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Lewis's Medical-Surgical Nursing

ASSESSMENT AND MANAGEMENT
OF CLINICAL PROBLEMS

12TH EDITION



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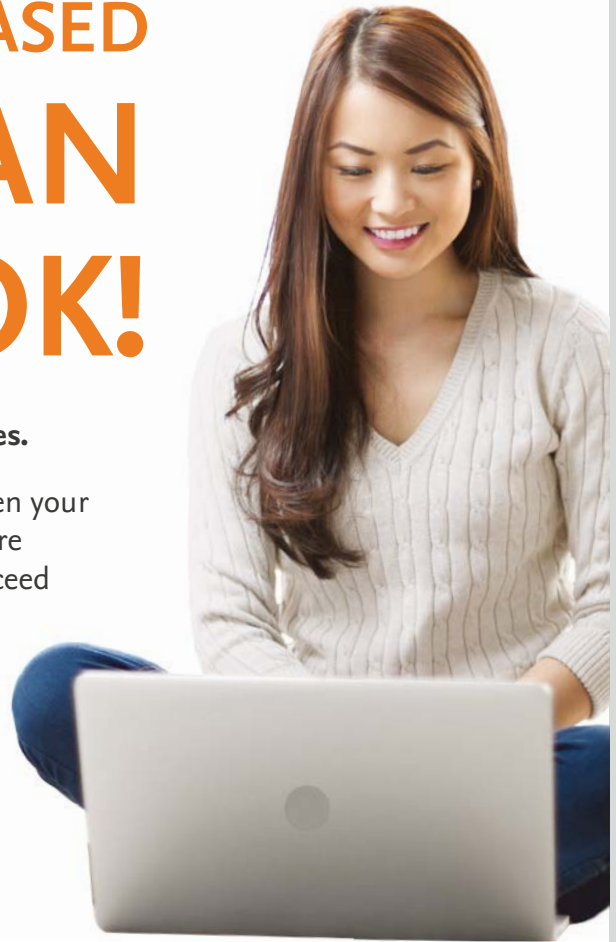
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CONTENTS

SECTION 1 Concepts in Nursing Practice

- 1 Professional Nursing, 1
- 2 Social Determinants of Health, 19
- 3 Health History and Physical Examination, 36
- 4 Patient and Caregiver Teaching, 49
- 5 Chronic Illness and Older Adults, 63
- 6 Caring for Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, and Gender Diverse Patients, 81

SECTION 2 Problems Related to Comfort and Coping

- 7 Stress Management, 93
- 8 Sleep and Sleep Disorders, 105
- 9 Pain, 119
- 10 Palliative and End-of-Life Care, 146
- 11 Substance Use Disorders in Acute Care, 162

SECTION 3 Problems Related to Homeostasis and Protection

- 12 Inflammation and Healing, 179
- 13 Genetics, 199
- 14 Immune Responses and Transplantation, 213
- 15 Infection, 237
- 16 Cancer, 265
- 17 Fluid, Electrolyte, and Acid-Base Imbalances, 302

SECTION 4 Perioperative and Emergency Care

- 18 Preoperative Care, 335
- 19 Intraoperative Care, 350
- 20 Postoperative Care, 365
- 21 Emergency and Disaster Nursing, 385

SECTION 5 Problems Related to Altered Sensory Input

- 22 Assessment and Management: Visual Problems, 407
- 23 Assessment and Management: Auditory Problems, 436
- 24 Assessment: Integumentary System, 456
- 25 Integumentary Problems, 471
- 26 Burns, 494

SECTION 6 Problems of Oxygenation: Ventilation

- 27 Assessment: Respiratory System, 515
- 28 Supporting Ventilation, 539
- 29 Upper Respiratory Problems, 577
- 30 Lower Respiratory Problems, 596
- 31 Obstructive Pulmonary Diseases, 632
- 32 Acute Respiratory Failure and Acute Respiratory Distress Syndrome, 672

SECTION 7 Problems of Oxygenation: Transport

- 33 Assessment: Hematologic System, 693
- 34 Hematologic Problems, 715

SECTION 8 Problems of Oxygenation: Perfusion

- 35 Assessment: Cardiovascular System, 767
- 36 Hypertension, 797
- 37 Coronary Artery Disease and Acute Coronary Syndrome, 819
- 38 Heart Failure, 859
- 39 Dysrhythmias, 884
- 40 Inflammatory and Structural Heart Disorders, 909
- 41 Vascular Disorders, 932
- 42 Shock, Sepsis, and Multiple Organ Dysfunction Syndrome, 961

SECTION 9 Problems of Ingestion, Digestion, Absorption, and Elimination

- 43** Assessment: Gastrointestinal System, 987
- 44** Nutrition Problems, 1009
- 45** Obesity, 1030
- 46** Upper Gastrointestinal Problems, 1050
- 47** Lower Gastrointestinal Problems, 1088
- 48** Liver, Biliary Tract, and Pancreas Problems, 1135

SECTION 10 Problems of Urinary Function

- 49** Assessment: Urinary System, 1177
- 50** Renal and Urologic Problems, 1195
- 51** Acute Kidney Injury and Chronic Kidney Disease, 1232

SECTION 11 Problems Related to Regulatory and Reproductive Mechanisms

- 52** Assessment: Endocrine System, 1265
- 53** Diabetes, 1285
- 54** Endocrine Problems, 1322
- 55** Assessment: Reproductive System, 1352
- 56** Breast Problems, 1371
- 57** Sexually Transmitted Infections, 1395

- 58** Female Reproductive Problems, 1412
- 59** Male Reproductive Problems, 1434

SECTION 12 Problems Related to Movement and Coordination

- 60** Assessment: Nervous System, 1461
- 61** Acute Intracranial Problems, 1483
- 62** Stroke, 1515
- 63** Chronic Neurologic Problems, 1538
- 64** Dementia and Delirium, 1573
- 65** Spinal Cord and Peripheral Nerve Problems, 1594
- 66** Assessment: Musculoskeletal System, 1622
- 67** Musculoskeletal Trauma and Orthopedic Surgery, 1638
- 68** Musculoskeletal Problems, 1674
- 69** Arthritis and Connective Tissue Diseases, 1696

APPENDIXES

- A** Basic Life Support for Health Care Providers, 1732
- B** Clinical Problems With Definitions, 1735
- C** Laboratory Reference Intervals, 1737

Index, I-1

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12TH EDITION

Lewis's Medical-Surgical Nursing

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The twelfth edition of *Lewis's Medical-Surgical Nursing: Assessment and Management of Clinical Problems* incorporates the most current medical-surgical nursing information in an easy-to-use format. This textbook is a comprehensive resource describing standards of nursing clinical practice for providing safe and comprehensive patient care. The text and accompanying resources include many features to help students learn key medical-surgical nursing content, including patient and caregiver teaching, gerontology, interprofessional care, diversity, patient safety, nutrition and drug therapy, evidence-based practice, and much more.

This edition features several important changes. **Chapter 2**, Social Determinants of Health, focuses on nursing awareness of patient circumstances on health outcomes. The discussion includes health status differences among groups of people related to access to care, economic aspects of health care, gender and cultural issues, and the nurse's role in promoting health equity.

New to this edition, **Chapter 6**, Caring for Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, and Gender Diverse Patients, addresses the unique health care needs of the LGBTQ+ population with the goal of promoting high-quality care.

Another new chapter to this edition is **Chapter 28**, Supporting Ventilation. Promoting a concept-based approach to optimizing ventilation, this chapter focuses on various strategies used to promote optimal ventilation and oxygenation. Covered content includes O₂ therapy, chest tubes, respiratory therapy, chest surgeries, and mechanical ventilation. Textbook reorganization to support a concept-based approach includes adding Acute Respiratory Failure and ARDS to the Ventilation Section and Shock, Sepsis, and MODS to the Perfusion Section.

Chapter 12, Inflammation and Healing, and **Chapter 15**, Infection, have been revised to include more concept-based care for the patient with an infection or experiencing inflammation. New tables addressing the nursing management of the patient with a fever and infection and antibiotic, antiviral, and antifungal Drug Therapy tables enhance the content. Care of the patient with COVID-19 infection is included.

Critical care nursing is now addressed throughout the textbook, an approach that reflects the needs of patients in various care environments. Varying levels of hemodynamic monitoring now occur outside the critical care unit and are included in the enhanced Cardiovascular System Assessment chapter. Similarly, advanced techniques to assess oxygenation are included in the new Supporting Ventilation chapter. Care of the patient experiencing problems such as pain, difficulty sleeping, and delirium are addressed in the respective textbook chapters.

Special content has been added to assist with NCLEX® preparation and the development of clinical judgment based on NCSBN's Clinical Judgment Measurement Model (CJMM). At the end of each unit, the reader will find Applying Clinical

Judgment With Multiple Patients, featuring traditional and Next-Generation NCLEX® (NGN)-style questions. Discussion questions in the management chapters' Case Studies focus on the 6 cognitive skills identified in the CJMM: Recognize Cues, Analyze Cues, Prioritize Hypotheses, Generate Solutions, Take Actions, and Evaluate Outcomes.

Great effort has been put into continuing to improve readability and lower the reading level. Readers will find clearer and easier-to-read language, with an engaging conversational style. The narrative addresses the reader, helping make the text more personal and an active learning tool.

ORGANIZATION

Content is organized into 2 major divisions. The first division, Sections 1 through 3 (**Chapters 1 through 17**), discusses general concepts related to the care of adult patients. The second division, Sections 4 through 13 (**Chapters 18 through 68**), presents nursing assessment and nursing management of medical-surgical problems. At the beginning of each chapter, the Conceptual Focus helps students focus on the key concepts and integrate concepts with exemplars affecting different body systems. Learning Outcomes and Key Terms assist students in identifying the key content for that chapter.

The various body systems are grouped to reflect their interrelated functions. Each section is organized around 2 central themes: assessment and management. Chapters dealing with assessment of a body system include a discussion of the following:

1. A brief review of anatomy and physiology, focusing on information that will promote understanding of nursing care
2. Health history and noninvasive physical assessment skills to expand the knowledge base on which treatment decisions are made
3. Common diagnostic studies, expected results, and related nursing responsibilities to provide easily accessible information

Management chapters focus on the pathophysiology, clinical manifestations, diagnostic studies, interprofessional care, and nursing management of various problems. The conceptual focus at the beginning of each chapter helps students focus on the key concepts and integrate concepts with exemplars affecting different body systems. The nursing management sections are organized into assessment, clinical problem, planning, implementation, and evaluation. To emphasize the importance of patient care in and across various clinical settings, nursing implementation is organized by the following levels of care:

1. Health Promotion
2. Acute Care
3. Ambulatory Care

SPECIAL FEATURES

- Features that are focused on developing clinical judgment include:
 - **Applying Clinical Judgment With Multiple Patients**, featuring traditional and **Next-Generation NCLEX® (NGN)-style** questions at the end of each unit
 - Prioritization questions in case studies and Bridge to NCLEX® Examination Questions.
 - **Enhanced! Case Studies** help students learn how to prioritize care and manage patients in the clinical setting. Discussion questions focus on the 6 cognitive skills identified in the CJMM, with a special focus on patient safety. For clarity, they are identified as Recognize, Analyze, Prioritize, Plan, Act, and Evaluate. Answer guidelines are provided on the Evolve website.
 - **Expanded! Nursing Management** tables focus on the actions nurses need to take to deliver safe, quality, effective patient care. Multiple new tables throughout the text focus on problems such as infection, fever, pressure injury, and inflammation.
 - **Expanded! Drug Therapy** tables provide more detailed information on associated nursing considerations. Concise **Drug Alerts** highlight important safety considerations for key drugs.
 - **Enhanced! Evidence-Based Practice** boxes use a case study approach to help students learn to use evidence in making decisions at the patient and systems levels.
 - Interprofessional care delivered by physicians, nurses, and other health care team members is highlighted in **Interprofessional Care** tables throughout the text.
 - **Safety Alert** boxes highlight important patient safety issues and focus on the US National Patient Safety Goals.
 - **Bridge to NCLEX® Examination** questions at the end of each chapter match the Learning Outcomes and help students learn the important points in the chapter. Answers are provided just below the questions for immediate feedback, and rationales are provided on the Evolve website.
 - Teaching is an ongoing theme and highlighted in **Patient & Caregiver Teaching** tables.
 - Gerontology is addressed throughout the text under Gerontologic Considerations headings and in **Gerontologic Assessment Differences** tables.
 - Nutrition is highlighted throughout the textbook. **Nutrition Therapy** tables summarize nutrition interventions and promote healthy lifestyles.
 - **Promoting Population Health** boxes address strategies to improve health outcomes as they relate to specific disorders, such as diabetes and cancer, and to health promotion, such as preserving hearing and maintaining a healthy weight.
 - **Check Your Practice** boxes challenge students to think critically, analyze patient assessment data, and implement the appropriate intervention. Scenarios and discussion questions are provided to promote active learning.
 - **Ethical/Legal Dilemmas** boxes promote critical thinking for timely and sensitive issues that nursing students may deal with in clinical practice—topics such as informed consent, advance directives, and confidentiality.

- **Emergency Management** tables outline the emergency treatment of health problems most likely to require emergency intervention.
- **Nursing Care Plans** on the Evolve website focus on common problems. These care plans incorporate clinical problems, Nursing Interventions Classification (NIC), and Nursing Outcomes Classification (NOC) in a way that clearly shows the linkages among NIC, NOC, and clinical problems and applies them to nursing practice.
- **Nursing Assessment** and **Health History** tables summarize key subjective and objective data related to common problems. Subjective data are organized by functional health patterns.
- **Assessment Abnormalities** tables in assessment chapters alert the nurse to commonly encountered abnormalities and their possible etiologies.
- **Focused Assessment** boxes in all assessment chapters provide brief checklists that help students conduct a more practical “assessment on the run” or bedside approach to assessment. They can be used to evaluate the status of previously identified health problems and monitor for signs of new problems.
- Genetics content includes:
 - **Genetics in Clinical Practice** boxes that summarize the genetic basis, genetic testing, and clinical implications for genetic disorders that affect adults.
 - A genetics chapter that focuses on practical application of nursing care, as it relates to this important topic.
 - **Genetic Risk Alerts** in the assessment chapters, which highlight key genetic risks
 - **Genetic Link** headings in the management chapters, which highlight the specific genetic bases of many disorders.
- **Biologic Sex Considerations** boxes discuss how biologic women and men are affected differently by conditions such as pain and hypertension.

LEARNING SUPPLEMENTS FOR STUDENTS

- The **Clinical Companion** presents more than 200 common medical-surgical problems and procedures in a concise, alphabetical format for quick clinical reference. Designed for portability, this popular reference includes the essential, need-to-know information for treatments and procedures in which nurses play a major role. An attractive and functional full-color design highlights key information for quick, easy reference.
- The revised **Study Guide** contains more than 500 pages of review material that reflects the content found in the textbook. It features a wide variety of clinically relevant exercises and activities, including NCLEX®-format multiple choice and alternate format questions, anatomy review, critical thinking activities, and much more. The revised case studies mirror the NCLEX® examination, with NGN-style case studies and questions reflecting the cognitive skills of the CJMM. It features an attractive full-color design and many alternate-item format questions to better prepare students for the NCLEX® examination. An answer key is included to provide students with immediate feedback as they study.

- The **Evolve Student Resources** are available online at <http://evolve.elsevier.com/Lewis/medsurg>. They include the following valuable learning aids organized by chapter:
 - Printable **Key Points** summaries for each chapter.
 - 1000 NCLEX® examination **Review Questions**.
 - **Answer Guidelines** to the case studies in the textbook.
 - **Rationales for the Bridge to NCLEX® Examination Questions** in the textbook.
 - 55 **Interactive Case Studies** with state-of-the-art animations and a variety of learning activities, which provide students with immediate feedback. Ten of the case studies are enhanced with photos and narration of the clinical scenarios.
 - Customizable **Nursing Care Plans** for more than 60 common patient problems.
 - **Conceptual Care Map Creator**.
 - **Audio Glossary** of key terms, available as a comprehensive alphabetical glossary and organized by chapter.
 - **Content Updates**.
- The **Test Bank** features more than 2000 NCLEX® test questions with text page references and answers coded for NCLEX® Client Needs category, nursing process, and cognitive level. The test bank includes hundreds of prioritization, delegation, and multiple patient questions. Alternate-item format questions are included. The ExamView software allows instructors to create new tests; edit, add, and delete test questions; sort questions by NCLEX® category, cognitive level, nursing process step, and question type; and administer and grade online tests.
- Unfolding and Standalone **Next-Generation NCLEX® (NGN) Examination–Style Case Studies** can be used to help strengthen students' clinical judgment and prepare them for NGN success.
- The **Image Collection** contains more than 800 full-color images for use in lectures.
- The **PowerPoint Presentations** include more than 125 different presentations focused on the most common patient problems. They feature unfolding case studies and NCLEX® examination questions for use with classroom response media.

TEACHING SUPPLEMENTS FOR INSTRUCTORS

- The **Evolve Instructor Resources** (available online at <http://evolve.elsevier.com/Lewis/medsurg>) remain the most comprehensive set of instructor's materials available, containing the following:
 - **TEACH for Nurses Lesson Plans** with electronic resources organized by chapter help instructors develop and manage the course curriculum. This exciting resource includes:
 - Objectives
 - Pre-class activities
 - Nursing curriculum standards
 - Student and instructor chapter resource listings
 - Teaching strategies, with learning activities and assessment methods tied to learning outcomes
 - Case studies with answer guidelines.

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We hope that this book will assist both students and clinicians in practicing truly professional nursing.

Mariann M. Harding
Jeffrey Kwong
Debra Hagler
Courtney Reinisch

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SECTION 1 Concepts in Nursing Practice

- 1 Professional Nursing, 1
- 2 Social Determinants of Health, 19
- 3 Health History and Physical Examination, 36
- 4 Patient and Caregiver Teaching, 49
- 5 Chronic Illness and Older Adults, 63
- 6 Caring for Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, and Gender Diverse Patients, 81

SECTION 2 Problems Related to Comfort and Coping

- 7 Stress Management, 93
- 8 Sleep and Sleep Disorders, 105
- 9 Pain, 119
- 10 Palliative and End-of-Life Care, 146
- 11 Substance Use Disorders in Acute Care, 162

SECTION 3 Problems Related to Homeostasis and Protection

- 12 Inflammation and Healing, 179
- 13 Genetics, 199
- 14 Immune Responses and Transplantation, 213
- 15 Infection, 237
- 16 Cancer, 265
- 17 Fluid, Electrolyte, and Acid-Base Imbalances, 302

SECTION 4 Perioperative and Emergency Care

- 18 Preoperative Care, 335
- 19 Intraoperative Care, 350
- 20 Postoperative Care, 365
- 21 Emergency and Disaster Nursing, 385

SECTION 5 Problems Related to Altered Sensory Input

- 22 Assessment and Management: Visual Problems, 407
- 23 Assessment and Management: Auditory Problems, 436
- 24 Assessment: Integumentary System, 456
- 25 Integumentary Problems, 471
- 26 Burns, 494

SECTION 6 Problems of Oxygenation: Ventilation

- 27 Assessment: Respiratory System, 515
- 28 Supporting Ventilation, 539
- 29 Upper Respiratory Problems, 577
- 30 Lower Respiratory Problems, 596
- 31 Obstructive Pulmonary Diseases, 632
- 32 Acute Respiratory Failure and Acute Respiratory Distress Syndrome, 672

SECTION 7 Problems of Oxygenation: Transport

- 33 Assessment: Hematologic System, 693
- 34 Hematologic Problems, 715

SECTION 8 Problems of Oxygenation: Perfusion

- 35 Assessment: Cardiovascular System, 767
- 36 Hypertension, 797
- 37 Coronary Artery Disease and Acute Coronary Syndrome, 819
- 38 Heart Failure, 859
- 39 Dysrhythmias, 884
- 40 Inflammatory and Structural Heart Disorders, 909
- 41 Vascular Disorders, 932
- 42 Shock, Sepsis, and Multiple Organ Dysfunction Syndrome, 961

SECTION 9 Problems of Ingestion, Digestion, Absorption, and Elimination

- 43 Assessment: Gastrointestinal System, 987
- 44 Nutrition Problems, 1009
- 45 Obesity, 1030
- 46 Upper Gastrointestinal Problems, 1050
- 47 Lower Gastrointestinal Problems, 1088
- 48 Liver, Biliary Tract, and Pancreas Problems, 1135

SECTION 10 Problems of Urinary Function

- 49 Assessment: Urinary System, 1177
- 50 Renal and Urologic Problems, 1195
- 51 Acute Kidney Injury and Chronic Kidney Disease, 1232

SECTION 11 Problems Related to Regulatory and Reproductive Mechanisms

- 52 Assessment: Endocrine System, 1265**
- 53 Diabetes, 1285**
- 54 Endocrine Problems, 1322**
- 55 Assessment: Reproductive System, 1352**
- 56 Breast Problems, 1371**
- 57 Sexually Transmitted Infections, 1395**
- 58 Female Reproductive Problems, 1412**
- 59 Male Reproductive Problems, 1434**

SECTION 12 Problems Related to Movement and Coordination

- 60 Assessment: Nervous System, 1461**
- 61 Acute Intracranial Problems, 1483**

- 62 Stroke, 1515**
- 63 Chronic Neurologic Problems, 1538**
- 64 Dementia and Delirium, 1573**
- 65 Spinal Cord and Peripheral Nerve Problems, 1594**
- 66 Assessment: Musculoskeletal System, 1622**
- 67 Musculoskeletal Trauma and Orthopedic Surgery, 1638**
- 68 Musculoskeletal Problems, 1674**
- 69 Arthritis and Connective Tissue Diseases, 1696**

APPENDIXES

- A Basic Life Support for Health Care Providers, 1732**
- B Clinical Problems With Definitions, 1735**
- C Laboratory Reference Intervals, 1737**

Index, I-1

CONCEPT EXEMPLARS

Acid–Base Balance

Chronic Kidney Disease
Diarrhea
Metabolic Acidosis
Metabolic Alkalosis
Respiratory Acidosis
Respiratory Alkalosis

Cellular Regulation

Anemia
Breast Cancer
Cervical Cancer
Colon Cancer
Endometrial Cancer
Head and Neck Cancer
Leukemia
Lung Cancer
Lymphoma
Melanoma
Prostate Cancer

Clotting

Disseminated Intravascular Coagulopathy
Pulmonary Embolism
Thrombocytopenia
Venous Thromboembolism

Cognition

Alzheimer Disease
Delirium

Elimination

Benign Prostatic Hypertrophy
Chronic Kidney Disease
Constipation
Diarrhea
Intestinal Obstruction
Pyelonephritis
Prostatitis
Renal Calculi

Fluids and Electrolytes

Burns
Hyperkalemia
Hypernatremia
Hypokalemia
Hyponatremia

Gas Exchange

Acute Respiratory Failure
Acute Respiratory Distress Syndrome
Asthma
Chronic Obstructive Pulmonary Disease
Cystic Fibrosis
Lung Cancer
Pulmonary Embolism

Glucose Regulation

Cushing Syndrome
Diabetes

Hormonal Regulation

Addison Disease
Hyperthyroidism
Hypothyroidism

Immunity

Allergic Rhinitis
Anaphylaxis
HIV Infection
Organ Transplantation
Peptic Ulcer Disease

Infection

Antimicrobial Resistant Infections
COVID-19
Health Care–Associated Infections
Hepatitis
Pneumonia
Tuberculosis
Urinary Tract Infection

Inflammation

Appendicitis
Cholecystitis
Glomerulonephritis
Pancreatitis
Pelvic Inflammatory Disease
Peritonitis
Rheumatoid Arthritis

Intracranial Regulation

Brain Tumor
Head Injury
Meningitis
Seizure Disorder
Stroke

Mobility

Fractures
Low Back Pain
Multiple Sclerosis
Osteoarthritis
Parkinson Disease
Spinal Cord Injury

Nutrition

Gastroesophageal Reflux Disease
Inflammatory Bowel Disease
Metabolic Syndrome
Malnutrition
Obesity

Perfusion

Acute Coronary Syndrome
Atrial Fibrillation
Cardiogenic Shock
Endocarditis
Heart Failure
Hyperlipidemia
Hypertension
Hypovolemic Shock
Mitral Valve Prolapse
Peripheral Artery Disease
Septic Shock
Sickle Cell Disease

Reproduction

Early Pregnancy Loss
Ectopic Pregnancy
Infertility

Sleep

Insomnia
Sleep Apnea

Sensory Perception

Cataracts
Glaucoma
Hearing Loss
Macular Degeneration
Otitis Media

Sexuality

Erectile Dysfunction
Leiomyomas
Menopause
Sexually Transmitted Infection

Thermoregulation

Frostbite
Heat Stroke
Hyperthyroidism

Tissue Integrity

Burns
Pressure Injuries
Wound Healing

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ASSESSMENT ABNORMALITIES TABLES

Auditory System, 23, p. 443
Breast, 55, p. 1365
Cardiovascular System, 35, p. 776
Endocrine System, 52, p. 1277
Female Reproductive System, 55, p. 1365
Fluid and Electrolyte Imbalances, 17, p. 325
GI System, 43, p. 1000
Hematologic System, 33, p. 703
Integumentary System, 24, p. 466
Male Reproductive System, 55, p. 1366
Musculoskeletal System, 66, p. 1632
Nervous System, 60, p. 1477
Respiratory System, 27, p. 528
Urinary System, 49, p. 1187
Vascular Skin Lesions, 33, p. 706
Visual System, 22, p. 416

BIOLOGIC SEX CONSIDERATIONS BOXES

AD, 64, p. 1576
Asthma, 31, p. 639
Cancer, 16, p. 266
Cholelithiasis, 48, p. 1167
COPD, 31, p. 657
Coronary Artery Disease and Acute Coronary Syndrome, 37, p. 822
Effects of Aging on Sexual Function, 55, p. 1359
Endocrine Problems, 54, p. 1330
Headaches, 63, p. 1541
Heart Failure, 38, p. 862
Hernia, 47, p. 1126
Hypertension, 36, p. 798
Lung Cancer, 30, p. 624
OA, 69, p. 1697
Older Adults, 5, p. 66
Osteoporosis, 68, p. 1689
STIs, 57, p. 1399
Urinary Incontinence, 50, p. 1218
Urinary Tract Stones, 50, p. 1207
Vascular Disorders, 41, p. 933

CASE STUDIES

End-of-Chapter Case Studies

Acute Respiratory Distress Syndrome, 32, p. 688
Alzheimer Disease, 64, p. 1592
Anal Cancer, 6, p. 90
Anaphylaxis, 14, p. 235
Ankylosing Spondylitis, 69, p. 1728
Benign Prostatic Hyperplasia With Acute Urinary Retention, 59, p. 1457
Breast Cancer, 56, p. 1393
Burn Injury, 26, p. 511
Chronic Kidney Disease, 51, p. 1260
Cirrhosis, 48, p. 1172

Colorectal Cancer, 47, p. 1132
COPD, 31, p. 669
DKA, 53, p. 1319
Dysrhythmia: Ventricular Tachycardia, 39, p. 907
Fluid and Electrolyte Imbalance, 17, p. 331
Glaucoma and Diabetic Retinopathy, 22, p. 434
Gonococcal Infection, 57, p. 1410
Graves Disease, 54, p. 1350
Health Disparities, 2, p. 33
Heart Failure, 38, p. 881
Hip Fracture and Revision Arthroplasty, 67, p. 1671
HIV Infection, 15, p. 262
Insomnia, 8, p. 117
Intraoperative Patient, 19, p. 363
Laryngeal Cancer, 29, p. 593
Leukemia, 34, p. 762
Mechanical Ventilation, 28, p. 574
Melanoma and Dysplastic Nevi, 25, p. 492
Ménière Disease, 23, p. 454
Myocardial Infarction, 37, p. 856
Obesity, 45, p. 1048
Older Adults, 5, p. 79
Osteoporosis/Hip Fracture, 68, p. 1693
Pain, 9, p. 144
Painful Bladder and Frequent Urination, 50, p. 1229
Patient and Caregiver Teaching, 4, p. 60
PCOS, 58, p. 1432
Peptic Ulcer Disease, 46, p. 1085
Peripheral Artery Disease, 41, p. 958
Pneumonia and Lung Cancer, 30, p. 629
Postoperative Patient, 20, p. 383
Preoperative Patient, 18, p. 348
Pressure Injury, 12, p. 196
Primary Hypertension, 36, p. 816
SCI, 65, p. 1619
Seizure Disorder With Headache, 63, p. 1570
Shock, 42, p. 982
Spiritual Distress at End of Life, 10, p. 159
Stress-Induced Illness, 7, p. 103
Stroke, 62, p. 1536
Substance Use Disorder, 11, p. 174
Trauma, 21, p. 403
Traumatic Brain Injury, 61, p. 1512
Undernutrition, 44, p. 1028
Valvular Heart Disease, 40, p. 929

Applying Clinical Judgment With Multiple Patients Case Studies

Perioperative and Emergency Care, Section 4, p. 405
Problems of Ingestion, Digestion, Absorption, and Elimination, Section 9, p. 1174
Problems of Oxygenation: Perfusion, Section 8, p. 984
Problems of Oxygenation: Transport, Section 7, p. 764
Problems of Oxygenation: Ventilation, Section 6, p. 690
Problems of Urinary Function, Section 10, p. 1263
Problems Related to Altered Sensory Input, Section 5, p. 513

Problems Related to Comfort and Coping, Section 2, p. 176
 Problems Related to Homeostasis and Protection, Section 3, p. 333
 Problems Related to Movement and Coordination, Section 12,
 p. 1730
 Problems Related to Regulatory and Reproductive Mecha-
 nisms, Section 11, p. 1459

Assessment Case Studies

Auditory System, 23, p. 438
 Cardiovascular System, 35, p. 773
 Endocrine System, 52, p. 1272
 Gastrointestinal System, 43, p. 994
 Hematologic System, 33, p. 700
 Integumentary System, 24, p. 460
 Musculoskeletal System, 66, p. 1627
 Nervous System, 60, p. 1470
 Reproductive System, 55, p. 1360
 Respiratory System, 27, p. 520
 Urinary System, 49, p. 1183
 Visual System, 22, p. 411

DIAGNOSTIC STUDIES TABLES

Auditory System, 23, p. 443
 Blood Studies: Urinary System, 49, p. 1189
 Cardiovascular System, 35, p. 788
 CBC Studies, 33, p. 708
 Clotting Studies, 33, p. 708
 Common Preoperative Diagnostic Studies, 18, p. 342
 Electrographic Studies: Nervous System, 60, p. 1481
 Fertility Studies, 55, p. 1369
 GI System, 43, p. 1002
 Hematologic System, 33, p. 711
 Integumentary System, 24, p. 468
 Interventional Studies, 55, p. 1368
 Interventional Studies: Cardiovascular System, 35, p. 793
 Interventional Studies: Musculoskeletal System, 66, p. 1636
 Laboratory Studies: GI System, 43, p. 1005
 Liver Function Tests, 43, p. 1006
 Miscellaneous Blood Studies, 33, p. 710
 Musculoskeletal System, 66, p. 1634
 Oxygenation, 27, p. 530
 Respiratory System, 27, p. 534
 Radiologic Studies: Endocrine System, 52, p. 1283
 Radiologic Studies: Male and Female Reproductive Systems,
 55, p. 1367
 Radiologic Studies: Nervous System, 60, p. 1479
 Respiratory System, 27, p. 534
 Serology Studies: Cardiovascular System, 35, p. 786
 Serology Studies: Male and Female Reproductive Systems, 55,
 p. 1367
 Serology Studies: Musculoskeletal System, 66, p. 1634
 Serology and Urine Studies: Endocrine System, 52, p. 1279
 Shock, 42, p. 964
 Sputum Studies, 27, p. 533
 Stroke, 62, p. 1523
 Urinary System, 49, p. 1190
 Urine, 49, p. 1188
 VTE, 41, p. 949
 Viral Hepatitis, 48, p. 1140
 Visual System, 22, p. 418

DRUG THERAPY TABLES

Acute and Chronic Glaucoma, 22, p. 432
 Acute and Chronic Pancreatitis, 48, p. 1162
 Adjuncts to General Anesthesia, 19, p. 361
 Adjuvant Drugs Used for Pain, 9, p. 133
 AD, 64, p. 1584
 Androgen Deprivation Therapy for Prostate Cancer, 59, p. 1447
 Antibiotics, 15, p. 242
 Anticoagulant Therapy, 41, p. 950
 Antidiarrheal Drugs, 47, p. 1091
 Antidysrhythmic Drugs, 39, p. 900
 Antihypertensive Agents, 36, p. 806
 Antithrombotic Therapy for Atrial Fibrillation and Atrial
 Flutter, 39, p. 895
 Antivirals for Herpes and Cytomegalovirus Infections, 15, p. 243
 Asthma, 31, p. 647
 Asthma and COPD, 31, p. 648
 Bacterial Community-Acquired Pneumonia, 30, p. 602
 Breast Cancer, 56, p. 1385
 Burns, 26, p. 504
 Causes of Medication Errors by Older Adults, 5, p. 77
 Chemotherapy, 16, p. 278
 Chronic Stable Angina and Acute Coronary Syndrome, 37, p.
 834
 Cirrhosis, 48, p. 1154
 Combination Therapy for Hypertension, 36, p. 809
 Common Bases for Topical Medications, 25, p. 488
 Common Preoperative Agents, 18, p. 345
 Constipation, 47, p. 1096
 Diseases/Disorders Treated With Corticosteroids, 54, p. 1348
 Disease-Modifying Drugs for Multiple Sclerosis, 63, p. 1559
 Diuretic Agents, 36, p. 808
 Drugs That May Cause Photosensitivity, 25, p. 472
 Effects and Side Effects of Corticosteroids, 54, p. 1348
 GERD and Peptic Ulcer Disease, 46, p. 1060
 General Anesthesia, 19, p. 360
H. pylori Infection, 46, p. 1071
 Heart Failure, 38, p. 869
 Hematopoietic Growth Factors Used in Cancer Treatment, 16,
 p. 292
 HIV Infection, 15, p. 254
 Hormone Therapy, 16, p. 291
 Hyperlipidemia, 37, p. 828
 Immunosuppressive Therapy, 14, p. 233
 Infertility, 58, p. 1413
 Inflammation and Healing, 12, p. 184
 Inflammatory Bowel Disease, 47, p. 1108
 Insomnia, 8, p. 110
 Insulin Plans, 53, p. 1292
 Leukemia, 34, p. 748
 LTBI Regimens, 30, p. 608
 Managing Side Effects of Pain Medications, 9, p. 128
 Methods of Chemotherapy Administration, 16, p. 278
 Nausea and Vomiting, 46, p. 1052
 OA, 69, p. 1700
 Obesity, 45, p. 1041
 Opioid Analgesics, 9, p. 131
 Oral Agents and Noninsulin Injectible Agents, 53, p. 1297
 Osteoporosis, 68, p. 1692
 Parkinson Disease, 63, p. 1564

Pulmonary Hypertension, 30, p. 621
 RA, 69, p. 1706
 Replacement Factors for Hemophilia, 34, p. 737
 Rhinitis and Sinusitis, 29, p. 582
 Safe Medication Use by Older Adults, 5, p. 77
 Select Antiseizure Agents, 63, p. 1549
 Select Immunotherapies and Targeted Therapies, 16, p. 289
 Select Nonopioid Analgesics, 9, p. 129
 Shock, 42, p. 973
 Smoking Cessation, 11, p. 166
 Suggested Options for COPD Treatment, 31, p. 663
 Tuberculosis, 30, p. 607
 Tuberculosis Treatment Regimens, 30, p. 608
 Types of Insulin, 53, p. 1291
 Viral HBV and HCV, 48, p. 1142
 Voiding Dysfunction, 50, p. 1222

EMERGENCY MANAGEMENT TABLES

Abdominal Trauma, 47, p. 1101
 Acute Abdominal Pain, 47, p. 1099
 Acute GI Bleeding, 46, p. 1083
 Acute Soft Tissue Injury, 67, p. 1641
 Acute Thyrotoxicosis, 54, p. 1334
 Anaphylactic Shock, 14, p. 225
 Chest Injuries, 30, p. 614
 Chest Pain, 37, p. 847
 Chest Trauma, 30, p. 614
 Depressant Toxicity, 11, p. 170
 DKA, 53, p. 1311
 Dysrhythmias, 39, p. 890
 Emergency Management Tables Throughout the Book, 21, p. 386
 Eye Injury, 22, p. 421
 Fractured Extremity, 67, p. 1650
 Head Injury, 61, p. 1500
 Hypertensive Crisis, 36, p. 815
 Hyperthermia, 21, p. 394
 Hypoglycemia, 53, p. 1313
 Hypothermia, 21, p. 395
 Inhalation Injury, 26, p. 500
 SCI, 65, p. 1600
 Shock, 42, p. 971
 Stimulant Toxicity, 11, p. 169
 Stroke, 62, p. 1526
 Submersion Injuries, 21, p. 397
 Tonic-Clonic Seizures, 63, p. 1548

ETHICAL/LEGAL DILEMMAS BOXES

Advance Directives, 31, p. 669
 Allocation of Resources, 51, p. 1256
 Board of Nursing Disciplinary Action, 11, p. 173
 Brain Death, 61, p. 1496
 Competence, 38, p. 875
 Confidentiality and HIPAA, 57, p. 1409
 Do Not Resuscitate, 40, p. 923
 Durable Power of Attorney for Health Care, 6, p. 86
 Entitlement to Treatment, 67, p. 1658
 Genetic Testing, 13, p. 210
 Good Samaritan, 21, p. 402
 Health Disparities, 2, p. 22

Individual vs. Public Health Protection, 15, p. 255
 Informed Consent, 18, p. 344
 Medical Futility, 16, p. 298
 Pain Management, 34, p. 728
 Pain Management at End of Life, 10, p. 152
 Patient Adherence, 30, p. 608
 Rationing, 48, p. 1157
 Religious Beliefs, 34, p. 757
 Right to Refuse Treatment, 65, p. 1611
 Scope and Standards of Practice, 39, p. 899
 Social Networking: HIPAA Violation, 1, p. 15
 Withdrawing Treatment, 51, p. 1260
 Withholding Treatment, 61, p. 508

EVIDENCE-BASED PRACTICE BOXES

Adherence to TB Treatment Program, 30, p. 610
 Breast Cancer Treatment, 56, p. 1388
 Condom Use and HIV, 15, p. 258
 Decreasing Readmissions for Heart Failure, 38, p. 875
 Depression in Patients With Hemophilia, 34, p. 738
 Effect of a Sexual Health Discharge Program, 59, p. 1443
 Enteral Nutrition and Stroke Rehabilitation, 62, p. 1532
 Health-Related Quality of Life in Patients With Cushing Syndrome, 54, p. 1345
 Hearing Aid Rehabilitation, 23, p. 452
 HPV Vaccine and Young Males, 57, p. 1403
 Interactive Self-Management and DM, 53, p. 1306
 Managing Pain in the Patient With Communication Problems, 9, p. 142
 The Mechanically Ventilated Patient and Early Mobilization, 28, p. 563
 Medication Adherence in Hypertension, 36, p. 814
 Nurse-Driven Protocol for Catheter Removal, 50, p. 1199
 Nutrition and FMS, 69, p. 1727
 Oral Health and CKD, 51, p. 1245
 Participating in Cardiac Rehabilitation, 37, p. 854
 Participating in Post-Fall Huddles, 1, p. 10
 Physical Activity and Chronic Obstructive Pulmonary Disease, 31, p. 667
 Postoperative Delirium, 64, p. 1591
 Preoperative Ostomy Education, 47, p. 1121
 Screening and Testing of Hepatitis C Virus, 48, p. 1145
 Self-Management Education for Ulcerative Colitis, 47, p. 1111
 Tanning Booths and Skin Cancer, 25, p. 472
 Technology-Based Devices and Preoperative Anxiety, 18, p. 337
 Use of Negative Pressure Wound Therapy (NPWT), 12, p. 191

FOCUSED ASSESSMENT BOXES

Auditory System, 23, p. 441
 Cardiovascular System, 35, p. 779
 Endocrine System, 52, p. 1278
 GI System, 43, p. 1002
 Hematologic System, 33, p. 707
 Integumentary System, 24, p. 465
 Musculoskeletal System, 66, p. 1634
 Nervous System, 60, p. 1476
 Reproductive System, 55, p. 1366
 Respiratory System, 27, p. 529
 Urinary System, 49, p. 1187
 Visual System, 22, p. 417

GENETICS IN CLINICAL PRACTICE BOXES

α_1 -Antitrypsin Deficiency, 31, p. 658
 AD, 64, p. 1577
 Ankylosing Spondylitis (AS), 69, p. 1714
 Breast Cancer, 56, p. 1377
 Cystic Fibrosis, 31, p. 635
 Diabetes, 53, p. 1287
 Duchenne and Becker Muscular Dystrophy (MD), 68, p. 1680
 Familial Adenomatous Polyposis (FAP), 47, p. 1114
 Familial Hypercholesterolemia, 37, p. 822
 Genetic Information Nondiscrimination Act (GINA), 13, p. 207
 Genetics in Clinical Practice Boxes Throughout the Book, 13, p. 205
 Hemochromatosis, 34, p. 729
 Hemophilia A and B, 34, p. 736
 Hereditary Nonpolyposis Colorectal Cancer (HNPCC) or Lynch Syndrome, 47, p. 1115
 Huntington Disease (HD), 63, p. 1569
 Ovarian Cancer and BRCA Genetic Mutations, 58, p. 1429
 Polycystic Kidney Disease (PKD), 50, p. 1214
 Sickle Cell Disease, 34, p. 725

GERONTOLOGIC ASSESSMENT DIFFERENCES TABLES

Adaptations in Physical Assessment Techniques, 3, p. 45
 Auditory System, 23, p. 438
 Cardiovascular System, 35, p. 772
 Cognitive Function, 5, p. 68
 Effects of Aging on Hematologic Studies, 33, p. 700
 Effects of Aging on the Immune System, 14, p. 219
 Endocrine System, 52, p. 1272
 GI System, 43, p. 994
 Integumentary System, 24, p. 459
 Musculoskeletal System, 66, p. 1627
 Nervous System, 60, p. 1470
 Reproductive Systems, 55, p. 1359
 Respiratory System, 27, p. 520
 Tables Throughout the Book, 5, p. 67
 Urinary System, 49, p. 1182
 Visual System, 22, p. 412

HEALTH HISTORY TABLES

Auditory System, 23, p. 439
 Cardiovascular System, 35, p. 774
 Endocrine System, 52, p. 1273
 Functional Health Pattern Format, 3, p. 39
 GI System, 43, p. 995
 Hematologic System, 33, p. 701
 Integumentary System, 24, p. 460
 Musculoskeletal System, 66, p. 1629
 Nervous System, 60, p. 1471
 Reproductive System, 55, p. 1361
 Respiratory System, 27, p. 522
 Urinary System, 49, p. 1184
 Visual System, 22, p. 413

INTERPROFESSIONAL CARE TABLES

Abnormal Uterine Bleeding, 58, p. 1419
 Acute Kidney Injury, 51, p. 1236
 Acute Pancreatitis, 48, p. 1162
 Acute Pericarditis, 40, p. 915
 Acute Pulmonary Embolism, 30, p. 618
 Acute Pyelonephritis, 50, p. 1201
 Acute Stroke, 62, p. 1523
 Addison Disease, 54, p. 1347
 AD, 64, p. 1582
 Amputation, 67, p. 1664
 Aortic Dissection, 41, p. 945
 ARDS, 32, p. 685
 ARF, 32, p. 678
 Asthma, 31, p. 644
 Bacterial Meningitis, 61, p. 1510
 Bladder Cancer, 50, p. 1217
 BPH, 59, p. 1437
 Breast Cancer, 56, p. 1381
 Burn Injury, 26, p. 501
 Cardiomyopathy, 40, p. 926
 Cataract, 22, p. 425
 Cervical Cord Injury, 65, p. 1601
 Chlamydial Infections, 57, p. 1397
 Cholelithiasis and Acute Cholecystitis, 48, p. 1169
 Chronic Otitis Media, 23, p. 446
 Cirrhosis, 48, p. 1152
 CKD, 51, p. 1243
 Colorectal Cancer, 47, p. 1116
 Comparison of Headaches, 63, p. 1539
 COPD, 31, p. 662
 Cor Pulmonale, 30, p. 622
 Cushing Syndrome, 54, p. 1343
 Diverticulosis and Diverticulitis, 47, p. 1124
 DKA and HHS, 53, p. 1310
 DM, 53, p. 1290
 ED, 59, p. 1455
 Esophageal Cancer, 46, p. 1063
 Fractures, 67, p. 1647
 GERD and Hiatal Hernia, 46, p. 1059
 Genital Herpes, 57, p. 1402
 Glaucoma, 22, p. 431
 Gonococcal Infections, 57, p. 1399
 Gout, 69, p. 1712
 Head and Neck Cancer, 29, p. 588
 Headaches, 63, p. 1540
 Heart Failure, 38, p. 867
 Hypertension, 36, p. 804
 Hyperthyroidism, 54, p. 1332
 Hypothyroidism, 54, p. 1336
 Inflammatory Bowel Disease, 47, p. 1108
 Increased Intracranial Pressure, 61, p. 1488
 Infertility, 58, p. 1413
 Insomnia, 8, p. 109
 Intervertebral Disc Disease, 68, p. 1684
 Iron Deficiency Anemia, 34, p. 720
 Kidney Cancer, 50, p. 1216
 Lung Cancer, 30, p. 626
 Ménière Disease, 23, p. 447

Multiple Sclerosis, 63, p. 1558
 Myasthenia Gravis, 63, p. 1567
 Neurogenic Bladder, 65, p. 1608
 Neutropenia, 34, p. 742
 OA, 69, p. 1699
 Obesity, 45, p. 1039
 Oral Cancer, 46, p. 1056
 Osteoporosis, 68, p. 1690
 Otosclerosis, 23, p. 446
 Parkinson Disease, 63, p. 1563
 Peptic Ulcer Disease, 46, p. 1070
 Peripheral Artery Disease, 41, p. 935
 Peritonitis, 47, p. 1104
 Pneumonia, 30, p. 601
 Premenstrual Disorders, 58, p. 1417
 Prostate Cancer, 59, p. 1445
 Pulmonary Tuberculosis, 30, p. 607
 RA, 69, p. 1705
 Retinal Detachment, 22, p. 428
 Rheumatic Fever, 40, p. 918
 Scleroderma, 69, p. 1722
 Seizure Disorder, 63, p. 1547
 Shock, 42, p. 975
 SLE, 69, p. 1719
 Stomach Cancer, 46, p. 1075
 Syphilis, 57, p. 1406
 Thrombocytopenia, 34, p. 733
 Trigeminal Neuralgia, 65, p. 1614
 UTI, 50, p. 1198
 Valvular Heart Disease, 40, p. 922
 Viral Hepatitis, 48, p. 1141

NURSING ASSESSMENT TABLES

Acute Coronary Syndrome, 37, p. 850
 Acute Pancreatitis, 48, p. 1163
 AD, 64, p. 1585
 Allergies, 14, p. 223
 Anemia, 34, p. 718
 ARF, 32, p. 677
 Assessment Techniques: Visual System, 22, p. 415
 Assessment Variations in Light- and Dark-Skinned Persons, 24, p. 466
 Asthma, 31, p. 653
 BPH, 58, p. 1440
 Breast Cancer, 56, p. 1387
 Care of Patient on Admission to Clinical Unit, 20, p. 382
 Cholecystitis or Cholelithiasis, 48, p. 1170
 Cirrhosis, 48, p. 1154
 Colorectal Cancer, 47, p. 1118
 Constipation, 47, p. 1098
 COPD, 31, p. 665
 Cushing Syndrome, 54, p. 1344
 Cystic Fibrosis, 31, p. 638
 Diarrhea, 47, p. 1092
 DM, 53, p. 1304
 Fracture, 67, p. 1651
 Head and Neck Cancer, 29, p. 591
 Head Injury, 61, p. 1501
 Headaches, 63, p. 1543
 Heart Failure, 38, p. 874
 Hepatitis, 48, p. 1143

Hypertension, 36, p. 811
 Hyperthyroidism, 54, p. 1333
 IBD, 47, p. 1110
 Infective Endocarditis (IE), 40, p. 912
 Leukemia, 34, p. 749
 Low Back Pain, 68, p. 1681
 Lung Cancer, 30, p. 628
 Malnutrition, 44, p. 1015
 Multiple Sclerosis, 63, p. 1560
 Nausea and Vomiting, 46, p. 1053
 Oral Cancer, 46, p. 1057
 Osteomyelitis, 68, p. 1676
 Pain, 9, p. 126
 Parkinson Disease, 63, p. 1565
 Patient With HIV, 15, p. 256
 Patient With Obesity, 45, p. 1037
 Peptic Ulcer Disease, 46, p. 1072
 Peripheral Artery Disease, 41, p. 937
 PID, 58, p. 1424
 Pneumonia, 30, p. 603
 Pressure Injuries, 12, p. 195
 Prostate Cancer, 59, p. 1449
 RA, 69, p. 1708
 Rheumatic Fever and Rheumatic Heart Disease, 40, p. 918
 SCI, 65, p. 1603
 Seizure Disorder, 63, p. 1552
 SLE, 69, p. 1720
 Sleep, 8, p. 111
 STIs, 57, p. 1406
 Stroke, 62, p. 1528
 Thrombocytopenia, 34, p. 734
 Upper GI Bleeding, 46, p. 1082
 Urinary Tract Stones, 50, p. 1211
 UTI, 50, p. 1199
 Valvular Heart Disease, 40, p. 925
 VTE, 41, p. 953
 Wound Assessment, 12, p. 188

NURSING MANAGEMENT TABLES

Acute COPD Exacerbation, 31, p. 666
 Acute Diverticulitis, 47, p. 1124
 Applying a Wet Compress, 25, p. 487
 Assessment and Data Collection, 3, p. 37
 Assisting With Cardioversion, 39, p. 901
 Blood Transfusions, 34, p. 759
 Care of the Hospitalized Older Adult, 5, p. 75
 Care of the Patient After Joint Surgery, 67, p. 1670
 Care of the Patient After a Hemorrhoidectomy, 47, p. 1130
 Care of the Patient After Pituitary Surgery, 54, p. 1325
 Care of the Patient After Spine Surgery, 68, p. 1685
 Care of the Patient After Thyroid Surgery, 54, p. 1335
 Care of the Patient Undergoing Bariatric Surgery, 45, p. 1045
 Care of the Patient Undergoing Cardiac Catheterization, 35, p. 794
 Care of the Patient Undergoing Closed Liver Biopsy, 43, p. 1007
 Care of the Patient Undergoing Lumbar Puncture, 60, p. 1479
 Care of the Patient Undergoing Paracentesis, 48, p. 1155
 Care of the Patient With Acute Ménière Disease, 23, p. 447
 Care of the Patient With Pneumonia, 30, p. 603
 Care of the Patient With Seizure Disorder, 63, p. 1553

Care of the Patient With a Urethral Catheter, 50, p. 1224
 Caring for the Patient Requiring Mechanical Ventilation, 28, p. 558
 Caring for the Patient With an Acute Stroke, 62, p. 1530
 Caring for the Patient With AD, 64, p. 1586
 Caring for the Patient With a Cast or Traction, 67, p. 1652
 Caring for the Patient With Chronic Venous Insufficiency, 41, p. 957
 Caring for the Patient With Delirium, 64, p. 1591
 Caring for the Patient With DM, 53, p. 1305
 Caring for the Patient With Hypertension, 36, p. 813
 Caring for the Patient With Incontinence, 50, p. 1222
 Caring for the Patient With Neutropenia, 34, p. 743
 Caring for the Patient With Osteomyelitis, 68, p. 1677
 Caring for the Patient With RA, 69, p. 1708
 Caring for the Patient With a Tracheostomy, 28, p. 571
 Caring for the Patient With VTE, 41, p. 953
 Caring for the Postoperative Patient, 20, p. 369
 Complications of IABP Therapy, 38, p. 879
 Decreasing Enteral Feeding Misconnections, 44, p. 1024
 Diarrhea, 47, p. 1092
 Elder Mistreatment, 5, p. 71
 Electrolyte and Acid-Base Imbalances, 17, p. 326
 EN, 44, p. 1023
 EN Problems, 44, p. 1023
 Fluid Volumes Changes, 17, p. 309
 HIV Infection, 15, p. 257
 Infection Prevention, 15, p. 241
 Interventions to Promote Health Equity, 2, p. 31
 IV Therapy, 17, p. 328
 Managing Distress in Breast Cancer, 56, p. 1390
 O₂ Administration, 28, p. 544
 Ostomy Care, 47, p. 1122
 Pain Management, 9, p. 139
 Patient Receiving Bladder Irrigation, 59, p. 1442
 Patient With a Bowel Obstruction, 47, p. 1113
 Patient With a Fever, 12, p. 184
 Patient Receiving Anticoagulants, 41, p. 954
 Percutaneous Coronary Intervention, 37, p. 839
 Physical Care at End of Life, 10, p. 157
 PN Infusions, 44, p. 1026
 Postmortem Care, 10, p. 159
 Problems Caused by Chemotherapy and Radiation Therapy, 16, p. 282
 Promoting Communication With the Patient With AD, 64, p. 1587
 Psychosocial Care at End of Life, 10, p. 155
 Skin Problems, 25, p. 487
 Specific Types of Tracheostomies, 28, p. 570
 Stoma and Cannula Care for a Tracheostomy, 28, p. 571
 Troubleshooting Pacemakers, 39, p. 906
 Ventilator Alarms, 28, p. 561
 Wound Care, 12, p. 187

NUTRITION THERAPY TABLES

1200-Calorie–Restricted Weight Reduction Diet, 45, p. 1039
 Celiac Disease, 47, p. 1128
 CKD, 51, p. 1245
 DM, 53, p. 1300
 Effects of Food on Stoma Output, 47, p. 1123

Foods High in Iron, 44, p. 1011
 Foods High in Protein, 44, p. 1010
 High-Calorie Foods, 16, p. 294
 High-Calorie, High-Protein Diet, 44, p. 1019
 High-Fiber Foods, 47, p. 1097
 High-Potassium Foods, 17, p. 315
 Low-Sodium Diets, 38, p. 873
 Maximizing Food Intake in COPD, 31, p. 664
 MyPlate Tips for a Healthy Lifestyle, 44, p. 1018
 Nutrients for RBC Production, 34, p. 719
 Postgastrectomy Dumping Syndrome, 46, p. 1078
 Protein Foods With High Biologic Value, 16, p. 294
 Sources of Calcium, 68, p. 1691
 Therapeutic Lifestyle Changes to Diet, 37, p. 826
 Tips to Make Diet and Lifestyle Changes, 37, p. 827
 Urinary Tract Stones, 50, p. 1211

PATIENT & CAREGIVER TEACHING TABLES

Acute Coronary Syndrome, 37, p. 852
 Acute or Chronic Sinusitis, 29, p. 586
 AD, 64, p. 1589
 Addison Disease, 54, p. 1347
 After Ear Surgery, 23, p. 446
 After Eye Surgery, 22, p. 426
 Anticoagulant Therapy, 41, p. 954
 Antiretroviral Drugs, 15, p. 259
 Asthma, 31, p. 657
 Automatic Epinephrine Injectors, 14, p. 225
 Autonomic Dysreflexia, 65, p. 1607
 Avoiding Allergens in Allergic Rhinitis, 29, p. 581
 Blood Glucose Monitoring (BGM), 53, p. 1303
 Bowel Management After SCI, 65, p. 1609
 Cancer Survivors, 16, p. 299
 Cardiomyopathy, 40, p. 929
 Cast Care, 67, p. 1653
 Cirrhosis, 48, p. 1157
 CKD, 51, p. 1247
 Constipation, 47, p. 1098
 COPD, 31, p. 666
 Corticosteroid Therapy, 54, p. 1349
 Decreasing the Risk for Antibiotic-Resistant Infection, 15, p. 243
 DM Management, 53, p. 1307
 Early Warning Signs of AD, 64, p. 1579
 Effective Huff Coughing, 28, p. 540
 Exercise for Patients With DM, 53, p. 1302
 FAST Warning Signs of Stroke, 62, p. 1516
 FITT Activity Guidelines for CAD, Chronic Stable Angina, and ACS, 37, p. 826
 Foot Care, 53, p. 1318
 Genetic Testing, 13, p. 207
 GERD, 46, p. 1059
 Halo Vest Care, 65, p. 1604
 Head Injury, 61, p. 1501
 Headaches, 63, p. 1544
 Heart Failure, 38, p. 876
 Heat and Cold Therapy, 9, p. 139
 Home O₂ Use, 28, p. 545
 How to Use a Dry Powder Inhaler (DPI), 31, p. 652
 How to Use Your Peak Flow Meter, 31, p. 656
 Hypertension, 36, p. 813

Hypothyroidism, 54, p. 1337
 Ileal Conduit Appliances, 50, p. 1228
 Implantable Cardioverter-Defibrillator (ICD), 39, p. 902
 Improving Adherence to ART, 15, p. 259
 Instructions for the Patient With DM, 53, p. 1307
 Joint Protection and Energy Conservation, 69, p. 1701
 Low Back Problems, 68, p. 1681
 Lower Extremity Amputation, 67, p. 1666
 Mitral Valve Prolapse (MVP), 40, p. 921
 Neutropenia, 34, p. 743
 Ostomy Self-Care, 47, p. 1122
 Pacemaker, 38, p. 906
 Pain Management, 9, p. 140
 Pelvic Floor Muscle (Kegel) Exercises, 50, p. 1221
 Peptic Ulcer Disease, 46, p. 1073
 Peripheral Artery Bypass Surgery, 41, p. 938
 Posterior Hip Replacement, 67, p. 1660
 Postoperative Laparoscopic Cholecystectomy, 48, p. 1171
 Preoperative Preparation, 18, p. 343
 Preparing an Insulin Injection, 53, p. 1293
 Pressure Injury, 12, p. 196
 Preventing External Otitis, 23, p. 444
 Preventing Food Poisoning, 46, p. 1084
 Preventing Musculoskeletal Problems in Older Adults, 67, p. 1639
 Prevention and Early Treatment of Lyme Disease, 69, p. 1713
 Prevention of Hypokalemia, 17, p. 316
 Protecting Small Joints, 69, p. 1709
 Pursed-Lip Breathing, 28, p. 540
 Radiation Skin Reactions, 16, p. 287
 Reducing Barriers to Pain Management, 9, p. 141
 Reducing Risk Factors for Coronary Artery Disease, 37, p. 825
 Seizure Disorder, 63, p. 1553
 Sexual Activity After Acute Coronary Syndrome, 37, p. 854
 Signs and Symptoms Patients With AIDS Need to Report, 15, p. 260
 Skin Care After SCI, 65, p. 1610
 SLE, 69, p. 1720
 Sleep Hygiene, 8, p. 110
 Smoking and Tobacco Use Cessation, 11, p. 165
 STIs, 57, p. 1408
 Surgical Discharge, 20, p. 382
 Thrombocytopenia, 34, p. 735
 UTI, 50, p. 1200

PROMOTING HEALTH EQUITY BOXES

AD, 64, p. 1576
 Brain Tumors, 61, p. 1502

Breast Cancer, 56, p. 1386
 Cancer, 16, p. 299
 Cancers of the Male Reproductive System, 59, p. 1443
 Chronic Kidney Disease, 51, p. 1239
 Colorectal Cancer, 47, p. 1114
 Coronary Artery Disease, 37, p. 821
 DM, 53, p. 1288
 Heart Failure, 38, p. 860
 Hypertension, 36, p. 798
 Liver, Pancreas, and Gallbladder Problems, 48, p. 1137
 Lung Cancer, 30, p. 624
 Obesity, 45, p. 1032
 Oral, Pharyngeal, and Esophageal Problems, 46, p. 1055
 Promoting Health Equity Boxes Throughout the Book, 2, p. 22
 STIs, 57, p. 1396
 Skin Cancer, 25, p. 474
 Stroke, 62, p. 1517
 Tuberculosis, 30, p. 604
 Visual Problems, 22, p. 414

PROMOTING POPULATION HEALTH BOXES

Decreasing Risk for Cognitive Decline, 64, p. 1585
 Health Impact of Good Oral Hygiene, 46, p. 1057
 Health Impact of Maintaining a Healthy Weight, 45, p. 1036
 Health Impact of Physical Activity, 67, p. 1640
 Health Impact of a Well-Balanced Diet, 44, p. 1010
 Improving the Health and Well-Being of LGBTQ+ Persons, 6, p. 86
 Maintaining a Healthy Weight, 45, p. 1038
 Preventing DM, 53, p. 1305
 Preventing OA, 69, p. 1701
 Preventing Respiratory Diseases, 30, p. 597
 Preventing STIs, 57, p. 1407
 Prevention and Detection of CKD, 51, p. 1247
 Prevention and Early Detection of Cancer, 16, p. 273
 Prevention and Early Detection of HIV, 15, p. 258
 Promoting Health in Older Adults, 5, p. 75
 Promoting Healthy Hearing, 23, p. 451
 Reducing Fall Risk, 67, p. 1639
 Reducing the Risk for Head Injuries, 61, p. 1501
 Reducing the Risk for Musculoskeletal Injuries, 67, p. 1639
 Responsible Eye Care, 22, p. 419
 Strategies to Reduce Burn Injury in Homes, 26, p. 495
 Stroke Prevention, 62, p. 1524

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Lewis's Medical-Surgical Nursing

ASSESSMENT AND MANAGEMENT OF CLINICAL PROBLEMS

Professional Nursing

Mariann M. Harding

ⓔ <http://evolve.elsevier.com/Lewis/medsurg/>

CONCEPTUAL FOCUS

Care Competencies
Leadership

Clinical Judgment
Professional Identity

LEARNING OUTCOMES

1. Describe the domain and definition of professional nursing practice.
2. Compare the different scopes of practice available to professional nurses.
3. Describe the role of clinical judgment skills and using a clinical practice framework to provide patient-centered care.
4. Apply the SBAR procedure and effective communication techniques in the clinical setting.
5. Explore the role of the professional nurse in delegating care to licensed practical/vocational nurses and assistive personnel.
6. Discuss the role of integrating safety and quality improvement processes into nursing practice.
7. Evaluate the role of informatics and health care technology in nursing practice.
8. Apply concepts of evidence-based practice to nursing practice.

KEY TERMS

advanced practice registered nurse (APRN)
clinical pathways
clinical judgment
delegation
electronic health records (EHRs)
evidence-based practice (EBP)
failure to rescue

interprofessional team
nursing
nursing process
patient handoff
SBAR (Situation-Background-Assessment-Recommendation)
serious reportable event (SRE)
telehealth

This chapter presents an overview of professional nursing practice, discussing the wide variety of roles and responsibilities nurses fulfill to meet society's health care needs. This overview includes the core abilities that are part of competent nursing practice. These include providing safe, patient-centered care and collaborating with others.

PROFESSIONAL NURSING PRACTICE

Domain of Nursing Practice

Today, nursing practice consists of a wide variety of roles and responsibilities necessary to meet society's health care needs.

You have never been more important to health care than you are today. As a nurse, you are at the forefront of patient care (Fig. 1.1). Beyond nursing's reputation for compassion and dedication lies a highly specialized profession.¹ Nursing continues to evolve to meet society's health care needs.

As a nurse, you (1) offer skilled care to those recovering from illness or injury, (2) advocate for patients' rights, (3) teach patients to manage their health, (4) support patients and their caregivers at critical times, and (5) help them navigate the complex health care system. You can practice in virtually all health care settings and communities. Although many nurses



Fig. 1.1 Nurses are frontline professionals of health care. (© LightField Studios/iStock/Thinkstock.)

work in acute care facilities, nurses may practice in long-term care, home care, community health, public health centers, schools, and ambulatory or outpatient clinics. Wherever you practice, recipients of your care include individuals, families, groups, or communities. Nurses work collaboratively with other health care providers to manage the needs of persons and groups.

Definitions of Nursing

Nursing is described as both an art and a science; a heart and a mind.¹ Well-known definitions of nursing show that the basic themes of caring, health, and illness have existed since Florence Nightingale first described nursing. Here are 2 such examples:

- Nursing is putting the patient in the best condition for nature to act (Nightingale).²
- The nurse's unique function is to aid patients, sick or well, in performing those activities contributing to health or its recovery (or to peaceful death) that they would perform unaided if they had the necessary strength, will, or knowledge—and to do this in such a way as to help them gain independence as rapidly as possible (Henderson).³

In 2010, the American Nursing Association (ANA) provided a new definition of nursing that reflects the ongoing evolution of nursing practice:

Nursing is the protection, promotion, and optimization of health and abilities, prevention of illness and injury, alleviation of suffering through the diagnosis and treatment of human response, and advocacy in the care of individuals, families, communities, and populations.⁴

Nursing's View of Humanity

In this book, we believe 7 dimensions of wellness contribute to health and quality of life: Physical, psychologic, social, spiritual, intellectual, career, and environmental. These dimensions are interrelated and not separate entities. Thus, a problem in one dimension may affect one or more of the other dimensions. A person is in constant interaction with a changing environment. A person's behavior is meaningful and oriented toward fulfilling needs, coping with stress, and developing oneself. However, at

times a person needs help to meet these needs, cope successfully, or develop their unique potential.

Scope of Nursing Practice

The essential core of nursing practice is to deliver holistic, patient-centered care. This includes assessment and evaluation, giving a variety of interventions, patient and caregiver teaching, and being a member of the interprofessional health care team.

The extent that nurses engage in their scope of practice depends on their educational preparation, experience, role, and state law. To enter practice, a nurse must complete an accredited program and pass the NCLEX-RN, a test that verifies the nurse has the basic knowledge needed to provide safe care. Entry-level nurses with associate or baccalaureate degrees are prepared to function as generalists. At this level, nurses provide direct health care and focus on ensuring coordinated, comprehensive care to patients in a variety of settings.

With experience and continued study, nurses may specialize in a specific practice area. Certification is a formal way for nurses to obtain professional recognition for having expertise in a specialty area. Many nursing organizations offer certification in specialty practice. Certification requires a certain amount of clinical experience and successfully passing a test. Recertification usually requires ongoing clinical experience and continuing education. Common nursing specialties include critical care, women's health, geriatric, medical-surgical, perinatal, emergency, psychiatric/mental health, and community health nursing.

More education and experience can prepare nurses for advanced practice. An **advanced practice registered nurse (APRN)** is a nurse educated at the master's or doctoral level. They have advanced education in pathophysiology, pharmacology, and health assessment and expertise in a specialized area of practice. APRNs include clinical nurse specialists, nurse practitioners, nurse midwives, and nurse anesthetists. APRNs play a vital role in the health care delivery system. Besides managing and delivering expert direct patient care, APRNs have roles in patient and staff education, leadership, quality improvement, research, and consulting.

The doctor of nursing practice (DNP) degree is a practice-focused terminal nursing degree. With raising the educational preparation for APRNs to the doctoral level, nursing is at the same level as other health professions that have practice doctorates (pharmacy [PharmD], physical therapy [DPT]). Nurses with a research-focused doctorate (PhD) typically work in health care settings as nurse faculty, clinical experts, researchers, and health care system executives.

Standards of Professional Nursing Practice

To guide nurses in how to perform professionally, the ANA defined Standards of Professional Nursing Practice. There are 2 parts, Standards of Practice and Standards of Professional Performance.⁵ The Standards of Practice describe a competent level of nursing care based on the nursing process. The Standards of Professional Performance describe behavioral competencies expected of a nurse. You are following the performance standards when you practice ethically and use evidence-based

practice. Communicating effectively and staying competent in practice are essential. You must be able to work in collaboration with other health care team members, patients, and caregivers.

INFLUENCES ON PROFESSIONAL NURSING PRACTICE

Expanding Knowledge and Technology

Ever-changing technology and rapidly expanding clinical knowledge add to the complexity of health care. The increased treatment, diagnostic, and care options available change care delivery and extend patients' lives. Discoveries in genetics are changing how we think about diseases such as cancer and heart disease. For example, genetic information guides breast cancer treatment. If a woman has cancer, this information allows for treatment and drug therapy based on genetic makeup. Ethical dilemmas arise about the use of new scientific knowledge and the disparities that exist in patients' access to advanced health care. Throughout this book, genetics and ethical/legal boxes highlight expanding knowledge and technology's impact on nursing practice.

Diverse Populations

Patient populations are more diverse than ever. People are living longer, with the number of people with chronic illnesses and multiple comorbidities increasing. Unlike those who receive acute, episodic care, patients with chronic illnesses have complex needs. They see different health care providers over an extended period and often move among health care settings. You need to be able to manage and coordinate care when patients transition among different settings.

At the same time, you will be caring for a more culturally and ethnically diverse population. When delivering care, you must consider the patient's and caregiver's cultural beliefs and values. Immigrants, particularly undocumented immigrants, often lack the resources necessary to access health care. Inability to pay for health care is related to a tendency to delay seeking care, resulting in more serious illnesses at the time of diagnosis. Boxes throughout this book emphasize the influence of such factors as gender, culture, and ethnicity on nursing practice.

Consumerism

Many patients today want to be more engaged in their health care. They want more control over their health care and expect high-quality, coordinated, and financially reasonable care. Health information is readily available. Many patients are very knowledgeable about their health and seek information about health problems and health care from media and Internet sources. They gather information so that they can have a voice in making decisions about their health care. As a nurse, you must be able to help patients access, interpret, and use safe health care information (Fig. 1.2).

Health Care Financing

High health care costs are a growing problem. There are many reasons for the continued increase in costs. These include the aging population, increased prescription medication use,

administrative costs, and more expensive products and treatments. Many changes in health care systems that influence nursing care delivery are usually in an effort to contain spending and provide more cost-effective health care delivery.

The U.S. health system is a mix of public and private, for-profit and nonprofit insurers, and health care providers. Public and private insurers set their own cost-sharing structures within federal and state regulations. Historically, the most noted event related to reimbursement was the establishment of the Medicare prospective payment system (PPS). With PPS, payment for care for Medicare patients is based on flat fees determined by the diseases and problems treated during the admission. For example, if a patient had a total hip replacement, the hospital receives a set sum of money, such as \$45,000, for the patient's care.

Other managed care systems also use PPS. In health maintenance organizations (HMOs) and preferred provider organizations (PPOs), charges are negotiated before delivering care using fixed reimbursement rates or capitation fees for medical care, hospitalization, and other health care services.

Now, quality initiatives have further changed health care financing. Value-based purchasing programs base payment to health care providers on their performance on certain quality measures. These measures include clinical outcomes, patient safety, patient satisfaction, and the provider's adherence to evidence-based practice. Those who provide quality care at a lower cost may receive more payment.

As part of value-based purchasing, payment for care can be withheld if a patient experiences events such as developing a pressure injury during a hospital stay or having something happen that is considered preventable (fall-related injury, having wrong-site surgery). This type of event is considered a serious reportable event (SRE). SREs are discussed later in this chapter.

Health Policy

Legislation has serious implications for health care delivery and nursing practice. The Affordable Care Act (ACA) was the most important health care legislation since the creation of Medicare in 1965. The ACA triggered changes throughout the health care system. The ACA's main goal was to increase access to health care. The ACA created new health care delivery and payment models that emphasized teamwork, care coordination, and quality care.

The ACA encourages the creation of accountable care organizations (ACOs). ACOs are groups of physicians, hospitals, and health care providers who unite to coordinate care for Medicare patients. The goal of an ACO is to see that patients, especially the chronically ill, get the right care at the right time while avoiding duplicate services and preventing errors. As a nurse, you must take a leadership role in creating health care systems that provide safe, quality, patient-centered care.

Professional Nursing Organizations

The ANA is the primary professional nursing organization. There are many professional specialty organizations, such as the American Association of Critical-Care Nurses (AACN), National Association of Orthopedic Nurses (NAON), and Oncology Nursing Society (ONS). Professional organizations



Fig. 1.2 The patient, caregiver, and nurse collaborate as part of coordinating care. (© monkeybusinessimages/iStock/Thinkstock.)

play a role in promoting quality patient care and professional nursing practice. These roles include developing standards of practice and codes of ethics, supporting research, and lobbying for legislation and regulations. Major nursing organizations research the causes of errors, develop strategies to prevent errors, and address nursing issues that affect the nurse's ability to deliver patient care safely. Nurses join a professional organization to keep current in their practice and network with others interested in a specific practice area.

A program that supports nurses is the American Nurses Credentialing Center's Magnet Recognition Program. Health care agencies that achieve Magnet designation have created environments in which high-quality nursing care is provided.⁶ Magnet agencies provide a positive practice environment for nurses. Nurses who work in Magnet agencies have low turnover and burnout rates and more professional and personal growth opportunities. This leads to better patient outcomes and greater career satisfaction.

Nursing Core Competencies

Several high-profile reports over the past 25 years have highlighted problems with health care quality. One report, *The Future of Nursing: Leading Change, Advancing Health*, discussed how health care providers, including nurses, were not being prepared to provide the highest quality care possible in today's health care systems. The report recommended making changes so that nurses would have the skills to advance health care and play leadership roles in health care.⁷

The Robert Wood Johnson Foundation funded the *Quality and Safety Education for Nurses (QSEN) Institute* to address nursing's role in solving these problems. QSEN made a major contribution to nursing by defining specific competencies that nurses need to practice safely and effectively in today's complex health care system. These competencies have been integrated into prelicensure and graduate nursing education. The rest of this chapter describes 6 common nursing competencies and the knowledge, skills, and attitudes (KSAs) associated with each: (1) patient-centered care, (2) interprofessional partnerships, (3)

safety, (4) quality improvement, (5) informatics, and (6) evidence-based practice (Table 1.1).⁸ When you are licensed as a registered nurse, you accept responsibility to base your practice on these competencies.

PATIENT-CENTERED CARE

Nurses have long shown that they deliver compassionate and coordinated care based on each patient's unique needs and respect for their preferences and values. We build relationships that make the patient a full partner in their care. Patients and caregivers are involved in making decisions and coordinating care. Patient-centered care is interrelated with quality and safety. With patient-centered care, patients and caregivers seek and receive care from competent and knowledgeable health care professionals.

Clinical Judgment

Complex health care environments require that you use clinical judgment to make decisions that lead to the best patient outcomes. **Clinical judgment** is your ability to make decisions and solve problems by making sense of information in a situation. It is not memorizing a list of facts or the steps of a procedure. Instead, you use nursing knowledge to assess situations, identify priority problems, and generate the best possible solutions to deliver safe patient care.⁹ It involves understanding the medical and nursing implications of a patient's situation when making decisions about patient care. You use clinical judgment when you identify a change in a patient's status, consider the context and patient and caregiver concerns, and decide what to do.

Because of the diversity and complexity of patient care, there may not be a right solution in each situation. Therefore, you need to learn and implement clinical judgment skills through experience. Various experiences in nursing school help you to learn to make decisions about patient care. Learning activities, including unfolding case studies and simulation, help you practice using clinical judgment. Throughout this book, case studies and practice questions promote your use of clinical judgment.

Clinical Practice Frameworks

Depending on the situation, nurses use different scientific models when providing patient care. Many use the nursing process. The **nursing process** is a problem-solving approach to the identification and treatment of patient problems. It is the foundation of nursing practice. The nursing process framework provides a structure for delivering nursing care and the knowledge, judgments, and actions that nurses use to achieve the best patient outcomes.

The nursing process consists of 5 phases: assessment, diagnosis, planning, implementation, and evaluation (ADPIE) (Fig. 1.3). The nursing process begins with assessment. *Assessment* is the collection of subjective and objective patient information on which you will base your care plan. *Diagnosing* is the act of analyzing the assessment data and making conclusions. During *planning*, you develop patient outcomes or goals and identify nursing interventions to accomplish the outcomes. Identifying the right expected outcomes provides criteria you can use to

TABLE 1.1 Core Nursing Competencies

Competency	Examples of Knowledge, Skills, and Attitudes
Patient-Centered Care Provide holistic, compassionate, and coordinated care based on respect for patient's preferences, values, and needs and guided by a scientific body of knowledge	<ul style="list-style-type: none"> • Provide care with sensitivity and respect • Consider the patient's perspectives, beliefs, and culture • Communicate effectively • Engage the patient in an active partnership that promotes health, well-being, and self-care management • Use assessment skills, diagnose health problems, and develop and deliver a plan of care
Interprofessional Partnerships Function effectively within nursing and interprofessional teams	<ul style="list-style-type: none"> • Value the expertise of each team member • Delegate work to team members based on their roles and competency • Initiate appropriate referrals • Follow communication practices that minimize risks associated with hand-offs and care transitions • Take part in interprofessional rounds • Manage conflict among team members
Safety Minimize risk of harm to patients and providers	<ul style="list-style-type: none"> • Follow national safety recommendations • Appropriately communicate concerns about hazards and errors • Contribute to designing systems to improve safety • Be accountable for reporting unsafe conditions and near misses • Promote policies to reduce workplace violence
Quality Improvement Use data to monitor the outcomes of care and to improve the quality and safety of health care systems	<ul style="list-style-type: none"> • Use outcome data to understand performance • Participate in implementing practice changes • Take part in investigating the circumstances surrounding a sentinel event or SRE
Informatics and Health Care Technology Use information and technology to communicate, manage knowledge, reduce errors, and support decision making	<ul style="list-style-type: none"> • Protect confidentiality of protected health information • Document appropriately in electronic health records • Use technology to coordinate patient care • Respond correctly to clinical decision-making alerts
Evidence-Based Practice Integrate best current evidence with clinical expertise and the patient/caregiver preferences and values for delivery of optimal health care	<ul style="list-style-type: none"> • Read research, clinical practice guidelines, and evidence reports related to area of practice • Base patient care plan on patient's values, clinical expertise, and evidence • Continuously improve clinical practice based on new knowledge

Source: QSEN competencies. Retrieved from www.qsen.org/competencies.

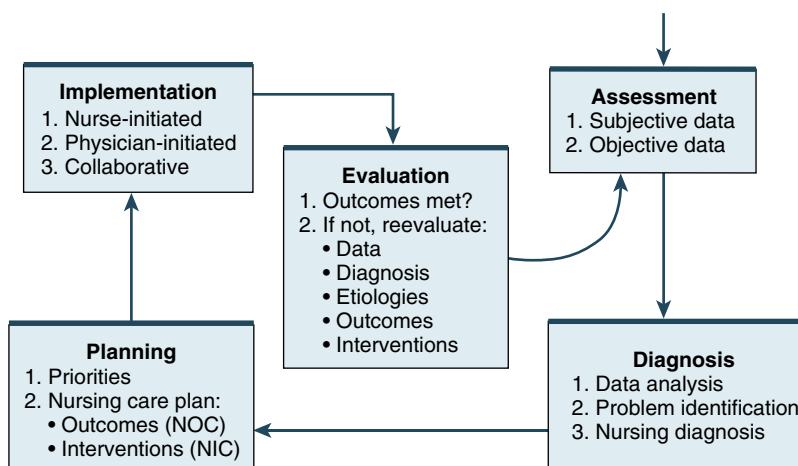


Fig. 1.3 Nursing process.

Model/theory	Components					
NCSBN clinical judgment model	Recognize cues	Analyze cues	Prioritize hypotheses	Generate solutions	Take action	Evaluate outcomes
Nursing process (ADPIE or AAPIE)	Assessment	Diagnosis or analysis		Planning	Implementation	Evaluation
Tanner model	Noticing	Interpreting		Responding		Reflecting

Fig. 1.4 Comparison of the phases of clinical practice frameworks. (From <https://evolve.elsevier.com/education/next-generation-nclex/resources/continuing-nursing-education/>.)

measure and evaluate the impact of the interventions you provide. *Implementation* is the action phase of the plan with the use of nursing interventions. *Evaluation* is a continual activity of deciding whether the patient outcomes were met. If the outcomes were not met, a review of the process helps to figure out why. You may need to obtain more assessments and revise diagnoses, outcomes, and interventions. Once started, the nursing process is continuous and cyclic.

There are other clinical practice frameworks. These include Tanner's Model of Clinical Judgment Model (with the phases of Noticing, Interpreting, Responding, and Reflecting) and the National Council of State Boards of Nursing's Clinical Judgment Model (CJM) (Fig. 1.4). The CJM was designed to test your clinical judgment on the NCLEX-RN. All 3 models emphasize assessment, making decisions, taking action, and evaluating outcomes. Many clinical facilities use a "shortened version" of the nursing process—Assess, Act, Reassess.¹⁰

In this book, we use an ADPIE format to help you learn how to care for patients with certain health problems. We use the term "clinical problem" to represent the diagnostic phase of nursing clinical practice (see Appendix B). It is intended to be a synonym for nursing diagnoses, nursing problems, patient problems, or any other label that describes patient problems, conditions, or diagnoses requiring health care.¹¹ Clinical problems can be diagnosed based on a single clinical finding, such as pain or anxiety, or result from a complex decision about a particular focus, such as impaired nutrition or musculoskeletal problem. Clinical problems are the basis for selecting nursing interventions to achieve patient outcomes for which nursing is accountable.

A nursing intervention is "a single nursing action, treatment, procedure, activity, or service designed to achieve an outcome of a nursing or medical diagnosis for which the nurse is accountable."¹² This includes treatments that you perform and direct or indirect care. When planning care for a patient, choose specific interventions for the patient based on the clinical problem and desired patient outcomes. You collaborate with the patient to decide when and which interventions to use for a specific patient and situation.

Nursing Care Plans

In any clinical setting, you are responsible for developing a plan of care that includes diagnoses or problems, outcomes, and interventions. In clinical practice, electronic care plans often follow a standard format that has been adapted for that specific setting. These plans are guides for routine nursing care. You customize each to your patient's unique needs and problems.

In nursing education, you will likely document the nursing process differently from clinical practice. The nursing process

is often recorded in nursing care plans similar to those found on the website for this book (<http://evolve.elsevier.com/Lewis/medsurg>). These nursing care plans are teaching and learning tools. You practice and learn the nursing process by collecting assessment data, identifying clinical problems, and selecting patient outcomes and nursing interventions. You usually must give rationales for the interventions you choose.

The nursing care plans associated with this book list clinical problems, in order of priority, along with outcomes and interventions. When you use these care plans, you will need to customize the plan for your patient. You must use clinical judgment to continually evaluate the situation and revise the clinical problems, outcomes, and interventions to fit each patient's unique care needs.

A *concept map* is another way to record a nursing care plan. A concept map records the nursing process in a visual diagram. The map shows patient problems and interventions and relationships among clinical data. Nurse educators use concept mapping to teach nursing processes and care planning. Concept maps have various formats.

Conceptual care maps blend a concept map and a nursing care plan. On a conceptual care map, assessment data used to identify the patient's primary health concern are in the center. Diagnostic test data, treatments, and medications surround the assessment data. Positioned below are clinical problems or nursing diagnoses that represent the patient's responses to the health state. Listed with those are the supporting assessment data, outcomes, nursing interventions with rationales, and evaluation. After completing the map, you draw connections between identified relationships and concepts. A conceptual care map creator is available online on the website for this book. Concept maps for select case studies at the end of management chapters are available on the website at <http://evolve.elsevier.com/Lewis/medsurg>.

Continuum of Patient Care

Nursing is part of health care at all points along the patient care continuum. Depending on their health status, patients often move among a multitude of different health care settings. For example, a young man is in a trauma unit of an acute care hospital after a motor vehicle crash. After he is stable, he is transferred to a general medical-surgical unit and then to an acute rehabilitation facility. After rehabilitation is complete, he is discharged home to continue with outpatient rehabilitation, with follow-up by home health care nurses and care in an ambulatory clinic.

Decisions about the best setting for obtaining health care often depend on the cost of care and the patient's health insurance plan and personal finances. Although the hospital is the

NURSING CARE PLAN

Patient With Heart Failure

Clinical Problem

Impaired Respiratory Function

Etiology: Increased preload, alveolar-capillary membrane changes

Supporting data: Abnormal O₂ saturation, hypoxemia, dyspnea, tachypnea, tachycardia, restlessness, patient's statement, "I am so short of breath."

Patient Goal

Maintains adequate O₂/CO₂ exchange at the alveolar-capillary membrane to meet O₂ needs of the body

Outcomes (NOC)

Respiratory Status: Gas Exchange

- O₂ saturation ____
- Arterial pH ____
- PaO₂ ____
- PaCO₂ ____
- Chest x-ray findings ____

Measurement Scale

- 1 = Severe deviation from normal range
 - 2 = Substantial deviation from normal range
 - 3 = Moderate deviation from normal range
 - 4 = Mild deviation from normal range
 - 5 = No deviation from normal range
- Dyspnea with exertion ____
 - Dyspnea at rest ____
 - Restlessness ____
 - Impaired cognition ____

Measurement Scale

- 1 = Severe
- 2 = Substantial
- 3 = Moderate
- 4 = Mild
- 5 = None

Interventions (NIC) and Rationales

Respiratory Monitoring

- Monitor pulse oximetry, respiratory rate, rhythm, depth, and effort of respirations *to detect changes in respiratory status.*
- Auscultate breath sounds, noting areas of decreased or absent ventilation and presence of adventitious sounds *to detect presence of pulmonary edema.*
- Monitor for increased restlessness, anxiety, and work of breathing *to detect increasing hypoxemia.*

Oxygen Therapy

- Administer supplemental O₂ or other noninvasive ventilator support (e.g., bilevel positive airway pressure [BiPAP]) as needed *to maintain adequate O₂ levels.*
- Monitor the O₂ liter flow rate and placement of O₂ delivery device *to ensure O₂ is adequately delivered.*
- Change O₂ delivery device from mask to nasal prongs during meals as tolerated *to sustain O₂ levels while eating.*
- Monitor the effectiveness of O₂ therapy *to identify hypoxemia and establish range of O₂ saturation.*

Positioning

- Position patient to alleviate dyspnea (e.g., semi-Fowler's position), as appropriate, to improve ventilation by decreasing venous return to the heart and increasing thoracic capacity.

mainstay for acute care interventions, community-based settings offer patients the opportunity to live or recover in settings that maximize their independence and preserve human dignity.

Community-based health care settings include ambulatory care, transitional care, and long-term care. *Transitional care* settings provide care in between the acute care and the home or long-term care setting. Patients may receive transitional care at an acute rehabilitation facility after head trauma or a spinal cord injury. *Long-term care* refers to the care of patients for a period longer than 30 days. It may be needed for those who are severely developmentally disabled, who are mentally impaired, or who have physical deficits requiring continuous medical and nursing care. These include patients who are ventilator dependent or have Alzheimer disease. Long-term care facilities include skilled nursing facilities, assisted living facilities, and residential care facilities.

There is a new emphasis on care coordination when patients transition between care settings. *Transitions of care* refer to patients moving among health care practitioners, settings, and home as their condition and care needs change.¹³ As a nurse, you are an essential part of care coordination by stressing actions that meet patients' needs and facilitate safe, quality care. Collaborating with other members of the health care team is critical. A lack of communication can result in an ineffective care

transition, leading to drug errors and higher hospital readmission rates. For example, you are a nurse in acute care admitting a long-term care patient who has been receiving propranolol 20 mg/5 mL twice a day. The admitting orders read, "propranolol 20 mg/mL, give 5 mL twice a day." Using communication to reconcile the difference averts a drug error. The patient would have received 100 mg instead of the 20 mg dose ordered.

Delivery of Nursing Care

Nurses deliver patient-centered care in collaboration with the interprofessional health care team and within the framework of a care delivery model. A care delivery model outlines how responsibilities and authority are structured to carry outpatient care. Better outcomes occur when the number and type of care providers match patient needs, and there is a designated care coordinator.

In acute care settings, 2 basic models are used: team care and total patient care. *Team care* models involve a group of providers who work together to deliver care. A professional nurse is usually the team leader. As the team leader, you manage and coordinate care with others, such as licensed practical/vocational nurses (LPN/VNs) and assistive personnel (AP). You have accountability for the quality of care delivered by team



Fig. 1.5 Patient in home quarantine videoconferencing with the nurse. (© valentinrussanov/iStock/Thinkstock.)

members during a work period. In total patient care models, you are responsible for planning and providing all care.

Case management involves managing the patient's care with other health care team members and available resources across multiple care settings and levels of care to meet their health needs. It is thought to promote quality, cost-effective outcomes. In nursing case management delivery systems, a registered nurse assumes the role of case manager. In this role, the nurse assesses the needs of patients and/or caregivers, coordinates services for them, makes appropriate referrals, and evaluates the progress toward meeting care goals. For example, a nurse case manager in an outpatient clinic has been working for 3 months with an older male patient with multiple comorbidities, including severe coronary artery disease, diabetes, and osteoarthritis. After he is scheduled for a coronary artery bypass, the nurse manager coordinates his care with other health care team members. She arranges his preoperative appointments and informs the other team members so that everyone understands the patient's unique needs. After the patient has surgery, he develops a deep venous thrombosis in his leg. The case manager then works with the health care team to evaluate the patient's discharge needs and decide whether rehabilitation or home health care is necessary for the patient. With the patient and caregiver, the team decides to discharge the patient to a rehabilitation facility. The case manager helps with the transition, again coordinating care so that the providers at the rehabilitation facility are aware of the patient's needs.

Telehealth nursing provides health care and information using telehealth technologies in virtual environments. These include smartphones and watches, kiosks, and Web-based or digital platforms. The type of telehealth visit depends on the setting and patient need.¹⁴ Among the many uses are triaging patients, monitoring patients with chronic or critical conditions, helping patients manage symptoms, providing patient and caregiver education and emotional support, and providing follow-up care. Telehealth can increase access to care. The nurse engaged in telehealth can assess the patient's health status, deliver interventions, and evaluate the outcomes of nursing care while separated geographically from the patient (Fig. 1.5).

Supporting Caregivers

Caregivers play a valuable role in the patient's health and are members of the health care team. They contribute to the patient's

well-being by (1) linking the patient to news from the outside world; (2) facilitating decision making and advising the patient; (3) helping with activities of daily living; (4) acting as liaisons to advise the health care team of the patient's wishes for care; and (5) providing safe, caring, familiar relationships for the patient.

When someone is ill, care extends beyond the patient to the patient's caregivers. Caregivers need your guidance and support. Anxiety and concerns about the patient's condition, prognosis, and pain are common. Caregivers may have a concern about financial issues related to a hospital stay. They often disrupt their daily routines to support the patient. Conduct a family assessment and intervene as needed. Recognize the caregivers' feelings, listen to them openly and without being judgmental, and acknowledge their decisions. Consult other team members, such as a chaplain or social worker, as needed to help caregivers cope.

The key needs of caregivers include information, communication, and access. Lack of information is a major source of anxiety. Assess their understanding of the patient's status, treatment plan, and prognosis and provide them with information. Identify a spokesperson to help coordinate information exchange between the health care team and caregivers. Have them meet team members. Include caregivers in rounds and patient care conferences. It helps caregivers cope when they see that the team is caring and competent, decisions are deliberate, and their input is valued. Invite the caregivers to take part in the patient's care if they want.

Caregivers need access to the patient. Assess the patient's and caregiver's needs and preferences and include these into the plan of care. Caregivers should have the option to be present at the bedside when patients are undergoing invasive procedures (central line insertion) or cardiopulmonary resuscitation (CPR). Even when the outcomes are not favorable, being present helps caregivers to (1) overcome doubts about the patient's condition, (2) reduce their anxiety and fear, (3) meet their need to be together with and to support their loved one, and (4) begin the grief process if death occurs.

INTERPROFESSIONAL PARTNERSHIPS

Interprofessional Team

To deliver high-quality care, you need to have effective working relationships with the health care team members. The **interprofessional team** is made up of providers from various disciplines, working together and sharing their expertise to provide customized care. It may consist of physicians, nurses, pharmacists, occupational and physical therapists, and others (Table 1.2). To be competent in interprofessional practice, you must collaborate in many ways by exchanging knowledge, sharing responsibility for problem solving, and making patient care decisions. You may be responsible for coordinating care among the team members, taking part in interprofessional team meetings or rounds, and making referrals when you need expertise in specialized areas to help the patient. To do so, you must be aware of the knowledge and skills of other team members and be able to communicate effectively with them.

To help you develop the competencies necessary to practice within an interprofessional clinical environment, you may take

TABLE 1.2 Interprofessional Health Care Team Members

Team Member	Services Provided
Dentist	Provides preventive and restorative treatments for problems affecting the teeth and mouth
Dietitian	Provides general nutrition services, including dietary consultation about health promotion or specialized diets
Occupational therapist (OT)	May help patient with fine motor coordination, performing activities of daily living, cognitive-perceptual skills, sensory testing, and the construction or use of assistive or adaptive equipment
Pastoral care	Offers spiritual support and guidance to patients and caregivers
Pharmacist	Prepares medications and infusion products
Physical therapist (PT)	Works with patients to improve strength and endurance, gait training, transfer training, and developing a patient education program
Physician (medical doctor [MD])	Practices medicine and treats illness and injury by prescribing medication, performing diagnostic tests and evaluations, performing surgery, and providing other medical services and advice
Physician assistant	Conducts physical exams, diagnoses and treats illnesses, and counsels on preventive health care in collaboration with a physician
Respiratory therapist	May provide oxygen therapy in the home, give specialized respiratory treatments, and teach the patient or caregiver about the proper use of respiratory equipment
Social worker	Assists patients with developing coping skills, meeting caregiver concerns, securing adequate financial resources or housing, or making referrals to social service or volunteer agencies
Speech pathologist	Focuses on treating speech defects and disorders, especially by using physical exercises to strengthen muscles used in speech, speech drills, and audiovisual aids that develop new speech habits

TABLE 1.3 Guidelines for Communicating Using SBAR

Purpose: SBAR is a model for effective transfer of information by providing a standard structure for concise factual communication from nurse-to-nurse, nurse-to-physician, or nurse-to-other health professionals.

Steps to Use: Before speaking with a physician or other health care professional about a patient problem, assess the patient yourself, read the most recent progress notes, and have the patient's health record available.

S Situation	<ul style="list-style-type: none"> • What is the situation you want to discuss? What is happening right now? • Identify self, unit. State: I am calling about: <i>patient, room number</i>. • Briefly state the problem: what it is, when it happened or started, and how severe it is. State: I have just assessed the patient and am concerned about: <i>describe why you are concerned</i>.
B Background	<ul style="list-style-type: none"> • What is the background or circumstances leading up to the situation? State pertinent background information related to the situation that may include: <ul style="list-style-type: none"> • Admitting diagnosis and date of admission • List of current medications, allergies, IV fluids • Most recent vital signs • Date and time of any laboratory testing and results of previous tests for comparison • Synopsis of treatment to date • Code status
A Assessment	<ul style="list-style-type: none"> • What do you think the problem is? What is your assessment of the situation? State what you think the problem is: <ul style="list-style-type: none"> • Changes from prior assessments • Patient condition unstable or worsening
R Recommendation/Request	<ul style="list-style-type: none"> • What should we do to correct the problem? What is your recommendation or request? State your request. <ul style="list-style-type: none"> • Specific treatments • Tests needed • Patient needs to be seen now

Source: Institute for Health Care Improvement: SBAR technique for communication: a situational briefing model. Retrieved from www.ihc.org/resources/Pages/Tools/SBARTechniqueforCommunicationASituationalBriefingModel.aspx.

part in education activities with students from other disciplines. Throughout this book, case studies and review questions discuss the roles others have in managing patient care.

Coordinating Care Communication

Effective communication is key to fostering teamwork and coordinating care. To provide safe, effective care, team members must exchange information clearly and accurately among team

members. Everyone involved in a patient's care should understand the patient's condition and needs. Unfortunately, many issues result from a breakdown in communication.

One model used to improve communication is the **SBAR (Situation-Background-Assessment-Recommendation)** technique (Table 1.3). SBAR offers a structured way to discuss a patient's condition between team members. It allows you to communicate vital patient information that needs immediate attention and action. There will be times when you will be