





LINDA WHITENTON MARTY WALKER

FREE SAMPLE CHAPTER

SHARE WITH OTHERS

in



MACE: Medication Aide Certification Exam

Linda Whitenton Marty Walker

MACE Exam Cram: Medication Aide Certification Exam

Copyright $\ensuremath{\mathbb{C}}$ 2013 by Pearson Education, Inc.

All rights reserved. No part of this book shall be reproduced, stored in a retrieval system, or transmitted by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission from the publisher. No patent liability is assumed with respect to the use of the information contained herein. Although every precaution has been taken in the preparation of this book, the publisher and author assume no responsibility for errors or omissions. Nor is any liability assumed for damages resulting from the use of the information contained herein.

ISBN-13: 978-0-7897-4960-4 ISBN-10: 0-7897-4960-2

Library of Congress Cataloging-in-Publication Data is on file.

Printed in the United States of America

First Printing: January 2013

Trademarks

All terms mentioned in this book that are known to be trademarks or service marks have been appropriately capitalized. Pearson IT Certification cannot attest to the accuracy of this information. Use of a term in this book should not be regarded as affecting the validity of any trademark or service mark.

Warning and Disclaimer

Every effort has been made to make this book as complete and as accurate as possible, but no warranty or fitness is implied. The information provided is on an "as is" basis. The authors and the publisher shall have neither liability nor responsibility to any person or entity with respect to any loss or damages arising from the information contained in this book or from the use of the CD or programs accompanying it.

Bulk Sales

Pearson IT Certification offers excellent discounts on this book when ordered in quantity for bulk purchases or special sales. For more information, please contact

U.S. Corporate and Government Sales 1-800-382-3419 corpsales@pearsontechgroup.com

For sales outside of the U.S., please contact

International Sales international@pearsoned.com

Associate Publisher

Dave Dusthimer

Acquisitions Editor Betsy Brown

Development Editor Eleanor C. Bru

Managing Editor Sandra Schroeder

Project Editor Mandie Frank

Copy Editor Keith Cline

Indexer Ken Johnson

Proofreader Sarah Kearns

Technical Editors Steve Picray Pat Reinhart

Publishing Coordinator Vanessa Evans

Media Producer Tony Palleschi

Book Designer Alan Clements

Compositor Trina Wurst

Contents at a Glance

	Introduction	1
Part I: Orientatio	on and Basic Concepts	
CHAPTER 1:	What You Need to Know to Prepare for the Medication Aide Certification Examination (MACE)	13
Part II: Authorize	ed Duties	
CHAPTER 2:	The Roles and Responsibilities of the Medication Aide	31
Part III: Medicat	ion Administration, Observation, and Reporting	
CHAPTER 3:	Pharmacology Review	51
CHAPTER 4:	Drug Orders, Forms, Measurements, and Handling	61
Part IV: Adminis	tering Medications	
CHAPTER 5:	Administering Medication Safely	77
CHAPTER 6:	Medication Administration Procedures and Techniques	93
Part V: Medicati	on Effects on Body Systems: Implications for Care	
CHAPTER 7:	Medications Affecting the Cardiovascular System	117
CHAPTER 8:	Medications Affecting the Respiratory System	143
CHAPTER 9:	Medications Affecting the Digestive System	157
CHAPTER 10:	Antibiotics and Other Anti-Infective Agents	175
CHAPTER 11:	Medications Affecting the Urinary System	193
CHAPTER 12:	Medications Affecting the Musculoskeletal System	209
CHAPTER 13:	Medications Affecting the Central Nervous System	223
CHAPTER 14:	Medications Affecting the Endocrine System	251
CHAPTER 15:	Medications for the Eye and Ear	263
CHAPTER 16:	Medications Used in the Treatment of Cancer	275
CHAPTER 17:	Medications Used to Treat Mental Health Disorders	287

Part VI: Practice Exams

Practice Exam I	301
Practice Exam I Rationales	311
Practice Exam II	317
Practice Exam II Rationales	327

Part VII: Appendixes

APPENDIX A:	Medication Administration Skills Performance Checklist	333
APPENDIX B:	Arithmetic Review: Weights and Measures	337
APPENDIX C:	Herbals, Vitamins, and Minerals	341
APPENDIX D:	To Err is Human: Building a Safer Health System	343
	Glossary	351
	Index	375

Table of Contents

Introduction	. 1
Notes	. 1
NCSBN: Test Plan / Content Outline	. 1
Sample Questions	. 3
Correct Answers	. 4
Sample Notes from VA: Pretest Items	. 4
Sample Examination	. 5
Examination Content Outline and Reference Material	. 5
Content Outline.	. 5
Applying for Registration and Examination	. 9
Exam Cost	10
How to Use This Book	10
Contact the Authors	11

Part I: Orientation and Basic Concepts

Chapter 1:

What You Need to Know to Prepare for the Medication Aide Certification Examination (MACE)	13
Testing Strategies	14
Answering the Questions	14
Self-Assessment	16
Exam-Prep Questions	17
Rationales	27
-	

Part II: Authorized Duties

napter 2: ne Roles and Responsibilities of the Medication Aide	I
Your Roles and Responsibilities)
Roles and Responsibilities of Other Nursing Team Members	;
The Role of UAPs	;
Exclusions to the MA-C Role (Legal Limitations)	ī

Accepting Delegated Duties
Medication Administration Policies
Medical Error Prevention
Effective Communication Regarding Medication Administration
Verbal Communication
Written Communication
Specific Ethical and Legal Issues
Residents' Rights
Ethics
Exam-Prep Questions
Rationales

Part III: Medication Administration, Observation, and Reporting

Chapter 3:

Pharmacology Review	51
Drug Classifications and Drug Names	52
Drug Actions and Implications	53
Drug Metabolism	54
Factors Influencing Drug Effectiveness	54
Drug Interactions	55
Drug Side Effects	55
Selected Drug Information Sources	57
Exam-Prep Questions	58
Rationales	60
Chapter 4: Drug Orders, Forms, Measurements, and Handling	
Drug Orders.	
Common Medical Terminology, Dosages, and Abbreviations	
Drug Labels	65
Drug Packaging	66
Drug Storage and Disposal	66
Drug Measurements	67
Drug Forms	68
Solids and Semisolids	68
Liquids and Semiliquids	69

Routes of Drug Administration	70
Exam-Prep Questions	73
Rationales	75

Part IV: Administering Medications

Chapter 5:

dministering Medication Safely	17
Introduction	78
Set Up for Medication Administration	78
Safety Checks When Administering Medications	32
The Six Rights of Medication Administration	33
Causes and Reporting of Medication Errors	37
Exam-Prep Questions	39
Rationales)1

Chapter 6:

Medication Administration Procedures and Techniques
Pre-Administration Procedures
Identifying Client
Hand Washing
Gloving
Explaining the Medication Procedure
Positioning the Client
Giving Medications Through Various Routes
Oral
Nasal Instillation
Inhalation
Opthalmic/Ocular (Eye)
Otic (Ear)
Topical
Vaginal
Rectal
Special Medication Administration Techniques
Aged Clients
Clients with Physical Limitations
Clients Refusing to Take Medications
Noncommunicative Clients

Post-Administration Procedures
Client Comfort
Client Environment
Right Documentation
Exam-Prep Questions
Rationales

Part V: Medication Effects on Body Systems: Implications for Care

Chapter 7: Medications Affect	ting the Cardiovascular System	117
	lar Structure and Function	
	n to Cardiovascular Disorders	
	Used to Treat Hyperlipidemia	
U	Used to Treat Hypertension	
e	Used for Angina	
U	Used for Arrhythmias	
e	Used for Congestive Heart Failure	
e	Cardiovascular Medications	
Exam-Prep	Questions	139
-	-	
Chapter 8: Medications Affect	ting the Respiratory System	143
Structure an	nd Function of the Respiratory System	144
The U	Jpper Respiratory Tract	150
Lower	r Respiratory Tract	152
Exam-Prep	Questions	155
Rationales		156
Chapter 9: Medications Affect	ting the Digestive System	157
Structure an	nd Function of the Digestive System	158
	f the Gastrointestinal Tract	
Antaci	ids	160
Histan	nine-2 Antagonists	161
Prosta	glandins	163
Protor	n Pump Inhibitors	163

Antispasmodics
Antiemetics
Antidiarrheals
Laxatives
Exam-Prep Questions
Rationales
Chapter 10:
Antibiotics and Other Anti-Infective Agents
The Infection Process
Common Infections
Antibiotics and Other Anti-Infective Agents
Exam-Prep Questions
Rationales
Chapter 11:
Medications Affecting the Urinary System
Urinary Structure and Function
Disorders of the Urinary System
Urinary Tract Infections
Dysuria
Overactive Bladder (OAB)
Urinary Retention
Exam-Prep Questions
Rationales
Chapter 12:
Medications Affecting the Musculoskeletal System
Structure and Function of the Musculoskeletal System
Disorders of the Musculoskeletal System
Muscle Spasms
Muscle Spasticity
Osteoporosis
Gout
Exam-Prep Questions
Rationales

	pter 13: dications Affecting the Central Nervous System	23
	Structure and Function of the Nervous System	24
	The Central Nervous System	
	The Peripheral Nervous System	
	Drugs That Affect the Autonomic Nervous System	
	Adrenergic Agents	27
	Alpha- and Beta-Adrenergic Blocking Agents	28
	Cholinergic Agents	30
	Anticholinergic Agents	31
	Sedative-Hypnotic Drugs	32
	Benzodiazepines	33
	Non-Barbiturate, Non-Benzodiazepine Sedative-Hypnotic Agents	34
	Analgesics	35
	Drugs Used for Alzheimer's Disease	14
	Drugs Used for Parkinson's Disease	1 5
	Exam-Prep Questions	18
	Rationales	50
	p ter 14: dications Affecting the Endocrine System	51
	Structure and Function of the Endocrine System	52
	Medications Used to Treat Endocrine Disorders	52
	Exam-Prep Questions	59
	Rationales	51
	pter 15: diactions for the Eve and For	20
me	dications for the Eye and Ear	
	The Eye	
	Structure and Function of the Eye	
	Disorders of the Eye	
	The Ear	
	Structure and Function	
	Disorders of the Ear	
	Exam-Prep Questions	
	Rationales	13

Chapter 16: Medications Used in the Treatment of Cancer
Introduction to Cancer
Drug Therapy for Cancer
Antineoplastic Antibiotics
Exam-Prep Questions
Rationale
Chapter 17: Medications Used to Treat Mental Health Disorders
The Nervous System and Emotions
Common Mental Health Disorders
Exam-Prep Questions
Rationales
Part VI: Practice Exams
Practice Exam I
Practice Exam I Rationales
Answers at a Glance
Answer Rationales
Practice Exam II
Practice Exam II Rationales
Answers at a Glance
Answer Rationales
Part VII: Appendixes
Appendix A: Medication Administration Skills Performance Checklist
Administering Oral Medication
Appendix B: Arithmetic Review: Weights and Measures
Decimal Fractions
Changing Common Fractions to Decimal Fractions

xii

MACE Exam Cram: Medication Aide Certification Exam

Conversions in the Metric System	38
Multiplying Decimals by Decimals	39
Calculating Doses	39
Dose on Hand	39
p endix C: erbals, Vitamins, and Minerals	41
Herbals	41
Vitamins and Minerals	42
p endix D: Err is Human: Building a Safer Health System	43
ossary	51
dex	75

About the Authors

Linda Whitenton is the co-author of the popular CNA Exam Cram (2009). Her 42-year nursing career began in 1967 as a Nursing Assistant in Paducah, Kentucky. Following her graduation from Murray State University's BSN program in 1970, she practiced in mental health, pediatrics, and medical-surgical nursing. Teaching Nursing Assistants, emergency medical technicians, and unit secretaries in her role as a hospital in-service education director in the early 1970s in a Mississippi hospital cemented her love for teaching. She accepted her first teaching position at Northeast Mississippi Community College in 1975. While at NEMCC, she taught fundamentals, medical-surgical nursing, management, and psychiatric nursing and served as assistant director and director of the program for seven years. In 1977, Linda earned her Master's of Science degree in nursing at the Mississippi University for Women, which also afforded her the Family Nurse Clinician credential. In 1987, she relocated to Florida and accepted a position as associate director of nursing for the associate degree nursing program at St. Petersburg College in St. Petersburg. While at SPC, she designed curriculum for more than 1,000 employees of the Pinellas County EMS, taught LPN transitional students at night, and practiced part-time at the Bayfront Medical Center Trauma Center. During her 28 years of teaching, Linda continued to practice in emergency nursing, urological nursing, and as a nurse clinician. Linda also earned 30 hours of post-Master's work in anthropology and educational psychology. In 2004, she returned to clinical practice as the director of nursing/vice president for a Mississippi community hospital. While there, she received a national award for outstanding nursing leadership. She returned to Florida in 2000 to design and direct a new AD nursing program for Northwest Florida State College, formerly Okaloosa-Walton College, the first of five health programs now in place at the college. Linda served as associate dean of health technology, adding administrative oversight for the health programs she launched during her nine-year tenure at NWFSC. In 2008, Linda retired from full-time tenure at the college, receiving the honor of emeritus associate dean and director of nursing. Linda currently serves as adjunct instructor at NWFSC, teaching medical terminology to health career majors. She is a Certified Nurse Educator, CNE, and a member of Sigma Theta Tau International Nursing Society.

Marty Walker has practiced nursing for the past 30 years at the vocational nursing level as a registered nurse, and at the Master's level. Marty began her nursing career as a licensed practical nurse, receiving her vocational education certificate from Atlantic Vocational School in Pompano Beach, Florida, in 1979. In 1982, she earned an Associate degree in nursing from Broward Community College in Davie, Florida. She worked for more than 10 years as a staff nurse in telemetry, critical care, and emergency nursing before completing a Bachelor of Science degree in nursing from Florida International University in Miami, Florida. In 1995, she began teaching medical-surgical nursing at Ivy Tech State College in Sellersburg, Indiana. After relocating to Miami, Marty accepted a position as Nurse Clinical Educator for three cardiac units at Jackson Memorial Hospital. She attained a Master's in Nursing Science in Nursing Education from Barry University in Miami Shores, Florida, in 2003. Marty's love of teaching led her to Mercy Hospital's School of Practical Nursing and to adjunct teaching positions at Florida International University and Barry University. While in Miami, Marty added pediatrics to her teaching expertise. She taught medical-surgical nursing for a short time at Pensacola Junior College in Pensacola, Florida, before accepting a full-time associate professor position at Northwest Florida State College, where she currently teaches in the RN-BSN program and in the Associate Degree Nursing Program. Marty's expertise also includes test construction. She has led the faculty at NWF State College in improving the success rates of students enrolled in the program as well as their success on the NCLEX-RN. Marty's versatility extends to her clinical practice, as she has recently completed the Family Nurse Practitioner certificate program at the University of South Alabama in Mobile, Alabama. Marty volunteers as a clinic nurse and as the director of nursing services for the Crossroads Medical Center Clinic in Valparaiso, Florida.

About the Technical Editors

Steven M. Picray is a medical-surgical Registered Nurse in a major metropolitan hospital. He has also been a Baptist pastor and a computer programmer. He has a Bachelor and a Master's degrees in theology and a Bachelor's degree in nursing. He is currently working on his Master's degree in nursing in preparation for a career as a nurse practitioner.

Pat Reinhart has been a nurse for 45 years, and her experience has been diverse. It includes clinic nursing, obstetrics, director of nursing in a skilled facility, emergency department, public health, and home care.

For the past 25 years, she has been a nursing faculty member at Minneapolis Community and Technical College (MCTC). She has taught in the PN program in a variety of areas, including psychosocial nursing, microbiology, and medical-surgical nursing. Currently, she is the coordinator of the Nursing Assistant Home Health Aide program, teaches the Health Care Core Curriculum, and teaches the Acute Care Nursing Assistant course for hospital-based Nursing Assistants, which she helped to develop. She develops healthcare courses with the Continuing Education and Customized Training Division of MCTC and is their instructor for the Trained Medication Assistant Program for Unlicensed Personnel and Train the Trainer with the Minnesota Department of Health for Registered Nurses who desire to either teach the MDH-approved Nursing Assistant Program or to begin the approved program in Minnesota.

Dedication

Linda: This review is dedicated to my Aunt Lois LeVin, who inspired me to become a nurse. This review is further dedicated to the certified Nurse Aides who are committed to providing the safest and best care to clients through higher education and certification.

Marty: This review is dedicated to my mother, Betty Herbert, who has inspired me to be the best at whatever I do. Thanks, Mom, for all your love and encouragement in life.

Acknowledgments

We want to acknowledge our technical assistant, Kathy McNair, for her dedication, diligence, and commitment to this project and for her continued friendship and encouragement.

We also thank our loving families for always being there for us.

We Want to Hear from You!

As the reader of this book, *you* are our most important critic and commentator. We value your opinion and want to know what we're doing right, what we could do better, what areas you'd like to see us publish in, and any other words of wisdom you're willing to pass our way.

We welcome your comments. You can email or write to let us know what you did or didn't like about this book—as well as what we can do to make our books better.

Please note that we cannot help you with technical problems related to the topic of this book.

When you write, please be sure to include this book's title and author as well as your name and email address. We will carefully review your comments and share them with the author and editors who worked on the book.

Email:	feedback@pearsonitcertification.com
Mail:	Pearson IT Certification ATTN: Reader Feedback 800 East 96th Street Indianapolis, IN 46240 USA

Reader Services

Visit our website and register this book at pearsonitcertification/register for convenient access to any updates, downloads, or errata that might be available for this book.

Introduction

Welcome to Medication Aide Certification (MACE) Exam Cram!

This book helps you prepare to take and pass the Medication Aide Certification Examination (MACE), hereafter referred to as the exam. This introduction describes the exam in general, how to apply for it, and the exam test-taking process. Let's get started!

Exam Cram is a standalone study guide, but you can use it with other instructional textbooks and materials, including CDs/DVDs and computerized learning programs. The purpose of this book is not to reteach classroom content but to highlight important content you are likely to find included on the exam.

We help you recall critical information needed to pass the certification examination. Using a concise and simplified approach, we focus on key principles and procedures for a safe and ethical practice as a Medication Assistant (hereafter called Medication Aide) and your role as a health team member. We review communication skills, values and ethics, health and safety, body systems and common diseases/conditions affected by drug therapy, and the basic components of medication administration (including dosage, preparation, administering drugs, documentation of drug therapy, and prevention of medication errors). Throughout this text, we focus on the basic competencies of the Medication Aide—that is, the knowledge, skills, and attitudes necessary for safe Medication Aide practice, which is the basic premise of Medication Aide certification.

Notes

NCSBN: Test Plan / Content Outline

I. Authorized Duties (10% of test content)

- A. Roles, responsibilities, legal aspects, and limitations of Medication Aides
 - 1. Authorized duties for a medication aide, including
 - **a.** Permitted routes of medication administration: Oral, eye, ear, nasal, inhalant, transdermal, topical, vaginal, and rectal
 - **b.** Prohibited routes: Subcutaneous, intradermal, intramuscular, and intravascular injections and medications via tubes and ostomies
 - 2. Medication Aide's responsibility for reporting to a nurse
 - 3. How to address conflict with role and authorized duty issues

Medication Aide Certification (MACE) Exam Cram

- 4. Medication Aide's role under state regulations
 - a. Completed an NC Board of Nursing-approved course
 - **b.** Completed a state-approved competency examination
 - c. Listed on NC Medication Aide Registry

II. Medication Administration (80% of test content)

- A. Administering and charting medications
 - 1. Medication packaging
 - 2. Preparation and administration of medications by approved routes
 - 3. Special circumstances for administering medications
 - a. Liquid medication
 - **b.** Scoring medications
 - c. Crushing medications
 - **d**. Swallowing challenges
 - e. Administering medications to children
 - f. Allergies
 - 4. Correct medication administration procedure (6 rights)
 - a. Right client
 - **b**. Right medication
 - c. Right dose
 - d. Right route
 - e. Right time
 - f. Right documentation
 - **5.** Client medication rights, including the right to confidentiality and the right to know and refuse medications
 - 6. Client safety and error prevention
 - 7. Appropriate communication with supervising licensed nurse
 - 8. Infection control procedures, including standard precautions
 - 9. Use of Medication Administration Record (MAR) to
 - a. Administer medications
 - **b**. Document medication administration

- **10.** Medication errors and reporting techniques
- 11. Auditing and inventory systems
 - **a**. Controlled substance counts
 - **b.** Disposition of unused or contaminated medications

III. Medication Concepts (10% of test content)

- A. Concepts in administration of medications
 - 1. Commonly used abbreviations
 - 2. Terminology and definitions

Sample Questions

The following questions are the kinds of questions that you will find on the exam. Check your answers to these questions in the following section.

- 1. Information that should be located on the MAR includes what?
 - O A. Medication dose
 - O B. Client's next of kin
 - O C. Medication side effects
 - O **D.** Agency medication administration policies
- 2. When should a Medication Aide report a medication error to the supervisor?
 - O A. Before the next medication is due
 - **B.** During the end-of-shift report
 - **O C.** As soon as the error occurs
 - **D.** After calling the physician
- 3. One teaspoon of an elixir is equal to what?
 - O A. 10 milliliters
 - O B. 5 milliliters
 - O C. 1 ounce
 - O **D.** 1 pint

Medication Aide Certification (MACE) Exam Cram

- 4. A symptom of anaphylaxis, a life-threatening allergic reaction, is which of the following?
 - O A. High blood pressure
 - O B. Quiet breathing
 - O C. Slow heart rate
 - O **D.** Wheezing
- 5. The site selected for applying a transdermal patch should be what?
 - O A. Cold
 - O B. Warm
 - O C. Hairless
 - O **D.** Odor free

Correct Answers

- 1. Correct answer is **A**. The medication dose along with the medications name and route is listed on the MAR along with the patient's identification.
- 2. Correct answer is **C**. As soon as the error occurs, it should be reported to the nurse so that the patient can be assessed and the physician notified.
- 3. Correct answer is **B**. One measured teaspoon equals 5 milliliters.
- 4. Correct answer is **D**. When a patient begins wheezing after receiving a medication, they could be demonstrating an anaphylactic reaction.
- 5. Correct answer is **C**. When applying a topical medication, it is best that the skin is clean, dry, and hairless for the best absorption.

Sample Notes from VA: Pretest Items

In addition to the number of examination items specified in the examination content outlines, a small number (5 to 10) of "pretest" questions may be administered to candidates during the examinations. These questions will not be scored, and the time taken to answer them does not count against examination time. The administration of such unscored experimental questions is an essential step in developing future licensing examinations.

Sample Examination

Examination Content Outline and Reference Material

The examination content outline has been approved by the Virginia Department of Health Professions. This outline reflects the minimum knowledge required by Medication Aide professionals to perform their duties to the public in a competent and responsible manner.

Use the outline as the basis of your study. The outline lists the topics that are on the exam and the number of items for each topic. Do not schedule your exam until you are familiar with all topics in the outline.

Number of questions: 80

Minimum passing score: 70%

Time allowed: 2 hours

Content Outline

- I. Legal and Ethical Issues (8 items)
 - A. Identify legal and ethical issues in medication management
 - B. Identify client rights regarding medication, treatment decisions, and confidentiality
 - **C.** Identify laws and regulations relating to administration of medications in Virginia assisted-living facilities
 - **D**. Identify permitted practices and practices prohibited by Medication Aides in Virginia
 - E. Identify requirement to report client abuse, neglect, or exploitation

II. Preparing for Safe Administration of Medication (12 items)

- A. Explain principles of maintaining aseptic conditions
- B. Recognize emergencies and other health-threatening conditions
- **C.** Explain principles of communicating with the cognitively impaired client
- **D.** Measure vital signs
- E. Explain the use of international time
- F. Identify the five rights of medication administration

Medication Aide Certification (MACE) Exam Cram

III. Introduction to Pharmacology (8 items)

- A. Define key pharmacology terms, medical terminology, and abbreviations
- B. Explain how drugs are classified
- **C**. Identify factors that affect drug action
- **D**. Explain how to facilitate client awareness of the purpose and effects of medication
- E. Demonstrate the use of selected drug information sources
- F. Identify Virginia drug-labeling requirements

IV. Administration of Prepared Instillations and Treatments (16 items)

- A. Identify basic principles of medication administration
- B. Administer or assist with self-administration of oral medication
- **C.** Administer or assist with self-administration of eye drops
- **D.** Administer or assist with self-administration of ear drops
- E. Administer or assist with self-administration of nasal drops and sprays
- F. Administer or assist with self-administration of topical preparations
- **G.** Administer or assist with administration of medicinal solutions by way of compresses and dressings
- H. Administer or assist with self-administration of vaginal products
- I. Administer or assist with self-administration of rectal products
- J. Administer or assist with self-administration of medicinal solutions by way of soaks and sitz baths
- **K**. Assist with the use of oral hygiene products
- L. Administer or assist with self-administration inhalation medications
- M. Administer or assist with self-administration of medications by way of a nebulizer
- N. Administer or assist with self-administration of transdermal patches
- 0. Administer or assist with self-administration of EpiPen injections

V. Documentation (12 items)

- A. Identify three commonly used forms for documentation
- **B.** Demonstrate procedures for receiving and transcribing healthcare provider orders
- **C.** Document medication administration using appropriate forms
- **D**. Document medication errors using appropriate forms

VI. Storage and Disposal of Medication (8 items)

- A. Identify procedures for storing and securing medication
- **B.** Identify procedures to maintain an inventory of medication, including controlled substances
- C. Identify proper procedures for disposal of medications

VII. Special Issues in Medication Administration (8 items)

- A. Identify common concerns of drug use in the elderly
- B. Recognize special considerations for psychotropic drug use
- **C.** Identify procedures for monitoring therapeutic drug levels
- D. Recognize when a drug is a chemical restraint
- E. Define the Beers Criteria of medications for the elderly population
- F. List ways of dealing with medication noncompliance
- G. Identify issues related to over-the-counter medications and herbal preparations

VIII. Insulin Administration (8 items)

- A. Explain basic facts about diabetes mellitus
- B. Identify activities involved in the management of diabetes
- C. List signs and symptoms of hypoglycemia and hyperglycemia
- **D**. Perform fingerstick for blood-glucose monitoring
- E. Administer insulin injections

Each state or jurisdiction contracts with a testing vendor to administer the written exam, which consists of 50 to 100 multiple-choice questions that test your knowledge of accurate and safe drug therapy. A select number of questions, often referred to as experimental questions, are often used for statistical purposes but not scored or counted against the total testing time allotted for the exam. The National Council of State Boards of Nursing (NCSBN) owns the exclusive rights to the exam, known by the NCSBN as the MACE. The following outline identifies the subject matter and percentage of questions related to such on the exam:

I. Authorized Duties (16% = 8 questions)

- A. Building relationships
- B. Delegation

Medication Aide Certification (MACE) Exam Cram

- **C.** Role of MA-C
 - **1**. Permitted duties
 - 2. Restrictions/limitations
- **D.** Specific legal and ethical issues
- **E.** Location and use of resources and references (for example, nurse, pharmacist, physician, package/drug insert, drug reference manuals)

II. Medication Administration, Observation, and Reporting (60% = 30 questions)

- A. Administering and charting medications
 - 1. Medication orders
 - 2. Documentation of medication administration
 - 3. Storage
 - 4. Disposal
- B. Safety and rights of medication administration
- **C.** Routes of administration
- **D**. Factors affecting how the body uses medication
- **E.** Classifications/categories of medications related to body systems (cardiovascular, dermatological, endocrine, and so on) and actions (for example, antimicrobials)
- F. Rights of individuals
- **G.** Causes of medication errors
- H. Reporting of medication errors
- I. Reporting of symptoms and side effects
- J. Reporting any change from client's normal condition

III. Medication Concepts and Measurements (24% = 12 questions)

- A. Medication concepts
 - 1. Terminology and abbreviations
 - 2. Dosage range
 - 3. Actions and implications
 - **4.** Therapeutic effects and side effects (for example, idiosyncratic, paradoxical, antagonist)

- 5. Precautions
- 6. Interactions
- **B.** Forms of medication
 - 1. Liquid
 - 2. Solid and semisolids
- **C.** Measurements

Source: NCSBN, 2011

This text reviews each category listed here, but not necessarily in the same order or using the exact terms as in the test plan. Although all categories are important content, for exam-preparation purposes, allot the most time in your study for section II of this test plan because the majority of the MACE, 60%, addresses that category.

Applying for Registration and Examination

Each state or jurisdiction for which you seek registration has the responsibility for the exam; the test questions reflect each state's approved curriculum and therefore may vary in content. Referred to by each state as its Medication Aide competency evaluation, the exam also meets state laws and regulations.

Expect to take the exam online via an electronic testing program. Follow each vendor's specifications, which most likely will include a specified time in which you must complete the exam. It is important, therefore, that you practice answering questions in this book with testing time limits in mind. (More about time management later.)

The registration and examination process begins with your application to the state agency charged with overseeing health occupations licensing and credentialing. Usually, a second application to each state-contracted vendor is required to arrange for testing. For specific information, contact each agency as soon as you decide on a practice locale and follow their requirements carefully and timely so as not to delay testing and registration. Special testing accommodations may be made according to each state's requirements. Candidate handbooks or other information are helpful guides to your preparation and are often available online. Because this information may change without notice, contact your state agency directly via telephone, fax, or email to verify their current mailing address and any registration updates.

Exam Cost

Contact the relevant state agency in the state in which you want to be registered and follow their specific directions for remitting all registration and testing fees. Again, timeliness and accuracy with fee payments is crucial to avoid testing delays.

How to Use This Book

Organized review is an effective test-preparation strategy. To help you with organization, we have structured *Exam Cram* to include important segments in a logical format:

- ► **Opening hot lists**: Each chapter opens with key terms you must remember to review the content. Hot lists appear before the chapter introduction that previews the review material.
- ► **Topical coverage**: The chapter title guides you to the material within it. Each chapter reviews the subject in a concise, need-to-know format to help you prepare for the exam.

EXAM ALERT

Exam Alert: To bring your attention to a key term, activity, or subject that is likely to appear on the exam, we've furnished you with an Exam Alert icon that looks like this.

NOTE

Note The Notes icon directs you to material/concepts not directly related to the exam itself but important to enhance your knowledge or skill.

TIP

Tip Helpful hints, these, as they help you save time and effort in accomplishing nursing care. Pay particular to these practice aids.

► Exam-prep questions: Remember to practice, practice, practice! You can check your test readiness along the way as we present important review material in each chapter. You can also use the practice questions to validate your recall of the chapter's topic while improving your test-taking and reasoning skills. Rationales for the answers help you learn the *what* and *why* of each correct and incorrect option. Questions placed at the end of each chapter will also help you build confidence as you proceed, validating your knowledge and providing you with additional areas for review before you take the practice examinations.

▶ **Practice exams**: In this book, you'll find two practice exams written in the expected testing format. These exams allow you to take a practice test for an extended period of time to increase your confidence and help condition you more realistically for testing conditions at the actual testing site. Although it is important that you not rush through the questions, keep in mind that you should be able to allot a minute to a minute and a half for each question.

Answers and rationales appear for these practice sessions. To score the practice exams (that is, the percent you answered correctly), subtract the number of questions you missed from the total number of questions, and then divide the total number of correct responses by the total number of questions. Scoring your practice test will give you a good idea about your readiness. You need to score at least 70% to feel confident about your potential success on the "real" exam.

- ► **Glossary**: At the back of this book, you will find terms that are essential to learning the content in this text. Recall of these key terms is a good review exercise as you prepare for the exam.
- Cram Sheet: For last-minute just-in-time study and review, we've attached a tearout card called the Cram Sheet. This handy pocket tool provides concise bulleted information, facts, and tips for the exam.

Contact the Authors

We are most interested in your success and want you to pass the exam on your first attempt. If, after reviewing this text, you want to contact us, please use the following addresses: Linda Whitenton (whitsend746@yahoo.com) or Marty Walker (Marty916@hotmail.com).

This page intentionally left blank

CHAPTER TWO

The Roles and Responsibilities of the Medication Aide

Medical Term Hot List

🖌 Abus	se
--------	----

- ✓ Accountability
- ✓ Assault
- ✓ Battery
- ✓ Beneficence
- ✓ Code of ethics
- ✓ Competence
- ✓ Conscientiousness
- ✓ Delegated duties
- ✓ Ethics
- ✓ Euthanasia
- ✓ False imprisonment
- ✓ Incident report

- 🗸 Libel
- ✓ Licensed Practice Nurse
- Medical Term Hot List
- ✓ Medically liable
- ✓ Medication Administration Record
- Medication Assistant-Certified
- ✓ National Council of State Boards of Nursing
- ✓ Negligence
- ✓ Nonmaleficence
- ✓ Nurse Practice Act
- ✓ Nursing process

- ✓ Position description
- ✓ Practice Act
- Professional boundaries
- ✓ Registered Nurse
- ✓ Resident's Bill of Rights
- 🗸 Role
- ✓ Scope of practice
- ✓ Sexual harassment
- ✓ Slander
- Unlicensed Assistive Personnel (UAP)
- ✓ Values
- ✓ Veracity

This chapter reviews key issues related to your roles and responsibilities as a member of the healthcare team and the importance of establishing a caring and ethical relationship with clients. A brief review of principles of effective communication as well as residents' rights follows.

Your Roles and Responsibilities

The National Council of State Boards of Nursing (NCSBN) accepts responsibility for developing standards of nursing care and education that protect the health and welfare of the public, thus serving as a guide for state laws addressing nursing practice. The Nurse Practice Act of each state determines what licensed nurses—Registered Nurses (RNs), Advanced Practice Registered Nurses (ARNPs), and Licensed Practical/Vocation Nurses (LPN/LVNs)—can do, also known as their scope of practice (or a description of what licensed nurses can do according to their level of educational training and experience). The Model Nurse Practice Act also outlines the role and responsibilities of nursing assistive staff, known by the NCSBN as unlicensed assistive personnel (UAP).

As part of the UAP category in most states, your title is that of **Medication Aide-Certified** (**MA-C**). In other states, you may be referred to as a Certified Medication Aide, Certified Medication Technician, Medication Aide, Trained Medication Aide (TMA), or other similar distinction. You must hold the Certified Nurse Assistant/Aide (CNA) credential, complete a state-approved Medication Assistant program, and meet all other state requirements to become registered, which include a written competency examination and may, in some instances, include a clinical competency evaluation. An alternative route to MA-C certification may be through equivalent education in an approved program leading to LPN or RN licensure.

Your **role** (or **function**) as a Medication Aide is to assist the licensed nurse (RN or LPN/LVN) in providing safe and ethical care for clients—that is, administering prescribed drugs (also called medications or medicines) and completing other delegated nursing tasks allowed by state law. Medication Aide employment settings vary (for example, skilled nursing homes, residential settings, or assisted-living facilities; hospitals, long-term care facilities; correctional centers; home health agencies, schools, group homes, and daycare centers). For purposes of this publication, the care setting for the Medication Aide is the skilled nursing center or assisted-living facility, and your clients are referred to as residents. You must adhere to all laws and regulations of the state licensing/accrediting agency.

EXAM ALERT

State regulatory agencies protect their citizens by

- > Overseeing healthcare provider licensure and registration.
- Authorizing duties of licensed nurses and other healthcare team members such as Nurse Assistants/Aides, Medication Aides, and others.
- Publishing practice limitations/exclusions and continuing education requirements to maintain licensure.
- Carrying out disciplinary action should the practitioner provide care outside state practice standards.

Roles and Responsibilities of Other Nursing Team Members

The following is a synopsis of the role of licensed nurses in healthcare facilities:

- ► Registered Nurse (RN): RNs are responsible for carrying out both the medical plan of care prescribed by the physician and the nursing care plan developed by the nursing staff. They assess each resident and modify their nursing care as needed to help meet residents' needs. RNs also work with other therapists and staff to ensure the well-being of each resident. They may assign you, the unlicensed assistive staff member, to assist in administering medications and directly supervise your work. RNs work under the supervision of the director of nursing and are accountable for their practice according to the state's Nurse Practice Act, which outlines RN practice competencies and limitations of their scope of practice. They may supervise other RNs, LPNs, or other UAPs.
- Licensed Practical Nurse (LPN): LPNs carry out the medical and nursing plans of care for assigned residents, but work under the supervision of RNs. LPNs give treatments, administer medications, and document care given according to a prescribed scope of practice set by the board of nursing or other licensing agency. LPNs may also supervise UAPs. Their duties may be expanded with additional training and credentialing. Where allowed, LPNs may assign you to assist with medications while supervising your work.

The Role of UAPs

Certified Nursing Assistants/Nurse Aides or Patient Care Assistants/Technicians (CNAs, PCAs, and PCTs) carry out duties under the supervision of RNs or LPNs. As unlicensed assistive personnel, they provide personal, hands-on care and other tasks required to meet residents' needs. CNAs are also responsible and accountable for their duties as defined in their position description and as proscribed by the standards of care by the state accrediting body. CNAs cannot delegate duties to other UAPs; this includes delegating medication administration tasks to you.

You, the Medication Aide, must perform your duties according to national standards as follows:

The Standard Job Description of the Medication Aide-Certified (NCSBN):

- Functions as a healthcare team member
- Carries out delegated nursing assistant tasks
- ► Assists the nurse in providing care to clients, which includes observation and reporting of client needs

- ► Recognizes and performs tasks according to level of education and training
- Accepts responsibility and accountability for own performance according to state laws and regulations regarding MA-Cs
- ▶ Performs tasks in an ethical-legal and caring manner
- ► Communicates changes in client status according to level of training and experience
- Documents care according to agency policy and procedure
- ▶ Performs tasks safely and effectively to assure client comfort and welfare
- Respects client rights
- Protects confidential client information unless otherwise required to promote client safety and welfare
- ▶ Follows federal, state, and agency regulations to protect own health and that of others
- ► Seeks guidance from the nurse as needed to perform tasks safely and efficiently

Similar standards apply in the state in which you become certified; it is also your responsibility to adhere to them.

Your **position description** or **job description** outlines your duties, responsibilities, and other expectations of your employer. It also documents the chain of command, or supervising personnel, to whom you report. It will note education, experience, and licensure requirements as well as desirable physical and mental abilities. Physical abilities include walking several miles during a work shift, standing for extended periods of time, lifting and moving abilities, and so forth. Mental stamina is needed when working under stressful conditions while modifying resident behaviors.

EXAM ALERT

Your job duties may include the following:

- Giving scheduled drugs under direct supervision of a licensed nurse unless otherwise allowed by state law
- ► Giving ordered PRN (as needed) medications after checking with the resident's nurse
- Performing tasks associated with medication administration, including vital signs, height and weight, glucose monitoring, and client observation
- Recording medication administration according to agency procedure
- ► Reporting changes in client status regarding drug therapy to ensure client comfort and safety
- ► Reporting life-threatening events to the nurse to protect self, the client, and others
- Reporting drug errors and filling out proper forms

34

Exclusions to the MA-C Role (Legal Limitations)

According to the NCSBN, the nurse shall not delegate to the MA-C any of the following acts:

- ► Giving medications that require dosage conversions or calculations
- ► Assessing the client's need for, or response to, medications, including PRN medications
- ► Giving medications via parenteral, nasogastric, gastrostomy, or jejunostomy routes
- Regulating IV fluids, program IV pumps, insulin pumps, or giving drugs to unstable clients or patients

EXAM ALERT

Other role limitations may include the following:

- Giving the first dose of a newly ordered medication to the client
- > Converting medication dosage from one method of measurement to another
- ► Giving medications when the nurse is not available to monitor the medications' effects on clients
- Making decisions that might include withholding medications
- > Calling the physician regarding client status or need for medication
- Accepting verbal or telephone orders from the physician or other healthcare professional allowed by state law to prescribe medications

This list shows just a sampling of role limitations; state law and administrative rules as well as the employing agency may further limit your practice. Remember, also, that the employing agency may not expand your practice beyond state law and regulations. This includes, for example, assigning you any duties not included in your position description. If you have any questions or conflicts related to your functions or job limitations, consult with the supervising nurse; or, if the situation involves the nurse involved in the assignment, contact your employer's human resources officer before you act. In any case, *do not perform any duty not included in your position description*.

Accepting Delegated Duties

Registered nurses are responsible for the overall nursing care of clients. RNs use the **nursing process**, a decision-making approach, to assess, plan, implement, and evaluate client care that they or other team members provide to clients. As **delegators**, RNs and, where allowed, LPNs give you, the MA-C, the authority to carry out certain nursing functions (also called procedures, tasks, or activities) that do not require professional level of knowledge or skills. Your assignment must be in keeping with your credentials and position description.

Remember, other UAPs may not delegate tasks to you; for example, a CNA asks you to give a PRN medication to a resident. You must first check with the resident to validate the request, and then consult with the nurse before giving the medication.

Just as you are legally **accountable**, or answerable, for your delegated functions, so, too, are the nurses accountable for their delegation. In this way, you and the delegating nurse share legal accountability for safe client care.

You are responsible for accepting your assigned tasks; refusing them because you want to avoid your work is unacceptable and grounds for discipline according to agency policy. Further, you cannot delegate any part of your assignment to other unlicensed assistive personnel. However, asking for help in carrying out your tasks is permissible; for example, you may ask the CNA to help you position the resident to safely receive medications.

EXAM ALERT

Should you accept a task that falls outside your position description, both you and the delegating nurse are **medically liable** (legally responsible) for any of your actions (or lack of action) that may result in harm to the client. To help prevent such an occurrence, you must ask the nurse to clarify any assignment that is unclear or that seems illegal or unethical or above your skill level or ability. If, after clarification, you still feel uncomfortable or unprepared, politely refuse the assignment. Other considerations for refusing assignments include the following:

- ► The delegated task is unclear.
- You are unfamiliar with the task.
- The client's condition is unstable.
- > Performing the delegated task could harm the client.
- ► The task is illegal or unethical.
- ► You will not be supervised by the nurse.
- The nurse will not be available to monitor the client's response to the task.

Medication Administration Policies

Following agency policies and procedures, your chief task/duty is to assist the nurse in giving certain prescribed drugs. In most cases, unless allowed by state law, the nurse must convert drug dosages where needed and directly supervise the administration of the drugs you give.

Agency guidelines guide you in how to receive drug orders, storage and distribution of medications, and documentation and other record keeping related to medication administration. This includes procedures for handling and disposing of controlled substances/drugs identified by state and federal agencies as scheduled drugs, which means they must be carefully monitored and inventoried. According to agency policy, you must report to the nurse immediately any emergency you observe while administering medications, help resolve the emergency per procedure, and participate in any quality-improvement activities that may result from the incident.

Medical Error Prevention

Preventing medical errors is a primary responsibility of all healthcare personnel. As a member of the healthcare team, you must ensure that your performance adheres to all administrative policies and procedures that serve to keep the client safe. Other measures essential for promoting client safety by preventing drug errors include the following:

- ► Following the prescriber's orders
- ► Following the drug manufacturer's directions
- ► Following accepted drug administration standards, including performing safety checks, and observing the **six rights** (or principles) of administering medications
- ► Listening to the client or family
- ▶ Notifying the nurse if questions or situations arise that could threaten client safety

Maintaining your **competence** (knowledge, skills, and attitude) will also go a long way to help prevent errors when giving medications. Should you make an error, you are responsible for following agency policy in reporting it immediately to your supervisor and for participating in any remediation necessary to prevent a recurrence; this includes submitting a medication error report (**incident report**) per agency policy. Failure to report a performance error could result in termination from the agency and/or discipline by the accrediting agency of the state in which you work.

EXAM ALERT

Key sources are available to you in the workplace to help prevent medication errors, including the nurse or the agency pharmacist. Keeping abreast of drug literature and related educational materials is also necessary, as is attending continuing education seminars and other activities necessary to maintain your knowledge and skills.

Effective Communication Regarding Medication Administration

The following issues regarding effective communication are reviewed here:

- Verbal communication
- ► Barriers to verbal communications
- Written communication
- Personal characteristics contributing to effective communication

Verbal Communication

Being able to express yourself effectively (both verbally and in writing) is a communication skill you learned in your Nursing Assistant program. It is appropriate to review key skills here as you prepare for certification; you will use them throughout your healthcare career. Likewise, forming positive working relationships with your coworkers and building effective interpersonal relationships with residents are essential elements in effective Medication Aide practice.

Communication skills involve listening, looking, responding, and documenting what residents tell you about themselves and their unique needs. Active listening (that is, listening to residents without being distracted by your own thoughts) is key to acknowledging them as worthy human beings who deserve your attention.

NOTE

This skill is called listening with a "third" ear. Your skill in observing what residents do not tell you is just as important as what they share with you; in this way, you are tuned in to their unexpressed needs.

Good verbal communication skills also include speaking clearly at a level residents can understand (that is, avoiding medical jargon), asking open-ended questions that discourage a yes/no response, using phrases to encourage further exploration of thoughts and feelings ("Oh?" "Tell me more," and so on), and confirming the message you receive ("Let me see if I understand what you mean," "Is this what I hear you saying?," and so on).

Barriers to Effective Verbal Communication

Communication barriers can occur in practice. Try to avoid the following pitfalls when communicating with the resident: asking close-ended questions that prompt a yes/no answer, speaking "over the resident's head," using medical terms or other language that he or she cannot understand, or responding to him or her with advice/criticism/sarcasm. Responses to the resident that begin with "You should/shouldn't..." or "why?" are not only demeaning but also encourage defensiveness and limit further communication. This reluctance to communicate can be hazardous for the resident and a detriment to an effective relationship with you.

It is important for you to recognize communication barriers that interfere with effective interpersonal relationships with residents and seek guidance and help from your supervisor to solve any communication problem you might encounter. Use an interpreter or family member to assist you in talking with the resident whose primary language is not English, and be patient with the resident who struggles to understand your language. Cultural barriers can also interfere with effective communication, especially if the resident's culture is very different from your own. Nonverbal gestures like avoiding eye contact might be viewed by the resident as offensive or disrespectful. Other cues to barriers include personal space (for example, standing too close to the resident), smiling or other facial expressions that do not match the verbal message, your conversational tone, or body posture. For example, you might be smiling when talking to a resident, and that might imply your agreement. At the same time, however, you are standing with arms crossed over your chest and leaning away from the resident, a message that you, indeed, do not agree with him or her. At best, this message is confusing, if not disrespectful. Equally important to effective interpersonal relationships with residents is the need to maintain resident safety through clear communication. This is especially important when giving medications. Barriers to communication also include those linked with the senses (that is, vision, hearing, and other sensory deficits). Speaking clearly, slowly, and directly to the resident who is hard of hearing is important to ensure understanding of your verbal communication. Offering large-print reading material or other assistance to the resident who is visually impaired is equally important. Some residents have a decreased sensation to pain and temperature changes. Specific details about giving medications to impaired residents are included in later chapters.

Written Communication

Reporting conversations between you and residents during medication administration is also important to maintain their safety and well-being. This includes changes in their condition, specific requests, concerns or evaluations regarding their care, safety considerations, and any other pertinent observations.

Recording/charting all drugs you give is an important and appropriate function. Charting requires knowledge of medical terminology and abbreviations as well as proper spelling on all designated agency forms. The **Medication Administration Record (MAR)** is the most common communication tool and chart form in the resident's medical record. Remember to follow all agency guidelines for recording on the MAR. Consult your supervisor for help with documentation to ensure completeness, objectivity, and accuracy.

Observation is the first step to ensuring resident safety, and you must report promptly to your supervisor any resident responses to the medications you give, other concerns that the resident might share, or any change in the resident's condition. Remember, where client safety is concerned, you can *never* overcommunicate.

Other personal characteristics required for effective MA-C practice include the following:

- ► Honesty, or truthfulness, is one of the most important qualities you can bring to your job. Second only to knowing your job well and being accountable for what you do is being truthful in your interactions with others. Accepting your own limitations is another example of being truthful. These attributes are essential to an effective and lawful practice.
- ► **Caring** means having a sincere regard for the safety and well-being of all the residents in your care and being willing to care for them and about them. You can be the most skillful Medication Aide in the facility, but if you do not care about what happens to

the residents, you are in the wrong job. In education, for example, we evaluate caring characteristics in our students in part by observing the time they spend with residents other than the time required to give care. Spending time with residents is only one way to evaluate caring behaviors, but it is an effective job-performance measure. These caring characteristics are the hallmark of the exemplary employee.

- ► Being empathetic (that is, seeing yourself in others' situations without pitying them) is also an important attribute you must possess. Consideration for other peoples' feelings is also an important personal quality for effective practice. This means being aware of the effect of what you say and how you say it. Cooperating with coworkers to help support them and the facility when short-staffed is another example of being considerate.
- ► Having respect for other people is important, especially when their values, culture, language, or beliefs differ from your own. Honesty, empathy, sincerity, and caring behaviors are all part of legal and ethical practice—basic but crucial expectations of your employer.
- ► **Dependability** is a basic expectation of your employer. Coming to work when scheduled and on time demonstrates your commitment to your job and to the residents. Doing what you commit to do and doing so consistently also demonstrate your dependability.
- ► Flexibility and dependability go hand in hand. Despite the best assignment plan, "stuff happens," meaning you might be reassigned to another unit or group of residents or staff you do not know. You must be able to accept this normal disruption in your work schedule and make the best of the situation.
- ► Accountability is a key quality you bring to your work. You must care for all residents in a variety of conditions and situations for which you have been prepared to handle and are expected to perform your duties in the way you have been trained to perform them. Should you have any questions or concerns about your assignment, discuss them privately with your supervisor.
- ► Self-responsibility means that you are responsible for your own health and safety. Wearing personal protective equipment (PPE), using safe body mechanics when positioning residents to take medications, maintaining a safe workspace, organizing your work to conserve energy, and maintaining a healthful lifestyle are examples of those actions you must take to protect yourself and promote your own well-being.
- ► **Conscientiousness** (that is, having a careful attitude about your work and concentrating on your duties without distraction) is most important for safe and effective practice. This is a critical attitude where giving medications is concerned. A sloppy, careless attitude can harm clients and place your job in jeopardy. The nurse and client alike must be able to trust that you are serious about your responsibilities and that you have the clients' best interests in mind in all that you do.

Being a team player implies working well with others; this is a hallmark of effective and efficient performance and will serve you well as a team member. Respecting each team member's talents and contributions goes a long way toward making the residents' lives meaningful, promoting a harmonious workplace environment, and making your work more fulfilling.

NOTE

Being a team player also means being able to accept constructive criticism, especially from your supervisor. Listening to supervisor feedback without getting defensive will help you to improve your performance and contribute to your job satisfaction. Always follow the facility's chain of command when resolving work-related issues, especially for work conflicts or other disagreements (which are bound to occur). It is important for you to consult with your supervisor about any situations that concern you in this regard.

Specific Ethical and Legal Issues

As mentioned previously, if you perform duties outside your job description or perform appropriate duties incorrectly that result in harm to a resident, you can be held liable. Liable acts may include the following:

- ► Abuse: A threat of physical or mental harm to a resident (including physical, mental, or sexual abuse).
- ► Aiding and abetting: Participating in an unlawful act or observing it and not reporting it. For example, observing sexual harassment of a resident and not reporting it.
- ► Assault: Threat of touching a resident without permission.
- ► **Battery**: Unlawful personal violence toward a resident (for example, forcing residents to take medications despite their refusal).
- ► False imprisonment: Preventing a resident from moving freely about, with or without force, against the resident's wishes (for example, restraining a resident's hands while giving medications).
- Invasion of privacy: Failing to keep a resident's affairs confidential or exposing the resident's body when performing care.
- Involuntary seclusion: Keeping a resident isolated from others as a form of punishment.
- ► **Negligence**: Neglecting to act in the manner in which you were taught, either omitting care or performing care incorrectly, with resultant harm to a resident.
- ► Theft: Taking something that does not belong to you. This can include taking medications intended for use by the resident, known in legal terms as **diversion**.

Diversion most often applies to diverting a drug categorized in the Controlled Substance Act (1970) as a Schedule II drug; all scheduled (leveled according to category) drugs must be carefully regulated according to agency policy and state and federal laws. Diversion of a Schedule II drug is a federal crime, punishable by immediate termination of employment, prosecution by the court system, as well as discipline from the state accrediting agency.

Residents' Rights

In 1973, the American Hospital Association (AHA) issued a policy for all patients called "A Patient's Bill of Rights." A similar document, the "Resident's Bill of Rights," contains additional considerations for residents in long-term-care settings. By law, all nursing homes must have written policies describing residents' rights and must make them available to all residents. The following list outlines the issues addressed in theses bills of rights; namely, that every resident has the right to

- ► Be informed about the facility's services and charges: The services of the nursing home and all charges involved with the services should be made available and fully explained to every resident. Likewise, charges that are not covered by Medicare or Medicaid should also be included in the notice of services; this includes those services not covered by the basic charges for facility rates.
- ► Be informed about one's medical condition: Unless the physician notes in the medical record that to be informed of his or her medical condition is not in the resident's best interest, every resident deserves to be apprised of his or her medical condition. Be truthful with you answer residents' questions about their condition, being careful to inform them of what you observe only (for instance, answering a resident's questions about vital signs or output).

EXAM ALERT

The RN or doctor should address the resident's medical condition because you cannot answer medical questions for which you have not been prepared to answer. You can, however, answer questions about medications as you give them to the residents (for example, name, dosage, and safety measures such as taking medications on empty stomach and so on). Explaining side effects and other more detailed drug information is the duty of the nurse. It is your responsibility to report to the nurse as soon as possible the resident's request for detailed drug information.

Participate in the plan of care: Every resident must have the opportunity to participate in his or her plan of care or to refuse care/treatment. Despite your belief that a procedure or care activity will help residents, be careful that you do not force them to participate against their wishes. This includes assisting other staff to do the same. Failure to observe this resident right is an example of assault, battery, and/or invasion of privacy. Giving medications to residents despite their refusal is an example of assault and battery. • Choose one's own physician: Every resident has the right to determine his/her own physician and pharmacy.

EXAM ALERT

Remember, your personal opinion is unimportant in this situation. Refer the resident to the RN or social worker for assistance.

- ▶ Manage one's own personal finances: Residents can manage their own finances or appoint someone else (power of attorney) to manage them. If authorized by the resident to manage funds, the manager must report the resident's financial status as directed and provide all receipts for business transactions. Avoid handling any money or valuables of the resident (for example, inventory of personal items upon resident admission to the facility) without a witness.
- Privacy, confidentiality, dignity, and respect: Privacy, confidentiality, dignity, and respect for each resident are of utmost importance. Privacy includes visitation for married couples (for example, closing the door to ensure couples are alone and are not interrupted and knocking before entering the room).

EXAM ALERT

Confidentiality means that all information about the resident's care and condition must be kept private; this includes all conversations with the resident and all medical records and reports. A positive regard for each resident, regardless of race, sex, age, ethnicity, or other personal attributes, is also paramount to every resident's health and well-being.

- ► Use one's own clothing and possessions: Unless hazardous, or potentially infringing on other residents' rights, each resident has the right to wear his or her own clothing and use his or her own possessions.
- ► Grievance without retaliation: Residents should be able to express concerns, make recommendations about facility services or care, and consult with outside sources to resolve conflicts involved in their care without fear of criticism, discrimination, or other acts of vengeance by the facility or its staff.
- ► Be discharged or transferred only for specific reasons: Residents may be transferred or discharged from a facility only for medical reasons, for their welfare or the welfare of other residents, or for nonpayment (excluding becoming Medicaid eligible). If transfer or discharge is planned, the resident or representative must be notified in writing within 30 days of the change.

- ► Access to:
 - ► Receive or refuse any visitor (includes family members)
 - ▶ Visiting hours, posted in public places
 - Confidential communication with visitors, including help with personal, social, or legal services
 - Claim own rights and benefits through consultation with others for the purpose of legal action, organizational activity, or other forms of representation
- ► Be free from abuse and restraints: Residents must be protected from mental and physical abuse, which can include unauthorized use of restraints. Except as authorized in writing by a physician for a specified and limited time or when necessary to protect the individual from hurting himself or others, residents must be free from chemical or physical restraints that cause them to be unable to move about freely.

Failure of any healthcare team member to honor residents' rights can be grounds for termination from employment, discipline by the state accrediting agency, or, where a crime has occurred, prosecution by the court.

EXAM ALERT

Abuse, or intentionally mistreating or harming another person, is one of the most serious offenses that can occur in the healthcare setting. Abuse is considered a crime and, as such, is punishable by prosecution by the court system.

Abuse may occur in several forms:

- ► Mental abuse refers to any threat to the psychological well-being of the resident that results in psychological or emotional distress. This can include financial exploitation or verbal assault; depriving residents of any of their rights is also considered mental abuse.
- ► Slander, or sharing information with others about the resident that could damage the resident's reputation, is a form of abuse and potential grounds for a civil lawsuit, called a tort. Accomplishing the same result by writing or recording this kind of negative reference to a client is called libel.

EXAM ALERT

To help you distinguish between the two legal terms, remember that *libel* means "literature or writing."

▶ **Physical abuse** includes hitting or rough handling of a resident. Withholding food or fluids and failure to change a wet bed are forms of physical abuse.

44

- ► Sexual abuse is a form of physical abuse and involves threats or physical contact for sexual favor or control. Fondling (or inappropriately touching a resident), rape, sexual assault, or sexual molestation are examples of sexual abuse.
- Sexual harassment (or making unwelcomed sexually explicit or implied statements to residents) is abusive and could become grounds for resident grievance.

Be watchful for any signs or other clues of resident abuse, including the following:

- ▶ Skin tears or bruises, especially in the genital area
- ► Increased elimination difficulties
- ▶ Frequent crying or periods of sadness or withdrawal
- Personality changes
- ▶ Refusal to carry out activities of daily living (ADLs)
- ► Fear of touch
- Anxiety or nervousness
- ► Refusal of certain visitors, including spouse or family members

EXAM ALERT

You have a moral, ethical, and legal duty to report any suspicion of abuse. Be as factual as possible, avoiding assumptions and personal opinions about what you observe. Do not worry if your suspicions are unfounded. Your sincere attempt to protect the resident outweighs any fears you might have. In all cases, follow the facility policy for reporting abuse concerns. Abuse hotlines might also be available for reporting suspicions of abuse. An ombudsmen committee might also be available as a source for investigating abuse complaints. An ombudsmen committee is a group of concerned citizens, usually appointed by the state governor, to investigate all complaints of abuse. The committee members are not affiliated with a healthcare facility. The originator of the abuse complaint, whether a fellow citizen or a healthcare provider, is kept confidential.

Ethics

Ethics is often linked with legalities when determining right and lawful behavior in health care. **Ethics** is a branch of philosophy dealing with the good, bad, right, and wrong thing to do in human interactions and the principles that help guide professionals in terms of what ought to be done in certain situations. Ethical principles, or standards, help guide you in your work. Examples cited include **beneficence** (doing good for others), **nonmaleficence** ("do no harm," which underscores the need to not cause undo harm to a resident and instead provide safe and effective care), and **veracity** (or truthfulness, which means speaking the truth consistently and dependably).

Nurses adhere to a published **code of ethics**, or code of conduct, which admonishes them to practice in an ethical manner at all times. Such guiding principles help form a practice framework on which nurses can build. A description of ethical behavior is to "do the right thing when nobody else is looking." This could be evidenced by refusing to accept money, gifts, or favors from residents or their families, avoiding shortcuts in job performance, maintaining a positive attitude about the facility, and treating residents' belongings with care.

Values are your personal beliefs about what is most important; they serve as guiding ethical principles for you throughout your life. Ethical problems occur when your "inner ethical voice" conflicts with a situation that causes you to struggle with the right course of action to maintain your values. Ethical dilemmas abound in today's world, especially in health care. Specific examples of ethical dilemmas regarding residents in long-term care mirror those of clients in other healthcare settings, such as quality-of-life issues, death and dying, access to health care, and **euthanasia** (commonly referred to as mercy killing).

An important ethical consideration for all health team members is that of maintaining **professional boundaries**. Although it is essential to form a caring, empathic relationship with residents, certain limits or boundaries must be set to ensure that your actions are helpful to residents and are not centered on meeting your own needs. Meeting the residents' needs must be your primary goal. Situations involving residents may place you in an ethical dilemma. One example is the resident who wants to give you gifts, money, or personal items. Another example is a resident requesting something (a favor) that is not permitted by the agency (for example, a ride in your personal vehicle or you buying the resident cigarettes or other items not permitted by their physician). Giving gifts or money to residents or providing personal advice or financial assistance in any form or conducting business with residents is also unethical and outside professional boundaries of conduct. It is ethical to befriend residents; however, it is unethical to form personal friendships that could result in poor judgment on your part or interfere with safe and efficient care of the resident. This includes becoming overly involved with the resident's family or friends. Sharing personal information about yourself and spending time with the resident outside your work schedule are other examples of unethical behavior that cross professional boundaries.

Another rule of ethical behavior it to respect residents by not using profanity or other offensive language and by not referring to them as "honey," "sweetheart," or other euphemisms or using suggestive or romantic language when talking to them. The golden rule applies here as in all aspects of care. If you find yourself in any potential unethical situation instigated or suggested by a resident, report the incident to your supervisor immediately. In extreme circumstances, you may request a reassignment to resolve the issue.

Exposure to Medical Malpractice/Negligence Claims/Lawsuits

It is your legal and ethical responsibility to respect residents' rights, perform your duties according to your position description, maintain professional boundaries, and communicate effectively and efficiently to avoid exposure to a lawsuit. Despite your careful performance and personal conduct, lawsuits can occur. However, following agency policies and procedures, seeking guidance from the nurse where needed, and maintaining a positive attitude can all serve you well as you work with clients.

Exam-Prep Questions

- 1. The Medication Aide is responsible to know the medical information of whom?
 - **O A.** All residents at their place of employment
 - **O B.** Residents he/she is assigned to
 - $O \quad \textbf{C.} \text{ All residents on the unit or floor}$
 - **D.** Residents assigned to their supervising nurse
- 2. Which of the following is the responsibility of the Medication Aide?
 - O A. Giving the first dose of a newly ordered medication to the client
 - **O B.** Converting medication dosage from milligrams to micrograms
 - O C. Withholding a patient medication without reviewing it with the nurse first
 - O **D.** Giving PRN medications ordered after checking with the resident's nurse
- 3. Which of the following is *not* a role limitation of an Medication Aide?
 - O A. Observe the client's need for, or response to, medications, including PRN medications
 - **O B.** Make decisions that might include withholding medications
 - O **C.** Report changes in client status regarding drug therapy to ensure client comfort and safety
 - O **D.** Call the physician about client status or need for medication
- 4. The nurse you are to work with for the upcoming shift informs you, the Medication Aide, that she will be late today and asks you begin to administer medications. With regard to this scenario, which of the following statements is correct?
 - **O A.** Medications that are usual for the residents can be administered without the nurse present.
 - **O B.** All medications can be administered without the nurse present.
 - **O C.** No medications can be administered without supervision.
 - **D.** No PRN medications can be given without appropriate supervision.
- 5. Maintaining competence refers to the
 - O A. Knowledge, skills, and attitude necessary to fulfill the role as an MA-C.
 - **O B.** MA-C gaining greater knowledge to perform newer skills.
 - O C. MA-C who does not have the necessary skills to do something successful.
 - **D.** Person who cannot perform the role of a Medication Aide due to mental deficiency.

Chapter 2: The Roles and Responsibilities of the Medication Aide

- **6.** Verbal communication skills include speaking clearly and at a level residents can understand, avoiding medical jargon, and
 - O A. Asking open-ended questions that discourages a yes/no response.
 - **O B.** Using phrases to stop residents from sharing feelings.
 - **O C.** Interrupting patients when they are taking too long to answer questions.
 - **D**. Using authoritative language to get the resident to follow directions.
- 7. Unlawful personal violence toward a resident (for example, forcing residents to take medications despite their wishes) is the definition of what?
 - O A. Abuse
 - O B. Neglect
 - O C. Assault
 - O **D.** Battery
- **8.** Which of the following is a reason for an Medication Aide to suspect a resident may be a victim of physical abuse?
 - O A. Skin tears on the forearm
 - O B. Bruises in various stages of healing
 - O **C.** Frequent crying or periods of sadness or withdrawal
 - **D.** Refusal of patient to see any visitors
- **9.** Sharing information with others about the resident that could damage the resident's reputation is the definition of what?
 - O A. Libel
 - O B. Abuse
 - O C. Neglect
 - O **D.** Slander
- **10.** Which of the following is an example of an ethical dilemma?
 - O A. Euthanasia
 - O B. Slander
 - O C. Abuse
 - O **D.** Stealing

Rationales

- **1.** Answer **B** is correct. The Health Insurance Portability and Accountability Act (HIPAA) states that all healthcare personnel should access health information only if it is necessary for them to perform their job.
- 2. Answer **D** is correct. Part of the MA-C duty is to give PRN medications as prescribed by the physician. A, B, and C are limitations of duties for the MA-C.
- Answer C is correct. The Medication Aide's role does not include assessing or making decisions to decide whether a resident needs a medication or to obtain orders from a physician. The MA-C is responsible to report changes.
- 4. Answer C is correct. If you accept a task that falls outside your position description, both you and the delegating nurse are medically liable (legally responsible) for any of your actions, or lack of action, that may result in harm to the client, and that includes not being supervised by a nurse.
- **5.** Answer **A** is correct. Competence is maintaining the knowledge, skills, and attitude necessary to perform the roles needed. B and C are incomplete definitions, and D is the definition of legal incompetence.
- 6. Answer A is correct. It is important to ask open-ended questions when you need more than a yes or no answer. Residents should be encouraged to speak freely and share feelings and not be interrupted or spoken down to.
- 7. Answer D is correct. Battery is unlawful personal violence toward a resident. Abuse is a threat of physical or mental harm, assault is a threat to touch a resident without permission, and neglect is to not act in the manner in which you were taught (either omitting care or performing care incorrectly) and that results in harm to a resident
- 8. Answer D is correct. A, B, and C are all possible signs of abuse. D is the correct answer because patients will usually become withdrawn when a person who may be abusing them comes to visit.
- **9.** Answer **D** is correct. Slander, or sharing information with others about the resident that could damage the resident's reputation, is a form of abuse and potential grounds for a civil lawsuit, called a tort.
- 10. Answer A is correct. The only option here that centers on an ethical dilemma involving residents in long-term care is euthanasia. Other examples of ethical dilemmas include quality-of-life issues, death and dying, and access to health care.

This page intentionally left blank

Index

A

abductor muscles, role in musculoskeletal system, 210-212 abuse (ethical/legal issues), 41 libel. 44 mental abuse, 44 physical abuse, 44 reporting, 45 sexual abuse, 45 sexual harassment, 45 signs of, 45 slander. 44 accessory muscles, emphysema and, 149 accountability of Medication Aides characteristics of Medication Aides, 40 delegated tasks, 36 ACE (Anaiotensin-Convertina-Enzyme) inhibitors, hypertension, 125 Acetaminophen, liver damage and. 244 acetvlcholine. 226 acquired immunity, 196 acrochordons. 264 active immunity, infections and. 177 acute infections. 146 acute pain. 237 acute ulcers (stress ulcers), 160

AD (Alzheimer's disease), 244-245 additive effect (drugs), defining, 54 adduction, 213 adenocarcinomas, 277 ADH (Antidiuretic Hormone), role in urinary system, 194 administering medication accuracy of medications, assuring, 78 age and, 108 aphasic clients, 110 blood-borne pathogens, 81 CDC, 81 client identification, 94 clients with physical limitations, 109-110 cognitive limitations, 82 ears, 104 errors, causes and reporting of, 87-88 eyes, 102-103 gloves, 95 hand hygiene, 80 hand washing, 94 HBV, 81 hemiparalysis, 110 medical asepsis, 80-81 medicine cups, 80 mental preparation, 79-80 noncommunicative clients, 111

nose nasal inhalation, 102 nasal instillation, 101-102 oral liquids, 98-99 lozenges/troches, 99-100 powders, 99 solids. 96-98 sublinguals/buccals, 100 order of, 82 **OSHA**, 81 physical impairments, 82 physical preparation, 79-80 positioning clients, 95 post-administrative procedures client comfort, 112 client environment, 112 right documentation, 113 **PPE**, 80 procedures, explaining to clients, 95 rectal application, 107-109 refusal to take medication, 110 rights of medication administration right documentation, 86-87 right dose, 85 right drug, 83 right resident, 84

right route, 84 right time, 85-86 safety checks, 82 souffle cups, 79-80 swallowing difficulties, 81-82 therapeutic relationships, 111 topicals and transdermal installations, 71, 104-105, 184-185 vaginal application, 106-107 workstation preparation, 79 administration (medication) communication verbal, 38-39 written, 39 policies, 36-37 six rights (principles) of administering medications, 37 ADR (Adverse Drug Reactions), 55 adrenergic agents, ANS and, 226-227 adrenergic catecholamine, 225 aerobic microbes. 176 ade eyes, aging's effects on, 264-265 medication administration and, 108 pain and, 236 AHA (American Hospital Association), Resident's Bill of **Rights**, 42-44 AHRQ (Agency for Healthcare Research and Quality), building safer healthcare systems, 347 aiding and abetting (ethical/legal issues), 41 AIDS (Acquired Immunodeficiency Syndrome), 182 air conduction, ears and, 268 akinesia, 245 Aldactone (Spironolactone), 204 aldosterone, 125, 194 alimentary canal, role in digestive system, 158

alkalosis, 161 alkylating agents, cancer and, 279-280 allergen-antibody responses, role in respiratory system, 146 allergic reactions, 55 alopecia, cancer and, 279 alpha adrenergic blocking agents, ANS and, 227-230 alpha-1 adrenergic blocking agents, hypertension, 126 alveoli, 133, 145 amino acids, role in digestive system, 158 aminoglycosides, 183 anaerobic microbes, 176 analgesics, 52 ANS and. 235 NSAID, 241 opiate analgesics, 238-241 opiates and opiate-like drugs, 243 salicylates, 242 eves, 265 anaphylaxis, 55-56 androgen (male hormones), cancer and, 282 anemia. 195 angina, 123, 128-130 anorexia, statin drugs and, 124 ANS (Autonomic Nervous System) adrenergic agents, 226-227 alpha adrenergic blocking agents, 227-230 analgesics, 235 NSAID, 241 opiates and opiate-like drugs, 238-243 salicylates, 242 anticholinergics, 231-232 barbiturates, 232-233 benzodiazepines, 233-234 beta adrenergic blocking agents, 227-230 cholinergics, 226, 230-231

dopaminergic agents, 227 heartbeat and, 121 nonbarbiturates, 234-235 nonbenzodiazepines, 234-235 parasympathetic nervous system, 226 sedative-hypnotic drugs, 232-235 SNS. 225 answers practice exam I, 311-315 practice exam II, 327-331 testing strategies face value, 15 focusing on key words, 15 opposite options, 15 option C, 15 process of elimination, 15 resident's feelings, 15 rethinking the question in your own words, 14 safety concerns, 15 taking time, 14 umbrella terms, 14 antacids. 160-161 antagonist effect (drugs), defining, 54 anti-infectives, 52, 186 cancer and, 279 eyes and, 265 anti-inflammatory agents, treating upper respiratory tract illnesses, 151 antibiotics, 52 allergies and, 184 aminoglycosides, 183 anti-infective agents, 186 antitubercular agents, 187 antiviral agents, 186 cephalosporins, 187-188 infection process AIDS, 182 bacteremia, 187 clostridium perfringens, 176

disease carriers, 180 dormant viruses, 181 E.coli. 176 environmental conditions for. 176 germs, 176, 183 HAI, 180 Hepatitis B, 180 Hepatitis C, 181 herpes, 181 hosts, 176 immunity's role in, 176-177 immunization process, 177 immunocompromised clients, 179 local infections, 178 meningitis, 183 microbes, 176 normal flora, 176 older clients and, 179 osteomyelitis, 187 pancreatitis, 186 pathogens, 176 recovering from, 179 resistance, 183 septicemia, 183 signs/symptoms of, 178 staph infections, 180 superinfections, 183 systemic infections, 178 TB (tuberculosis). 181, 187 urinary tract infections. 183 wound infections, 183 macrolides, 189 pneumonia treatments, 148 quinolones, 189 safety considerations, 184 sulfonamides, 189 systemic antifungal agents, 186 tetracyclines, 189

topical antifungal (fungicidal) agents, 71, 104-105, 184-185 UTI treatment, 196 Furandantin, 201 Macrodantin, 201 Mandelamine, 201 penicillins, 197-198 quinolones, 200-201 sulfa drugs, 198-199 tetracyclines, 199-200 antibodies. immunity from infection and, 177 anticholinergics, 167 ANS and, 231-232 Parkinson's disease. treatment of, 247 anticoagulating, 242 antidepressants, 292-293 antidiabetic agents, 52 antidiarrheals, 52, 167-168 antiemetics, 52, 166-167, 279 antifungal (fungicidal) agents, 184-186 antigens, 196 antihistamines, 52, 150-151, 167 antihyperlipidemic drugs, 123 antihypertensive drugs, 126-128 antilipidemics. 53, 124 antimetabolites, cancer and, 280-281 antimicrobial agents allergies and, 184 aminoglycosides, 183 antibiotics, 183 safety considerations, 184 UTI, 196 antineoplastic drugs, 278-282 antipeptic agents (antacids), 160-161 antiplatelet agents, 136-137 antipsychotics, 53, 295-296 antipyretics, 53 antiseptic effect, UTI, 196 antispasmodics, 165, 202

antitubercular agents, 187 antitussives, 53 lower respiratory tract illness, treating, 152 pneumonia treatments, 148 antiviral agents, 186 anuria, 196 anxietv anxiolytics, 290 benzodiazepines, 289 signs/symptoms of, 288-289 tranquilizers, 289 aortic arteries. 121 aortic bodies, role in respiratory system, 145 aortic valves (heart), 120 aphasic clients and medication administration, 110 apical pulse, 120 appendicular skeleton, 211 arachnoid (CNS), 224 ARB (Angiotensin II Receptor Blockers), hypertension, 125 arcus senilis, 264 ARDS (Acute Respiratory Distress Syndrome), 147 arithmetic review decimals. 337 changing fractions to decimals, 338 multiplying decimals by decimals, 339 doses, calculating, 339 fractions, 337-338 metrics conversions, 338 weights and measures table, 337 arrhythmia, 131-133 arteries aortic arteries, 121 arterioles, 121 cardiovascular system, role in. 119 coronary arteries, 121

378 arteries

intra-arterially administering drugs, 72 lumen, 122 respiratory system, role in, 145 stenosis, 125 arterioles. 121 arteriosclerosis obliterans, 135 arthritis (gouty), 219 ascites, urinary retention, 203 aspiration, 81, 147 aspirin. 242 assault (ethical/legal issues), 41 asthma, 148 atelectasis, 147 atherosclerosis, 122-123 atria (heart), 120 attenuated viruses, 186 auricle (pinna), ears and, 268 auscultate, 121 axial skeleton, 210 axons (white matter), cerebrum and, 224

B

bacteremia, 187 barbiturates, ANS and, 232-233 barrel chest, emphysema and, 149 basal ganglia, 224 battery (ethical/legal issues), 41 belching (eructation), 158 beneficence. 45 benign neoplasms, 276 benzodiazepines ANS and, 233-234 anxiety, 289 beta adrenergic blocking agents, ANS and, 227-230 beta blockers, 53, 125 Bill of Rights (Resident's), 42-44 bipolar disorder. 294 bladder cystitis, 196 OAB, 202 role in urinary system, 194

blepharitis, 266 blood anticoagulating, 242 bacteremia, 187 blood-borne pathogens, medication administration, 81 BP. 121 de-oxygenated blood, cardiovascular system, 119 oxygenated blood, cardiovascular system, 119 stagnation, 147 blood clots (thrombus), 123 blood vessels capillaries, 121 cardiovascular system, role in. 119 hypoxia, 149 PVD. 134 antiplatelet agents, 136-137 arteriosclerosis obliterans, 135 DVT, 135-136 Reynaud's disease, 135 thromboembolic diseases, 136 vasoconstriction, 228 vasospasms, 135 bones axial skeleton, 210-211 bone resorption inhibitors, 215 carpals, 210 cartilage, 211-212 estrogen and calcium storage, 212 femurs, 210 fibulas, 210 flat bones, 210 fractures, 215 hematopoiesis, 211 humerus, 210 intraosseously administering drugs, 72

irregular bones, 210 long bones, 210 mandible, 210 maxilla. 210 musculoskeletal system, role in, 210-211 osteomyelitis, 187 osteoporosis, 215 patellas, 210 radius, 210 RBC, 211 scapulas, 210 sesamoids, 210 short bones, 210 skeletal density, 212 tarsals, 210 tibias, 210 ulna. 210 vertebrae, 210 boundaries (professional), ethics and, 46 bowels antidiarrheals, 167-168 laxatives, 168-169 **BP** (Blood Pressure), 121 **BPH (Benign Prostatic** Hypertrophy), 195 brachial pulse, 120 bradycardia, 120, 131 bradykinesia, antipsychotic agents and, 295 brain, 224-225 bronchi, role in respiratory system. 145 bronchioles, role in respiratory system, 145 bronchitis, 148 bronchodilators, 53, 153-154 buccally administering drugs, 70 buccals/sublinguals. oral medication administration. 100 bursae, role in musculoskeletal system, 212

379 chalzion

C

C (option), answering questions, 15 CAD (Coronary Artery Disease), 122 calcium calcium ion antagonists, hypertension and, 125 estrogen and calcium storage, 212 hypertension, 126 cancer adenocarcinomas, 277 age and, 279 alopecia, 279 carcinogenesis, 276-277 carcinoma in situ, 282 carcinomas, 277 common sites for, 277 drug therapy age and, 279 alkylating agents, 279-280 anti-infectives, 279 antiemetics. 279 antimetabolites, 280-281 antineoplastic drugs, 278-282 chemotherapeutic agents, 279 cytoprotective agents, 279 mitotic inhibitors, 281 erythroleukemia, 277 gliomas, 277 hormones and, 282-283 leukemia, 277, 281 leukopenia, 279 lung cancer, 149 lymphomas, 277 malignancy, defining, 276 melanomas, 277 metastasis, 276 myelomas, 277 myeoblastic disease, 279

respiratory system, upper respiratory tract, 149 risks for developing, 276 sarcomas, 277, 282 signs/symptoms of, 278 stomatitis, 279 thrombocytopenia, 279 tumors (malignant neoplasms), 276 carcinoma in situ, 282 drug therapy, 281 sarcomas, 282 capillaries, 121 caplets, 68 capsules, 68 carbon dioxide cardiovascular system, role in, 119 respiratory system, role in. 145 carcinogenesis, 276-277 carcinomas, 277, 282 cardiac arrest, 56, 123 cardiac/heart muscle, role in cardiovascular system, 120 cardiologists, 121 cardiomegaly, 133 cardiotonic drugs, 134 cardiovascular system, 138 disorders angina, 123, 128-130 arrhythmia, 131-133 arteriosclerosis obliterans, 135 atherosclerosis, 122-123 bradycardia, 131 CAD, 122 cardiac arrest, 123 cardiomegaly, 133 congestive heart failure, 133-134 controllable factors, 122 DVT. 135-136 dysrhythmia, 131 embolus, 123

heart attacks, 123 heart murmur, 134 hyperlipidemia, 123-124 hypertension, 124-128 hypotension, 126 hypoxia, 133 infarct, 123 ischemia, 123 left-sided heart failure, 133 MI. 123 peripheral edema, 134 pitting edema, 134 pulmonary edema, 133 PVD. 134-137 Revnaud's disease, 135 right-sided heart failure, 134 tachycardia, 131 thrombus, 123 uncontrollable factors, 122 valvular heart disease, 133 function of, 119-121 structure of, 119-121 caring, characteristics of Medication Aides, 39 carotid bodies. role in respiratory system, 145 carotid pulse, 120 carpals and tarsals, 210 cartilage, 211-212 cataracts. 264 catatonia, schizophrenia and, 295 **CDC** (Center for Disease Control), medication administration. 81 central hearing loss, 268 cephalosporins, 187-188 cerebellum, 224 cerebral cortex. 224 cerebral edema, urinary retention, 203 cerebrum, 224 cerumen (wax), ears and, 268-270 chalzion, 266

How can we make this index more useful? Email us at indexes@quepublishing.com

380

checklists (performance), medication administration skills

checklists (performance), medication administration skills. 333-335 chemical name (drugs), 52 chemotherapeutic agents, 279 chicken pox (varicella), 196 cholesterol. 123 cholinergics, ANS and, 226, 230-231 chorea. 247 choriocarcinomas. 281 choroid. 264 chronic bronchitis, 148 chronic pain, 238 chronic sinusitis, 146 chime, role in diaestive system, 158 circulatory system. See cardiovascular system circumduction. 212 cirrhosis. 281 civil lawsuits, 44 classifying drugs, 52-53 clearance (creatinine), role in urinary system, 194 client identification. medication administration. 94 clostridium perfringens, 176 **CNA** (Certified Nursing Assistants/Nurse Aides). responsibilities of, 33 CNS (Central Nervous System), 224-225 CO (Cardiac Output), 123 cochleas (ears), 268 code of ethics, 46 COGME (Council on Graduate Medical Education). building safer healthcare systems, 348 cognitive limitations, medication administration and, 82 comfort (client), medication administration. 112 communication (medication administration) noncommunicative clients. 111

verbal communication, 38-39 written communication. 39 competence, medical-error prevention, 37 conductive activity (heart), 121 conductive hearing loss, 268 confidentiality. Resident's Bill of Rights, 43 congestion (stuffy nose), 146 congestive heart failure, 133-134 coniunctiva. 264 conjunctivitis (pink eye), 266 conscientiousness. characteristics of Medication Aides. 40 constipation antacids and, 161 laxatives, 168-169 constructive criticism. handling, 41 contraindications, 56 Controlled Substance Act (1970), diversion. 42 **COPD** (Chronic Obstructive Pulmonary Disease), bronchodilators and. 154 corneas. 264 coronary arteries, 121 corticosteroids, 53 gout treatment, 216-217 intranasal corticosteroids, 151-152 cough reflex, role in respiratory system, 145 **CPR** (Cardiopulmonary Resuscitation), 123 creams, drugs as, 71 creatinine clearance. role in urinary system, 194 cretins, symptoms/signs of, 253-254 criticism/feedback, handling, 41 CSF (Cerebrospinal Fluid), 224 cyclopegic agents, 265 cvstitis. 196 cytoprotective agents, cancer and, 279

D

de-oxygenated blood, role in cardiovascular system, 119 decimals, arithmetic review, 337 changing fractions to decimals, 338 multiplying decimals by decimals, 339 decongestants, 53, 150-151 defibrillation. 123 dehvdration. 126 delegated tasks. Medication Aides and accountability, 36 delegators, RN as, 35 delusions. 294 dependability, characteristics of **Medication Aides, 40** depression. 290 age and, 291 drug therapy antidepressants, 292-293 MAOI, 291-293 SSRI. 291-293 TCA. 291-293 signs/symptoms of, 291 suicidal ideation, 291 diabetes antidiabetic agents, 52 complications from, 256-257 DKA. 256 drug therapy, 257-258 HHSN, 256 sulfonylureas agents, 258 symptoms/signs of, 256 TZD antibetic agents, 258 diagnostic errors, the healthcare system and. 344 diaphragm, role in respiratory system, 145 diarrhea antacids and, 161 antidiarrheals, 167-168 diastolic phase (heart), 120 diastolic pressure (heart), 121 diffusion, role in respiratory system, 145

digestive enzymes, role in digestive system, 158 digestive system alimentary canal, 158 bowels antidiarrheals, 167-168 laxatives, 168-169 function of, 158 GI tract disorders antacids, 160-161 antispasmodics, 165 eructation (belching), 158 flatulence (passing gas), 159 GERD, 159 H pylori, 160 heartburn, 158 PUD, 158-160 reflux, 158 stress ulcers (acute ulcers), 160

histamine-2 antagonists, 161-162 large intestine, 158 peristalsis, 158 rectum, 158 small intestine, 158 stomach amino acids, 158 antiemetics, 166-167 chyme, 158 digestive enzymes, 158 gastric juices, 158 hyperemesis, 166 lavage (gastric), 166 PPI, 163-164 prostaglandins, 163 structure of, 158 diplopia (double vision), 265 disease carriers and infections, 180 disposing of drugs, 67 distal end (large intestine), 158 diuretics. 53

hypertension, 125 Lasix, 203

loop diuretics, 203 potassium-sparing diuretics, 204 thiazide diuretics, 203-204 urinary retention, 203-204 diversion (theft), ethical/legal issues, 41-42 DKA (Diabetic Ketoacidosis), 256 DM (Diabetes Mellitus), 254-255 complications from, 256-257 DKA, 256 drug therapy, 257-258 HHSN, 256 sulfonylureas agents, 258 symptoms/signs of, 256 TZD antibetic agents, 258 documentation. medication administration. 113 dopamine agonists, treatment of Parkinson's disease, 247 dopaminergic agents, ANS and, 227 dormant viruses and infections. 181 dorsal root (PNS), 225 doses calculating, 339 defining, 53 double vision (diplopia), 265 druas absorption/distribution of, 55 actions of, 53 additive effect, defining, 54 administering buccally, 70 ear drops, 71 eve drops, 71 inhaling, 71 intra-arterially, 72 intracardiacally, 72 intradermally, 71 intramuscularly, 72 intraosseously, 72 intrathecally, 72 intravascularly, 72

nose drops, 71 orally, 70 parenterally, 71 subcutaneously, 72 sublingually, 70 topically, 71, 104-105, 184-185 transdermally, 71 ADR, 55 allergic reactions, 55 antagonist effect, defining, 54 classifying, 52-53 contraindications, 56 defining, 52 disposing of, 67 doses, defining, 53 drug order, defining, 53 effectiveness of, 54 food and, 55 forms of caplets, 68 capsules, 68 creams, 71 elixirs, 69 liniments, 71 liquids, 69 lotions, 69-71 lozenges/troches, 69 ointments, 69-71 pastes, 69 powders/granules, 68 solutions, 69 suppositories, 69 suspensions, 70 syrups, 70 tablets, 68 tinctures, 69 idiosyncratic effect. defining, 54 implications of, 53 indications, defining, 53 information sources. 57 interactions, 55 labels, 65-66

IVs, 72

382 drugs

measurements, metric system equivalents table, 67 metabolism and, 54 naming, 52 narcotics sheets, 67 ordering clarifying orders, 63 components of an order. 62 confusion and, 63 dangerous terms/abbreviations table, 64-65 key terms/abbreviations table, 63-64 one-time drug orders, 62 PRN drug orders, 62 STAT drug orders, 62 TO, 62 VO. 62 overdoses, 55 packaging, 66 paradoxical effect, defining, 54 pharmacology, defining, 52 pharmacotherapeutics, defining, 52 placebo effect, defining, 54 potentiate effects, defining, 54 precautions, 56 receptor sites, multiple drugs using the same sites, 55 Schedule II drugs, diversion of. 42 side effects, 55-56 storing, 66-67 therapeutic effects, defining, 52-53 tolerance, defining, 54 toxicity, 55 duodenum, role in digestive system, 158 dura mater. 224 duties of Medication Aides. 34 DVT (Deep Vein Thrombosis), 135-136

dysphagia, GERD and, 159 dyspnea, 146-148 dysrhythmia, 131 dysuria, 196, 201

Ε

E.coli (Escherichia coli), 176, 196 ears aging's effects on, 268 air conduction, 268 central hearing loss, 268 cerumen (wax), 268-270 cochleas, 268 conductive hearing loss, 268 ear drops, 71 equilibrium, 268 Eustachian tubes, 268 external auditory meatus, 268 external otitis (swimmer's ear). 269 function of, 268 incus bones, 268 infections, 146 labyrinthitis, 268 malleus bones, 268 medication administration, 104 middle ear infections (otitis media), 146 otic drugs, 269-270 otitis media (middle ear infection), 146 ototoxic drugs, 186 pinna (auricle), 268 presbycusis, 268 sensorineural hearing loss, 268 stapes, 268 structure of, 268 tinnitus. 268 tympanic membrane, 268 vertigo, 269 EC (Enteric-coated) tablets, 68 ECG (Electrocardiograms), 121, 131

edema. 146 cerebral edema, urinary retention, 203 peripheral edema, 134 pitting edema, 134 pulmonary edema, 133, 203 EKG (Electrocardiographs), 121.131 elastic cartilage, 212 electrocardiographs, 121 elimination, process of (answering questions), 15 elixirs, 69 embolus, 123 emesis (vomit), GI bleeding, 242 emotions and the nervous system mental disorders antipsychotic agents, 295-296 anxiety, 288-290 bipolar disorder, 294 delusions, 294 depression, 290-293 hallucinations, 294 mood disorders, 290-294 paranoia, 290, 294 psychoses, 294-296 schizophrenia, 295-296 mental illness, defining, 288 neurohormonal agents, 288 serotonin, 288, 292 empathy, characteristics of Medication Aides, 40 emphysema, 149 endocardium (heart), 120 endochrondral ossification, cartilage and, 211 endocrine system function of, 252 structure of, 252 thyroid diseases DM. 254-258

Grave's disease, 253 hyperthyroidism, 252-253

myxedema, 253-254 thyroid-replacement hormones. 254 enzyme blockers. hypertension, 125 enzymes (digestive), role in digestive system, 158 epicardium (heart), 120 epiglottis, role in respiratory system, 144 EPS (Extrapyramidal Side Effects), antipsychotic agents and. 295 eauilibrium brain and, 224 ears and, 268 errors (medical) contributing factors of, 343 costs of, 343 diagnostic errors, 344 error prevention policies (medical), 37 systems, processes and conditions, 345 eructation (belching), 158 erythroleukemia, 277 erythropoiesis, 195 erythropoietin, 195 Escherichia coli. See E.coli (Escherichia coli) esophagitis, GERD and, 159 estrogen, 212 ethical/legal issues, 35 abuse, 41 libel. 44 mental abuse, 44 physical abuse, 44 reporting, 45 sexual abuse, 45 sexual harassment, 45 signs of, 45 slander, 44 aiding and abetting, 41 assault, 41 battery, 41 diversion (theft), 41

false imprisonment, 41 invasion of privacy, 41-43 involuntary seclusion, 41 lawsuits, 46 malpractice, 46 medical liability, 36 negligence, 41, 46 offensive language, 46 profanity, 46 romantic language, 46 suggestive language, 46 theft (diversion), 41 torts, 44 values. 46 veracity, 45 euphoria, bipolar disorder, 294 Eustachian tubes (ears), 268 euthanasia, ethics and, 46 eversion. 213 exams practice exams answers, 311-315, 327-331 questions, 301-310, 317-325 testing strategies answering questions, 14-15 Cram Sheet. 13 Exam Alerts, 13 last-minute crises, 16 positive attitude, 15 practice questions, 13 relaxation, 15 reviewing materials, 13 self-assessments, 16 exophthalmos. 253 expectorants lower respiratory tract illness, treating, 152 pneumonia treatments, 148 respiratory system, role in, 144 expiration, role in respiratory system, 144

extension, 212 external auditory meatus, ears and. 268 external otitis (Swimmer's ear), 269 external rotation, 212 exudating fluid, respiratory system, 147 eves acrochordons, 264 aging's effects on, 264-265 analgesics, 265 anti-infectives, 265 arcus senilis, 264 cataracts, 264 chalzion, 266 choroid, 264 conjunctiva, 264 corneas, 264 cycloplegic agents, 265 diplopia (double vision), 265 double vision (diplopia), 265 exophthalmos, 253 eve drops, 71 farsightedness (presbyopia), 264 floaters, 265 function of, 264 glaucoma, 265 infections bledpharitis, 266 conjunctivitis (pink eve), 266 hordeolum, 266 medications for treatment, 266-267 stys, 266 IOP. 265 irises. 264 lacrimal ducts, 264 medication administration, 102-103 miotic drugs, 265 mydriatics, 265 oculgyric crises, Parkinson's disease and, 246

How can we make this index more useful? Email us at indexes@quepublishing.com

384 eyes

> ophthalmic drugs, 265 optic nerves, 264 photophobia, 266 presbyopia (farsightedness), 264 refraction, 265 retinas, 264 retinopathy, 256 sclera, 264 sebaceous (oil) glands, 266 structure of, 264 vitreous humor, 264-265

F

face value (answering questions), 15 false imprisonment (ethical/legal issues), 41 farsightedness (presbyopia), 264 feedback/criticism, handling, 41 feelings (resident's), answering questions, 15 femoral pulse, 120 femurs, 210 fibrous cartilage, 211 fibulas and tibias. 210 finances (personal). Resident's Bill of Rights, 43 flat bones. 210 flatulence (passing gas), 159 flexibility, characteristics of Medication Aides, 40 flexion (joints), 210-212 flexor muscles, role in musculoskeletal system, 210 floaters (eyes), 265 flora (normal), role in infections. 176 fluoroquinolones/quinolones. See guinolones food, drugs and, 55 fractions, arithmetic review, 337-338 fractures (bones), 215

function of

CNA, 33 LPN, 33 Medication Aides, 32 legal limitations, 35 medical liability, 36 PCA, 33 PCT, 33 RN, 33 state regulatory agencies, 32 UAP, 33 fungicidal (antifungal) agents, 184-186 Furandantin, UTI treatments, 201

G

gas, passing (flatulence), 159 gastric juices, role in digestive system, 158 generic name (drugs), 52 **GERD** (Gastroesophageal Reflux Disease), 159 germs, 176, 183 GI (Gastrointestinal) tract antispasmodics, 165 bleeding, 242 digestive system, role in, 158 EC tablets, 68 eructation (belching), 158 flatulence (passing gas), 159 GERD, 159 H pylori, 160 heartburn, 158 PUD, 158-160 reflux, 158 stress ulcers (acute ulcers), 160 ulcers, antacids, 160-161 glaucoma, 203, 265 gliomas, 277 gloves, medication administration, 95 glycosuria, 195 goiters, 253

gonadotropic hormones (sex hormones), cancer and, 282 gout

gouty arthritis, 219 joint degeneration, 216 kidney stones, 216 purines, 215 tophi, 216 treatment corticosteroids, 216-217 NSAID, 218-219 uric acid, 215 uricemia. 216 grandeur, delusions of, 294 granules/powders, 68 Grave's disease, 253 gray matter (cerebrum), 224 grouping drugs. See classifying druas guaifenesin (Robitussin), treating lower respiratory tract illness, 152 guides (usage) herbals, 341 minerals, 342 vitamins, 342

H

H pylori (Helicobacter pylori), 160 HAI (Healthcare-Associated Infections), 180, 195 halitosis, GERD and, 159 hallucinations. 87, 294 hand washing, medication administration, 80, 94 harassment (sexual), ethical/legal issues, 45 HBV (Hepatitis B Virus), medication administration, 81 HDL (High-Density Lipoproteins), 123 healthcare system building safer systems, 343 AHRQ action plan, 347 **COGME**. 348

enforcing performance standards, 346 improvement strategies, 345 IOM findings, 344-347 Leapfrog Group, 348 NACNEP. 348 NASHP. 348 nationwide reporting systems. 346 safety systems, 347 To Err is Human: Building a Safer Health System, 349 medical errors contributing factors of. 343 costs of. 343 diagnostic errors, 344 systems, processes and conditions. 345 hearing hearing loss, 268 ototoxic drugs, 186 heart angina, 128-130 ANS and, 121 aortic valves, 120 arrhythmia, 131-133 arteries aoritic arteries, 121 arterioles. 121 coronary arteries, 121 stenosis, 125 atherosclerosis, 123 atria. 120 bradycardia, 120, 131 cardiac arrest, 123 cardiac output, 123 cardiologists, 121 cardiomegaly, 133 cardiotonic drugs, 134 cardiovascular system, role in, 119-120 cholesterol. 123 conductive activity, 121

congestive heart failure, 133-134 CPR. 123 defibrillation, 123 diastolic phase, 120 diastolic pressure, 121 dysrhythmia, 131 ECG, 121, 131 EKG, 121, 131 electrocardiographs, 121 embolus, 123 endocardium, 120 epicardium, 120 HDL, 123 heart attacks, 123 heartburn, 158 hyperlipidemia antihyperlipidemic drugs, 123 antilipidemic drugs, 124 statin drugs, 123 hypertension antihypertensive drugs, 126-128 HTN (primary hypertension), 124-126 hypotension, 126 hypoxia, 133 intracardially administering drugs, 72 LDL. 123 left-sided heart failure, 133 lipids, 123 MI. 123 mitral valves, 120 murmur, 134 myocardium, 120 nodes, 121 pulmonic valves, 120 pulse, 120 PVD, 134 antiplatelet agents, 136-137 arteriosclerosis obliterans, 135

DVT, 135-136 Revnaud's disease, 135 thromboembolic diseases, 136 right-sided heart failure, 134 septa, 120 sphygmomanometer, 121 systolic phase, 120 systolic pressure, 121 tachycardia, 120, 131 thrombus, 123 tricuspid valves, 120 valvular heart disease, 133 ventricles, 120 help, testing strategies answering questions, 14-15 Cram Sheet, 13 Exam Alerts, 13 last-minute crises, 16 positive attitude, 15 practice questions, 13 relaxation, 15 reviewing materials, 13 self-assessments, 16 hematopoiesis, 211 hemiparalysis, medication administration, 110 hemoptysis, lung cancer and, 149 Hepatitis B, 180 Hepatitis C, 181 hepatomegaly, 134 hepatoxicity, 55, 186 herbals. 53. 341 herpes, 181 HHNS (Hyperosmolar Hyperglycemic Nonketotic Syndrome), 256 histamines histamine-2 antagonists, 161-162 role in respiratory system, 146 **HIV (Human Immunodeficiency** Virus), 182 hives. 55 homeostasis, 120, 225

How can we make this index more useful? Email us at indexes@quepublishing.com

honesty (truthfulness), characteristics of Medication Aides, 39 hordeolum, 266 hormones

aldosterone, 125 androgen (male hormones), 282 cancer and, 276, 282-283 endocrine system, function in. 252 estrogen, 212 gonadotropic hormones (sex hormones), 282 HRT. 276 insulin, DM, 254, 257 thyroid-replacement hormones, 254 trophic hormones, endocrine system and, 252 urinary system ADH, 194 aldosterone, 194 erythropoietin, 195 hosts, role in infections, 176 HRT (Hormone Replacement Therapy), cancer and, 276 HTN (hypertension), urinary system, 194 humerus, 210 hyaline cartilage, 211 hygiene (hands), medication administration, 80 hyperemesis, 166 hyperglycemia, 195 defining, 55 symptoms/signs of, 255 hyperlipidemia antihyperlipidemic drugs, 123 antilipidemic drugs, 124 statin drugs, 123 hyperpnea, asthma and, 148 hypertension, 121 antihypertensive drugs, 126-128 HTN (primary hypertension), 124-126 pulmonary hypertension, 149 hyperthyroidism, 252-253 hypertonia, 213 hypnotics/sedatives, 53 hypocalcemia, 195 hypoglycemia, 257 hypokalemia, 203 hypotension, 121, 126 hypothalmus (cerebrum), 224 hypoxia, 133, 149

idiosyncratic effect (drugs), defining, 54 ilium, role in digestive system, 158 illness, pain's relationship to, 237 immunity and infections, 176 active immunity, 177 acquired immunity, 196 immunization process, 177 inoculation, 177 passive immunity, 177, 196 immunocompromised clients and infections. 179 immunosuppressive therapy, pneumonia and, 147 imprisonment (false), ethical/legal issues, 41 incident reports, medical-error prevention, 37 incus bones (ears), 268 indications (drugs), defining, 53 infarct, 123 infections acute infections, 146 AIDS, 182 anti-infective agents, 52, 186 antimicrobial agents, 183-184 antitubercular agents, 187 antiviral agents, 186 bacteremia, 187 cephalosporins, 187-188 clostridium perfringens, 176 disease carriers, 180

dormant viruses, 181 E.coli. 176 environmental conditions for, 176 germs, 176, 183 HAI, 180, 195 Hepatitis B, 180 Hepatitis C, 181 herpes, 181 hosts, 176 immunity, 176-177 immunocompromised clients. 179 local infections, 178 macrolides, 189 meningitis, 183 microbes, 176 normal flora, 176 older clients and, 179 osteomyelitis, 187 pancreatitis, 186 pathogens, 176 quinolones, 189 recovering from, 179 resistance, 183 septicemia, 183 signs/symptoms of, 178 staph infections, 180 sulfonamides, 189 superinfections, 183 systemic antifungal agents, 186 systemic infections, 178 TB (tuberculosis), 181, 187 tetracyclines, 189 topical antifungal (fungicidal) agents, 71, 104-105, 184-185 urinary tract infection (UTI), 183 antibiotics, 196-201 antimicrobial agents, 196 antiseptic effect, 196 anuria, 196 BPH. 195 cystitis, 196

drug therapy, 196-201 dysuria, 196, 201 E.coli, 196 Furandantin. 201 Macrodantin, 201 Mandelamine, 201 oliguria, 196 pathogens, 196 penicillins, 197-198 prostatitis, 195 pyelonephritis, 196 pyuria, 196 quinolones, 200-201 signs/symptoms of, 196 sulfa drugs, 198-199 tetracyclines, 199-200 urethritis, 196 urosepsis/uricemia, 196 wound infections, 183 information sources. drugs. 57 inhaling, administering drugs via. 71 inoculation and infections. 177 inspiration, role in respiratory system, 144 insulin, DM, 254, 257 intercostal muscles, role in respiratory system, 145 intercostal nerves, role in respiratory system, 145 intermittent pain, 236 internal rotation. 212 intestines. 158 intra-arterially administering drugs, 72 intracardially administering drugs, 72 intradermally administering drugs, 71 intramuscularly administering drugs, 72 intranasal corticosteroids, treating upper respiratory tract illness. 151-152 intraosseously administering drugs, 72

intrathecally administering drugs, 72 intravascularly administering drugs, 72 invasion of privacy (ethical/legal issues), 41-43 inversion. 213 involuntary seclusion (ethical/legal issues), 41 IOM (Institute of Medicine). building safer healthcare systems. 344-347 IOP (Intraocular Pressure), 265 irises. 264 irregular bones, 210 ischemia. 123 IV (Intravenous) therapy, 72

J-K-L

Jejunum, role in digestive system, 158 joints flexion, 210 gout, 216 musculoskeletal system, role in, 212

key words, focusing on (answering questions), 15 kidnevs aldosterone, 125 anuria. 196 dysuria, 196, 201 erythropoiesis, 195 erythropoietin, 195 HTN. 194 kidney stones, gout, 216 nephrons, 194 nephrotoxic drugs, 186 oliguria, 196 pyelonephritis, 196 pyuria, 196 renin. 125 tubules, 195 urinary system, role in, 194

labels (drugs), 65-66 labyrinthitis, 268 lacrimal ducts. 264 lactic acid, muscle spasms, 213 language (ethical/legal issues), 46 large intestine, role in digestive system, 158 larvnx (voice box), role in respiratory system, 144 Lasix. 203 last-minute crises, avoiding (testing strategies), 16 lavage (gastric), 166 lawsuits. 44-46 laxatives, 53, 168-169 LDL (Low-Density Lipoproteins), 123 Leapfrog Group, building safer healthcare systems, 348 left-sided heart failure, 133 legal/ethical issues, 35 abuse, 41 libel. 44 mental abuse, 44 physical abuse, 44 reporting, 45 sexual abuse, 45 sexual harassment, 45 signs of, 45 slander, 44 aiding and abetting, 41 assault, 41 battery, 41 diversion (theft), 41 false imprisonment, 41 invasion of privacy, 41-43 involuntary seclusion, 41 lawsuits, 46 malpractice, 46 medical liability, 36 negligence, 41, 46 offensive language, 46 profanity, 46 romantic language, 46 suggestive language, 46

How can we make this index more useful? Email us at indexes@quepublishing.com

legal/ethical issues

theft (diversion), 41 torts, 44 values, 46 veracity, 45 leukemia, 277, 281 leukocytes and immunity from infection, 177 leukopenia, cancer and, 279 liability (medical), 36 libel (ethical/legal issues), 44 ligaments, role in musculoskeletal system, 212 liniments, drugs as, 71 lipids, 123 liauids drugs as, 69 oral medication administration. 98-99 liver acetaminophen and liver damage, 244 hepatomogealy, 134 lobes (lungs), role in respiratory system, 145 local infections. 178 long bones, 210 loop diuretics, 203 lotions, drugs as, 69-71 lower respiratory tract COPD, 154 drug therapy antitussives, 152 bronchodilators, 153-154 expectorants, 152 guaifenesin (Robitussin), 152 SSKI (potassium iodide), 152 lozenges/troches, 69, 99-100 LPN (Licensed Practical Nurses), role/responsibilities of, 33 lumen (arteries), 122 lunas asthma, 148 atelectasis. 147 bronchitis, 148

cancer, 149 emphysema, 149 peripheral edema, 134 pitting edema, 134 pneumonia, 146 antibiotics, 148 antitussives, 148 aspiration pneumonia, 147 classifications of, 147 effects of, 147 expectorants, 148 immunosuppressive therapy, 147 mucolytic agents, 148 pneumococcal pneumonia, 147 primary pneumonia, 147 secondary pneumonia, 147 symptoms of, 148 treatment of, 148 viral pneumonia, 147 vomitus, 147 pulmonary circulation, 119 pulmonary edema, 133 respiratory system expiration, 144 inspiration, 144 lobes, 145 perfusion, 145 ventilation, 145 lymphatic system, role in cardiovascular system, 12 lymphomas, 277 lyse, 213

M

MA-C (Medication Assistant-Certified), 32 MACE (Medication Aide Certification Exam), testing strategies answering questions, 14-15

Cram Sheet, 13 Exam Alerts, 13

last-minute crises. 16 positive attitude, 15 practice questions, 13 relaxation. 15 reviewing materials, 13 self-assessments, 16 Macrodantin, UTI treatments, 201 macrolides, 189 main stem bronchi, role in respiratory system, 145 male hormones (androgen), 282 malignancy, cancer as, 276 malignant neoplasms (tumors), 276 carcinoma in situ, 282 drug therapy, 281 sarcomas, 282 malleus bones (ears), 268 malpractice, 46 Mandelamine. UTI treatments. 201 mandible, 210 MAOI (Monoamine Oxidase Inhibitors), 291-293 MAR (Medication Administration Record), 39 math review decimals, 337 changing fractions to decimals, 338 multiplying decimals by decimals, 339 doses, calculating, 339 fractions, 337-338 metrics conversions, 338 weights and measures table, 337 maxilla, 210 medical asepsis. medication administration, 80-81 medical errors contributing factors of, 343 costs of, 343 diagnostic errors, 344 systems, processes and conditions, 345

medical liability, 36 medical-error prevention polices. 37 medication administration accuracy of medications, assuring, 78 age and, 108 aphasic clients, 110 blood-borne pathogens, 81 CDC, 81 clients identification, 94 physical limitations, 109-110 cognitive limitations, 82 communication verbal, 38-39 written. 39 ears, 104 errors, causes and reporting of, 87-88 eves, 102-103 gloves, 95 hand hygiene, 80 hand washing, 94 HBV. 81 hemiparalysis, 110 medical asepsis, 80-81 medication skills performance checklist, 333-335 medicine cups, 80 mental preparation, 79-80 noncommunicative clients. 111 nose nasal inhalation, 102 nasal instillation, 101-102 oral. 333-335 liquids, 98-99 lozenges/troches, 99-100 powders, 99 solids, 96-98 sublinguals/buccals, 100 order of, 82 OSHA, 81

physical impairments, 82 policies, 36-37 physical preparation, 79-80 positioning clients, 95 post-administrative procedures client comfort, 112 client environment, 112 right documentation, 113 PPE, 80 procedures, explaining to clients, 95 rectal application, 107-109 refusal to take medication, 110 rights of medication administration, 37 right documentation, 86-87 right dose, 85 right drug, 83 right resident, 84 right route, 84 right time, 85-86 safety checks, 82 souffle cups, 79-80 swallowing difficulties, 81-82 therapeutic relationships, 111 topicals, transdermal installations, 71, 104-105, 184-185 vaginal application, 106-107 workstation preparation, 79 Medication Aides characteristics of accountability, 36, 40 being a team player, 41 caring, 39 conscientiousness, 40 dependability, 40 empathy, 40 flexibility, 40 honesty (truthfulness), 39 respect, 40

self-responsibility, 40 working well with others, 41 criticism/feedback. handling, 41 delegated tasks, 36 duties of. 34 job description per NCSBN, 33-34 MA-Cn designation, 32 Medication administration, 36-37 verbal communication, 38-39 written communication, 39 medication-error prevention policies, 37 responsibilities of, 35-36 role of, 35-36 medicine cups. medication administration. 80 medulla oblongata, 225 melanomas. 277 meningitis, 183 menopause, estrogen and, 212 mental abuse (ethical/legal issues). 44 mental health antidepressants, 292-293 antipsychotic agents, 295-296 anxiety anxiolytics, 290 benzodiazepines, 289 paranoia, 290 signs/symptoms of, 288-289 tranquilizers, 289 bipolar disorder, 294 delusions, 294 depression, 290 age and, 291 drug therapy, 291-293 signs/symptoms of, 291 suicidal ideation, 291 drug therapy anxiolytics, 290

benzodiazepines, 289 bipolar disorder, 294 mood disorders, 291-293 schizophrenia, 295-296 tranquilizers, 289 hallucinations, 294 MAOI, 291-293 mental illness, defining, 288 mood disorders, 290-294 nervous system and emotions, 288, 292 neurohormonal agents, 288 paranoia, 294 psychoses, 294-296 schizophrenia, 295-296 serotonin and, 288, 292 SSRI, 291-293 TCA. 291-293 metabolic diseases. See gout metabolism, factors influencing drug effectiveness, 54 metastasis. cancer and. 276 metric system conversions, arithmetic review. 338 drug measurements table, 67 weights and measures table, 337 MI (Myocardial Infarction), 123 microbes aerobic microbes, 176 anaerobic microbes, 176 antimicrobial agents, 183-184 micturition, role in urinary system, 194 midbrain, 225 middle ear infection (otitis media), 146 minerals, usage guide, 342 miotic druas. 265 mitotic inhibitors, cancer and, 281 mitral valves (heart), 120 Model Nurse Practice Act, 32 mood disorders bipolar disorder, 294

depression, 290 age and, 291 drug therapy, 291-293 signs/symptoms of, 291 suicidal ideation, 291 mucolytic agents, pneumonia treatments, 148 mucus, role in respiratory system, 145 multiplying decimals by decimals (arithmetic review), 339 murmur (heart), 134 muscles abduction, 212 abductor muscles, role in musculoskeletal system, 210 accessory muscles and emphysema, 149 adduction, 213 akinesia. 245 cardiac/heart muscle, role in cardiovascular system, 120 circumduction, 212 eversion, 213 extension, 212 external rotation, 212 flexion, 212 flexor muscles, role in musculoskeletal system, 210 hypertonia, 213 intercostal muscles, role in respiratory system, 145 internal rotation, 212 inversion, 213 pronation, 213 protraction, 213 relaxants, 214 retraction, 213 skeletal muscles, role in musculoskeletal system, 210 spasms, 213-214 spasticity, 213 striations, 210 supination, 213 voluntary muscles, role in musculoskeletal system, 210 musculoskeletal system abductor muscles, 210 bones bone resorption inhibitors, 215 classifying, 210-211 estrogen and calcium storage, 212 fractures, 215 osteoporosis, 215 skeletal density, 212 bursae, 212 cartilage, 211-212 corticosteroids and, 216-217 disorders of gout, 215-219 muscle spasms, 213 muscle spasticity, 213 osteoporosis, 215 flexion, 210 flexor muscles, 210 function of. 210-213 joints, 210-212 ligaments, 212 muscles abduction, 212 adduction. 213 circumduction, 212 eversion, 213 extension, 212 external rotation, 212 flexion. 212 internal rotation, 212 inversion, 213 pronation, 213 protraction, 213 relaxants, 214 retraction, 213 supination, 213 NSAID and, 218-219 skeletal muscles, 210 striations, 210 structure of, 210-213 tendons. 212 voluntary muscles, 210

mydriatics, 265 myelomas, 277 myeoblastic disease, cancer and, 279 myocardium (heart), 120 myxedema, 253-254

Ν

N & V (nausea and vomiting), 55 NACNEP (National Advisory Council on Nurse Education and Practice), building safer healthcare system, 348 naming drugs, 52 narcotic sheets and drug storage, 67 nasal inhalation (medication administration), 102 nasal instillation (medication administration), 101-102 Nasalcrom, treating upper respiratory tract illness, 151 NASHP (National Academy for State Health Policy), building safer healthcare systems, 348 nausea antiemetics, 166-167 N & V, 55 NCSBN (National Council of State Boards of Nursing), 32-34 negligence (ethical/legal issues), 41.46 neoplasms benign neoplasms, 276 malignant neoplasms (tumors), 276 carcinoma in situ, 282 drug therapy, 281 sarcomas, 282 nephrons (kidneys), role in urinary system, 194 nephrotoxicity, 55, 186 nerves intercostal nerves, role in respiratory system, 145 optic nerves, 264

nervous system

acetylcholine, 226 adrenergic agents and ANS, 226-227 adrenergic catecholamine, 225 alpha adrenergic blocking agents and ANS, 227-230 Alzheimer's disease, drug therapy, 244-245 analgesics and ANS, 235 NSAID. 241 opiate analgesics, 238-241 opiates and opiate-like drugs, 243 salicylates, 242 ANS adrenergic agents, 226-227 alpha adrenergic blocking agents, 227-230 analgesics, 235, 238-243 anticholinergics, 231-232 barbiturates, 232-233 benzodiazepines, 233-234 beta adrenergic blocking agents, 227-230 cholinergics, 226, 230-231 dopaminergic agents, 227 nonbarbiturates, 234-235 nonbenzodiazepines, 234-235 parasympathetic nervous system, 226 sedative-hypnotic drugs, 232-235 SNS. 225 anticholinergics and ANS, 231-232 barbiturates and ANS, 232-233 benzodiazepines and ANS, 233-234 beta adrenergic blocking agents and ANS, 227-230 cholinergics and ANS, 226, 230-231 CNS, 224-225

dopaminergic agents and ANS, 227 emotions and mental disorders antipsychotic agents, 295-296 anxiety, 288-290 bipolar disorder, 294 delusions, 294 depression, 290-293 hallucinations, 294 mental illness. 288 mood disorders, 290-294 neurohormonal agents, 288 paranoia, 290, 294 psychoses, 294-296 schizophrenia, 295-296 serotonin, 288, 292 function of. 224-226 homeostasis, 225 neuropathy, 257 nonbarbiturates and ANS, 234-235 nonbenzodiazepines and ANS, 234-235 norepinephrine, 225 parasympathetic nervous system. 226 Parkinson's disease, 245-247 PNS. 225-230 sedative-hypnotic drugs and ANS, 232-235 SNS, 225 structure of, 224-226 sympathomometics, 225 neurohormonal agents, nervous system and emotions, 288 neuron cell bodies (cerebrum), 224 neuropathy, 257 neutrophils and immunity from infection, 177 nitrates. 129-130 nitroglycerin, angina and, 129 Nocturia, 134

392 nodes (heart)

nodes (heart), 121 nonbarbiturates, ANS and, 234-235 nonbenzodiazepines, ANS and, 234-235 noncommunicative clients, medication administration. 111 nonmaleficence, 45 norepinephrine, 126, 225 normal flora, role in infections. 176 nose congestion (stuffy nose), 146 edema, 146 nasal inhalation. medication administration, 102 nasal instillation, medication administration. 101-102 nose drops, 71 rhinitis, 146 rhinorrhea, 146 septum, 146 sinusitis, 146 turbinates, 146, 150 NSAID (Nonsteroidal Anti-Inflammatory Agents), 53. 218-219.241 Nurse Practice Act, 32 nursing process, RN and, 35

0

OAB (Overactive Bladder), 202 obese clients, GERD and, 159 ocular/ophthalmic (eyes) installation (medication administration), 102-103 oculogyric crises, Parkinson's disease and, 246 offensive language (ethical/legal issues), 46 oil (sebaceous) glands, eyes and, 266 ointments, drugs as, 69-71 oliguria, 196 ombudsmen committees, 45 one-time drug orders, 62 ophthalmic drugs, 265 ophthalmic/ocular (eyes) installation (medication administration), 102-103 opiate analgesics, 238-243 opposite options (answering questions), 15 optic nerves, 264 option C (answering questions), 15 oral medication administration, 70, 333-335 liquids, 98-99 lozenges/troches, 99-100 powders, 99 solids, 96-98 sublinguals/buccals, 100 orderina druas clarifying orders, 63 components of an order, 62 confusion and, 63 dangerous terms/abbreviations table. 64-65 key terms/abbreviations table, 63-64 one-time drug orders, 62 PRN drug orders, 62 STAT drug orders, 62 TO, 62 VO, 62 orthopnea, 134 orthostatic hypotension, 126 **OSHA** (Occupational and Safety Health Administration), medication administration, 81 ossification (endochrondral). cartilage and, 211 osteomyelitis, 187 osteoporosis. 215 otic (ear) drugs, 269-270 otic (ear) installation (medication administration). 104 otitis media (middle ear infection), 146 ototoxicity defining, 55 ototoxic drugs, 186

overdoses, drug toxicity and, 55 oxygen cardiovascular system, role in, 119 hypoxia, 149 respiratory system, role in, 145 oxygenated blood, cardiovascu-

lar system, 119

Ρ

packaging drugs, 66 pain acute pain, 237 age and, 236 character of, 237 chronic pain, 238 duration of. 237 exacerbation of, 238 illness and, 237 intermittent pain, 236 location of. 238 meaning of, 237 onset of, 237 phantom pain, 238 precipitating factors of, 238 previous experiences with. 237 radiating, 238 rating, 237 relief of. 238 signs/symptoms of, 235-236 value of. 237 Wong-Baker Faces Pain Rating Scale, 237 pancreas endocrine system, function in, 252 hyperglycemia, 255 hypoglycemia, 257 pancreatitis, 186 paradoxical effect (drugs), defining, 54 paranoia, 290, 294 parasympathetic nervous system, 226

393 process of elimination (answering questions)

parasympathomimetic drugs. See cholinergics parenteral vaccinations, 71, 177 Parkinson's disease. 245-247 passing gas (flatulence), 159 passive immunity, 177, 196 pastes, drugs as, 69 patellas, 210 pathogens, 176, 196 pathophysiology, 119 PCA (Patient Care Assistants), 33 PCT (Patient Care Technicians), 33 PDR (Physician's Drug Reference), 57 penicillin. UTI treatments. 197-198 performance checklists, medication administration skills, 333-335 perfusion, role in respiratory system, 145 peripheral edema, 134 peristalsis, role in digestive system, 158 personal finances. Resident's Bill of Rights, 43 phantom pain, 238 pharmacology, defining, 52 pharmacotherapeutics. defining, 52 pharynx (throat), role in respiratory system, 144 phlegm, role in respiratory system, 144 photophobia, 266 physical abuse (ethical/legal issues), 44 physical limitations, clients with (medication administration), 82, 109-110 pia mater. 224 pink eye (conjunctivitis), 266 pinna (auricle), ears and, 268 pitting edema, 134 placebo effect, defining, 54

plaque cardiovascular system, 122 embolus, 123 thrombus, 123 pneumococcal pneumonia, 147 pneumonia, 146 antibiotics, 148 antitussives, 148 classifications of, 147 effects of, 147 expectorants, 148 immunosuppressive therapy, 147 mucolytic agents, 148 pneumococcal pneumonia, 147 primary pneumonia, 147 secondary pneumonia, 147 symptoms of, 148 treatment of, 148 viral pneumonia, 147 vomitus, 147 **PNS (Peripheral Nervous** System) ANS adrenergic agents, 226-227 alpha adrenergic blocking agents, 227-230 analgesics, 235, 238-243 anticholinergics, 231-232 barbiturates, 232-233 benzodiazepines, 233-234 beta adrenergic blocking agents, 227-230 cholinergics, 226, 230-231 dopaminergic agents, 227 nonbarbiturates, 234-235 nonbenzodiazepines, 234-235 parasympathetic nervous system, 226 sedative-hypnotic drugs, 232-235 SNS, 225

dorsal root, 225 teceptors, 225 ventral route, 225 policies medical-error prevention policies, 37 medication administration policies, 36-37 pons. 225 positioning clients, medication administration, 95 positive attitude, testing strategies, 15 potassium iodide (SSKI), treating lower respiratory tract illnesses. 152 potassium-sparing diuretics, 204 potentiate effects (drugs), defining, 54 powders/granules, 68, 99 PPE (Personal Protective Equipment), medication administration, 80 PPI (Proton Pump Inhibitors), 163-164 practice exams answers practice exam I. 311-315 practice exam II, 327-331 questions practice exam I, 301, 303-310 practice exam II, 317-325 practice questions, testing strategies, 13 precautions (drugs), 56 presbycusis, 268 presbyopia (farsightedness), 264 primary pneumonia, 147 privacy (invasion of). ethical/legal issues, 41-43 PRN drug orders, 62 procedures, explaining to clients (medication administration). 95 process of elimination (answering questions), 15

profanity (ethical/legal issues), 46 professional boundaries, ethics and. 46 prokinetics, GERD and, 159 pronation, 213 prostaglandins, 163 prostatitis, 195 protraction, 213 psychoses antipsychotic agents, 295-296 delusions, 294 delusions of grandeur, 294 hallucinations, 294 paranoia, 294 schizophrenia, 295-296 PUD (Peptic Ulcer Disease). 158-160 pulmonary (lung) circulation. cardiovascular system, 119 pulmonary edema, 133, 203 pulmonary hypertension, 149 pulmonic valves (heart), 120 pulse, role in cardiovascular system, 120 purines, gout and, 215 PVD (Peripheral Vascular Disease), 134 antiplatelet agents, 136-137 arteriosclerosis obliterans, 135 DVT, 135-136 Reynaud's disease, 135 thromboembolic diseases, 136 pyelonephritis, 196 pyuria, 196

questions

answering face value, 15 focusing on key words, 15 opposite options, 15 option C, 15

0

process of elimination, 15 resident's feelings, 15 rethinking the question in your own words, 14 safety concerns, 15 taking time, 14 umbrella terms, 14 practice exam I, 301-310 practice questions, testing strategies, 13 **quinolones, 189, 200-201**

R

radial pulse, 120 radiating pain, 238 radius and ulna, 210 **RBC (Red Blood Cells)**, 211 reaction to drugs (side effects), 55-56 receptor sites (drugs), multiple drugs using the same receptor sites, 55 receptors, 225 rectal application, medication administration. 107-109 rectum, role in digestive system, 158 reflux (GI tract disorder), 158 refraction, 265 refusal to take medication. medication administration. 110 regulatory agencies (state), role of, 32 regurgitation, 121, 159 relaxants (muscle), 214 relaxation, testing strategies, 15 renal calculi (kidney stones), gout and, 216 renin. 125 renin-angiotensinaldosterone, 125 reporting abuse (ethical/legal issues), 45

reports

incident reports, medicalerror prevention, 37 MAR. 39 Medication administration, 39 Resident's Bill of Rights, 42-44 resident's feelings (answering questions), 15 resistance and infections. 183 respect, characteristics of Medication Aides, 40 respiratory arrest, anaphylaxis, 56 respiratory system allergen-antibody responses, 146 alveoli, 145 aortic bodies, 145 ARDS, 147 arteries, 145 asthma. 148 bronchioles, 145 bronchitis, 148 cancer, 149 carbon dioxide, 145 carotid bodies, 145 congestion (stuffy nose), 146 COPD, 154 cough reflex, 145 diaphragm, 145 diffusion, 145 disorders, causes of, 145 dyspnea, 146 emphysema, 149 epiglottis, 144 expectorant, 144 expiration, 144 exudating fluid, 147 function of, 144-146 histamine, 146 hypoxia, 149 inspiration, 144 intercostal muscles, 145 intercostal nerves, 145 larynx (voice box), 144

seclusion (involuntary), ethical/legal issues

lower respiratory tract antitussives, 152 bronchodilators, 153-154 COPD, 154 drug therapy, 152-154 expectorants, 152 guaifenesin (Robitussin), 152 SSKI (potassium iodide), 152 lungs, 144 ateletasis, 147 cancer. 149 lobes, 145 perfusion, 145 ventilation, 145 main stem bronchi, 145 mucus, 145 nose, turbinates, 150 otitis media (middle ear infection). 146 oxygen, 145 pharynx (throat), 144 phlegm, 144 pneumonia, 146 antibiotics, 148 antitussives, 148 aspiration pneumonia, 147 classifications of, 147 effects of, 147 expectorants, 148 immunosuppressive therapy, 147 mucolytic agents, 148 pneumococcal pneumonia, 147 primary pneumonia, 147 secondary pneumonia, 147 symptoms of, 148 treatment of, 148 viral pneumonia, 147 vomitus, 147 pulmonary hypertension, 149 rhinitis, 146 rhinorrhea, 146

right ventricular hypertrophy, 149 secondary bronchi, 145 septum, 146 sinusitis, 146 sputum, 144 structure of, 144-146 trachea (windpipe), 144 trachea-bronchial tree, 145 upper respiratory tract anti-inflammatory agents, 151 antihistamines, 150-151 cancer. 149 decongestants, 150-151 drug therapy, 150-152 intranasal corticosteroids. 151-152 Nasalcrom, 151 responsibilities of CNA. 33 LPN, 33 Medication Aides, 32, 35-36, 40 PCA, 33 PCT, 33 RN, 33 UAP, 33 rethinking the question in your own words (answering questions), 14 reticular formation (brain), 225 retinas. 264 retinopathy, 256 retraction (muscles), 213 reviewing materials (testing strategies), 13 Reynaud's disease, 135 rhinitis. 146 rhinorrhea, 146 right ventricular hypertrophy, 149 right-sided heart failure, 134 rights of medication administration right documentation, 86-87 right dose, 85

right drug, 83 right resident, 84 right route, 84 right time, 85-86 **RN (Registered Nurses)** delegators, RN as, 35 nursing process, 35 responsibilities of, 33 role of. 33 Robitussin (quaifenesin). treating lower respiratory tract illnesses. 152 role of CNA, 33 LPN, 33 Medication Aides, 32 legal limitations, 35 medical liability, 36 PCA, 33 PCT. 33 RN, 33 state regulatory agencies, 32 UAP, 33 romantic (ethical/legal issues), 46 rotation (muscles), 212

S

safety concerns (answering questions), 15 medication administration and, 82 salicylates, 242 sarcomas, 277, 282 scapulas, 210 Schedule II drugs, diversion of. 42 schizophrenia, 295-296 sclera, 264 scope of practice. See Nurse Practice Act scored tablets, 68 sebaceous (oil) glands, eyes, 266 seclusion (involuntary), ethical/legal issues, 41

secondary bronchi, role in respiratory system

secondary bronchi, role in respiratory system, 145 secondary pneumonia, 147 sedative-hypnotic drugs. ANS and, 232-235 sedatives/hypnotics, 53 self-assessments, testing strategies, 16 self-responsibility, characteristics of Medication Aides. 40 sensorineural hearing loss, 268 septa (heart), 120 septicemia, 183 septum (nose), 146 serotonin, nervous system and emotions, 288, 292 sesamoids, 210 severe dyspnea, 146 sex hormones (gonadotropic hormones), 282 sexual abuse (ethical/legal issues), 45 sexual harassment (ethical/legal issues), 45 short bones. 210 side effects (drugs), 55-56 signs/symptoms anxiety, 288-289 cancer, 278 depression, 291 schizophrenia, 295 UTI. 196 sinusitis. 146 six rights (principles) of administering medications. 37 skeletal muscles, role in musculoskeletal system, 210 slander (ethical/legal issues), 44 small intestine, role in digestive system, 158 SNS (Sympathetic Nervous System), 225 solfonamides, 189 solids, oral medication administration. 96-98 solutions, drugs administered as, 69

souffle cups, medication administration, 79-80 spasms (muscles), 213 lyse, 213 treatment by spasmolytic agents, 213-214 spasticity (muscles), 213 speech, noncommunicative clients and (medication administration), 111 sphygmomanometers, 121 spinal cord, CNS, 224-225 Spironlactone (Aldactone), 204 Sputum, role in respiratory system. 144 SR (sustained-release) capsules, 68 SSKI (potassium iodide), treating lower respiratory tract illness. 152 SSRI (Selective Serotonin Reuptake Inhibitors), 291-293 stagnation, 147 stapes (ears), 268 staph (staphylococcus aureus) infections, 180 STAT drug orders, 62 state regulatory agencies medication administration policies, 36 role of, 32 statin drugs anorexia. 124 hyperlipidemia, 123 stenosis (arteries), 125 steroids, treating upper respiratory tract illness, 151 stethoscopes, 121 stomach amino acids, 158 antiemetics, 166-167 chyme, 158 digestive enzymes, 158 digestive system, role in, 158 gastric juices, 158 hyperemesis, 166

lavage (gastric), 166 PPI, 163-164 prostaglandins, 163 stomatitis, cancer and, 279 storina druas. 66-67 stress ulcers (acute ulcers), 160 striations, 210 stuffy nose (congestion), 146 stvs. 266 subcutaneously administering drugs, 72 sublinguals/buccals, oral medication administration, 70, 100 suggestive language (ethical/legal issues), 46 suicidal ideation, depression and, 291 sulfa drugs, UTI treatments, 198-199 sulfonvlureas agents, DM drug therapy, 258 superinfections, 183 supination, 213 suppositories, 69 surfactant, 147 suspensions, drugs administered as. 70 swallowing difficulties. medication administration and, 81-82 swimmer's ear (external otitis), 269 sympathomometics, 225 symptoms/signs anxiety, 288-289 cancer, 278 depression, 291 schizophrenia, 295 UTI, 196 syrups, drugs as, 70 systemic antifungal agents, 186 systemic circulation. role in cardiovascular system, 119 systemic infections. 178 systolic phase (heart), 120 systolic pressure (heart), 121

397 ulcers

Т

tables, weights and measures (arithmetic review), 337 tablets. 68 tachycardia, 120, 131 tardive dyskinesia, antipsychotic agents and, 295 tarry (sticky) stools. Gl bleeding, 242 tarsals and carpals, 210 **TB** (Tuberculosis), 181, 187 TCA (Tricyclic Antidepressants), 291-293 team player (being a), characteristics of Medication Aides, 41 temporal pulse, 120 tendons, role in musculoskeletal system, 212 testing strategies answering questions face value, 15 focusing in key words, 15 opposite options, 15 option C, 15 process of elimination, 15 resident's feelings, 15 rethinking the question in your own words, 14 safety concerns, 15 taking time, 14 umbrella terms, 14 Cram Sheet, 13 Exam Alerts. 13 last-minute crises, avoiding, 16 positive attitude, 15 practice questions, 13 relaxation, 15 reviewing materials, 13 self-assessments, 16 tests. See exams (practice exams) tetracyclines, 189, 199-200 thalmus (cerebrum), 224

theft (diversion), ethical/legal issues, 41-42 therapeutic effect (drugs), defining, 52-53 therapeutic relationships, medication administration. 111 thiazide diuretics. 203-204 throat (pharynx), role in respiratory system, 144 thrombocytopenia, 55, 279 thromboembolic diseases, 136 thrombus (blood clots), 123 thvroid cretins, symptoms/signs of, 253-254 DM, 254-255 complications from, 256-257 DKA, 256 drug therapy, 257-258 HHSN, 256 sulfonylureas agents, 258 symptoms/signs of, 256 TZD antibetic agents, 258 endocrine system, function in. 252 exophthalmos, 253 goiters, 253 Grave's disease, 253 hyperthyroidism, 252-253 myxedema, 253-254 thyroid-replacement hormones, 254 thyroiditis, 253 toxic adenoma, 253 tibias and fibulas. 210 time, taking (answering questions), 14 time-release capsules, 68 tinctures. 69 tinnitus, 268 TO (telephone orders), 62 To Err is Human: Building a Safer Health System, 349 tolerance (drugs), defining, 54 tophi (gout), 216

topicals and transdermal drug installations, 71, 104-105, 184-185 torts. 44 toxic adenoma, 253 toxicity (drugs), 55 trachea (windpipe), role in respiratory system, 144 trachea-bronchial tree, role in respiratory system, 145 trade name (drugs), 52 tranguilizers, anxiety and, 289 transdermal and topical drug installations, 71, 104-105, 184-185 tricuspid valves (heart), 120 triglycerides, 123 troches/lozenges, 69, 99-100 trophic hormones, function in endocrine system, 252 truthfulness (honesty), characteristics of Medication Aides, 39 TSH (Thyroid-Stimulating Hormone), endocrine system and, 252 tubules (kidneys), role in urinary system, 195 tumors (malignant neoplasms), 276 carcinoma in situ, 282 drug therapy, 281 sarcomas, 282 turbinates, 146, 150 tympanic membrane (ears), 268 TZD (Thiazolidinedione) antibetic agents, DM drug therapy, 258

U

UAP (Unlicensed Assistant Personnel), role/ responsibilities of, 33 ulcers antacids, 160-161 GERD and, 159 PUD, 158-160 stress ulcers (acute ulcers), 160

ulna and radius. 210 umbrella terms (answering auestions), 14 upper respiratory tract cancer, 149 drug therapy anti-inflammatory agents, 151 antihistamines, 150-151 decongestants, 150-151 intranasal corticosteroids, 151-152 Nasalcrom, 151 ureters. role in urinary system, 194 urethra urethritis, 196 urinary system, role in, 194 uric acid, gout and, 215 uricemia, gout and, 216 urinary retention. diuretics. 203-204 urinary system anemia, 195 antigens, 196 anuria, 196 bladder, role of, 194 BPH, 195 clearance (creatinine), role of, 194 cystitis, 196 dysuria, 196, 201 E.coli, 196 erythropoiesis, 195 function of, 194-195 glycosuria, 195 hormones ADH. 194 aldosterone, 194 ertyhropoietin, 195 HTN, 194 hyperglycemia, 195 hypocalcemia, 195 kidneys, role of, 194 micturition, role of, 194 nephrons, role of, 194

OAB, 202 oliguria, 196 prostatitis, 195 pyelonephritis, 196 pyuria, 196 structure of, 194-195 tubules, role of, 195 ureters, role of, 194 urethra, role of, 194 urethritis, 196 urinary retention, diuretics, 203-204 urinary tract infections, 183 urination, role of, 194 urine, role in, 194 urosepsis/uricemia, 196 UTI (Urinary Tract Infection) antibiotics, 196-201 antimicrobial agents, 196 antiseptic effect, 196 anuria. 196 BPH. 195 cystitis, 196 drug therapy, 196-201 dysuria, 196, 201 E.coli. 196 Furandantin, 201 Macrodantin, 201 Mandelamine, 201 oliguria, 196 pathogens, 196 penicillins, 197-198 prostatitis, 195 pyelonephritis, 196 pyuria, 196 quinolones, 200-201 sings/symptoms of, 196 sulfa drugs, 198-199 tetracyclines, 199-200 urethritis, 196 urosepsis/uricemia, 196 usage guides herbals, 341 minerals, 342 vitamins, 342

UTI (Urinary Tract Infection)

anuria, 196 BPH. 195 cystitis, 196 drug therapy antimicrobial agents, 196 Furandantin, 201 Macrodantin, 201 Mandelamine, 201 penicillins, 197-198 quinolones, 200-201 sulfa drugs, 198-199 tetracyclines, 199-200 dysuria, 196, 201 E.coli, 196 oliguria, 196 pathogens, 196 prostatitis, 195 pyelonephritis, 196 pyuria, 196 signs/symptoms of, 196 urethritis, 196 urosepsis/uricemia, 196 utricaria, defining, 55

V

vaccination and infections. 177, 186 vaginal application, medication administration, 106-107 values (ethics), 46 valvular heart disease, 133 varicella (chicken pox), 196 vasoconstriction. 228 vasodilator drugs. See nitrates vasospasms, 135 veins cardiovascular system, role in. 119 venules, 121 ventilation, role in respiratory system, 145 ventral route (PNS), 225 ventricles (heart), 120

venules, 121 veracity, 45 verbal communication, medication administration, 38-39 vertebrae, 210 vertigo, 269 viral pneumonia, 147 viruses antiviral agents, 186 attenuated viruses, 186 dormant viruses and infections. 181 HIV, 182 vaccines, 186 vitamins, 53, 342 vitreous humor, 264-265 VO (Verbal Orders), 62 voice box (larynx), role in respiratory system, 144 voluntary muscles, role in musculoskeletal system, 210 vomit antimetics, 166-167 GI bleeding, 242 hyperemesis, 166 N & V, 55 pneumonia, 147

W-X-Y-Z

washing hands, medication administration, 94 wax (cerumen), ears and, 268-270 WBC (White Blood Cells), 211 weights and measures table, 337 wheezing, asthma and, 148 white matter (axons), cerebrum and. 224 windpipe (trachea), role in respiratory system, 144 Wong-Baker Faces Pain Rating Scale, 237 working well with others, characteristics of Medication Aides. 41 wound infections. 183 written communication, medication administration, 39