FOURTH EDITION

MANAGEMENT ACCOUNTING IN HEALTHCARE ORGANIZATIONS

David W. Young

Management Accounting in Healthcare Organizations

Fourth Edition

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Preface

This book provides an introductory level of instruction to students of healthcare management who are studying management accounting for the first time. It offers a user-oriented approach to management accounting concepts and techniques that will help to prepare them for work in an environment where an understanding of management accounting is important to success.

Management accounting is concerned primarily with the information needs of an organization's managers. In general these needs arise in three areas: full cost accounting, differential cost accounting, and responsibility accounting. The distinctions among these different types of accounting are discussed below.

TO THE STUDENT

The working assumption of this book is that you have no prior knowledge of management accounting. Upon completing the book successfully, you will be knowledgeable about both the uses and the limitations of management accounting information. To accomplish this, I place minimal emphasis on the technical aspects of preparing accounting information, covering only those technical matters that are essential to understanding the information. Most of the focus is on the meaning and utility of accounting information for managers and other users.

In general the learning process consists of developing new skills, which can be acquired only by practice. Learning management accounting is a bit like learning about a new city. If someone takes you on several drives around the city, you will probably learn very little about how to get from one place to another. If you drive by yourself, however, you will learn a great deal about the city—acquiring far more knowledge on a single trip than you would in dozens of trips as a passenger.

In this book you are the driver rather than the passenger. The idea is to practice (and learn) accounting while you read each chapter. You will have opportunities to prepare answers to problems that appear throughout each chapter, and to analyze a practice case study (sometimes two) at the end of the chapter. There are several features that you should keep in mind as you engage in this effort.

Minimal Memorization

Mastering management accounting requires learning some analytical techniques that build on each other. Although most students find management accounting intuitively understandable, the material cannot be learned by thinking "deep thoughts." This book guides you as you work with the concepts and techniques so you can see how they are developed and applied. The discussion in each chapter assumes that you understand the material covered in the prior chapters, so it is important to work through the chapters in order.

Throughout each chapter, important terms are indicated in italics. A definition of each of those terms is contained in a glossary at the end of the book.

Interactive Learning

A distinctive feature of this book is its interactive approach to the learning process. You are regularly asked to stop reading and work out the solution to a problem. The idea is to shorten the feedback loops in the learning process. Rather than answering questions or analyzing problems only at the end of each chapter, you can apply what you have learned about a topic immediately following the discussion about it. When the discussion of a topic is lengthy, problems may be presented throughout the discussion.

You may be tempted to shortcut this process, but please do not succumb to temptation. Shortcutting will compromise your mastery of the material. Indeed, the reasoning in the answer to a problem can be quite seductive—if you look at it before working out your own answer, you will likely find yourself in agreement with it, saying something like "That's how I would have done it, if I had done it." But you may not have fully internalized the analytical techniques. Actually working through a problem, arriving at a solution, and then comparing it to the answer will give you an understanding of the logic behind the related

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accounting concept, and allow you to apply it to real-life problems. To take full advantage of the interactive feature, you should answer each problem to the best of your ability before looking at the answer provided in the text, and you also should analyze each practice case thoroughly before looking at the solution in the Appendix.

In short, to learn management accounting, you must struggle through the process of arriving at solutions yourself, gaining understanding from both your successes and your mistakes. To prepare for this learning process you should have a pencil, a calculator, and a supply of paper next to you while you are reading each chapter. A problem begins with a dotted line as follows:

Problem: It is in smaller type font like this, and ends with a pencil, like the following:

Answer: The answer to the problem, also in smaller type font, immediately follows this second dotted line, and ends with another dotted line.

Use a sheet of blank paper to cover the answer as you work out the solution to each problem. Then compare your solution and associated reasoning to the answer provided. If your comparison shows that your solution is correct, continue reading. If you have an incorrect answer, spend as much time as you need to figure out where you went wrong. This may require rereading the section of the chapter immediately preceding the problem.

Short Chapters

Most of the chapters are relatively short. Reading a chapter and working your way through the problems can take several hours, however, so it's normal to feel that you are working slowly.

You should not try to cram the learning process into less time, because you need to digest the material as you go along. If you believe you already understand the material in a particular section and therefore do not need to read that section, you should prepare solutions to the problems in the section to verify your understanding.

End-of-Chapter Tools

At the end of each chapters there are two tools that can help you solidify your understanding of the chapter's concepts and techniques:

To Bear in Mind. This section highlights two of the most significant concepts and/or techniques in the chapter, especially ones that can be confusing or cause difficulties when used in practice. These are just short "nudges" to make sure you understand.

Practice Case Studies. In addition to solving the problems in each chapter, you are asked to prepare an analysis of a practice case study (sometimes two) at the chapter's end. As with the problems contained in the chapter, you should attempt to analyze a practice case to the best of your ability before looking at the solution in the Appendix at the end of the book. Each case covers some of the concepts discussed in the chapter and thus will give you an opportunity to test your knowledge of the chapter's content in a practical setting.

The practice cases usually are quite short, and might even be thought of as extended problems. In some instances, the cases are longer and more detailed—much depends on the chapter's content. The conventional distinction between an extended problem and a case is that a case usually presents a situation for which there is no single right answer. For most of the practice cases, there are right answers, although, as you will see, there is sometimes more room for judgment than you might imagine initially.

Several practice cases are good candidates for a relatively simple spreadsheet analysis, and you should use spreadsheet software in preparing your analyses of these cases. Not only will this approach help you to perfect your spreadsheet skills, but it will allow you to test alternative approaches to the answer more easily than if you had only written out the answer.

The Appendix at the end of the book contains solutions to the practice cases. A glossary of selected terms and concepts used in this book follows the appendix.

User Orientation

The book has a heavy user orientation, focusing mainly on line managers and senior managers (including many physicians and nurses), and orienting the discussion to the decisions they make on a day to day basis. Accounting details are discussed to the extent you need them to understand the concepts and techniques used in most organizations, but the text does not cover exceptions to the rules or some of the possible variations on each traditional theme.

Organizational Focus

Many texts use manufacturing examples to illustrate accounting concepts and principles. This book also uses some manufacturing examples, when appropriate, but they—as well as all the problems and cases—are set in organizations that in some way are associated with the healthcare sector.

Although most management accounting concepts are universal, such that the type of organization used to illustrate a point is relatively unimportant, the learning process is much easier when the examples are related to your area of interest. The examples, problems, and practice cases have been chosen with the hope that they will "resonate" with you because they deal with organizations with which you may have some familiarity.

TO THE INSTRUCTOR

This book has been written principally for use in a one-semester, user-oriented course in management accounting in health care. Each chapter is designed to be covered in a week, ideally over two classes of 1.5 to 2 hours each. Clearly, a great deal depends on the depth you wish to pursue, and how quickly or slowly you wish to move through the material.

Students' preparation for the first class session associated with a given chapter should include reading the chapter, engaging in the chapter's interactive activities, and analyzing the chapter's practice case(s). Please bear in mind that, due to the interactivity, students will need considerably more time to read these chapters than they would if they were using a more traditional text. Moreover, they will also need to spend time analyzing the practice case(s).

It is sometimes useful to have an open class discussion following the students' reading of a chapter and preparation of the practice case(s). This discussion can serve to clarify the chapter's concepts and to deal with any difficulties the students are having in using them.

After this class session, each remaining class for a given chapter can focus on a case study that requires students to use the chapter's concepts and techniques. This way, the concepts are first clarified and then used in the analysis of case situations. A list of potential cases for each chapter in the text is contained later in this Preface.

If you wish additional help in selecting cases for your course, you should contact The Crimson Press Curriculum Center (TheCrimsonGroup.org) and review its on-line catalog of materials. In addition, Harvard Business School Publications has a catalog and a Web site (hbsp.harvard.edu) that can help you in selecting cases to supplement each chapter. Instructors who adopt the book can obtain cases from The Crimson Press Curriculum Center at no charge.

Case Method of Instruction

Increasingly, educators are recognizing the power of using the case method in the teaching of management accounting. Its value is that it puts students in the middle of the action and requires them to be analytical—to apply principles rather than just memorize and/or reiterate them. In this way, it prepares students for work in an environment where analysis, judgment, and attention to nuance increasingly are required for success. A list of potential cases to use with each chapter is contained below.

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ORGANIZATION OF THE BOOK

Exhibit P.1 contains the book's learning objectives in each of its three major areas: full cost accounting, differential cost accounting, and responsibility accounting. As the discussion following this exhibit indicates, the book's chapters move from the design of good cost *measurement* systems to the design of good cost *management* systems. Cost measurement can take place without cost management, but managing costs requires an ability to measure them. Therefore, the chapters need to be read in the same sequence as presented.

Exhibit P.1. Management Accounting Learning Objectives

Full Cost Accounting

- The meaning of such terms as cost object, cost center, direct and indirect costs, overhead, cost allocation methods, and cost systems
- The way costs can be allocated to determine the cost of a particular product
- The distinction between production (or mission) centers and service centers
- The nature of the managerial choices inherent in a full cost accounting system
- · The concept of an overhead rate for attaching a mission center's costs to its cost objects
- The concepts of activity-based costing (ABC) and cost drivers, including the use multiple second-stage cost drivers

Differential Cost Accounting

- · The rationale for the statement "different costs are used for different purposes"
- · The distinction between full costs and differential costs, and when each should be used
- The nature of the factors that influence changes in cost, including the distinctions among fixed, variable, step-function, and semi-variable costs
- The nature of alternative choice decision making, and the three major types of alternative choice decisions that most organizations make
- The concepts of unit contribution margin and total contribution, and their roles in alternative choice decision making
- The technique of cost-volume-profit analysis, how to prepare such an analysis, and its uses and limitations

Responsibility Accounting

- The definition of a responsibility center, the different responsibility center options, and the basis for choosing the most appropriate type of center
- The definition of a transfer price, and the role of transfer prices in a responsibility accounting system
- The phases of the management control process, and the characteristics of each phase
- The key elements in the budget formulation process, and the relationship between budgeting and responsibility centers
- The meaning of the term flexible budget, and its use in a responsibility accounting system
- · The technique of variance analysis, and the different types of variances that can occur
- The uses and limitations of variance analysis, and the relationship between variance analysis and management reporting
- Some of the difficulties involved in measuring non-financial (or programmatic) performance, and how to overcome them

Chapter 1: Management Accounting and Health Care's Impending Fiscal Crisis

Healthcare systems throughout the industrialized world are in trouble. The aging of the population means that, as people live longer, they demand increasing amounts of healthcare services, especially for chronic conditions. In addition, individuals born shortly after the end of World War II (between 1945 and 1955) have now reached the age where they will demand more services. Even non-elderly individuals who do not practice good health habits demand greater care. This chapter discusses the details of this demographic and health behavior scenario. The inevitable conclusion is that if healthcare costs in industrialized countries are not better managed there will be a fiscal crisis—either spending will skyrocket or people will be denied needed care. Neither needs to happen if policy makers, managers, and physicians can learn to understand their costs and manage them more appropriately. In effect, this chapter represents a "call to action."

Chapter 2: Essentials of Full Cost Accounting

The question "What did it cost?" is one of the trickiest accounting questions for all organizations, including those in health care. This chapter discusses the kinds of managerial decisions that are made in answering this question, as well as the managerial utility of full cost information. Before managers can control their costs, they must know what they are. Unfortunately, many healthcare organizations do not have this rudimentary knowledge. Appendix 2.1 discusses the reciprocal method of cost allocation.

Chapter 3: Cost Behavior

Chapter 2 classified costs as either direct or indirect, a distinction that is important for undertaking a successful full cost computation, which is important for pricing and profitability analyses. For many managers, however, the distinction between direct and indirect costs is less important than the question of how costs actually behave. This chapter addresses cost behavior. It first distinguishes among fixed, variable, step-function, and semi variable costs. Next, it explains cost-volume-profit (CVP) analysis, and the concept of contribution. It also discusses some tricky aspects of CVP analysis, including the approaches to be followed when step-function costs or multiple products and/or services are involved.

Chapter 4: Differential Cost Accounting

The notion that different costs are used for different purposes can be difficult to accept. This chapter explains why this notion is important, reinforcing the distinction between full costs and differential costs, and discussing when each should be used. The ideas contained in this chapter are important for managers when they are making what are called alternative choice decisions, such as outsourcing, keeping or eliminating a product or service that is unprofitable on a full-cost basis, or offering a special price.

Chapter 5: Activity-Based Costing

The discussion in Chapter 2 focused principally on what is known as "Stage 1" of a full cost accounting system—the stage in which all costs end up in the organization's "mission" (or "revenue") centers. This chapter looks at "Stage 2," which is the stage where mission center costs are attached to the products that are produced by the center. This "absorption costing" concept is applicable to service delivery units in almost all healthcare settings, ranging from a clinical care department (such as surgery or medicine) to laboratories, radiology departments, and pharmacies, to name a few.

The major focus of the chapter is on the technique of activity-based costing (ABC), which is becoming increasingly prevalent in health care. However, many users of ABC in healthcare organizations do not fully understand the kinds of problems it was designed to solve, nor the importance of what are called "multiple second-stage cost drivers." The chapter shows how to make the computations, and illustrates the importance of using ABC to determine the full cost of an organization's individual products.

Chapter 6: Responsibility Accounting: An Overview

There is an important distinction to be made between measuring costs and managing them. This chapter makes that distinction, and moves into the realm of responsibility accounting. To design a good responsibility accounting system, a manager must think about the system's structure and process. This

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chapter emphasizes structure, describing the different types of responsibility centers that can exist in an organization and the basis for choosing one type over another. The chapter concludes with a summary of the four phases of the management control process.

Chapter 7: Key Issues in Designing the Responsibility Accounting Structure

Chapter 6 raises but does not fully discuss several tricky matters in designing an organization's responsibility accounting structure. This chapter takes the next step, discussing matters of fairness, goal congruence, the link between the responsibility center structure and the organization's motivation process, and the development of appropriate transfer prices for intra-organizational transactions.

Chapter 8: Programming

This chapter discusses some of the techniques for analyzing new programs or other capital investments, using the concepts of net present value and internal rate of return. It also examines the issues involved in choosing a discount rate for assessing a capital project, and assesses the impact of political and behavioral considerations on the choice of capital projects. Appendix 8.1 discusses the concept of present value, and Appendix 8.2 discusses some special programming issues in governmental organizations.

Chapter 9: Operational Budgeting

This chapter discusses the annual (usually) activity of forecasting operating revenues and expenses. Among the topics addressed are the key elements in the budget process, the relationship between budgeting and responsibility centers, the organizational and strategic contexts in which budgeting takes place, and the mechanical aspects of building a budget. Appendix 9.1 contains a description of seven common "budgeting misfits," or places where the operational budgeting phase does not align well with other activities in the organization.

Chapter 10: The Cash Budget

Moving from preparing the capital and operating budgets to preparing the cash budget requires an understanding of both financial accounting and financial management. This chapter is concerned with the choices managers make about (a) the use of debt or equity to finance assets, (b) the structure of debt, (c) the size of net income, and (d) the management of growth. It discusses the operating and financing cycles along with several key concepts that are important to understanding a cash budget: debt structure, leverage, and the role of profits.

Chapter 11: Measuring and Reporting

An important phase in the management control process involves measuring performance and reporting the resulting information to managers. This chapter discusses this phase, beginning with flexible budgeting and variance analysis. It includes the uses and limitations of variance analysis, and moves to the relationship between variance analysis and management reporting. It also provides some examples of reports that can communicate action-oriented information to managers. It concludes by addressing an emerging concern of many healthcare organizations—the measurement of non-financial performance.

Chapter 12: Implementing a New Responsibility Accounting System

The value of the concepts of structure and process that form the basis of responsibility accounting systems is in their application to real-world situations and problems. The ultimate goal is to develop responsibility accounting systems that facilitate improved operations, which requires assessing how a responsibility accounting system fits into a broader organizational context. This chapter first summarizes the key characteristics of a good responsibility accounting system. It then positions the responsibility accounting system in an organizational context made up of seven separate processes. It concludes with a discussion of some of the important issues that managers need to keep in mind when introducing a new or redesigned responsibility accounting system.

POTENTIAL CASES BY CHAPTER¹

Chapter 1: Management Accounting and Health Care's Impending Fiscal Crisis

Apogee Health Care Boise Park Health Care Foundation (A) Hilda Cook Percy Memorial Hospital Wheeling Cardiology Associates

Chapter 2: Essentials of Full Cost Accounting Carroll University Hospital

Croswell University Hospital Harbor City Community Center Jebah Hospital

Chapter 3: Cost Behavior Abbington Health Center Carlsbad Home Care Springfield Visiting Nurse Association

Chapter 4: Differential Cost Accounting Boston University Medical Center Hospital

Lakeside Hospital LLC Labs

Chapter 5: Activity-Based Costing Massachusetts Eye and Ear Infirmary Neighborhood Servings Owen Hospital

Chapter 6: Responsibility Accounting: An Overview Franklin Health Associates (A) Hospital San Pedro WIC Program

Chapter 7: Key Issues in Designing the Responsibility Accounting Structure

Converse Health System National Youth Association White Hills Medical Center

Chapter 8: Programming

Disease Control Programs Green Valley Medical Center The Heartbreak of DRGs Yoland Research Institute

Chapter 9: Operational Budgeting Bandon Medical Associates (A) Centro Italiano Sviluppo

Lomita Hospital (A) North Lake Medical Center North Lincoln Southeast University Health System Sonsonala (A)

¹ These cases are available at no charge to the students in a course where the instructor had adopted the book. Other cases may be obtained at a charge from Harvard Business School Publications. Go to <u>hbsp.harvard.edu</u>.

Chapter 10: The Cash Budget

Brookstone Ob-Gyn Associates (B) Jupiter Insurance Company Menotomy Home Health Services Northridge Sonsonala (B)

Chapter 11: Measuring and Reporting

Bandon Medical Associates (A) Clinique Nosral Franklin Health Associates (B) Lomita Hospital (B) Los Reyes Hospital (B) Spruce Street Shelter United Medical Center

Chapter 12: Implementing a New Responsibility Accounting System

Centuria Health System Concord Municipal Hospital Department of Surgery Easter Seal Foundation of New Hampshire and Vermont, Inc. Lawrence University Medical Center Omega Research Institute Priority Health System The Robert Wood Johnson Medical School White Mountain Health Care

ACKNOWLEDGEMENTS

Previous editions of this text have benefited greatly from the advice and input of many people. The late Andy Pasternak was perhaps the most influential, in that he encouraged me to write the text and then supported me in preparing the first two editions. Leslie Breitner and Emanuele Padovani both have used the text and have given me some very useful feedback. I also am indebted to the faculty who have adopted one or more of the first three editions and have provided me with some thoughts about their experiences and how the text might be improved. Finally, many students have provided me some thinking that has influenced the book's content. Clearly, however, while all of this assistance has been invaluable, any errors or omissions are my responsibility.

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