HEALTHCARE FINANCE *and* FINANCIAL MANAGEMENT

Essentials for
Advanced Practice Nurses
and Interdisciplinary
Care Teams

Mary A. Paterson, PhD, RN
Ordinary Professor, School of Nursing
The Catholic University of America
Washington, DC

Technical Editor
Alexander V. Telyukov, PhD

DES*tech* Publications, Inc.

Healthcare Finance and Financial Management

DEStech Publications, Inc.
439 North Duke Street
Lancaster, Pennsylvania 17602 U.S.A.

Copyright © 2014 by DEStech Publications, Inc.
All rights reserved

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

Printed in the United States of America
10 9 8 7 6 5 4 3 2 1

Main entry under title:
Healthcare Finance and Financial Management: Essentials for Advanced Practice Nurses and Interdisciplinary Care Teams

A DEStech Publications book
Bibliography: p.
Includes index p. 201

Library of Congress Catalog Card No. 2014931017
ISBN No. 978-1-60595-062-4

HOW TO ORDER THIS BOOK

BY PHONE: 877-500-4337 or 717-290-1660, 9AM–5PM Eastern Time

BY FAX: 717-509-6100

BY MAIL: Order Department
DEStech Publications, Inc.
439 North Duke Street
Lancaster, PA 17602, U.S.A.

BY CREDIT CARD: American Express, VISA, MasterCard, Discover

BY WWW SITE: http://www.destechpub.com

Table of Contents

Preface ix

Acknowledgments xi

Section 1

1. Introduction to Healthcare Finance 3

1.1. Chapter Objectives 3
1.2. What Do Healthcare Providers Need to Know about Finance and Financial Policy? 3
1.3. Characteristics of Financial Systems in Healthcare—The Social Compact 4
1.4. Health or Healthcare—The Social Goal and the Financial Objective 7
1.5. Concept Checkout 9
1.6. Discussion Questions 9
1.7. References 10

2. Models of Healthcare Financing 11

2.1. Chapter Objectives 11
2.2. The Household as a Central Stakeholder in Healthcare 11
2.3. The Stakeholders in All Health-Financing Models 12
2.4. The Essential Approaches to Healthcare Financing 15
2.5. The Financial Flows in Healthcare Systems 18

2.6. Concept Checkout 19
2.7. Discussion Questions 19
2.8. References 20

Section 1 Case Study—The Island Nation of Tekram 21

Section 2

3. Health Insurance in Public and Private Markets 27
3.1. Chapter Objectives 27
3.2. The Nature of Risk 27
3.3. Estimating Risk in Health Insurance 29
3.4. Managing Costs as a Risk-Control Strategy 31
3.5. The Budget Approach to Health Insurance 33
3.6. Risk Control Strategies in Health Insurance 34
3.7. Concept Checkout 35
3.8. Discussion Questions 36
3.9. References 36

4. Healthcare System Strategy and Finance 39
4.1. Chapter Objectives 39
4.2. Goal Setting in the U.S. Healthcare System 39
4.3. The Relationship between Goals and Financial Strategy 41
4.4. Goals, Strategy, and Finance in the U.S. Healthcare System 43
4.5. Strategic Dilemmas in U.S. Healthcare 47
4.6. Concept Checkout 50
4.7. Discussion Questions 50
4.8. References 50

Section 2 Case Study—The Prisoner's Dilemma 53

Section 3

5. Financial Management in Healthcare Markets 59
5.1. Chapter Objectives 59
5.2. Financial Incentives in the U.S. Healthcare Market 59
5.3. Healthcare Financial Management Strategies as a Response to Market Incentives 63

5.4. The Linkage between Healthcare Financial Management and Operations Management 65
5.5. The Organizational Financial Plan 66
5.6. Concept Checkout 67
5.7. Discussion Questions 67
5.8. References 68

6. Costs and Cost-Finding in the Practice 69

6.1. Chapter Objectives 69
6.2. Cost Behavior in Ambulatory Care Practices 69
6.3. Step-down Cost Analysis 71
6.4. Costing Systems Useful to Ambulatory Care Practices 75
6.5. The Organizational and Policy Uses of Cost Data 78
6.6. Concept Checkout 80
6.7. Discussion Questions 81
6.8. References 81

Section 3 Case Study—Homegrown Healthcare Inc.: A Rural Accountable Care Organization. 83

Section 4

7. Revenue Planning and Management 91

7.1. Chapter Objectives 91
7.2. Managing Revenue 91
7.3. Allocating Revenue to Accounts: The Account-Management Challenge 94
7.4. Revenue Optimization and Account Evaluation 96
7.5. Account Negotiation Strategies 97
7.6. Concept Checkout 98
7.7. Discussion Questions 98
7.8. References 98

8. Budgeting for Ambulatory Care Practices 101

8.1. Chapter Objectives 101
8.2. Strategic Planning, Budgeting, and Budget Evaluation 101
8.3. Constructing Budgets: A Focus on Revenue and Expense 103

8.4. Expense Budgets and Categories 105
8.5. Building a Chart of Accounts 106
8.6. Evaluating Budget Performance: Goal Achievement 107
8.7. Concept Checkout 109
8.8. Discussion Questions 109
8.9. Reference 110

Section 4 Case Study—New Day Health and Associates 111

Section 5

9. Capitalization Structure and Investment Planning 115

9.1. Chapter Objectives 115
9.2. Capitalization Structure Planning 115
9.3. The Effect of Capitalization Structure on Performance 116
9.4. The World of Taxation and Its Effects on Capital 117
9.5. Risk and Capitalization 119
9.6. Capital Structure Planning for the Primary Care Provider 120
9.7. Concept Checkout 121
9.8. Discussion Questions 121
9.9. References 122

10. Basic Financial Statements 123

10.1. Chapter Objectives 123
10.2. The Four Basic Financial Reports 123
10.3. Putting the Financial Picture Together: The Interaction of the Income and Expense Statement and the Balance Sheet 124
10.4. Understanding Cash Flow and Its Effect on the Balance Sheet 128
10.5. The Financial Position of a Practice: Financial Statements and Ratios 129
10.6. Concept Checkout 131
10.7. Discussion Questions 131
10.8. References 132

Section 5 Case Study—General Practice Affiliates and Titus Lake Hospital: A Provider Leasing Proposal **133**

Section 6

11. Financial Performance Evaluation **143**
- 11.1. Chapter Objectives 143
- 11.2. Financial Ratios as an Analytical and Comparative Tool 143
- 11.3. Ratio Categories and Their Purposes in Financial Analysis 144
- 11.4. Basic Ratio Relationships and Financial Performance Diagnosis 146
- 11.5. Concept Checkout 150
- 11.6. Discussion Questions 150
- 11.7. References 151

12. Projecting Financial Performance **153**
- 12.1. Chapter Objectives 153
- 12.2. The Pro Forma Financial Analysis: Purpose and Use 153
- 12.3. Using Evidence to Build the Pro Forma Analysis 154
- 12.4. Building the Pro Forma Financial Plan 156
- 12.5. Financial Barriers and Supports: SWOT Analysis 158
- 12.6. Financial Interrelationships and Financial Strategy 159
- 12.7. Concept Checkout 160
- 12.8. Discussion Questions 161
- 12.9. References 161

Section 6 Case Study—Provider Financial Goals and Management **163**

Section 7

13. Project Financial Management: Planning and Budgeting **167**
- 13.1. Chapter Objectives 167
- 13.2. Project Financial Planning and Budgeting 167
- 13.3. Accounting for Project Expenses 172

13.4. Integrated Project Management Plan and Team 173
13.5. Project Financial Management 174
13.6. Concept Checkout 176
13.7. Discussion Questions 176
13.8. Reference 177

14. Project Financing and Valuation 179
14.1. Chapter Objectives 179
14.2. Constructing Project Financial Flows 179
14.3. Project Valuation Methods 181
14.4. Impact of the Financial Environment on Projects 184
14.5. Project Financial Evaluation 186
14.6. Concept Checkout 188
14.7. Discussion Questions 188
14.8. Reference 189

Section 7 Case Study—General Practice Affiliates Electronic Medical Records Project 191

15. Concluding Thoughts on the Healthcare Financial Enterprise 193
15.1. Chapter Objectives 193
15.2. The Relationship Between Finance and Population Health 193
15.3. The Emerging Trends Affecting Healthcare Financing 194
15.4. Aging Societies and Longevity 195
15.5. Worldwide Health Protection 196
15.6. The Consumer 197
15.7. The Roles of Macro- and Micro-Financing in Responding to These Trends 197
15.8. Discussion Questions 198
15.9. Reference 199

Index 201

Preface

HEALTHCARE in the United States is a complex blend of private, state, and federal systems with conflicting incentives that result in seemingly irrational financing policies. Over the more than twenty years that I have taught healthcare finance to clinical professionals, I have struggled to explain these systems in the short time allocated to this subject in a clinical program. The available healthcare finance textbooks are usually not intended for clinical students; they are either overly complex or too narrowly focused on the hospital enterprise or the entire healthcare financing system. This book provides an introduction to the healthcare financing system and a guide to the financial management of a healthcare practice. The book supports a semester-long class that prepares clinicians to participate knowledgeably in practice financial management and understand general concepts of the U.S. healthcare financing system.

The book is divided into two main sections. The first introduces the financing system, general models of healthcare financing with a focus on the concepts of risk and return, and health insurance models. The section concludes with a discussion of financial incentives and how they shape the costs of care. The second section focuses on financial management of the ambulatory care practice. This section provides a guide to cost finding, revenue analysis and management, and financial reporting. It concludes with two chapters focused on the planning, financial management, and evaluation of projects. These two chapters support not only capital investment analysis but also investment decisions on funded projects that the practice is considering. Taken together, the sections develop an understanding of the financing environment surround-

ing any clinical practice, the reasons for the state and federal financing policies with which a typical ambulatory care practice needs to comply, and the future challenges that are likely to develop given the new directions healthcare financing is taking with the Patient Protection and Affordable Care Act. Additionally, the book provides the practitioner with the basic financial tools necessary to survive as a business. The cases at the end of each section enable students to apply the material to practical problems in healthcare finance at the system and practice levels.

Healthcare finance is frequently taught in clinical programs by faculty who are not financial specialists. I provide simple, jargon-free explanations and examples to clarify financial theory and principles. I also provide an extensive instructor's manual with model syllabi, guides to all the cases, explanations of the problem sets, and PowerPoint slides intended to present the essential material in each chapter. Additionally, each chapter begins with clearly specified instructional objectives so that the material can be adapted to online instruction as well as classroom presentation. Students are provided with a review of essential concepts necessary to complete the chapter, along with study questions and problem sets that reinforce the material. The material is appropriate for a graduate class in healthcare finance, for clinical professionals such as nurse practitioners, physician's assistants, physical or occupational therapists, clinical psychologists, and social workers. It would also be applicable to graduate physicians interested in ambulatory care practice.

It has been both a challenge and a pleasure to compile this text with the clinical faculty and student in mind. I believe that well-informed clinical professionals are our best hope for a responsive and financially viable healthcare system. I wish all who use this book well as they begin the study of healthcare finance.

Acknowledgments

THE material presented in this book is the result of a thirty-year dialogue with my teachers and students. I have found that the best education is a conversation between those who understand and those who seek to understand. This conversation is exciting, challenging, at times frustrating, and, above all, enlightening. This book could not have been written without my teachers, particularly Dr. Kyle Grazier, formerly at the University of California, Berkeley, and now at the University of Michigan, Ann Arbor. It could also not have been written without the many students who worked to understand, asked excellent questions, and insisted on clarity and simplicity. I am most grateful to them, but especially to the Doctor of Nursing Practice students at The Catholic University of America who pilot-tested much of this material when it was in draft form.

The educational dialogue between teacher and student is supported by our families. I thank my family and friends for their unfailing support of this work and the enrichment they bring to my life.

Finally I thank my colleagues at The Catholic University of America and at the American Association of Colleges of Nursing for their patience and forbearance as I struggled to complete this book, most especially to Dean Patricia McMullen who gave me the precious gift of time to focus on this project. I am grateful to all of you.

Section 1

CHAPTER 1

Introduction to Healthcare Finance

1.1. Chapter Objectives

After completing this chapter you should be able to:

1. Define the terms *macro-finance* and *micro-finance*.
2. Discuss why healthcare providers need to know basic principles of financial economics.
3. Understand why government healthcare systems in the United States always have a political as well as administrative dimension.
4. Discuss the concept of states' rights and its implications for government healthcare systems.
5. Understand the evolving social compact in U.S. society in regards to healthcare financing.
6. Discuss the resource allocation issues inherent in the societal goal of health and healthcare.

1.2. What Do Healthcare Providers Need to Know about Finance and Financial Policy?

Economic theories are the basis for the concepts and principles that explain financial decisions. As students in healthcare fields, we may learn these principles as part of the required social science courses that we take before entry to professional study. Beginning healthcare students often find these concepts vaguely interesting but not very relevant for the work they intend to do. It is only after entry into practice that the impact of healthcare financing systems becomes apparent. For most of us, financial

issues present barriers and constraints to what we consider the optimal delivery of care, and we decide that we need a better understanding of why the healthcare financing system seems to function the way it does.

This book is intended to help healthcare practitioners develop a better understanding of healthcare finance. It answers basic questions providers have concerning healthcare finance. The intention is not to develop a deep analytical expertise in accounting and finance; rather we provide an introduction to the main principles of healthcare financial policy and to some of the financial skills necessary to organize an effective and efficient professional practice. Most healthcare providers are also involved in making healthcare policy and allocation decisions—as voters as well as providers of care. So we begin with discussion of macro-finance. This area of finance is concerned with the way financial policy affects various sectors of the economy. Later sections of the book offer basic financial management knowledge that can help providers better organize their practice and make sound business decisions. This area of study is known as micro-finance.

The principles of financial economics help shape the way healthcare resources are managed in our society. For example, as providers of care, the amount and timing of the payment we receive for our services is determined by the financial realities of the healthcare sector. The distribution of healthcare to our patients is also determined by financial policy; whether services are paid or delivered pro bono, healthcare providers need to receive some payment for the work they do. The source, amount, and method of payment are all subject to many variations. Understanding financial economic and policy principles helps clarify not only the variations, but also the reasons for them.

1.3. Characteristics of Financial Systems in Healthcare—The Social Compact

The effect of the financial system on the distribution of healthcare has been the topic of many research projects, policy briefs, books, and dissertations. The U.S. approach to healthcare financing is shaped by a few fundamental ideas that reflect the social compact between U.S. citizens and their government. One of the most important of these ideas is the relationship of the government to the people expressed clearly in this passage from the Declaration of Independence:

> We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.—That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed.

This compelling statement defines the way the government relates to the people. It derives from ideas discussed by social philosophers of the time, such as John Locke, Thomas Hobbs, and Jean-Jacques Rousseau. These individuals believed that people come together and agree to give up some of their individual liberty in exchange for benefits from a government that creates an orderly society for the good of all. However, if people judge that the government no longer serves the common good, individuals may act to change it. This relationship makes clear that the government serves the collective will of the people. If it does not, the people are free to change it.

The Declaration of Independence states that the fundamental power is with the people who agree to allow the government some role in supporting societal order. This arrangement implies that the people must agree with actions that the government takes on their behalf. Unlike governmental systems that concentrate power in a central government that may grant some rights to individuals, the U.S. system concentrates power with the individuals who grant rights to the government. This is an important allocation of power that has profound implications for any government healthcare system in the United States. In this country the people have the right to agree or disagree with any system of health insurance or healthcare that the government offers, and they also have the right to change it if they are not satisfied. Government healthcare systems in the United States are always subject to the will of the people and must have the approval of the majority of them in order to continue to exist. It is apparent, then, that government-managed healthcare will always have a political as well as an administrative aspect, and both are important if the system is to be sustainable.

A second important concept inherent in the U.S. system of government is the division between the rights and duties of state government and those of the federal government. The U.S. Constitution clearly establishes a federalist system that allocates only specific powers to the federal government. Powers not specifically given to the federal government remain with the states or with the people. The Tenth Amendment to the Constitution, often held to be redundant to reinforce ideas already inherent in the document's main body, makes this division of power unambiguous: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people."

The powers explicitly allocated to the federal government do not contain a reference to the establishment of healthcare or the right to healthcare; the involvement of the federal government in healthcare has been voluntary. For example, the establishment of federal programs to support care for active duty military and veterans, the Medicare pro-

gram for the elderly, and the control of communicable disease were all established by Congressional action that contained no underlying mandate to provide health services for everyone. In fact, the federal government's right to regulate across state lines, including the right to tax and spend for the general welfare, stems from the commerce clause of the Constitution (Leonard, 2010). Constitutional scholars and the courts generally agree that health, welfare, and domestic safety are outside the boundaries of the commerce clause; therefore fall clearly within the powers reserved for the states. This is the reason that most government health programs in the United States have historically been the responsibility of the states, not the federal government.

These key concepts illustrate the critical relationship of the individual to the government in the United States and elucidate the social compact that exists in regard to healthcare. Individuals generally expect to provide healthcare for themselves, or in some cases to look to the state government for assistance. People historically do not expect the involvement of the federal government. Clearly, the advent of large federal programs such as Medicare and the significant federal share of Medicaid have changed this view. However, these relatively recent developments do not change the fundamental social agreements reflected in the documents that define the role of government in the United States. As shown in this brief discussion, historically there is a fundamental social understanding that the federal government has a limited and voluntary role in healthcare programs.

Given the social compact that exists in this society, healthcare financing can be expected to be primarily a private responsibility with some state involvement for vulnerable groups. The evolution of private health insurance, designed to assist individuals to bear the costs of healthcare services, reflects this societal expectation. Medicare and Medicaid, enacted in 1965, are relatively recent programs that reflect a new role for the federal government in financing the cost of care. The rapidly increasing number of individuals eligible for these programs has created an expanding health-financing role for government and accompanying financial requirements. The new mandates enacted in March 2010 with the passage of the Patient Protection and Affordable Care Act further increase the government's role in healthcare financing and promise to change further the expectations that U.S. citizens have for government involvement in the healthcare system.

The relatively recent emergence of this government role also illustrates the need for expanded fiscal policy and regulatory structures, many of which are not yet fully developed. Notably, some individuals do not agree with the expanded role of government and are challenging the constitutionality of these programs. The historic basis for these

challenges and the importance of the changing social compact between individuals and the government in healthcare areas reflect the basic relationships we have discussed in this section.

1.4. Health or Healthcare—The Social Goal and the Financial Objective

As federal money is increasingly spent on healthcare, many policy makers have started to ask questions regarding the societal goals of these funds and press for accountability. Households have similar but less complex concerns regarding their private spending for healthcare. The household decisions can be made with careful consideration of the household's needs and resource allocations that match its members' preferences. These preferences are somewhat easier to determine in the smaller household unit. Spending tax monies for healthcare introduces a new level of complexity because societal welfare as a whole must be considered. Allocation strategies that focus on the greatest health gain that can be achieved for society may conflict with individual healthcare needs that also require the expenditure of public funds.

A classic dilemma in the allocation of public funds is the conflict between health and healthcare. More than thirty years ago, health economists posed this dilemma based on empirical analysis of the determinants of health in society (Fuchs, 1986, 274–279). If the goal for society is the overall health of its members, healthcare makes only a marginal contribution to health (Fuchs, 1986, 274; Newhouse and Friedlander, 1980). These early studies and many others have shown that strategies such as improving the educational level of society, improving the environment, and economic development in areas of poverty all make larger contributions to societal health than the delivery of healthcare. However, this does not remove the urgent need for individual healthcare when it is required. For most people improvement in education, environmental conditions, and economic development will not affect the conditions that require treatment now.

As government assumes the responsibility to pay for healthcare as well as create societal conditions that support health, financial allocation conflicts are certain to occur. The public health financing choices that ensue have no easy answer. For providers of healthcare, this dilemma has the following practical implications. Funds for healthcare are often found at the expense of reduced spending on education, environmental health, and social welfare. In this situation, healthcare providers still need to control healthcare spending but also deal with the adverse trends in public and personal health due to eroding social supports that create a healthy society. The classic example of the resulting conflict

is the hospitalization of malnourished individuals to ensure that they have access to food. If the state raises money for acute care services by cutting back on social welfare programs such as nutrition support, the providers of care have to address the need for additional health services caused by severe malnourishment in their patients. Clearly from a cost-benefit perspective, it is far cheaper to provide food rather than finance increased hospitalization. However, at the point of serious malnutrition, it is too late to revisit more cost effective solutions. The provider must act to preserve life and does so at much greater expense. As this example illustrates, social allocation strategies that maximize health may do so at the expense of healthcare, while allocation strategies that maximize healthcare likely do so at the expense of long-term societal health. It remains a challenge for healthcare providers and public policy makers to find workable solutions to this dilemma and develop a clearer societal consensus on the goals for public financing in and around the health sector.

In the 2010 federal budget, healthcare consumed a larger share of the federal budget than disease prevention, social welfare, or education programs. This reflects the federal focus on large healthcare delivery programs such as Medicare, Medicaid, and the military healthcare systems. In fact, the only level of government that spends more on education than on health, education being a powerful determinant of long-term societal health, is the local government as can be understood from Figure 1.1. However, the local level represents the smallest share of the total of public monies expended on social programs, and it does not compensate for the lower spending on education seen at the state and federal level.

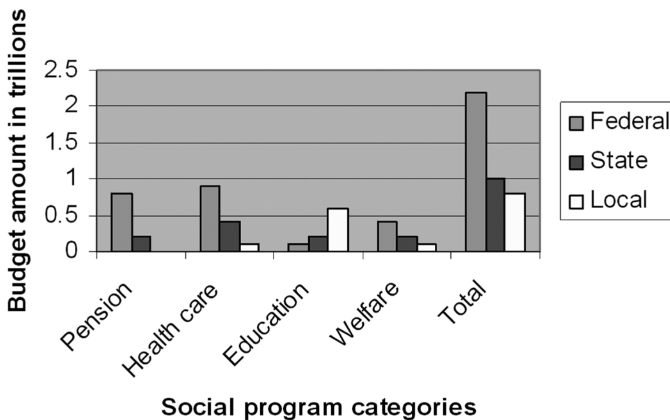

FIGURE 1.1. Public spending estimates 2012. Source: Spending estimates compiled by C. Chantrill.

Clearly, the dominant social spending objective at federal and state levels at the present time is healthcare, with less emphasis on programs that contribute directly to long-term population health such as education and social welfare. The long-term effects of this public allocation strategy pose risks for the overall health of society, which in turn will increase the demand for healthcare services.

1.5. Concept Checkout

Be sure you understand these concepts before you attempt the discussion questions:

- Macro-finance and micro-finance
- Financial economics
- Allocation of power to government and to people
- States' rights
- Health or healthcare as a societal objective

1.6. Discussion Questions

1. What is the main difference between macro-finance and micro-finance concepts? Conduct some independent research and find an example or an application of each concept.
2. Find a recent example of the debate between states and the federal government in regard to healthcare. This could be a court case involving states' rights or an administrative action between a state and the federal government.
3. You have learned that in the United States, power belongs to the people, who choose to allow government to act on their behalf. Find an example of another type of shared power between people and their government and contrast it with that of the United States, with a focus on government healthcare programs.
4. Give an example of and discuss the allocation dilemmas that occur as a result of the government's need to support either health or healthcare. For example, if the government chooses to support healthcare from a limited budget, does it reduce support of the population's overall health? Support your answer with evidence.
5. The Constitution states that the people have a right to change the government if they are not satisfied with it. This implies that people must be generally satisfied with systems instituted by the government on their behalf. How might this implication change your behavior as a provider of healthcare in a government-financed program?

1.7. References

Chantrill, C. Comparative spending at levels of government. (February 2012). Retrieved from www.usgovernmentspending.com/total_spending_2012USrn.

Budget of the U.S. Government, Fiscal Year 2010. Retrieved from www.gpo.gov/fdsys/pkg/BUDGET-2010-SUMMARY/pdf/BUDGET-2010-SUMMARY.pdf.

Fuchs, Victor. 1986. *The Health Economy.* Cambridge, Mass: Harvard University Press.

Leonard, Elizabeth Weeks. 2010. "State Constitutionalism and the Right to Health Care." *University of Pennsylvania Journal of Constitutional Law* 12: 1325–54.

Newhouse, Joseph P., and Friedlander, L. J. 1980. "The Relationship between Medical Resources and Measures of Health: Some Additional Evidence." *Journal of Human Resources* 15 (Spring): 200–218.

CHAPTER 15

Concluding Thoughts on the Healthcare Financial Enterprise

15.1. Chapter Objectives

After you complete this chapter you should be able to:

1. Discuss the relationship between finance and population health.
2. Identify the emerging trends that will affect healthcare financing.
3. Define the role of macro- and micro-financing in responding to emerging trends in healthcare.

15.2. The Relationship Between Finance and Population Health

Population health, one of the goals of the multibillion-dollar healthcare industry, had not been precisely defined in the United States until 2003, when Kindig and Stoddart (2003) suggested the following definition in an article in the *American Journal of Public Health*: "the health outcomes of a group of individuals including the distribution of such outcomes within the group."

The concept of population health has long been discussed in the healthcare industry. Healthcare providers strongly believed that their core business was population health and that providing healthcare services was essential to achieving that goal. Victor Fuchs, a prominent U.S. health economist whose work is discussed in this book, has clearly shown that healthcare makes only a small contribution to the health of the population (Fuchs, 1986). Healthcare providers, on the other hand, cannot imagine how the health of the population could be sustained without their services. The answer to the sometimes perplexing dilem-

ma of population-wide versus personal healthcare lies in the area of system optimization. In the United States, we are far from optimizing our society to engender health. The challenges we face in education, environmental pollution, poverty, substance abuse, and quality of life all impact health. Until we are able to address these issues, the health of the population will inevitably be far less than optimal, and healthcare providers will need to intervene to remedy the damage. Because of upstream deficiencies in our society the need for healthcare services is real and urgent. The important resource allocation issue is whether to continue addressing healthcare needs "downstream," by providing disease-driven health services, or to shift attention to "upstream" determinants of health. If healthcare delivery consumes more and more resources to address illness caused by increasing poverty, poor education, or environmental pollution, this spending is not remedying the underlying societal problems. This paradox is becoming more pressing as healthcare spending continues to consume an ever-increasing share of the gross domestic product of the United States.

The role of macro- and micro-healthcare finance in addressing this paradox is clear. Healthcare providers need to be as efficient and effective as possible to use the least amount of societal resources to deliver personal healthcare services. This book endeavors to provide some guidance to ambulatory care providers, to enable them to use financial resources wisely and to measure outcomes as resources are expended on ambulatory care delivery. One of the recurrent themes of the book is that those who have the technical knowledge to deliver healthcare services need to understand enough about finance at the macro- and micro-level to engage in decisions about the use of resources in their practices and in the wider professional policy sphere. This is a pressing issue because resource allocation strategies to address population health must fund a broader portfolio of activities than healthcare alone. Put simply, if population health is our goal, then resources currently used in healthcare delivery are needed elsewhere. Provider's technical knowledge about population health and its intersection with healthcare needs to be fully engaged when healthcare resource allocation decisions are made either at the system level or at the practice level.

15.3. The Emerging Trends Affecting Healthcare Financing

There are many trends that affect healthcare financing either directly through competition for scarce funding or indirectly by increasing the need for healthcare services. The discussion that follows highlights three of these trends and their impact on healthcare financing. These are by no means the only trends that deserve our attention, but they do

highlight the need for healthcare providers to look beyond healthcare delivery to understand the impact of resource utilization and financing for healthcare.

15.4. Aging Societies and Longevity

Figure 15.1 conveys a very sobering picture if we assume that labor and retirement policies seen in the developed world and increasingly adopted in the developing world do not change. Retirement plans were never expected to support individuals and families for almost half of their adult life, yet if an individual retires at age 65 and lives to 104, he or she might be retired for almost as long as his or her working life. This is especially true since the need for education has lengthened the time young adults need to train before they are qualified to enter the labor force as professionals. Labor economists and policy professionals are facing the perplexing problem of how to fund such lengthy retirements, particularly if illness and disability occur early in the retirement span. The challenge to population health and healthcare professionals is clear and urgent. The burden of chronic disease we see today in the elderly has to be alleviated to provide for lower severity and resource use. Our

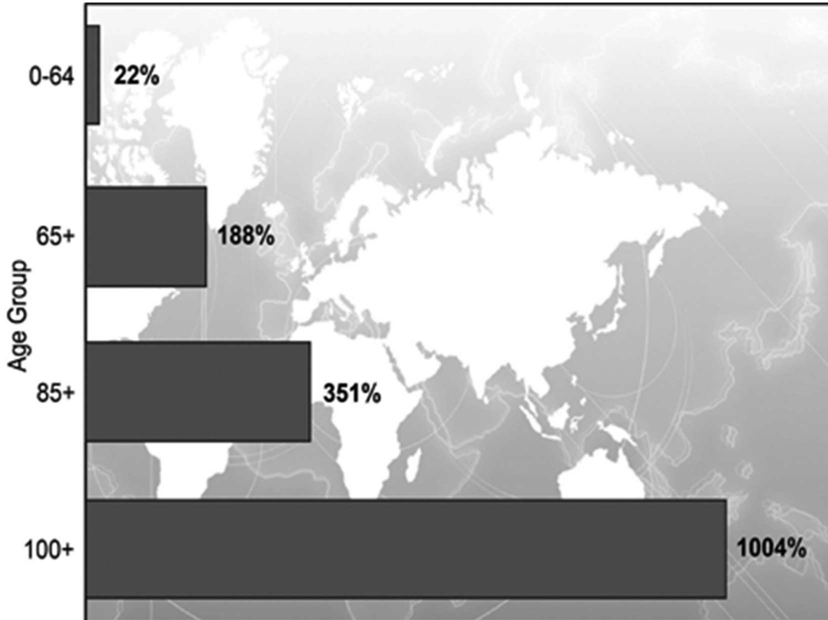

FIGURE 15.1. *Projected Change in the World's Population, by Age Group: 2010–2050. Source: United Nations, World Population Prospects: The 2010 Revision. http://esa.un.org/unpd/wpp.*

current concept of old age as the synonym of infirmity has to change to the concept of a healthy and productive old age. Ideally, chronic diseases that incapacitate the elderly should develop much later and be treated in ways that allow elderly individuals maximum functioning so that they remain in the workforce longer. Any other option is not financially sustainable given the demographic trends developing worldwide.

15.5. Worldwide Health Protection

Disease outbreaks and disasters do not respect national boundaries. The impact of these events may be devastating to nations that are impacted directly while the aftereffects would spread through the global community. For example, regional conflicts between nation-states used to be confined to the nations involved and their near neighbors. Today the refugee populations created during a regional conflict affect global population migration patterns and result in significant social cost worldwide. The effects of these refugee populations on global labor markets, national social-benefit programs, and educational systems are far reaching and economically significant.

The outbreaks of dangerous communicable diseases such as the 2003 SARS epidemic have also had profound and far-reaching impacts on people and economies around the world. These effects were presented in an important 2004 review of the epidemic published by the Institute of Medicine. The review described how effects of the epidemic centered in Asia spread throughout the world and affected the gross domestic product in most major countries both immediately and for as long as ten years (Institute of Medicine, 2004). The authors concluded that there is reasonable evidence to support rapid international intervention to control disease outbreaks in any country because the economic impacts are felt by all.

Global terrorism and its effects are familiar to everyone. In the United States, the estimated cost of the global war on terror is $758 billion through 2008 (Cordesman, 2007). While the United States may have faced the largest share of these costs, there is no doubt that the global community shares both the costs and the effects of this devastating and ongoing war. As with all conflicts, the effects of the war on terror will extend far into the future because the opportunity cost of this conflict is particularly high. The very societies that desperately need additional social spending to improve education, economic opportunity, and welfare support must divert funds to deal with terrorist groups. This distraction of funds ensures that the social conditions that engender unrest and support of terrorists will not be properly addressed.

The impact of disease outbreaks, disasters, and wars increases the

likelihood that the resources needed to respond effectively to protect global health are not available. One of the few options available is to increase the efficiency and effectiveness of existing healthcare services so that resources can be redirected to prevent the disease and improve the welfare of the population.

15.6. The Consumer

The role of the consumer in protecting health and interacting with the healthcare system is in the midst of profound and lasting change. One of the most important of these changes is in the way consumers access and use health information. It is the rare provider who has not seen patients present Internet information that they have compiled about a health concern or care regimen. Some consumers are well informed, some use questionable information unwisely, and some do not use information at all. All of these consumers need to be assisted to a level of health literacy that will benefit them and improve their health status. Unfortunately, little of this assistance is reimbursed by health insurers.

Developing consumer health literacy is critically dependent on basic education, which has suffered from decreased funding as a result of the recession. A 2013 report by the Center on Budget and Policy Priorities shows that at least thirty-four states are providing less funding per pupil than they did before the recession (Leachman and Mai, 2013). Health and education are the main competitors for state funds, and healthcare providers are caught in the middle. As basic educational skills decline, consumers' ability to use information to improve health status is threatened and healthcare spending increases. Effective use of healthcare services depends on a reasonable level of health literacy, which depends on basic education. This circular interdependence cannot be solved without some shift of resources from healthcare to education at the state level.

15.7. The Roles of Macro- and Micro-Financing in Responding to These Trends

The social determinants of health include the global, national, and local environments, education, economic well-being, and social support. All of these factors interact to help consumers and households maintain health. Deficiencies in managing the social determinants raise the risk of poor health and increase the use of healthcare services. This increases healthcare costs and decreases resources available to remedy deficits in other social systems. By now this paradox is familiar to you. The solution partially depends, as we have seen, on providing health-

care effectively and efficiently, using excellent clinical skills in a quality organization that maximizes outcomes and minimizes the resources needed to achieve them.

Understanding the financial system that shapes healthcare delivery depends on knowledge of financial policy as well as organizational financial skill. This book is intended to create a base for continued learning about healthcare finance. Providers with financial skills are needed to support changes that can lead to a healthier society and a better future, not only for patients but also for those who need social services that support optimal health status at the present time, so they will need fewer health services in the future. The goal for our society is increased health and decreased healthcare.

15.8. Discussion Questions

1. You have been asked to make a presentation to the local chamber of commerce on population health. Outline three major points you will make about population health. For each point discuss its actual or potential impact on healthcare finance either at the system or organizational level.
2. Identify one additional development that affects healthcare financing in the United States that you would include in the list of trends. Provide evidence to support the health-financing effect and the likely impact of the trend.
3. Your healthcare practice is located in a county that intends to eliminate all after-school sports and music programs for middle school students, due to lack of funding. Outline the points that you will make in a presentation to the county board of supervisors in reaction to this proposal. Be sure to emphasize the anticipated effects on the health of middle school children and support these anticipated effects with evidence.
4. The rate of premature births to teenage mothers in your state has doubled in the last ten years. Identify one initiative that you would support to decrease this troubling trend and support your proposal with evidence of its impact. Your proposal does not need to be healthcare focused, but it does need to have direct impact on the rate of premature births to teenage mothers. You may address either the numerator (premature births) or the denominator (teenage pregnancies) in your answer.
5. You have been asked to serve on an advisory group to improve population health in your state. The group's first project will be to investigate the determinants of health for people and prioritize five

initiatives most likely to improve health. Select any state you wish and propose a prioritized list with evidence supporting each initiative you recommend.

15.9. References

Cordesman, Anthony H. 2007. "The Uncertain Cost of the Global War on Terror." Center for Strategic and International Studies. http://csis.org/files/media/csis/pubs/080907_thecostsofwar.pdf.

Fuchs, Victor R. 1986. *The Health Economy.* Cambridge, Mass.: Harvard University Press.

Institute of Medicine. 2004. "Learning from SARS: Preparing for the Next Disease Outbreak." Workshop Summary. http://www.iom.edu/Reports/2004/Learning-from-SARS-Preparing-for-the-Next-Disease-Outbreak-Workshop-Summary.aspx

Kindig, David and Greg Stoddard. 2003. "What Is Population Health?" *American Journal of Public Health* 93: 380–83.

Knobler, Stacey, Adel Mahmoud, Stanley Lemon, Alison Mack, Laura Sivitz, and Katherine Oberholtzer, editors. 2004. *Learning from SARS: Preparing for the Next Disease Outbreak, Workshop Summary.* Washington, D.C.: National Academies Press.

Leachman, Michael and Chris Mai. 2013. "Most States Funding Schools Less Than Before the Recession." Center on Budget and Policy Priorities. www.cbpp.org/files/9-12-13sfp.pdf.

Index

accessibility management, 32
accountable care organizations, 77
accounting rate of return, 181
accounts-receivable process, 93
accrual basis, 126
actuarial rating, 29
administrative cost, 33
agents, 13
allocation dilemmas, 44
allocation of public funds, 7
annual conversion fee calculation, 80
asset management, 145
asset management strategy, 148

balance sheet, 124
basic accounting, 127
basic actuarial formula, 29
benefit management, 32
billing practices, 94
break-even analysis, 78
budget, 101
budget categories in a new practice, 106
budget model, 18
business risk, 119
business strategy, 102

capital investment projects, 167
capital structure, 115
cash basis, 127
cash flow statement, 124
change in owners' equity, 130
chart of accounts, 106
clinical efficacy, 61
clinical outcomes, 61
commerce clause, 6
communicable diseases, 196
community rating, 29
concept map, 148
concept paper, 168
consumer health literacy, 197
consumer preference, 103
contextual analytics, 75
cost allocation strategy, 74
cost management, 32
cost traceability, 71
cost allocation systems, 71
cost-benefit, 179
costing, 69

debt capacity, 117
debt/equity ratio, 117
Declaration of Independence,
See social compact
Delphi method, 158
demand-side control, 32
depreciation, 130
diagnosis-related groups, 45
direct-costing systems, 71
dominant social-spending objective, 9
DuPont analysis, 148

effectiveness evaluation, 187
electronic medical records, 35
episode of care, 77
equity capital, 116
expense budget, 104
experience rating, 29

federalist system, 5
Financial Accounting Standards Board, 124
financial operations management, 65
financial ratios, 146
financial risk, 119
fixed costs, 71
flexible budget approach, 107
free-market solutions, 18
fully variable costs, 71
fund accounting, 172

generic drugs, 48
global budgets, 33
global terrorism, 196
goal conflicts, 40

health and healthcare, 7
health insurance, 15
health savings accounts, 17
healthcare objectives, 13
health-system goals, 40
Hobbs, Thomas, *See* social compact household, 11

immunization policy, 43
income and expense statement, 124
indirect cost centers, 73
individual patient welfare, 62
information gap, 13
internal rate of return, 181

liquidity, 145
Locke, John, *See* social compact
long term solvency, 145
longevity, 195
long-term financial planning, 66

mandatory participation, 49
market, 60
market distortions, 60
market incentives, 61
Medicaid, 6
Medicare, 6
Medicare Professional Fee Schedule, 79

Negotiated Indirect Cost Rate Agreement (NICRA), 169
negotiations with payers, 97
net present value, 181
nominal accounts, 106
North American Industry Classification System, 144

opportunity cost, 118
organizational financial plan, 66
out-of-pocket payment, 17

participatory approach, 105
patient encounter, 95
Patient Protection and Affordable Care Act (The), 6
payback, 181
payment cycles, 92
perfect competition, 60
performance-to-benchmarks summary, 187
population health, 193
post-service encounter, 96
practice costs, 70
pre-encounter phase, 94
preventive strategies, 34
primary entry to the market, 63
private insurers, 16
pro forma balance sheet, 157
pro forma financial analysis, 153
pro forma revenue, 154
production efficiency requirement, 117
profitability, 145
project opportunity cost, 187
project proposals, 168
project valuation methods, 181

ratio categories, 144
ratio of cost to charges, 76
regional conflicts, 196

reimbursement analysis, 63
reimbursement environment, 102
relative value units, 75
resource planning information systems, 65
revenue budget, 104
revenue cycle, 92
revenue planning, 91
revenue-management policy, 94
revenue-producing centers, 74
risk, 27
risk premium, 27
risk-based financial model, 18
role of the consumer, 197
Rosseau, Jean-Jacques, *See* social compact
RVU calculation, 75

secondary payer, 93
semi-variable costs, 71
short-term financial planning, 66
sickness tax, 49
social compact, 4
social determinants of health, 34
Social Security Amendments of 1965, 39
socialized medicine, 15
societal goals, 7
sources of funds, 116
start-up costs, 115
step-down method, 73
strategic dilemmas, 47
strategic plan, 101
strategic planning, 41
student loan debt, 118
supply-side control, 32
SWOT, 120

tax deductibility, 117
Tenth Amendment, 5
time in accounts receivable, 96
total financial requirements, 116
two-stage indirect cost allocation, 74

uncompensated care, 49
under-capitalization, 172

variance analysis, 107
variance drivers, 105
volume budget, 104

wage and price controls, 16