# TABLE OF CONTENTS

Preface ........................................................................................................................................................................... v
Contributors ......................................................................................................................................................................... viii

## PART I: INTRODUCTION

**CHAPTER 1:** Introduction to Acute and Ambulatory Care Health-System Pharmacy Practice ..... 1  
Douglas J. Scheckelhoff and Kasey K. Thompson

**CHAPTER 2:** Overview of the History of Hospital Pharmacy in the United States ..................... 19  
William A. Zellmer

**CHAPTER 3:** Key Legal and Regulatory Issues in Health-System Pharmacy Practice .............. 43  
John P. Uselton and Lee B. Murdaugh

## PART II: MANAGING MEDICATION USE

**CHAPTER 4:** Medication Management ................................................................................................. 67  
Kathy A. Chase

**CHAPTER 5:** Clinical Pharmacy ............................................................................................................. 89  
John E. Murphy

**CHAPTER 6:** Medication Safety .............................................................................................................. 107  
David A. Holdford

## PART III: MANAGING MEDICATION DISTRIBUTION

**CHAPTER 7:** Medication Distribution Systems ................................................................................ 129  
Stephen F. Eckel, Jami E. Mann, and Fred M. Eckel

**CHAPTER 8:** Controlled Substances Management ........................................................................ 151  
George J. Dydek and David J. Tomich

## PART IV: USING TECHNOLOGY

**CHAPTER 9:** Informatics ......................................................................................................................... 167  
Bruce W. Chaffee

**CHAPTER 10:** Electronic Data Management: Electronic Health Record Systems and  
Computerized Provider Order Entry Systems ...................................................................................... 195  
Asli Ozdas Weitkamp, Scott D. Nelson, Shane Stenner, and S. Trent Rosenbloom

**CHAPTER 11:** Automation in Practice ................................................................................................. 213  
Brad Ludwig and Jack Temple

## PART V: FINANCIAL MANAGEMENT

**CHAPTER 12:** Purchasing and Inventory Control ............................................................................. 239  
Jerrod Milton

**CHAPTER 13:** Basics of Financial Management and Cost Control ............................................. 269  
Andrew L. Wilson

**CHAPTER 14:** Providing Sustainable Pharmacy Services in Ambulatory Care ..................... 291  
David A. Holdford
# TABLE OF CONTENTS

## PART VI: STERILE PRODUCT PREPARATION AND ADMINISTRATION

**CHAPTER 15:** Sterile Preparations and Admixture Programs ................................................................. 311  
   Ryan A. Forrey and Philip J. Schneider

**CHAPTER 16:** Parenteral Therapy ........................................................................................................... 335  
   Julie A. Patterson and David A. Holdford

## PART VII: MANAGING PEOPLE

**CHAPTER 17:** Leadership and Management.......................................................................................... 359  
   David A. Holdford

**CHAPTER 18:** Recruiting, Selecting, and Managing Pharmacy Personnel ............................................. 381  
   David A. Holdford and Emily C. Prabhu

## PART VIII: CAREERS IN HEALTH-SYSTEM PHARMACY PRACTICE

**CHAPTER 19:** Preparing for Careers in Hospitals and Health Systems .................................................. 405  
   Thomas P. Reinders and David A. Holdford

**CHAPTER 20:** Career Options for Technicians in Hospitals and Health Systems ................................. 423  
   Jennifer Phillips and Carrie A. Sincak

Index .......................................................................................................................................................... 435
When I was a child living in Mount Vernon, Ohio, I visited my father at his workplace in the pharmacy of Mercy Hospital, a small Catholic hospital serving the rural community. My dad, Arthur A. Holdford, RPh, was the director of pharmacy services. In fact, he was the only pharmacist employed by Mercy Hospital at the time. Large pharmacy staffs were not common when he first took the job at the hospital. Over time, he was able to hire employees to support the expansion of pharmacy services.

The hospital where my father worked was very different from today’s hospitals. Back then, there were no computers, no Internet, and no automated dispensing cabinets. Handling, storage, and administration of sterile products and other medicines were primitive compared to today. Nurses prepared intravenous drugs on the floors using subpar aseptic technique. Oral medications were typically sent in bulk bottles to nursing units to be administered, with little pharmacy oversight or input. Medication-use systems were neither very safe, nor were they really systems.

Clinical pharmacy, as we now know it, was in its infancy back then. Clinical pharmacists were rarely seen in hospitals. Today’s most commonly used drugs had not yet been invented. Major diseases, including AIDS, were not known either.

The hospital where my father worked was not part of an integrated health system, so it did not coordinate its care with a network of outpatient clinics, physicians’ offices, pharmacy benefits management, long-term care facilities, home health agencies, and the like. My father worked in a hospital, not a health system.

Medicare and Medicaid were just in their infancy at that time. Pharmacy benefits managers and many other forms of managed care were virtually nonexistent. Pharmacists were not as well paid as today’s pharmacists. Pharmacist training was also different. Pharmacists needed fewer years of schooling, and their education revolved around the product versus the patient. In short, a lot has changed since my father’s days.

Individuals entering the pharmacy profession today will see some truly amazing changes in healthcare and pharmacy practice during their career. It is impossible to accurately predict the exact nature of those changes, just as it would have been impossible for my father to imagine the changes that would occur over his lifetime. The only certainty is that change will continue, and pharmacists will be a part of it.

Origin of this Text
The first edition of this text, Introduction to Hospital and Health-System Pharmacy Practice, originated from another, Handbook of Institutional Pharmacy Practice. The Handbook, first published in 1979 by Drs. Thomas Brown and Mickey Smith, went through four editions before sparking the origin of this book.

Introduction to Hospital and Health-System Pharmacy Practice covered many of the same topics and concepts as the original Handbook, but it was written for a new audience—pharmacy students, educators, technicians, and new pharmacy graduates. Content and pedagogy were developed to focus on the needs of these audiences. The first edition offered learning tools (e.g., review questions, discussion questions, additional readings) to assist readers in building on the text’s basic terminology and concepts.

This second edition evolved from the first edition with a number of significant changes. The first and most visible change is the new title, Introduction to Acute & Ambulatory Care Pharmacy Practice. This new title explicitly acknowledges the growing importance of ambulatory care practice in health-system settings and is line with the direction of ASHP.
INTRODUCTION TO ACUTE AND AMBULATORY CARE PHARMACY PRACTICE

In addition to the new title, the second edition has two new chapters. The first, Providing Sustainable Pharmacy Services in Ambulatory Care, discusses how to make ambulatory pharmacy services financially sustainable by using new, innovative business models. The second new chapter, Career Options for Technicians in Hospitals and Health Systems, explores the evolving roles of pharmacy technicians and discusses career and training opportunities in acute and ambulatory settings. All of the remaining chapters have been updated with new content. Of note are the following:

- A discussion about the Affordable Care Act in Chapter 1: Introduction to Acute and Ambulatory Care Health-System Pharmacy Practice
- Further analysis of the history of institutional pharmacy in Chapter 2: Overview of the History of Hospital Pharmacy in the United States
- An explanation of Lean Management practices in Chapter 6: Medication Safety
- Introduction of the topic of employee engagement in Chapter 18: Recruiting, Selecting, and Managing Pharmacy Personnel
- An extensive update of Chapter 19: Preparing for Careers in Hospitals and Health Systems

Approach and Organization

This text presents an overview of essential terms, concepts, and processes in acute and ambulatory care pharmacy practice in a concise, practical, and understandable way. Content comes from recognized topic experts. Emphasis is on explaining, developing comprehension, and encouraging application.

The book consists of 20 chapters divided into eight parts. Part I, Introduction, answers the question, “What Is Health-System Pharmacy Practice?” It provides an overview, describes its history, and discusses key legal and regulatory issues. Part II, Managing Medication Use, describes how the medication-use process is controlled through formularies, clinical pharmacy practice, and medication safety practices. Part III, Managing Medication Distribution, describes systems for managing the distribution of medications (including controlled substances) throughout health systems. Part IV, Using Technology, discusses the role of automation, technology, and information systems in health systems. Part V, Financial Management, reviews key management responsibilities of the pharmacy department including revenue generation, inventory control, budgeting, and cost control. Part VI, Sterile Product Preparation and Administration, discusses key systems, practices, and terms in preparing and administering sterile products. Part VII, Managing People, addresses leadership and human resources management in health systems. Finally, Part VIII, Careers in Health-System Pharmacy Practice, discusses different training options for careers in health systems.

Prior knowledge of health-system practice is not necessary to use this text, because it is written in an easy-to-read style and provides definitions for unfamiliar vocabulary. Some of the major highlights of this book include:

- Learning objectives for each chapter
- Key terms highlighted and defined within chapters
- Key points highlighted and then explained by answering “so what?”
- Graphics and visual aids used throughout to illustrate key concepts
- Review questions provided at the end of each chapter for self-assessment
- Discussion questions provided in each chapter to initiate dialogue and debate
Intended Readers
This book is written for anyone interested in health-system pharmacy practice, especially students in PharmD and pharmacy technician programs. This book provides a foundation for introductory and advanced pharmacy practice experiences (APPEs) and on-the-job training in hospitals and health systems. Mastery of the book’s terms and concepts will be particularly useful for students who plan to seek residencies.

The book can also be useful for students who plan to practice in community settings by helping them understand how health systems work. Not all community pharmacists understand health-system practice, although a general understanding of those systems can be valuable when interacting with pharmacists in them. Interactions often occur as patients move in and out of hospitals and other settings. Greater contact and understanding will also be needed across practice settings if integrated therapeutic interventions such as medication therapy management and specialty medicine are going to succeed in achieving positive patient outcomes.

Practicing pharmacists who read this book can gain insight into health-system practice. Non–health-system pharmacists working in community settings or other jobs will learn about the various financial, clinical, technological, and distributional systems in healthcare institutions. This can be especially useful for individuals seeking new career opportunities.

For Educators
This book can be used as the core text around which an elective or required course in health-system pharmacy practice can be built. It can also serve as a text for the integration of health-system pharmacy across the curriculum.

For a standalone elective or required course, educators can build learning experiences around individual chapters. The chapters can form the backbone of the course. Chapters can be supplemented with presentations by practitioners, classroom assignments, and active learning projects. A textbook would also help guide the presentations of different faculty involved in team-taught courses. For instance, Part I, Introduction, can be used to provide an overview of health systems and pharmacy practice within them. Faculty and guest speakers can describe common types of health-system settings and the types of patients treated in each as well as the pharmacist’s roles and models of practice, the history of hospital pharmacy, and the various accreditation, regulation, practice standards, and policies and procedures influencing practice. Clarification of concepts within the related chapters can occur, and problem-based learning activities can be used to apply and synthesize ideas covered in the book and class.

Use of the text could also occur across the curriculum as part of an integrated, multidisciplinary education. This could be accomplished by mapping health-system pharmacy topics across curriculum, identifying the desired learning objectives for various courses, and matching book chapters to the learning objectives. For instance, chapters from the Managing Medication Use and Managing Medication Distribution sections of the book could be assigned as part of hospital introductory pharmacy practice experiences (IPPEs). Part VI, Sterile Product Preparation and Administration, could accompany laboratory classes that teach compounding of intravenous solutions. Financial management could be part of a pharmacy management course, while careers in health-system pharmacy practice could be part of career training. Students who complete all of the text’s learning objectives would have much richer APPEs.

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