample direct cost (labor expense + supply expense) by the greatest common denominator (GCD).

Procedure	Total Sample Direct Expense	÷	GCD	=	RVU
A	90		5		18
B	70		5		14
C	35		5		7
D	25		5		5

(continued)

PROBLEM 8.2
Job-Order Costing *(continued)*

Step 2: Calculate the total cost for each procedure.

Step 2, Part 1:
Calculate the total projected RVUs by multiplying the RVUs per procedure by the projected volume of each procedure.

Procedure	RVU	×	Projected Volume	=	Total RVUs
A	18		1,000		18,000
B	14		2,000		28,000
C	7		4,000		28,000
D	5		5,200		26,000
Total					100,000

Step 2, Part 2:
Calculate the cost per RVU by dividing total costs by total RVUs.
$10,000,000 ÷ 100,000 = $100

Step 2, Part 3:
Calculate the cost per procedure by multiplying the cost per RVU by the RVUs of each procedure.

Procedure	Cost/RVU	×	RVU	=	Cost/ Procedure
A	$100		18		$1,800
B	100		14		1,400
C	100		7		700
D	100		5		500

Note: RVU = relative value unit; CT = computed tomography; GI = gastrointestinal

activity-based costing A method of determining product cost by using *cost drivers*, or activity measures, to assign indirect costs to products.

Activity-Based Costing

Activity-based costing is a method of determining product cost by using *cost drivers*, or activity measures, to assign indirect costs to products. Whereas job-order costing assigns indirect costs to products proportionate to direct costs and volumes, activity-based costing uses cost drivers that cause indirect costs to be incurred. Ideal cost drivers are activities that pertain to each procedure in varying amounts.

In problem 8.2, labor expense and supply expense, which reflected activities and varied for each procedure, were used to determine both the direct and indirect costs for each procedure. Adding a cost driver that better represents the causal relationship of the indirect costs (such as equipment use, which represents a causal relationship to depreciation expense and repair expense) produces the most accurate cost-per-procedure information available, as demonstrated in problem 8.3.

The difference in the costs per procedure for job-order costing and activity-based costing in problem 8.3 are a result of the more accurate method of assigning indirect costs using activity-based accounting. Generally speaking, more cost drivers provide a more accurate cost; however, cost-driver information is often expensive to collect. Therefore, only cost drivers that have a high correlation to the consumption of overhead should be used (Siegel and Shim 2006).

PROBLEM 8.3
Activity-Based Costing

XYZ Diagnostic Center wants to develop a product cost for the following CT procedures using labor expense and supply expense to assign direct costs and machine minutes as a cost driver to assign indirect costs. Projected total costs for the CT department are $10 million ($6 million in direct costs and $4 million in indirect costs). Assign costs to each procedure using the following information.

Procedure	Projected Volumes	Labor Expense	Supply Expense	Equipment Use (min.)
A: CT scan	1,000	$60	$30	30
B: Upper GI	2,000	50	20	30
C: Chest X-ray	4,000	25	10	20
D: Hand X-ray	5,200	20	5	10

Step 1: Calculate the direct RVU and the cost driver for each procedure, a two-part process.

Step 1, Part 1:
Divide total sample direct cost (labor expense + supply expense) by the GCD.

(continued)

PROBLEM 8.3
Activity-Based Costing *(continued)*

Procedure	Total Sample Direct Cost	÷	GCD	=	Direct RVU
A	$90		5		18
B	70		5		14
C	35		5		7
D	25		5		5

Step 1, Part 2:
Divide total sample indirect cost by the GCD. Equipment use in minutes can be used as total sample indirect cost because it shows the same relationship as depreciation cost; however, if additional indirect cost drivers, such as the number of full-time equivalents, are used, then both would be converted to money, added together, and then divided by the GCD.

Procedure	Total Sample Indirect Cost	÷	GCD	=	RVU
A	$30		10		3
B	30		10		3
C	20		10		2
D	10		10		1

Step 2: Calculate the total cost for each procedure, a seven-part process.

Step 2, Part 1:
Calculate the total projected direct RVUs by multiplying the direct RVUs per procedure by the projected volume per procedure.

Procedure	RVU	×	Projected Volume	=	Total RVUs
A	18		1,000		18,000
B	14		2,000		28,000
C	7		4,000		28,000
D	5		5,200		26,000
Total					100,000

PROBLEM 8.3
Activity-Based Costing *(continued)*

Step 2, Part 2:
Calculate the total projected cost drivers by multiplying the RVUs per procedure by the projected volume per procedure.

Procedure	RVU	×	Projected Volume	=	Total Cost Drivers
A	3		1,000		3,000
B	3		2,000		6,000
C	2		4,000		8,000
D	1		5,200		5,200
Total					22,200

Step 2, Part 3:
Calculate the direct cost per RVU by dividing direct costs by total RVUs.
$6,000,000 ÷ 100,000 = $60

Step 2, Part 4:
Calculate the indirect cost per cost driver by dividing indirect costs by total cost drivers.
$4,000,000 ÷ 22,200 = $180.18

Step 2, Part 5:
Calculate the direct cost per procedure by multiplying the direct cost per RVU by the RVUs in each procedure.

Procedure	Direct Cost/RVU	×	RVU	=	Direct Cost/ Procedure
A	$60		18		$1,080
B	60		14		840
C	60		7		420
D	60		5		300

(continued)

PROBLEM 8.3
Activity-Based Costing *(continued)*

Step 2, Part 6:
Calculate the indirect cost per procedure by multiplying the indirect cost per cost driver by the number of cost drivers in each procedure.

Procedure	Indirect Cost/ Cost Driver	×	Cost Driver	=	Indirect Cost/ Procedure
A	$180.18		3		$540.54
B	180.18		3		540.54
C	180.18		2		360.36
D	180.18		1		180.18

Step 2, Part 7:
Calculate the total cost per procedure by adding the direct cost per procedure and the indirect cost per procedure.

Procedure	Direct Cost/ Procedure	+	Indirect Cost/ Procedure	=	Total Cost/ Procedure
A	$1,080		$540.54		$1,620.54
B	840		540.54		1,380.54
C	420		360.36		780.36
D	300		180.18		480.18

Note: RVU = relative value unit; CT = computed tomography; GI = gastrointestinal; GCD = greatest common denominator

Standard Costing

Standard costing is not actually a method of determining costs; it is a method of establishing benchmark costs, or budgeted costs, for the purpose of comparing actual costs. This method of comparing standard costs to actual costs produces *variances*, or differences, that are useful to the manager in controlling costs.

Impact of the Affordable Care Act on Costing Methods

The focus on costing methods in the past has been on costs per product and costs per payer, while the focus under the Affordable Care Act (ACA) has been on costs per patient population and costs per specific high-cost diagnoses and patients. The law moves providers

toward assuming more risk for utilization through value-based purchasing, such as bundled payments and accountable care organizations. According to a study by the Agency for Healthcare Research and Quality (Bush 2012), 1 percent of the patients consumed 20 percent of all healthcare spending in 2009, or more than $90,000 per person that year. The same study found that 5 percent of the patients accounted for more than 50 percent of all healthcare spending. Data usage in the past has been on volume and profit, while data usage in the future will be on finding best practices and comparing costs between treatment options (Selivanoff 2011). Also, costing methods in the past have included ratio of costs to charges and job-order costing, while costing methods in the future should be on activity-based costing in an attempt to identify and reduce both direct and indirect costs.

Relationship of Costs to Volume and Revenue

For purposes of determining profit or loss, managers must review costs in relation to associated volumes and revenues (sometimes referred to as *cost-volume-profit analysis*). The profit equation is

Profit = Revenues – Expenses

Therefore, the manager first must understand the relationship between costs and expenses. Within this context, cost is the amount spent to acquire an asset, and expense is the amount spent consuming the asset. Therefore, expense is an expired asset. As referenced earlier in this chapter, costs can be classified as fixed costs or variable costs. When classifying these costs in relation to an accounting period, fixed costs remain constant and variable costs change in relation to volume, as demonstrated in exhibit 8.5.

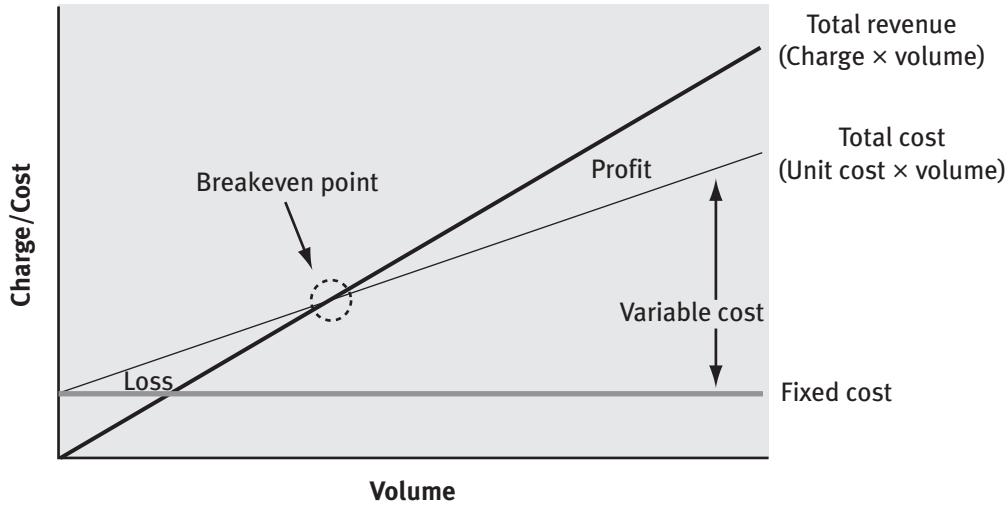
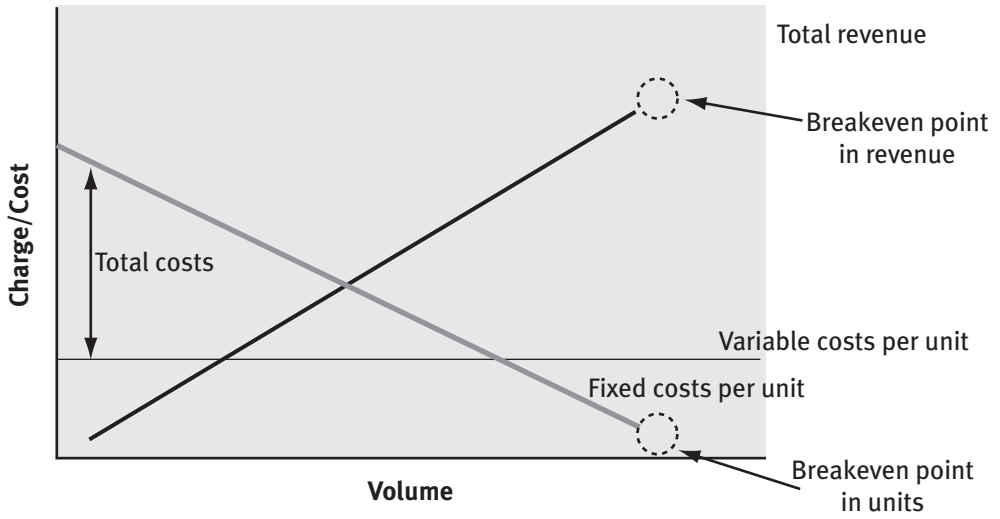


Exhibit 8.5
Costs per Period

Exhibit 8.6
Costs per Unit



Related to costs per period, the breakeven point is the volume in units at which the total revenue line intersects the total cost line, or where total costs equal total revenues, as expressed by the equation

$$\text{Breakeven quantity} = \frac{\text{Total fixed costs}}{\text{Charge} - \text{Variable costs per unit}}$$

When classifying these costs in relation to a unit of product or service, fixed costs change in relation to volume, and variable costs remain constant per unit, as shown in exhibit 8.6.

Exhibit 8.6 is somewhat unorthodox, but it is important to understand the relationship in this way to understand breakeven analysis. At any point on the volume axis, total costs equal variable costs per unit, which remain constant, plus fixed costs per unit, which decline as volume increases. Using costs per unit, the breakeven point in units or revenues is the point at which fixed costs have been covered. Before the breakeven point, each unit sold not only has covered its variable costs but also has contributed something to fixed costs. After the breakeven point, each unit sold has covered its variable costs and its fixed costs and is contributing to profit. This concept is called the *contribution margin* and can be expressed in dollars with the formula

$$\text{Contribution margin \$} = \text{Charge} - \text{Variable costs per unit}$$

It also can be expressed as a percentage:

$$\text{Contribution margin percent} = \frac{\text{Charge} - \text{Variable costs per unit}}{\text{Charge}}$$

and the breakeven point in dollars can be expressed with the formula

$$\text{Breakeven Point \$} = \frac{\text{Total fixed costs}}{\text{Contribution margin percentage}}$$

After the breakeven point has been reached and fixed costs have been covered, each subsequent unit produced contributes to profit, rather than to fixed costs. Problem 8.4 demonstrates breakeven analysis per period, where the objective is to determine the quantity necessary to cover fixed costs and where additional quantity will increase profit.

To understand breakeven analysis in a capitated revenue environment, a more detailed profit equation is needed. (This equation is also useful in determining profit at various levels of volume and determining profit if variable costs per unit can be reduced.) Problem 8.5 demonstrates breakeven analysis in a capitated environment where the objective is to determine the quantity necessary to cover fixed costs and where additional quantity will decrease profit.

MINI-CASE STUDY

Suppose that you are the administrator of a physician's office practice, and the physician owners have asked you for a presentation on improving profitability without raising rates. Using both exhibits 8.5 and 8.6, explain how profit can be increased.

PROBLEM 8.4
Breakeven Analysis

ABC's home health care agency is considering a new product with a fixed cost of $1,000, a charge of $10 per unit, and a variable cost of $5.

What is the breakeven point in quantity and in dollars?

What is the contribution margin in dollars and in a percentage?

$$\text{Breakeven point quantity} = \frac{1{,}000}{10-5} = 200 \text{ units}$$

$$\text{Contribution margin \$} = 10 - 5 = \$5$$

$$\text{Contribution margin percent} = \frac{10-5}{10} = 50 \text{ percent}$$

$$\text{Breakeven point \$} = \frac{1{,}000}{0.5} = \$2{,}000$$

PROBLEM 8.5
Breakeven Analysis for Capitated Revenue

ABC Outpatient Clinic is considering a capitated agreement with an insurance company whereby the clinic would provide outpatient coverage to a 1,000-member plan at $100 per member per month. Variable costs are projected at $150 per clinic visit, and fixed costs allocated to the agreement are $600,000 per year. What is the breakeven point in volume of clinic visits?

Profit = Revenue – (Fixed costs + [Variable cost per unit × Volume])

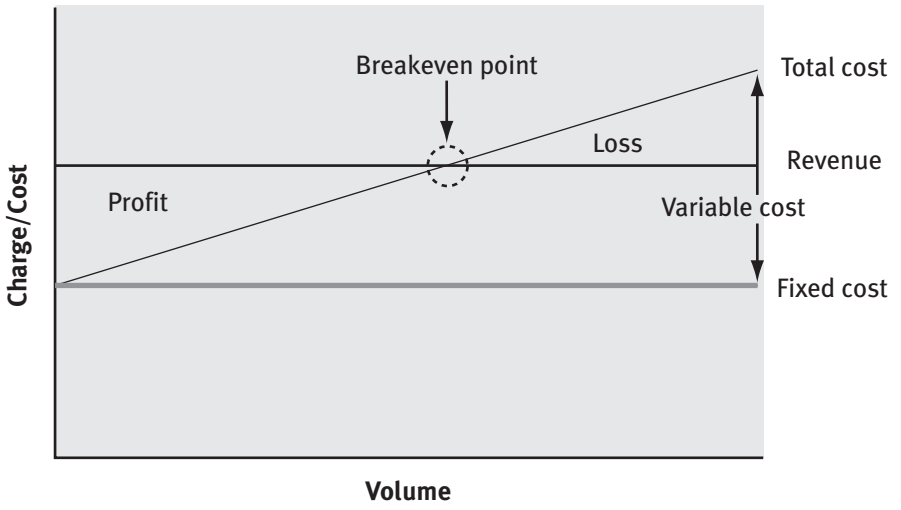
$0 = $1,200,000 – ($600,000 + [$150 × Volume])

Volume = 4,000 clinic visits (more than 4,000 clinic visits would result in a loss)

Profit = Revenues – Expenses
where Revenues = (Charge × Volume)
and where Expenses = (Fixed costs) + (Variable cost per unit × Volume)

In a capitated revenue environment, revenue is fixed, and what becomes important is controlling volume and variable costs. Exhibit 8.7 gives a graphic representation of the breakeven point in a capitated revenue environment.

EXHIBIT 8.7
Breakeven Point for Capitated Revenue



Chapter Key Points

- Understanding the various methods of classifying costs is necessary in a cost-containment environment.
- Knowing how indirect costs are allocated to direct costs and ultimately to the charge is crucial to an understanding of the cost structure of a department.
- A manager who wants to improve department efficiency and/or profit must understand the relationship of costs to both volumes and revenues.
- Knowing how to isolate relevant costs in differential cost analysis improves decision making.
- Allocating costs using activity-based costs better reflects costs and in turn will enable more accurate rate setting.
- Identifying new costing methods is necessary under the ACA.

Discussion Questions

1. Why is it important for the healthcare manager to be able to classify costs in a variety of ways?
2. What is the point of allocating costs? After allocation, how is the resulting information used?
3. Cost information can be assembled in a variety of ways for a variety of reasons. What are three ways that cost information is assembled, and what is the reason for the assembly?
4. How might differential cost analysis be used in the following nonroutine decisions: expanding an existing service, decreasing an existing service, starting a new service, and closing an existing service?
5. How was the ACA expected to change how providers look at costs?
6. What are the similarities and differences between breakeven points per period and breakeven points per unit of service?

Differential Cost Analysis

Differential Cost Analysis Practice Problem

Beta Managed Care Corporation has approached XYZ Hospital for inpatient labor and delivery coverage for Beta's subscribers. Beta will pay $5,000 per delivery. XYZ's fixed costs per delivery are $3,000, and variable costs are $3,000. Using differential cost analysis, should XYZ Hospital accept Beta's offer?

Differential Cost Analysis Practice Problem Solution

Step 1: Gather all costs and revenues associated with each alternative.

	Accept	Reject
Revenue	$ 5,000	$ 0
Fixed Cost	3,000	3,000
Variable Costs	3,000	0
Full Cost Gain/(Loss)	**($1,000)**	**($3,000)**

Step 2: Identify and drop all sunk costs (drop $3,000 fixed cost for each alternative).

	Accept	Reject
Revenue	$5,000	$0
Fixed Cost	0	0
Variable Costs	3,000	0

Step 3: Identify and drop all costs and revenues that do not differ between the alternatives.

	Accept	Reject
Revenue	$5,000	$0
Fixed Cost	0	0
Variable Costs	3,000	0

Step 4: Select the best alternative based on the remaining cost and revenue information.

	Accept	Reject
Revenue	$5,000	$0
Fixed Cost	0	0
Variable Costs	3,000	0
Differential Cost Gain/(Loss)	**$2,000**	**$0**

Conclusion: Using differential cost analysis, XYZ should accept the offer because it has a higher differential gain ($2,000) than rejecting the offer ($0).

Differential Cost Analysis Self-Quiz Problem

The integrated delivery system you work for is thinking about dropping your sleep disorder program for financial reasons. The program serves 4,000 patients a year with annual revenues of $2 million. The variable cost per patient is $200, with allocated fixed costs to the program of $1.6million. Should your program be dropped for financial reasons?

Job-Order Costing

Job-Order Costing Practice Problem

XYZ Reference Lab must calculate the relative value and cost per procedure given that the total lab expense is $851,455:

Procedure	Projected Volume	Labor Expense ($)
A	4,000	.10
B	3,500	.05
C	2,000	.05
D	4,000	.15
E	4,500	.10
F	6,000	.10
G	2,200	.15
H	1,800	.15
I	4,000	.05
J	3,000	.10

Job-Order Costing Practice Problem Solution

Step 1: Calculate RVUs by dividing labor expense per procedure by the average labor expense.

Procedure	Labor Expense ($)	÷	Average Labor Expense ($)	=	RVU
A	.10		.10		1.0
B	.05		.10		.5
C	.05		.10		.5
D	.15		.10		1.5
E	.10		.10		1.0
F	.10		.10		1.0
G	.15		.10		1.5
H	.15		.10		1.5
I	.05		.10		.5
J	.10		.10		1.0

Step 2: Calculate total cost for each procedure, a three-part process.

Step 2, Part 1: Calculate total RVUs by multiplying RVUs per procedure by projected volume.

Procedure	RVU	×	Projected Volume	=	Total RVUs
A	1.0		4,000		4,000
B	.5		3,500		1,750
C	.5		2,000		1,000
D	1.5		4,000		6,000
E	1.0		4,500		4,500
F	1.0		6,000		6,000
G	1.5		2,200		3,300
H	1.5		1,800		2,700
I	.5		4,000		2,000
J	1.0		3,000		3,000
					34,250

Step 2, Part 2: Calculate the cost per RVU by dividing total costs by total RVUs.

$851,455 ÷ 34,250 = $24.86

Step 2, Part 3: Calculate the cost per procedure by multiplying the cost per RVU by RVUs per procedure.

Procedure	Cost/RVU ($)	×	RVUs/Procedure	=	Cost/Procedure ($)
A	24.86		1.0		24.86
B	24.86		0.5		12.43
C	24.86		0.5		12.43
D	24.86		1.5		37.29
E	24.86		1.0		24.86
F	24.86		1.0		24.86
G	24.86		1.5		37.29
H	24.86		1.5		37.29
I	24.86		0.5		12.43
J	24.86		1.0		24.86

Job-Order Costing Self-Quiz Problem

Using the weighted procedure method of setting rates, calculate the relative value and cost per procedure for the following lab procedures, given a total lab cost of $1.25 million and an average hourly lab tech rate of $15 (to calculate the RVU, divide the total sample expense by the common denominator of .25):

Procedure	Projected Volume	Labor in Minutes	Supply Expense ($)
Amylase	4,000	15	.75
Bleeding time	5,000	12	.50
Uric acid	3,000	10	.50
Platelet count	7,800	9	.25
Hematocrit	7,600	8	.25

Activity-Based Costing

Activity-Based Costing Practice Problem

XYZ Home Health Care Corporation wants to develop a product cost for the following home visits using labor expense and supply expense to assign direct costs and visit minutes as a cost driver to assign indirect costs. Projected total costs for the home health care corporation are $6 million ($5 million direct and $1 million indirect). Assign costs to each visit using the following information:

Visit	Projected Volumes	Labor Expense ($)	Supply Expense ($)	Visit Minutes
Physical therapy (PT)	2,000	60	30	60
Respiratory therapy (RT)	4,000	50	20	40
Nursing	9,000	25	10	30
Occupational therapy (OT)	7,000	20	5	40

Activity-Based Costing Practice Problem Solution

Step 1: Calculate the direct RVU and the indirect RVU for each visit, a two-part process.

Step 1, Part 1: Divide total sample direct cost (labor expense + supply expense) by the greatest common denominator (GCD).

Visit	Total Sample Direct Cost ($)	÷	GCD	=	RVUs
PT	90		5		18
RT	70		5		14
Nursing	35		5		7
OT	25		5		5

Step 1, Part 2: Divide total sample indirect cost (visit minutes) by the GCD.

Visit	Total Sample Indirect Cost ($)	÷	GCD	=	Cost Drivers
PT	60		10		6
RT	40		10		4
Nursing	30		10		3
OT	40		10		4

Step 2: Calculate the total cost for each visit, a seven-part process.

Step 2, Part 1: Calculate the total projected direct RVUs by multiplying the direct RVUs per visit by the projected volume per visit.

Visit	RVU	×	Projected Volume	=	Total RVUs
PT	18		2,000		36,000
RT	14		4,000		56,000
Nursing	7		9,000		63,000
OT	5		7,000		35,000
					190,000

Step 2, Part 2: Calculate the total projected indirect cost drivers by multiplying the indirect RVUs per visit by the projected volume per visit.

Visit	Cost Driver	×	Projected Volume	=	Total Cost Drivers
PT	6		2,000		12,000
RT	4		4,000		16,000
Nursing	3		9,000		27,000
OT	4		7,000		28,000
					83,000

Step 2, Part 3: Calculate the direct cost per RVU by dividing direct costs by total direct RVUs.

$5,000,000 ÷ 190,000 = $26.32

Step 2, Part 4: Calculate the indirect cost per cost driver by dividing indirect costs by total cost drivers.

$1,000,000 ÷ 83,000 = $12.05

Step 2, Part 5: Calculate the direct cost per procedure by multiplying the direct cost per RVU by the direct RVUs in each procedure.

Visit	Direct Cost/RVU ($)	×	RVU	=	Direct Cost/ Visit ($)
PT	26.32		18		473.76
RT	26.32		14		368.48
Nursing	26.32		7		184.24
OT	26.32		5		131.60

Step 2, Part 6: Calculate the indirect cost per visit by multiplying the indirect cost per cost driver by the indirect cost drivers in each procedure.

Visit	Indirect Cost/ Cost Driver ($)	×	Cost Driver	=	Indirect Cost/Visit ($)
PT	12.05		6		72.30
RT	12.05		4		48.20
Nursing	12.05		3		36.15
OT	12.05		4		48.20

Step 2, Part 7: Calculate the total cost per procedure by adding the direct cost per procedure and the indirect cost per procedure.

Visit	Direct Cost/Visit ($)	+	Indirect Cost/Visit ($)	=	Total Cost/Visit ($)
PT	473.76		72.30		546.06
RT	368.48		48.20		416.68
Nursing	184.24		36.15		220.39
OT	131.60		48.20		179.80

Activity-Based Costing Self-Quiz Problem

Your wellness clinic wants to develop a product cost for the following activities using labor expense and supply expense to assign direct costs and visit minutes as a cost driver to assign indirect costs. Projected total costs for your wellness clinic are $600,000 ($300,000 direct and $300,000 indirect). Assign costs to each activity using the following information:

Activity	Projected Volumes	Labor Expense ($)	Supply Expense ($)	Visit Minutes
Evaluation	4,000	30	10	60
Education	3,000	50	20	40
Exercise	2,000	5	0	90

Breakeven Analysis

Breakeven Analysis Practice Problem

Assume the following for XYZ Medical Supply Vendor:

Fixed cost = $20,000
Selling price = $1,000
Variable cost = $600

What is the breakeven point in units? In dollars? What is the contribution margin in percent? In dollars?

Breakeven Analysis Practice Problem Solution

Breakeven point in units

$$\frac{\text{Total fixed costs}}{\text{Price} - \text{Variable costs}} = \frac{\$20{,}000}{\$1{,}000 - \$600} = 50 \text{ units}$$

Breakeven point in dollars

Breakeven units x Price = 50 x $1,000 = $50,000

Contribution margin in percent

$$\frac{\text{Price} - \text{Variable costs}}{\text{Price}} = \frac{\$1{,}000 - \$600}{\$1{,}000} = .40, \text{ or } 40\%$$

Contribution margin in dollars

Price – Variable cost = $1,000 – $600 = $400

Breakeven Analysis Self-Quiz Problem

Assume the following for your facility:

Fixed cost = $10,000
Selling price = $100
Variable cost = $20

What is the breakeven point in units? In dollars? What is the contribution margin in percent? In dollars?

Breakeven Analysis for Capitated Revenue

Breakeven Analysis for Capitated Revenue Practice Problem

An obstetrician/gynecologist (OB/GYN) practice is considering a capitated agreement with an accountable care organization whereby the practice would provide OB/GYN coverage to a 5,000-member plan and receive $50 per member per month. Variable costs are projected to be $300 per visit, and fixed costs allocated to the agreement are projected to be $600,000 per year. If the practice wants to make a $250,000 profit, what is the breakeven point in visits each year?

Breakeven Analysis for Capitated Revenue Practice Problem Solution

Profit = Revenue – (Fixed costs + [Variable cost per visit x Total visits])

$250,000 = $3,000,000 – ($600,000 + [$300 x Total visits])

Total visits = 7,167 visits (more than 7,167 visits would result in a profit below the desired $250,000)

Breakeven Analysis for Capitated Revenue Self-Quiz Problem

Bend-Me-Straight (BMS) is considering a capitated agreement with a comprehensive care for joint replacement program (CJR) that would provide $200 per patient per year for 100 patients. If BMS wants to make a $2,000 profit on the program and if fixed costs are $5,000, BMS must keep variable costs per patient under what amount in order to make the desired profit?

CHAPTER 9

REIMBURSEMENT

The economic "perfect storm" is coming to healthcare organizations: a rising tide of uninsured and underinsured patients, aging baby boomers that will present greater healthcare demands, a challenging economic climate, shifting eligibility requirements, and cultural obstacles regarding healthcare payments.

DeLuca and Smith (2010)

Learning Objectives

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

- Review the history of setting charges
- Understand the current concerns regarding charges
- Examine the various methods of setting charges
- Examine the future of setting charges
- Describe how cost shifting affects setting charges
- Review methods of reimbursement to providers

Introduction

In response to a report by ABC's *PrimeTime Live* on how charging practices affected rising healthcare costs, Humana, which at the time was a large for-profit chain of hospitals, responded with the following statement (ABC News 1991):

> Hospital charges are inaccurate measurements of the cost of healthcare to patients, since the vast majority of patients and insurers no longer pay them in full.

Essentially, Humana was correct: Few patients or insurers pay what they are charged; most patients and insurers pay charges minus a negotiated discount.[1] Discounting charges and other charging practices have resulted in charges that have little, if any, relationship to costs. How did charges in the healthcare industry arrive at such a nonsensical point? The answer can be found in the history of healthcare charging practices.

Historical Context

Healthcare charging practices have progressed through three distinct eras: consensus-driven charging, financial expediency–driven charging, and competition-driven charging. All of these have had a perverse effect on the relationship between charges and costs.

Prior to Medicare, charging was driven by consensus: Healthcare providers set charges consistent with other providers in the community. Providers sought consistent charges for fear that higher-than-average charges would signal inefficiencies to regulators or drive business to competing providers. Setting charges based on consensus resulted in *cost shifting* (i.e., the practice of shifting costs to some payers to offset losses from other payers). For instance, a new provider would set charges consistent with other providers in the community, even if the new provider had higher per-unit costs than its competitors. To make up the difference, the provider would charge more for procedures for which it had less competition from other providers (Finkler 1982).

With the advent of Medicare and Medicaid, charges became irrelevant for a substantial portion of the provider's business. Medicare—and usually Medicaid—paid hospitals on the basis of reasonable costs, not charges, and paid physicians on the basis of approved charge schedules. Realizing that only patients covered by commercial insurance and patients paying their own way (i.e., charge-based patients) would pay the provider based on charges, most providers set charges based on financial expediency—the financial needs of the provider. The financial needs of the provider obviously include the costs of providing services to charge-based patients, but they also include other factors, such as losses to both Medicare and Medicaid, the cost of bad debt, and the cost of charity care. Problem 5.1 in chapter 5 demonstrates how these costs are identified and shifted to charge-based patients during the budget process. The recovery of shifted costs occurs at the procedural

charge masters
Lists of items for which providers charge.

level using **charge masters**, which are lists of items (e.g., medications, procedures, supplies, rooms) for which providers charge. Providers developed software programs to show each item on the charge master and the item's use by the patient. If the item was frequently used by cost-based payers (i.e., those on Medicare or Medicaid), the charge was set close to allowable cost because allowable cost was the amount the provider would be reimbursed. If the item was not often used by cost-based payers, the charge was increased to maximize the collection from the charge-based patients (i.e., those who had commercial insurance or paid the bills themselves). Because providers, especially hospitals, set charges in this manner every year, it is easy to understand how some charges, over time, were increased thousands of percent over cost (see appendix 9.1).

In the early 1980s, the consumer movement complicated charging based on financial expediency. Billing regulations mandated that Medicare patients receive a copy of their bill from the provider, even in cases where patients had no financial liability. In this way, patients could audit the bills to determine whether they had received the items listed on the bill. Patients often complained about high charges for items they could buy for less in their local drugstore (e.g., aspirin, facial tissues, toothbrushes), even when the charges were covered in part or entirely by Medicare. In response, many providers either reduced the charges for these consumer items or dropped the charges altogether. However, to recover the cost of these items, providers increased the charges for items that patients could not buy in their local drugstore.

Medicare's prospective payment based on diagnosis-related groups (DRGs) did not change the way providers set charges; however, it did provide the impetus for providers to implement sophisticated cost accounting systems so that they could determine their profits or losses per DRG. This development proved to be an important precursor to the next era—competition-driven charging.

During the competition-driven charging era, which began in the mid-1980s and continues today, providers set charges based on what the market will bear, or what the charge-based patients and their insurers will pay. However, two factors have led to lower charges: (1) managed care, which demands that providers discount their charges significantly in exchange for business, and (2) the prospective payment system (PPS), which means providers are no longer guaranteed to cover their costs.[2, 3, 4]

The practice of charging payers different prices for the same products and services—which could be construed to be a violation of the 1890 Sherman Antitrust Act (15 USC 2), the 1914 Clayton Act (15 USC 13), and the 1932 Robinson-Patman Act (15 USC 13–13b, 21a)—may be thought to be essentially the same as discounting charges to different payers for the same products and services. However, third-party payers justified the demands for discounts on the basis of the high volumes of patients they brought to the providers. Because the third parties were a sure and predictable source of revenue, product costing became critical during the competition-driven era.[5] Providers needed sophisticated methods of determining product costs so they could negotiate discounts without discounting below cost, or at least below variable costs.[6]

During the early years of competition-driven charging, providers used *price-driven costing*, the practice of cutting costs to break even with charges, which were dictated by the insurer or determined by competition. However, price-driven costing, even when coupled with aggressive downsizing or reengineering strategies,[7] ultimately arrives at a point at which additional cost cutting may affect quality.[8] Furthermore, managing costs effectively is only half the strategy for economic survival. The other half is managing revenue effectively by making up for revenue lost as a result of discounting and competition.

Most healthcare organizations have pursued relatively conservative revenue management strategies that have included charging analysis, charge master enrichment, and charge capture assessment (Murray et al. 1994). **Charging analysis** ensures that the charge set for a specific item results in maximum reimbursement related to the payer classification. For example, elective plastic surgery, which is normally paid for by private insurance, is marked up considerably to maximize profits. On the other hand, hip replacement surgery, which is usually Medicare reimbursed, is not marked up because Medicare pays a predetermined amount, thus limiting the reimbursement. **Charge master enrichment** ensures that healthcare organizations charge only for items that third-party payers recognize as legitimate charges. **Charge capture assessment** ensures that healthcare organizations do not lose charges within the organization. Charge capture assessment compares what patients receive, as documented by medical records, to what patients are billed, as documented in patient bills.

charging analysis
An examination of charges to make sure maximum reimbursement is being received.

charge master enrichment
An analysis of charges to make sure every item is recognized by third-party payers as a legitimate charge.

charge capture assessment
A comparison of medical records to patient invoices to make sure the organization is not missing billable items.

Cross (1997) believed that the healthcare industry was ready for more aggressive revenue management strategies, including charging strategies that have been commonplace in other service industries for a long time, and to a certain extent that has happened. For instance, airlines offer significant discounts to travelers who are willing to travel during off-peak periods and make their reservations in advance. In this way, the airlines are better off using their fixed costs (i.e., airplanes) while ensuring that their variable costs are still met by the discounted charges. The discounted charges have created a new market without hurting the old market. In most cases, business travelers who fly during peak periods are willing to pay the higher charges because their company is reimbursing the cost; vacation travelers who fly during off-peak periods want the lower charges because they pay the cost themselves. Some healthcare organizations enhance their market share by discounting to fill excess capacity, especially during the weekends, or create new markets by discounting procedures that patients are likely to pay out of pocket.

Healthcare Pricing Comes Under Public Scrutiny

While most patients do not pay charges because their insurance company has negotiated a discount, patients without insurance have often been asked by healthcare organizations to pay the entire bill. Whether the organizations actually expect the uninsured patient to pay the entire bill is unclear (many of these bills ultimately become bad debt), but there is no doubt that the healthcare industry has been widely criticized for these charges, especially by increasing numbers of uninsured middle-class individuals and families with political and

business clout. Why haven't hospitals offered the uninsured the same discounts offered to insurance companies? Historically, hospitals have not offered discounts to the uninsured because of concerns about Medicare payment and compliance. For example, if a hospital offered a big discount to everybody except Medicare, the hospital could run afoul of Medicare rules regarding charges that are "substantially in excess" of "usual charges" (Barry and Keough 2005). However, this situation may change. As noted in chapter 4, the Affordable Care Act (ACA) requires nonprofit hospitals to limit charges to patients eligible for assistance to no more than the lowest amount billed to insured patients.

In addition to amending policies to allow additional write-offs to charity care, hospitals also revised their pricing policies and prices. Amending prices is difficult because of the number of managed care agreements that have negotiated discounts on the previous price. HFMA introduced the following strategy for rational pricing in 2005 (Clarke 2006):

1. Using a cost accounting system, identify and measure the costs associated with the product or service to be priced.
2. Gather data on prices for similar products and services offered by competitors.
3. Address contractual considerations to ensure that the new price will result in the same or improved net revenue for the product or service.
4. Prepare for public scrutiny. Under consumer-driven healthcare, consumers are more financially responsible for their healthcare. As a result, they demand prices and information on how the prices were set. What most patients need is a detailed explanation of benefits that identifies what their out-of-pocket expense will be.

MINI-CASE STUDY

Suppose that you are the business office manager of a 26-bed rural hospital. The chair of your governing body, who has served in that role for more than 30 years, is discussing with you possible ways to improve the hospital's financial position. During the discussion, he asks you why you cannot increase the charges to Blue Cross to cover the losses to Medicare, Medicaid, and charity care. He goes on to say that this strategy was used in the 1970s and 1980s, and he does not understand why it will not work in 2017. What do you tell him?

Many state legislatures have passed pricing transparency laws. New York passed such a law in 2007. The New York law, dubbed Manny's Law after a 24-year-old patient who died as a result of surgery postponed because he did not have insurance, requires New York hospitals to establish financial-aid policies for low-income and uninsured patients. The law prohibits hospitals from charging patients earning less than 300 percent of the federal poverty level more than private or government insurers pay. California passed a similar law in late 2006. California's Hospital Fair Pricing Law prohibits hospitals from charging self-pay patients who earn less than 350 percent of the federal poverty level more than what Medicare

and other government-sponsored programs pay for care (Benko 2006). The National Conference of State Legislatures disclosed a summary of signed laws and proposed state legislation relating to transparency and disclosure of health and hospital charges. Included are details concerning 31 state measures affecting disclosure, transparency, and reporting and/or publication of healthcare provider and hospital charges and fees (NCSL 2009).

The ACA includes requirements for hospitals to publicize an annual updated list of standard charges, including Medicare severity diagnosis-related groups (MS-DRGs; see AHA 2010). The laws also require tax-exempt hospitals to limit their charges for emergency or other medically necessary care to patients eligible under the facility's financial assistance policy (charity care policy) to not more than the amounts billed to insured patients who receive the same care. According to the regulations (IRS 2012, 5), the financial assistance policy must include

- eligibility criteria for financial assistance and whether such assistance includes free or discounted care;
- the basis for determining amounts charged to patients;
- the method for applying for financial assistance;
- in the case of an organization that does not have a separate billing and collections policy, the actions the hospital organization may take in the event of nonpayment; and
- measures to widely publicize the financial assistance policy within the community served by the hospital organization.

Subsequent to the 2012 Supreme Court decision on the ACA, states have been encouraged to expand eligibility criteria for Medicaid from 100 percent to 138 percent of the federal poverty level. To encourage states to expand Medicaid, the federal government was scheduled to pay all of the expansion costs for the first three years and 90 percent for the next seven years. States that have resisted the expansion have expressed concern about its effects on the federal debt and the federal government's ability to keep its funding promise for ten years. Hospital associations have generally supported the expansion, even though Medicaid seldom pays the full cost of providing care to its beneficiaries. These associations projected that increases in Medicaid volumes, even at a reimbursement less than cost, would be more than offset by the decline in charity care that would result from the expansion of Medicaid eligibility. This projection is especially true for safety-net hospitals that care for higher-than-average Medicaid loads (Betbeze 2013).

MINI-CASE STUDY

Imagine that you are the CEO of a nonprofit community hospital located in a small city. An influential patient is in your office with a hospital bill that she received recently for a one-day stay in your hospital (most of the time was spent in the emergency room). The bill, excluding physician charges, was $17,000. The patient thinks this is outrageous, and she wants to know what the care actually cost the hospital. What do you tell her?

Methods of Setting Charges

Many influences affect the charge-setting decision. Thus, the initial charge, before comparisons to other facilities and before discounts, should reflect the healthcare organization's true cost of providing the product or service.[9] Three methods of setting charges based on costs—the RVU method, the hourly rate method, and the surcharge method—are well established in the literature (Suver, Neumann, and Boles 1995; Berman, Kukla, and Weeks 1994). These three methods are described in the following sections.

RVU Method

RVU schedule
A list of charges, such as procedures performed by the laboratory or the radiology department, based on relative value units (RVUs).

The first method of setting charges is called the *relative value unit* (RVU) method (see chapter 8 for an explanation of how RVUs are created). The RVU method is used in departments that have an established **RVU schedule**, such as laboratory and radiology. RVU schedules are recalculated every three to five years. Costs per RVU and corresponding charges per procedure are calculated more often, usually every year.[10] After full costs per procedure have been established (see problems 8.2 and 8.3 in chapter 8), charges can be set to break even (i.e., charge the full cost only) or to realize a gain (i.e., charge the full cost plus a percentage) (see problem 9.1).

PROBLEM 9.1
RVU Method of Setting Charges

Using job-order costing and activity-based costing from problems 8.2 and 8.3, calculate the charge necessary to realize a 5 percent gain at the diagnostic center.

Using Job-Order Costing:
(This example is a continuation of problem 8.2 in chapter 8, where earlier steps are shown):

Step 2, Part 3 (repeated here from problem 8.2):
Calculate the cost per procedure by multiplying the cost per RVU by the RVUs in each procedure.

Procedure	Cost/RVU	×	RVU	=	Cost/ Procedure
A	$100		18		$1,800
B	100		14		1,400
C	100		7		700
D	100		5		500

PROBLEM 9.1
RVU Method of Setting Charges *(continued)*

Step 2, Part 4:
Calculate the charge necessary to realize a 5 percent gain at the diagnostic center.

Procedure	Cost/ Procedure	+	5 Percent	=	Charge
A	$1,800		90		$1,890
B	1,400		70		1,470
C	700		35		735
D	500		25		525

Using Activity-Based Costing:
(This example is a continuation of problem 8.3 in chapter 8):

Step 2, Part 7 (repeated here from problem 8.3):
Calculate the total cost per procedure by adding the direct cost per procedure and the indirect cost per procedure.

Procedure	Direct Cost/ Procedure	+	Indirect Cost/ Procedure	=	Total Cost/ Procedure
A	$1,080		$540.54		$1,620.54
B	840		540.54		1,380.54
C	420		360.36		780.36
D	300		180.18		480.18

Step 2, Part 8:
Calculate the charge necessary to realize a 5 percent gain at the diagnostic center.

Procedure	Cost/ Procedure	+	5 Percent	=	New Charge
A	$1,620.54		81.03		$1,701.57
B	1,380.54		69.03		1,449.57
C	780.36		39.02		819.38
D	480.18		24.01		504.19

PROBLEM 9.2
Hourly Rate Method of Setting Charges

Using the hourly rate method of setting charges, calculate the charge per modality necessary to recover total costs at ABC Physical Therapy Clinic given that:

Total projected cost per year of physical therapy = $800,000

Total projected hours of use per year = 20,000 hours

Modality = 15 minutes

Charge per modality is calculated as total projected cost divided by total projected modality in hours (in this case, hours multiplied by 4, the modality per hour), therefore:

Charge per modality = $800,000 ÷ 80,000 = $10 per modality

Hourly Rate Method

The second method of setting charges is called the hourly rate method; it is used in departments that charge per hour (or per modality or segment of time) for their services. Respiratory therapy, physical therapy, and surgery are three examples of departments that use this method for setting charges. Problem 9.2 demonstrates the calculations involved in using the hourly rate method.

Surcharge Method

The third method of setting charges is the surcharge method. It is used in departments that know the cost of their products and add a surcharge to cover overhead. Pharmacy and central supply are two examples of departments that use the surcharge method for setting charges. This method is demonstrated in problem 9.3.

Strategic Charge Setting

In 1987, Eastaugh predicted that increasing competitive pressures would drive healthcare organizations into the same strategic pricing options that other service industries were using at the time. Referring to Porter's 1980 book, *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, Eastaugh identified the competitive pressures as they relate to the healthcare industry:

PROBLEM 9.3
Surcharge Method of Setting Charges

Using the surcharge method of setting charges, calculate the charge necessary to cover total costs for 100,000 admission kits at XYZ Women's Hospital given that:

Overhead allocated to the admission kits project = $50,000

Total projected cost of admission kits = $100,000

Step 1: Overhead + Cost of kits = Total cost

$50,000 + $100,000 = $150,000

Step 2: Total cost ÷ Number of kits = Charge per kit to break even

$150,000 ÷ 100,000 = $1.50

- Rivalry among existing competitors
- Potential new entrants to the market
- Bargaining power of buyers (e.g., Medicare, Medicaid, managed care)
- Bargaining power of suppliers (e.g., physicians)
- Rivalry from substitute products (e.g., holistic medicine, natural cures, self-care)

These pressures ultimately forced healthcare organizations to review all of the following strategic pricing options:

- *Predatory pricing*: The practice of pricing products and services low in the short term to gain market share.
- *Slash pricing*: The practice of pricing products and services low in the long term by making fundamental changes in the product or service.
- *Follower pricing*: The practice of pricing products and services relative to the market leader.

- *Phaseout pricing*: The practice of pricing products or services high to eliminate poor quality or underused products and services.
- *Preemptive pricing*: The practice of pricing products and services low to discourage new entrants in the market.
- *Skim pricing*: The practice of pricing products and services high because of high quality or low availability in the market.
- *Segment pricing*: The practice of pricing products and services high relative to their "snob appeal," such as high charges for birthing centers.
- *Loss-leader pricing*: The practice of pricing products and services low to attract customers to complementary products or services that are priced high.

The ongoing changes occurring in the healthcare environment will require close attention to rate setting and pricing strategies. Sound pricing decisions remain critical to the successful operation of healthcare organizations.

Methods of Reimbursement to Providers

Common methods of reimbursement to providers include the following:

- *Charges*: Retrospective reimbursement based on charges submitted by the provider to the patient or to the insurer on behalf of the patient.
- *Charges minus a discount*: Retrospective reimbursement based on charges minus a discount negotiated between the provider and the insurer (the usual method of reimbursement for preferred provider organizations).
- *Cost plus*: Retrospective reimbursement based on a cost report submitted by the provider to the insurer. The insurer reimburses the provider for reasonable cost plus a percentage for growth.
- *Cost*: Retrospective reimbursement based on a cost report submitted by the provider to the insurer (the predominant method of Medicare and Medicaid reimbursement from 1966 to 1982).
- *Per diem*: Prospective reimbursement based on a per-day rate established by the insurance company (the predominant method of reimbursement to nursing homes).
- *Per diagnosis*: Prospective reimbursement based on a per-diagnosis rate established by the insurer (the predominant method of Medicare and Medicaid reimbursement from 1983 to the present).

- *Per head, or capitation*: Prospective reimbursement based on a per-head rate negotiated between the provider and the insurer. The provider receives the capitation each month regardless of whether the patient is sick.

Most providers agree that reimbursement based on charges is the most favored method, while reimbursement based on capitation is the least favored method of reimbursement. Under charges, charges minus a discount, cost plus, and cost, the strategy for successful providers is containing costs. Under per diem, per diagnosis, and capitation, the strategy for successful providers is not only containing cost but also controlling utilization. Capitation has a successful history of containing both costs and utilization in health maintenance organizations, and many observers believe that capitation can reduce healthcare costs in integrated delivery systems and accountable care organizations.

Reimbursement Under the ACA of 2010

The Affordable Care Act ushered in new initiatives in reimbursement designed to incentivize institutional providers for quality of care to Medicare beneficiaries. Called **value-based programs**, they are part of a larger government effort to pay providers for quality rather than quantity by providing better care for individuals, better health for populations, and lower costs. The first value-based programs initiated by the Centers for Medicare & Medicaid Services (CMS) include the following (CMS 2016b):

value-based programs Programs that reward healthcare providers with incentive payments for the quality of care they deliver to Medicare beneficiaries.

- Hospital Value-Based Purchasing (HVBP) Program, initiated in 2012, rewards acute care hospitals for the quality of care delivered to Medicare beneficiaries.
- Hospital Readmission Reduction (HRR) Program, initiated in 2012, provides financial incentives to hospitals for reducing unnecessary hospital readmissions for Medicare beneficiaries.
- End-Stage Renal Disease (ESRD) Quality Initiative Program, initiated in 2012, rewards outpatient dialysis facilities for the quality of care delivered to Medicare beneficiaries.
- Hospital-Acquired Condition (HAC) Reduction Program, initiated in 2014, rewards hospitals that improve patient safety by reducing their number of hospital -acquired conditions, such as pressure sores and hip fractures after surgery.
- Value Modifier (VM) or Physician Value-Based Modifier (PVBM) Program, initiated in 2015, measures the quality and cost of care provided to Medicare beneficiaries under the Medicare Physician Fee Schedule (PFS) and rewards physicians based on quality performance and lower costs.

Reimbursement Under the PAMA of 2014

The Protecting Access to Medicare Act of 2014 (PAMA) initiated one new value-based program. The Skilled Nursing Facility Value-Based Program (SNFVBP), to be initiated in 2019, rewards skilled nursing facilities for the quality of care delivered to Medicare beneficiaries (CMS 2016b).

Reimbursement Under MACRA of 2015

The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) continues the value-based programs established by ACA and PAMA by implementing the Quality Payment Program. Certain clinicians (physicians, physician assistants, nurse practitioners, clinical nurse specialists, and certified registered nurse anesthetists) who bill Medicare more than $30,000 a year and provide care to 100 or more Medicare patients per year, or who currently participate in an Advanced Alternative Payment Model, are required to participate in the Quality Payment Program starting in 2017. Additional clinicians may be required to participate in the Quality Payment Program in 2021. Clinicians can choose one of two tracks in the Quality Payment Program (CMS 2016b):

- **Merit Incentive Payment System (MIPS)**, to be initiated by certain clinicians no later than 2019, provides a performance-based payment adjustment based on quality, resource use, **advancing care information** (which replaces meaningful use criteria), and cost. Most clinicians will start in MIPS.
- **Alternative Payment Models (APMs)** are fundamental changes to reimbursement and generally include moving providers away from low-risk fee-for-service payment to risk-assuming (both cost risk and utilization risk) methods of payment. If clinicians participate in an Advanced Alternative Payment Model, they will be exempt from participation in MIPS. Not only does an Advanced Alternative Payment Model (Advanced APM) move the clinician away from low-risk fee-for-service to risk-assuming methods of payment, but the Advanced APM also must be CMS certified and must include certified electronic health record technology, report quality measures similar to MIPS, and bear financial risk.

Merit Incentive Payment System (MIPS)
A government-mandated program that provides a Medicare performance-based payment adjustment based on quality, resource use, advancing care information, and cost to physicians and certain other clinicians, to be initiated no later than 2019.

advancing care information
Programs that reward healthcare providers with incentive payments for the quality of care they deliver to Medicare beneficiaries.

Alternative Payment Models (APMs)
Fundamental changes to reimbursement that generally include moving providers away from low-risk fee-for-service payment to risk-assuming methods of payment.

Chapter Key Points

- A healthcare manager must understand the relationship between costs, studied in chapter 8, and charges, discussed in this chapter, to make sound financial decisions.

- Knowing the history of setting charges in healthcare helps managers understand current practices.
- Healthcare pricing has come under public scrutiny. Effective managers need to be able to articulate why this scrutiny has come about and what can be done to restore the public's faith.
- Managers should know how healthcare prices are established both academically and in practice.
- Pricing in other industries may have relevance to healthcare in the future.
- Capitation and other methods of payment that transfer risk to the providers will gain in popularity among payers of healthcare services.
- Value-based programs will continue to reward providers for quality of care delivered to Medicare beneficiaries.

Discussion Questions

1. Is there a relationship between cost and price for any given product or service in healthcare? Should there be?
2. Many observers would concede that healthcare prices are currently irrational. How did prices get that way?
3. The public and those that represent the public (legislatures, insurance companies, consumer groups) have concluded that healthcare prices are outrageous. What can the healthcare industry do to restore public confidence?
4. Healthcare prices are not, and perhaps should not be, set like prices in other industries. How are healthcare prices set as compared with how automobile prices are set?
5. From the provider's perspective, how would you evaluate the common methods of reimbursement?
6. From the provider's perspective, what are the implications of value-based programs?

Notes

1. *Charge*, *price*, and *rate* are often used synonymously.
2. Eastaugh (1987) compares the healthcare industry to the airline industry in explaining the competitive pressures brought about by the PPS. In the airline industry, routes were deregulated, resulting in airlines competing for the more

favorable routes. The competition resulted in inefficient airlines going out of business and efficient airlines gaining market share and reducing prices. In the healthcare industry, the guarantee of reimbursed cost to hospitals ended in 1983 and to physicians in 1992; as a result, inefficient hospitals and group practices went out of business, and the remaining hospitals and group practices gained market share.

3. Some healthcare organizations and physicians have refused to discount their charges. Reid Hospital in Richmond, Indiana, refused to discount, citing the hospital's pricing policy, which states that "prices should be fair and reflective of the resources used to produce the services performed and uniformly applied" (Pallarito 1997a). Under this policy, which has since been changed, the hospital considered it unfair to discount to one payer and shift the costs to another payer.
4. The Center for Healthcare Industry Performance Studies reported that wage-adjusted and case mix–adjusted hospital prices increased only 0.6 percent during 1995, down from 2.4 percent the previous year (Pallarito 1997b).
5. Courts have consistently found that such practices did not lessen competition and therefore were not violations of antitrust law.
6. If fixed costs are covered, effective charges can be negotiated down to variable costs without realizing a relevant loss.
7. *Downsizing*—that is, reducing resources to meet reduced demand—was an appropriate strategy for healthcare organizations that were losing business or had too many resources. *Reengineering*—that is, "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance, such as cost, quality, service, and speed" (Hammer and Champy 2001)—was an appropriate strategy for healthcare organizations that were experiencing the same or greater demand but at greatly reduced effective charges.
8. *Anti–managed care laws* (laws designed to control the growth and decision making of managed care organizations), *length-of-stay laws* (those that mandate minimum lengths of stay for certain diagnoses such as obstetric delivery), and *any-willing-provider laws* (patient protection laws that allow patients to receive care from providers outside a network) are examples of patient reactions to cost-savings endeavors. Opponents of these laws are quick to point out that such laws would increase costs and, as a result, charges and premiums to patients.
9. *True cost* is a widely disputed term based largely on the Medicare interpretation of cost during the cost-based reimbursement days. Medicare "disallowed" portions of some costs because the costs were higher than the community standard and "unallowed" some costs in their entirety because the program did not recognize the

nature of the cost (e.g., bad debt in the early days and shift differentials in the latter days of cost-based reimbursement). True cost is still important under prospective payment because the payment formulas for DRGs were determined on the basis of Medicare's interpretation of true cost. True costs could vary considerably between facilities on the basis of volume because high-volume healthcare organizations have a lower fixed cost per unit than low-volume healthcare organizations.

10. For the purpose of setting charges, the use of the same RVU schedule for several facilities or the adoption of a national RVU schedule could constitute price fixing.

Appendix 9.1
Cost-Shift Pricing

This problem demonstrates how cost-shift pricing, also referred to as financial expediency–driven pricing, works. For the sake of simplicity, this example uses only three procedures and only two types of reimbursement. The projected volume for each procedure is ten. Procedure A is reimbursed at allowable cost ($100) for all ten procedures. Five of Procedure B's procedures are reimbursed at allowable cost, and the other five are reimbursed at the price charged. Procedure C is reimbursed at the price charged for all ten procedures.

Procedure	Percentage Cost-Based	Projected Volume	Cost/ Procedure	Price/ Procedure	Total Collections
A	100	10	$100	$105	10 × $100 = $1,000
B	50	10	$100	$105	5 × $100 + 5 × $105 = $1,025
C	0	10	$100	$105	10 × $105 = $1,050
Average price					$105
Total true cost					$3,000
Total collections					$3,075

To generate collections that would cover costs without raising the average price, the healthcare organization could use cost-shift pricing. Doing so would involve lowering the price of the cost-based Procedure A to $100 (without affecting the amount collected), lowering the price of Procedure B to $100 (with a minimal effect on collections), and raising the price of Procedure C to $115 (with a moderate effect on collections). In so doing, the average markup for all three procedures is 0 percent, while the effect on collections can be more—in this case, 2.4 percent.

Procedure	Percentage Cost-Based	Projected Volume	Cost/ Procedure	Price/ Procedure	Total Collections
A	100	10	$100	$100	10 × $100 = $1,000
B	50	10	$100	$100	5 × $100 + 5 × $105 = $1,000
C	0	10	$100	$115	10 × $115 = $1,150
Average price					$105
Total true cost					$3,000
Total collections					$3,150

RVU Rate Setting

RVU Rate-Setting Practice Problem

Referring to the job-order costing and activity-based costing practice problems from pages 183 and 187, respectively, calculate the charges necessary to realize a 10 percent gain at the XYZ Reference Lab using job-order costing and a 10 percent gain at the XYZ Home Health Care Corporation using activity-based costing.

RVU Rate-Setting Practice Problem Solution

Using Job Order Costing (continued from the job-order costing practice problem solution on pages 184–85)

Step 2, Part 3: (repeated here from page 185): Calculate the cost per procedure by multiplying the cost per RVU by RVUs per procedure.

Procedure	Cost/RVU ($)	×	RVUs/ Procedure	=	Cost/Procedure ($)
A	24.86		1.0		24.86
B	24.86		0.5		12.43
C	24.86		0.5		12.43
D	24.86		1.5		37.29
E	24.86		1.0		24.86
F	24.86		1.0		24.86
G	24.86		1.5		37.29
H	24.86		1.5		37.29
I	24.86		0.5		12.43
J	24.86		1.0		24.86

Step 2, Part 4: Calculate the charge necessary to realize a 10 percent gain at the XYZ Reference Lab.

Procedure	Cost/RVU ($)	×	10%	=	Change/Procedure ($)
A	24.86		2.49		27.35
B	12.43		1.24		13.67
C	12.43		1.24		13.67
D	37.29		3.73		41.02
E	24.86		2.49		27.35
F	24.86		2.49		27.35
G	37.29		3.73		41.02
H	37.29		3.73		41.02
I	12.43		1.24		13.67
J	24.86		2.49		27.35

Using Activity-Based Costing (continued from the activity-based costing practice problem solution on pages 188–90)

Step 2, Part 7: (first part repeated here from page 190):

Calculate the total cost per procedure by adding the direct cost per procedure and the indirect cost per procedure.

Visit	Direct Cost/Visit ($)	+	Indirect Cost/Visit ($)	=	Total Cost/Visit ($)
PT	473.76		72.30		546.06
RT	368.48		48.20		416.68
Nursing	184.24		36.15		220.39
OT	131.60		48.20		179.80

Visit	Cost/Visit ($)	+	10%	=	Charge/Visit ($)
PT	546.06		54.61		600.67
RT	416.68		41.67		458.35
Nursing	220.39		22.04		242.43
OT	179.80		17.98		197.78

RVU Rate-Setting Self-Quiz Problem

Referring to the job-order costing and activity-based costing self-quiz problems on pages 186 and 191, respectively, calculate the charges necessary to realize a 10 percent gain at the lab using job-order costing and a 7 percent gain at the wellness clinic using activity-based costing.

Hourly Rate Setting

Hourly Rate-Setting Practice Problem

Using the hourly rate method of setting rates, calculate the operating room rate to recover the costs at the XYZ Ambulatory Surgery Center:

Total projected cost of operating room = $130,000
Total projected hours of use = 2,000 hours

Hourly Rate-Setting Practice Problem Solution

Total projected cost ÷ Total projected hours of use = Hourly rate

$130,000 ÷ 2,000 = $65

Hourly Rate-Setting Self-Quiz Problem

Using the hourly rate method of setting rates, calculate the oxygen therapy rate per shift to break even at your nursing home:

Total projected cost of oxygen = $600,000
Total projected hours of use = 100,000 hours
Shift = 8 hours

Surcharge Rate Setting

Surcharge Rate-Setting Practice Problem

Using the surcharge method of setting rates, calculate the average prescription rate for the XYZ Pharmacy to cover its costs given the following data:

Total projected cost of the pharmacy = $60,000
Projected cost of drugs billed to patient = $45,000
Number of prescriptions = 3,750

Surcharge Rate-Setting Practice Problem Solution

Step 1: Overhead + Cost of drugs = Total cost

$15,000 + $45,000 = $60,000

Step 2: Total Cost ÷ Number of prescriptions = Average prescription rate

$60,000 ÷ 3,750 = $16

Surcharge Rate-Setting Self-Quiz Problem

Using the surcharge method of setting rates, calculate the average rate to break even in your central supply given the following data:

Total projected cost of central supply = $900,000
Total projected cost of billable supplies = $750,000
Average cost per billable supply = $7

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PART III

WORKING CAPITAL

CHAPTER 10

MANAGING WORKING CAPITAL

Our goal is to maintain financial viability and keep the hospital from any financial risk, even as our focus remains on expansion and growth.

Chrissy Yamada, chief financial officer, EverGreen Health

Learning Objectives

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

- Define and understand the importance of working capital
- Identify the sources of working capital
- Explain the importance of managing cash flow
- Discuss the ratios used to evaluate capital and cash performance

Note: Terms shown in **boldface** in this chapter are defined in the margins and appear in the glossary. Terms in ***boldface italic*** also appear in the glossary.

Introduction

Every manager in the healthcare organization has either a direct or an indirect effect on working capital. Therefore, managers need to have an understanding of working capital, the sources of working capital, and the financing of working capital to make good business decisions.

Definition of *Working Capital*

working capital
An organization's current assets; the assets available to run the organization in the short term.

Working capital, properly defined, is the sum of a healthcare organization's investment in current assets; it can be simply defined as *total current assets*. Current assets are cash and other short-term assets that the organization expects to convert to cash within one year. Following is a list of typical current assets:

- ***Cash***: Money on hand and money to which the organization has immediate access that is deposited in a bank. Cash equivalents are reported as cash and include investments with a maturity of three months or less (e.g., treasury bills, money market funds).
- ***Short-term securities***: Investments with a maturity date of less than one year.
- ***Accounts receivable***: Amounts due to the organization from patients and insurers for services that the organization has already provided.[1]
- ***Inventories***: The value of supplies on hand that are properly presented as a current asset on the balance sheet. When inventories are used, they are presented as a supply expense on the statement of operations.
- ***Prepaid expenses***: Expenditures made by the hospital for goods and services not yet consumed or used in hospital operations (sometimes referred to as *deferred expenses*), such as rent and insurance premiums.

liquidity
A characteristic of an investment that pertains to how quickly it can be converted to cash.

Current assets are often measured in terms of their **liquidity**, which is their ability to be consumed or converted to cash. Cash is considered the most liquid current asset, followed by cash equivalents, short-term investments, and accounts receivable. Prepaid expense is considered the least liquid current asset; inventories are only slightly more liquid than prepaid expense.

The term *working capital* is often used synonymously with the term *net working capital*, so it is important to distinguish the difference.[2] Although working capital is the organization's total current assets, net working capital is the difference between current assets and current liabilities. Net working capital is an important measure of an organization's ability to meet its current liabilities, or its short-term debt-paying capacity.

Current liabilities include accrued wages payable and accounts payable. *Accrued wages payable* is money owed but not yet paid to employees for work already performed for the

organization. *Accounts payable* is money owed but not yet paid to vendors for services and products already received by the organization.

Importance of Working Capital

Working capital is important because it is the catalyst that makes fixed or long-term assets productive. For instance, although fixed and long-term assets consist of buildings and equipment, the buildings and equipment cannot be productive or produce revenue unless working capital in the form of employees and inventory is introduced. The costs of the employees and inventory, as well as the costs of the building and equipment in the form of depreciation, are reflected in the bill to the patient or the patient's insurance company. Until the bill is paid, the amount is carried as an account receivable. When the bill is paid, part of the money is used to start the process again.

Healthcare organizations that possess sufficient amounts of working capital also enjoy other benefits. Sufficient amounts of working capital enable organizations to pay their employees and vendors on time and thus help ensure good employee and vendor relations. Sufficient amounts of working capital also demonstrate to lenders that organizations have sufficient resources to repay loans and are therefore creditworthy.

Sources of Working Capital

Sources of working capital include money invested in the organization (equity), net income, borrowed money (which is an increase in noncurrent liabilities), and the sale of a noncurrent asset, such as a building or piece of equipment. The sources and methods used to finance working capital, as well as the quantity of working capital to be maintained, make up what is called the **working capital policy**.

working capital policy Sources and methods used to finance working capital, as well as the quantity of working capital to be maintained.

Healthcare organizations obtain their *permanent working capital* (the minimum amount of working capital that is always on hand) from the owners to cover start-up costs. In the case of government organizations, the initial working capital comes from the government entity through taxes or bonds. In the case of not-for-profit organizations, the initial working capital comes from the community or religious order through tax-exempt bonds. In some cases, working capital may come from philanthropy. In the case of for-profit organizations, the initial working capital comes from the sale of stock.

For-profit organizations not only have greater access to working capital through stock markets but also have greater flexibility in using the proceeds of stock transactions. For-profit organizations can choose the timing of the sale of stock and the volume of stock necessary to bring in the desired amount of working capital. And they have fewer restrictions on how they can use the proceeds of the sale of stock. The uses of capital in governmental and not-for-profit organizations are often restricted by the philanthropists who provided it or by bond issuers. Because healthcare organizations do not generate sufficient working

equity
Ownership claim against total assets; the difference between assets and liabilities in a for-profit organization.

capital from patient revenues for months or even years, depending on the size of the organization and market conditions, the owners must be willing to support start-up working capital needs for an extended period.

At some point in a healthcare organization's life cycle, the organization's collected revenues will surpass its expenses. After this point, future working capital needs should be funded by net income. In addition to working capital, other demands on net income will arise. For-profit organizations, for instance, will use portions of net income to pay stockholders' dividends and retain part of the income for future expansion. Not-for-profit organizations will use portions of net income to fund reserves and expansion.

debt
Money that is borrowed by an organization.

trade credit
Credit extended to an organization by vendors.

Sometimes healthcare organizations have an unexpected increase in business that depletes their working capital reserves. When that happens, they need *temporary working capital*, which comes from **equity**, **debt**, or **trade credit**. For instance, the category of accrued wages payable is typically due every 14 days and accounts payable is typically due every 30 days, but accounts receivable may take as long as 60 days to collect. If the organization does not have enough cash to meet its obligations while waiting for the accounts receivable to be paid, it may need an infusion of cash from new investment (equity) or the bank or other lender (debt); or it may need to ask its creditors to extend its payment deadlines or enlarge its credit line (trade credit). Exhibit 10.1 reviews the working capital cycle.

Debt should not be used for permanent working capital needs, nor should it be used for temporary working capital needs unless there is reasonable assurance that the debt can be repaid. For instance, in situations where healthcare organizations lack the working capital necessary to pay employees and vendors because of a decline in business, increasing debt may be a mistake unless alternative sources of funds exist from which the debt can be repaid (see exhibit 10.2).

Financing Temporary Working Capital Needs

Assuming that the organization does not have sufficient cash available to meet temporary working capital needs, two sources of short-term financing are available: debt and trade credit.

Exhibit 10.1
Working Capital Cycle

	Day 1	Day 3	Day 14	Day 30	Day 63
Accounts Receivable	Patient seen	Patient billed			Patient pays
Accrued Wages	Employees work		Employees paid		
Accounts Payable	Supplies used			Vendors paid	

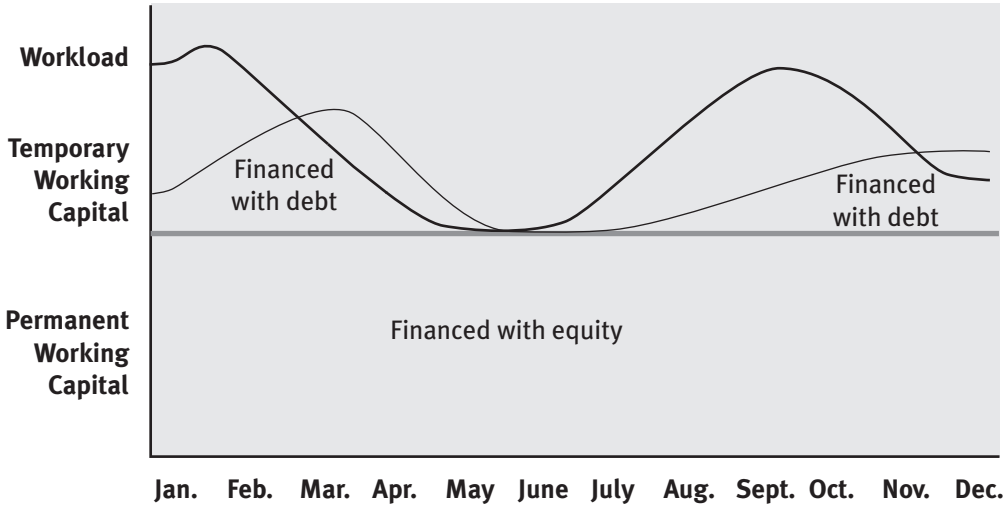

EXHIBIT 10.2
Sources of Working Capital

In the case of using short-term debt to finance temporary working capital needs, healthcare organizations with good credit histories have a line of credit with a commercial bank. At the beginning of the year, the commercial bank will notify the healthcare organization how much credit the organization has available for the coming year. During the year, the organization can borrow against that line of credit. Because banks extend lines of credit to organizations with good credit histories, the interest rate charged to such organizations is generally the prime rate, or the lowest possible rate charged to creditworthy organizations. The interest on short-term loans can be expressed with the following equation (see problem 10.1):

$$\text{Interest} = \text{Amount borrowed} \times \text{Annual interest rate} \times \text{Fraction of the year}$$

PROBLEM 10.1
Interest on Short-Term Loans

ABC Nursing Home borrows $100,000 for six months at a 3 percent annual interest rate. How much interest will ABC Nursing Home pay for the loan?

(Interest = $100,000 × 0.03 × $\frac{6}{12}$)

Interest = $1,500

If the healthcare organization does not have a good credit history, the bank might lend the organization money at the prime rate plus a percentage to account for the risk that the organization might not pay on time, or might not pay at all. In such cases, the bank might also want to secure the loan with collateral. The organization can use marketable securities, land, buildings, equipment, or inventory as collateral. For healthcare organizations, often accounts receivable are used as collateral. In such cases, the organization pledges the accounts receivable to the bank; the organization maintains control of the receivables unless the organization fails to repay the loan.

When an organization uses trade credit to finance temporary working capital needs, it is in effect borrowing money from a vendor by delaying payment to the vendor for goods or services already received by the organization. In using trade credit, the cost involved is either the cost of forgoing an incentive to pay on time or the cost of a late fee. Many vendors offer an incentive, or discount, if the organization pays on time. The term *2–10, net 30* means that the organization receives a 2 percent discount off the net payment normally due within 30 days if it pays within ten days. Applying 2–10, net 30 to a $100 purchase means that if the organization pays within ten days, the vendor will discount the purchase to $98. If the organization pays during days 11 to 30, the organization must pay $100. Thus, the organization is effectively paying $2 in interest to delay paying the bill for a couple of weeks. Problem 10.2 (adapted from Berman, Kukla, and Weeks 1994) shows how to calculate the effective annual interest rate for this situation.

PROBLEM 10.2
Effective Annual Interest Rates on Trade Credit

ABC Clinic makes a $100 purchase with a 2 percent in ten net 30 provision. What is the effective annual interest rate if the clinic pays on day 11? On day 30? Think of the problem this way: How much *annual* interest is the clinic paying to keep its money *one extra day* (in the case of paying on day 11), or 20 extra days (in the case of paying on day 30)? In either case, the organization is paying a penalty of $2 (because it has to pay the full $100 instead of $98, which it would have paid had it paid within ten days). If it pays on day 11, it is paying that penalty to keep its money just one extra day, so the equivalent *annual* interest would be $2 times 365, which, as you can imagine, equates to a giant interest rate. The story is similar if the organization pays on day 30; it is paying $2 for the privilege of holding onto its money for 20 extra days. There are 18.25 20-day periods in one year, so the equivalent annual interest is $2 times 18.25. That's much better than paying on day 11 but still much more than any other normal finance interest rate.

PROBLEM 10.2
Effective Annual Interest Rates on Trade Credit *(continued)*

On day 11:

Step 1: Annual interest paid = $\frac{365}{1} = 365 \times \$2 = \$730$

Step 2: Amount borrowed = $98

Step 3: Annual interest rate = $\frac{\text{Annual interest paid}}{\text{Amount borrowed}}$

$$= \frac{\$730}{98} = 7.45 \text{ or } 745\%$$

On day 30:

Step 1: Annual interest paid = $\frac{365}{20} = 18.25 \times \$2 = \$36.50$

Step 2: Amount borrowed = $98

Step 3: Annual interest rate = $\frac{\text{Annual interest paid}}{\text{Amount borrowed}}$

$$= \frac{\$36.50}{98} = .372 \text{ or } 37.2\%$$

cash flow
The difference between cash receipts (inflows) and cash disbursements (outflows) for a given accounting period.

Trade credit is usually expensive and should only be used to finance temporary working capital needs if it is the least costly alternative.

cash conversion cycle
The process of converting resources represented by cash outflows into products or services represented by cash inflows. In healthcare organizations, cash outflows consist of employee wages and supply expenses; cash inflows consist of patient revenues.

Managing Cash Flow

Managing **cash flow**—the difference between cash receipts and cash disbursements for a given accounting period—is also known as the management of the cash conversion cycle. The **cash conversion cycle** is the process of converting resources represented by cash outflows into services and products represented by cash inflows. In healthcare organizations, cash outflows consist of employee wages and supply expenses; cash inflows consist of patient revenues. The objective of managing cash flow is to always have the right amount of cash on hand by maximizing and expediting cash inflows and minimizing and delaying cash outflows.[3] The organization must have cash on hand for the following purposes:

MINI-CASE STUDY

Imagine that you are the administrator of Main Street Family Clinic, which has been hit hard by the current economic crisis and has been cutting expenses to survive. Your cash on hand is short, and it is the time of the month to pay your employees and vendors. The cash inflows from patient revenues supplied just enough to cover about half of your salaries and expenses. Explain the options for the clinic. What would you do?

- *Transactions*: The expected demand for cash to pay employees and suppliers.
- *Precautions*: The unexpected demand for cash to pay for emergencies and other unplanned events.
- *Speculations*: The unexpected demand for cash when a vendor offers a price reduction or other good deal that the organization does not want to pass up. For example, sometimes a vendor offers a reduced price per unit if the organization buys a certain amount that exceeds its current needs.

Because cash inflows consist of patient revenues, maximizing and expediting inflows is the primary objective of managing accounts receivable (discussed in detail in chapter 11). Cash outflows consist of employee wages and supply expenses, and to the extent possible, ethically and legally, they should be minimized and delayed. Minimizing employee wages and supply expenses is a function of the budgeting process, during which managers should explore new ways to accomplish more work with fewer people. In delaying cash outflows, the chief financial officer (CFO) or controller must determine when to pay employees and vendors. Typically, organizations pay employees every two weeks or once a month, rather than at the end of each day. In this way, the organization holds and invests money that employees have already earned. Organizations pay vendors when the money is due, not when the organization receives the supplies or the bill. The organization determines the **float period**, which is the time difference between the day checks are written and the day checks are presented for payment. The organization uses the float period to transfer money from an interest-bearing account to the checking account as the money is drawn, a process called **book overdraft**. With the increased use of electronic funds transfer, float periods become less relevant.

float period
The time between when a check is written and when it is presented for payment.

book overdraft
The process of transferring money from an interest-bearing account to the checking account as the money is drawn.

Cash Budget

Larger healthcare organizations use a *cash budget* to help manage cash flows. A **cash budget** predicts the timing and amount of cash inflows and outflows and systematically examines the cost implications of various cash management decisions. Basic steps in developing a cash budget for a specific period include the following:

cash budget
A cash flow management tool that predicts the timing and amount of cash flows and systematically examines the cost implications of each alternative.

- Prepare a list of all expected sources of cash inflows.
- Estimate the amounts to be received from each source.

- Prepare a list of all expected sources of cash outflows.
- Estimate the amounts to be expended to each source.
- Calculate the period-end cash balance.
- Determine how to finance deficit balances (see earlier section, "Financing Temporary Working Capital Needs") or invest surplus balances.

investment policy
A board-approved policy that directs the chief financial officer or controller in making short-term investment decisions.

The organization should have a board-approved **investment policy** that directs the CFO or controller in making short-term investment decisions. The investment policy should include objectives of investment, authority for investment, and types of investments to be made. Typically, the types of investments to be made include US Treasury bills, money market funds, and commercial certificates of deposit, all of which provide both liquidity, in the event the organization needs the money invested on short notice, and financial security. **Compounding** is used to determine the amount of income that investments will generate. Compounding is a way of looking at a present amount of money, called **present value** (PV), and calculating the future amount of money, called **future value** (FV), using the following formulas:

compounding
The action of adding interest to interest on an investment.

present value
The current value of an investment.

future value
The anticipated value of an investment at a given point in the future, taking into account factors such as interest rate, time, and the frequency of compounding.

$$FV = PV(1 + i)^n$$

where i is the annual interest rate at which the money is invested, and n is the number of years the money is invested; and

$$FV = PV(1 + i/m)^{mn}$$

where m is the number of times the money is compounded each year. Problem 10.3 shows how these formulas are used.

PROBLEM 10.3
Calculating the Future Value of an Investment

ABC Physical Therapy Clinic wants to invest $100,000. What is the FV compounded annually at 7 percent for five years? What is the FV compunded semiannually at 7 percent for five years?

Compounded annually for five years:
$FV = \$100{,}000\ (1 + .07)^5$
$FV = \$140{,}255$

(continued)

PROBLEM 10.3
Calculating the Future Value of an Investment *(continued)*

Compounded semiannually for five years:
FV = $100,000 (1 + [.07 / 2])$^{2 \times 5}$
FV = $141,060

Note: This answer is formula driven. Use of a calculator or spreadsheet may alter the answer slightly because of rounding or how interest is calculated (at the end of the period versus during the period).

HP 10BII Keys

Key	Store or Calculates
N	The number of payments or compounding periods
I/YR	The annual nominal interest rate
PV	The present value of future cash flows
PMT	The amount of periodic payments
FV	Future value
◒ P/YR	Store the number of periods per year. The default is 12.
◒	Shift key (orange on most models)

HP 10BII Solution to problem 8.3 compounded annually

Keys	Display	Description
1 ◒ P/YR	1.00	Sets compounding periods per year to 1
5 N	5.00	Stores the number of compounding periods (1 × 5)
7 I/YR	7.00	Stores the interest rate
–100,000 PV	–100,000.00	Stores the PV as an annuity (–)
FV	140,255.17	Calculates the FV

PROBLEM 10.3
Calculating the Future Value of an Investment *(continued)*

HB 10BIIs solution to problem 8.3 compounded semiannually

Keys	Display	Description
2 [◒] [P/YR]	2.00	Sets compounding periods per year to 2
10 [N]	10.00	Stores the number of compounding periods (2 x 5)
7 [I/YR]	7.00	Stores the interest rate
–100,000 [PV]	–100,000	Stores the PV
[FV]	141,059.88	Calculates the FV

Evaluating Working Capital and Cash Performance

Financial analysis, which was covered in greater depth in chapter 3, is how investors, creditors, and management evaluate the past, present, and future financial performance of the organization. Financial analysis includes the following three steps:

financial analysis Methods used by investors, creditors, and management to evaluate past, present, and future financial performance of an organization.

1. Establish the facts in the organization.
2. Compare the facts in the organization over time and also to facts in other similar organizations.
3. Use perspective and judgment to make decisions regarding the comparisons.

The first step, establishing the facts, usually relates to a review of the organization's financial statements, the accuracy of which has been confirmed by independent auditors.

The second step, comparing the facts over time and comparing the facts to similar organizations, includes ratio analysis, horizontal analysis, and vertical analysis. ***Ratio analysis*** is the most common form of comparison and evaluates an organization's performance through computing and showing the relationships of important line items found in the financial statements. Typically, there are four kinds of ratios: liquidity, profitability, activity,

and capital structure. ***Horizontal analysis*** evaluates the trend in the line items by focusing on the percentage change over time. ***Vertical analysis*** evaluates the internal structure of the organization by comparing important line items to a base number. For instance, vertical analysis could be used to show what percentage of gross revenue is net revenue, bad debt, charity care, or contractual allowance. After ratio analysis, horizontal analysis, and vertical analysis are complete, the organization can make trend and industry comparisons.

Trend comparisons assess the organization's present and past ratios, trends, and percentages to determine the organization's financial performance over time. However, trend comparisons only work with ratios, trends, and percentages that show **directionality**; this means that the numbers are always better as they move in one direction and always worse as they proceed in the other direction.

directionality Statistical property for numbers that always improve in one direction and always worsen in the other direction.

Industry comparisons analyze the organization's ratios, trends, and percentages compared to the ratios, trends, and percentages of other similar organizations to determine the organization's financial performance relative to competitors. Several organizations publish key ratios, trends, and percentages: Moody's Investors Service publishes *Health Care Medians*, Dun & Bradstreet publishes *Key Business Ratios*, and CCH publishes the *Almanac of Business and Industrial Financial Ratios*.

The third step of financial analysis, using perspective and judgment to make decisions regarding the comparisons, uses the information obtained in the first two steps, coupled with information derived from the decision maker's unique perspective and judgment. Decisions that may at first be at odds with the information provided in the first two steps may make perfect sense based on pressures from internal and external constituents, including medical staffs, employers, regulators, donors, and others.

When evaluating working capital and cash performance, the following liquidity ratios are important to know. The first of these ratios does not show directionality: If the ratio is too low, the organization must borrow money to meet its obligations; if the ratio is too high, the organization loses the opportunity to invest in longer-term assets with a higher return. The remaining three do show directionality in that movement in the ratio in a specific direction is always better.

- Current Ratio

$$\frac{\text{Total current assets}}{\text{Total current liabilities}}$$

The basic indicator of financial liquidity, or an organization's ability to meet its financial obligations. Higher values indicate better debt-paying capacity. The current ratio does not take into account the relative liquidity of the different current asset accounts. The current ratio median for all hospitals reporting to Optum (2017) for 2015 audited financial statements was 2.18.

- Days Cash on Hand, Short-Term Sources

$$\frac{\text{Cash + Marketable securities}}{\text{(Total expenses – Depreciation expense) / 365}}$$

- Days Cash on Hand, All Sources

$$\frac{\text{Cash + Marketable securities + Unrestricted long-term investments}}{\text{(Total expenses – Depreciation expense) / 365}}$$

An indicator of how long an organization could meet its obligations if cash receipts were discontinued. The days cash on hand, short-term sources median from all hospitals reporting to Optum (2017) for 2015 audited financial statements was 27.4. The days cash on hand, all sources median from all hospitals reporting to Optum for 2015 audited financial statements was 70.5.

- Average Payment Period

$$\frac{\text{Current liabilities}}{\text{(Total expenses – Depreciation expense) / 365}}$$

An indicator of the average time that passes before a current liability is paid. Higher values can indicate potential liquidity problems to creditors. The average payment period median from all hospitals reporting to Optum (2017) for 2015 audited financial statements was 55.3.

The analysis of working capital and cash performance is a key aspect of the financial management of healthcare organizations. Chapters 11 and 12 take a closer look at the management of two specific current assets: accounts receivable and materials.

Chapter Key Points

- Working capital is an organization's total current assets.
- Working capital can be made up of equity, net income, an increase in noncurrent liabilities, and a decrease in noncurrent assets.
- Net assets, short-term debt, or trade credit can finance temporary working capital needs.
- The management of cash flows is represented by cash outflows into services and cash inflows from patient revenues.
- Financial analysis is used to evaluate the past, present, and future financial performance of an organization.

Discussion Questions

1. How would you define the terms *cash*, *short-term securities*, *accounts receivable*, *inventories*, and *prepaid expenses*?
2. What are some of the differences in sources of capital between not-for-profit organizations and for-profit organizations?
3. What is the formula for calculating interest on short-term loans?
4. What is the main objective of managing cash flows? What are the reasons an organization should have cash on hand?
5. Why do healthcare organizations use present value of money and future value of money for their investments?
6. Why do organizations need to perform a financial analysis? Explain each of the three steps involved.

Notes

1. Healthcare organizations, such as physicians' offices, that use cash accounting rather than accrual accounting will not have accounts receivable or bad-debt expense because cash accounting records revenue when paid, whereas accrual accounting records revenue when earned.
2. Net working capital is sometimes confused with *cash flow*, which is the difference between cash receipts and cash disbursements for a given accounting period.
3. The right amount of cash on hand is a function of both the timing and the amount of cash inflows and outflows. At a minimum, the right amount of cash on hand is the difference between cash inflows and cash outflows, as expressed in the following equation (Berman, Kukla, and Weeks 1994): Cash outflows – Cash inflows = Minimum cash balance on hand

Effective Annual Interest Rate on Short-Term Loans

Effective Annual Interest Rate on Short-Term Loans Practice Problem

XYZ Assisted Living Center can borrow $150,000 for one year at 7.5 percent. Calculate the amount of interest the center will pay.

Effective Annual Interest Rate on Short-Term Loans Practice Problem Solution

$$7.5\% = \frac{I}{\$150{,}000}$$

$$I = 7.5\% \times \$150{,}000$$

$$I = \$11{,}250$$

Effective Annual Interest Rate on Short-Term Loans Self-Quiz Problem

Your daycare center can borrow $50,000 for one year and pay $3,625 in interest. Calculate the interest rate you will pay.

Effective Annual Interest Rate on Trade Credit

Effective Annual Interest Rate on Trade Credit Practice Problem

XYZ Hospital makes a $98 purchase on the first day of the month and must pay a $2 late fee if it does not pay within the first ten days. What is the annual interest rate if the hospital pays on day 45? On day 30? On day 11?

Effective Annual Interest Rate on Trade Credit Practice Problem Solution

On day 45

Step 1: Annual interest paid = $\frac{365}{35}$ = 10.43 x $2 = $20.86

Step 2: Amount borrowed each time = $98

Step 3: Annual interest rate = $\frac{\text{Annual interest paid}}{\text{Amount borrowed each time}} = \frac{\$20.86}{\$98.00}$ = 21.3%

On day 30

Step 1: Annual interest paid = $\frac{365}{20}$ = 18.25 x $2 = $36.50

Step 2: Amount borrowed each time = $98

Step 3: Annual interest rate = $\frac{\text{Annual interest paid}}{\text{Amount borrowed each time}} = \frac{\$36.50}{\$98.00}$ = 37.2%

On day 11

Step 1: Annual interest paid = $\frac{365}{1}$ = 365 x $2 = $730

Step 2: Amount borrowed each time = $98

Step 3: Annual interest rate = $\frac{\text{Annual interest paid}}{\text{Amount borrowed each time}} = \frac{\$730}{\$98}$ = 744.89%

Effective Annual Interest Rate on Trade Credit Self-Quiz Problem

Assume that a hospital makes a $150 purchase on the first day of the month and must pay a $5 late fee if it doesn't pay within the first 15 days. What is the annual interest rate if the hospital pays on day 16? On day 30?

Future Value

Future Value Practice Problem

XYZ Sleep Disorder Clinic invests $106,944 for five years to retire a debt. Assuming the clinic can invest at 7 percent compounded annually, how much is the debt XYZ needs to retire?

Future Value Practice Problem Solution

$FV = PV(1 + i)^n$

$FV = \$106{,}944(1 + .07)^5$

$FV = \$149{,}994.49$

HB 10BII solution, compounded annually

Keys	Display	Description
1 [◒] (P/YR)	1.00	Sets compounding periods per year to 1
5 (N)	5.00	Stores the number of compounding periods (1 x 5)
7 (I/YR)	7.00	Stores the interest rate
–106,944 (PV)	–106,944	Stores the present value
(FV)	$149,994.49	Calculates the future value

Future Value Self-Quiz Problem

Your hospital wants to invest $1 million at 5 percent compounded quarterly. How much will the investment be worth after ten years?

CHAPTER 11

MANAGING REVENUE CYCLE

Today's new payment models challenge us to go beyond the acute care space and manage care across the continuum. You've heard that before, but have you stopped to think what's truly at stake?

Melinda S. Hancock (2015), chief financial officer and
senior executive vice president of Virginia Commonwealth
University Health System

Learning Objectives

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

- Define and understand the importance of the revenue cycle
- Explain the important elements of the revenue cycle
- Identify methods of financing accounts receivable
- Describe the laws governing accounts receivable
- Discuss the ratios used to evaluate revenue cycle performance

Introduction

In most healthcare organizations, accounts receivable is the largest current asset and deserves special attention. Three factors set the healthcare industry apart from most other industries with regard to accounts receivable: the nature of the services provided, the cost of the services provided, and the method of payment for the services provided. Because many of the services provided by healthcare organizations are provided in an emergent nature, at least in the patient's mind, patients often do not have the time to raise the funds necessary to pay for the services they need or want before the services are provided.

Many of the services provided by healthcare organizations are services requiring highly trained personnel and high-tech equipment available 24 hours a day. Furthermore, many of the services provided by healthcare organizations are reimbursed by third parties, such as insurance companies.

Distinguishing Revenue Cycle from Accounts Receivable

Accounts receivable is money due to the organization from patients and third parties for services that the organization has already provided. **Revenue cycle** is a multidisciplinary approach to reducing the amount in accounts receivable by effectively managing the production and payment cycles, as illustrated in exhibit 11.1.

revenue cycle
A multidisciplinary approach to reducing the amount in accounts receivable by effectively managing the production and payment cycles.

During precare, the healthcare organization obtains from the patient all the information necessary to both treat and bill (exhibit 11.2 provides a list of information to be collected during precare). The Healthcare Financial Management Association (HFMA) says that inadequate or incorrect information gathered at this stage is the single greatest reason for not billing or collecting accounts receivable in a timely manner (HFMA 1998). According to HFMA, unless the care is emergent in nature, treatment should not begin until this stage is completed. From a legal perspective, the organization is not required to initiate treatment—absent an emergency—if the patient is unable to pay.[1] However, after the organization has initiated treatment, it cannot terminate treatment solely based on the patient's inability to pay.[2]

During care, the organization should post charges in a prompt and accurate manner. The medical record, which is in the hands of clinicians at this point, should document all phases of the patient's care. The medical record is the primary source of clinical data required for reimbursement from most third parties. Utilization review by the utilization review nurse or discharge planner ensures that the care provided to the patient is appropriate and will be reimbursed by the patient or a third party. The organization should conduct utilization review during care, called *concurrent review*, as well as after care, called *retrospective review*.

During the care-completed phase, sometimes referred to as *discharged but not final billed*, the medical record is transferred from the clinicians to the medical record department.

Exhibit 11.1
Accounts Receivable Cycle

Cycle	Patient Activity	Accounts Receivable Activity
Production cycle	**Patient seeks care**	
	Precare	Obtain demographic data
		Obtain insurance data
		Verify insurance coverage
		Obtain authorizations
		Obtain deductibles
		Obtain copays
	Care	Record charges
		Maintain medical record
		Review utilization
	Care completed	Transfer medical record
		Analyze medical record
		Abstract medical record
		Code medical record
		Transcribe dictation
Payment cycle*		Print bill
		Submit bill
		Follow up bill
		Collect bill, or bill resolution

* The payment cycle usually begins when the medical record is complete for billing purposes. However, in organizations where the medical records department reports to the chief financial officer (CFO), the payment cycle may begin at patient discharge because the CFO is responsible for the processing time in medical records.

gross receivable
The full amount a healthcare organization charges.

net receivable
The gross receivable minus any negotiated discounts.

The patient's record is analyzed for completeness, abstracted, and coded. The medical record department adds transcriptions from the physician, including final diagnosis.

On completion of the medical record, the payment cycle begins. In the bill print phase, a claim form is completed. Any previously agreed-on discounts, such as contractual discounts with the insurance company, are applied at this time, which changes the figure from a **gross receivable** to a **net receivable**. In the bill submission phase, a claim is sent from the organization to the patient and/or third-party payer.

Exhibit 11.2
Patient Information Collected During Precare

The following information is obtained from the patient before care begins:

- Patient name and other identifiers, including Social Security number, gender, date of birth, place of birth, and race
- Patient address and telephone number
- Patient occupation, employer, employer address, and phone number
- Resident status of all foreign-born patients
- Name, address, and telephone numbers of next of kin
- Name, address, and telephone numbers of person responsible for bill
- Name, address, telephone numbers, and certificate numbers of all third-party payers
- Benefits to which the patient is entitled
- Name, address, and telephone number of primary care physician
- Name, address, and telephone number of attending physician
- Preliminary diagnosis
- Date of most recent previous outpatient services or admission
- Accident information
- Financial resources information for self-pay patients
- Authorizations and precertifications
- Consent for medical treatments and admissions
- Assignments of insurance benefits from the patient to the provider

Source: Adapted from HFMA (1998), 1–16.

The bill collection phase also applies to bills that were not paid on time. The organization makes additional efforts to collect the bill, such as letters, phone calls, and e-mails, and if those don't work, it can submit the account to a collection agency. The organization's credit-and-collection policy and relevant federal and state laws should cover the extent to which the organization and collection agency should seek payment. The organization's board should also play a role in deciding how aggressively to pursue overdue bills. If a patient does not pay even after these efforts, the organization may decide to write off the bill as a bad debt. The Affordable Care Act of 2010 (ACA) has regulations that direct how aggressively a nonprofit hospital can collect bills of patients who meet the hospital's financial assistance policy.

Importance of Accounts Receivable

The amount of current assets tied up in accounts receivable can vary significantly among organizations (accounts receivable can be as much as 75 percent of the current assets), as can the associated costs. This variance is often attributed to the credit-and-collection policies of the board and to management methods used to reduce accounts receivable. Costs

associated with accounts receivable include a **carrying cost**, a routine **credit-and-collection cost**, and a **delinquency cost**.

carrying cost
The cost incurred by the organization for extending credit to the patient after the organization has provided services.

Carrying costs associated with accounts receivable are the costs incurred by the organization for extending credit to the patient after the organization has provided services. If patients paid at the time of service, the organization would have the funds on hand to either invest or pay current liabilities. Thus, the carrying cost is the amount of money the organization would have earned had it been able to invest that money at a given interest rate, or the amount of money the organization must pay in interest to borrow funds to pay current liabilities.

credit-and-collection cost
The cost incurred by the organization for billing and collecting during the organization's average payment cycle.

Routine credit-and-collection costs are the costs incurred by the organization for billing and collecting during the organization's average payment cycle. If patients paid at the time of service, the organization would generate only one bill per patient. When the organization extends credit, it incurs the cost of sending additional bills and reminders.

delinquency cost
The cost incurred by the organization for the patient not paying on time. This cost can include the costs associated with turning the account over to a collection agency or with writing off the account to bad debt.

Delinquency costs are the costs incurred by the organization for the patient not paying on time. These costs can include the costs associated with turning the account over to a collection agency or with writing off the account to bad debt.

Management of the Revenue Cycle

The extension of credit for most healthcare organizations is a necessary evil because of the nature and cost of the services provided and the preponderance of third-party payment. However, the organization's credit-and-collection philosophy should treat the extension of credit as the exception to the rule, and not the rule itself. The rule should be to collect as much money as possible at the time of service and to extend credit to creditworthy patients only when necessary. The objective of managing the revenue cycle is to reduce the **collection period**, which is the number of days between the time of service and the time of payment. An obvious way to reduce the collection period is to collect as much money as possible as soon as service is provided. Management of the revenue cycle includes four steps, involving policies and procedures, an accounting system, a medical record system, and a credit-and-collection policy.

collection period
The number of days between the time of service and the time of payment.

Policies and Procedures

The first step in managing the revenue cycle is to have policies and procedures for the registration and admission of all patients. All patients who are not emergent in nature should go through a preregistration or preadmission process so the organization can obtain the information listed in exhibit 11.2. At that time, deductibles, copayments, and deposits should also be collected. Organizations are much more likely to obtain information and payments prior to providing services than afterward because organizations cannot hold a

patient against the patient's will to obtain payment or information (see Showalter [2017] on false imprisonment).

Many healthcare organizations offer preregistration or preadmission, in which the patient completes the paperwork and other tasks before arriving for care. This process can be done in person, over the phone, or online. Not only does this speed things up for the patient, but it reduces wait times for everyone, and wait times are a key indicator of quality, according to patient surveys.

Accounting System

The second step in managing the revenue cycle is to have an accounting system that provides prompt and accurate recording of charges. Not having such a system has been a problem in healthcare for decades and continues to be a problem. An **internal auditor** often plays a role in determining the effectiveness of the accounting system by verifying the system's **internal control**. Adequate internal control identifies and corrects errors in the accounting system as they occur and before the auditor finds the error (Finkler and Ward 2006). As described by Nowicki (2017), effective accounting systems also

internal auditor
Staff member who monitors the effectiveness of an accounting system by verifying the system's internal control.

internal control
Accounting systems and procedures that identify and correct errors as they occur.

- identify and record all valid accounting transactions on a timely basis;
- value these transactions in an appropriate manner;
- identify the time period in which these transactions occur; and
- disclose these transactions in the financial statements.

Exhibit 11.3 provides typical questions that an internal auditor may ask in relation to internal control of accounts receivable.

Medical Record System

The third step in managing the revenue cycle is to have a medical record system that allows for prompt and accurate recording of clinical information. With the advent of Medicare prospective payment in 1983, hospital health information management (HIM) departments had significant pressure to process medical records in a timely fashion so that the physician could attest to the final diagnosis, which was required prior to bill submission.

Traditionally, HIM departments were not involved with the medical record until after discharge. With the advent of Medicare prospective payment, hospitals needed a preliminary diagnosis-related group (DRG) assignment at patient admission; needed to monitor use during the patient stay; and needed to interface the patient billing system with

Exhibit 11.3
Internal Audit of Accounts Receivable Questions

1. Do registration or admission procedures exist and ensure that complete and accurate accounts receivable and collection information is gathered, including such documents as signed authorization forms, patient billing information, and insurance assignments?
2. Do procedures exist and ensure that services rendered to patients are medically necessary?
3. Is a complete medical record prepared, including physician discharge summaries and physician statements attesting to the principal diagnosis and other clinical information?
4. Do procedures exist and ensure that amounts due from third-party payers are properly supported?
5. Do procedures exist and ensure that cash receipts are properly recorded?
6. Do procedures exist and ensure that charity care balances are identified and deducted from gross revenues?
7. Do procedures exist and ensure that detailed accounts receivable records are routinely compared to general ledger control accounts and third-party payer logs?
8. Do reviews exist and ensure that allowances for bad debts and contractuals are adjusted periodically to ensure that receivables are reported at estimated net realizable amounts?
9. Do procedures exist and ensure that medical records personnel are properly trained and supervised to provide appropriate coding?
10. Do procedures exist and ensure prompt coding of Medicare and other similar medical records data?
11. Do procedures exist and ensure independent coding reviews, primarily for Medicare patients?

Source: Adapted from Herkimer (1993), 288–89.

the medical record system to determine cost per DRG. The resulting interfaced information systems are shown in exhibit 11.4.

Completing the medical record in a timely fashion is still important, particularly as required for Joint Commission accreditation. The penalty for delinquent medical records—limits on or suspension of medical staff privileges—has always been difficult to enforce because of the financial effect on the hospital caused by limiting physician privileges. However, from the accounts receivable perspective, emphasis has changed from promptness to accuracy of medical records.

Some of the pressure to complete the medical record in a timely fashion has diminished with the increase in fixed payments, such as DRGs. Also, hospitals are no longer required to have a signed physician attestation before submitting a Medicare claim. Finally, as electronic medical records have become more common, medical records turnaround time has improved (Office of National Coordinator for Health Information Technology 2013).

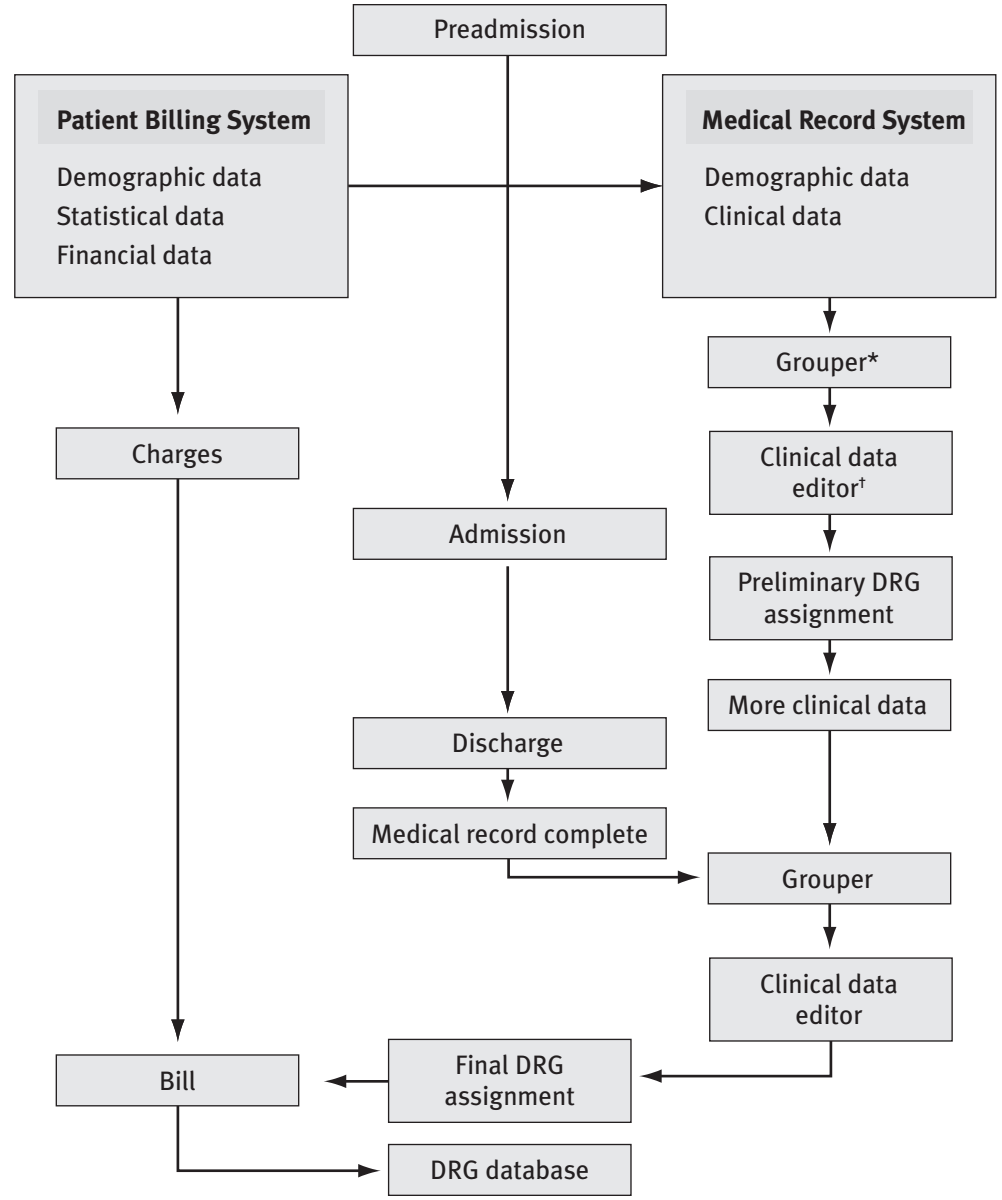

Exhibit 11.4 Patient Billing System/Medical Record System Interface

*Grouper: software package that assigns diagnosis-related group (DRG).

†Clinical data editor: software package that edits clinical data by checking for coding errors.

HIM departments have experienced increased pressure for accuracy in medical records. Coding errors can delay payment until corrected and can initiate federal investigations and resulting fines. Since the passage of the 1986 False Claims Act amendments, the federal government has recovered more than $27 billion in false or erroneous claims

to the Medicare program (OIG 2013).[3] Unfortunately, accurate coding is less objective than federal investigations and court cases might imply. For instance, current procedural terminology (CPT) codes were developed to identify physician services and often do not work well in hospital outpatient departments; therefore, they result in coding problems. Coding problems are often identified by fiscal intermediaries during routine focused medical reviews.

The most effective way for healthcare organizations to avoid fraud and abuse investigations and minimize the effects of investigations if they do occur is to have a comprehensive compliance plan that includes a coding compliance plan (see chapter 6 for more information on corporate compliance plans). A coding compliance plan provides the framework for effective internal controls and is one way to defend against charges of reckless disregard. Under the provisions of the False Claims Act, the federal government does not need to prove intent to defraud but only reckless disregard for a claim's validity.

According to the American Health Information Management Association (AHIMA), Cassidy (2012) identified the key elements of a coding compliance plan. Examples of the elements include the following:

- A commitment from the organization to correctly report and assign codes
- Sources of coding guidance
- Positions with delegated authority to assign codes
- Procedures to follow when assigned codes are not clear
- Areas of risk that have been identified by compliance audits
- Procedures to resolve coding disputes
- Policies for developing and revising coding

Credit-and-Collection Policy

The fourth step in managing accounts receivable is to have a board-approved credit-and-collection policy that directs the organization's management regarding extending credit and collecting accounts. Organizations vary considerably in how aggressively they collect accounts receivable, but the credit-and-collection policy should address the issues of charity care, bad debt, self-pay, third-party insurance relationships, billing procedures, and deposit procedures, as described in the following sections.

Charity Care

The discussion of charity care (as distinguished from bad debt and described in chapter 5) should include a discussion on eligibility criteria.

Bad Debt

The discussion of bad debt (also described in chapter 5) should address at what point and under what circumstances the organization turns accounts over to a collection agency and at what point and under what circumstances the organization writes off accounts as bad debts.

Self-Pay

Self-pay should include provisions for financial counseling to determine how the services provided will be reimbursed.

Financial counseling is the process of extending credit to self-pay patients. Because of this process, the organization should better understand the patient's ability or inability to pay the organization for services rendered, and the patient should better understand patient financial responsibilities to the organization. Financial counseling should do the following:

1. Tell the patient about the organization's credit-and-collection policies and how the policies pertain to the patient.
2. Investigate the patient's credit history and determine to what extent the patient can pay for anticipated services.
3. Help the patient evaluate alternative payment options, including, but not limited to,
   - credit cards;
   - bank loans, including home equity loans;
   - credit union loans;
   - cash from sale of assets; and
   - extended payment plans, with or without interest.

   Organizations should be willing to significantly discount their charges to obtain payment at time of service.
4. Follow up and resolve any pending financial transactions.

To the extent possible, money due from the patient (deductibles and copays) should be collected at time of service. In a 2004 study, best-performing hospitals collected 31 percent of revenue due them from patients at time of service, while the national average was 16 percent. As reported by Runy (2004), the study listed the reasons most often stated by the hospital for not collecting money due from the patient at time of service (respondents in the survey could provide more than one answer, thus the total exceeds 100 percent) and included the following:

1. Too hard and inaccurate to prorate patient account (copays), 36 percent
2. Patient liability unknown at time of service, 34 percent
3. Lack of automated method of prorating claims, 26 percent
4. Hospital policy does not allow it, 20 percent
5. Poor public relations, 20 percent
6. Staff uncomfortable asking for money, 14 percent
7. Not a significant amount of money, 4 percent

Third-Party Insurance Relationships

coordination of benefits
A step in the billing process during which the order of insurance company liability is identified for accounts that have multiple insurance companies.

The discussion of third-party insurance relationships should include provisions for **coordination of benefits**, which is the process of determining the order of insurance company liability when multiple insurance companies are involved; *assignment of benefits*, which is the process of transferring insurance benefits from patients to the healthcare organization; and third-party audits.

Billing Procedures

The credit-and-collection policy should also discuss billing procedures, including provisions for

- *bill cutoff*, which is the point at which the organization determines the bill is complete and ready for submission;
- methods for encouraging prompt payment, such as interest assessment on late payments; and
- follow-up billing, including both the format (i.e., how aggressive the language should be) and timing (i.e., how often the organization should mail reminders, called *dunning notices*).

Deposit Procedures

The section of the credit-and-collection policy on deposit procedures should include provisions for a **lock box** and **electronic data interchange** (EDI) and other aspects of processing and posting payments. When an organization uses a lock box, payers mail their payments directly to the bank, which deposits the money and forwards the accompanying paperwork, along with a copy of the check, to the organization for processing. When using EDI, large payers such as Medicare electronically transmit the payment directly to the bank or organization and then forward accompanying paperwork via regular mail or an image of it via e-mail. EDI reduces claims completion time substantially while reducing the administrative costs associated with processing the claim.

lock box
In healthcare, a system in which payments from patients are mailed directly to a bank, which credits the healthcare organization's account more quickly than if the check had been mailed to the organization.

electronic data interchange
A method of payment in which the payer, such as Medicare, electronically transmits payment to the healthcare organization's bank and sends related information to the organization.

From Accounts Receivable Management to Revenue Cycle Management

The Health Insurance Portability and Accountability Act (HIPAA) transaction standard provides a unique opportunity for healthcare organizations to improve their revenue cycle performance. Revenue cycle management conceptualizes the accounts receivable process as a continuum rather than as a set of isolated events (Laforge and Tureaud 2003) and incorporates the use of multidisciplinary teams, including clinicians, to improve performance. Any healthcare organization whose key financial measures lie outside the industry benchmarks should review its revenue cycle practices. According to Guyton and Lund (2003), key benchmarks include the following:

- Outstanding revenues that exceed the industry average of about 50 days
- More than 15 percent of receivables exceeding 90 days
- High management turnover in revenue-related areas
- Evidence of cash-flow problems
- Declining net-to-gross ratios

Opportunities for improved revenue cycle management are usually found in the following five key areas:

1. Denials management (virtually all denials of payment by third-party payers are the result of administrative problems or clinical problems)
2. Follow-up on unpaid claims
3. Patient payments of copays and deductibles at point of service and enhanced methods of patient payments

MINI-CASE STUDY

Suppose that you were hired as charge analyst a few months ago at Bryant Hospital. Due to lack of proper training, you have steadily fallen behind in billing for hospital services to patients, and patients are now complaining about receiving late bills, even after they have made payments. The hospital is suffering from both a collections standpoint and a public relations standpoint because of late billings, and the hospital is now facing an internal audit.

What problems will the internal audit discover? How will the hospital address these problems?

What can the hospital do to process the bills in a timely manner? Are you the sole reason for the late billing? Who else should be held accountable? Are the patients still responsible for the late billing? What if they refuse to pay because the hospital was not upfront about the costs?

4. Third-party payment compliance to ensure that payment received was the correct amount
5. Vendor contract coordination to ensure a broad-based evaluation of contract terms in relation to coordination of benefits

Financing Accounts Receivable

Sometimes healthcare organizations can convert outstanding accounts receivable into cash to meet short-term cash demands. There are two ways to do this: **factoring receivables** and **pledging receivables**. When an organization *factors* its accounts receivable, it sells the accounts at a discount to a bank or other agent, which then attempts to collect (and keeps the money). The advantage of factoring is that the organization receives the cash immediately, albeit at a discount. The disadvantage of factoring is that the organization loses control of the collection process, and the collection methods used by the bank or other agent may reflect poorly on the organization.

factoring receivables The practice of selling accounts receivable to a third party at a discount. The third party attempts to collect the accounts and keeps the money.

When an organization *pledges* its receivables, it uses the receivables as collateral for a loan. The advantage of pledging accounts receivable is that the organization maintains control of the collection process. The disadvantage of using receivables to secure a loan is that the resulting interest rate on the loan is usually higher than the rate for other conventional loans.

pledging receivables The practice of using accounts receivable as collateral for a loan.

Federal Laws Governing Accounts Receivable

Four federal laws govern accounts receivable: the Fair Debt Collection Practices Act, the Truth in Lending Act, the Fair Credit Reporting Act, and the ACA.

Fair Debt Collection Practices Act

The Fair Debt Collection Practices Act applies only to third-party collectors. As long as the healthcare organization collects its own debts, the act does not apply. If the organization contracts with a collection agency, or operates a collection agency under another name, the act does apply. The act deals with four key bill-collecting practices:

1. *Skiptracing*: Governs how the debt collector communicates with consumers owing the debt and under what conditions a debt collector can communicate with others regarding the debt
2. *Collector communication*: Governs when debt collectors can communicate with consumers
3. *Harassment*: Identifies certain behaviors and actions by debt collectors that may be considered harassment and are therefore prohibited
4. *Deceptive or false representations*: Prohibits misleading representation designed to intimidate the consumer

Truth in Lending Act

The Truth in Lending Act establishes disclosure rules for sales involving consumer credit. It requires a written agreement and four or more installments. In addition, the lending organization must disclose the following under Regulation Z:

- Annual percentage rate
- Amount of the finance charge
- Amount of the principal
- Amount for each payment
- Number of payments
- Total of all payments
- Late-charge arrangements
- Prepayment arrangements
- An opportunity for the debtor to receive an itemization of how the payments are to be applied

Fair Credit Reporting Act

The Fair Credit Reporting Act governs the permissible uses of credit reports. The act lists the ways credit reports can be obtained, including by court order, by permission of the consumer, and by legitimate business need. Information that must be removed from credit reports and the time at which that information must be removed follows (HFMA 2012):

- Bankruptcies after ten years
- Judgments after seven years or when the statute of limitations expires, whichever is longer
- Paid tax liens after seven years
- Collection accounts or those charged to profit and loss after seven years
- Arrests, indictments, or convictions after seven years
- Other adverse items after seven years

Affordable Care Act

The ACA imposes requirements on tax-exempt hospitals regarding billing and collections. Hospital financial assistance policy requirements such as the following must be adopted, implemented, and publicized:

- Criteria for granting financial assistance to patients
- The basis for calculating the amount charged to patients and limitations on charges to patients eligible for financial assistance, including charging no more than the lowest amount charged to insured patients
- A method for applying for assistance
- Debt collection actions, including the avoidance of extraordinary collection efforts until eligibility for financial assistance is determined
- Availability of emergency care regardless of the patient's ability to qualify for financial assistance

Evaluating Revenue Cycle Performance

average collection period
A financial ratio that shows the average time a healthcare organization takes to collect money owed to it.

When evaluating accounts receivable performance, **average collection period** (also called *days in accounts receivable*) is most often used. Average collection period is the average amount of time it takes for an organization to collect a bill; the term is formally defined as the number of days of operating revenue that an organization has due from its patient billings after deducting for contractual allowances, bad debt, and charity care. The average collection period median for all hospitals reporting to Optum (2017) from 2015 audited financial statements was 47.3 days.

$$\text{Average Collection Period} = \frac{\text{Net accounts receivable}}{\text{Net patient service revenue} / 365}$$

The objective of managing the revenue cycle is to reduce the average collection period; the collection period does show direction; a smaller number is always better. One way to reduce the average collection period is to write off accounts as bad debt. However, writing off accounts prematurely may not be in the organization's best interest.

Chapter Key Points

- *Accounts receivable* refers to the money due to the organization by patients and third parties for services already provided.
- *Revenue cycle* refers to a multidisciplinary effort to reduce the amount in accounts receivable by managing both the production cycle and the payment cycle.
- The objective of managing the revenue cycle is to reduce the collection period by reducing the amount of receivables.
- The four steps of managing the revenue cycle include having policies and procedures regarding admission and discharge, having an accounting system that records charges promptly and accurately, having a prompt and accurate medical record system, and having a credit-and-collection policy.
- Revenue cycle management views the accounts receivable process as a continuum.
- The Fair Debt Collection Practices Act, the Truth in Lending Act, the Fair Credit Reporting Act, and the Affordable Care Act are four federal laws that govern accounts receivable.
- The best way to evaluate the management of the revenue cycle is the average collection period ratio.

Discussion Questions

1. What is the definition of *accounts receivable*? What are some primary reasons patients are sometimes not billed in a timely manner?
2. How does *accounts receivable* differ from the *revenue cycle*?
3. What happens when an organization extends credit to patients?

4. What are the steps in managing accounts receivable? Explain each step.
5. What are the methods used to collect accounts receivable?
6. How can an organization improve its revenue cycle management?
7. What are the advantages and disadvantages of the two methods used to convert accounts receivable to cash?
8. What are the key provisions of the four laws that govern accounts receivable?
9. What is the best way to evaluate revenue cycle management performance?

Notes

1. From a legal perspective, the contract between the patient and the healthcare organization does not begin until treatment begins (see *Childs v. Weiss* 1969). The organization's tax status, as well as the organization's ethics as reflected in its credit-and-collection policy, may dictate otherwise, however.
2. Generally speaking, healthcare organizations cannot terminate treatment solely based on the inability to pay (see Holder 1973 on abandonment).
3. Between 2008 and 2012, the federal and state governments recovered $18.3 billion from lawsuits and criminal cases claiming healthcare providers overbilled. Most cases were filed under the federal False Claims Act. Abusive billing occurs when products or services are billed to a public program and are not supported by documentation, are not medically necessary, are not covered by the public program, or do not meet other conditions of payment. Significant abusive billing occurs in the following areas: hospital postacute discharges and transfers; hospital claims for mechanical ventilation; hospital claims for canceled elective surgeries; hospital inpatient and outpatient claims in risk areas; outpatient therapy services; medical equipment and/or supplies related to diabetes and lower limb prosthetics; and Medicare Part B drugs and Part B ambulance services (OIG 2013).

CHAPTER 12

MANAGING MATERIALS

Understanding the principles of retail competition and how to put them into practice can help health systems flourish in a changing healthcare industry.

Grube, Cohen, and Clarin (2014)

Learning Objectives

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

- Define and understand the importance of materials management
- Discuss methods of valuing inventory
- Identify costs related to inventory
- Discuss the ratios used to evaluate inventory performance

Introduction

In most healthcare organizations, materials—including supplies and pharmaceuticals—make up the largest nonlabor cost in the operating budget and therefore deserve special attention. One of the problems associated with the cost of supplies and pharmaceuticals is the changing demand for healthcare services and the ability of organizations to manage that change. Proper management of materials can have a significant effect on operating costs and, as a result, the net income of the organization.

inventory management The management and control of items that have an expected useful life of fewer than 12 months.

Definitions of *Inventory Management* and *Materials Management*

Inventory management is the management and control of *inventory*, or items that have an expected useful life of fewer than 12 months.

Materials management is defined more broadly than *inventory management*: Materials management is the management and control of inventory, services, and equipment from acquisition to disposition. Organizations further classify items into two major categories: patient care and administration. Items in patient care include medical supplies, surgical supplies, drugs, linens, and food. Items in administration include housekeeping supplies, office supplies, and other supplies not used for direct patient care.

materials management The management and control of inventory, services, and equipment from acquisition to disposition.

The primary objective of materials management is to minimize the total cost associated with materials while ensuring that the proper materials, meaning in both quality and quantity, are readily available for patient care and administration.

Importance of Materials Management

Why are materials and, more specifically, inventory so important? There are two key reasons. First and most important, an organization must have the right kind and the right amount of supplies on hand for patient care. Second, effective materials management helps control cost.

Patient Care

The right kind of supplies for patient care can be determined by the materials manager with the help of a user committee. The right amount of supplies can be more difficult to project for three reasons: time, uncertainties, and discontinuities.

Time

The time element refers to the fact that, for most supplies, a lag time exists between ordering and receiving the supplies.

Uncertainties

The demand for supplies fluctuates with volume and kind of patient; therefore, the demand for most healthcare supplies is uncertain. Because of uncertain demand, the materials manager must meet with each department manager to determine the actual necessity of every supply item.

If the supply item is a lifesaving drug used in emergencies, for example, the materials manager will stock the item at a high level to ensure that the organization never runs out. This procedure is called a *stock-out*.

If the supply in question is a seldom-used office supply, the materials manager will stock the item at a low level, if at all. This method of classifying inventory is the *ABC inventory method*, where items in category A represent 80 percent of the inventory value but only 20 percent of the items in inventory; category B represents 15 percent of the inventory value but 30 percent of the items in inventory; and category C represents only 5 percent of the inventory value but 50 percent of the items in inventory.

If the organization is large or has sufficient influence over its vendors, the organization may use the **just-in-time (JIT) inventory method** for some of its inventory items, meaning that the supply item is delivered immediately prior to use. With JIT, the organization has no, or very little, inventory on hand.

just-in-time inventory method
Inventory method in which supply items are delivered immediately prior to use.

Discontinuities

Discontinuities also affect the amount of supplies on hand. Discontinuities are disruptions to the inventory process, such as a new model of the supply item or a missed delivery. The organization must have enough stock on hand to deal with possible discontinuities.

discontinuities
Disruptions to the inventory process, such as the introduction of a new version of a product.

Cost

The second reason materials management is so important is cost. Inventory, like accounts receivable, is a nonproductive asset; it does not grow or produce income. In fact, both accounts receivable and inventory lose value over time. For accounts receivable, the more time an account spends in receivables, the more likely it will become uncollectible. The more time an item spends in inventory, the more likely it will become stolen, expired, or lost. For that reason, organizations seek to reduce inventory holdings and increase cash, marketable securities, and other assets that produce income.

Inventory Valuation

Costs related to inventory appear in two places on the healthcare organization's financial statements. First, inventory appears as a current asset on the organization's balance sheet. In this case, inventory, expressed as a dollar amount, represents the unused portion of inventory on hand for a given accounting period.

first-in, first-out (FIFO) An inventory valuation system that assumes that the first items put into inventory will be the first taken out. Thus, the value of the remaining inventory is based on the cost of the most recent additions to inventory.

last-in, first-out (LIFO) An inventory valuation system that assumes that the last items put into inventory will be the first taken out. Thus, the value of the remaining inventory is based on the cost of the earliest additions to inventory.

weighted average An inventory valuation system that uses an average of the costs of inventory items to determine the value of inventory.

specific identification An inventory valuation system that determines the actual value of each inventory item.

Second, inventory appears as expense items on the organization's statement of revenues and expenses. In this case, inventory, expressed as supplies, food, and drugs, represents the portion of inventory used for a given accounting period. The value of inventory on the balance sheet is based on the cost paid for the items in inventory. During the year, however, identical items of inventory will be purchased at different prices. Furthermore, some inventory items are expensed as the organization uses them. How does the materials manager determine which inventory items and related costs have been expensed and which inventory items and related costs are still in inventory? There are four commonly accepted methods of valuing inventory: first-in, first-out (FIFO); last-in, first-out (LIFO); weighted average; and specific identification. Each will produce a different value, and each has advantages and disadvantages:

- **First-in, first-out (FIFO):** The first item put into inventory is the first item taken out of inventory. FIFO produces an inventory of newer items. The total cost of inventory is determined by multiplying the unit cost of the newest items in inventory by the number of units in inventory.
- **Last-in, first-out (LIFO):** The last item put into inventory is the first item taken out of inventory. LIFO produces an inventory of older items. The total cost of inventory is determined by multiplying the unit cost of the oldest items in inventory by the number of units in inventory.
- **Weighted average:** This method determines the average cost of items placed in inventory and then multiplies the average cost by the number of units in inventory.
- **Specific identification:** This method determines the actual cost of each item in inventory. Specific identification is used when inventory items are easy to identify and when the cost of each inventory item is high.

The organization's management must determine which method is best for the organization. Problem 12.1 demonstrates how the first three inventory methods work. (Specific valuation would not be applicable in this situation.)

Costs of Inventory

To minimize the total costs of inventory, the materials manager must have a good understanding of inventory costs.[1] Inventory costs are reflected in the following issues:

- How much of an item to order each time
- When to order the item
- The cost of the item

PROBLEM 12.1
Inventory Valuation

ABC Outpatient Clinic purchased surgical dressing trays at the following dates and amounts.

	Units	Price	Total
January 1 beginning balance	100	$10	$1,000
March 1 purchase	400	12	4,800
May 1 purchase	400	13	5,200
July 1 purchase	300	14	4,200
September 1 purchase	200	14	2,800
November 1 purchase	100	15	1,500
Total	1,500		19,500
Ending inventory on Dec. 31	150		

Using FIFO, LIFO, and weighted average, what is the ending cost of inventory?

FIFO (ending inventory is composed of the most recent 150 trays purchased)

	Units	Price	Total
November 1 cost	100	$15	$1,500
September 1 cost (apply 50 trays)	50	14	700
Ending inventory	150		2,200
			or $14.67 per tray

LIFO (ending inventory is composed of the earliest 150 trays purchased)

	Units	Price	Total
January 1 cost	100	$10	$1,000
March 1 cost (apply 50 trays)	50	12	600
Ending inventory	150		1,600
			or $10.67 per tray

(continued)

PROBLEM 12.1
Inventory Valuation *(continued)*

Weighted average (ending inventory is the average cost per item multiplied by the ending inventory in units)

$$\frac{\$19{,}500}{1{,}500} = \$13.00 \text{ per unit} \times 150 = \$1{,}950$$

Purchasing Cost

Expressed formulaically, purchasing cost PD is the total cost paid to vendors for a specific item during an accounting period, or year. Purchasing cost is derived by multiplying the price of the item P per unit paid to the vendor by the demand D, or the annual amount of the item used:

$$\text{Purchasing cost} = PD$$

Ordering Cost

Ordering cost O is the administrative cost associated with placing a single order for the inventory item. Ordering cost includes the costs of

- writing specifications,
- soliciting bids,
- evaluating and awarding bids,
- preparing and signing the contract,
- preparing the purchase order,
- receiving the items, and
- accounting for and paying the invoice.

Total ordering cost associated with an inventory item is dependent on the number of orders placed for the item. The number of orders is derived by dividing demand by the size of a single order, called quantity Q. Total ordering cost for an item in inventory is then derived by multiplying the number of orders per year by the ordering cost:

$$\text{Total ordering cost} = \frac{D}{Q} O$$

Carrying Cost

Carrying cost is the cost of holding an inventory of items. When an organization holds items in inventory, carrying costs include an opportunity cost at least equal to the average cost of inventory holdings $P\frac{Q}{2}$, derived by multiplying the price of the item P by the average number of items in inventory $\frac{Q}{2}$, multiplied by the interest rate I at which the organization could have invested:

$$\text{Opportunity cost} = IP\frac{Q}{2}$$

Carrying cost also includes a holding cost. Holding cost includes the costs of storing, securing, and insuring the items in inventory, and it is derived by multiplying the holding cost per unit (H) by the quantity Q ordered each time:

$$\text{Holding cost} = HQ$$

Therefore, carrying cost can be derived by adding holding cost HQ and opportunity cost $IP\frac{Q}{2}$:

$$\text{Carrying cost} = HQ + IP\frac{Q}{2}$$

Stock-Out Cost

Stock-out cost S is the cost associated with having insufficient inventory holdings to meet demand (i.e., running out of the item in inventory). Stock-out cost includes the purchasing costs and ordering costs associated with a stat (immediate) order, and the intangible costs of loss of goodwill among the organization's medical staff and patients. If the stock-out results in injury or death for the patient, the stock-out cost would include the cost associated with this adverse event. The stock-out cost is derived on a case-by-case basis.

stock-out cost
The cost of running out of inventory on an item, such as the cost of making a rush order.

Overstock Cost

Overstock cost (expressed formulaically as L) is the cost associated with having more than enough inventory holdings to meet demand. Overstock cost includes the carrying cost associated with stocking items for additional accounting periods until the organization uses and expenses the items.

overstock cost
The cost of carrying more inventory than demand calls for.

Total Cost

The total cost TC formula produces the minimum costs associated with keeping a specific item in inventory for a period of one year, and it is derived by adding purchasing cost PD, total ordering cost $(\frac{D}{Q})O$, carrying cost $(HQ + IP[\frac{Q}{2}])$, stock-out cost S, and overstock cost L:

$$\text{Total cost} = PD + \left(\frac{D}{Q}\right) O + \left(HQ + IP\left[\frac{Q}{2}\right]\right) + S + L$$

The total cost formula can provide a basis for a variety of real-world situations the manager may face. For instance, a vendor offers a manager a 10 percent discount on price if the vendor can reduce the number of deliveries per year to four. In this situation, the total cost TC formula changes based on the new information: price P becomes P – 10 percent, and quantity Q becomes $\frac{D}{4}$. After reworking the TC formula, if adjusted total cost is less than the original total cost, the manager should accept the vendor's offer.

Here's another example. If the manager has $10,000 budgeted for an inventory item and must ask the vendor for a discount on price, TC is $10,000, and the unknown variable is price P. But before calculating the total cost formula in this example, the economic order quantity Q_e must be calculated.

Economic Order Quantity and Reorder Point

economic order quantity
The number or amount of items that should be ordered each time to result in the minimum total inventory costs.

The **economic order quantity**, EOQ or Q_e, is the number or amount of items that should be ordered each time to result in the minimum total inventory costs associated with the item. The Q_e formula is

$$Q_e = \sqrt{\frac{2DO}{IP + 2H}}$$

The Q_e model makes the following assumptions:

- Demand is fixed and constant during the year.
- Lead time for placing orders is constant.
- No discounts are offered for quantity orders.
- No stock-out or overstock costs exist.

These assumptions may be unrealistic in most healthcare organizations. However, in organizations where demand fluctuates weekly, the fluctuations tend to cancel out so that seasonal demand, or annual demand, appears constant (Siegel and Shim 2006). Calculation of the reorder point RP requires knowledge of the lag time in receiving orders, or how

many days occur between ordering an item and receiving the item. Thus, the reorder point in units is the demand during the lag time, and the reorder point in days is the lag time.

Problem 12.2 demonstrates the economic order quantity Q_e formula, the total cost TC formula, and the reorder point.

PROBLEM 12.2
Economic Order Quantity Q_e, Total Cost TC, and Reorder Point

Find the Q_e, the total cost, and the reorder point in units given:

Price P	= $10
Annual demand D	= 10,000 units, with a constant daily demand
Order cost O	= $10 per order
Interest I	= 7 percent
Holding cost H	= $.10 per unit
Lag time	= 5 days

Find the Q_e.

$$Q_e = \sqrt{\frac{2DO}{IP + 2H}}$$

$$Q_e = \sqrt{\frac{2(10{,}000)(10)}{(.07)(10)+(2)(.10)}}$$

$$Q_e = 471 \text{ units}$$

Find the total cost.

$$TC = PD + \frac{D}{Q_e}O + \left(HQ_e + IP\frac{Q_e}{2}\right)$$

$$TC = (10)(10{,}000) + \frac{10{,}000}{471}(10) + \left[(.10)(471) + (.07)(10)\left(\frac{471}{2}\right)\right]$$

$$TC = \$100{,}424$$

Find the reorder point in units.

$$RP = \frac{D}{365} \times 5, \text{ or } RP = \frac{10{,}000}{365} \times 5, \text{ or } RP = 137 \text{ units}$$

Find the number of orders to be placed in a year.

$$\text{Orders per year} = \frac{D}{Q} \text{ or } \frac{10{,}000}{471}, \text{or } 21.2$$

Find the number of days between orders.

$$\text{Days between orders} = \frac{365}{\text{Orders per year}}, \text{or } \frac{365}{21.2}, \text{ or } 17.2$$

(continued)

PROBLEM 12.2
Economic Order Quantity Q_e, Total Cost TC, and Reorder Point *(continued)*

Find the carrying cost.

$$\text{Carrying cost} = HQ_e + IP\frac{Q_e}{2}, \text{ or } \left[(.10)(471) + (.07)(10)\left(\frac{471}{2}\right)\right], \text{ or } \$211.95$$

Find the holding cost.

$$\text{Holding cost} = HQ_e, \text{ or } \$47.10$$

Find the opportunity cost.

$$\text{Opportunity cost} = IP\frac{Q_e}{2}, \text{ or } (.07)(10)\frac{471}{2}, \text{ or } \$164.85$$

Find the cost of the average inventory.

$$\text{Average inventory cost} = P\frac{Q_e}{2}, \text{ or } (10)\frac{471}{2}, \text{ or } \$2{,}355$$

Find the volume of the average inventory.

$$\text{Volume of the average inventory} = \frac{Q_e}{2}, \text{ or } \frac{471}{2}, \text{ or } 235.5 \text{ units}$$

The vendor offers a 10 percent discount on price if allowed to make equal monthly deliveries. Should the vendor's offer be accepted?

Find the total cost based on the terms of this offer, TC2, and compare with TC.

Price P = $9.00

Quantity $Q = \frac{10{,}000}{12}$, or 833 units

$$TC2 = (9)(10{,}000) + \frac{10{,}000}{833}(10) + (.10)(833) + (.07)(9)\left(\frac{833}{2}\right)$$

$$TC2 = \$90{,}465$$

Yes, the vendor's offer should be accepted because $90,465 (TC2) is less than $100,424 (TC).

Managing Inventory When Uncertain Demand Exists

In problem 12.2, demand was constant. Each day the organization used the same amount of the product; daily demand was 10,000 ÷ 365 = 27.4 units. However, a constant demand is unlikely in most healthcare organizations. Given an uncertain demand, the probability of stock-outs and overstocks increases, as shown in exhibit 12.1. Measuring the costs associated with stock-outs and overstocks is admittedly difficult, but assume that stock-out cost

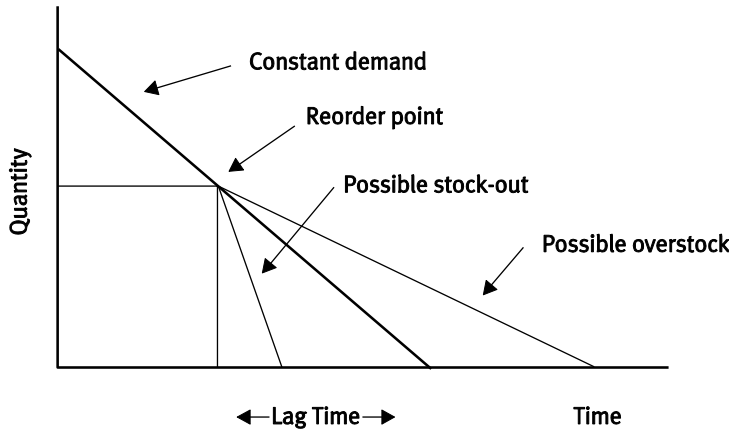

Exhibit 12.1
Inventory Demand

Source: Adapted from Berman, Kukla, and Weeks (1994), 287.

was $7.50 per unit and overstock cost was $2.00 per unit in problem 12.2.

To determine the reorder point RP under conditions of uncertain demand, the organization needs to know the costs associated with stock-outs and overstocks, and the probability of a stock-out based on the history of the inventory item (see problem 12.3). By multiplying the stock-out or overstock cost by the probability of occurrence, the projected cost can be calculated for each reorder point. For example, at a reorder point of 135 units and a demand of 136 units, one additional unit is needed at a stock-out cost of $7.50, which is then multiplied by the chance of that happening (0.25), for a cost in that specific cell of $1.88. In problem 12.3, the low-cost solution is to establish a reorder point at 138 units, which will minimize the stock-out and overstock costs associated with an uncertain demand (Berman, Kukla, and Weeks 1994).

MINI-CASE STUDY

Imagine that you are the administrator of a 15-physician group practice. After completing a physical inventory, you have concluded that the practice has about three times more inventory than is needed based on current demand. You need to meet with the physicians and prove that they have excess inventory. What would you include in your presentation?

Evaluating Inventory Performance

The ratio most often used to evaluate inventory performance is **inventory turnover**, which measures the number of times an organization goes through its inventory relative to operating revenue. The average inventory turnover median for all hospitals reporting to Optum (2017) from 2015 audited financial statements was 53.1.

inventory turnover
A ratio that measures how many times an organization goes through its inventory relative to its operating revenue.

PROBLEM 12.3
Reorder Point Under Conditions of Uncertainty

Find the reorder point under conditions of uncertainty, given the following information:

Stock-out cost = $7.50 per item

Overstock cost = $2.00 per item

	Potential Demand					
	135	136	137	138	139	
Probability	.10	.25	.30	.25	.10	
Reorder Point						**Cost**
135	.00	1.88	4.50	5.63	3.00	$15.01
136	.20	.00	2.25	3.75	2.25	8.45
137	.40	.50	.00	1.88	1.50	4.28
138	.60	1.00	.60	.00	.75	2.95
139	.80	1.50	1.20	.50	.00	4.00

Answer: The low-cost reorder point under conditions of uncertainty is 138 units at $2.95.

Source: Adapted from Berman, Kukla, and Weeks (1994), 290.

$$\text{Inventory Turnover} = \frac{\text{Total operating revenue} + \text{Other income}}{\text{Inventory expense}}$$

Low values indicate overstocking and thus an inappropriate investment in nonproductive assets. This ratio does show directionality; higher values are considered to be better. Because of their size, healthcare systems enjoy considerable purchasing power and often receive medical supplies on consignment. This means that the vendors do not charge the system until the supply item is used, so inventory value is very low.

Chapter Key Points

- Inventory management is the management and control of inventory, or items that have an expected useful life of fewer than 12 months.
- Materials management is the control of inventory, services, and equipment from acquisition to disposition.

- Inventory management is necessary to provide patients with high-quality supplies at the right time at the lowest possible cost.
- Inventory is valued using FIFO, LIFO, weighted average, and specific identification.
- The economic order quantity, the total cost, and the reorder point are calculated using formulas.
- The best way to evaluate inventory management is the inventory turnover ratio.

Discussion Questions

1. What is the definition of *inventory management*?
2. Why is proper inventory management important?
3. How would you explain the four methods used to value inventory?
4. How can an organization reduce the value of inventory and the number of items in inventory?
5. What does an economic order quantity (EOQ or Q_e) tell management?
6. What does the total cost formula tell management?
7. What is the reorder point?
8. What is the best way to evaluate inventory management performance?

Note

1. Several formulas are used to determine inventory costs. This book uses the formula and cost descriptions from the classic Berman, Kukla, and Weeks (1994) book because of the level of detail.

Inventory Valuation

Inventory Valuation Practice Problem

XYZ Central Billing Office purchased magnetic storage disks on the following dates and for the following amounts:

	Units	Price ($)	Total ($)
January 1 beginning balance	10	15	150
March 1 purchase	30	14	420
May 1 purchase	40	14	560
July 1 purchase	10	13	130
September 1 purchase	20	12	240
November 1 purchase	10	12	120
Total	**120**		**1,620**
Ending inventory on Dec. 31	**35**		

Using FIFO, LIFO, and weighted average, what is the ending cost of inventory?

Inventory Valuation Practice Problem Solution

FIFO (ending inventory is composed of the most recent 35 disks purchased)

	Units	Price ($)	Total ($)
November 1 costs	10	12	120
September 1 costs	20	12	240
July 1 purchase (apply 5 disks)	5	13	65
Ending inventory	**35**		**425**
			or 12.14 per disk

LIFO (ending inventory is composed of the earliest 35 disks purchased)

	Units	Price ($)	Total ($)
January 1 costs	10	15	150
March 1 costs (apply 25 disks)	25	14	350
Ending inventory	**35**		**500**
			or 14.29 per disk

Weighted average (ending inventory is composed of the weighted average cost per disk times the ending inventory in units)

$$\frac{\$1,620}{120} = \$13.50 \text{ per unit} \times 35 = \$472.50$$

Inventory Valuation Self-Quiz Problem

Your radiology department purchased film on the following dates and for the following amounts:

	Units	Price ($)	Total ($)
January 1 beginning balance	10	150	1,500
July 1 purchase	10	155	1,550
December 1 purchase	20	160	3,200
Total	**40**		**$6,250**
Ending Inventory	**25**		

Using FIFO, LIFO, and weighted average, what is your ending cost of inventory?

Economic Order Quantity

Economic Order Quantity Practice Problem

Find the economic order quantity Q_e and total cost TC, assuming the following:

Price P = $100
Annual demand D = 1,000
Order cost O = $10
Interest I = 5%
Holding cost H = $.50
Lag time = 5 days

$$Q_e = \sqrt{\frac{2DO}{IP + 2H}}$$

$$TC = PD + \frac{D}{Q_e}O + (HQ_e + IP\frac{Q_e}{2})$$

Given a constant demand for the product, how many orders will be made in one year?

Given a constant demand and a lag time of five days between order and receipt, how many units will be in stock when you place an order?

Given a constant demand, how many days will elapse between orders?

Economic Order Quantity Practice Problem Solution

$$EOQ = Q_e \sqrt{\frac{2\,(1{,}000)\,(10)}{(.05)\,(100) + 2\,(.5)}} = 58 \text{ units}$$

$$TC = (100)\,(1{,}000) + \frac{1{,}000}{58}\,(10) + (.5 \times 58) + (.05)\,(100)\,\frac{58}{2}$$

$$TC = \$100{,}346$$

$$\frac{1{,}000}{58} = 17.24 \text{ orders per year}$$

$$\frac{1{,}000}{365} \times 5 = 13.70 \text{ units on the shelf}$$

$$\frac{365}{17.24} = 21.17 \text{ days between orders}$$

Economic Order Quantity Self-Quiz Problem

Find the Q_e and TC, assuming the following:

P = $5
D = 20,000
O = $10
I = 10%
H = $.75

$$Q_e = \sqrt{\frac{2DO}{IP + 2H}}$$

$$TC = PD + \frac{D}{Q_e} O + (HQ_e + IP\frac{Q_e}{2})$$

Given a constant demand for the product, how many orders will be made in one year?

Given a constant demand and a lag time of five days between order and receipt, how many units will be in stock when you place an order?

Given a constant demand, how many days will elapse between orders?

What is the carrying cost?

What is the opportunity cost?

What is the cost of the average inventory?

What is the volume of the average inventory?

The hospital has only $90,000 budgeted for the product. What is the new price the hospital must negotiate with the vendor to make budget?

Reorder Point Under Conditions of Uncertainty

Reorder Point Under Conditions of Uncertainty Practice Problem

Find the low-cost reorder point under conditions of uncertainty given the following information:

Stock-out cost = $5.00 per item					
Overstock cost = $1.00 per item					
Probability of	.10	.25	.30	.25	.10
meeting demand	100	101	102	103	104

Reorder Point Under Conditions of Uncertainty Practice Problem Solution

	Potential Demand				
	100	101	102	103	104
Probability	.10	.25	.30	.25	.10

Reorder Point						Cost ($)
100	.00	1.25	3.00	3.75	2.00	10.00
101	.10	.00	1.50	2.50	1.50	5.60
102	.20	.25	.00	1.25	1.00	2.70
103	.30	.50	.30	.00	.50	1.60
104	.40	.75	.60	.25	.00	2.00

Conclusion: The low-cost reorder point under conditions of uncertainty is 103 units at $1.60.

Reorder Point Under Conditions of Uncertainty Self-Quiz Problem

Find the low-cost reorder point under conditions of uncertainty given the following information:

Stock-out cost = $6.00 per item
Overstock cost = $1.00 per item

Probability of	.10	.25	.30	.25	.10
meeting demand	100	101	102	103	104

RECOMMENDED READINGS—PART III

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PART IV

RESOURCE ALLOCATION

CHAPTER 13

STRATEGIC AND OPERATIONAL PLANNING

One fundamental misperception is that strategic planning outside of healthcare (in for-profits) is financially driven, but in not-for-profit healthcare it isn't because we're not sophisticated. The reality is that although there is more financial integration with strategic planning outside of healthcare, it's not the case that "they do it right" and "we don't." And healthcare organizations are making good progress in linking financial planning and strategic planning and closing whatever gap that may still exist.

Alan Zuckerman (2007), healthcare industry strategist

Learning Objectives

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

- Define and understand the importance of planning
- Identify the prerequisites to the planning process
- Explain the types of planning
- Compare and contrast strategic and operational planning
- List in order and explain each step in the planning process
- Discuss the methods used to evaluate the planning process

Introduction

Everyone agrees that planning—especially strategic planning—is critical for economic survival in today's turbulent environment. However, planning is a management function often neglected by healthcare managers. In a 2006 survey of 138 Texas hospitals, 13 percent did not have a strategic plan; for the hospitals that did have a strategic plan, 50 percent did not delegate the responsibility for the plan to the chief executive officer (CEO). The average board member involvement was rated at 4.86 on a 7.0 scale. All three characteristics—existence of a strategic plan, delegation of plan responsibilities to the CEO, and board member involvement in the development of the strategic plan—had a statistically significant effect on higher financial performance (Kaissi and Begun 2008).

Definition of *Planning*

Planning as a management function is the process of deciding in advance what must be done in the future. Planning consists of establishing the goals, objectives, policies, procedures, methods, and rules necessary to achieve the purposes of the organization. Planning precedes, and serves as a framework for, the other management functions of organizing, staffing, influencing, and controlling. Effective planning is a continuous process; managers are responsible for planning for the appropriate use of resources in their areas of responsibility in concert with the operational and strategic direction of the organization. In the absence of effective planning, managers would engage in random activities. In healthcare organizations where customers demand a high degree of predictable outcomes, such random activities on the part of managers would have a disastrous effect (Dunn 2016).

Prerequisites to Planning

As described in the classic text by Berman, Kukla, and Weeks (1994), before effective planning can begin, the organization must meet certain requirements. First, the organization must have a sound organizational structure that ensures management accountability for the planning process. Second, the organization must have a well-defined chart of accounts that corresponds with the organizational structure. Third, the organization must have a prompt and accurate accounting system that ensures financial accountability for the planning process. Fourth, the organization must have a comprehensive management information system that captures nonfinancial information for each department.

Types of Planning

Planning can be classified by the three characteristics of planning horizon, management approach, and design characteristics.

Planning Horizon

Planning horizon is the length of time management is looking into the future. Strategic plans look three to ten years into the future. Operating plans look one year into the future.

planning horizon
The length of time management is looking into the future.

Management Approach

Planning can also be classified by management approach, or top-down versus bottom-up planning. These approaches correspond closely with top-down and bottom-up budgeting, to be discussed in chapter 14. In *top-down planning*, senior management, which includes the division heads or vice presidents, develops the plan with little or no input from subordinates. The advantage of such a design is that senior management may be in the best position to objectively view the future. The disadvantage of the top-down design is that plan implementation may be difficult if subordinates have little or no input.

In *bottom-up planning*, subordinates develop the plan and submit it to senior management for approval. The advantage to bottom-up planning is the commitment to the plan by those who developed it. The disadvantage is that subordinates may not be in the best position to view the future.[1]

In most cases, a combination of the top-down and bottom-up designs is used, with senior management deciding on plan parameters and subordinates submitting plans within those parameters.

Design Characteristics

Planning can also be classified by design characteristics, which also correspond closely with the design characteristics of budgeting, as will be discussed in chapter 14.

Incremental Versus Zero-Base Planning

Incremental planning requires planning only for changes, such as new equipment, new positions, and new programs. Incremental planning assumes that all current operations, including positions and equipment, are essential to the continued mission of the organization and that all current operations are working at peak performance. The advantages are the ease of incremental planning, the minimal time commitment required to plan, and the support of a larger organizational culture. The principal disadvantage of incremental planning is the assumption that all current operations are essential in a healthcare environment that is changing so rapidly.

incremental planning
Planning only for changes, such as new equipment. The assumption in incremental planning is that current operations are already optimal.

Conversely, **zero-base planning** takes nothing for granted and requires rejustification for existing equipment, positions, and programs, as well as justification for new equipment, positions, and programs. Therein lies the principal advantage of zero-base planning: In

zero-base planning
Planning that requires all operations to be justified anew; nothing is assumed to be already optimal.

a rapidly changing environment where reimbursement is moving away from cost-based approaches toward prospective payment per case or per enrollee, zero-base planning can eliminate unnecessary programs and improve operations. Disadvantages include the large time commitment required, employee fear and anxiety, and significant administrative and communication requirements (Person 1997).

Comprehensive Versus Limited-in-Scope Planning

Comprehensive planning integrates the strategic plan and the operational plan into one document. The advantage is the recognition that short-term objectives affect long-term goals. *Limited-in-scope planning* segregates the plans. Most organizations integrate the plans at the board and executive management level of the organization, but the issue is the level at which the plans should be segregated.

Fixed Versus Flexible Plans

Fixed plans assume that volumes, and related revenues and variable expenses, remain constant during the year. Fixed plans are easy to project, but they are unrealistic for healthcare organizations, whose volumes fluctuate during the year and whose variable expenses, which are dependent on volumes, account for about half of an organization's operating expenses (Kalman et al. 2015). *Flexible plans* take into account fluctuations in volumes, at least within ranges expressed as probabilities, and adjust variable expenses accordingly.

Discrete Versus Continuous Plans

Discrete plans apply to a fixed period of time, usually a year. At the end of the year, a new plan begins. Discrete plans are relatively easy to prepare, but it can be difficult to plan things in 12-month increments because circumstances often change. Furthermore, discrete plans can be challenging to some managers who know that if they exceed objectives at the end of the year, they will receive new, more rigorous objectives for the coming year. *Continuous plans*, sometimes referred to as *rolling plans*, are updated continuously so that year end never occurs. Department managers who manage wisely roll over their efforts to the next month.

corporate planning
A business planning approach based on market needs. It consists of four major stages: strategic planning, operational planning, budgeting, and capital budgeting.

Corporate Planning

Most healthcare organizations have moved away from *facility planning*—planning based on their own needs—which was popular under retroactive, cost-based reimbursement. They have instead adopted a business planning approach based on market needs, called **corporate planning**. Corporate planning consists of four major stages (see exhibit 13.1):

1. *Strategic planning*: determines the organization's overall direction in the next three to ten years
2. *Operational planning*: converts the strategic plan into the next year's objectives
3. *Budgeting*: converts the operating plan into budgets for revenues, expenses, and cash
4. *Capital budgeting*: converts the operating plan into budgets for capital expenditures

Strategic planning and operational planning are discussed in the following sections of this chapter. Budgeting is covered in chapter 14 and capital budgeting in chapter 15. As shown in exhibit 13.1, the corporate planning process consists of 22 steps that progress through the four stages within the planning horizon.

Strategic Planning

Strategic planning forces managers to anticipate where they want the healthcare organization to be in three to ten years; to identify the resources that will be necessary to get there; and to preview the provision of healthcare services at the end of the planning horizon. Strategic planning also provides the starting point for the operating plan and budget.

strategic planning Long-range planning that anticipates where an organization will be in three to ten years.

The governing board has the overall responsibility for strategic planning for the organization, but it should actively seek input from the organization's stakeholders, which are those constituents with a vested interest in the organization. Certainly, the community (which may be represented by the board members), the medical staff, and organization employees should provide input. While a strategic plan is mandated by both Medicare and The Joint Commission, healthcare organizations sometimes offer excuses for not fully engaging in the planning process. Excuses range from a lack of time to a rapidly changing future. Paradoxically, if organizations spent more time planning, they would end up having more time to execute the plans. Organizations with serious planning processes position themselves to control the turbulent future, rather than simply react to it. Often financial management, including the chief financial officer (CFO), is not involved in the planning process until the budgeting stage. The CFO might be viewed as an impediment to the vision needed for the strategic plan to work. However, the CFO is necessary to provide input to the *strategic financial plan*—that is, the ability of the organization to fund the capital and operating costs necessary to make the strategic plan successful.

The Planning Process

The planning process involves 13 steps, as outlined in the sections that follow.

Exhibit 13.1
Corporate Planning Process

Stage	Planning Horizon
Strategic Planning	**3–10 years out, revised annually**
1. Validate mission and strategic interpretations.	
2. Assess the external environment.	
3. Assess the internal environment.	
4. Formulate the vision.	
5. Establish strategic thrusts, or goals.	
6. Identify critical success factors.	
7. Develop primary, or core, objectives.	
8. Develop the strategic financial plan.	
Operational Planning	**1 year out**
9. Develop secondary, or department, objectives.	
10. Develop policies.	
11. Develop procedures.	
12. Develop methods.	
13. Develop rules.	
Budgeting	**1 year out**
14. Project volumes.	
15. Convert volumes into revenues.	
16. Convert volumes into expense requirements.	
17. Adjust revenues and expenses as necessary.	
Capital Budgeting	**1–3 years out**
18. Identify and prioritize requests.	
19. Project cash flows.	
20. Perform financial analysis.	
21. Identify nonfinancial benefits.	
22. Evaluate benefits and make decisions.	

Step 1: Validate Mission and Strategic Interpretations

The first step in the corporate planning process—also the first of the eight steps in the strategic planning stage—is for the executive management team, which includes the governing body and the CEO, to validate the organization's mission. The mission is a broad statement of organizational purpose that can be easily communicated throughout both the organization and the community. Because mission statements are broad, organizations should not need to change them frequently; mission statements should survive to the end of the planning horizon. A study of more than 200 *Fortune* 500 companies identified common characteristics of effective mission statements (Pearce and David 1987). The mission statements

- target customers and markets,
- indicate the principal services delivered by the organization,
- specify the geographic area in which the organization intends to operate,
- identify the organization's philosophy,
- confirm the organization's self-image, and
- express the organization's desired public image.

Strategic interpretations provide the means for executive management to interpret the mission statement by recognizing the changing character of the healthcare industry and the changing needs of the community. Strategic interpretations may also prioritize organizational purposes when the mission statement includes multiple purposes that might conflict when operationalized. Strategic interpretations are seldom directly stated in any form and are more often represented in the actions of executive management. For instance, executive management may show a preference for one purpose over another through the budget allocation process.

Step 2: Assess the External Environment

The second step in the corporate planning process and the strategic planning stage is to assess the external environment, including factors that might have an effect on present or future performance. To maintain objectivity and guard against vested interests, a governing body or outside consultants should be responsible for assessing both the external and internal environments. The first part of the assessment should include a determination on the direction of the industry as a whole by investigating national trends. Some of the current national trends for the healthcare industry include

- decreasing reimbursement from federal and state health programs as government tries to slow rising healthcare costs;
- increasing popularity of managed care programs (and capitation), especially among payers including employers;
- increasing consolidation as a result of competition;
- continuing expansion into businesses outside the traditional healthcare industry;
- increasing growth in outpatient care, preventive care, and innovative alternative delivery systems;
- declining numbers of rural and public teaching hospitals; and
- decreasing numbers of uninsured patients as the Affordable Care Act (ACA) is implemented and more people are insured.

The second part of the external environment assessment should determine the direction of the local market and should investigate the following elements:

- Demographic and socioeconomic characteristics of the primary and secondary service areas and their effect on present and future utilization patterns
- Key economic and employment indicators and their effect on present and future utilization patterns
- Patient migration patterns, to determine from where patients and potential patients come
- Market share statistics for key competitors, to determine market strengths and weaknesses
- Competitor profiles, including strengths and weaknesses, use by service, use by payer, exclusive and other managed care contracts, extent of horizontal and vertical integration, potential expansion plans, and cost comparisons
- A managed care profile, to determine present and future managed care penetration
- A physician profile, to determine numbers, ages, and specialists available in the market

Any significant differences between national trends identified in the first part of the external environment assessment and the local trends identified in the second part of the

external environment assessment should be thoroughly analyzed to determine the reasons for the differences.

Step 3: Assess the Internal Environment

The third step in the corporate planning process and the strategic planning stage is for the governing body or outside consultants to assess the internal environment, including factors that might have an effect on performance either now or in the future. The first part of the assessment should determine the direction of the organization by investigating organizational trends. Some of the organizational trends for analysis might include

- patient composition, including utilization patterns (i.e., patient days, outpatient visits, admissions, discharges, lengths of stay, age, payer, patient origin);
- medical staff composition, including use patterns by specialty, age, practice (solo versus group), admissions, lengths of stay, and board certification;
- agreements with payers and managed care organizations;
- a financial assistance policy that is readily available to the public;
- financial ratios, including liquidity, profitability, activity, capital structure, and operating ratios (see chapter 3); and
- Joint Commission quality measures and safety indicators.

Some organizations use a SWOT (strengths, weaknesses, opportunities, and threats) analysis to assess the internal environment. A SWOT analysis forces the organization to identify its strengths and weaknesses during internal assessment. Then the organization identifies opportunities for additional market penetration with existing or new programs and threats from competitors that might reduce the organization's chances for success (Dunn 2016).

The ACA requires tax-exempt hospitals to complete a community health needs assessment every three years and to make the assessment, along with audited financial statements, available to the public. The assessment must include a treasurer review of community benefit and an explanation for why certain community health needs are not being addressed. The presumption is that community health needs should be met and financed with the difference between tax savings and the cost of providing community benefit.

Step 4: Formulate the Vision

The fourth step in the corporate planning process and the strategic planning stage is for the executive management team to formulate a *vision*—a view of the future that the team

members think gives the organization the best chance of accomplishing its mission. Executive management bases its vision on the information obtained from assessing the external and internal environments. It must communicate its vision throughout the organization. Effective vision statements have certain characteristics in common, as described in the still-timely text *Thriving on Chaos: Handbook for a Management Revolution* (Peters 1988). They should

- be inspiring first of all to employees, but also to customers;
- be clear, challenging, and about excellence;
- make sense to the community, be flexible, and stand the test of time;
- be stable, but change when necessary;
- provide direction in a chaotic environment;
- prepare for the future while honoring the past; and
- be easily translated into action.

Step 5: Establish Strategic Thrusts

strategic thrusts
Broad statements of significant results that an organization wants to achieve related to its vision. Also called *goals*.

The fifth step in the corporate planning process and the strategic planning stage is for executive management to establish **strategic thrusts**, or *goals*, which are broad statements of significant results that the organization wants to achieve related to its vision. Strategic thrusts should be limited in number, stable and enduring, and, taken together, comprehensive to the point that they provide meaningful results for all components of the organization's mission (Dunn 2016).

Step 6: Identify Critical Success Factors

critical success factors
Subgoals of a plan, monitored during performance management to measure progress of the overall plan.

The sixth step in the corporate planning process and the strategic planning stage is for executive management to identify **critical success factors** that will measure progress toward achieving the plan (Dunn 2016). The assessment of the environment should introduce both strategic thrusts and critical success factors. Critical success factors are organization specific, but most healthcare organizations will include critical success factors from the following areas:

- Inpatient use and market share
- Outpatient use and market share
- Managed care use and market share
- Medical staff profiles and activity levels
- Accessibility indicators

- Cost-effectiveness indicators
- Efficiency indicators
- Quality indicators

Step 7: Develop Primary, or Core, Objectives

The seventh step in the corporate planning process and the strategic planning stage is for executive management to develop primary, or core, objectives that support the strategic thrusts or goals. Primary objectives should encompass the entire organization. Organizations have several primary objectives; the real challenge lies in balancing them. See exhibit 13.2 for a sample strategic plan.

Exhibit 13.2
Sample Not-for-Profit Nursing Home Strategic Plan

Mission
Our mission is to be the nursing home of choice in our community by providing high-quality, competitively priced skilled nursing services.

Interpretation
To provide a skilled nursing facility to those living in our community in a cost-effective manner to ensure financial survival.

Vision
Our vision is to expand our services in the next five years to include a residential care facility and a hospice facility while maintaining a high-quality, cost-effective skilled nursing facility.

Strategic Thrusts
1. To provide high-quality skilled nursing care
2. To provide cost-effective skilled nursing care
3. To expand service without harming quality or increasing costs

Critical Success Factors
1. Continued accreditation
2. Continued licensure
3. Continued favorable physician relations
4. Cost increases not to exceed 3 percent per year
5. Residential care facility and hospice to open within five years

Primary Objectives
1. Initiate total quality management program
2. Initiate patient satisfaction surveys
3. Initiate physician satisfaction surveys
4. Initiate reengineering program to improve processes and reduce costs
5. Build residential care facility
6. Build hospice facility

Step 8: Develop the Strategic Financial Plan

The eighth step in the corporate planning process and the last step in the strategic planning stage is for the governing body and CEO to develop the strategic financial plan. The strategic financial plan is the link between the strategic plan, which looks three to ten years out, and the operating plan, which looks one year out. In essence, the strategic financial plan is the quantification of a series of strategic planning policy decisions that will answer whether the organization can make progress toward accomplishing its strategic plan over the next ten years. These decisions are based on the answers to the following questions regarding the five-year planning horizon (Berger 2007):

- How much cash should the organization have five years from now (days cash on hand ratio)?
- How much debt can the organization afford to take on five years from now (debt service coverage ratio)?
- What profitability targets are necessary to meet the cash and debt metrics identified (operating margin and excess margin ratios)?
- What is the required level of operating change necessary to meet the profitability targets identified (projected increases in net revenues and decreases in operating expenses)?
- What are the organization's strategic capital requirements over the next five years (five-year capital spending projection)?
- What is the financing method for the capital necessary to meet the capital requirements identified (debt, equity, lease, or philanthropy)?

All of the industry ratios identified earlier can be obtained by rating agencies, which might rate the hospital in the future if part of the financing will be dependent on bonds. Progress toward these ratios is also an excellent way for the governing board to evaluate the CEO on an annual basis (Nowicki 2004).

Value of Strategic Planning

The value of strategic planning lies in its systematic approach to dealing with an uncertain future. Many organizations become disillusioned with strategic planning when their plans are not met. These plans often have too narrow a focus—the narrower the focus, the less likely an organization is to accomplish the plan. Strategic planning that establishes the organization's overall direction without attempting to be specific has the following benefits:

- It integrates the mission, vision, strategic thrusts, and primary objectives as described in the strategic plan with the secondary objectives, policies, procedures, methods, and rules of the operating plan.
- It provides a process and time frame for making strategic decisions.
- It provides a framework for the operating plan, budget, and capital budget.

Operational Planning

For the strategic direction of the organization to be useful, the organization's managers must translate the strategic direction into small, measurable steps to be taken during the next year. **Operational planning** is the process of translating the strategic plan into a year's objectives. *Budgeting* is the process of expressing the operating plan in monetary terms and is covered in chapter 14. Many organizations have difficulty determining where strategic planning ends and operational planning begins, and where operational planning ends and budgeting begins.

operational planning The process of translating the strategic plan into a year's objectives.

Three characteristics distinguish strategic planning from operational planning:

1. *Planning horizon*: Strategic planning is for the next three to ten years, and operational planning is for the next year.
2. *Principal participants*: The governing body and executive management develop the strategic plan; the department managers develop or have significant input in the operational plan.
3. *Objectives*: Strategic planning lists primary objectives common to the entire organization, and the operating plan lists secondary objectives by division or department.

Step 9: Develop Secondary, or Department, Objectives

In the ninth step in the corporate planning process—the first step in the operational planning stage—department managers develop secondary, departmental objectives to support the strategic plan of the organization (Berman, Kukla, and Weeks 1994; Dunn 2016):

- Department objective setting should be participative. Meaningful employee participation in planning improves both morale and the chances of meeting objectives.

- Department objectives should be rigorous but attainable. The department will not progress if the objectives are easily attainable, but the department may not attempt objectives that seem too difficult.
- Department objectives should be verifiable and/or measurable to ensure progress and to reward those responsible for the progress. For Joint Commission accreditation purposes, the manager and subordinates should discuss desired outcomes and their indicators.

One method of developing department objectives is Peter Drucker's management by objectives (MBO), introduced during the 1950s (Drucker 2008). In a nutshell: (1) the manager provides subordinates with a general overview of the work to be accomplished in the coming year, (2) the subordinates propose objectives, and (3) the objectives are negotiated until final agreement. Reported advantages of MBO include directing work activity toward organizational goals, reducing conflict and ambiguity, providing clear standards for control and performance appraisals, and improving motivation. MBO is not without disadvantages, including burdensome procedures and paperwork; overemphasis on quantitative objectives at the possible expense of qualitative objectives; suboptimization of performance; and *illusionary participation*, which means that managers give the perception of participation, but the participation lacks meaningful substance, often because the subordinates sense that decisions have already been made.

Step 10: Develop Policies

The tenth step in the corporate planning process—the second step in the operational planning stage—is for department managers to develop *policies* (broad guides to thinking) that provide subordinates with general guidelines for decision making. Policies are the most common type of plan at the department level (Dunn 2016). According to Dunn, good policies have the following characteristics:

- They are issued by top management and provide managers with general guidelines for decision making.
- They are flexible, so managers can apply them to normal and abnormal circumstances.[2]
- They are stated simply and clearly. Policies should not require complex interpretation.
- They are communicated so that both managers and subordinates are aware of them. Most policies are written, which helps ensure consistent understanding.

- They are consistent with one another. Inconsistency among policies or in the application and enforcement of policies will affect morale and will likely detract from accomplishing objectives. Inconsistencies frequently occur in the enforcement of organizational policies between departments, and they can have dire consequences.[3]

Step 11: Develop Procedures

The eleventh step in the corporate planning process—the third step in the operational planning stage—is for department managers and supervisors to develop *procedures*, which are guides to action. Procedures are derived from policies, but they are considerably more specific. Procedures identify in a step-by-step fashion how to accomplish a policy. Good procedures are the result of a detailed analysis of how best to accomplish the intent of the policy. Good procedures provide the manager or supervisor with a consistent and uniform performance appraisal.

Step 12: Develop Methods

The twelfth step in the corporate planning process—the fourth step in the operational planning stage—is for department managers and supervisors to develop methods to accomplish the procedures. *Methods* are detailed, uniform actions with specific instructions and predictable outcomes.

Step 13: Develop Rules

The thirteenth step in the planning process—the fifth and final step in the operational planning stage—is for department managers to develop *rules*, which are statements that either require or forbid an action or inaction. The manager or supervisor has some flexibility in the application and enforcement of policies, procedures, and methods—but not rules. Good rules are those that everyone sees as clearly necessary for the proper order and functioning of the department.

Evaluating Plan Performance

The governing body of the organization should review the strategic plan on an annual basis and evaluate the CEO based on progress in accomplishing primary objectives. Likewise, executive management should review the operating plan, probably on a monthly or quarterly basis. It should also evaluate department managers on the basis of their progress in accomplishing secondary objectives and compliance with policies, procedures, methods, and rules. The Joint Commission requires that hospitals have a planned, systematic, hospital-wide approach to process design and performance measurement, assessment, and improvement. The relevant standard requires leaders to "establish priorities for performance improvement" (Joint Commission 2016) in the following ways:

1. Leaders set priorities for performance improvement activities and patient health outcomes.
2. Leaders give priority to high-volume, high-risk, or problem-prone processes for performance improvement activities.
3. Leaders reprioritize performance improvement activities in response to changes in the internal or external environment.

Budgeting, the next step in the corporate planning process, begins once the strategic and operating plans have been approved; budgeting consists of converting the operating plan into monetary terms.

Chapter Key Points

- *Planning* is the process of deciding in advance what must be done in the future.
- Planning can be classified several ways: by planning horizon, by management approach, and by design characteristics.
- Corporate planning has replaced facility planning for most healthcare organizations.
- Corporate planning consists of four major stages: strategic planning, operational planning, budgeting, and capital budgeting.
- Strategic planning looks three to ten years into the future and consists of several sequential steps: validating the mission and strategic interpretations; assessing the external environment; assessing the internal environment; formulating the vision; establishing strategic thrusts, or goals; identifying critical success factors; developing primary, or core, objectives; and developing a strategic financial plan.
- The value of strategic planning lies in its systematic approach toward dealing with an uncertain future.
- Operational planning is the process of translating the strategic plan into the next year's objectives and consists of several sequential steps: developing secondary, or department, objectives; developing policies; developing procedures; developing methods; and developing rules.
- The governing body of the healthcare organization is responsible for evaluating the progress of the strategic plan; the executive management of the healthcare organization is responsible for evaluating the progress of the operating plan.

Discussion Questions

1. What is the definition of *planning*? Of *strategic planning*? Of *operational planning*? What are examples of each?
2. What are the planning horizons for strategic planning and operational planning?
3. How would you explain the various management approaches to planning?
4. How would you describe each step, in order, in the strategic planning process?
5. How would you describe each step, in order, in the operational planning process?
6. How do you imagine organizations that do not engage in meaningful strategic planning would look?
7. Who is responsible for evaluating the progress of the strategic plan and the operational plan?

Notes

1. Strategic planning for the organization is the responsibility of the governing board, which often contracts the preparation of the plan to outside consultants rather than organization employees. With a planning horizon of three to ten years, employees would be likely to produce plans with vested interests, rather than a clear picture of where the organization is going. For instance, how many employees would plan to diminish or eliminate their functions, even if that seemed like the right thing to do?
2. Managers must be cautious about indiscriminately granting exceptions to policy. Although a manager wants to treat subordinates and patients with mercy, the manager must also seek justice, or fair play. The following two questions may help managers resolve the frequently faced dilemma of mercy versus justice: Can the manager afford to grant everyone with similar extenuating circumstances an exception? How can the manager make sure that the other subordinates or patients know about the exception, are encouraged to apply for the exception if circumstances warrant, and are supportive of the manager's decision to grant the exception? (See Nowicki 1998.)
3. In *St. Mary's Honor Center v. Hicks* (1993), Melvin Hicks, a black prison guard, sued a Missouri prison for civil rights violations. Hicks, who had been fired for exceeding the prison's absenteeism policy, claimed that other guards who were white had exceeded the absenteeism policy but had been given exceptions. Although Hicks lost in a 5–4 decision (the majority felt that Hicks had not proven intentional discrimination and the action could have been the result of poor management), the case had a chilling effect on the indiscriminate granting of policy exceptions.

CHAPTER 14

BUDGETING

In healthcare today, a mission that focuses only on quality is only half a mission.

Richard L. Clarke (2009), former president of the
Healthcare Financial Management Association

Learning Objectives

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

- Define and understand the importance of budgeting
- Identify the prerequisites to the budgeting process
- Explain the types of budgeting
- Outline the steps in the budgeting stage of the corporate planning process

Introduction

In *The Zero-Base Hospital*, M. W. Person emphasizes the need for budget skills for every management position in the healthcare organization:

> To function effectively in the healthcare industry in the foreseeable future, managers will need to develop specific financial skills. They will need to acquire an appreciation of volume, expense, and revenue relationships. They will need to become familiar with cost-containment strategies for their particular corner of the market. Most of all, they will need to cultivate an intimate knowledge of the details that define their operations and drive their costs, such as utilization statistics, seasonal trends, staffing models, productivity analysis, supply alternatives, inventory management, make/lease/buy options, physician practice patterns, and rate setting. (Person 1997, 67)

In short, healthcare managers must learn how to budget. Considering that most managers in healthcare organizations are specialists in fields other than financial management and that, as specialists, they have little or no formal education in budgeting, their records of accomplishment to date have been commendable. However, with healthcare costs and rapidly changing demographics at the center of public debate, and with prospective payment limiting the ability of organizations to "just raise rates" to cover expenses, tomorrow's healthcare managers clearly must do more work with fewer resources.

Definition of *Budgeting*

Budgeting is the process of converting the operating plan (discussed in chapter 13) into monetary terms. In addition to converting the operating plan into monetary terms for planning purposes, budgeting is an important way for managers to exert control. Budgets become a control standard against which superiors can easily measure the performance of subordinates. Budgeting is also an excellent opportunity for the finance staff to educate the nonfinance department managers about the relationship of revenues, expenses, and capital expenditures to the overall financial well-being of the organization.

budgeting
The process of converting the operating plan into monetary terms.

Sequentially, budgeting occurs after the steps in operational planning (described in chapter 13) have been completed. Budget information therefore does not bias operating information, especially in not-for-profit healthcare organizations. Department managers should prioritize objectives in the operating plan based on community need, not organizational profitability.

Prerequisites to Budgeting

Before effective budgeting can begin, the organization must meet several prerequisite requirements, the first four of which were introduced in chapter 13 related to planning (Berman, Kukla, and Weeks 1994; Herkimer 1988):

1. A sound organizational structure that ensures management accountability for the budgeting process
2. A well-defined chart of accounts that corresponds with the organizational structure
3. Prompt and accurate accounting systems that ensure financial responsibility for the budgeting process
4. A comprehensive management information system that captures nonfinancial information for each department
5. A budget director who is responsible for coordinating the budget process and who serves as chair of the budget committee
6. A budget committee that is responsible for establishing a budget manual and a budget calendar and assisting department managers in developing their department budgets. Budget committees usually consist of senior managers who represent the department managers in their divisions.
7. A budget manual that includes necessary strategic planning information; the organizational structure; the chart of accounts; a list of budget committee members who can assist department managers; budget forms and instructions; budget assumptions regarding items such as anticipated growth, inflation, and employee raises; and a budget calendar with important completion dates
8. The previous year's data regarding volumes, revenues, and expenses

Types of Budgets

Budgeting can be classified by management approach and by design characteristics. Many of the following budget classifications also apply to planning and were introduced in chapter 13.

Management Approach

Budgets can be classified by management approach, either with top-down or bottom-up budgeting. In *top-down budgeting*, as in top-down planning, senior management develops the budget with little or no input from department managers. The advantage of this design is that senior management may be in the best position to objectively view the future; the disadvantage is that budget implementation may be difficult if subordinates have little or no input.

In *bottom-up budgeting*, subordinates develop the budget and submit it to senior management for approval. The advantage to bottom-up budgeting, as with bottom-up

planning, is the commitment to the budget by those who developed it. The disadvantage is that subordinates may not be in the best position to view the future.

In most cases, a combination of top-down and bottom-up designs is used—senior management decides on budget parameters, and subordinates submit plans within those parameters.

Design Characteristics

Budgeting can also be classified by design characteristics; these characteristics also apply to the design characteristics of planning (described in chapter 13).

Incremental Versus Zero-Base Budgeting

Incremental budgeting requires budgeting only for changes such as new equipment, new positions, and new programs. Incremental budgeting assumes that all current operations, including positions and equipment, are essential to the continued mission of the organization and that all current operations are working at peak performance. The advantages of incremental budgeting are its ease, the minimal time commitment required to prepare the budget, and the support of a larger organizational culture. The main disadvantage is the assumption that all current operations are essential in a healthcare environment that is changing rapidly.

incremental budgeting Budgeting only for changes, such as new equipment. The assumption in incremental budgeting is that the current budget is already optimal.

Conversely, **zero-base budgeting** takes nothing for granted and requires rejustification for existing equipment, positions, and programs, as well as justification for new equipment, positions, and programs.[1] Therein lies the principal advantage of zero-base budgeting: In a rapidly changing environment where reimbursement is moving away from cost-based approaches and moving toward prospective payment per case or per enrollee, zero-base budgeting can eliminate unnecessary costs and improve margins. Disadvantages are numerous and include the large time commitment, employee fear and anxiety, and the administrative and communication requirements (Person 1997).

zero-base budgeting Budgeting that requires all operations to be justified anew; nothing in the current budget is assumed to be already optimal.

Comprehensive Versus Limited-in-Scope Budgeting

Comprehensive budgeting integrates all the budgets into one document. The advantage is the recognition that capital affects operations. *Limited-in-scope budgeting* segregates the budgets. Most organizations integrate the budgets at the executive management level of the organization, but the issue is at what level of the organization the budgets should be integrated. For instance, many healthcare organizations do not show department managers revenue information because they believe that the department managers will not understand the difference between billed revenue and collected revenue, or that the organization uses department revenue to cover expenses in departments that do not generate revenue.

Another reason department managers might not be shown revenue information is because department managers cannot effect changes in revenue, which is a function of volumes ordered by the physicians multiplied by rates set by the chief financial officer. A similar case can be made regarding whether department managers should be shown indirect expenses.

Fixed Versus Flexible Budgets

Fixed budgets assume that volumes, related revenues, and variable expenses remain constant during the year. Fixed budgets are easy to project, but they are unrealistic for healthcare organizations whose volumes fluctuate during the year and whose variable expenses, which are dependent on volumes, account for about half of an organization's operating expenses (Kalman et al. 2015). *Flexible budgets* take into account fluctuations in volumes, at least within ranges expressed as probabilities, and adjust variable expenses accordingly.

Discrete Versus Continuous Budgets

Like discrete plans (discussed in chapter 13), *discrete budgets* apply to a fixed period of time, usually a year. At the end of the year, a new budget begins. Discrete budgets are relatively easy to prepare, but budgeting in 12-month increments can be difficult because circumstances often change. Furthermore, discrete budgets can be challenging to some managers who know that if they are efficient and spend less than originally budgeted, they may receive less money in the following year's budget. *Continuous budgets*, sometimes called *rolling budgets*, are updated continuously so that year end never occurs. Department managers who manage wisely roll over their efforts to the next month.[2]

Steps in the Budgeting Stage

The budgeting stage is a key part of the corporate planning process that was introduced in chapter 13. The entire process has 22 steps (illustrated in exhibit 13.1), the first 13 of which encompass the strategic planning and operational planning stages discussed in chapter 13. The four steps of the budgeting stage are discussed in this chapter. The final five steps, which make up the capital budgeting stage, will be covered in the next chapter.

Step 14: Project Volumes

The fourteenth step in the corporate planning process—the first step in the budgeting stage—is to project volumes for the budget year. This step is often called the *statistical budget*, and it is sometimes part of the operating plan. Typically, the budget committee will give its projections of the organization's production units to department managers in the budget manual. Department managers use the organization's production units to calculate

department production units that are specific to each department. For instance, the radiology department manager must be able to determine how many radiology procedures are generated for every 100 admissions.

production units
The best measures of what an entity is producing. For example, patient days and admissions are both considered production units for a hospital.

Production units are the best measures of what an entity is producing. For example, hospitals produce patient days and admissions (both of which are called *production units*), but neither reflects severity of illness or the volume of outpatient work produced by the hospital. The unit used to show severity of illness (SOI), a factor that affects resource consumption, will vary—many hospitals have adopted diagnosis-related groups (DRGs) or another severity index.[3] Regarding the volume of outpatient work produced by the hospital, either outpatient work needs to be captured separately as outpatient visits and with the related revenues and expenses, or the inpatient production unit must be adjusted to reflect outpatient work produced. Regardless of which production units are chosen by the organization, the units must be reported by payer to project both gross and net revenues by payer.

Each department should have a production unit that best measures what the department is producing. Radiology, for example, produces radiology procedures. However, this production unit, like patient days for the hospital, does not reflect the complexity of the procedure and the related resource consumption. To show complexity of the procedure, most departments have developed a relative value unit (RVU) that reflects relative complexity and related resource consumption (refer to chapters 8 and 9 for information on developing RVUs).[4] If the hospital can tell the radiology department manager how many of each DRG it is projecting, the radiology manager should be able to project the number and type of procedures. In addition to serving as a basis for projecting volumes for budgeting purposes, department production units are used to (Herkimer 1988)

- measure and evaluate department productivity,
- measure and evaluate employee productivity,
- serve as the basis for calculating the cost of each procedure (see chapter 8),
- serve as the basis for calculating the charge for each procedure, and
- serve as the basis for determining staffing requirements and staffing schedules.

To project future volumes under conditions of uncertainty, most managers rely on *forecasting*, which is the process to determine what alternative scenarios are likely to occur in the future, given what managers know about the past and present. According to the classic work of Reeves, Bergwall, and Woodside (1984), to forecast, the manager must first prepare the *forecast content*, which is a description of the specific situation in question. Next, the manager must prepare the *forecast rationale*, which is an explanation of how the situation will evolve from its current state to its forecasted state (Reeves, Bergwall, and Woodside 1984).

In preparing the forecast content, the manager first identifies *content items*, which are descriptions of important occurrences, such as admissions, patient days, and outpatient visits. Next, the manager must measure the current status of content items. The final step of the forecast content is to identify the expected state of the content items in the future budget period. Although forecast content often produces quantifiable data, the manager also must consider the effect of the following subjective factors on the forecast content (Reeves, Bergwall, and Woodside 1984):

- Political factors
- Social factors
- Economic factors
- Technological factors
- Personal health factors
- Environmental health factors

A manager may use several forecasting techniques to prepare the forecast content, including the use of experts, causal models, and time-series methods.

Use of Experts

The use of experts depends on the manager's ability to identify and secure the services of appropriate experts. Then, the manager must consider the advantages and disadvantages of using experts in preparing the forecast. Using experts is usually quick and relatively inexpensive. However, different experts may develop different, yet valid, opinions about the future. Which expert is correct? To address this disadvantage, managers can choose a variety of models to obtain their opinion (Reeves, Bergwall, and Woodside 1984):

- A *task force* brings together several experts who provide collective input.
- The *Delphi technique* gathers information from a group of dispersed experts with anonymity and limited interaction.
- The *Delbecq technique*, or *nominal group process*, is similar to the Delphi technique, except that the group of experts meets face-to-face for discussion and to present and defend their forecasts.
- *Questionnaires* are used to gather responses to questions from a large group of experts.
- *Permanent panels* maintain a group of experts who can be used for several forecasts over time.

- *Essay writing* obtains opinions from experts in a format that can be used for preparing the forecast rationale.
- *Computer-facilitated group processes* can reveal and "parallel process" more contributions from a greater number of participants than is possible using manual facilitation techniques alone.

In addition to relying on expert opinion regarding the future, a manager may apply probability statistics to the expert opinion. Another derivative of using expert opinion is the program evaluation and review technique (PERT). This technique requires estimates of optimistic (O), pessimistic (P), and most likely (ML) future scenarios. These three estimates are weighted to calculate an expected value that equals

$$\frac{(O + P + 4ML)}{6}$$

Causal Models

The manager may use *causal models* when the forecast variable is dependent on a causal, or independent, variable. The most common statistical method used in causal models is *regression analysis*, which mathematically describes an average relationship between a forecast variable and one or more causal variables. For instance, the manager can use a regression line based on past volumes over time to predict future volumes. Problem 14.1 demonstrates the use of regression lines.

PROBLEM 14.1
Linear Regression and Estimation

If a hospital emergency department had the following history of volumes, what would be the projected volume for 2018?

Year	Volume
2013	10,000
2014	10,500
2015	10,200
2016	10,400
2017	10,600

(continued)

PROBLEM 14.1
Linear Regression and Estimation *(continued)*

Using the HP10BII, the inputs would be as follows:

Keys	Display	Description
[◒] CLEAR ALL	0.00	Clear statistical registers
2013 INPUT	2013.00	Enters year
10,000 Σ+	1.00	Enters volume and displays first pair of data entered
2014 INPUT	2014.00	Enters year
10,500 Σ+	2.00	Enters volume and displays second pair of data entered
2015 INPUT	2015.00	Enters year
10,200 Σ+	3.00	Enters volume and displays third pair of data entered
2016 INPUT	2016.00	Enters year
10,400 Σ+	4.00	Enters volume and displays fourth pair of data entered
2017 INPUT	2017.00	Enters year
10,600 Σ+	5.00	Enters volume and displays fifth pair of data entered
2018 INPUT	2018.00	Enters year
[◒] ŷ,m	10,670	Displays predicted volume associated with last year entered

The coefficient of determination, symbolized by R^2, indicates the proportion of the variance of the forecast variable that is explained by the regression statistic. When given a choice between two or more regression statistics, the manager should select the statistic that maximizes the coefficients of determination. The causal variables in regression may include time, leading economic indicators, demographic factors, or any other variables that might exhibit a causal relationship with the forecast variable.

A measure of the statistical contribution of a causal variable to regression's causal power is the *beta coefficient*, which indicates the relative importance of each of the causal variables in explaining or predicting changes in the forecast variable. In multiple regression, the manager can use beta coefficients to decide which causal variables to retain and which to exclude. The manager should be cautioned regarding one flaw in multiple regression: *multicollinearity*, which is the phenomenon that occurs when causal variables relate to each other in addition to the relationship to the forecast variable.[5]

MINI-CASE STUDY

Suppose that you are the new chief executive officer at Memorial Hospital. Memorial is a nonprofit hospital with 300 beds and is located in a busy metropolitan area directly adjacent to a large university. Memorial is the only hospital within a 20-mile radius of campus, but construction on a new, competing hospital has just started within 5 miles. Identify three forecast content items. How will they be measured? What is the expected status of the content items in the future? Which forecasting techniques should you use? Why?

Time-Series Methods

The manager may use *time-series methods* when the past behavior of a variable is available to predict the future behavior of the variable. Time-series methods do little to account for causal relationships; rather, they attempt to identify historical patterns that are likely to be repeated in the future. The manager may use regression for long-term forecasts and time-series methods for forecasts of less than one year.

Many series of data collected over time will exhibit trend, seasonal, cyclical, horizontal, and random patterns. A *trend pattern* exists when the value of the variable consistently increases or decreases over time. A *seasonal pattern* exists when the value of the variable fluctuates according to a seasonal influence, such as hour of the day, day of the week, week of the month, or month of the year. A *cyclical pattern* is similar to a seasonal pattern; however, the length of each cycle is longer than one year and cycles vary in length. A *horizontal pattern* exists when the variable's value does not change over time. A *random pattern* exists when the variable's value changes, but in no predictable way (Berenson and Levine 1993).

After preparing the forecast content, the manager must prepare the *forecast rationale*, which is an explanation of how the situation will evolve from its current state to its forecasted state. The forecast rationale clarifies the result of the forecasting process, provides a basis for evaluating the forecasting process, and provides a basis from which future forecasts can be made (Reeves, Bergwall, and Woodside 1984).

Step 15: Convert Volumes into Revenues

The fifteenth step in the corporate planning process—the second step in the budgeting stage—is to convert volumes into patient revenues. Managers must consider whether the organization should budget revenues before or after the expense budget is completed.

cost-led pricing
Setting prices after costs have been projected.

Historically, healthcare organizations have determined their expense budgets first and then set rates in their revenue budgets to cover the expenses, which is called **cost-led pricing**. However, healthcare organizations that are facing increasing proportions of fixed payment arrangements, such as prospective payment and premium payment (which essentially dictate the rate to the organization), may decide to calculate revenue first, which is called **price-led costing**. The organization then must adjust expenses to match the projected patient revenues.

price-led costing
Reducing costs after prices, or effective prices (i.e., collections), have been determined by the payers.

To project gross patient services revenues, projected production units are classified by payer and then multiplied by the projected charge that, at this point, usually includes a projected increase. Next, net patient services revenue is determined by deducting contractual allowances and charity care allowances and bad debt, if the organization recognizes significant portions of patient revenues at the time of service, even though the organization does not assess the patient's ability to pay at time of service. To project total revenues from operations, net patient services revenue is added to premium revenue, other revenue (e.g., parking, catering), and net assets released from restrictions and used for operations. Other projected changes in net assets that would be reported at the bottom of the statement of operations may also be available for operations (see the "Statement of Operations" section in chapter 3).

Step 16: Convert Volumes into Expense Requirements

The sixteenth step in the corporate planning process—the third step in the budgeting stage—is to convert volumes into expense requirements: labor expense with benefits, nonlabor expense, and overhead expense. Department managers should have budget histories that indicate labor expense with benefits per production unit. They should also have budget histories for nonlabor expense per production unit, which includes supplies, travel, and repairs. The budget director should have budget histories for overhead expense for the organization.

staffing mix
The proportional combination of full-time, part-time, and temporary employees in a department.

Department managers should review the labor expense with benefits per production unit to determine whether they can reduce expenses. Senior management determines the benefits package (approximately 32 percent of wages for a full-time employee),[6] but department managers can reduce benefit expenses by using part-time and temporary workers. Part-time employees usually receive benefits in proportion to the number of hours worked (approximately 16 percent of wages for a half-time employee), and temporary workers usually receive only the benefits required by law (approximately 12 percent of wages). Department managers must decide on the appropriate mix of full-time, part-time, and temporary workers. Part-time and temporary workers are less expensive to the department manager, but continuity of patient care may suffer if the manager uses too many part-time and temporary workers. Many department managers staff their minimum needs with full-time workers, moderate needs with part-time workers, and maximum needs with temporary workers (see exhibit 14.1).

skill mix
The proportional combination of particular skilled positions in a department.

Staffing mix is the proportional combination of full-time, part-time, and temporary workers and should be reviewed by the department manager; department **skill mix**, which

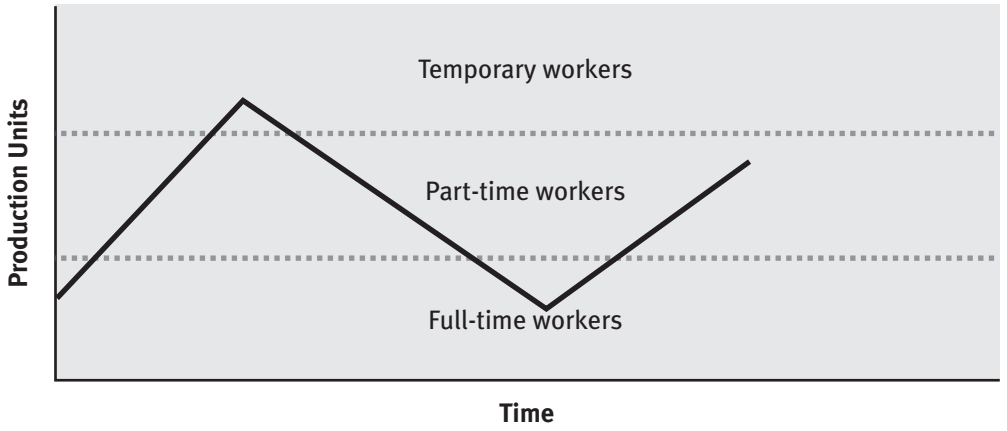

Exhibit 14.1
Staffing Mix

is the proportional combination of skilled positions, should also be reviewed by managers. Most departments have a variety of tasks requiring a variety of skills performed by a variety of positions paid a variety of wages. The department manager's job is to match the tasks to the positions in the most cost-effective manner possible.

After the department managers have reviewed staffing mix and skill mix and have made any necessary changes, they must consider the effect of employee raises on their expense budget. The budget committee should provide department managers with information regarding cost-of-living raises, merit raises, and bonuses.

Cost-of-living raises are designed to protect employees from inflation by increasing pay in proportion to the rate of inflation. The use of these raises is declining because inflation has been low and employee spending is not all inflation prone. However, if the organization uses a cost-of-living raise, the raise is administered to all employees at the same time. The effect of cost-of-living raises on the department budget depends on the effective date of the raise. For instance, if the effective date is the first day of the new budget year, the department budget will realize the full effect of the raise. If the effective date of the raise is three months into the new budget year, the department will realize 75 percent of the effect of the raise.

Merit raises are designed to motivate employees toward, and reward employees for, meritorious performance. Merit raises as a motivator are dependent on the amount of the raise and the likelihood that superiors will judge performance as meritorious. Merit raises are expensive for organizations because the amount of the raise is built into the employee's base pay for future years.

Organizations typically give merit raises in conjunction with employee performance appraisals on employment anniversaries. Assuming that employment anniversaries occur in equal distribution throughout the year, the effect on the department budget will be 50 percent of the

total amount for merit raises, and the budget should be adjusted accordingly. For instance, if the department manager can give 5 percent raises to meritorious employees on their employment anniversaries, and all the department's employees are meritorious, the annual effect on the department will be 2.5 percent, assuming that 50 percent of the employment anniversaries are in the first half of the budget year and 50 percent of the employment anniversaries are in the second half of the budget year.

Bonuses are designed to motivate employees in much the same way as merit raises. However, using bonuses as a motivator is dependent on the amount of the bonus, the likelihood that superiors will judge performance "bonus-worthy," and the proportion of employees receiving the bonus. For instance, if all employees receive bonuses, motivation resulting from the bonus will be low because everyone receives a bonus. If 1 out of 100 employees receives a bonus, motivation will be low because the chance of being rewarded for bonus-worthy performance is low. However, if 1 out of 7 employees receives a bonus, motivation as a result of the bonus will be maximized because the chances of receiving a bonus are realistic. Organizations typically award bonuses at the end of the budget year, and the funds come from the organization, not the department; budgeting the effect of bonuses, therefore, is relatively easy.

After budgeted department wages have been adjusted for changes in staffing mix, skill mix, and employee raises, department managers multiply the budgeted wages and benefits per production unit by the number of production units projected for the budget year to determine the total budgeted wages and benefits for the department.

Department managers should have budget histories that indicate nonlabor expense per production unit and should review those figures to determine whether they can reduce expenses. Managers should review supply use to ensure that generic supplies are used whenever possible. The pharmacy manager should provide information on the use of generic medicines and work with the pharmacy committee to maintain a formulary with as many generics and as few brand-name pharmaceuticals as possible. The pharmacy manager should also establish security measures to ensure that narcotics are secure. Department managers should review travel expenses and bring training programs to the organization whenever possible to reduce travel expense. Department managers should review repair expense and maintenance agreements, and replace equipment when feasible. The manager of materials management should provide department managers with an estimate of anticipated cost increases in supplies, repairs, and travel as a result of contract renewals or inflation.

After department managers have reduced nonlabor expense wherever possible, department managers multiply the nonlabor expense per production unit by the number of production units projected for the budget year to determine the total budgeted nonlabor expense for the department.

Largely, overhead expenses for the organization (such as depreciation, heating and cooling, insurance premiums, and so on) do not fluctuate with production units. Therefore,

the budget committee determines the overhead expenses for the budget year after reviewing historical data to determine whether adjustments are necessary.

Step 17: Adjust Revenues and Expenses as Necessary

The seventeenth step in the corporate planning process—the fourth and final step in the budgeting stage—is for the budget committee to determine whether budgeted net revenues are adequate to cover budgeted expenses. If budgeted expenses exceed budgeted net revenues, the budget committee may recommend to executive management ways to generate additional revenues or ways to reduce expenses. To cover the budget shortfall, executive management must decide whether to generate additional revenues and consider the possible effect of such action on expenses; whether to reduce expenses and consider the possible effect on quality and patient access; or whether to release funds from unrestricted net asset accounts to cover the loss.

Evaluating Budget Performance

The governing body of the organization should review the budget annually and evaluate the chief executive officer (CEO) on the basis of organizational compliance with the budget. Likewise, the CEO should review senior management quarterly and evaluate senior managers based on divisional compliance with the budget. Senior management should review department managers monthly and evaluate departmental compliance with the budget.

The most common method of evaluating budget performance is **variance analysis**, which compares budgeted production units, revenues, and expenses to actual production units, revenues, and expenses, typically monthly. Labor variance analysis, including hours and expense, may be completed every two weeks in conjunction with payroll. The variance is the amount of the difference between the actual and budgeted amount:

variance analysis An examination of the differences (variances) between budgeted and actual amounts. Variance analysis requires managers to explain why budgeted and actual amounts do not match.

$$\text{Variance} = \text{Actual} - \text{Budgeted}$$

For production units and revenue, positive variances are favorable and negative variances are unfavorable:

$$\text{Revenue variance} = \text{Actual revenue} - \text{Budgeted revenue}$$

For expenses, negative variances are favorable and positive variances are unfavorable:

$$\text{Expense variance} = \text{Actual expense} - \text{Budgeted expense}$$

Variance analysis ensures accountability by requiring the managers who are responsible for the variances to explain why the variances occurred and what actions are being taken to ensure that favorable variances resume and negative variances do not recur.

After the budget has been reviewed and approved, the healthcare organization can enter the capital budgeting stage of the corporate planning process, which will be discussed in chapter 15. To recap the budgeting discussion in the present chapter, exercise 14.1 demonstrates the budgeting steps in a radiology department.

EXERCISE 14.1
Budgeting Exercise

The radiology department is developing a budget for DRG 250: Fracture, Sprain, Strain, and Dislocation of Forearm, Hand, and Foot. This year the department saw 1,100 admissions for DRG 250 analyzed in the following way: 50 percent of the admissions were for a hand X-ray (which takes 5 minutes), 20 percent for a foot X-ray (which takes 15 minutes), and 30 percent for a forearm X-ray (which takes 30 minutes). The budget committee is projecting a 9.1 percent increase in DRG 250 for next year, analyzed in the same proportions. The controller states that the charges for a hand X-ray will be $75, for a foot X-ray will be $285, and for a forearm X-ray will be $450. The controller also projects the payer analysis for DRG 250 to be 45 percent Medicare (DRG rate is 80 percent of charges), 35 percent Medicaid (DRG rate is 85 percent of charges), 15 percent managed care (discount is 30 percent of charges), and 5 percent self-pay (self-pay patients pay full charges, but 10 percent of self-pay patients don't pay their bills and their fees are recorded as charity care).

DRG 250 accounts for 25 percent of the radiology department's labor, supply, and overhead expenses. The department's labor expenses are $225,000—labor expenses are expected to increase 5 percent next year due to raises. The department's nonlabor expenses are $185,000—nonlabor expenses are expected to increase 6 percent next year due to inflation. The department's overhead expenses are $375,000—overhead expenses are not expected to increase next year. Using the budgeting steps, calculate the volumes, collected revenues, expenses, and adjustments for DRG 250 in the radiology department.

Step 14: Project Volumes

1. Calculate the current volume for each X-ray procedure.

Procedure	Admissions	Volume
Hand X-ray	1,100 × .50	550
Foot X-ray	1,100 × .20	220
Forearm X-ray	1,100 × .30	330

EXERCISE 14.1
Budgeting Exercise *(continued)*

2. Convert the current volumes to RVUs.

Procedure	Minutes	Minutes/ * GCD	RVUs/ Procedure	Volume	Total RVUs
Hand X-ray	5	5/5	1	550	550
Foot X-ray	15	15/5	3	220	660
Forearm X-ray	30	30/5	6	330	1,980
					3,190

* GCD = greatest common denominator

3. Calculate the projected volume for each X-ray procedure (1,100 DRG 250 × 1.091 increase = 1,200 DRG 250).

Procedure	Admissions	Volume
Hand X-ray	1,200 × .50	600
Foot X-ray	1,200 × .20	240
Forearm X-ray	1,200 × .30	360

4. Convert the projected volumes to RVUs.

Procedure	Minutes	Minutes/ GCD	RVUs/ Procedure	Volume	Total RVUs
Hand X-ray	5	5/5	1	600	600
Foot X-ray	15	15/5	3	240	720
Forearm X-ray	30	30/5	6	360	2,160
					3,480

Step 15: Convert Projected Volumes into Projected Revenues

1. Calculate projected gross and net revenues by payer.

Medicare

Procedure	Projected Charge	Projected Volume	%	Gross Revenue	Rate	Net Revenue
Hand X-ray	$75	600	.45	$20,250	.80	$16,200
Foot X-ray	285	240	.45	30,780	.80	24,624
Forearm X-ray	450	360	.45	72,900	.80	58,320
				$123,930		$99,144

(continued)

EXERCISE 14.1
Budgeting Exercise *(continued)*

Medicaid

Procedure	Projected Charge	Projected Volume	%	Gross Revenue	Rate	Net Revenue
Hand X-ray	$75	600	.35	$15,750	.85	$13,388
Foot X-ray	285	240	.35	23,940	.85	20,349
Forearm X-ray	450	360	.35	56,700	.85	48,195
				$96,390		$81,932

Managed Care

Procedure	Projected Charge	Projected Volume	%	Gross Revenue	Rate	Net Revenue
Hand X-ray	$75	600	.15	$6,750	.70	$4,725
Foot X-ray	285	240	.15	10,260	.70	7,182
Forearm X-ray	450	360	.15	24,300	.70	17,010
				$41,310		$28,917

Self-Pay

Procedure	Projected Charge	Projected Volume	%	Gross Revenue	Rate	Net Revenue
Hand X-ray	$75	600	.05	$2,250	.90	$2,025
Foot X-ray	285	240	.05	3,420	.90	3,078
Forearm X-ray	450	360	.05	8,100	.90	7,290
				$13,770		$12,393
Total				$275,400		$222,386

Step 16: Convert Projected Volumes into Projected Expense Requirements

1. Calculate current expenses per RVU.
   $225,000 × .25 = 56,250 / 3,190 = 17.63 labor expense/RVU
   185,000 × .25 = 46,250 / 3,190 = 14.50 supply expense/RVU
   375,000 × .25 = 93,750 / 3,190 = 29.39 overhead expense/RVU

EXERCISE 14.1
Budgeting Exercise *(continued)*

2. Calculate projected expenses per RVU.

Projected labor expense	= 17.63 + 5%	=	18.51
Projected supply expense	= 14.50 + 6%	=	15.37
Projected overhead expense	= 29.39 + 0%	=	29.39
Total			$63.27

3. Calculate projected expenses per procedure.

Procedure	Projected RVUs	Projected Expense/RVU	Total Projected Expense
Hand X-ray	600	$63.27	$37,962
Foot X-ray	720	63.27	45,554
Forearm X-ray	2,160	63.27	136,663
Total			$220,179

Step 17: Adjust Revenues and Expenses as Necessary

1. Determine initial gain/loss.

Net Revenues	$222,386
Expenses	220,179
Gain/(Loss)	$2,207

2. If the initial determination is a loss, first investigate whether collected revenues can be increased through a rate increase or improvements in collection efforts. If collected revenues cannot be increased, investigate whether expenses can be reduced. Usually this involves investigating variable labor expenses and reviewing the mix of full-time to part-time to temporary as well as a review of skill mix. If collected revenues cannot be increased and expenses cannot be decreased, then management must decide whether to continue the service at a loss and how that loss is going to be covered by other profitable services.

Source: Neil Dworkin, PhD, Emeritus Associate Professor of Management, Western Connecticut State University. Used with permission.

Chapter Key Points

- *Budgeting* is the process of converting the operating plan into monetary terms.
- Certain prerequisites need to be in place before budgeting can begin.
- Budgeting consists of several sequential steps: projecting volumes, converting volumes to revenues, converting volumes into expense requirements, and adjusting revenues and expenses as necessary.
- The governing body should review the budget annually, and each management level in the organization should be evaluated based on its performance to budget.

Discussion Questions

1. What is the definition of *budgeting*?
2. What are the ways to classify budgeting?
3. How would you explain the various management approaches to budgeting?
4. What are the steps in the budgeting process, and how would you describe each step, in sequence?
5. Who is responsible for evaluating budget performance?

Notes

1. For a compelling argument for zero-base planning, see Person's (1997) *The Zero-Base Hospital: Survival and Success in America's Evolving Healthcare System*. Person also provides a historical perspective by identifying the US Department of Agriculture as the first zero-base planner in 1964. Zero-base planning was abandoned at the Department of Agriculture, but it was successfully adopted at Texas Instruments in the late 1960s, as related by Pyhrr (1970). During the 1970s and 1980s, zero-base planning was used by a variety of organizations with a variety of success. Hospitals, according to Person, did not adopt it because of the financial security provided by retrospective, cost-based reimbursement.
2. Continuous budgets avoid the year-end "sucking sound"—the sound of year-end unnecessary spending of budgeted but not-yet-spent funds—that occurs in organizations using discrete budgeting.
3. DRGs measure severity of illness between DRGs, but they do not measure severity of illness within the same DRG. Eastaugh (1987, 1992) discusses several

severity of illness (SOI) indices that do measure how ill a patient is within a specific DRG or condition: Horn's SOI index, Horn's computerized severity index, Western Pennsylvania Blue Cross patient management categories, and Brewster's MEDISGRPS.

4. Even after adopting an RVU schedule for the production unit, most departments maintain a procedure count as a basis for auditing charges (each procedure should generate a charge).
5. Multicollinearity was one of the weaknesses of the Herzlinger and Krasker (1987) study on for-profit hospitals, which is referenced in chapter 4. Arrington and Haddock (1990) used discriminate analysis to avoid the multicollinearity problem in their follow-up study.
6. Statistics from US Bureau of Labor Statistics (2016). Benefits include not only payroll taxes (7.5 percent of total compensations), retirement (5.2 percent), and health insurance (8.4 percent), but also paid leave (6.9 percent).

Linear Regression and Estimation

Linear Regression and Estimation Practice Problem

If a hospital outpatient clinic had the following history of visits, what would be the projected number of visits for 2019?

Year	Visits
2014	20,000
2015	21,500
2016	21,700
2017	22,000
2018	23,000

Linear Regression and Estimation Practice Problem Solution

Using the HP10BII, the inputs would be as follows:

Keys	Display	Description
[◒] CLEAR ALL	0.00	Clears statistical register
2014 INPUT	2014.00	Enters year
20,000 ∑+	1.00	Enters volume and displays first pair of data
2015 INPUT	2015.00	Enters year
21,500 ∑+	2.00	Enters volume and displays second pair of data
2016 INPUT	2016.00	Enters year
21,700 ∑+	3.00	Enters volume and displays third pair of data
2017 INPUT	2017.00	Enters year
22,000 ∑+	4.00	Enters volume and displays fourth pair of data
2018 INPUT	2018.00	Enters year
23,000 ∑+	5.00	Enters volume and displays fifth pair of data
2019 INPUT	2019.00	Enters year
[◒] ŷ,m	23,590	Displays predicted volume

Linear Regression and Estimation Self-Quiz Problem

If a physician's office had the following history of visits, what would be the projected visits for 2020?

Year	Visits
2015	5,000
2016	4,800
2017	4,700
2018	4,500
2019	4,400

CHAPTER 15

CAPITAL BUDGETING

We live in a world of limited financial resources, so we have to make guns-versus-butter decisions all the time: capital decisions about whether we invest in x, y, or z or make cost reductions as we go through the budgeting process.

Joseph J. Fifer, FHFMA, CPA, president and CEO,
Healthcare Financial Management Association

Learning Objectives

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

- Define and understand the importance of capital budgeting
- Explain the types of capital budgets
- List in order and explain each step in the capital budgeting stage of the corporate planning process
- Describe the methods used to finance capital expenditures
- Discuss the methods used to evaluate the capital budgeting process

Introduction

Capital costs, which are generally defined as purchases of land, buildings, and equipment (a more complete definition appears later in this chapter), make up a relatively small percentage of total organization costs—in hospitals, they are 6 to 10 percent. However, their importance in terms of rising healthcare costs and dictating current trends in acquisitions, mergers, joint ventures, and closings cannot be overstated. Under cost-based reimbursement from 1966 to 1983 (cost-based reimbursement continued for capital costs until 1990), capital costs for new equipment (38 to 40 percent of capital costs) and plants exploded with little resistance from regulation or the market.

Two programs were enacted in 1974 in attempts to slow the growth in healthcare capital costs. Certificate-of-need legislation (PL 93-641 as the National Health Planning and Resources Development Act of 1974) and Section 1122 of the Social Security Amendments of 1974 both compelled hospitals to get permission from a government entity before major capital expenditures. However, these programs did little to slow capital growth (Eastaugh 1987).

The Social Security Amendments of 1983 introduced Medicare prospective payment, which was designed to slow Medicare costs by reimbursing hospitals and other healthcare providers on the basis of predetermined payments rather than reimbursing costs after the fact. However, those amendments did not affect capital costs because until 1992 capital costs were reimbursed on the basis of cost, which meant that if Medicare approved a capital expenditure, it would pay its portion of the expenditure whether the piece of equipment was used or not. For example, if Medicare normally covered 30 percent of a hospital's costs and the hospital acquired a new X-ray machine, Medicare would pay for 30 percent of that X-ray machine even if it were never used.

Finally, in the mid-1980s to early 1990s, government efforts to slow capital costs paid off. The Tax Reform Act of 1986 lowered the tax deductibility for charitable gifts and restricted or increased the cost of acquiring capital through tax-exempt bond markets. The Omnibus Budget Reconciliation Act (OBRA) of 1990 moved capital costs to prospective payment over a ten-year implementation period. These acts slowed capital growth markedly, causing one investment banker (quoted in Eastaugh 1987, 600) to comment:

> Starting in 1988 [1990] the typical hospital should be viewed as a more risky venture, and will pay higher interest rates unless they can demonstrate DRG [diagnosis-related group] profitability. Hospitals shall no longer have government as a "Sugar Daddy" paying the interest on their debt coupon by coupon. One thousand hospitals may close. We view such hospitals as "cross-eyed javelin throwers" in that they will not win any rewards, but they will keep the attention of their fearful audience.

The Balanced Budget Act of 1997 also had a stifling effect on the access to capital, as many hospitals were forced to use funds earmarked for capital projects to subsidize operations because of reduced reimbursements from Medicare. Reflecting this effect, bond downgrades outnumbered bond upgrades by rating agencies during this time until 2005, when reimbursement began to improve. This effect inspired a series of studies published

by the Healthcare Financial Management Association beginning in 2003 and ending in 2006. The studies found that larger hospitals, newer hospitals, and hospitals that belonged to systems had broader access to capital than other hospitals did. The following strategies were recommended to compete for capital (HFMA 2004):

- Be distinctive.
- Hold onto physicians.
- Focus on core service lines.
- Improve quality of care.
- Protect profits.
- Integrate strategic and financial plans.
- Establish/fine-tune policies regarding charity care.

The studies went on to predict that the major trends to affect capital in healthcare organizations in the future would be competition, payment, and technology. To afford technology in the future, hospitals must have operating margins that exceed 2 percent, the studies stated (HFMA 2004).

Definition of *Capital Expenditures*

Capital expenditures are defined by an organization in its capital expenditures policy, and as a result, the definitions vary. Generally speaking, capital expenditures are purchases of land, buildings, and equipment used for operations; are not for resale; have a useful life of more than one year; cost $5,000 or more; and are subject to depreciation, with the exception of land, which is not depreciated unless the use of the land harms the future use of the land. Capital expenditures are classified into the following categories:

capital expenditures Purchases of land, buildings, and equipment used for operations.

- *Land*, including all costs associated with acquiring land and making it ready for use (the cost of the land itself cannot be depreciated unless the use of the land harms the future use of the land)
- *Land improvements*, including all costs associated with sidewalks, parking lots, driveways, and fencing
- *Buildings*, including all costs associated with constructing or buying buildings
- *Fixed equipment*, including all costs associated with equipment that is permanently attached to the building, such as the plumbing system, furnace, and air conditioners

- *Major movable equipment* that has a useful life of three years or more and has a unit cost of $5,000 or more
- *Major repairs* that benefit future periods and/or extend the useful life of the building or equipment (ordinary repairs are expensed)

Types of Capital Expenditure Budgets

Healthcare organizations typically divide capital expenditure budgets into two broad categories: replacement and new. Budgets for replacement capital expenditures include requests to replace existing buildings and equipment that are made for a number of reasons:

- Scheduled replacement at the end of the useful life or when fully depreciated[1]
- Improved productivity
- Improved quality
- Required by regulation

Budgets for new capital expenditures include requests to add buildings and equipment for a number of reasons:

- Expanded services
- Improved safety conditions
- Reduced operating expenses
- Improved patient care

Steps in the Capital Budgeting Stage

The capital budgeting stage is the final part of the 22-step corporate planning process that was introduced in chapter 13 (see exhibit 13.1) and a crucial follow-up to the budgeting stage discussed in chapter 14: Budgeting must be concluded to determine funds available for capital expenditures.

Step 18: Identify and Prioritize Requests

The eighteenth step in the corporate planning process—the first step in the capital budgeting stage—is for the budget committee to identify and prioritize all capital requests. Typically, the budget committee asks department managers, including the chief of medical staff services (included with department managers in this chapter discussion), to list the capital

CRITICAL CONCEPTS
The Trustees' Responsibility

Allen County Clinic has been growing rapidly in the past few years. Many of the patients it sees are women needing prenatal care and screening. To meet these needs, Allen County Clinic would like to open a new women's health clinic.

Name three steps Allen County Clinic needs to take to ensure that this is a viable option. Besides building an addition to the clinic, what costs must be considered? What are some advantages and disadvantages of building a new clinic? What are some options for the clinic to fund for this new addition?

equipment and buildings needed and to justify the resources needed. After the department managers have provided a list,[2] the budget committee prioritizes the list on the basis of community need and compliance with the strategic plan as initial criteria.[3]

Step 19: Project Cash Flows

The nineteenth step in the corporate planning process—the second step in the capital budgeting stage—is for the department managers to project, and the budget committee to confirm, cash flows for each capital expenditure request. In cases of replacement equipment, this is a relatively easy step in that revenues (Volumes × Charge per procedure), expenses (Volumes × Expense per procedure), and resulting cash flow (Revenues – Expenses) already exist.[4] However, the department manager must indicate any changes in revenue or expenses that will occur with the replacement equipment.

For new equipment, or equipment that the organization has never had before, revenues and expenses may be difficult to project. The department manager can obtain volumes in a number of ways.

First, if the organization is currently using an outside service that will be replaced by the new equipment, the department manager can obtain volumes from accounts payable. If the organization is not currently using an outside service, the department manager can administer a questionnaire to potential users or complete a medical record review to determine how many patients would have used the new equipment had it been available.

For expensive equipment such as computed tomographic scanners, manufacturers will assist in the medical record review; however, the department manager should review manufacturer projections carefully because manufacturers have a vested interest and may overproject volumes. The department manager can obtain charge information from neighboring facilities or insurance companies. The department manager can also obtain expense

information from neighboring facilities or the manufacturer. If the manager obtains the information from the manufacturer, it is a good idea to confirm it with other organizations that use the same equipment—manufacturers should be willing to provide client lists.

For equipment that does not generate revenue, department managers can still project cash flow by using salary savings, utility savings, and so on.

Previously incurred costs, or sunk costs, and costs that would be incurred regardless of the budget outcome should not be included in cash-flow projections.

Step 20: Perform Financial Analysis

The twentieth step in the corporate planning process—the third step in the capital budgeting stage—is for the budget committee or the chief financial officer (CFO) to perform financial analyses on the requests. Before Medicare stopped reimbursing capital at cost, few healthcare organizations performed any significant financial analyses on equipment because in the risk-free environment of cost-based reimbursement, healthcare organizations and their lenders were guaranteed a return on capital expenditures regardless of whether they used the equipment. In a 1973 study of large hospitals, only 8 percent of the hospitals calculated the net present value of a capital expenditure before purchasing it (William and Rakich 1973). Some hospitals had two of everything in case the first broke (they preferred capital expense to labor and repair expenses).

As the Medicare reimbursement for capital costs was folded into the DRG formula during the 1990s as a result of the OBRA of 1990, healthcare organizations found themselves competing with other industries for limited capital funds. Healthcare organizations no longer had cost-based reimbursement to put up as collateral, and as a result, lending institutions required financial analyses to ensure that the capital expenditure would generate sufficient revenue to repay the loan. As a result, net present value and return on investment calculations are completed on most capital expenditures today.

This section defines and explains how to calculate several analyses that are used to measure the benefit-to-cost ratio. In theory, these analyses are benefit-cost analyses, which are based on the Pareto optimality, or a condition in which changes occur only if they improve the benefits more than they increase the costs. In benefit-cost analysis, both costs and benefits are variable, as opposed to cost-effectiveness analysis, where either costs or benefits are held constant. In their simplest forms, benefit-cost analysis is the ratio of discounted benefits to discounted costs, and cost-effectiveness analysis is the benefits obtained for a particular cost.

The typical financial analyses for capital expenditures are *payback period analysis*, *net present value analysis*, and *internal rate of return analysis*. Each type of analysis will be explained in the sections that follow.

MINI-CASE STUDY

A federally qualified community health center is implementing an electronic medical record (EMR) costing $35,000 per physician provider. Identify benefits of the EMR and ways the benefits can be estimated to calculate a benefit-cost ratio.

Payback Period Analysis

payback period
The number of years necessary for cash flows to recover the original investment.

Payback period is the number of years necessary for cash flows to recover the original investment. Payback period analysis is easy to calculate (see problem 15.1), but it is the least sophisticated of the three analyses because it does not take into account the effects of time on money.

PROBLEM 15.1
Payback Period

ABC Day Surgery Center wants to buy equipment for $10,000, with projected cash flows (net revenues minus expenses) of $3,000 per year during the equipment's five-year useful life. What is the payback period?

Year	Cash Flow ($)	Cumulative Cash Flow ($)
cf0	(10,000)	($10,000)
cf1	3,000	(7,000)
cf2	3,000	(4,000)
cf3	3,000	(1,000)
cf4	3,000	2,000
cf5	3,000	5,000

Initial investment represented by cf0; cf = cash flow.

The day surgery center will recover the cost of the equipment sometime during year 4. Sometimes when comparing capital equipment requests, it is necessary to use a value more exact than whole years. To determine exactly when during year 4 the equipment will break even, assuming an even distribution of cash flow during the year:

Payback period

$$= \text{Year before recovery} + \frac{\text{Unrecovered cost at beginning of year}}{\text{Cash flow during year}}$$

$$= 3 + (1{,}000 / 3{,}000)$$

$$= 3.33 \text{ years}$$

The primary disadvantage of payback period analysis is that it does not take into account the effects of time on money.

Net Present Value

net present value (NPV)
The present value of the future cash flow of an investment. NPV takes into account the fact that future cash flows are "discounted" to determine their present value.

Net present value (NPV) is a commonly used financial analysis for capital expenditures that relies on discounting cash flows. Whereas discounted payback period gives the manager an answer in years, NPV gives the manager an answer in dollars. An NPV of zero means that the capital expenditure is generating discounted cash flows just sufficient to repay the original investment. If the NPV is positive, the expenditure is generating discounted cash flows in excess of the amount necessary to repay the original investment. If the NPV is negative, the expenditure is generating discounted cash flows insufficient to repay the original investment.

NPV has some flaws (see Zelman et al. 2014)—the principal flaw seems to be determining the discount rate. Most theorists agree that NPV is superior to internal rate of return (IRR, discussed in the next section) as a method of evaluating capital expenditures. However, because IRR is a common method of evaluating capital expenditures in the real world, managers should be prepared to calculate both NPV and IRR.

After managers understand the concept of *discounting*, they can apply discounting to payback period analysis, NPV analysis, and IRR analysis. Discounted payback period is similar to payback period except that the manager discounts the projected cash flows by discount factors for the expenditure's discount rate (see problem 15.2). Managers can find discount factors on a present value (PV) table (exhibit 15.1).

PROBLEM 15.2
Calculating the Present Value

Discounting is used to compare capital expenditures that will generate future cash flows. Discounting is a way of looking at a future amount of money, called future value (FV), and calculating the present value (PV) of the money using the following formula:

$$PV = FV / (1 + i)^n$$

What is the PV of $100,000, discounted at 5 percent annually for five years?

$$PV = \frac{FV}{(1+i)^n} = \frac{100{,}000}{(1+.05)^5} = \frac{100{,}000}{1.2763} = \$78{,}351.48$$

Note: This answer is formula driven. Use of a calculator or spreadsheet may alter the answer slightly because of rounding or how interest is calculated (at the end of the period versus during the period).

PROBLEM 15.2
Calculating the Present Value *(continued)*

HP 10BII Solution to Problem 15.2

Keys	Display	Description
1 [◒] [P/YR]	1.00	Sets compounding periods per year to 1
5 [N]	5.00	Stores the number of compounding periods
5 [I/YR]	5.00	Stores the interest rate
–100,000 [FV]	–100,000.00	Stores the future value as an annuity (–)
[PV]	78,352.62	

EXHIBIT 15.1
Present Value Table

	Discount Rate (%)				
	10	*20*	*30*	*40*	*50*
Year 1	0.909	0.833	0.769	0.714	0.667
Year 2	0.826	0.694	0.592	0.511	0.444
Year 3	0.751	0.579	0.455	0.364	0.296
Year 4	0.683	0.482	0.351	0.261	0.198
Year 5	0.621	0.402	0.269	0.186	0.132
Year 6	0.564	0.335	0.207	0.133	0.088
Year 7	0.513	0.279	0.159	0.095	0.059
Year 8	0.467	0.233	0.123	0.068	0.039
Year 9	0.424	0.194	0.094	0.048	0.026
Year 10	0.385	0.162	0.073	0.035	0.017

internal rate of return (IRR)
The minimum return one needs to break even on an investment. It is the necessary net present value of an investment that, when added to the final market value of the investment, equals the current cost of the investment.

Internal Rate of Return

The **internal rate of return (IRR)** is the minimum return one needs to break even on an investment. IRR analysis calculates the discount rate of a capital expenditure where the discounted cash flows equal the expenditure's original investment, or the discount rate where the NPV is zero. Whereas discounted payback period analysis gives the manager an answer in years, and NPV analysis gives the manager an answer in dollars, IRR analysis gives the manager an answer as a percentage. Solving the NPV equation by hand is relatively simple, but solving the IRR is difficult without a calculator. Problem 15.3 shows how the healthcare manager can use a calculator to find NPV and IRR.

PROBLEM 15.3
NPV/IRR Calculation

ABC Day Surgery Center wants to buy equipment for $10,000 with projected cash flows of $3,000 per year during the equipment's five-year useful life. What is the NPV of the equipment at 10 percent? What is the IRR?

HB 10BII Solution to Problem 15.3

Keys	Display	Description
1 [◒] [P/YR]	1.00	Sets compounding periods per year to 1
–10,000 [CFj]	0 CF	Enters the initial cash flow
3,000 [CFj]	1 CF	Enters the first cash flow
3,000 [CFj]	2 CF	Enters the second cash flow
3,000 [CFj]	3 CF	Enters the third cash flow
3,000 [CFj]	4 CF	Enters the fourth cash flow
3,000 [CFj]	5 CF	Enters the fifth cash flow
[In the event that there is a salvage value, enter the value to the last year cash flow.]		
10 [I/YR]	10.00	Stores the interest rate
[◒] [NPV]	1,372.36	Displays NPV in dollars
[◒] [IRR/YR]	15.238	Displays IRR in percent

Step 21: Identify Nonfinancial Benefits

The twenty-first step in the corporate planning process—the fourth step in the capital budgeting stage—is for the department manager requesting the capital expenditure to identify nonfinancial benefits for the request. Examples of nonfinancial benefits could include community need or medical staff politics. Even if the organization is buying equipment just to please a valuable physician, the organization should still complete a financial analysis to determine the equipment's loss, which will need to be subsidized elsewhere.

Step 22: Evaluate Benefits and Make Decisions

The twenty-second and last step in the corporate planning process—the fifth and final step in the capital budgeting stage—is for the budget committee to evaluate the financial and nonfinancial benefits for each request and make decisions. The budget committee can use a decision matrix with weighted criteria similar to that shown in exhibit 15.2. When constructing a decision matrix, criteria are listed on the horizontal axis, and the capital expenditure requests are listed on the vertical axis. To improve the chances that the ultimate decision will be fair, criteria should be determined and perhaps weighted before evaluating the capital expenditure requests using the criteria. Implicit in the decision-making process is an evaluation of the decision. Many healthcare organizations use their internal audit departments to review capital expenditure decisions and the justifications of the department managers to determine their accuracy. Internal auditors can review the actual volumes, revenues, and expenses to determine whether the projections used to support the decisions were accurate.

Financing Capital Expenditures

Healthcare organizations can use cash generated from philanthropy, funded depreciation, operating surpluses, and debt to finance capital expenditures. Generally speaking, the

Exhibit 15.2
Decision Matrix for Capital Budget

	Financial Analysis	Community Need	Cost Containment	Physician Relations	
Request	*40*	*20*	*30*	*10*	*Total*
A	30	20	25	10	85
B	40	10	20	05	80
C	35	05	10	10	60
D	20	20	05	10	55

organization should use funded depreciation to finance replacement equipment and should use philanthropy, operating surpluses, or debt to finance new equipment.

The Tax Reform Act of 1986 limited the tax deduction individuals were able to take for donations; as a result, philanthropy to healthcare organizations declined. The decline in philanthropy paralleled an increase in debt financing because of two federal government policies. First, Medicare reduced the risk associated with debt financing by reimbursing 100 percent of the interest on debt used for capital expenditures (which ended in 1992 when capital and interest associated with capital became part of the DRG formula). Second, the Nixon administration encouraged debt financing by allowing local governments to create taxing authorities that issued tax-exempt bonds. As a result of these two policies, hospitals and many other healthcare organizations have relied on debt financing significantly more than other industries have.[5]

Facing rising demand for capital caused by aging facilities, the need for expansion, and the introduction of new technologies, many healthcare organizations may not have access to the capital they need. In 2012, the American Hospital Association reported that, in Moody's credit outlook for hospitals, "the preponderance of credit factors facing the industry is unequivocally negative, and is expected to remain negative for at least the next several years" (AHA 2012). Likewise Standard & Poor's (2013) reported a negative outlook for hospitals in the near future; however, it raised its credit rating from negative to stable in 2016, largely due to declines in charity care attributable to the Affordable Care Act (Evans 2016).

One of the most significant factors affecting an organization's ability to access the capital markets is the organization's creditworthiness. The healthcare industry relies on rating agencies such as Standard & Poor's, Moody's, and Fitch to measure creditworthiness using both objective criteria and subjective assessments of organizations and the markets in which they operate.

Moody's downgraded a record amount of debt held by not-for-profit hospitals in 2012. In downgrading the debt, Moody's noted a challenging operating environment, increasing debt loads, declining liquidity, greater competition, and management and governance issues. Historically, size has insulated large systems from downgrades; however, in 2012 the majority of the downgraded debt ($13 out of the $20 billion) belonged to just three large systems. In addition to size of system, the following characteristics have typically led to stronger bond ratings (Kutscher 2013):

- Effective management and governance
- Improved and sustained operating performance
- Strong and liquid investment portfolios and management of debt structure risks
- Favorable market demographics and market share
- Favorable change in organizational or legal structure

With many hospitals at debt capacity, credit markets limiting the extension of credit, and operating and investment margins declining, many future capital expenditures will be financed through hospital consolidations, including mergers, acquisitions, and joint ventures (Grauman, Harris, and Martin 2010; Commins 2016), which makes the planning and budgeting functions all the more crucial. Sometimes leasing is considered as another method of financing a capital expenditure.

Lease Versus Purchase Decisions

Lease versus purchase decisions are made after the decision to acquire the equipment; therefore, the lease versus purchase decision is in fact a financing decision. Generally, there are two types of leases: operating leases and capital leases. *Operating leases* are for periods shorter than the equipment's useful life and are common for copy machines, desktop computers, and cars. *Capital leases* are for the equipment's approximate useful life and usually include provisions for the lessee to purchase the equipment at the end of the lease period.

Lease decisions have several advantages over purchase decisions and can provide the lessee with more flexibility, more financing options for other equipment, more protection from unexpected events such as changes in technology, and more and better maintenance. In the case of for-profit healthcare organizations, capital leases can provide the same tax advantages as equipment purchases.

Lease decisions have several disadvantages over purchase decisions—including penalties for early lease termination and the requirement that the property be maintained in good working condition—and leases are generally more expensive than the purchase decision because lessors must make a profit and cover their risk of loss.

Exercise 15.1 gives a simple way of analyzing the costs associated with a nonprofit facility either purchasing or leasing a $1.3 million magnetic resonance imaging machine by applying a PV of 10 percent to both decisions (a for-profit facility would have tax shields, or reductions in the amount of income taxes paid, due to the tax deductibility of depreciation and interest expense).

Evaluating Capital Budgeting Performance

When evaluating capital budgeting performance, several ratios are used to determine how much debt an organization can incur.

Debt to Capitalization Ratio

$$\frac{\text{Long-term debt}}{(\text{Long-term debt} + \text{Net assets})}$$

EXERCISE 15.1
Lease Versus Purchase Decision Exercise

Purchase Considerations	Lease Considerations
Borrow $1.3 million at 10 percent on declining balance	Lease payments of $26,000 per month for 60 months (includes maintenance)
Depreciate straight line over five years	
Trade-in value of $130,000 at end of useful life	
Maintenance expense of $12,000 per year	

(Revenues, as well as labor and supply expenses, are the same for both decisions and therefore are not included in the analysis.)

PURCHASE

Year	Principal Payment	Interest Payment	Maintenance Expense	Total Expense	PV Factor at 10%	PV Expense
1	260,000	130,000	12,000	402,000	0.909	365,418
2	260,000	104,000	12,000	376,000	0.826	310,576
3	260,000	78,000	12,000	350,000	0.751	262,850
4	260,000	52,000	12,000	324,000	0.683	221,292
5	260,000	26,000	12,000	298,000	0.621	185,058
Trade-in	(130,000)				0.621	(80,730)
						1,264,464

LEASE

Year	Lease Payment	PV Factor at 10%	PV Expense
1	312,000	0.909	283,608
2	312,000	0.826	257,712
3	312,000	0.751	234,312
4	312,000	0.683	213,096
5	312,000	0.621	193,752
			1,182,480

Because the PV expense of the lease decision is less than the PV expense of the purchase decision, the financial merit supports the lease decision. However, other criteria in the advantages and disadvantages of the lease decision already mentioned should also be considered before making a final decision.

Debt to capitalization, or long-term debt to capitalization, is an indicator of the long-term debt divided by the long-term debt plus net assets. Higher values imply a greater reliance on debt financing as a percentage and may imply a reduced ability to carry additional debt. The debt-to-capitalization median for all hospitals reporting to Optum (2017) for 2015 audited financial statements was 23.7.

Average Age of Plant

$$\frac{\text{Accumulated depreciation}}{\text{Depreciation expense}}$$

Average age of plant provides an indicator in years of the age of a healthcare organization's fixed assets. Higher values reflect an older plant and equipment and indirectly may imply a difficulty in competing with "newer" healthcare organizations; lower values reflect a newer plant and equipment. The median average age of plant for all hospitals reporting to Optum (2017) for 2015 audited financial statements was 11.48.

Chapter Key Points

- Capital costs are important to consider because of rising healthcare costs and in dictating the trends of acquisitions, mergers, joint ventures, and closings.
- *Capital expenditures* are the purchases of land, buildings, and equipment for operations.
- *Replacement* and *new* are the two broad categories for capital expenditures.
- The capital budgeting stage of the corporate planning process has five steps: (1) identifying and prioritizing requests, (2) projecting cash flows, (3) performing financial analyses, (4) identifying nonfinancial benefits, and (5) evaluating benefits and making decisions.
- Funded depreciation should be used to finance replacement equipment, while operating surpluses, philanthropy, or debt should be used to finance new equipment.
- The decision to lease or purchase is a financial decision, and both options have pros and cons.
- The debt-to-capitalization ratio and average age of plant are two of the ratios used to evaluate capital budgeting performance.

Discussion Questions

1. Why are capital costs such an important aspect of a healthcare organization's costs?
2. What two categories are capital expenditure budgets divided into? Provide real-world examples of both of these categories.
3. How would you explain the five steps involved in the capital budgeting stage of the corporate planning process?
4. What are the three methods of financial analysis for capital expenditures? What are the formulas for each? Which of these three is the least sophisticated? Why?
5. What policies led to an increase in debt financing? What result did the two policies have on healthcare organizations?
6. What factors do rating agencies look at when issuing bond ratings?
7. Why would an organization choose to lease equipment over purchasing it? Provide an example of when an organization would be better off purchasing equipment than leasing.

Notes

1. "Useful life" is part of the depreciation controversy between providers and insurers regarding allowable cost for reimbursement purposes. The issues include what the useful life should be; whether the amount to be depreciated should be based on historical cost or replacement cost; and what method of computing depreciation (i.e., straight line, sum-of-the-years digits, or double declining balance—the latter two of which are accelerated) should be used.
2. In some cases, the budget committee may ask the medical staff or chief of the medical staff to prioritize the list of chief-of-service requests before submitting it to the budget committee. Doing so avoids the problem of nonphysician department managers making decisions on physician-generated requests.
3. Most organizations prioritize replacement equipment that is fully depreciated ahead of new requests to avoid the snowball effect of not replacing assets on schedule. Doing so is easy to justify because the need for the equipment is supportable with procedure logs; if the organization funded the equipment's depreciation properly, funds exist for the replacement. Some organizations prioritize new equipment ahead of replacement equipment to generate new streams of revenue. However, this strategy could result in long-term problems for the organization, especially if the organization uses funded depreciation to acquire the new equipment.

4. Usually the budget committee, chief financial officer, or designee is responsible for converting gross revenue to net revenue by subtracting contractual adjustments, charity care adjustments, and bad debt adjustments. This calculation can be accomplished in a fashion similar to that shown in problem 5.1, step 1, in chapter 5.
5. Health economists agree that organizations with this kind of excessive debt have great difficulty with cyclical recessions or downturns in the economy, which helps explain the growing trend of not-for-profit organizations entering joint ventures or being acquired by for-profit organizations that have access to different capital markets (Gold 2010).

Payback Period

Payback Period Practice Problem

XYZ Skilled Nursing Facility wants to buy equipment for $100,000 with projected cash flows of $22,000 per year during the equipment's five-year useful life. What is the payback period?

Payback Period Practice Problem Solution

Year	Cash Flow ($)	Cumulative Cash Flow ($)
cf_0*	(100,000)	(100,000)
cf_1	22,000	(78,000)
cf_2	22,000	(56,000)
cf_3	22,000	(34,000)
cf_4	22,000	(12,000)
cf_5	22,000	10,000

*cf_0 represents initial investment

By looking at the table, one can see that the skilled nursing facility will recover the cost of the equipment during year 5. Sometimes when comparing capital equipment requests it might be necessary to use a value more exact than whole years. To determine exactly when during year 5 the equipment will break even (assuming an even distribution of cash flows during the years), use the following formula:

$$\text{Payback period} = \text{Year before recovery} + \frac{\text{Unrecovered costs at beginning of year}}{\text{Cash flow during year}}$$

$$= 4 + \frac{12{,}000}{22{,}000} = 4.55 \text{ years}$$

Payback Period Self-Quiz Problem

Your sleep disorder clinic wants to buy new software for $20,000, with projected cash flows (salary savings) of $12,000 per year during the software's three-year useful life. What is the payback period?

Present Value

Present Value Practice Problem

What is the present value of $50,000, discounted at 7.5 percent annually for five years?

Present Value Practice Problem Solution

$$PV = \frac{FV}{(I + i)^n}$$

$$PV = \frac{\$\ 50{,}000}{(I + .075)^5}$$

$$PV = \frac{\$50{,}000}{1.4356}$$

$$PV = \$34{,}829$$

HB 10BII solution, compounded annually

Keys	Display	Description
I [◒] (P/YR)	1.00	Sets compounding periods per year to 1
5 (N)	5.00	Stores the number of compounding periods (1 x 5)
7.5 (I/YR)	7.50	Stores the interest rate
–50,000 (FV)	–50,000	Stores the future value
(PV)	$34,827.93	Calculates the present value

Present Value Self-Quiz Problem

What is the present value of $25,000, discounted at 3.5 percent annually for three years?

Net Present Value/Internal Rate of Return

NPV/IRR Practice Problem

XYZ Skilled Nursing Facility wants to buy equipment for $100,000, with projected cash flows of $22,000 per year during the equipment's five-year useful life. What is the net present value at 10 percent with a salvage value of $10,000? What is the internal rate of return?

NPV/IRR Practice Problem Solution

HB 10BII solution

Keys	Display	Description
1 ◒ P/YR	1.00	Sets compounding periods per year to 1
–100,000 CF_j	0 CF	Enters the initial cash flow as an annuity (–)
22,000 CF_j	1 CF	Enters the first cash flow
22,000 CF_j	2 CF	Enters the second cash flow
22,000 CF_j	3 CF	Enters the third cash flow
22,000 CF_j	4 CF	Enters the fourth cash flow
32,000 CF_j*	5 CF	Enters the fifth cash flow

In the event that there is a salvage value, enter the value to the last year cash flow.

10 I/YR	10.00	Stores the interest rate
◒ NPV	10,393.48	Displays NPV in dollars
IRR/YR	6.05	Displays IRR in percent

NPV/IRR Self-Quiz Problem

The physician's office that you manage wants to buy equipment for $20,000, with projected cash flows of $3,000 per year over the equipment's ten-year useful life. Calculate the NPV/IRR at 10 percent.

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PART V

HEALTHCARE REFORM: PAST, PRESENT, AND FUTURE

CHAPTER 16

HEALTHCARE REFORM TRENDS

The bill I'm signing will set in motion reforms that generations of Americans have fought for and marched for and hungered to see. Today we are affirming that essential truth, a truth every generation is called to rediscover for itself, that we are not a nation that scales back its aspirations.

President Barack Obama, while signing the Affordable Care Act (ACA) on March 23, 2010

Tonight, I am calling on this Congress to repeal and replace Obamacare [the Affordable Care Act] with reforms that expand choice, increase access, lower costs, and at the same time, provide better healthcare. Mandating every American to buy government-approved health insurance was never the right solution for America.

President Donald Trump, while speaking to a joint session of Congress on February 28, 2017

Learning Objectives

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

- Identify the need for national healthcare reform
- Compare and contrast healthcare reform proposals in the past
- Discuss the Affordable Care Act of 2010

- Explain the need for entitlement reform
- Discuss various state proposals for healthcare reform
- Consider possible future developments in healthcare reform

National Healthcare Reform

The need for national healthcare reform has focused on three issues: quality, access, and cost. This section examines each of these issues in turn and then presents a detailed history of national healthcare reform efforts in the United States from 1910 to the present.

Quality

In 1999, the Institute of Medicine (IOM) published *To Err Is Human*, which reframed the quality movement from improvement of quality to reduction of errors. The report identified the scope and extent of medical errors in American hospitals and concluded that medical errors kill between 46,000 and 98,000 Americans every year. An additional 1.2 million Americans suffer an adverse event caused by the hospital that results in an extended hospitalization or disability. More than half of the adverse events were reported as preventable (IOM 1999).

In 2001, the IOM published *Crossing the Quality Chasm*, which called for fundamental change in the delivery of healthcare to improve quality and reduce medical error. The report provided a set of six performance expectations for the twenty-first century healthcare system (safe, effective, patient-centered, timely, efficient, and equitable), a new framework to better align financial incentives with better practice (accountability), steps to promote evidence-based practice and clinical information systems, and ten new rules to guide patient–clinician relationships (IOM 2001).

In 2016, *BMJ* (formerly the *British Medical Journal*) published an analysis by researchers at Johns Hopkins Medicine estimating that more than 250,000 Americans die each year from medical errors—making medical errors the third leading cause of death, behind heart disease and cancer and ahead of deaths related to respiratory illness (Makary and Daniel 2016).

The federal government has argued that the ACA is improving the quality of patient care. Since 2011, patient safety programs have reduced medical errors including hospital-acquired conditions, pressure ulcers, central line–associated bloodstream infections, falls, and traumas by 17 percent, saving an estimated 50,000 lives and $12 billion. In 2013, avoidable hospital readmissions fell 17.5 percent, or by 150,000 fewer hospital readmissions for Medicare beneficiaries. More than 700 accountable care organization have generated $417 million in savings for Medicare by emphasizing value-based programs (HHS 2016d).

Access

One of the goals of the Healthy People 2020 program is to improve access to comprehensive, high-quality healthcare services by 2020. Proponents of improving access argue that 17.2 percent of Americans, or approximately 55 million Americans, were without health insurance before the ACA. Many proponents argue that healthcare is the right of every American.

Prior to the ACA, opponents of healthcare reform argued that while 17.2 percent of Americans were without insurance, 82.8 percent of Americans had insurance. Opponents also argued that insurance coverage was available for many Americans in need: Medicare for the elderly, Medicaid for the poor and disabled, and Temporary Assistance for Needy Families (TANF) and the Children's Health Insurance Program (CHIP) for children. Opponents argued that most of the uninsured represented the young, whose risk for serious illness and resulting large healthcare expenditures is small. Opponents also argued that many of the uninsured were employed (85 percent) and earned more than the federal poverty level for Medicaid eligibility but refused to purchase health insurance because they considered it too expensive (Scalise and Thrall 2002).

The federal government has argued that the ACA is working to improve access. Through 2015, about 10.2 million Americans were paying their premiums and had achieved access through the Health Insurance Marketplace. An additional 12.3 million Americans had achieved access through the Medicaid expansion, and 2.3 million young Americans had achieved access using the provision to stay on their parents' plan until age 26 (HHS 2016d).

Cost

The argument for healthcare reform to reduce costs is far more compelling; employers, employees, taxpayers, and patients are seemingly all in agreement that healthcare costs are too high. Exhibit 16.1 shows the projected growth in healthcare expenditures, per capita healthcare expenditures, and healthcare expenditures as a percentage of gross domestic product (GDP) since 1950 and projected through 2019. The continued growth in healthcare expenditures as a percentage of GDP means that healthcare expenditures continue to grow at a faster rate than the economy.

The federal government was projected to account for 35 percent of the $3 trillion spent on healthcare in 2016, while state and local governments would account for an additional 6.3 percent of total expenditures. Because professional providers and hospitals are the largest recipients of healthcare dollars (27.7 percent and 33.5 percent, respectively, projected in 2016), understanding the government's growing emphasis on reducing the rate of growth for expenditures for hospital and physician care is easy (Keehan et al. 2016).

President Obama summarized the problem of rising healthcare costs in a speech to a joint session of Congress (Obama 2009):

> Then there's the problem of rising cost. We spend one and a half times more per person on health care than any other country, but we aren't any healthier for it. This is one of the reasons that insurance premiums have gone up three times faster than wages. It's why so many employers—especially small businesses—are forcing their employees to pay more for insurance, or are dropping their coverage entirely. It's why so many aspiring entrepreneurs cannot afford to open a business in the first place, and why American businesses that compete internationally—like our automakers—are at a huge disadvantage. And it's why those of us with health insurance are also paying a hidden and growing tax for those without it—about $1,000 per year that pays for somebody else's emergency room and charitable care.
>
> Finally, our healthcare system is placing an unsustainable burden on taxpayers. When healthcare costs grow at the rate they have, it puts pressure on programs like Medicare and Medicaid. If we do nothing to slow these skyrocketing costs, we will eventually be spending more on Medicare and Medicaid than every other government program combined. Put simply, our healthcare problem is our deficit problem. Nothing else even comes close. Nothing else.

Increasing political and economic pressure to reduce the deficits and resulting national debt means that the country must reduce the rate of growth of healthcare spending. This will be especially difficult as the baby boomers, the first of whom became eligible for Medicare in 2011, demand greater amounts of healthcare as they age for the next 30 years of their lives.

Economists believe, and research supports, that as much as 30 percent of all healthcare spending is inappropriate or unnecessary. In 2009, Thomson Reuters (now Truven Health Analytics) attempted to quantify the almost 30 percent ($700 billion of $2.5 trillion in healthcare spending that year) that could be eliminated without harming quality (Kelley 2009):

- $250 to $325 billion on unwarranted use
- $125 to $175 billion on fraud and abuse
- $100 to $150 billion on administrative system inefficiencies
- $75 to $100 billion on provider inefficiency and error
- $25 to $50 billion on lack of care coordination
- $25 to $50 billion on preventable conditions and avoidable care

Research supports the following ten proposals to reduce costs (or bend the cost curve) in healthcare (Moore, Eyestone, and Coddington 2013):

Exhibit 16.1
Projected Growth in Healthcare Expenditures, Total Expenditures, per Capita, and Percent of GDP

Year	Health Expenditures (in $ billions)	Per Capita ($)	Percent GDP*
1950	12.7	82	4.4
1960	26.9	146	5.3
1970	73.2	341	7.1
1980	247.3	1,052	8.9
1990	699.5	2,691	12.2
2000	1,310.0	4,670	13.3
2010	2,600.0	8,417.2	17.4
2011	2,700.7	8,680.0	17.3
2012	2,806.6	8,948.4	17.2
2013	2,879.9	9,115.1	17.3
2014	3,031.3	9,523.4	17.5
2015	3,205.6	9,990.0	17.8
2016†	3,350.7	10,345.5	18.1
2019†	3,958.6	11,887.5	18.5

* GDP = gross domestic product

† projected

Source: Martin et al. 2017; Keehan et al. 2016; CMS 2016a.

1. Replace fee-for-service reimbursement with value-based contracting.
2. Increase the supply and effective utilization of primary care physicians and physician extenders.
3. Focus more attention on the management of individuals with chronic disease.
4. Pass tort reform.
5. Discourage the use of physician-owned ambulatory surgery centers, imaging centers, and specialty hospitals.
6. Encourage the formation of multispecialty group practices and integrated systems.
7. Reduce administrative complexity.

8. Stop accepting excuses that providers cannot cover their costs under public programs and must shift unreimbursed costs to the private sector.
9. Expect more from the customer.
10. Develop strategies that work for end-of-life decision making.

The federal government has argued that the ACA is making healthcare more affordable for consumers by subsidizing health insurance purchased on the Health Insurance Marketplaces—85 percent of consumers who purchased health insurance on the Health Insurance Marketplaces received a health insurance premium tax credit, averaging $272 per month. As of 2016, the price for healthcare to consumers had risen at its slowest rate in 50 years (HHS 2016d). However, total healthcare expenditures for the nation continue to increase at a more rapid rate than the economy: 4.8 percent in 2016, 5.5 percent in 2015, and 5.3 percent in 2014, caused in part by the cost of the subsidies provided by the federal government and the cost of the Medicaid expansion to the federal government (the federal portion of Medicaid increased 18.4 percent in 2014 and 14.7 percent in 2015; Keehan et al. 2016).

Early Healthcare Reform

The discussion regarding national healthcare reform and universal health insurance coverage has a long history in the United States, beginning with former president Theodore (Teddy) Roosevelt in 1910. Running as a third-party candidate, Teddy Roosevelt offered a platform that included universal coverage. President Franklin Roosevelt later explored national health insurance as part of his Social Security Act in the 1930s. And President Harry S. Truman included national health insurance in his speeches in 1945. Congress passed and President Lyndon B. Johnson signed publicly financed healthcare for the elderly and the poor in 1965. Senator Edward (Ted) Kennedy (D-MA) in the 1970s and 1980s advocated national health insurance and in the 1990s settled for publicly financed healthcare for needy children. Until the defeat of President Bill Clinton's healthcare proposal, the American Health Security Act of 1993, it was unclear whether healthcare reform would be market based, legislation based, or both. Healthcare reform prior to 1994 could best be characterized as reactionary, meaning that policy and resulting legislation reacted to each problem without overall guiding principles.

In 1973, Congress passed legislation to facilitate the development and growth of health maintenance organizations (HMOs). In addition to allocating seed money to develop HMOs, the law also required employers of 25 or more employees to offer HMO coverage, if available, as a competitive alternative to traditional indemnity coverage.

Legislation that ended Medicare cost-based reimbursement for hospitals and initiated a competitive environment under prospective payment was passed by Congress in 1983.

Eastaugh (1987) compared prospective payment in the healthcare industry to deregulation in the airline industry. When routes were deregulated in the airline industry, excess capacity diminished and prices fell markedly (and some would say quality improved). By deregulating payment methods in healthcare, or by eliminating the guaranteed return provided by cost-based reimbursement, excess capacity should be diminished and prices should fall as a result of increased competition.[1]

In 1984, Congress passed the Deficit Reduction Act (DEFRA) that limited the amount an employer could deduct for health benefits for employees, and—because costs beyond the limits were absorbed by employees and, through employees, the employers—employers became sensitive to the costs of health benefits. Managed care became an alternative for many employers seeking to reduce health benefit costs.

Congress then passed the Omnibus Reconciliation Act of 1989, which ended Medicare charge-based reimbursement for physicians and initiated a competitive environment under prospective payment in 1992.

Unsuccessful Legislative Attempts at Reform

During the late 1980s and early 1990s, a variety of healthcare reform bills circulated through Congress. While none of these bills was passed into law, reviewing them in broad classifications is useful for better understanding the Clinton plan's demise and subsequent legislation.

Incremental proposals assumed that the current healthcare system was working well and needed only minor changes. The advantages of the incremental proposals were that they attempted to build on the current public/private healthcare system, spent fewer federal dollars, and enjoyed bipartisan support. The disadvantages included the assumption that the private sector would be able to control costs, the continuance of patching healthcare coverage, and the provision of solutions that addressed only symptoms of healthcare problems, not the problems themselves. Examples of incremental proposals included the Affordable Health Care Now Act of 1993 by Senator Robert Michel (R-IL) and the Health Equity and Access Reform Today Act of 1993 by Senator John Chafee (R-RI).

A **single-payer proposal** assumed that the current healthcare system was broken and needed a radical change—the provision of near-universal coverage from a single payer, presumably the federal government. Advantages of the various single-payer proposals put forth included eliminating cost shifting, providing near-universal coverage, reducing administrative costs by billing one payer, and accommodating spending limits through global budgeting. Disadvantages included shifting resources from the relatively efficient private sector to the relatively inefficient public sector, allowing financing and management by the federal government, and forcing waiting periods for elective procedures. Examples of single-payer proposals included the American Health Security Act of 1993 by Representative James McDermott (D-WA) and the Mediplan Health Care Act of 1993 by Representative Pete Stark (D-CA).

single-payer proposal A health reform idea that a single payer—namely, the federal government—should pay for all healthcare.

employer-based proposal
A health reform idea that employers should provide health insurance for their employees.

An **employer-based proposal** assumed that businesses were responsible for providing health insurance coverage to their employees. Advantages of the various employer-based proposals put forth included building on the current public/private system, providing increased access, and decreasing the government cost burden. Disadvantages included placing a heavier cost burden on businesses and encouraging businesses to dump high-risk workers. An example of an employer-based proposal was Health America of 1993 by Senator Elizabeth Mitchell (D-ME).

managed-competition proposal
A health reform idea that blended government regulation with free-market competition.

A **managed-competition proposal** assumed that the advantages of government regulation, including improved access, could be integrated with the advantages of free-market competition, including lower prices. Advantages of the various managed-competition proposals put forth included the fixing and provision of community rating of health insurance premiums, which requires that the fortunate healthy subsidize the unfortunate sick; encouraging competition based on quality; providing portable coverage that employees could transfer from one employer to another; and prohibiting insurers from canceling or declining insurance coverage based on new illness, preexisting illness, or high risk for illness. Disadvantages included mandating participation, requiring management of the system by the federal government, establishing community rating of premiums that discourages incentives for leading healthy lifestyles, limiting physician and hospital choice, and limiting access to certain procedures. An example of a managed-competition proposal was the Managed Competition Act of 1993 by Senator James Cooper (D-TN).

The Clinton Plan

In early 1992, presidential candidate Bill Clinton seemed to be favoring employer-based proposals while promising to lower healthcare costs to win support from businesses. As president, Clinton promoted the Health Security Act of 1993, which had two major goals: to achieve universal coverage, making healthcare a right for all Americans, and to curtail rapidly rising healthcare costs. Building on the success of HMOs in improving access while containing costs, the act proposed a choice of private health insurance plans through regional healthcare alliances, with exceptions to those already covered by Medicare or large employers. Clinton's act was a compromise between the liberals, led by Democratic Senator Edward Kennedy, who wanted a single-payer plan, and conservatives, led by Republican Senator John Chaffee, who supported market-based reforms to promote voluntary health insurance (Kooijman 1999).

As Clinton's Health Security Act moved from theory to legislation introduced in the 103rd Congress of 1993–1994, conservatives attacked the act as the epitome of "big government." Although the content of the act was sound, Congress never voted on it because of several mistakes in strategy on Clinton's part: The insurance industry resisted the insurance reform that was necessary; the conservatives characterized the alliances as cooperatives; the goal of universal coverage led to endless rules and legislative demands; in

the face of calls for a balanced budget, conservatives characterized the act as an open-ended entitlement; and the act made some sense in theory but became increasingly difficult to operationalize (Zelman 1996).

With the failure of the Clinton plan, no one in Congress or the White House was willing to introduce the massive legislation necessary for managed-competition, single-payer, or employer-based healthcare reform. In the absence of such legislation, it appeared that the country was willing to let Congress address the access problem with incremental legislation and to let the free market control healthcare costs with competition.

Federal Reform

The first major piece of health-related legislation enacted by Congress after the Clinton plan's defeat was the Health Insurance Portability and Accountability Act (HIPAA) of 1996, which included the following provisions:

- Insurance reform to protect currently insured people from losing coverage as a result of job change or family illness and to require insurance companies that offer small-group insurance coverage to make policies available to all small groups[2]
- Medical savings accounts (MSAs)
- Administrative simplification, which mandated the development of standardized electronic billing, claims, and remittance
- Healthcare tax rule changes, which allowed the self-employed to increase their deduction for healthcare costs and insurance premiums from 30 percent in 1996 to 80 percent by 2006 and made long-term care costs and insurance premiums and costs tax-deductible
- Medicare fraud and abuse changes

The Balanced Budget Act (BBA) of 1997, in addition to cutting Medicare expenditures over a five-year period, included provisions for increasing access. It allowed provider-sponsored organizations to bid on Medicare and Medicaid business and gave states the option to require Medicaid beneficiaries to enroll in managed care plans. The act also adopted Kids Care, a proposal to provide $23.4 billion over five years to expand health coverage for children whose parents' income is too high to qualify for Medicaid but too low to afford private insurance. The act also established the sustainable growth rate (SGR), which calculates the amount of increase physicians would receive each year from Medicare.

After significant evidence that the BBA was cutting more than the projected $115 billion from the budget (some observers estimate that it cut two to three times more than

the $115 billion originally intended), Congress passed and President Clinton signed the Balanced Budget Refinement Act (BBRA) in November 1999. The plan provided an estimated $16 billion in increased Medicare payments to providers over five years.

In December 2000, Congress passed and President Clinton signed the Medicare, Medicaid, and SCHIP [State Children's Health Insurance Program] Benefits Improvement and Protection Act (BIPA). BIPA provided about $35 billion in Medicare relief over five years and increased Medicare and Medicaid healthcare provider payments; added preventive benefits and reduced beneficiary cost sharing under Medicare; and improved insurance options for low-income children, low-income families, and low-income seniors.

In late November 2003, Congress passed the Medicare Prescription Drug, Improvement, and Modernization Act (MMA), which President George W. Bush signed in early December. Heralded as the most significant expansion of the Medicare program since its inception, the act was a compromise between Republicans who wanted to privatize Medicare and Democrats who wanted to expand Medicare benefits. In addition to the increased payments to healthcare providers, MMA provided a Medicare-endorsed prescription drug discount card, a Medicare prescription drug benefit beginning in 2006, faster delivery of generic drugs to market, and other features.

The Deficit Reduction Act (DEFRA) of 2005 was signed into law by President Bush in 2006. DEFRA achieved $8.3 billion in savings from Medicare and $4.7 billion in savings from Medicaid, including SCHIP, over five years. The act provided for the following (HFMA 2006):

- Starting in 2008, it reduced Medicare payments for services provided as a result of certain hospital-acquired infections.
- It addressed the calculation of a hospital's Medicare disproportionate share hospital adjustments.
- It provided that Medicare-dependent hospitals—hospitals with 100 or fewer beds and a high proportion of Medicare patients—receive special payments.
- It reduced the reimbursement to ambulatory surgical centers (ASCs) if the ASC payment exceeds the hospital outpatient department fee schedule.

President Bush signed into law the Tax Relief and Health Care Act of 2006, which included provisions to prevent a 2007 cut in Medicare physician payments mandated under DEFRA of 2005.

In 2007, President Bush signed into law the Medicare, Medicaid, and SCHIP Extension Act, which included the following provisions to extend funding for SCHIP: extended funding for the program through March 31, 2009; a 0.5 percent Medicare payment increase for physicians for six months; and an extension of transitional medical assistance eligibility for Medicaid beneficiaries for six months.

In 2009, President Obama signed into law the American Recovery and Reinvestment Act, which provided $224 billion for education and healthcare as well as entitlement programs (states received $15 billion in Medicaid relief).

On March 23, 2010, President Obama signed into law the Senate version of healthcare reform—the Patient Protection and Affordable Care Act. On March 30, 2010, the president signed into law the House version of healthcare reform, the Health Care and Education Reconciliation Act. Together, the two laws were projected to cost $940 billion over ten years and provide insurance coverage to an additional 32 million Americans, increasing health insurance coverage to 94 percent of the population (Lubell and DoBias 2010). As described by the American Hospital Association (AHA 2010), the reform laws include provisions that do the following to address the three big issues in healthcare—access, quality, and cost:

- Expand coverage to 32 million people through a combination of public program and private-sector insurance expansions, including a mandate for individuals to purchase health insurance; a mandate for employers with 50 or more employees to provide or contribute to health insurance; low-income subsidies to help individuals purchase health insurance; expansion of Medicaid eligibility to 133 percent of the federal poverty level; and the creation of state-based insurance exchanges to provide low-cost health insurance to individuals and small businesses (those with fewer than 100 employees).
- Reduce the rate of increase in Medicare and Medicaid spending through reduced payment updates, decrease disproportionate share hospital payments, and initiate financial penalties for unnecessary hospital readmissions and hospital-acquired infections.
- Adopt several delivery system reforms to better align reimbursement with improved coordination of patient care and quality. These reforms include value-based purchasing, pilot projects to test Medicare bundled payments, and voluntary pilots for accountable care organizations (ACOs).
- Provide grants and loans to improve workforce education and training on healthcare issues.
- Include provisions to reduce waste, fraud, and abuse in Medicare and Medicaid programs.
- Impose new reporting requirements for tax-exempt hospitals.
- Place significant restrictions on the expansion of physician-owned hospitals and prohibit new facilities.

The constitutionality of the Affordable Care Act was challenged by 26 states, and the Supreme Court ruled on the act in 2012. While articulating the role of the new Roberts Supreme Court, the court ruled on the following (Carlson 2012):

- The individual mandate is unconstitutional under the Constitution's commerce clause.
- The individual mandate is constitutional under the federal government's authority to tax.
- The Medicaid mandate, putting all of a state's federal Medicaid money at risk if the state does not expand Medicaid eligibility, is unconstitutional.

In response to the unconstitutionality of the Medicaid mandate, the federal government asked the states to expand Medicaid eligibility from 100 percent of the federal poverty level to 138 percent of the federal poverty level (providing Medicaid coverage to an additional 17 million low-income adults and children). To incentivize the states, the federal government offered to pick up 100 percent of the expansion costs for the first three years and no less than 90 percent of the expansion costs on a permanent basis. As of January 1, 2014 (the date of implementation of the Medicaid expansion), 25 states and the District of Columbia, largely along party lines, had agreed to expand their Medicaid programs.

The Budget Control Act of 2011 was passed in August 2011 in response to President Obama's request for permission to raise the debt ceiling. The act established the Joint Select Committee on Deficit Reduction to identify at least $1.2 trillion in cuts over ten years. In the event that the committee could not identify the cuts, an across-the-board cut in the same amount, called *sequestration*, would automatically be enforced. On December 23, 2011, the Joint Select Committee announced that it could not reach agreement on the cuts. Despite the sequestration, the act continued funding for healthcare fraud and abuse investigations.

The American Taxpayer Relief Act was passed on January 1, 2013, and it delayed sequestration for two months. The act raised taxes on the wealthy, generating $600 billion over ten years. Regarding healthcare, the act delayed a pending 26.5 percent cut in Medicare reimbursement to physicians based on the SGR established in 1997. Sequestration went into effect on March 1, 2013, and cut $1.2 trillion in federal spending over ten years ($42 billion in cuts during 2013), including a 2 percent cut from Medicare reimbursement to hospitals, or about $10 billion over ten years.

In late 2013, the House and Senate passed and President Obama signed a two-year federal budget, the Bipartisan Budget Act, averting a federal government shutdown. The budget eliminated many automatic-spending cuts and delayed for three months pending cuts to physician reimbursement mandated under the SGR.

During the fall of 2013, both the House Appropriations Committee and the Senate Finance Committee discussed an elimination of the SGR in a bill called the Medicare Patient Access and Quality Improvement Act of 2013. The bill proposed replacing the pending 24 percent cut in Medicare physician payment with 0.5 percent increases in Medicare physician payment per year for five years and value-based reimbursement after five years. The Medicare Patient Access and Quality Improvement Act of 2013 was replaced in 2014 by the SGR Repeal and Medicare Provider Modernization Act, which proposed replacing the SGR with a merit-based incentive pay system, which combined three existing incentive programs for physicians: Physician Quality Reporting System, Value-Based Payment Modifier, and the meaningful use of electronic health records. Although the act had broad bipartisan support, the parties differed on how to pay for the amount physicians owed to the federal government under the SGR, estimated by the Congressional Budget Office to be $140 billion. Republicans proposed to pay for the act by delaying the individual mandate under the ACA for five years, which Democrats would not support.

The Protecting Access to Medicare Act of 2014 was signed into law on April 1, 2014, and extended expiring program authorizations and appropriations including the SGR for physician reimbursement under Medicare. The act also introduced the Skilled Nursing Facility Value-Based Purchasing Program, to become effective in 2019.

The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) had significant bipartisan support, as evidenced by a 92–8 vote in the Senate and a 392–37 vote in the House. President Obama signed the law on April 15, 2015, after deciding to pay for the $200 billion owed to the federal government under the SGR by increasing the deficit by $140 billion, by cutting hospital reimbursement $34 billion, by increasing Medicare Part B and Part D premiums to wealthy Medicare beneficiaries by $34 billion, and by increasing out-of-pocket costs for Part B by $6 billion.[3] The law repealed the SGR; provided a 0.5 percent annual update for five years; and developed two tracks for physician reimbursement starting in 2019: Merit Incentive Payment System (MIPS) or Alternative Payment Models (APMs). MIPS would measure quality, advancing care information (formerly meaningful use criteria), clinical practice improvement, and cost. APMs were intended to move physicians away from low-risk, volume-based fee-for-service to risk-assuming, value-based methods of payment.

State Reform

With the growing state and local expense of providing healthcare to the uninsured and with little hope of federal legislation to address the problem, states have been experimenting with reform on their own. Massachusetts was the first state to address healthcare reform with legislation in 2006, but its circumstance was unique given the relatively low number of uninsured, the agreements with major insurers in the state, and the arrangement with the federal government to help pay for uncompensated care (Mantone 2006). The Massachusetts plan included the following:

- An individual mandate for individuals to find health insurance coverage or face a $1,069 per year fine
- MassHealth (Medicaid) and SCHIP expansion to provide health insurance coverage for individuals earning up to 150 percent of the poverty level
- A state plan, Commonwealth Care, to provide subsidized health insurance coverage for those individuals making between 150 and 300 percent of the poverty level
- A mandate for employers with 11 or more employees to provide health insurance coverage to their employees or face a $295 per employee per year fine
- A state plan, Commonwealth Choice, to provide health insurance coverage at group rates to individuals making more than 300 percent of the poverty level and to small businesses
- A waiver based on an affordability standard for families making less than $114,000 who cannot find health insurance coverage

Because of a slow start in enrolling individuals, 2007 actual costs of $133 million came in under budget. However, 2008 actual costs came in significantly over budget at $625 million, and 2009 budget requests were $869 million. Facing large budget deficits in the state, MassHealth (Medicaid) payment levels were reduced. Even with the cost problems, the Massachusetts plan still seemed to have widespread bipartisan support of the legislature as well as public support (Larkin 2009).

In 2010, a four-year review of the Massachusetts plan was conducted, with mixed reviews. Uninsured numbers improved from 10.9 percent in 2006 to 6.3 percent in 2010, while per capita health spending was 15 percent higher than the national average (Kaiser Family Foundation 2012a).

Another state that attempted its own healthcare reform in the first decade of the twenty-first century was California. In 2007, California governor Arnold Schwarzenegger announced his healthcare initiative. Citing the uninsured as the major problem with healthcare costs, Schwarzenegger said that healthcare to the uninsured cost the average insured family about $1,186 in increased insurance costs, or a "hidden tax," each year (Rau 2008). Under his initiative, all Californians would be required to have health insurance coverage. Insurers would be required to guarantee coverage. The initiative would encourage personal responsibility for health and wellness by providing incentives and rewards. After Governor Schwarzenegger's proposal passed in the California Assembly in December 2007, a California Senate panel rejected it in January 2008 as too risky and too expensive (Rau 2008).

The ACA originally required states to expand Medicaid eligibility to citizens making from 100 percent of the federal poverty level to citizens making 138 percent of the poverty

level or risk losing all federal funding for Medicaid. After the Supreme Court ruled that provision unconstitutional, the federal government tried to entice states to expand eligibility to 138 percent by promising to pay 100 percent of the expansion costs for the first three years and 90 percent of the expansion costs until 2022. As of mid-2016, 31 states and the District of Columbia had expanded Medicaid and 19 states had not (Kaiser Family Foundation 2017a, 2017b). For details, see the "Expansion" section of chapter 7 on Medicaid.

Free-Market Reform

After the defeat of the Clinton plan in 1994, managed care began to dominate the marketplace, having evolved on its own in response to economic pressures. Eighty-five percent of all workers were covered by some form of managed care in 1998, up from 50 percent in 1994. Managed care, although still plagued with complaints regarding limited choice, slowed soaring healthcare costs.[4] Although the nation's spending for healthcare reached $1 trillion in 1996, the amount was only $50 billion more than that spent in 1995, for an increase of 4.4 percent, which was the smallest percent increase in 37 years (Kilborn 1998).

Regarding clinical quality, evidence in the late 1990s suggested that managed care provided better healthcare than the previous fee-for-service plans. For example, HMO patients were 25 percent less likely to endure futile, painful, degrading, unwanted care during the last six months of a terminal illness. Such care accounted for 21 percent of all Medicare spending (Cher and Lenert 1997). Because of the emphasis on prevention and early detection, managed care should detect cancers at an earlier stage than fee-for-service plans and, as a result, reduce the need for surgical intervention. Regarding patient satisfaction, enrollees continue to complain about managed care limiting the number of providers patients can choose and about waiting times for elective procedures.

As employers continue to seek strategies to reduce healthcare costs and as providers continue to consolidate resources in reaction to market forces, the answer may well be direct contracting, a topic discussed in chapter 5. *Direct contracting* is the practice of large employers making a contractual agreement directly with integrated delivery systems or systems of healthcare providers capable of accepting a financial risk and delivering a full range of healthcare services to employees. Direct contracting stimulates competition between integrated delivery systems and encourages local control and innovation. It also reduces administrative costs, which in turn reduces employer health plan costs (Burrows and Moravec 1997).

The need for clinical coordination among physicians and between physicians and hospitals is addressed by the ACA, which authorized ACO pilots for Medicare patients beginning in 2012. ACOs can take many forms, but they generally provide high-quality care at the lowest possible cost by exploring new ways to minimize fragmented care between professionals in an organizational provider and between organizational providers, avoid repetitive services, and improve clinical and service performance. Several successful ACOs exist today, including Kaiser Permanente and Geisinger Health System, whose models of

in-house insurance plans (risk taking) and employed physicians have proven effective in improving quality and reducing costs (HFMA 2010). However, while the 20 ACOs in the pioneer program and the 333 in the shared savings program reported savings of $411 million in 2014, Medicare reported that after bonuses and incentives were paid by Medicare, the Centers for Medicare & Medicaid Services (CMS) recorded a $2.6 million loss. Accounting for the loss, ACO experts cite initial infrastructure costs and slow changes in physician behavior (Kaiser Family Foundation 2015).

The Future of Healthcare

With the passage of the ACA, national healthcare reform became a reality. However, soon after its enactment, three "brutal facts" about the US healthcare system still existed, according to Kaufman (2011): (1) the healthcare bubble would eventually burst; (2) neither ACOs nor first-generation clinical integration would produce the desired results; and (3) physician autonomy and the organized medical staff would become less relevant.

Healthcare Bubble Bursting

Supporting the notion that the healthcare bubble was coming to an end, the Bipartisan Debt Reduction Task Force in late 2010 called for immediate steps to reduce the federal debt caused in part by the aging population and rising healthcare costs (Domenici and Rivlin 2010). The Congressional Budget Office released projections indicating that the ACA would not reduce the deficit by the $143 billion originally planned during the first ten years (Daly 2011). And the *Wall Street Journal* predicted that the states would be unable to absorb the increased healthcare costs passed to them by the ACA in 2014 (Chen 2011). Kaufman (2011) predicted that federal and state governments would continue to reduce payments to providers in the current fee-for-service reimbursement environment, and in the future, governments would move toward bundled payments and capitated payments to further reduce healthcare costs.

Lack of Desired Results from ACOs and First-Generation Clinical Integration

Regarding the "brutal fact" that neither ACOs nor first-generation clinical integration would produce desired results (significant cost savings through improved quality and efficiency), Kaufman (2011) noted that

- generating significant savings on Medicare fee-for-service patients is difficult for integrated medical groups; and

- when groups receive shared savings payments, the payments are insufficient to cover the increased costs.

Kaufman recommended a second-generation clinical integration characterized by primary care–based medical homes, electronic health records with point-of-care protocols, disease management programs, relationships with post-acute providers, and a culture (and reimbursement environment) committed to improving cost and quality rather than to maintaining provider autonomy and income.

Reduced Autonomy of Physicians and Relevance of Organized Medical Staff

Regarding Kaufman's (2011) prediction that physician autonomy and the organized medical staff would become less relevant, Medicare reimbursement strategies, such as value-based purchasing (VBP), were expected to hold hospitals increasingly responsible, from a financial perspective, for patient care provided by physicians. Under VBP, hospital revenue was expected to be at risk as Medicare and other insurers reduced payments for hospital-acquired infections and unnecessary readmissions, for example. According to Kaufman, hospitals can no longer afford to delegate the authority for the quality or cost of patient care to autonomous physicians practicing a highly variable model of care. Hospitals will need to work with medical staffs to

- modify medical staff bylaws to require conformance to patient safety, patient satisfaction, process, and quality metrics as a condition of hospital privileges; and
- develop a medical staff organization in which medical leaders have authority over cost, quality, and the patient satisfaction decisions of physicians.

Entitlement Reform

The next reform that has been expected to have an important effect on the healthcare industry is entitlement reform (Nowicki 1996). As president-elect, Obama pledged entitlement reform, saying that the nation's long-term economic recovery was dependent on controlling America's most costly entitlement programs: Medicare and Social Security (Shear 2009).

Through 2016, the government had funded the vast majority of entitlement payments through current tax revenues and the hope for future tax revenues (deficit spending that increases the national debt). Twenty years earlier, Peterson (1996) argued that much of the economic burden for funding current entitlements would fall to future generations. In 2008, the national debt based on future promised and funded benefits was $62.3 trillion,

which represented an additional tax burden of $200,000 for every man, woman, and child in the United States (Peter G. Peterson Foundation 2008).

The National Commission on Fiscal Responsibility and Reform established by President Obama agreed with many of the entitlement reforms proposed by Peterson. In late 2010, cochairs Erskine Bowles, chief of staff in the Clinton White House, and former Republican Senator Alan Simpson presented a draft plan that identified $200 billion in discretionary-spending cuts by 2015. The cuts included limits on federal spending on healthcare, a gradual increase of the Social Security retirement age, and a reduction in defense spending and federal government spending. On the tax side, the plan would lower the corporate tax rate, increase the gasoline tax, limit tax breaks on second-home mortgages, and increase taxes on social benefits for wealthy seniors (Boles and Vaughan 2010). Eleven out of 18 commission members agreed with the recommendations; however, since the recommendations were not endorsed by a supermajority of 14 commissioners, the commission did not forward the recommendations to Congress for approval.

President Trump's Healthcare Plans

A blogger for the *Economist* explained why Republicans hate "Obamacare" (the ACA). Ideologically, the ACA's premise that Americans who can afford insurance are charged a higher premium to help pay for those who cannot pay for their own coverage is a form of income redistribution that Republicans resist. Economically, premium increases are unsustainable and a possible precursor to market failure. And historically, government-financed healthcare has always been characterized as socialized medicine interfering in the relationship between physicians and their patients (M. J. 2016).

During Donald Trump's 2016 campaign for president, he promised to take the following actions regarding healthcare (Trump 2016):

- Repeal and replace "Obamacare" [the ACA] with health savings accounts (HSAs)
- Work with Congress to create a patient-centered healthcare system that promotes choice, quality, and affordability
- Work with states to establish high-risk pools to ensure access to coverage for individuals who have not maintained continuous coverage
- Allow people to purchase insurance across state lines, in all 50 states, creating a dynamic market
- Maximize flexibility for states via block grants so that local leaders can design innovative Medicaid programs that will better serve their low-income citizens

After he was declared the winner of the election, President-Elect Trump seemed to soften his stance on the ACA by announcing that he might keep the parts of it that enjoy bipartisan support of Congress and popular support: allowing young adults to remain on a parent's policy until age 26 and certain insurance reforms (Langley and Baker 2016). However, with the confirmation of Tom Price—a Republican representative from Georgia, an orthopedic surgeon, and an outspoken critic of the ACA—as Trump's choice for secretary of Health and Human Services, it appeared that Trump was again thinking of "repeal and replace." Even before his cabinet post nomination, Congressman Price had drafted a bill to replace the ACA that relied more on free-market choices and less on individual and employer mandates. His bill, called the Empowering Patients First Act, contained the following features (Pear 2016):

- Certain insurance protections would be available to consumers who had maintained continuous health insurance coverage.
- Consumers would be encouraged to purchase health insurance tax credits and health savings accounts.
- Physicians could enter into private contracts with Medicare beneficiaries to provide care.
- Physicians could more easily defend themselves from malpractice suits by showing they followed clinical guidelines, and physicians would be exempt from federal antitrust laws during negotiations with insurance plans.
- Federal health insurance exchanges would be replaced with federal grants to states to subsidize insurance for people who might have difficulty finding insurance coverage on the open market.
- Tax-free insurance coverage from employers would be limited to $8,000 per individual and $20,000 per family.

On March 6, 2017, the Republican leadership in the US House of Representatives introduced the American Health Care Act—a bill praised by both President Trump and HHS Secretary Price, a bill called "Obamacare Lite" by conservative Republicans, a bill called "destructive" by Democrats, and a bill opposed by such major provider groups as the American Hospital Association and the American Medical Association (Cornwell and Abutaleb 2017). The bill was expected to undergo major revisions before a final vote but would undoubtedly keep some of the principles identified by President Trump and HHS Secretary Price.

The question of how the Republicans address the Affordable Care Act (repeal, amend, replace) and whether Republicans could gain the support of Democrats and provider groups

was expected to dominate healthcare news well into 2017. The outcome will occur after the publication of this book. However, it is my hope that readers will acquire the knowledge and skills necessary to engage in the debate and manage the outcome, whatever it may be.

Chapter Key Points

- Healthcare reform attempts to improve quality, lower cost, and increase access.
- Healthcare reform since the mid-1990s has been incremental in nature, in that it attempted to improve quality, lower cost, or increase access.
- The Affordable Care Act of 2010 attempted to improve quality, lower cost, and increase access.
- The Medicare Access and CHIP Reauthorization Act of 2015 attempted to move physician reimbursement from fee-for-service to risk-based models.
- In the absence of meaningful healthcare reform from the federal government before 2010, some states attempted healthcare reform.
- The free market has attempted reform through managed care movements and direct contracting.
- With the passage of healthcare reform, entitlement reform to guarantee the sustainability of federal entitlement programs is expected to be a legislative priority.
- Healthcare and the nation's economy will be interdependent in future decades.
- President Trump's campaign promise was to repeal and replace the ACA with free-market reforms.

Discussion Questions

1. How would you summarize the history of healthcare reform?
2. What are the key provisions of the Affordable Care Act of 2010?
3. What are the key provisions of the Medicare Access and CHIP Reauthorization Act of 2015?
4. What are the key provisions of the Massachusetts health plan?
5. Why did the California health plan fail to gain legislative support?
6. What are the two major free-market initiatives and what is the impact of each on quality, cost, and access?

7. Why is there a need for entitlement reform? What might entitlement reform look like in the future?
8. Why might healthcare reform not work?
9. What are the major healthcare reform ideas proposed by President Trump and HHS Secretary Price?

Notes

1. Growth in the number of physicians in relation to the population should increase competition and lower prices. However, the federal government did not take into account the effects of *supplier-induced demand*, which is the degree to which physicians can control the demand for their services. Several twentieth-century studies (Roemer 1961; Fuchs 1978; Reinhardt 1985) reported that physician-induced demand actually occurred. Three hypotheses have been forwarded by Feldstein (2007) to explain this contradiction to the law of supply and demand. The first suggests that an increase in physician density results in an increase in service to previously unserved populations and stable physician incomes. The second suggests that new demand is physician generated. The third suggests that in the face of increasing competition, physicians simply increase fees in a fee-for-service environment. While there is general agreement among economists that physicians generate demand for their services, the amount of demand and the reasons for the generated demand is less clear (Morrisey and Cawley 2008).
2. The law attempts to make insurance coverage more accessible to the self-employed and small businesses by forcing insurance companies that offer such coverage to be less selective.
3. Many of the legislators who voted against the law actually favored the law but were members of the right-wing Tea Party group who had taken an oath to vote against any laws that increased the deficit.
4. The patient's freedom of choice for providers may be more of an emotional issue than an economic one. The Rand Health Insurance Experiment concluded that patient loyalty to their physicians had a minimal price—patients were willing to change physicians for a small reduction in premiums (patient loyalty to OB/GYN physicians had a somewhat higher price). In point-of-service managed care plans, only 16 percent of the enrollees used the out-of-network option, reflecting a relatively high satisfaction level with network physicians (Zelman 1996).

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APPENDIX

ANSWERS TO SELF-QUIZZES

Chapter 3

Ratio Analysis

Current ratio = 2.116—better, good to benchmark

Collection period ratio = 165.427—better, poor to benchmark

Days cash on hand, all sources, ratio = 11.790—worse, poor to benchmark

Days cash on hand, short-term sources, ratio = 7.547—worse, poor to benchmark

Average payment period ratio = 82.547—better, good to benchmark as long as credit is not affected

Operating margin ratio = –0.023%—better, poor to benchmark

Total margin ratio = 1.076%—better, poor to benchmark

Return on net assets ratio = 2.097—better, poor to benchmark

Total asset turnover ratio = 0.884—better, poor to benchmark

Age of plant ratio = 3.673—worse, good to benchmark

Fixed asset turnover ratio = 1.664—better, poor to benchmark

Current asset turnover ratio = 2.233—better, poor to benchmark

Inventory ratio = 49.926—worse, poor to benchmark

Net asset financing ratio = 44.870—worse, poor to benchmark, though nondirectional

Long-term debt to capitalization ratio = 44.804—worse, poor to benchmark

Debt service coverage ratio = 2.279—better, poor to benchmark

Cash flow to debt ratio = 10.351—better, poor to benchmark

Chapter 5

Cost Shifting

Charge per patient necessary to recover cost = $3,731

Cost Cutting

Amount of costs to cut to break even = $54,650

Chapter 8

Differential Cost Analysis

The sleep disorder program should be kept, showing a gain of $1.2 million.

Job-Order Costing

	RVU	Cost ($)
Amylase	18	69.30
Bleeding time	14	53.90
Uric acid	12	46.20
Platelet count	10	38.50
Hematocrit	9	34.65

Activity-Based Costing

	Total Cost ($)
Evaluation	64.96
Education	77.54
Exercise	53.99

Breakeven Analysis

Breakeven point in units = 125 units
Breakeven point in dollars = $12,500
Contribution margin in percent = 80%
Contribution margin in dollars = $80

Breakeven Analysis for Capitated Revenue

Variable costs per patient must be kept under $130 to make the desired profit.

Chapter 9

RVU Rate Setting

Charges necessary to realize a 10 percent gain at the lab using job-order costing:

	Charge ($)
Amylase	76.23
Bleeding time	59.29
Uric acid	50.82
Platelet count	42.35
Hematocrit	38.12

Charges necessary to realize a 7 percent gain at the wellness center using activity-based costing:

	Charge ($)
Evaluation	69.51
Education	82.97
Exercise	57.77

Hourly Rate Setting

Hourly oxygen therapy rate per shift to break even = $48.00

Surcharge Rate Setting

Average rate to break even = $8.40

Chapter 10

Effective Annual Interest Rate on Short-Term Loans

Interest rate = 7.25%

Effective Annual Interest Rate on Trade Credit

Annual interest rate if paid on day 16 = 1,216.67%
Annual interest rate if paid on day 30 = 81.10%

Future Value

Value of investment after ten years = $1,643,619

Chapter 12

Inventory Valuation

Ending cost of inventory using FIFO = $3,975
Ending cost of inventory using LIFO = $3,850
Ending cost of inventory using weighted average = $3,906

Economic Order Quantity

Q_e = 447.21 units
TC = $100,894

$\frac{20,000}{447.21}$ = 44.72 orders per year

$\frac{20,000}{365}$ x 5 = 273.97 units on the shelf

$\frac{365}{44.72}$ = 8.16 days between orders

Carrying cost = $447.21
Opportunity cost = $111.80
Cost of average inventory = $1,118.02
Volume of average inventory = 223.61 units
New price to be negotiated = $4.46

Reorder Point Under Conditions of Uncertainty

Low-cost reorder point under conditions of uncertainty = 103 units

Chapter 14

Linear Regression and Estimation

Projected visits for 2020 = 4,230

Chapter 15

Payback Period

Payback period = 1.667 years

Present Value

Present value = $22,549

Net Present Value/Internal Rate of Return

Formula solution:
NPV = –$1,571
IRR = 8.642%

Calculator solution:
NPV = –$1,566
IRR = 8.144%

CASE STUDY

HAYS COUNTY INTEGRATED DELIVERY SYSTEM

Your Integrated Delivery System

Imagine that it is December 2017, and you have just accepted the chief financial officer (CFO) position at Hays County Integrated Delivery System (IDS), hereinafter referred to as County. You will be reporting to Mr. Salter, County's chief executive officer, a retired schoolteacher who was hired last year. Also reporting to Mr. Salter are Dr. Spok, County's medical director; Mr. Wannabe, County's chief operating officer; Ms. Pincher, County's controller; and Ms. Care, County's director of nursing. When announcing your appointment, Mr. Salter stated that your primary objective in the coming year (2018) would be to reverse the ominous financial trend that began in 2016 with an operating loss and continued in 2017. Previous operating losses were funded with investment income (investment income was $200,000 in 2017); however, your board recently passed a resolution discontinuing that practice and restricting investment income to capital expenditures in 2017.

County is a not-for-profit county-owned urban hospital and includes a 130-bed acute care hospital, a 35-bed skilled nursing facility (SNF), a 15-bed rehab facility, a home health care agency, and an outpatient clinic. It has a 40-member medical staff that bills independently. The hospital, Hays County Hospital (HCH), is one of two hospitals in the county (population is 175,000) and the only hospital in San Marcos, Texas, with a population of 50,000. St. Teresa's, a not-for-profit Catholic-owned hospital, is the only other hospital in Hays County. St. Teresa's is about 25 miles from Hays County IDS.

To acquire background information, you decide to meet first with each member of the executive team and then with selected members of senior management.

Meeting with Dr. Spok

Dr. Spok, hospital medical director, tells you:

> Most doctors have been on the medical staff for at least ten years. There is little loyalty to the hospital, and most doctors also have admitting privileges at St. Teresa's, a newer hospital with better facilities. While it is a hassle for the doctors to drive the 25 miles from San Marcos to St. Teresa's to see patients, there are a few good reasons for the doctors to admit their patients to St. Teresa's. St. Teresa's has a hospitalist and pays physicians for menial service assignments like committee work (a practice that County has refused to implement).

Meeting with Mr. Salter

Mr. Salter, chief executive officer, states:

> I just don't understand why we are losing money. I spent a considerable amount of time recruiting new doctors while keeping the existing doctors happy. The new, younger doctors just don't seem to have a sense of loyalty to County. Furthermore, I've tried to establish a "family atmosphere" for our employees that stresses getting along well with others in return for job security. Everyone seems happy—everyone except Mr. Finance Myway, whom you'll be replacing. He and I both started in January 2015 and he seemed increasingly frustrated with the way I do things here—he just didn't fit in. I tried to accommodate him by implementing some of his recommendations, even though they were against my better judgment—like charging visitors for parking, which generated $100,000 in other operating revenue in 2017, but I have discontinued the practice for 2018 because no other organization in San Marcos, other than the university, charges for parking. And when I announced that I was bringing in more business to the hospital by entering into a two-year capitated managed care agreement with the city (it expires this month)—we get $250 per month per family for taking care of the 300 city employees and their families, whether they're sick or not—Mr. Myway threw a fit at an executive team meeting. He claimed that my decisions were driving County deeper into the red, and as a result, I had to show Mr. Myway the highway for insubordination. That happened last month.

Mr. Salter has asked you to do the following [Note: Steps in the case correspond to chapters in the textbook]:

1. I would like you to make a fifteen-minute, 25-slide PowerPoint presentation during our board strategic planning retreat regarding the effects of the economy [see appendix 1.2 in chapter 1] on the healthcare industry.

2. And I would like you to make a fifteen-minute, 25-slide PowerPoint presentation to the medical staff regarding the role of the CFO and the roles of the primary direct reports to you.

3. Develop a statement of operations for 2017 using Tables II, IV-A, IV-B, and IV-C [at the end of this case study] and a balance sheet for 2017 (you can assume the format and numbers are correct on the 2016 balance sheet in Table I, and you can further assume that all balances on the 2016 balance sheet carry forward to the 2017 balance sheet with the exception of accounting for the profit or loss from the 2017 statement of operations). Analyze the financial statements using ratio analysis with benchmarks found in Table III and identify strengths and weaknesses and then make recommendations for improvement in 2018.

4. The Treasury Department has issued final regulations on the ACA [Affordable Care Act] requirements for not-for-profit hospitals. Hospitals must be in compliance with regulations beginning in 2016. Please explain the requirements to me; please identify the penalties for noncompliance found in the IRS regulations (501(r)); and please recommend ways to protect our tax-exempt status.

5. Please explain the concept of cost shifting to me and tell me why it has become increasingly less effective in generating more income. What is taking its place in generating more income?

6. Medicare talks a lot about value-based purchasing. What is it and why is Medicare talking about it? Are there implications to our hospital?

7. Explain the Medicaid expansion and why some states expanded Medicaid and why some states did not expand Medicaid. What are the financial implications of Medicaid expansion to our hospital (be specific with revenue forecasts)?

8. Analyze my capitated managed care agreement with the city. Using differential cost analysis for 2017 data, tell me the full cost profit/loss and the differential cost profit/loss. Should we renew the contract for next year at present rates, or should we ask for a rate increase and if so, how much rate increase do we need to cover our full cost? To cover our differential cost?

9. Our imaging department is in violation of antitrust statutes because it produced charges using relative value units developed by another organization. You must establish new relative value units and then set 2017 imaging rates using activity-based costing. Total imaging expenses for 2017 are projected to be $6.5 million, and the imaging manager has already finished some of the work that you will need (see Table V).

10. Dr. Garcia is thinking about retiring this year and has asked us if we want to buy her practice. She would like annual income of $250,000 for the next 30 years. If we can put the purchase price in an annuity that earns 4 percent per year compounded annually, what is the purchase price necessary to guarantee her desired income? What other factors should we consider before buying a physician practice? What is your recommendation?

11. What is the best ratio for measuring accounts receivable performance? How is our hospital doing? What are your recommendations on improving our accounts receivable performance?

12. I also need your assistance in calculating the following economic order quantity [Q_e] given new data for 2017. Our inventory generally follows Pareto's Law; therefore, I have emphasized controlling those items representing the majority of our inventory activity. One of those items is IV [intravenous] setups. Our current situation is as follows:

2016 Price	$50 for each IV setup
2017 Demand	50,000
2017 Ordering cost	$25
2017 Interest	6.25%
2017 Holding cost	$0.50

The IV distributor would like to distribute a new model setup in 2017 at the same price, but he tells us that he is willing to reduce our carrying costs by making monthly deliveries. After discussing this proposal with Ms. Care, I discovered that training will be required for the new setup. Ms. Care believes, and the distributor agrees, that each registered nurse will be required to attend a two-hour seminar. I'm not sure where we put this training cost in the total cost formula. Ms. Care tells me there are significant quality advantages with the new setup and she would prefer the new setup. What do you think? If we lose money on the new model, what price can we negotiate with the IV distributor to cover our loss?

13. I would like you to develop a five-year strategic financial plan for Hays County IDS including benchmarked financial metrics. Our strategic plan calls for a replacement facility in about ten years.

14. For 2018, develop a statistical budget using regression analysis; then develop a revenue budget (using a financial model, determine whether to increase charges found in Table IV-C and if so, how much) and then develop an

expense budget using the staffing found in Table VI-B, in statement of operations format including detailed footnotes explaining any changes in the numbers.

I would like to see at least four different expense scenarios:

(1) Maintain expenses at 2017 levels after adjusting for volumes and mandated expenditures identified in earlier steps

(2) Maintain expenses at 2017 levels after adjusting for volumes and mandated expenditures identified in earlier steps and *honoring all requests* (i.e., raises, additional personnel, etc.)

(3) Cut expenses (from expense scenario 1) to break even in 2018

(4) Cut expenses (from expense scenario 1) to break even in 2018 *and recover fiscal year 2017 losses*

15. Calculate the financial impact of buying a CT [computed tomography] unit that would cost $3 million, would have a five-year useful life, would have a 10 percent salvage value, would have a profit per procedure of $400, and would generate an estimated volume of 450 procedures per year. The bank tells me the discount rate should be 10 percent. If the project loses money, let me know how many procedures in addition to the 450 projected per year we would need to generate to break even.

    Our long-term debt represents the remaining balance on a 30-year loan taken out in 1997 at 7 percent with options to refinance every ten years. If we refinance for the remaining ten years at 3 percent, how much interest expense will we save *over the remainder of the loan*?

16. Please give me your thoughts on the operational and financial implications of the ACA of 2010 and MACRA [Medicare Access and CHIP Reauthorization Act] of 2015 on our hospital.

Meeting with Mr. Wannabe

Mr. Wannabe, the chief operating officer and a recent graduate from a program in healthcare administration, expresses the following concerns regarding the hospital:

It's easy to understand how we lost money last year—Mr. Salter just won't say no to the doctors, or the nurses, for that matter. Our revenue is down for a variety of reasons and

our expenses continue to increase. I don't know why the board ever picked a schoolteacher to run a healthcare system.

Meeting with Ms. Pincher

Ms. Pincher, County's controller, in answer to your question regarding last year's loss, believes the following:

While acute care days are flat and SNF and rehab days and outpatient visits are up, our real financial problems involve our patient mix by financial class—commercial and self-pay continue to decline and fixed payment and capitation continue to increase, and our board won't approve more than a 2 percent rate increase for 2018 (which affects collections for only commercial and managed care with discount—*you need to make assumptions* regarding Medicare and Medicaid collections).

Ms. Pincher provides the following table to show what the patient financial mix was for 2017:

2017 Collections/Discharge

	Acute	SNF	Rehab	Home	ER	Out
Medicare	13,000	10,000	13,000	130	525	200
Medicaid	15,000	12,000	15,000	150	550	225
Commercial	40,000	30,000	40,000	400	1,600	600

Managed care contracts include a 40% discount from charges. The contracts call for an additional 1% discount for every additional 1% increase in charges.
Managed care with capitation reimburses $250 per month per family and includes only the agreement with the city.
Hospital collects 18 percent of *cost* for both bad debt and charity care.

Meeting with Ms. Care

Ms. Care, the director of nursing, seeks your support in the following proposal:

While our financial loss is serious, most of it is attributable to low rates—we need to increase our rates to reflect our quality services. Our nurses are overworked and underpaid. I've been working on two solutions that I would like your support on.

First, I believe strongly in primary care nursing, and as a result, 80 percent of the nursing staff is RNs [registered nurses]. RNs can perform more tasks than LPNs [licensed practical nurses], nursing assistants, and clerks; therefore, RNs are more efficient. This can be further justified by the acuity of our patients. Using the DRG [diagnosis-related group] scale as a severity index, our patients are sicker than those of the average hospital. RNs perform clerical duties, in addition to administering medication, emptying bedpans, and feeding patients.

However, some RNs complain about performing clerical duties, and I am having difficulty getting RNs to administer meds, empty bedpans, and feed patients. Therefore, I have developed a TQM [total quality management] program designed to convince the RNs that all their tasks are important. All RNs are required to attend five hours of TQM training each week.

Even though patient days are down, I would like to hire ten more RNs to help cover the floors when the other RNs are in training. To recruit these RNs in light of the nursing shortage, we need to increase their average hourly rate to $50, which is competitive with County Hospital (see Table VI-A). This, of course, would be in addition to the cost-of-living raises already announced by the personnel director.

I also would like for you to include a doctorally prepared entry-level nurse in our strategic plan for ten years from now.

Meeting with Ms. Personnel

Ms. Personnel, the human resources director, reluctantly admits the following to you:

Hospital practice in the past has been to give the employees a cost-of-living raise equal to the previous year's percent increase in the CPI [Consumer Price Index]. Also, historically, we have allocated 5 percent of total wages to a merit pool to be awarded to meritorious employees based on their annual evaluations. Because Mr. Salter treats the employees like family, virtually everyone gets the raise. Because of shortages in nursing, I am recommending a market raise of 3 percent, in addition to the other raises, to keep us competitive. Here is a wage comparison to the facilities that we compete with for new hires (see Table VI-A). Mr. Salter asked us not to announce raises until your financial analysis is complete.

Meeting with Mr. Materials

Mr. Materials, materials manager, reports the following information to you:

I am projecting a 3 percent increase in supply and food prices for 2018 and a 5 percent increase in all other prices.

Table 1

Hays County IDS Balance Sheet as of December 31, 2016: Assets

Assets	2016
Current Assets	
Cash and cash equivalents	$ 816,875
Marketable securities	8,100,500
Accounts receivable less allowances	17,250,000
Inventories at cost	2,368,000
Other current assets	8,992,500
Total Current Assets	37,527,875
Land and improvements	11,250,000
Buildings	50,509,500
Fixed equipment	5,063,250
Movable equipment	4,466,750
Property, Plant, and Equipment	91,289,500
Less accumulated depreciation	(38,376,231)
Total Property, Plant, and Equipment	52,913,269
TOTAL ASSETS	**90,441,144**
Current Liabilities	
Current portion of long-term debt	$ 10,151,000
Accounts payable and accrued expenses	8,400,000
Estimated amounts due to third-party payers	8,423,750
Other current liabilities	10,500,000
Total Current Liabilities	37,474,750
Long-term debt, net of current portion	25,000,000
TOTAL LIABILITIES	**62,474,750**
Net Assets	
Unrestricted	742,625
Temporarily restricted	16,000,000
Permanently restricted	11,223,769
TOTAL NET ASSETS	**27,966,394**
TOTAL LIABILITIES AND NET ASSETS	**$90,441,144**

Table II

Hays County IDS Actual Expenses ($) through December 31, 2017

Wages, Taxes, Benefits (90% variable, 10% fixed)	$ 76,725,792
Professional Fees and Commissions (fixed)	7,000,000
Drugs (variable)	8,000,000
Medical and Other Supplies (variable)	8,500,000
Food (variable)	7,500,000
Purchased Services (variable)	6,500,000
Repairs and Maintenance (fixed)	8,000,000
Utilities (fixed)	9,000,000
Interest (fixed)	8,021,440
Depreciation (fixed)	3,000,000
TOTAL EXPENSES	**$142,247,232**

Table III

Selected Industry Financial and Productivity Ratios for Urban Hospital ($175–400 million revenue)

Financial Ratios	Optum 2015*	Hays County Hospital
Liquidity Ratios		
Current ratio	1.87	
Collection period ratio	47.60	
Days cash-on-hand, short-term sources	18.80	
Days cash-on-hand, all sources	91.60**	
Capital Structure Ratios		
Net asset financing ratio	56.30	
Debt service coverage ratio	2.17**	
Efficiency Ratios		
Total asset turnover ratio	0.87	
Age of plant ratio	11.47	
Fixed asset turnover ratio	2.59	
Current asset turnover ratio	4.22	
Inventory turnover ratio	51.38	
Profitability Ratios		
Excess margin	5.10	
Operating margin	4.14	
Return on net assets	9.50	
Operating Indicators		
Length of stay—acute	4.10	
Occupancy rate—acute	52.30	
Productivity Ratios		
Cost per acute discharge equivalents	$11,076†	
Salaries per acute discharge equivalents	$4,270†	
Nursing Service		
RNs as a percent of total nursing	56.9‡	
LPNs as a percent of total nursing	4.0‡	
Nursing assistants as a percent of total nursing	39.1	
Full-Time Equivalent Employees (FTEs)		
Per occupied bed	4.86	
Salary per FTE	$62,306	

*See Optum (2017) for 2015 data.

**Optum 2014 data (see Optum 2016).

†Optum number is adjusted for acute discharge equivalents.

‡See Health Forum (2015) for nursing personnel data adjusted for Bureau of Labor Statistics (2017).

Table IV-A

Hays County IDS Discharges

Service (LOS)	2013	2014	2015	2016	2017
Acute (4)	6,777	6,354	5,931	5,931	5,931
SNF (30)	239	243	247	251	255
Rehab (20)	155	157	159	162	164
Home Health	7,298	6,082	4,866	3,650	3,650
Emergency	27,915	30,062	32,207	34,354	36,500
Outpatient	16,826	18,355	19,884	22,942	26,000

LOS = length of stay; SNF = skilled nursing facility

Table IV-B

Percentage of Discharges by Payer

	2013	2014	2015	2016	2017
Medicare	24	25	26	27	28
Medicaid	22	24	26	28	30
Commercial	5	4	3	2	1
Managed Care—discount	39	39	39	33	32
Managed Care—capitation	0	0	0	5	5
Bad Debt	2	2	2	3	2
Charity	2	2	2	1	2

Table IV-C

2017 Charges per Discharge/Visit ($)

	HCH	St. Teresa
Acute	40,000	38,200
SNF	30,000	28,000
Rehab	40,000	38,000
Home Health	400	300
Emergency	1,600	1,500
Outpatient	600	500

SNF = skilled nursing facility

Table V

Radiology Department Procedures

Procedure	Tech Minutes	Supply Expense	Machine Minutes	2017 Volume
Radiology				
Chest 2-view	14	10	10	20,000
Chest 4-view	28	20	10	15,000
Hand	5	5	5	7,000
Arm	10	10	5	4,000
Foot	5	5	5	1,000
Leg	10	10	5	6,000
Fluoroscopy	30	30	15	3,000
Ultrasound				
Abdomen	15	10	10	5,000
Other	10	10	10	5,622
Nuclear Medicine				
Scan	60	30	30	2,000
CT				
Head without contrast	30	50	30	200
Head with contrast	60	75	45	300
Body without contrast	30	75	30	400
Body with contrast	60	100	45	500

Table VI-A

Salary Survey of Area Hospitals
Average Hourly Rates (in dollars, without benefits), December 2017

Position	HCH	St. Teresa
Chief Executive Officer	595.00	595.00
Chief Operating Officer	390.00	386.00
Chief Nursing Officer	175.00	172.00
Director Clinical Services	230.00	226.00
Director Support Services	150.00	149.00
Chief Medical Officer	295.00	291.00
Chief Financial Officer	312.00	280.00
Chief Compliance Officer	140.00	135.00
Chief Information Officer	225.00	222.00
Head Nurse	43.00	38.00
Staff RN	37.40	33.00
Staff LPN	24.70	21.00
Nursing Assistant	14.80	11.00
Laboratory Tech	31.68	28.00
Radiology Tech	29.72	26.00
Food Server	12.45	9.45
Housekeeper	12.41	9.00
Administrators Below Chiefs	40.73	37.00
Clerk	20.23	17.00
Respiratory Therapist	30.14	27.25

Table VI-B

Hays County IDS Staffing

Department	FTEs
Chief Executives	9
Administrators Below Chiefs	50
Medical Records	10
Dietary	35
Housekeeping	25
Laundry	*
Physical Plant	4
Nursing[†]	500
Laboratory	20
Radiology	10
Respiratory Therapy	5
Physical Therapy	*
Emergency Department Physicians	*

FTEs = full-time equivalent employees

*contract

[†]84% RNs, 10% Nursing Assistants, 5% Head Nurses, 1% Clerks

LIST OF ABBREVIATIONS

ACA	Affordable Care Act of 2010
ACHE	American College of Healthcare Executives
ACO	accountable care organization
AFDC	Aid to Families with Dependent Children
AHA	American Hospital Association
AHIMA	American Health Information Management Association
AICPA	American Institute of Certified Public Accountants
ALOS	average length of stay
AMA	American Medical Association
APMs	Alternative Payment Models
ASC	ambulatory surgical center
AUPHA	Association of University Programs in Health Administration
BBA	Balanced Budget Act of 1997
BBRA	Balanced Budget Refinement Act of 1999
BIPA	Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000
BPCI	Bundled Payments for Care Improvement
CBO	Congressional Budget Office
CCO	corporate compliance officer
CDC	Centers for Disease Control and Prevention
CEO	chief executive officer
CEP	coordinated examination program
CFO	chief financial officer

CHA	Catholic Health Association
CHFPs	certified healthcare financial professionals
CHIP	Children's Health Insurance Program
CHPS	certification in healthcare privacy and security
CHSO	cooperative hospital service organization
CIO	chief information officer
CMS	Centers for Medicare & Medicaid Services
COBRA	Consolidated Omnibus Budget Reconciliation Act
COO	chief operating officer
CPA	certified public accountant
CPI	Consumer Price Index
CPT	current procedural terminology
CT	computed tomography
DEFRA	Deficit Reduction Act
DME	durable medical equipment
DOD	Department of Defense
DRG	diagnosis-related group
EDI	electronic data interchange
EMR	electronic medical record
EMTALA	Emergency Medical Treatment and Active Labor Act
EOQ	economic order quantity (also known as Q_e)
ERISA	Employee Retirement Income Security Act of 1974
ESRD	End-Stage Renal Disease (CMS program)
FACHE	Fellow of the American College of Healthcare Executives
FASB	Financial Accounting Standards Board
FHFMA	Fellow of the Healthcare Financial Management Association
FIFO	first-in, first-out
FTE	full-time equivalent personnel
FV	future value
GAAP	generally accepted accounting principles
GAO	Government Accountability Office
GCD	greatest common denominator
GDP	gross domestic product
GI	gastrointestinal

HAC	hospital-acquired condition
HCERA	Health Care and Education Reconciliation Act of 2010
HCFA	Health Care Financing Administration
HFMA	Healthcare Financial Management Association
HHS	US Department of Health and Human Services
HI	hospital insurance
HIM	health information management
HIPAA	Health Insurance Portability and Accountability Act
HMO	health maintenance organization
HPSA	health professional shortage area
HRR	Hospital Readmission Reduction (CMS program)
HSA	health savings account
HVBP	hospital value-based purchasing
IOM	Institute of Medicine
IPA	independent practice association
IRR	internal rate of return
IRS	Internal Revenue Service
JD	juris doctor (doctor of law)
JIT	just-in-time inventory
LIFO	last-in, first-out
LOS	length of stay
MACRA	Medicare Access and CHIP Reauthorization Act
MBO	management by objectives
MCO	managed care organization
MedPAC	Medicare Payment Advisory Commission
MIPS	Merit Incentive Payment System
MMA	Medicare Prescription Drug, Improvement, and Modernization Act of 2003
MSA	medical savings account
MS-DRGs	Medicare severity diagnosis-related groups
NCSL	National Conference of State Legislators
NPSGs	National Patient Safety Goals (of The Joint Commission)
NPV	net present value

NR	departments that do not generate revenue
OB/GYN	obstetrician/gynecologist
OBRA	Omnibus Budget Reconciliation Act
OCR	Office for Civil Rights
OIG	Office of Inspector General
PAMA	Protecting Access to Medicare Act of 2014
PERT	program evaluation and review technique
PFS	Physician Fee Schedule (of Medicare)
PHI	protected health information
PHO	physician–hospital organization
POS	point-of-service (type of MCO plan)
PPO	preferred provider organization
PPS	prospective payment system
PROs	peer review organizations
PSO	provider-sponsored organization
PSROs	professional standards review organizations
PV	present value
PVBM	Physician Value-Based Modifier (CMS program)
$\mathbf{Q_e}$	economic order quantity (also known as EOQ)
R	department that generates revenue
RAC	recovery audit contractor
RBRVS	resource-based relative value scale
RVU	relative value unit
SCHIP	State Children's Health Insurance Program
SEC	Securities and Exchange Commission
SGR	sustainable growth rate
SMI	supplemental medical insurance
SNFVBP	Skilled Nursing Facility Value-Based Purchasing (CMS program)
SOI	severity of illness
SOX	Sarbanes–Oxley Act of 2002
SSI	Supplemental Security Income
SWOT	strengths, weaknesses, opportunities, and threats
TANF	Temporary Assistance for Needy Families
TEFRA	Tax Equity and Fiscal Responsibility Act of 1982

TQM total quality management

VA Veterans Administration
VBP value-based purchasing
VM Value Modifier (CMS program)

GLOSSARY

abuse. An unintentional misrepresentation of fact.

accountable care organization (ACO). An organization that coordinates care among healthcare organizations and physicians. A key element of an ACO is that some portion of its reimbursement is tied to accountability.

accounts payable. Amounts the organization owes to suppliers and other trade creditors for merchandise and services purchased from them, but for which the organization has not yet paid.

accounts receivable. Amounts due to the organization from patients and insurers for services that the organization has already provided.

accrued expenses payable. Liabilities for expenses that have been incurred by the hospital but for which the hospital has not yet paid, such as compensation to employees.

activity-based costing. A method of determining product cost by using *cost drivers*, or activity measures, to assign indirect costs to products.

actual costs. Historical costs incurred.

advancing care information. Programs that reward healthcare providers with incentive payments for the quality of care they deliver to Medicare beneficiaries.

Alternative Payment Models (APMs). Fundamental changes to reimbursement that generally include moving providers away from low-risk fee-for-service payment to risk-assuming methods of payment.

asset efficiency ratios. Ratios that measure efficiency by comparing revenue to assets.

assets. Economic resources that provide or are expected to provide benefit to the organization.

average collection period. A financial ratio that shows the average time a healthcare organization takes to collect money owed to it.

average costs. Full costs divided by the number of products or services.

bad debt. Patient bills that the patient can but is unwilling to pay based on the hospital's collection policy.

bad debt expense. The amount for which the organization provided services with the expectation of payment.

balance sheet. A statement that shows the organization's financial position at a specific point in time.

book overdraft. The process of transferring money from an interest-bearing account to the checking account as the money is drawn.

budgeting. The process of converting the operating plan into monetary terms.

Bundled Payments for Care Improvement (BPCI) initiative. A program developed by CMS in 2013 to better coordinate care across providers by replacing fee-for-service payments to multiple providers with a single payment for an episode of care that multiple providers must share.

capital analysis. A process to determine how much a capital expenditure will cost and what return it will generate.

capital expenditures. Purchases of land, buildings, and equipment used for operations.

capital structure ratios. Ratios that measure an organization's long-term liquidity by measuring a variety of relationships to capital.

capitated price. A healthcare payment system in which an organization accepts a monthly payment from a third-party payer for each individual covered by that payer's plan, regardless of whether a given individual is treated in a given month. Also known as *capitation*, it provides a financial incentive to a healthcare organization to keep its population from

using more healthcare services than necessary because the organization profits only if the total cost of treating the specified population falls below the total capitated price provided by the third-party payer.

carrying cost. The cost incurred by the organization for extending credit to the patient after the organization has provided services.

cash. Money on hand and money to which the organization has immediate access that is deposited in a bank. Cash equivalents are reported as cash and include investments with a maturity of three months or less (e.g., treasury bills, money market funds).

cash budget. A cash flow management tool that predicts the timing and amount of cash flows and systematically examines the cost implications of each alternative.

cash conversion cycle. The process of converting resources represented by cash outflows into products or services represented by cash inflows. In healthcare organizations, cash outflows consist of employee wages and supply expenses; cash inflows consist of patient revenues.

cash flow. The difference between cash receipts (inflows) and cash disbursements (outflows) for a given accounting period.

charge capture assessment. A comparison of medical records to patient invoices to make sure the organization is not missing billable items.

charge master enrichment. An analysis of charges to make sure every item is recognized by third-party payers as a legitimate charge.

charge masters. Lists of items for which providers charge.

charges. The amount patients are expected to pay for services; also called *prices* or *rates.*

charging analysis. An examination of charges to make sure maximum reimbursement is being received.

charitable organization. An organization that provides community benefit or serves the public interest. In the case of healthcare, a hospital is a charitable organization if it provides care to people who cannot pay for their care or provides community health benefits.

charity care. Care provided to patients who the organization knows cannot pay for the care.

closed-panel HMO. A health maintenance organization that contracts with or employs physicians to treat enrollees exclusively (i.e., the physicians do not treat other patients).

collection period. The number of days between the time of service and the time of payment.

commercial indemnity plan. An arrangement whereby an employer pays an insurance company, which in turn reimburses hospitals and physicians chosen by the employees.

common stock. Money invested in the organization by its owners.

community benefit. A term used by taxing authorities such as the Internal Revenue Service that refers to specific actions required from a tax-exempt organization to maintain tax-exempt status.

community rating. A premium-setting method in which all groups covered by an insurance company pay essentially the same premiums, regardless of their health risks.

compounding. The action of adding interest to interest on an investment.

compulsory health insurance. A legal requirement that everyone have health insurance.

consumer-driven plan. A health plan that provides information and incentives to encourage enrollees to make wise healthcare choices.

controllable costs. Costs that are under the manager's influence, such as labor.

controller. The chief accounting officer of an organization.

coordination of benefits. A step in the billing process during which the order of insurance company liability is identified for accounts that have multiple insurance companies.

corporate planning. A business planning approach based on market needs. It consists of four major stages: strategic planning, operational planning, budgeting, and capital budgeting.

corporate restructuring. A legal strategy involving the establishment of subsidiaries or related corporations in order to maximize the economic position of a healthcare organization.

cost accounting. The study of costs, including methods of classifying, allocating, and identifying costs.

cost allocation. Assigning indirect costs, and some direct costs, to departments that generate charges. Also called *cost finding* or *cost analysis*.

cost center. A department; from an accounting standpoint, a department that consumes money.

cost-led pricing. Setting prices after costs have been projected.

cost shifting. The practice of transferring costs to some payers to offset losses from other payers.

credit-and-collection cost. The cost incurred by the organization for billing and collecting during the organization's average payment cycle.

critical success factors. Subgoals of a plan, monitored during performance management to measure progress of the overall plan.

current assets. Resources that the organization expects to consume within one year.

current liabilities. Economic obligations, or debts, that are due within one year.

current portion of long-term debt. The amount of the organization's long-term debt (not including interest) that is expected to be paid within one year.

debt. Money that is borrowed by an organization.

deferred revenue. Money received by the hospital but not yet earned by the hospital, such as registration fees for an educational program not yet provided.

defined-benefit plan. A health plan in which the employer pays the premium, or an established part of the premium, regardless of the cost.

defined-contribution plan. A health plan in which the employer pays a set amount toward the cost of the premium and the employee pays the rest. Thus, if an employee chooses an expensive plan, the employee pays more than if a less expensive plan were chosen.

delinquency cost. The cost incurred by the organization for the patient not paying on time. This cost can include the costs associated with turning the account over to a collection agency or with writing off the account to bad debt.

depreciation and amortization. Expensing of long-term assets over time to show their declining value.

diagnosis-related group (DRG). A grouping of similar healthcare cases that should require similar resource consumption. DRGs are used by Medicare to calculate prospective payments.

differential costing. A method of assembling costs and sometimes revenues to alternative decisions. Also known as *incremental costing* or *relevant costing*.

differential costs. The difference in costs between two or more alternatives. Also known as *incremental costs.*

direct apportionment. A cost allocation method that moves costs from departments that do not generate revenue to departments that do generate revenue.

direct contracting. The practice of an employer making a contractual agreement directly with an integrated delivery system to deliver health services to employees.

direct costs. Costs that can be traced directly to a department, product, or service.

directionality. Statistical property for numbers that always improve in one direction and always worsen in the other direction.

direct service plan. An arrangement whereby an employer prepays specific hospitals and physicians to take care of employees.

discontinuities. Disruptions to the inventory process, such as the introduction of a new version of a product.

Disproportionate Share Hospital. A CMS designation initiated in 1985 for a hospital that serves a disproportionately high percentage of low-income patients and therefore receives payments from Medicare and Medicaid to cover the increased cost of providing care to low-income patients.

double apportionment. A cost allocation method that allocates costs from non-revenue-generating cost centers to other non-revenue-generating cost centers (as appropriate), then allocates costs from revenue-generating cost centers to other revenue-generating cost centers (as appropriate), and then allocates costs from non-revenue-generating cost centers to revenue-generating cost centers.

economic order quantity. The number or amount of items that should be ordered each time to result in the minimum total inventory costs.

electronic data interchange. A method of payment in which the payer, such as Medicare, electronically transmits payment to the healthcare organization's bank and sends related information to the organization.

employer-based proposal. A health reform idea that employers should provide health insurance for their employees.

equity. Ownership claim against total assets; the difference between assets and liabilities in a for-profit organization.

estimated third-party adjustments. Approximations of how much money the organization will be required to return to third-party payers due to overpayments to the organization.

excess of revenues over expenses. Operating income plus nonoperating income minus total expenses.

executive committee. A committee of the governing body of an organization that monitors all the other committees.

expenses. Amounts of resources used by the organization.

experience rating. A premium-setting method in which different groups covered by an insurance company pay different premiums based on their risk.

factoring receivables. The practice of selling accounts receivable to a third party at a discount. The third party attempts to collect the accounts and keeps the money.

fiduciary. A person, or governing body, in a position of great trust and confidence. The term is typically used to describe the duty of an entity to be loyal and responsible.

finance committee. A committee of the governing body of an organization that monitors the CEO's performance in financial affairs.

financial accounting. A type of accounting that provides historical accounting information to external users.

financial accounting costs. The amount of money used for a certain purpose.

financial analysis. Methods used by investors, creditors, and management to evaluate past, present, and future financial performance of an organization.

first-in, first-out (FIFO). An inventory valuation system that assumes that the first items put into inventory will be the first taken out. Thus, the value of the remaining inventory is based on the cost of the most recent additions to inventory.

fixed costs. Costs that remain constant in relation to changes in volume.

float period. The time between when a check is written and when it is presented for payment.

foundation. A not-for-profit corporation, usually a subsidiary of a for-profit organization, that facilitates education and research or otherwise undertakes charitable projects.

fraud. An intentional misrepresentation of fact designed to induce reliance by another.

full costing. A method of assembling direct and indirect costs to a product or service to determine its profitability.

full costs. Costs that include both direct and indirect costs.

future value. The anticipated value of an investment at a given point in the future, taking into account factors such as interest rate, time, and the frequency of compounding.

gross patient services revenue. The total amount of charges for patients utilizing the hospital, regardless of the amount actually paid.

gross receivable. The full amount a healthcare organization charges.

Healthcare Financial Management Association (HFMA). Association of healthcare financial managers; confers four certifications: certified revenue cycle representative, certified technical specialist, certified healthcare financial professional, and fellow of the Healthcare Financial Management Association.

Health Insurance Portability and Accountability Act of 1996 (HIPAA). Legislation that mandated privacy and security regulations for the healthcare industry.

health maintenance organization (HMO). An organization that integrates the financing and delivery of healthcare into one organization.

high-deductible health plan. A health insurance plan with higher deductibles and lower premiums than traditional health plans.

horizontal analysis. Evaluation of the trends in an organization's finances by focusing on percentage change over time.

Hospital Value-Based Purchasing Program. A program initiated by CMS in 2012 that rewards hospitals with incentive payments for high-quality care delivered to Medicare patients. Other payers have initiated similar programs.

incremental budgeting. Budgeting only for changes, such as new equipment. The assumption in incremental budgeting is that the current budget is already optimal.

incremental planning. Planning only for changes, such as new equipment. The assumption in incremental planning is that current operations are already optimal.

indirect costs. Costs that cannot be traced directly to a department, product, or service. Also known as *overhead costs*.

integrated delivery system. A system of healthcare providers capable of accepting financial responsibility for and delivering a full range of clinical services.

interest. Expense incurred with borrowed money.

internal auditor. Staff member who monitors the effectiveness of an accounting system by verifying the system's internal control.

internal control. Accounting systems and procedures that identify and correct errors as they occur.

internal rate of return (IRR). The minimum return one needs to break even on an investment. It is the necessary net present value of an investment that, when added to the final market value of the investment, equals the current cost of the investment.

inurement. Providing an employee benefit, such as salary, that is greater than the value of the employee's work.

inventories. The value of supplies on hand that are properly presented as a current asset on the balance sheet. When inventories are used, they are presented as a supply expense on the statement of operations.

inventory. The cost of food, fuel, drugs, and other supplies purchased by the hospital but not yet used or consumed.

inventory management. The management and control of items that have an expected useful life of fewer than 12 months.

inventory turnover. A ratio that measures how many times an organization goes through its inventory relative to its operating revenue.

investment policy. A board-approved policy that directs the chief financial officer or controller in making short-term investment decisions.

job-order costing. A method of determining product cost by sampling the product's actual direct costs and developing a relative value unit (RVU)—a measure of resources consumed by each product—in varying amounts for each product.

The Joint Commission. The primary accrediting body for healthcare organizations.

joint venture. A relationship between two business entities entered into for a specific purpose and period of time.

just-in-time inventory method. Inventory method in which supply items are delivered immediately prior to use.

last-in, first-out (LIFO). An inventory valuation system that assumes that the last items put into inventory will be the first taken out. Thus, the value of the remaining inventory is based on the cost of the earliest additions to inventory.

liabilities. Economic obligations, or debts, of the organization.

liquidity. A characteristic of an investment that pertains to how quickly it can be converted to cash.

liquidity ratios. Ratios that measure an organization's ability to meet short-term obligations.

lock box. In healthcare, a system in which payments from patients are mailed directly to a bank, which credits the healthcare organization's account more quickly than if the check had been mailed to the organization.

long-term debt, net of current portion. An economic obligation, or debt, that is due in more than one year, minus the amount that is due within one year.

long-term investments. Economic resources that the hospital owns, such as corporate bonds and government securities, and intends to hold for more than one year.

long-term liabilities. Economic obligations, or debts, that are due in more than one year.

managed care organization. An organization that controls the cost and quality of and access to healthcare.

managed-competition proposal. A health reform idea that blended government regulation with free-market competition.

management connective processes. Management functions that connect elements of the healthcare organization, including communicating, coordinating, and decision making.

management functions. The key functions of a manager, including planning, organizing, staffing, directing, and controlling.

managerial accounting. A type of accounting that provides accounting information, generally current or prospective in nature, to internal users.

managerial accounting costs. Costs that help management make better decisions.

marginal costs. The costs of producing one more unit of something.

materials management. The management and control of inventory, services, and equipment from acquisition to disposition.

Medicaid. A program created by the federal government, funded by the federal and state governments, and administered by the state government, to provide free or low-cost healthcare to low-income recipients.

Medicaid coverage gap. A hole in insurance coverage created by states that did not expand Medicaid (for example, an eligibility income limit of 44 percent of the federal poverty level) and subsidized insurance on the exchanges that starts at 100 percent of the federal poverty level.

Medicare. A federally funded program that provides health insurance to Americans at age 65.

Merit Incentive Payment System (MIPS). A government-mandated program that provides a Medicare performance-based payment adjustment based on quality, resource use, advancing care information, and cost to physicians and certain other clinicians, to be initiated no later than 2019.

multiple apportionment. A two-step cost allocation method that makes multiple, simultaneous apportionments during the first step. Also known as *algebraic apportionment.*

National Patient Safety Goals (NPSGs). A set of goals established by The Joint Commission to address safety areas of special concern for hospitals.

net assets. The difference between assets and liabilities in a not-for-profit organization, which represents the owner's and others' financial interests in the organization.

net assets released from restrictions used for operations. Money previously restricted by donors that has become available for operations.

net income. The difference between collected revenues and expenses; a reasonable amount is considered the most important objective of healthcare financial management.

net patient services revenue. Money generated by providing patient care minus the amount the organization will not collect as a result of discounting charges per contractual agreement and providing charity care.

net present value (NPV). The present value of the future cash flow of an investment. NPV takes into account the fact that future cash flows are "discounted" to determine their present value.

net receivable. The gross receivable minus any negotiated discounts.

network HMO. A health maintenance organization that contracts with physician groups to provide care for enrollees. A network HMO may be either an open-panel or a closed-panel HMO.

noncurrent assets. Economic resources that have a life of one year or more (i.e., the organization expects to consume them over a span longer than one year).

nonoperating costs. Costs associated with supporting the production of a product or the provision of a service.

nonoperating income. Money earned from non–patient care services, such as investment income.

notes payable. Short-term obligations for which a formal contract has been signed, such as a short-term loan.

open-panel HMO. A health maintenance organization that exerts moderate control over physicians by contracting with them to provide care for enrollees. However, these physicians can see other patients.

operating costs. Costs associated with producing a product or providing a service.

operating expenses. Resources used on operations to generate revenue in support of the organization's mission statement.

operating income. Money earned from providing patient care services. It includes the total revenue, gains, and other support minus the total operating expenses.

operational planning. The process of translating the strategic plan into a year's objectives.

opportunity costs. Potential revenues forgone by rejecting an alternative.

other noncurrent assets. Assets limited as to use (by contracts with outside parties) and goodwill, which represents the amount above fair market value based on an entity's future earning potential.

other operating expenses. Miscellaneous expenses that have not been reported elsewhere.

other operating revenue. Money generated from services other than health services to patients and enrollees. It may include revenue from rental equipment and office space, sales of supplies and pharmaceuticals, cafeteria and gift shop sales, and so on. Often the test for whether revenue is considered other operating revenue or nonoperating revenue is whether the revenue was generated in support of the organization's mission statement.

overstock cost. The cost of carrying more inventory than demand calls for.

patient dumping. Denying care to or transferring a patient based on the patient's inability to pay.

payback period. The number of years necessary for cash flows to recover the original investment.

peer review organizations (PROs). Organizations that ensure that providers give appropriate care to Medicare recipients.

per diagnosis rate. A method of paying for healthcare in which the hospital is paid a flat fee for each given diagnosis, regardless of the actual service provided.

per diem rate. A method of paying for healthcare in which the hospital is paid a flat fee per day, regardless of the service delivered on any given day.

permanently restricted net assets. Donor-restricted net assets with restrictions that never expire, such as endowment funds.

physician–hospital organization (PHO). A joint venture between a hospital organization and physicians that is capable of contracting with managed care organizations.

planning horizon. The length of time management is looking into the future.

plant and equipment, net. Economic resources, such as land, buildings, and equipment, minus the amount that has been depreciated over the life of the buildings and equipment (which is called *accumulated depreciation*).

pledging receivables. The practice of using accounts receivable as collateral for a loan.

preferred provider organization (PPO). An organization that provides discounted healthcare services to insurance carriers and employers.

premium revenue. Money generated from capitation arrangements that must be reported separately from patient services revenue because premium revenue is earned by agreeing to provide care, regardless of whether care is ever delivered.

prepaid expenses. Expenditures made by the hospital for goods and services not yet consumed or used in hospital operations (sometimes referred to as *deferred expenses*), such as rent and insurance premiums.

present value. The current value of an investment.

price-led costing. Reducing costs after prices, or effective prices (i.e., collections), have been determined by the payers.

process costing. A method of determining product cost by dividing the full costs of the organization or department during a given accounting period by the number of products or services produced or provided during the given accounting period.

production units. The best measures of what an entity is producing. For example, patient days and admissions are both considered production units for a hospital.

profitability ratios. Ratios that measure an organization's ability to exist and grow.

prospective payment. A payment system in which a healthcare organization accepts a fixed, predetermined amount to treat a patient, regardless of the true ultimate cost of that treatment. Diagnosis-related groups (DRGs) are one type of prospective payment; Medicare pays hospitals a fixed amount for an episode of treatment based on that treatment's DRG.

ratio. A comparison between two or more financial facts, such as income to assets or assets to liabilities.

ratio analysis. Evaluation of an organization's performance by computing the relationships of important line items in the financial statements.

ratio of cost to charges. A method of determining product cost by relating its cost to its charge. This ratio is usually calculated by dividing an organization's total operating expenses by the gross patient revenue. The resulting percentage is then applied to any product's charge in the organization to calculate the product's cost.

Readmission Reduction Program. A CMS program designed to reduce payments to hospitals for patients who return to the hospital with certain diagnosed conditions within 30 days of their prior admission for the same condition.

receivables, net. Money due to the organization from patients and third parties for services already provided.

recovery audit contractor (RAC). A private business that detects and recovers improper Medicare payments to providers.

relevant costs. Costs that are important to a decision at hand.

resource-based relative value scale (RBRVS). A Medicare reimbursement system that provides a flat, per-visit fee to physicians rather than reimbursing them according to their customary charges.

responsibility costing. A method of assembling costs by cost center or department.

retained earnings. Income earned by the organization from operations minus dividends (distributions of earnings paid to stockholders based on the number of shares of stock owned).

revenue center. A cost center (department) that generates money.

revenue cycle. A multidisciplinary approach to reducing the amount in accounts receivable by effectively managing the production and payment cycles.

revenues. The amounts earned by the organization or sometimes donated to it.

RVU schedule. A list of charges, such as procedures performed by the laboratory or the radiology department, based on relative value units (RVUs).

second-party payment. Payment for healthcare that comes from the person receiving the service (i.e., patients paying their own bills).

semivariable costs. Costs that change incrementally in response to changes in volume.

shareholders' equity. The difference between assets and liabilities in for-profit healthcare organizations; it represents the ownership interest of stockholders in the organization. Also called *stockholders' equity*, *owners' equity*, or *net worth*.

short-term securities. Investments with a maturity date of less than one year.

single-payer proposal. A health reform idea that a single payer—namely, the federal government—should pay for all healthcare.

skill mix. The proportional combination of particular skilled positions in a department.

specific identification. An inventory valuation system that determines the actual value of each inventory item.

staffing mix. The proportional combination of full-time, part-time, and temporary employees in a department.

standard costs. Estimated or budgeted costs used for comparison.

statement of cash flows. A financial report that shows the organization's amounts of cash receipts and where they came from and the amounts of cash disbursements and where they went during the statement period.

statement of changes in net assets. A financial report that shows the reasons why net assets changed from the beginning of the statement period to the end of the statement period.

statement of operations. A financial report that summarizes the organization's net revenues, expenses, and excess of net revenues over expenses over a period of time.

step-down apportionment. A cost allocation method that allocates costs from non-revenue-generating cost centers to other non-revenue-generating cost centers (as appropriate) and then to revenue-generating cost centers.

stock-out cost. The cost of running out of inventory on an item, such as the cost of making a rush order.

strategic planning. Long-range planning that anticipates where an organization will be in three to ten years.

strategic thrusts. Broad statements of significant results that an organization wants to achieve related to its vision. Also called *goals*.

sunk costs. Costs that have already been incurred and thus will not play a role in future decisions.

tax-exempt. The status that allows an organization to pay no taxes, including sales tax, income tax, and property tax. Tax-exempt organizations may also raise capital by selling tax-exempt bonds, for which they can pay lower interest than comparable taxable bonds.

temporarily restricted net assets. Donor-restricted net assets that the organization can use for the donor's specific purpose after the organization has met the donor's restriction, such as the passage of time or an action by the organization.

temporary investments. Money placed in securities with maturities up to one year, such as commodities and options.

third-party payer. An agent of the patient (the first party) that contracts with a provider (the second party) to pay all or a portion of the bill to the patient.

total changes in net assets. The difference between total net assets at the beginning of the year and total net assets at the end of the year.

trade credit. Credit extended to an organization by vendors.

treasurer. The person responsible for managing the capital of an organization.

true costs. Hypothetical costs that are the most accurate representation of full costs that can be determined by management.

two-sided risk. A risk model that allows the provider to share savings with the payer if costs are below a negotiated target and to lose Medicare reimbursement if costs are above a negotiated target.

uncontrollable costs. Costs that cannot be influenced by the manager.

unrestricted net assets. Net assets that have not been externally restricted by donors or grantors, such as the excess of revenues to expenses from operations.

value-based programs. Programs that reward healthcare providers with incentive payments for the quality of care they deliver to Medicare beneficiaries.

variable costs. Costs that change directly and proportionately in response to changes in volume.

variance analysis. An examination of the differences (variances) between budgeted and actual amounts. Variance analysis requires managers to explain why budgeted and actual amounts do not match.

vertical analysis. Evaluation of the internal structure of an organization by focusing on a base number and showing percentages of important line items in relation to the base number.

weighted average. An inventory valuation system that uses an average of the costs of inventory items to determine the value of inventory.

working capital. An organization's current assets; the assets available to run the organization in the short term.

working capital policy. Sources and methods used to finance working capital, as well as the quantity of working capital to be maintained.

zero-base budgeting. Budgeting that requires all operations to be justified anew; nothing in the current budget is assumed to be already optimal.

zero-base planning. Planning that requires all operations to be justified anew; nothing is assumed to be already optimal.

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