MEDICAL-SURGICAL NURSING

CONCEPTS FOR INTERPROFESSIONAL COLLABORATIVE CARE

10th EDITION

Ignatavicius
Workman
Rebar
Heimgartner

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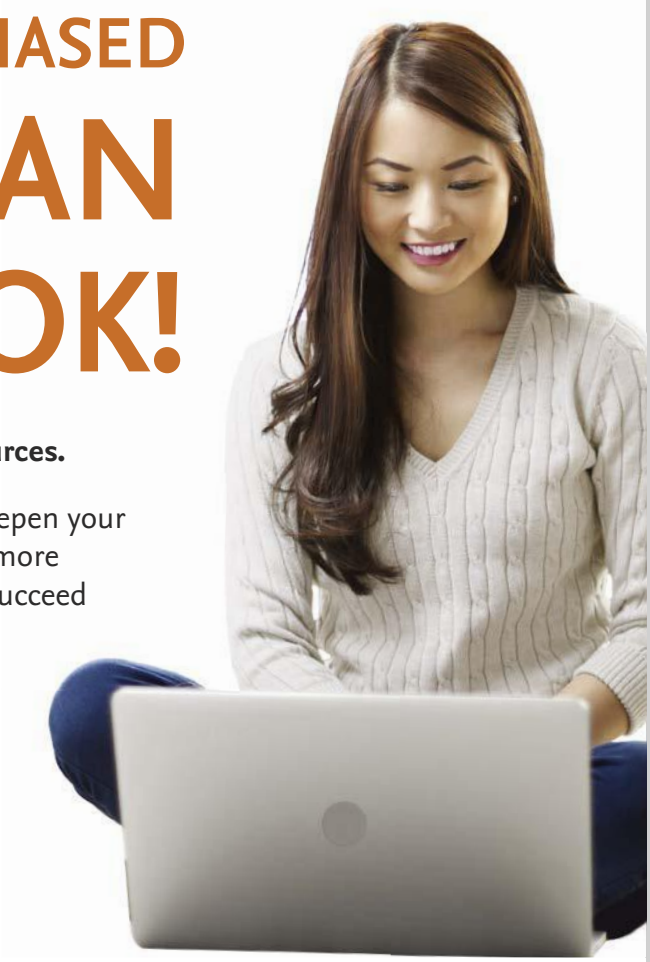

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MEDICAL-SURGICAL NURSING

CONCEPTS FOR INTERPROFESSIONAL COLLABORATIVE CARE

Donna D. Ignatavicius,
MS, RN, CNE, CNEcl, ANEF
Speaker and Nursing Education Consultant;
Founder, Boot Camp for Nurse Educators;
President, DI Associates, Inc.
Littleton, Colorado

M. Linda Workman,
PhD, RN, FAAN
Author and Consultant
Visiting Professor and Former Endowed Professor
Frances Payne Bolton School of Nursing
Case Western Reserve University
Cleveland, Ohio

Cherie R. Rebar,
PhD, MBA, RN, COI
Subject Matter Expert and Nursing Education Consultant
Beavercreek, Ohio;
Professor of Nursing
Wittenberg University
Springfield, Ohio

Nicole M. Heimgartner,
DNP, RN, COI
Subject Matter Expert and Nursing Education Consultant
Louisville, Kentucky;
Adjunct Faculty
American Sentinel University
Aurora, Colorado

ELSEVIER

Elsevier
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Publishing Services Manager: Julie Eddy
Senior Project Manager: Jodi M. Willard
Design Direction: Brian Salisbury

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CONTRIBUTORS

Marie Bashaw, DNP, RN, NEA-BC
Professor and Director of Nursing
Department of Nursing
Wittenberg University
Springfield, Ohio

Cecilia Bidigare, MSN
Professor
Nursing
Sinclair Community College
Dayton, Ohio

Maureen Bishop, MSN, RN, CCRN, CCNS
Clinical Nurse Specialist
Lakeland University
Lakeland Health
St. Joseph, Michigan

Andrea A. Borchers, PhD, RN
Assistant Professor
School of Nursing
Northern Arizona University
Flagstaff, Arizona

Samuel A. Borchers, OD
Optometrist
Vision Clinic
Northern Arizona VA Healthcare System
Prescott, Arizona

Katherine Byar, MSN, ANP, BC, BMTCN
Nurse Practitioner
Hematological Malignancy
Nebraska Medicine
Omaha, Nebraska

Michelle Camicia, PhD, CRRN, CCM, NEA-BC, FAHA
Director of Operations
Kaiser Foundation Rehabilitation Center
Kaiser Permanente
Vallejo, California

Lara Carver, PhD, MSN, RN, CNE
Director
College of Health Professions
Western Governors University
Salt Lake City, Utah

Keelin C. Cromar, MSN, RN
Subject Matter Expert
Nursing Consultant
Wichita County Public Health District
Wichita Falls, Texas

Laura M. Dechant, DNP, CCNS, CCRN
Clinical Nurse Specialist
Heart, Vascular and Interventional Services
Christiana Care Health System
Newark, Pennsylvania

Stephanie M. Fox, PsyD
Clinical Psychologist
Littleton, Colorado

Carolyn J. Gersch, PhD, MSN, RN, CNE
Professor
Wittenberg University
Springfield, Ohio

Darla Green, RN, DNP, FNP-C
Assistant Professor
Del Mar College
Department of Nurse Education
Corpus Christi, Texas

Charity Hacker, RN, MSN-Ed
Assistant Professor
Nursing
Ivy Tech Community College
Madison, Indiana;
Adjunct Faculty
Nursing
Indiana University Purdue University Columbus (IUPUC)
Columbus, Indiana

Linda Laskowski-Jones, MS, APRN, ACNS-BC, CEN, FAWM, FAAN
Vice President
Emergency & Trauma Services
Christiana Care Health System
Newark, Delaware

Cheryl L. Leksan, MSN, MEd, BSN
Formerly, Teaching Professor
School of Nursing
Xavier University
Cincinnati, Ohio

Hannah Lopez, MSN, RN, OCN, CBCN
Clinical Nurse Manager
Hematology/Oncology & Supportive and Palliative Care
Baylor Scott & White Health
Round Rock, Texas

Robyn Mitchell, APRN-CNP, MSN, CCRN, CSC, CMC, AGACNP-AG, AGACNP-BC, ACNP
Critical Care House Officer
Cleveland Clinic
Cleveland, Ohio

Jennifer Dawn Powers, FNP-BC, MSN, BSN
Adjunct Faculty
Department of Nursing
National University
Henderson, Nevada

Harry Rees III, MSN, APRN-CNP
Trauma, Critical Care, and Burn
The Ohio State University Wexner Medical Center
Columbus, Ohio

Jonathon Rospierski, MSN, BS, RN-BC
Nursing Professional Development Specialist/Nurse Residency Program Coordinator
Lakeland University
Lakeland Health
St. Joseph, Michigan

James G. Sampson, DNP, RN
Infectious Disease
Denver Health Medical Center
Denver, Colorado

Karen L. Toulson, DNP, MBA, CEN, NE-BC
Director, Clinical Operations
Emergency Department
Christiana Care Health System
Newark, Delaware

Sharon A. Watts, DNP, MSN, BSN
Endocrinology
Veterans Health Administration
Cleveland, Ohio

CONTRIBUTORS TO TEACHING/LEARNING RESOURCES

PowerPoint Slides

Nicole M. Heimgartner, DNP, RN, COI
Subject Matter Expert and Nursing Education Consultant
Louisville, Kentucky;
Adjunct Faculty
American Sentinel University
Aurora, Colorado

Cherie R. Rebar, PhD, MBA, RN, COI
Subject Matter Expert and Nursing Education Consultant
Beavercreek, Ohio;
Professor of Nursing
Wittenberg University
Springfield, Ohio

Teach® for Nurses Lesson Plans

Nicole M. Heimgartner, DNP, RN, COI
Subject Matter Expert and Nursing Education Consultant
Louisville, Kentucky;
Adjunct Faculty
American Sentinel University
Aurora, Colorado

Cherie R. Rebar, PhD, MBA, RN, COI
Subject Matter Expert and Nursing Education Consultant
Beavercreek, Ohio;
Professor of Nursing
Wittenberg University
Springfield, Ohio

Test Bank

Meg Blair, PhD, MSN, RN, CEN
Professor
Nursing Division
Nebraska Methodist College
Omaha, Nebraska

Donna D. Ignatavicius, MS, RN, CNE, CNEcl, ANEF
Speaker and Nursing Education Consultant;
Founder, Boot Camp for Nurse Educators;
President, DI Associates, Inc.
Littleton, Colorado

Case Studies

Tami Kathleen Little, DNP, RN, CNE
Corporate Director of Nursing
Vista College
Richardson, Texas

Review Questions for the NCLEX® Examination

Donna D. Ignatavicius, MS, RN, CNE, CNEcl, ANEF
Speaker and Nursing Education Consultant;
Founder, Boot Camp for Nurse Educators;
President, DI Associates, Inc.
Littleton, Colorado

M. Linda Workman, PhD, RN, FAAN
Author and Consultant
Visiting Professor and Former Endowed Professor
Frances Payne Bolton School of Nursing
Case Western Reserve University
Cleveland, Ohio

Cherie R. Rebar, PhD, MBA, RN, COI
Subject Matter Expert and Nursing Education Consultant
Beavercreek, Ohio;
Professor of Nursing
Wittenberg University
Springfield, Ohio

Nicole M. Heimgartner, DNP, RN, COI
Subject Matter Expert and Nursing Education Consultant
Louisville, Kentucky;
Adjunct Faculty
American Sentinel University
Aurora, Colorado

REVIEWERS

Rosalinda Alfaro-Lefevre, MSN, RN, ANEF
President
Teaching Smart/Learning Easy
Stuart, Florida

Nell Britton, MSN, RN, CNE
Adjunct Nursing Instructor
Anderson University
Anderson, South Carolina

Mary Dolansky, PhD, RN, FAAN
Associate Professor
Frances Payne Bolton School of Nursing;
Assistant Professor
Department of Population and Quantitative Health Sciences
School of Medicine;
Director, QSEN Institute
Frances Payne Bolton School of Nursing;
Senior Faculty Scholar
VA Quality Scholars Program
Case Western Reserve University
Cleveland, Ohio

Claudia Grobbel, DNP, RN
Associate Professor
Oakland University
Rochester, Michigan

Michael J. Rebar, DO, DPM
Hospitalist
Miami Valley Hospital
Dayton, Ohio

Christy Roberts, MSN, BSN, APRN, FNP-C
Family Nurse Practitioner
One Medical
Mount Washington, Kentucky

Jeffrey Schultz, MS, APRN, ACNP-BC, CCNS, RN-BC, CCRN, CEN, NE-BC, NR-P
Senior APP-CVICU
Cardiothoracic Surgery
North Florida Regional Medical Center
Gainesville, Florida;
Flight Nurse
University of Florida Health
ShandsCair Critical Care Transport Program
Gainesville, Florida

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PREFACE

The first edition of this textbook, entitled *Medical-Surgical Nursing: A Nursing Process Approach,* was a groundbreaking work in many ways. The following nine editions built on that achievement and further solidified the book's position as a major trendsetter for the practice of evidence-based adult health nursing. Now in its tenth edition, "Iggy" again charts the cutting-edge approach for the future of adult nursing practice—an approach reflected in its current title: *Medical-Surgical Nursing: Concepts for Interprofessional Collaborative Care.* The focus of this new edition continues to help students learn how to utilize clinical judgment skills to provide safe, quality nursing care that is patient-centered, evidence-based, and interprofessionally collaborative. In addition to print formats as single- and two-volume texts, this edition is available in a variety of electronic formats.

KEY COMPONENTS OF THE TENTH EDITION

Similar to the last edition's conceptual learning approach, the tenth edition organizes the content in each chapter by the most important *professional nursing and/or health concepts* and then presents commonly occurring *exemplars* for each concept. The key components for this edition that strengthen the text's conceptual focus are consistent with the Quality and Safety Education for Nurses' (QSEN) competencies and include *clinical judgment*, *safety*, *quality care*, and *patient-centeredness*. Further information about these components are described below.

- **Enhanced Emphasis on Professional Nursing and Health Concepts.** This edition uniquely balances a focus on nursing concepts with a conceptual approach to teaching and learning. Prelicensure programs that embrace the concept-based nursing curriculum, system-focused curriculum, or a hybrid or modified approach will find this edition easy to use. To help students connect previously learned concepts with new information in the text, Chapters 1 and 3 review the main concepts used in this edition, giving a working definition on which the students will reflect and build as they learn new material. These unique features build on basic concepts learned in nursing fundamentals courses, such as gas exchange and safety, to help students make connections between foundational concepts and interprofessional care for patients with medical-surgical conditions. For continuity and reinforcement, a list of specific Priority and Interrelated Nursing Concepts is highlighted at the beginning of each chapter. This placement is specifically designed to help students better understand the priority and associated needs that the nurse will address when providing safe, evidence-based, patient-centered care for individuals with selected health problems.
- **Emphasis on Common Exemplars.** For each priority concept listed in the beginning of the Nursing Care chapters, the authors have identified common or major exemplars. The nursing and interprofessional collaborative care for patients experiencing these exemplar diseases and illnesses is discussed through the lens of the priority and interrelated concepts. In addition, patient problems are presented as a collaborative problem list.
- **Focus on Clinical Judgment.** Stressing the importance of clinical judgment helps to prepare students for professional nursing practice and the current and Next-Generation NCLEX® (NGN) Examination for nursing licensure. A new chapter in this edition (Chapter 2), entitled *Clinical Judgment and Systems Thinking,* focuses on how nurses use clinical judgment in practice. Systems thinking allows the nurse to look beyond an individual action for additional or enhanced methods to promote safety and increase quality of care, which drives more favorable patient outcomes**.** Inversely, the nurse can look at interventions that have served populations and then navigate ways to bring those to the individual patient level.

  In addition to the new chapter, most chapters in this edition present **Clinical Judgment Challenges** that describe complex clinical situations and require the students to use clinical judgment skills based on the NCSBN's Clinical Judgment Measurement Model (CJMM). This model is the basis for the new test item types on the Next-Generation NCLEX® Examination. Suggested answer guidelines for these Clinical Judgment Challenges are provided on the companion Evolve website (http://evolve.elsevier.com/Iggy/).

  In the tenth edition, the six cognitive skills of the NCSBN's CJMM can be aligned with each nursing process step. The authors use this alignment to help students and faculty transition from the basic foundation of the nursing process to the critical thinking and clinical reasoning required for clinical judgment as follows:
  - Assessment: Recognize Cues
  - Analysis: Analyze Cues and Prioritize Hypotheses
  - Planning and Implementation: Generate Solutions and Take Action
  - Evaluation: Evaluate Outcomes
- **Emphasis on Patient Safety.** Patient safety is emphasized throughout this edition, not only in the narrative but also in **Nursing Safety Priority boxes** that enable students to immediately identify the most important care needed for patients with specific health problems. These highlighted features are further classified as an Action Alert, Drug Alert, or Critical Rescue. We also continue to include our leading-edge **Best Practice for Patient Safety & Quality Care boxes** to emphasize the most important nursing care.
- **Highlight on Quality Care.** The QSEN Institute emphasizes, and clinical practice agencies require, that all nurses have *quality improvement* knowledge, skills, attitudes, and abilities. To help prepare students for that role, this edition includes unique **Systems Thinking and Quality Improvement boxes.** Each box summarizes a quality improvement project published in the literature and discusses the implications of the project's success in improving nursing care.

The inclusion of these boxes disseminates information and research and helps students understand that quality improvement begins at the bedside as the nurse identifies potential evidence-based solutions to practice problems.

- **Enhanced Focus on Patient-Centered Care.** Patient-centered care is enhanced in this tenth edition in several ways. This edition continues to use the term "patient" instead of "client" throughout. Although the use of these terms remains a subject of discussion among nursing educators, we have not defined the patient as a dependent person. Rather, the patient can be an individual, a family, or a group—all of whom have rights that are respected in a mutually trusting nurse-patient relationship. Most health care agencies and professional organizations use "patient" in their practice and publications, and most professional nursing organizations support the term. To help illustrate the importance of Patient-Centered Care, this text incorporates the following special boxes:
  - Patient-Centered Care: Older Adult Considerations
  - Patient-Centered Care: Veterans Health Considerations
  - Patient-Centered Care: Cultural/Spiritual Considerations
  - Patient-Centered Care: Genetic/Genomic Considerations
  - Patient-Centered Care: Gender Health Considerations

  In addition, specific differences in patient values, preferences, and beliefs are addressed in **Chapter 68, Concepts of Care for Transgender Patients**. Along with other individuals in the LGBTQ population, the health needs of transgender patients have gained national attention through their inclusion in *Healthy People 2020* and The Joint Commission's Standards affecting transgender patients. This chapter, first introduced in the eighth edition, continues to provide tools to help prepare students and faculty to provide safe, evidence-based, patient-centered care for transgender patients who are considering, currently undergoing, or have undergone the gender transition process.
- **Emphasis on Evidence-Based Practice.** The tenth edition focuses again on the importance of *using best current evidence in nursing practice* and how to locate and use this information to improve patient care. **Evidence-Based Practice boxes** offer a solid foundation in this essential component of nursing practice. Each box summarizes a useful research article, explains the implications of its findings for nursing practice and further research, and rates the level of evidence based on a well-respected scale.
- **Continued Emphasis on Preparation for the NCLEX® Examination.** An enhanced emphasis on the NCLEX® Examination and consistency with the 2019 NCLEX-RN® test plan has been refined in this edition. The tenth edition emphasizes "readiness"—readiness for the NCLEX® Examination, readiness for disaster and mass casualty events, readiness for safe drug administration, and readiness for the continually evolving world of genetics and genomics. An increased number of new **NCLEX Examination Challenges** are interspersed throughout the text to allow students the opportunity to practice test-taking and decision making. **NCLEX Mastery Questions**, new to the tenth edition, are at the end of each chapter. Answers to these Challenges are provided in the back of the book, and their rationales are provided on the Evolve website (http://evolve.elsevier.com/Iggy). In a world that needs more nurses than ever before, it is critical that students be ready to pass the licensure examination on the first try. To help students and faculty achieve that goal, **Learning Outcomes** at the beginning of each chapter continue to be consistent with the competencies outlined in the 2019 NCLEX-RN® Test Plan. The tenth edition continues to include an innovative end-of-chapter feature called **Get Ready for the Next-Generation NCLEX® Examination!** This unique and effective learning aid consists of a list of **Key Points** *organized by Client Needs Category* as found in the NCLEX-RN® Test Plan. Relevant QSEN and Nurse of the Future competency categories are identified for selected Key Points.
- **Focus on Care Coordination and Transition Management.** Similar to the ninth edition, the tenth edition includes a priority focus on continuity of care via a Care Coordination and Transition Management section in each Nursing Care chapter. Literature continues to emphasize the importance of care coordination and transition management between acute care and community-based care. To help students prepare for this role, this edition of our text provides content focusing on Home Care Management, Self-Management Education, and Health Care Resources.

CLINICAL CURRENCY AND ACCURACY

To ensure currency and accuracy, we listened to students and faculty who have used the previous editions, hearing their impressions of and experiences with the book. A thorough literature search of current best evidence regarding nursing education and clinical practice helped us validate best practices and national health care trends that have shaped the focus of the tenth edition. Further cumulative efforts are reflected in this edition:

- Strong, consistent focus on NCLEX-RN® Examination preparation, clinical judgment, safe patient-centered interprofessional care, pathophysiology, drug therapy, quality improvement, evidence-based clinical practice, and care coordination and transition management
- Foundation of relevant research and best practice guidelines
- Emphasis on critical "need-to-know" information that entry-level nurses must master to provide safe patient care

With the amount of information that continues to evolve in health care practice and education, it is easy for a book to become larger with each new edition. The reality is that today's nursing students have a limited time to absorb and apply essential information to provide safe medical-surgical nursing care. Materials in this edition were carefully scrutinized to determine the essential information that students will actively *use* when providing safe, patient-centered, interprofessional, quality nursing care for adults.

OUTSTANDING READABILITY

Today's students must maximize their study time to read information and quickly understand it. The average reading level of today's learner is 10th to 11th grade. To achieve this level of

readability without reducing the quality or depth of material that students need to know, this text uses a direct-address style (where appropriate) that speaks directly to the reader. Sentences are as short as possible without sacrificing essential content. The new edition has continued to improve within consistency among chapters. The result of our efforts is a medical-surgical text of consistently outstanding readability in which content is clear, focused, and accessible.

EASE OF ACCESS

To make this text as easy to use as possible, we have maintained our approach of having smaller chapters of more uniform length. Consistent with our focus on "need-to-know" material, we chose exemplars to illustrate concepts of care versus detailing every health disorder. The focused tenth edition contains 69 chapters. To help decrease the number of chapters and stay focused on essential "need-to-know" content, several changes were made, including:

- Combining the content on skin disorders and burns into one chapter instead of two separate chapters
- Deleting the chapter on Intraoperative Care, a specialized area of expertise that is no longer tested on the NCLEX-RN® Examination
- Combining the preoperative and postoperative content from two chapters into one chapter (Chapter 9: Concepts of Care for Perioperative Patients)
- Deleting the chapter on arthritis and connective tissue disorders but moving essential content into appropriate chapters, including a new chapter in the musculoskeletal section (Chapter 46: Concepts of Care for Patients with Arthritis and Total Joint Arthroplasty)
- Combining the two chapters on disorders of the oral cavity and esophagus into one chapter (Chapter 49) to prevent duplication of content

The overall presentation of the tenth edition has been updated, including more current, high-quality photographs for realism. Design changes have been made to improve accessibility of material. There is appropriate placement of display elements (e.g., figures, tables, and boxes) for a chapter flow that enhances text reading without splintering content or confusing the reader. Instead of including a glossary at the end of the text, each chapter's key terms are now defined at the beginning of the chapters for quick reference. To increase the smoothness of flow and reader concentration, side-turned tables and charts or tables and charts that span multiple pages are infrequently used.

We have maintained the unit structure of previous editions, with larger vital body systems appearing earlier in the book. However, in the tenth edition we expanded complex care content in separate critical care chapters for patients with coronary artery disease, respiratory health problems, and neurologic health problems.

To break up long blocks of text and highlight key information, we continue to include streamlined yet eye-catching headings, bulleted lists, tables, boxes, and in-text highlights. Current references at the end of each chapter include research articles, nationally accepted clinical guidelines, and other sources of evidence when available for each chapter. Classic sources from before 2015 are noted with an asterisk (*).

A PATIENT-CENTERED, INTERPROFESSIONAL COLLABORATIVE CARE APPROACH

As in previous editions, we maintain in this edition a collaborative, interprofessional care approach to patient care. In the real world of health care, nurses, patients, and all other providers who are part of the interprofessional team *share* responsibility for the management of patients and their health problems. Thus we present information in a collaborative framework with an increased emphasis on the interprofessional nature of care. In this framework we make no *artificial* distinctions between medical treatment and nursing care. Instead, under each Interprofessional Collaborative Care heading we discuss how the nurse coordinates care and transition management while interacting with members of the interprofessional team. A new feature for the tenth edition is **Interprofessional Collaboration boxes** that present helpful content on how nurses can collaborate with the interprofessional health care team to help meet optimal patient outcomes. Each box identifies the Interprofessional Education Collaborative (IPEC) Expert Panel's Competency of Roles and Responsibilities that aligns with its content.

Although our approach has a focus on interprofessional care, the text is first and foremost a *nursing* text. We therefore use a nursing process/clinical judgment approach as a tool to organize discussions of patient health problems and their management. Discussions of *major* health problems follow a full nursing process format using this structure:

[Health problem]
Pathophysiology Review
  Etiology (and Genetic Risk when appropriate)
  Incidence and Prevalence
Health Promotion and Maintenance (when appropriate)
Interprofessional Collaborative Care
  Assessment: Recognize Cues
  Analysis: Analyze Cues and Prioritize Hypotheses
  Planning and Implementation: Generate Solutions and Take Action
    [Collaborative Intervention Statement (based on priority patient problems)]
    Planning: Expected Outcomes
    Interventions
  Care Coordination and Transition Management
    Home Care Management
    Self-Management Education
    Health Care Resources
  Evaluation: Evaluate Outcomes

Discussions of less common (but important) or less complex disorders follow a similar yet abbreviated format: a discussion of the problem itself (including pertinent review information on pathophysiology) followed by a section on interprofessional collaborative care of patients with the disorder. To demonstrate our commitment to providing the content foundational to nursing education, and consistent with the recommendations of Benner and colleagues through the Carnegie Foundation for

the Future of Nursing Education, we highlight essential pathophysiologic concepts that are key to understanding the basis for collaborative management.

Integral to the interprofessional care approach is a narrative of who on the health care team is involved in the care of the patient. When a responsibility is primarily the nurse's, the text says so. When a decision must be made jointly by various members of the team (e.g., by the patient, nurse, primary health care provider, and physical therapist), this is clearly stated. When health care practitioners in different care settings are involved in the patient's care, this is noted.

ORGANIZATION

The 69 chapters of *Medical-Surgical Nursing: Concepts for Interprofessional Collaborative Care* are grouped into 15 units. Unit I, Concepts for Medical-Surgical Nursing, provides fundamental information for the health care concepts incorporated throughout the text. Unit II consists of three chapters on concepts of emergency care and disaster preparedness.

Unit III consists of three chapters on the management of patients with fluid, electrolyte, and acid-base imbalances. Chapters 13 and 14 review key assessments associated with fluid and electrolyte balance, acid-base balance, and related patient care in a clear, concise discussion. The chapter on infusion therapy (Chapter 15) is supplemented with an online Fluids & Electrolytes Tutorial on the companion Evolve website.

Unit IV provides core content on health problems related to immunity. This material includes information on inflammation and the immune response, altered cell growth and cancer development, and interventions for patients with connective tissue disease, HIV infection, and other immunologic disorders, cancers, and infections.

The remaining 11 units focus on medical-surgical content by body system. Each of these units begins with an Assessment chapter and continues with one or more Nursing Care chapters for patients with selected health problems, highlighted via exemplars, in that body system. This framework is familiar to students who learn the body systems in preclinical foundational science courses such as anatomy and physiology.

MULTINATIONAL, MULTICULTURAL, MULTIGENERATIONAL FOCUS

To reflect the increasing diversity of our society, *Medical-Surgical Nursing: Concepts for Interprofessional Collaborative Care* takes a multinational, multicultural, and multigenerational focus. Addressing the needs of both U.S. and Canadian readers, we have included U.S. and international units for normal values of selected laboratory tests. When appropriate, we identify specific Canadian health care resources, including their websites. In many areas, Canadian health statistics are combined with those of the United States to provide an accurate "North American" picture.

To help nurses provide quality care for patients whose preferences, beliefs, and values may differ from their own, numerous **Patient-Centered Care: Cultural/Spiritual Considerations** and **Patient-Centered Care: Gender Health Considerations boxes** highlight important aspects of culturally competent care. Chapter 68 is dedicated to the special health care needs of transgender patients.

Increases in life expectancy and aging of the baby-boom generation contribute to a steadily increasing older adult population. To help nurses care for this population, the tenth edition continues to provide thorough coverage of the care of older adults. Chapter 4 offers content on the role of the nurse and interprofessional team in promoting health for this population, with coverage of common health problems that older adults may experience, such as falls and inadequate nutrition. **Patient-Centered Care: Considerations for Older Adults boxes** that specify normal physiologic changes to expect in the older population are found in each Assessment chapter. In the Nursing Care chapters, these boxes also present key points for the student to consider when caring for these patients. A new feature for the ninth edition was **Patient-Centered Care: Veterans Health Considerations**. The tenth edition increases emphasis on the special health needs of this population. An increasing number of veterans have multiple physical and mental health concerns that require special attention in today's environment of care.

AN INTEGRATED MULTIMEDIA RESOURCE BASED ON PROVEN STRATEGIES FOR STUDENT ENGAGEMENT AND LEARNING

Medical-Surgical Nursing: Concepts for Interprofessional Collaborative Care, 10th edition, is the centerpiece of a comprehensive package of electronic and print learning resources that break new ground in the application of proven strategies for student engagement, learning, and evidence-based educational practice. This integrated multimedia resource actively engages the student in problem solving and using clinical judgment to make important clinical decisions.

Resources for Instructors

For the convenience of faculty, all Instructor Resources are available on a streamlined, secure instructor area of the Evolve website (http://evolve.elsevier.com/Iggy/). All ancillaries for this edition were developed with direct involvement of the textbook authors. Included among these Instructor Resources are the ***TEACH*® *for Nurses* Lesson Plans.** These Lesson Plans focus on the most important content from each chapter and provide innovative strategies for student engagement and learning. This tenth edition *TEACH for Nurses* product incorporates numerous interprofessional activities that give students an opportunity to practice as an integral part of the health care team. Lesson Plans are provided for each chapter and are categorized into several parts:

Learning Outcomes
Teaching Focus
Key Terms
Nursing Curriculum Standards
- QSEN
- Concepts
- BSN Essentials

Student Chapter Resources
Instructor Chapter Resources
Teaching Strategies

Additional Instructor Resources provided on the Evolve website include:

- A completely revised, updated, high-quality **Test Bank** consisting of more than 1509 items, both traditional multiple-choice and NCLEX-RN® "alternate-item" types. Each question is coded for correct answer, rationale, cognitive level, NCLEX Integrated Process, NCLEX Client Needs Category, and new key words to facilitate question searches. Page references are provided for Remembering (Knowledge)-level and Understanding (Comprehension)-level questions. (Questions at the Applying [Application] and above cognitive level require the student to draw on understanding of multiple or broader concepts not limited to a single textbook page, so page cross references are not provided for these higher-level critical thinking questions.) The Test Bank is provided in the Evolve Assessment Manager and in ExamView and ParTest formats. New to this edition, 75 Next-Generation NCLEX® Examination Review questions are provided within an interactive application for further testing options.
- An electronic **Image Collection** containing all images from the book (approximately 550 images), delivered in a format that makes incorporation into lectures, presentations, and online courses easier than ever.
- A completely revised collection of more than 2000 **PowerPoint slides** corresponding to each chapter in the text and highlighting key materials with integrated images and Unfolding Case Studies. Audience Response System Questions (three discussion-oriented questions per chapter for use with iClicker and other audience response systems) are included in these slide presentations. Answers and rationales to the Audience Response System Questions and Unfolding Case Studies are found in the "Notes" section of each slide.

Also available for adoption and separate purchase:

- Corresponding chapter-by-chapter to the textbook, ***Elsevier Adaptive Quizzing (EAQ)*** integrates seamlessly into your course to help students of all skill levels focus their study time and effectively prepare for class, course exams, and the NCLEX® certification exam. ***EAQ*** is comprised of a bank of high-quality practice questions that allows students to advance at their own pace—based on their performance—through multiple mastery levels for each chapter. A comprehensive dashboard allows students to view their progress and stay motivated. The educator dashboard, grade book, and reporting capabilities enable faculty to monitor the activity of individual students, assess overall class performance, and identify areas of strength and weakness, ultimately helping to achieve improved learning outcomes.
- ***Simulation Learning System (SLS) for Medical-Surgical Nursing*** is an online toolkit designed to help you effectively incorporate simulation into your nursing curriculum, with scenarios that promote and enhance the clinical decision-making skills of students at all levels. It offers detailed instructions for preparation and implementation of the simulation experience, debriefing questions that encourage critical thinking, and learning resources to reinforce student comprehension. Modularized simulation scenarios correspond to Elsevier's leading medical-surgical nursing texts, reinforcing students' classroom knowledge base, synthesizing lecture and clinicals, and offering the remediation content that is critical to debriefing.

Resources for Students

Resources for students include a revised, updated, and retitled Study Guide, a Clinical Companion, Elsevier Adaptive Learning (EAL), Virtual Clinical Excursions (VCE), and Evolve Learning Resources.

The ***Study Guide*** has been completely revised and updated and features a fresh emphasis on clinical decision making, priorities of delegation, management of care, and pharmacology. Unlike earlier editions, the rationales are provided along with the correct responses to allow students the opportunity to enhance their understanding of content and increase their test-taking skills.

The pocket-sized ***Clinical Companion*** is a handy clinical resource that retains its easy-to-use alphabetical organization and streamlined format, with completely revised content for ease of use and on-the-go care. The bulleted format is integrated with key elements of the NCSBN Clinical Judgment Measurement Model. It includes "Critical Rescue," "Drug Alert," and "Action Alert" highlights throughout based on the Nursing Safety Priority features in the textbook. National Patient Safety Goals highlights have been expanded as a QSEN feature, focusing on one of six QSEN core competencies while still underscoring the importance of observing vital patient safety standards. Increased use of illustrations facilitates clinical application of key content. This "pocket-sized Iggy" has been tailored to the special needs of students preparing for clinicals and clinical practice.

Corresponding chapter-by-chapter to the textbook, ***Elsevier Adaptive Learning (EAL)*** combines the power of brain science with sophisticated, patented Cerego algorithms to help students to learn faster and remember longer. It's fun, it's engaging, and it constantly tracks and adapts to student performance to deliver content precisely when it's needed to ensure core information is transformed into lasting knowledge.

Virtual Clinical Excursions, featuring an updated and easy-to-navigate "virtual" clinical setting, is once again available for the tenth edition. This unique learning tool guides students through a virtual clinical environment and helps them "learn by doing" in the safety of a "virtual" hospital.

Also available for students is a dynamic collection of Evolve Student Resources, available at http://evolve.elsevier.com/Iggy/. The Evolve Student Resources include the following:

- Review Questions—NCLEX® Examination
- Review Questions—Next-Generation NCLEX® Examination
- Answer Guidelines for Next-Generation NCLEX® Examination and Clinical Judgment Challenges
- Interactive Case Studies
- Concept Maps

- Concept Map Creator (a handy tool for creating customized Concept Maps)
- Fluid & Electrolyte Tutorial (a complete self-paced tutorial on this perennially difficult content)
- Key Points (downloadable expanded chapter reviews for each chapter)
- Audio Glossary
- Audio Clips and Video Clips

In summary, *Medical-Surgical Nursing: Concepts for Interprofessional Collaborative Care,* tenth edition, together with its fully integrated multimedia ancillary package, provides the tools you will need to equip nursing students to meet the opportunities and challenges of nursing practice both now and in an evolving health care environment. The only elements that remain to be added to this package are those that you uniquely provide—your passion, your commitment, your innovation, *your nursing expertise.*

Donna D. Ignatavicius
M. Linda Workman
Cherie R. Rebar
Nicole M. Heimgartner

We are dedicating this landmark tenth edition to our parents. These wonderful women and men were our first teachers, believed in our dreams, and instilled in us the fortitude to reach high to accomplish our professional and personal goals. It is with love and gratefulness that we honor and remember:

Donna's parents
Mary P. Dennis (1929-1972)
Barney J. Dennis, Jr. (1923-1985)

Linda's parents
M. Eunice R. Workman (1929-2019)
Homer D. Workman (1928-1992)

Cherie's parents
Ruth (Whitt) Carnes (1933-2019)
Charles R. Carnes, Jr. (1930-2008)

Nicole's parents
Edna Surles (1944-2018)
Logan Surles, Jr. (living)

ABOUT THE AUTHORS

Donna D. Ignatavicius received her diploma in nursing from the Peninsula General School of Nursing in Salisbury, Maryland. After working as a charge nurse in medical-surgical nursing, she became an instructor in staff development at the University of Maryland Medical Center. She then received her BSN from the University of Maryland School of Nursing. For 5 years she taught in several schools of nursing while working toward her MS in Nursing, which she received in 1981. Donna then taught in the BSN program at the University of Maryland, after which she continued to pursue her interest in gerontology and accepted the position of Director of Nursing of a major skilled-nursing facility in her home state of Maryland. Since that time, she has served as an instructor in several associate degree nursing programs. Through her consulting activities, faculty development workshops, and international nursing education conferences (such as Boot Camp for Nurse Educators®), Donna is nationally recognized as an expert in nursing education. She is currently the President of DI Associates, Inc. (http://www.diassociates.com/), a company dedicated to improving health care through education and consultation for faculty. In recognition of her contributions to the field, she was inducted as a charter Fellow of the prestigious Academy of Nursing Education in 2007, received her Certified Nurse Educator credential in 2016, and obtained her Academic Clinical Nurse Educator certification in 2020.

M. Linda Workman, a native of Canada, received her BSN from the University of Cincinnati College of Nursing and Health. After serving in the U.S. Army Nurse Corps and working as an Assistant Head Nurse and Head Nurse in civilian hospitals, Linda earned her MSN from the University of Cincinnati College of Nursing and a PhD in Developmental Biology from the University of Cincinnati College of Arts and Sciences. Linda's 30-plus years of academic experience include teaching at the diploma, associate degree, baccalaureate, master's, and doctoral levels. Her areas of teaching expertise include medical-surgical nursing, physiology, pathophysiology, genetics, oncology, and immunology. Linda has been recognized nationally and internationally for her teaching expertise and was inducted as a Fellow into the American Academy of Nursing in 1992. She received Excellence in Teaching awards at the University of Cincinnati and at Case Western Reserve University. She is a former American Cancer Society Professor of Oncology Nursing and occupied an endowed chair in oncology for 5 years. She has authored several additional textbooks and continues to serve as a consultant for major universities.

Cherie R. Rebar earned her first degree in education from Morehead State University in Morehead, Kentucky. She returned to school to earn an Associate of Science degree in Nursing from Kettering College, MSN and MBA degrees from the University of Phoenix, a post-masters certificate in Family Nurse Practitioner studies from the University of Massachusetts—Boston, a Psychiatric-Mental Health Nurse Practitioner post-masters certificate from the University of Cincinnati College of Nursing, and a PhD in Psychology (Health Behaviors) from Northcentral University. Combining her loves of nursing and education, Cherie continues to teach students in prelicensure and graduate nursing programs. She has served in numerous leadership positions over the years, including Chair of ASN, BSN Completion, and BSN Prelicensure Nursing Programs, and Director of Nursing. She currently is a Professor of Nursing at Wittenberg University and an Adjunct Faculty Member at Indiana Wesleyan University and Mercy College of Ohio. Her years of clinical practice include medical-surgical, acute care, ear/nose/throat surgery and allergy, community, and psychiatric-mental health nursing. A frequent presenter at national and state nursing conferences, Cherie serves as a consultant to nursing programs and faculty, contributes regularly to professional publications, and holds student success at the heart of all she does.

Nicole M. Heimgartner received her BSN from Spalding University in Louisville, Kentucky, her MSN with an emphasis in education from the University of Phoenix, and her Doctorate of Nursing Practice in Educational Leadership from American Sentinel University in Aurora, Colorado. Nicole is also certified in online education.

Nicole has a very diverse clinical background, with extensive practice experience in cardiovascular, medical-surgical, and community nursing. As her love for the nursing profession grew, Nicole started teaching in undergraduate and graduate degree programs. Nicole now has over 17 years of experience as an educator, focusing on innovative educational strategy, nursing leadership, and incorporating online learning into nursing education. Her expertise includes currency in clinical practice as well as teaching and designing curriculum at the undergraduate and graduate levels of nursing education. Nicole also presents at the state and national level on best nursing practice, serves as a consultant with nursing programs and faculty, contributes regularly to professional publications, and is passionate about current practice and engaging the adult learner.

ACKNOWLEDGMENTS

Publishing a textbook and ancillary package of this magnitude would not be possible without the combined efforts of many people. With that in mind, we would like to extend our deepest gratitude to many people who were such an integral part of this journey.

For the tenth edition, we welcomed Nicole M. Heimgartner as a full member of the author and editor team. Nicole has worked with our team previously in contributor, section editor, and ancillary roles over the past editions.

Our contributing authors once again provided excellent manuscripts to underscore the clinical relevancy of this publication. Our reviewers—expert clinicians and instructors from around the United States and Canada—provided invaluable suggestions and encouragement throughout the development of book.

The staff of Elsevier has, as always, provided us with meaningful guidance and support throughout every step of the planning, writing, revision, and production of the tenth edition. Executive Content Strategist Lee Henderson worked closely with us from the early stages of this edition to help us hone and focus our revision plan while coordinating the project from start to finish. Senior Content Development Specialist Laura Goodrich then worked with us to bring the logistics of the tenth edition from vision to publication. Laura also held the reins of our complex ancillary package and worked with the authors and a gifted group of writers and content experts to provide an outstanding library of resources to complement and enhance the text.

Senior Project Manager Jodi Willard was, as always, an absolute joy with whom to work. If the mark of a good editor is that his or her work is invisible to the reader, then Jodi is the consummate editor. Her unwavering attention to detail, flexibility, and conscientiousness helped to make the tenth edition consistently readable, while making the production process incredibly smooth. Also, a special thanks to Publishing Services Manager Julie Eddy.

Designer Brian Salisbury is responsible for the beautiful cover and the new interior design of the tenth edition. Brian's work on this edition has cast important features in exactly the right light, contributing to the readability and colorful beauty of this edition.

Our acknowledgments would not be complete without recognizing our dedicated team of Educational Solutions Consultants and other key members of the Sales and Marketing staff who helped to put this book into your hands.

Donna D. Ignatavicius
M. Linda Workman
Cherie R. Rebar
Nicole M. Heimgartner

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1

Overview of Professional Nursing Concepts for Medical-Surgical Nursing

Donna D. Ignatavicius

http://evolve.elsevier.com/Iggy/

LEARNING OUTCOMES

1. Provide examples of how nurses use the Rapid Response Team (RRT) to ensure patient ***safety.***
2. Identify the six core Quality and Safety Education for Nurses (QSEN) competencies that professional nurses need to provide safe, coordinated ***patient-centered care.***
3. Differentiate the major ***ethics*** principles that help guide professional nursing practice.
4. Communicate patient values, preferences, and expressed needs to other members of the health care team for effective ***teamwork and*** interprofessional ***collaboration.***
5. Describe common methods used to ensure effective hand-off communication in health care agencies.
6. Explain the relationship between ***evidence-based practice*** and ***clinical judgment.***
7. Identify the nurse's role in ***systems thinking*** and the ***quality improvement*** process.
8. State three ways that ***informatics*** is used in health care.
9. Explain why many minority populations and older adults are at risk for ***health care disparities.***
10. Identify the role of the nurse when communicating with members of the LGBTQ community.

KEY TERMS

adverse event A variation in the standard of care.

autonomy An ethical principle in which one is capable of making informed decisions about one's own care; also referred to as *self-determination* or *self-management.*

beneficence An ethical principle in which nurses promote positive actions to help others.

care coordination The deliberate organization of and communication about patient care activities between two or more members of the health care team (including the patient) to facilitate appropriate and continuous health care to meet that patient's needs.

care transition Actions designed to ensure safe, effective coordination and continuity of care as patients experience a change in health status, primary health care provider, or setting; the nurse plays a vital role in patient-centered care transition management.

case management A process to ensure quality and cost-effective services and resources to achieve positive patient outcomes.

clinical judgment The observed outcome of critical thinking and decision making. It is an iterative process that uses nursing knowledge to observe and access presenting situations, identify a prioritized client concern, and generate the best possible evidence-based solutions in order to deliver safe client care (NCSBN, 2019).

culture of safety An environment that provides a blame-free approach to improving care in high-risk, error-prone health care settings using interprofessional collaboration.

delegated responsibility A nursing activity, skill, or procedure that is transferred from a licensed nurse to a delegate, usually an LPN/VN or assistive personnel (AP) in a selected patient care situation.

early warning system (EWS) (also called an early warning scoring system [EWSS]) A guide for the health care team to quickly determine a patient's condition on the basis of a physiologic scoring matrix.

ethics A theoretical and reflective domain of human knowledge that addresses issues and questions about morality in human choices, actions, character, and ends.

Evidence-Based Practice (EBP) A QSEN competency in which the nurse uses the integration of the best current evidence and practices to make decisions about patient care. It considers the patient's preferences and values and one's own clinical expertise for the delivery of optimal health care.

failure to rescue The inability of nurses or other interprofessional health team members to save a patient's

life in a timely manner when a health care issue or medical complication occurs.

fidelity An ethical principle that refers to the agreement that nurses will keep their obligations or promises to patients to follow through with care.

health care disparities Differences in patient access to or availability of appropriate health care services.

Informatics A QSEN competency in which the nurse accesses and uses information and electronic technology to communicate, manage knowledge, prevent error, and support decision making.

medication reconciliation A formal evaluative process in which the nurse compares the patient's actual current medications to his or her medications at time of admission, transfer, or discharge to identify and resolve discrepancies.

modified early warning system (MEWS) A screening and scoring tool for medical-surgical nursing assessment to determine a patient's condition based primarily on the patient's level of consciousness and respiratory rate. Most MEWS tools also include measurements of systolic blood pressure, temperature, heart rate, oxygen saturation, and hourly urinary output (previous 2 hours).

nonmaleficence An ethical principle that emphasizes the importance of preventing harm and ensuring the patient's well-being.

Patient-Centered Care A QSEN competency in which the nurse recognizes the patient or designee as the source of control and full partner in providing compassionate and coordinated care based on respect for the patient's preferences, values, and needs.

PICOT A format using a spirit of inquiry to formulate a quality improvement project question.

Plan-Do-Study-Act (PDSA) A commonly used systematic quality improvement model used in health care and other settings.

Quality Improvement (QI) A QSEN competency in which the nurse uses indicators (data) to monitor care outcomes and develop solutions to change and improve care.

Rapid Response Team (RRT) A group of health care professionals who save lives and decrease the risk for harm by providing care before a medical emergency occurs. by intervening rapidly for patients who are beginning to clinically decline. Members of an RRT are critical care experts who are on-site and available at any time.

Safety A QSEN competency in which the nurse keeps the patient and staff free from harm and minimizes errors in care.

SBAR A formal method of communication between two or more members of the health care team or health care agency.

sentinel event A severe variation in the standard of care that is caused by human or system error and results in an avoidable patient death or major harm.

social justice An ethical principle that refers to equality and fairness; that is, all patients should be treated equally and fairly, regardless of age, gender identity, sexual orientation, religion, race, ethnicity, or education.

Systems Thinking The ability to recognize, understand, and synthesize the interactions and interdependencies in a set of components designed for a specific purpose (Dolansky & Moore, 2013).

supervision Guidance or direction, evaluation, and follow-up by the nurse to ensure that a nursing task or activity is performed appropriately and safely.

TeamSTEPPS A systematic communication approach for interprofessional teams designed to improve safety and quality.

Teamwork and Collaboration A QSEN competency in which the nurse functions effectively within nursing and interprofessional teams, fostering open communication, mutual respect, and shared decision making to achieve quality patient care.

telehealth The long-distance use of electronic information and telecommunication technology to support clinical health care by a variety of health care professionals.

telenursing A type or subset of telehealth that allows nurses to provide care through the use of the Internet, telephone, computers, digital assessment tools, and telemonitoring equipment.

veracity An ethical principle related to fidelity in which the nurse is obligated to tell the truth to the best of his or her knowledge.

PRIORITY AND INTERRELATED CONCEPTS

The priority concepts for this chapter are:

- ***Patient-Centered Care***
- ***Safety***
- ***Teamwork and Collaboration***
- ***Evidence-Based Practice***
- ***Quality Improvement***
- ***Informatics***
- ***Clinical Judgment***
- ***Systems Thinking***
- ***Ethics***
- ***Health Care Disparities***

Medical-surgical nursing, sometimes called *adult health nursing,* is a specialty practice area in which nurses promote, restore, or maintain optimal health for patients from 18 to older than 100 years of age (Academy of Medical-Surgical Nurses [AMSN], 2012). A separate chapter on care of older adults is part of this textbook because the majority of medical-surgical patients in most health care settings are older than 65 years (see Chapter 4).

To be consistent with the most recent health care literature, the authors use the term *patient* rather than *client* (except in NCLEX Examination Challenge questions and Clinical Judgment Challenges where *client* is used to reflect that licensure examination). To be patient-centered, be sure to refer to individuals according to the policy of the health care organization and the individual's preference. The *family* refers to the

patient's relatives and significant others in the patient's life whom the patient identifies and values as important.

Medical-surgical nursing is practiced in many types of settings, such as acute care hospitals, skilled nursing facilities, ambulatory care settings, and the patient's home, which could be either a single residence or group setting such as an assisted living facility. The role of the nurse in these settings includes care coordinator and transition manager, caregiver, patient educator, leader, and patient and family advocate. To function in these various roles, nurses need to have the knowledge, skills, attitudes, and abilities to keep patients and their families safe.

QUALITY AND SAFETY EDUCATION FOR NURSES' COMPETENCIES

The Institute of Medicine (IOM, now the National Academy of Medicine [NAM]), a highly respected U.S. organization that monitors health care and recommends health policy, published many reports during the past 25 years suggesting ways to improve patient safety and quality care. One of its classic reports, *Health Professions Education: A Bridge to Quality,* identified five broad core competencies for health care professionals to ensure patient safety and quality care (Institute of Medicine [IOM], 2003). All of these competencies are interrelated and include:

- Provide ***patient-centered care.***
- *Collaborate* with the interprofessional health care team.
- Implement ***evidence-based practice.***
- Use ***quality improvement*** in patient care.
- Use ***informatics*** in patient care.

Several years later, the QSEN initiative, now called the *QSEN Institute,* validated the IOM (NAM) competencies for nursing practice and added ***safety*** as a sixth competency to emphasize its importance. More information about the QSEN Institute can be found on www.qsen.org.

In addition to emphasizing the six QSEN competency concepts in this text, the authors integrate these four professional nursing concepts:

- Clinical Judgment
- Systems Thinking
- Ethics
- Health Care Disparities

This chapter briefly reviews each of these professional nursing concepts and includes the concept definition; scope, category, or models of the concept; and attributes (characteristics) of the concept. Each concept analysis review ends with at least one example of how the concept may be used in practice. Many of the concepts in this chapter are interrelated. For instance, ***systems thinking*** is required for ***quality improvement. Clinical judgment*** to make the best patient care decisions promotes ***patient safety.***

PATIENT-CENTERED CARE

Definition of Patient-Centered Care

To be competent in ***Patient-Centered Care,*** the nurse recognizes "the patient or designee as the source of control and full partner in providing compassionate and coordinated care based on respect for [the] patient's preferences, values, and needs" (Quality and Safety Education for Nurses [QSEN], 2019). Implied in this widely used definition is the need for the nurse to provide safe, culturally competent care for diverse patients and their families. Many patients who are part of minority groups do not have equal access to appropriate and/or culturally sensitive health care. Therefore, the primary interrelated concepts are ***safety*** and ***health care disparities***. The Joint Commission, a major accrediting organization for health care agencies, uses the term *family-centered care* to emphasize the importance of including the patient's support system as part of interprofessional collaboration.

Scope of Patient-Centered Care

Patient-centered care has been a focus of health professions' education and research for several decades. Before this period of time, patients in inpatient facilities and their families often had little to no input into their health care. Many health care professionals believed that they were better prepared than patients to make care decisions and did not consistently include the patient and family in this process. The Joint Commission and other organizations called for the rights of patients or their designees (e.g., family members, guardians) to make their own informed decisions. The IOM (now NAM) further emphasized the need for all health care agencies to place patients and their families at the center of the interprofessional team to make mutual decisions based on patient preferences and values.

Attributes of Patient-Centered Care

The attributes, or characteristics, of ***patient-centered care*** were identified by researchers as a result of a classic medical study (Frampton et al., 2008). These attributes are listed in Table 1.1 and discussed in this section.

Showing respect and advocating for the patient and family's preferences and needs is essential to ensure a wholistic or "whole person" approach to care. As a patient advocate, the nurse also ensures that the patient's autonomy and self-determination are respected (Gerber, 2018). To help illustrate the importance of Patient-Centered Care, this text incorporates special boxes that include:

- Patient-Centered Care: Older Adult Considerations
- Patient-Centered Care: Gender Health Considerations
- Patient-Centered Care: Veterans Health Considerations
- Patient-Centered Care: Cultural/Spiritual Considerations
- Patient-Centered Care: Genetic/Genomic Considerations

TABLE 1.1 Attributes of the Concept of Patient-Centered Care

- Respect for patients' values, preferences, and expressed needs
- Coordination and integration of care
- Information, communication, and education
- Physical comfort
- Emotional support and alleviation of fear and anxiety
- Involvement of family and friends
- Transition and continuity
- Access to care

Data from Frampton, S., Guastello, S., Brady, C., Hale, M., Horowitz, S., Smith, S. B., et al. (2008). *Patient-centered care improvement guide*. Derby, CT: Planetree.

TABLE 1.2 Examples of Integrative (Complementary and Alternative) Therapies Used in Health Care Organizations

- Pet therapy
- Massage therapy
- Guided imagery
- Biofeedback
- Exercise and fitness programs
- Nutritional supplements
- Aromatherapy
- Health-focused television
- Music therapy
- Acupuncture
- Acupressure
- Disease management programs

Canadian nursing practice includes ***patient-centered care*** and culture from a ***safety*** perspective. Promoting safety requires nursing practice that respects and nurtures the unique and dynamic characteristics of patients and families to meet their needs, preferences, values, and rights (Doane & Varcoe, 2015). *Cultural safety* is part of relational inquiry and practice and is highly valued in Canada as a major competency for professional nursing.

Examples of Context of Patient-Centered Care in Nursing and Health Care

Patient-centered care is a major emphasis in all health care settings. For example, many health care organizations integrate complementary and alternative medicine (CAM) as a supplement to traditional health care to meet the specific preferences of patients and their families. This *integrative care* model is in response to the increasing use of these therapies by consumers to maintain health and help manage chronic health issues, such as joint pain, back pain, and anxiety or depression. Integrative care reflects nursing theories of caring, compassion, and whole person care to *respect the diverse preferences and needs* of patients and their families. Examples of these therapies are listed in Table 1.2. Specific integrative therapies are highlighted throughout this text as appropriate.

All patients have the right to have their *basic physical care and comfort needs* met. For example, patients in a variety of settings often experience acute and/or chronic pain. Nurses continually assess the patient's pain management needs and implement interventions to relieve or reduce pain in a timely manner. Chapter 5 describes pain assessment and interventions in detail.

During a stay in a health care agency, patients have a need for individualized coordinated care. **Care coordination** is the deliberate organization of and communication about patient care activities between two or more members of the health care team (including the patient) to facilitate appropriate and continuous health care to meet that patient's needs (Lamb, 2014). One of the most important members of the health care team who assists with care coordination is the case manager (CM) or discharge planner, who is typically a nurse or social worker in health care agencies.

The purpose of the **case management** process is to ensure quality and cost-effective services and resources to achieve positive patient outcomes. In collaboration with the nurse, the CM coordinates inpatient and community-based care before discharge from a hospital or other facility. Part of that process may involve communicating with other CMs who are employed by third-party health care payers (e.g., Medicare) in the community to keep patients from being readmitted to the hospital.

In addition to care coordination during and after hospital discharge, care transitions are essential to prevent adverse events and hospital readmissions. A **care transition** involves actions designed to ensure safe, effective coordination and continuity of care as patients experience a change in health status, primary health care provider, or setting (Dusek et al., 2015). The medical-surgical nurse plays a vital role in managing patient-centered care transitions, often called *transition management* or *transitional care*. The Joint Commission (2013) recommends these components for effective patient-centered care coordination and transition management:

- Understandable discharge instructions for the patient and family
- Explanation of self-care activities
- Ongoing or emergency care information
- List of community and outpatient (ambulatory care) resources and referrals
- Knowledge of the patient's language, culture, and health literacy
- Medication reconciliation (also a Joint Commission National Patient Safety Goal)

Medication reconciliation is a formal evaluative process in which the patient's actual current medications are compared with his or her medications at time of admission, transfer, or discharge to identify and resolve discrepancies. The types of information that clinicians use to reconcile medications include drug name, dose, frequency, route, and purpose. This comparison addresses duplications, omissions, and interactions and the need to continue current medications. Medication discrepancies can cause negative patient outcomes, including rehospitalizations for medical complications.

Miner et al. (2018) identified six steps for improving the care transition or discharge process as outlined in the Best Practice for Patient Safety & Quality Care: Best Care Transition Practices box.

BEST PRACTICE FOR PATIENT SAFETY & QUALITY CARE QSEN

Best Care Transition Practices

- Educate and coach patients and their caregivers.
- Use transition coaches, if available, to improve care coordination and transition management.
- Follow up with postdischarge visits or phone calls.
- Improve communication handoffs from hospitals to ambulatory care or home care settings.
- Identify high-risk patients for readmission on the basis of age (older than 80), number of comorbidities (≥3), number of prescription drugs (≥5), and difficulty performing at least 1 activity of daily living (ADL).
- Address patient caregiver needs to prevent caregiver role strain.

Data from Miner, M. B., Evans, M. M. & Riley, K. (2018). Using transitional care to improve the discharge process in a medical-surgical setting. *MEDSURG Nursing, 27*(1), 4–6.

In this text the authors use the heading *Care Coordination and Transition Management* to describe the specific activities, including discharge planning, health teaching, and community-based care, that are essential for patients with selected health problems and their families. Nurses play a major role in coordinating this care with the interprofessional team to promote safe, quality care.

SAFETY

Definition of Safety

Safety is the ability to keep the patient and staff free from harm and minimize errors in care. The concept of ***safety*** is interrelated to all of the other professional nursing concepts in this chapter. Health care errors by primary health care providers, nurses, and other professionals have been widely reported for the past 25 years. Many of these errors resulted in patient injuries or deaths, as well as increased health care costs. A number of national and international organizations implemented new programs and standards to combat this growing problem.

Scope of Safety

Safety is essential for patients, staff members, and health care organizations. Although most literature discusses ***safety*** for patients, safety for members of the staff and interprofessional team is equally important. The scope of ***safety*** can be described as *unsafe,* possibly causing harm or even death, or *safe* to help prevent harm or minimize negative outcomes. Nurses have accountability for and play a key role in promoting ***safety*** and preventing errors, including "missed nursing care," the necessary care that should have been provided by one or more nurses.

According to classic research by Benner et al. (2010), patient *harm and errors* caused by nurses generally occur as a result of:

- Lack of clear or adequate communication among patient, family, and members of the interprofessional health care team (discussed later in this chapter)
- Lack of attentiveness and patient monitoring
- Lack of ***clinical judgment*** (discussed later in this chapter and in Chapter 2)
- Inadequate measures to prevent health complications
- Errors in medication administration (discussed later in this section)
- Errors in interpreting authorized provider prescriptions
- Lack of professional accountability and patient advocacy
- Inability to carry out interventions in an appropriate and timely manner (discussed later in this chapter)
- Lack of mandatory reporting

Attributes of Safety

Patient and staff safety is the major priority for professional nurses. Best ***safety*** practices reduce error and harm through established protocols, memory checklists, and systems such as bar-code medication administration (BCMA) (Fig. 1.1). Maintaining ***safety*** requires that nurses and other health care professionals use these systems and practices consistently and as specified to achieve positive outcomes. Working around these systems (often called *work-arounds*) is not acceptable and can increase the risk of error to patients and/or staff.

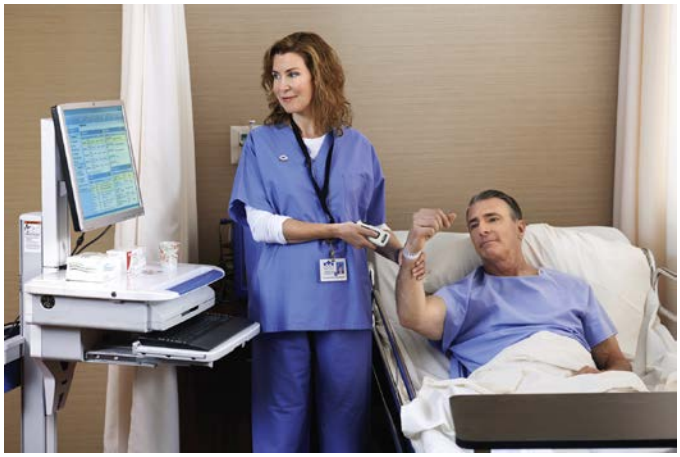

FIG. 1.1 Example of a bar-code medication administration (BCMA) system. (Courtesy Zebra Technologies.)

Three types of *Nursing Safety Priority* boxes are found throughout this text to emphasize its importance in daily practice. These features delineate ***safety*** on the basis of patient and/or staff need. For example, *Nursing Safety Priority: Critical Rescue* emphasizes the need for action for potential or actual life-threatening problems. *Nursing Safety Priority: Action Alert* boxes focus on the need for action but not necessarily for life-threatening situations. As the name implies, *Nursing Safety Priority: Drug Alert* boxes specify actions needed to ensure ***safety*** related to drug administration, monitoring, or related patient and family education.

Examples of Context of Safety in Nursing and Health Care

Medication administration ***safety*** continues to be a major problem in hospitals and other health care agencies. While giving medications, nurses frequently experience work interruptions and distractions, which contribute to medication errors (Cooper et al., 2016). A study by McMahon (2017) found that wearing a medication ***safety*** vest and signage during medication administration can reduce interruptions and minimize these errors (see the Systems Thinking and Quality Improvement box).

In 2002 The Joint Commission (TJC) published its first annual National Patient Safety Goals (NPSGs). These goals require health care organizations to focus on specific priority ***safety*** practices, many of which involve establishing nursing and health system approaches to safe care. Since that time, TJC continues to add new goals each year. NPSGs address high-risk issues such as safe drug administration, prevention of health care–associated infections, and communication effectiveness among the interprofessional team. When appropriate, this textbook includes related NPSGs. A complete list of the latest goals can be found on the TJC website at www.jointcommission.org.

TJC also requires that health care organizations create a culture of safety. A **culture of safety** provides a blame-free approach to improving care in high-risk, error-prone health care settings using interprofessional collaboration. Patients and families are encouraged to become ***safety*** partners in protecting patients from harm. In this environment, nurses and other

SYSTEMS THINKING AND QUALITY IMPROVEMENT QSEN

How Can Medication Administration Safety Be Improved?

McMahon, J. T. (2017). Improving medication administration safety in the clinical environment. *MEDSURG Nursing, 26*(6), 374–377, 409.

Work interruptions and distractions during medication administration increase the risk of medication errors and can cause patient harm. In this quality improvement (QI) project, clinical nurses on a 28-bed medical-surgical unit in a 251-bed regional medical center worked with a project leader to decrease the number of medication errors on their unit. For a period of 4 weeks, nurses wore disposable vests labeled *Do Not Disturb* while they were giving patient medications. As a result of this intervention, medication errors on the unit decreased by 88%.

Commentary: Implications for Practice and Research

The system in this study was the medical-surgical nursing unit. In any clinical setting or system, nurses need to implement interventions to prevent work interruptions and distractions while administering medications. For this QI project, the number of participants was limited to 28 staff nurses, and the study was conducted on only one patient care unit for 4 weeks. The project needs to be repeated using a larger number of nurses working on multiple units and health care organizations. However, this project validated findings from previous studies about the effectiveness of the medication safety vest with signage in reducing errors.

interprofessional health team members should not hesitate to report and document errors or missed care using appropriate internal organizational documents for risk management, ***quality improvement,*** and staff education purposes. A variation in the standard of care is often referred to as an **adverse event.** The Joint Commission requires that health care organizations report serious adverse events, known as sentinel events. A **sentinel event** is a *severe* variation in the standard of care that is caused by human or system error and results in an avoidable patient death or major harm.

TEAMWORK AND COLLABORATION

Definition of Teamwork and Collaboration

To provide patient- and family-centered care and be competent in ***teamwork and collaboration,*** the nurse "functions effectively within nursing and interprofessional teams, fostering open communication, mutual respect, and shared decision making to achieve quality patient care" (QSEN, 2019). Therefore the knowledge and skills needed for this competency are effective communication and team functioning. Communication is an essential process for evaluating patient care together using an interprofessional (IP) plan of care. To help meet this purpose, health care organizations have frequent and regular IP meetings and often conduct IP patient care rounds. The primary interrelated concepts are ***patient-centered care*** and ***ethics.***

Scope of Teamwork and Collaboration

In this textbook the interprofessional health care team includes the patient, family, primary health care providers, nurses, assistive personnel (AP, such as nursing assistants), and other health care professionals and their assistants needed to provide appropriate and safe, evidence-based care. Other older terms used for these members include the *interdisciplinary* or multidisciplinary team, depending on health care organization, context, or setting. Although there are many health care team members, some health care professionals work more closely with nurses than others. For example, the primary health care provider and medical-surgical nurse collaborate frequently in any given day regarding patient care. The occupational therapist may not work as closely with the nurse unless the patient is receiving rehabilitation services. Collaboration with the rehabilitation team is discussed in Chapter 7.

Attributes of Teamwork and Collaboration

In 2016 the Interprofessional Education Collaborative (IPEC) Expert Panel published their latest competencies to guide health professionals in education and practice. The four major IPEC competencies include:

- *Values/Ethics for Interprofessional Practice:* Work with individuals of other professions to maintain a climate of mutual respect and shared values.
- *Role-Responsibilities:* Use the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of patients and populations served.
- *Interprofessional Communication:* Communicate with patients, families, communities, and other health professionals in a responsive and responsible manner that supports a team approach to the maintenance of health and the treatment of disease.
- *Teams and Teamwork:* Apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan and deliver patient-population-centered care that is safe, timely, efficient, effective, and equitable.

Specific competencies for each of these general statements are delineated in the IPEC document. Examples of competencies for *Interprofessional Communication* are listed in Table 1.3. Interprofessional Collaboration boxes that apply some of these competencies are found throughout this textbook.

Examples of Context of Teamwork and Collaboration in Nursing and Health Care

Two examples of nursing ***teamwork and collaboration*** are discussed in this section: communication and delegation/supervision.

Communication. Poor communication between professional caregivers and health care agencies causes many medical errors and patient ***safety*** risks. In 2006 The Joint Commission began to require systematic strategies for improving communication. Two years later, another National Patient Safety Goal mandated that nurses communicate continuing patient care needs such as pain management or respiratory support to postdischarge caregivers for safe transition management.

To improve communication between staff members and health care agencies, procedures for handoff communication were established. An effective procedure used in many agencies today is called **SBAR** (pronounced S-Bar) (see the Evidence-Based Practice box).

TABLE 1.3 Interprofessional Communication Competencies (CC)

CC1. Choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance team function.

CC2. Organize and communicate information with patients, families, and health care team members in a form that is understandable, avoiding discipline-specific terminology when possible.

CC3. Express one's knowledge and opinions to team members involved in patient care with confidence, clarity, and respect, working to ensure common understanding of information and treatment and care decisions.

CC4. Listen actively and encourage ideas and opinions of other team members.

CC5. Give timely, sensitive, instructive feedback to others about their performance on the team, responding respectfully as a team member to feedback from others.

CC6. Use respectful language appropriate for a given difficult situation, crucial conversation, or interprofessional conflict.

CC7. Recognize how one's own uniqueness, including experience level, expertise, culture, power, and hierarchy within the health care team, contributes to effective communication, conflict resolution, and positive interprofessional working relationships.

CC8. Communicate consistently the importance of teamwork in patient-centered and community focused care.

Data from the Interprofessional Education Collaborative Expert Panel. (2016). *Core competencies for interprofessional collaborative practice: Report of an expert panel* (2nd ed.). Washington, DC: Interprofessional Education Collaborative.

EVIDENCE-BASED PRACTICE QSEN

How Effective Is SBAR Handoff Communication?

Stewart, K.R. & Hand, K.A. (2017). SBAR, communication, and patient safety: An integrated literature review. *MEDSURG Nursing, 26*(5), 297–305.

The purpose of this systematic review was to analyze studies to determine the effectiveness of using the SBAR handoff communication method in health care. Four themes were identified by researchers from 21 articles included in the review:

- Use of SBAR creates a common language for communication of key patient care information.
- Use of SBAR increases confidence of both the speaker and receiver during the handoff report.
- Use of SBAR improves efficiency, efficacy, and accuracy of the handoff report.
- Use of SBAR improves the perception of effective communication and is well received among health care staff.

Level of Evidence: 1

This study was a systematic review and analysis of multiple research articles.

Commentary: Implications for Practice and Research

The researchers suggest that because communication has been established as a cause of sentinel events, use of SBAR has these two implications for nursing practice: (1) SBAR should be used as a handoff communication method for all interactions, and (2) education regarding the proper use of SBAR should be included in nursing curricula. A limitation of this review was that only one randomized control study was included. This limitation prevents any conclusion about *causation* between SBAR and patient ***safety.***

SBAR is a formal method of communication between two or more members of the health care team or health care agency. The SBAR process includes these four steps:

- **S**ituation: Describe what is happening at the time to require this communication.
- **B**ackground: Explain any relevant background information that relates to the situation.
- **A**ssessment: Provide an analysis of the problem or patient need based on assessment data.
- **R**ecommendation/**R**equest: State what is needed or what the desired outcome is.

Several modifications of SBAR include I-SBAR, I-SBAR-R, and SBARQ. In these methods the "I" reminds the individual to *identify* himself or herself. The last "R" stands for the *response* that the receiver provides based on the information given. "Q" represents any additional questions that need to be answered. Be sure to follow the established documentation and reporting protocols in your health care organization.

TeamSTEPPS is also a systematic communication approach for interprofessional teams that was designed to improve ***safety*** and quality. STEPPS stands for **S**trategies and **T**ools to **E**nhance **P**erformance and **P**atient **S**afety. Adapted from the aviation industry, this model reminds professionals that mistakes can cause negative outcomes, including death. In addition to SBAR or other standardized communication, these common communication tools as part of TeamSTEPPS are effective for promoting communication, patient ***safety***, and teamwork:

- *CUS words:* State "I'm **c**oncerned; I'm **u**ncomfortable; I don't feel like this is **s**afe."
- *Check backs:* Restate what a person said to verify understanding by all team members.
- *Call outs:* Shout out important information (such as vital signs) for all team members to hear at one time.
- *Two-challenge rule:* State a concern twice as needed; if ignored, follow the chain of command to get the concern addressed.

Many health care agencies have adopted TeamSTEPPS. Gaston et al. (2016) found that initiating this systematic approach was a practical, effective, and low-cost strategy to promote patient ***safety.*** Staff perception of the TeamSTEPPS initiative included improved communication and teamwork.

Delegation and Supervision. As a nursing leader you will delegate certain nursing tasks and activities to assistive personnel (AP) such as patient care technicians (PCTs) or nursing assistants (NAs). A **delegated responsibility** is a nursing activity, skill, or procedure that is transferred from a licensed nurse to a delegatee, usually an LPN/VN or assistive personnel (AP) in a selected patient care situation (NCSBN-ANA, 2019). These activities, skills, or procedures are not part of the routine care usually performed by the delegatee. This process requires precise and accurate communication. *The nurse is always accountable for what is delegated!*

An important process that is sometimes not consistently performed by busy medical-surgical nurses is supervision of the LPN/VN or AP to whom activities, skills, or procedures have been delegated. **Supervision** is guidance or direction, evaluation, and follow-up by the nurse to ensure that they are performed appropriately and safely.

Be sure to follow these five rights when you delegate and supervise to a delegatee:

- *Right task:* The task is within the delegatee's scope of practice and competence.
- *Right circumstances:* The patient care setting and resources are appropriate for the delegation.
- *Right person:* The delegatee is competent to perform the delegated activity, skill, or procedure.
- *Right communication:* The nurse provides a clear and concise explanation of the task or activity, including limits and expectations.
- *Right supervision:* The nurse appropriately monitors, evaluates, intervenes, and provides feedback on the delegation process as needed.

Interventions that you can typically delegate or assign in any state are indicated throughout this text. Some of the *NCLEX Examination Challenges* throughout this book will test your understanding of the delegation and supervision process.

NCLEX EXAMINATION CHALLENGE 1.1

Safe, Effective Care Environment

Which nursing activities may be safely delegated to competent assistive personnel (AP)? **Select all that apply.**

A. Discharge teaching
B. Blood pressure monitoring
C. Gastrostomy feeding
D. Oxygen administration
E. Ambulation assistance

EVIDENCE-BASED PRACTICE

Definition of Evidence-Based Practice

Evidence-Based Practice (EBP) is the integration of the best current evidence and practices to make decisions about patient care. It considers the patient's preferences and values and one's own clinical expertise for the delivery of optimal health care (Melnyk & Fineout-Overholt, 2019; QSEN, 2019). The primary interrelated concepts are ***patient-centered care, clinical judgment***, and ***safety***.

Levels of Evidence

The best source of evidence is usually research. Fig. 1.2 shows the level of evidence (LOE) pyramid that is commonly used to rate the quality (strength) or scope of available evidence. The highest levels of evidence are systematic reviews and integrative or meta-analysis studies. In these studies the researcher conducts a thorough literature search for appropriate studies and then analyzes findings of those studies to determine which best practices answer the research question. The types of research in nursing may be limited in some areas and may not reflect the highest or best level of evidence. Some nursing research is designed as small, descriptive studies to explore new concepts. The findings of these studies cannot be generalized, but they provide a basis for future larger and better-designed research.

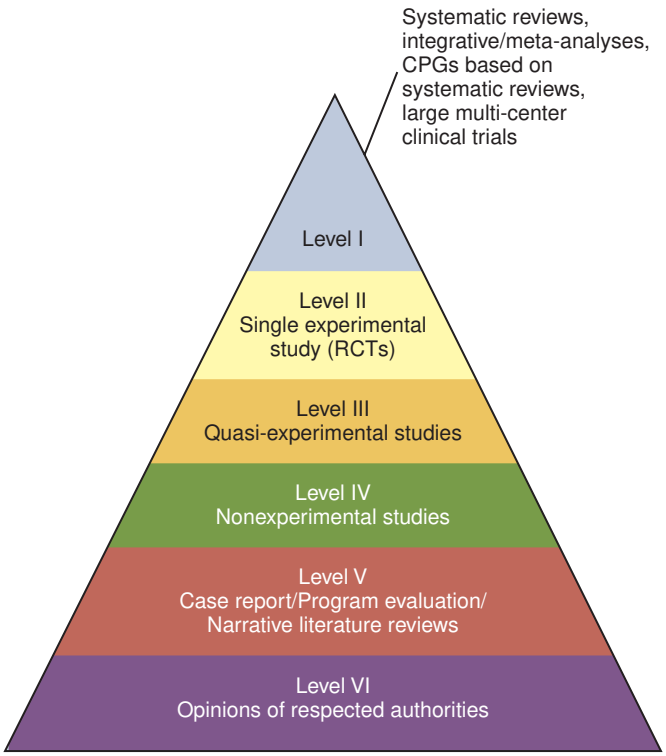

FIG. 1.2 Levels (strength) of evidence. Level 1 is the strongest evidence. (©2010. Rona F. Levin & Jeffrey M. Keefer.)

Evidence-Based Practice boxes are found throughout the text (including this chapter) to provide the most current research that serves as a basis for nursing practice. Each of these features presents a brief summary of the research, identifies the LOE using the scale in Fig. 1.2, and concludes with a "Commentary: Implications for Practice and Research" discussion to help you apply the findings of the study to daily nursing practice.

Attributes of Evidence-Based Practice

EBP promotes ***safety*** for patients, families, staff, and health care systems because it is based on reliable studies, guidelines, consensus, and expert opinion. However, recall that a best practice identified through research or clinical practice guideline may not be consistent with the patient's or family's personal preferences or beliefs. Nurses must be patient centered and respect the values of the patient or designee at all times even if those values differ from their own or those of the interprofessional health care team.

Examples of Context of Evidence-Based Practice in Nursing and Health Care

Health care organizations receiving Medicare and/or Medicaid funding are obligated to follow the evidence-based interprofessional Core Measures to ensure that best practices are followed for selected health problems. Examples of Core Measures are included in this textbook, such as those related to heart failure, stroke, and venous thromboembolism.

In addition to complying with federal mandates and those outlined by The Joint Commission (TJC), many hospitals have achieved or are on the path to achieve the American Nurses

Credentialing Center's Magnet Recognition. This highly desired status requires nurses to demonstrate how best current evidence guides their practice. Many hospitals have nursing research departments with experts to facilitate this process. Using research to guide practice is a way to continuously improve the quality of care, as described as part of the following concept.

QUALITY IMPROVEMENT

Definition of Quality Improvement

Quality Improvement (QI), sometimes referred to as *continuous quality improvement (CQI)*, is a process in which nurses and the interprofessional health care team use indicators (data) to monitor care outcomes and develop solutions to change and improve care. This process is also sometimes called the *evidence-based practice improvement (EBPI)* process because the best sources of evidence are used to support the improvement or change in practice. Therefore the primary interrelated concepts are ***evidence-based practice*** and ***safety.***

Models for Quality Improvement

When a patient care or system issue is identified as needing improvement, specific systematic QI models such as the **Plan-Do-Study-Act (PDSA)** or the *FOCUS-PDCA* are typically used. The steps of the PDSA model include (Connelly, 2018):

1. Identify and analyze the problem (Plan).
2. Develop and test an evidence-based solution (Do).
3. Analyze the effectiveness of the test solution, including possible further improvement (Study).
4. Implement the improved solution to positively impact care (Act).

The steps of the more specific *FOCUS-PDCA* model are:

- **F**ind a process to improve.
- **O**rganize a team.
- **C**larify the current process.
- **U**nderstand variations in current process.
- **S**elect the process to improve.
- **P**lan the improvement.
- **D**o the improvement.
- **C**heck for results.
- **A**ct to hold the gain.

An example of a QI project using the *FOCUS-PDCA* model to prevent hospital-acquired pressure injuries (HAPIs) on a medical-surgical telemetry unit is summarized in the Systems Thinking and Quality Improvement box.

Another QI method called the *DMAIC model* was translated from the business world to health care to more clearly delineate each QI step. This model includes the need to continue the new intervention or change over time. The steps of this model are:

1. **D**efine the issue or problem.
2. **M**easure the key aspects of the current process for the issue (collect data).
3. **A**nalyze the collected data.
4. **I**mprove or optimize the current process by implementing an evidence-based intervention/solution.
5. **C**ontrol the future state of the intervention to ensure continuity of the process.

SYSTEMS THINKING AND QUALITY IMPROVEMENT QSEN

Can a Medical-Surgical Unit Decrease the Incidence of HAPIs?

Amon, B. V., David, A. G., Do, V. H., Ellis, D. M., Portea, D., Tran, P., et al. (2019). Achieving 1,000 days with zero hospital-acquired pressure injuries on a medical-surgical telemetry unit. *MEDSURG Nursing, 28*(1), 17–21.

A nursing team was established on a 32-bed medical-surgical telemetry unit to develop a QI program using a bundled evidence-based practice approach to decrease hospital-acquired pressure injuries (HAPIs). Six strategies were implemented:

- Improved risk assessment
- Individualized pressure injury risk factor reduction
- Specialized skin prevention products and support services
- Early mobility
- Staff education
- Unit skin champions

The result of this QI project was achieving 1000 days (almost 2 years) with no patient developing a HAPI in the unit.

Commentary: Implications for Practice and Research

The system in this study was the medical-surgical nursing telemetry unit. The application of evidence-based practices to decrease HAPI improved system outcomes. The project needs to be repeated using a larger number of nurses working on multiple units and health care organizations.

Attributes of Quality Improvement

As a medical-surgical nurse, you will be expected to participate in the QI process on your unit or in your agency. You will need the knowledge and skills to:

- Employ a spirit of inquiry to formulate PICOT questions. The **PICOT** format stands for:
  - **P**opulation/**P**atient Problem (such as falls)
  - **I**ntervention (such as bed alarms to help reduce falls)
  - **C**omparison (use of reminder signage for staff instead of or in addition to bed alarms)
  - **O**utcome (fall reduction)
  - **T**ime frame (during night shift, but time may not always be relevant)
- Identify indicators (data) to monitor quality and effectiveness of health care.
- Access and evaluate data to monitor quality and effectiveness of health care.
- Recommend ways to improve care processes.
- Implement activities to improve care processes.

Examples of Context of Quality Improvement in Nursing and Health Care

This textbook features *Systems Thinking and Quality Improvement* boxes that summarize articles on QI projects and end with a "Commentary: Implications for Practice and Research" discussion. These features will help you learn how nurses participate in QI and the benefits to patients, staff, and health care systems or patient care units. Two examples of these boxes are part of this chapter. Additional information about the QI process can be found in nursing leadership and management resources.

INFORMATICS

Definition of Informatics

Although the QSEN competency includes only Informatics, this text recognizes that technology plays an equally important role in patient ***safety.*** ***Informatics*** is defined as the access and use of information and electronic technology to communicate, manage knowledge, prevent error, and support decision making (QSEN, 2019). Therefore the primary interrelated concepts are ***safety, evidence-based practice,*** and ***quality improvement.***

Categories of Informatics

Many health care organizations have information technology (IT) departments. The most common application of health care ***informatics*** is use of the electronic health record (EHR) (also called electronic patient record [EPR] or electronic medical record [EMR]) for documenting nursing and interprofessional care. Computers may be located at the nurses' workstation, at the patient's bedside (point of care [POC]), or near the nurses' station. Handheld mobile devices or laptops are also popular because of their ease of use and portability.

The most common application of technology is the use of devices and systems to monitor patient care and prevent errors. For example, smart infusion pumps consist of customized software that contains a drug library. The software transforms conventional infusion pumps into computers to alert nurses when medication dosing is not within acceptable parameters. These devices reduce human medication errors caused by incorrect pump settings.

Attributes of Informatics

Although ***safety*** and quality of health care are the major purposes for ***informatics,*** patient and family privacy may be at risk unless precautions are implemented. For example, staff and students may take photos of patients to show their family and friends about the health problems for which they care. In some cases these photos are posted on social media such as Facebook. *This action is a violation of patient privacy and confidentiality.*

Examples of Context of Informatics in Nursing and Health Care

A major purpose of ***informatics*** is for retrieval of data for ***evidence-based practice*** and ***quality improvement.*** the internet and intranets (internal databases) provide ways to search for multiple sources of information efficiently. However, all data sources must be evaluated for their credibility and reliability.

New technologies for patient, staff, and resource (inventory) management are used in health care agencies to promote patient ***safety*** and improve efficiency. For example, radiofrequency identification (RFID) systems allow any person or object to be tracked electronically. BCMA systems ensure that the correct medication is given to the correct patient (see Fig. 1.1).

Another example of health technology is the growing use of telehealth and telenursing. **Telehealth** is the long-distance use of electronic information and telecommunication technology to support clinical health care. **Telenursing** is a type or subset of this technology that allows nurses to provide care through the use of the Internet, telephone, computers, digital assessment tools, and telemonitoring equipment. Most patients who are monitored have chronic diseases such as heart failure and diabetes. The *Healthy People 2030* objectives include the call for a need to increase the use of telehealth to improve access to health services (www.healthypeople.gov).

Regardless of their use, nurses need to be involved in decisions about introducing new or advanced health care technologies into the health care agency or community. They should also be included in designing technology that improves the effectiveness and efficiency of health care while providing for patient and staff privacy.

CLINICAL JUDGMENT

Definition of Clinical Judgment

Clinical judgment, sometimes called nursing judgment, is an iterative process that uses nursing knowledge to observe and access presenting situations, identify a prioritized client concern, and generate the best possible evidence-based solutions in order to deliver safe client care (NCSBN, 2019). Clinical judgment, then, is the observed outcome of critical thinking and decision making (www.ncsbn.org). These solutions may be developed for individual or systems care. Therefore the primary interrelated concepts are ***evidence-based practice, systems thinking,*** and ***safety***. The nursing process, critical thinking, and a variety of reasoning patterns help the medical-surgical nurse make clinical judgments while being respectful of the patient's and family's culture and lifestyle choices. This textbook presents many *Clinical Judgment Challenges* and *NCLEX Examination Challenges* to help you practice how to make clinical judgments on the basis of the best current evidence. Chapter 2 discusses ***clinical judgment*** in more detail.

Scope of Clinical Judgment

Appropriate or "sound" ***clinical judgment*** (also referred to as *sound judgment*) leads to positive patient or staff outcomes. By contrast, inappropriate or "poor" judgment results in negative outcomes that can pose a risk to patient or staff safety. In her classic systematic review, Tanner (2006) concluded that sound ***clinical judgment*** is influenced by how well the nurse knows the patient's typical response pattern and the situational context or culture of the nursing care unit.

The worst result of poor judgment is a growing health care crisis referred to as *failure to rescue.* **Failure to rescue (FTR)** is the inability of nurses or other interprofessional health team members to save a patient's life in a timely manner when a health care issue or medical complication occurs. Patients often have beginning or subtle signs and symptoms 1 to 3 days before cardiopulmonary arrest or multiple organ failure. FTR occurs when those signs and symptoms are not noticed *(failure to recognize*) or accurately interpreted and therefore action to improve the patient's condition is not implemented *(failure to escalate*) (see the Evidence-Based Practice box).

EVIDENCE-BASED PRACTICE QSEN

What Is Failure to Rescue?

Musta, J., Rush, L. K., & Andersen, E. (2018). Failure to rescue as a nurse-sensitive indicator. *Nursing Forum, 53*(1), 84–92.

The researchers conducted a systematic review of the literature to analyze the concept of **failure to rescue (FTR).** Four key attributes of this concept were identified:

- Errors of omission
- Failure to recognize changes in patient condition
- Failure to communicate patient changes
- Failures in clinical decision making

The authors also found evidence that strategies which help prevent FTR include early warning system indicators, structured communication, and teamwork.

Level of Evidence: 1
This study was a systematic review and analysis of multiple research articles.

Commentary: Implications for Practice and Research
Medical-surgical nurses can play a pivotal role in preventing FTR through early recognition of and intervention for subtle changes of medical complications. Although this study was a systematic review, more studies are needed to validate best practices for preventing FTR and managing complications to prevent patient death.

Models of Clinical Judgment

According to Tanner, ***clinical judgment*** involves specific reasoning and critical thinking and includes these skills:

- Noticing
- Interpreting
- Responding
- Reflecting

The National Council of State Boards of Nursing (NCSBN) recognizes six cognitive skills or processes of ***clinical judgment*** that can be measured. These skills will serve as the basis for new types of test items on the national nursing licensure examination (NCLEX Examination) in the near future (NCSBN, 2019). In this text, each of these skills is paired with the steps of the nursing process for all exemplar health problems:

- Assessment: Recognize Cues
- Analysis: Analyze Cues and Prioritize Hypotheses
- Planning and Implementation: Generate Solutions and Take Action
- Evaluation: Evaluate Outcomes

The *Clinical Judgment Challenges* in this book will require you to apply these six skills of the NCSBN Clinical Judgment Measurement Model (NCSBN-CJMM). This model is discussed in more detail in Chapter 2.

Examples of Context of Clinical Judgment in Nursing and Health Care

Clinical judgment is needed to improve patient ***safety*** and prevent failure to rescue. Most hospitals have a Rapid Response Team (RRT), also called the *Medical Emergency Team (MET).* **Rapid Response Teams** save lives and decrease the risk for harm by providing care *before* a medical emergency occurs by intervening rapidly when needed for patients who are *beginning* to clinically decline. Members of an RRT are critical care experts who are on-site and available at any time. Although membership varies among agencies, the team may consist of an intensive care unit (ICU) nurse, respiratory therapist, intensivist (physician who specializes in critical care), and/or hospitalist (physician, physician assistant, or nurse practitioner employed by the hospital). The team responds to emergency calls, usually from clinical staff nurses, according to established agency protocols and policies. Patients' families may also activate the RRT.

The Joint Commission's **NPSGs** include the need for early intervention for patients who are clinically deteriorating. They require each health care organization to establish criteria for patients, families, or staff to call for assistance in response to an actual or perceived deterioration in the patient's condition. As a strategy to meet this requirement, many hospitals and other health care agencies use an **early warning system (EWS,** also called an early warning scoring system [EWSS]). An EWSS is a guide for the health care team to quickly determine a patient's condition on the basis of a physiologic scoring matrix.

The most commonly used type of EWS is the **modified early warning system (MEWS).** This guide is a screening and scoring tool for medical-surgical nursing assessment to determine a patient's condition based primarily on the patient's level of consciousness and respiratory rate. Declines in either of these assessments often occur about 6 to 8 hours before a cardiac or respiratory arrest. Most MEWS tools also include measurements of systolic blood pressure, temperature, heart rate, oxygen saturation, and hourly urinary output (previous 2 hours) (Race, 2015). If the patient's condition deteriorates, the MEWS score triggers the need for medical intervention usually initiated by the RRT. More information on this patient safety warning system may be found in Chapter 34 of this text.

Systems Thinking

Definition of Systems Thinking. ***Systems thinking*** is the ability to recognize, understand, and synthesize the interactions and interdependencies in a set of components designed for a specific purpose. In health care, the nurse must know how the components of a complex health care system influence the care of each patient (Dolansky & Moore, 2013). As part of Systems Thinking, the nurse uses the primary interrelated concepts of ***quality improvement***, ***clinical judgment***, ***evidence-based practice***, and ***patient-centered care*** whether caring for individuals, families, communities, or populations.

Scope of Systems Thinking. ***Systems thinking*** functions on a continuum from individuals to larger environmental components, such as teams, units, and organizations (Dolansky & Moore, 2013). It can transform care provided to an *individual* as a result of patient-centered care or can influence organizational transformation among *teams.* ***Systems thinking*** can also transform the entire health care *organization* as a result of "strengthening organization and clinical reasoning, facilitated decision making, and provision of improved IPP [interprofessional practice] to meet patient outcomes" (Stalter et al., 2017, p. 327).

Attributes of Systems Thinking. In their concept analysis of ***systems thinking,*** Stalter et al. (2017) identified four attributes:

- Is a dynamic system on a continuum
- Has a holistic perspective including multiple aspects
- Seeks to identify patterns within a complex situation
- Is transformative creating change through insight and action

Examples of Context of Systems Thinking in Nursing and Health Care. To promote patient ***safety*** and quality care, nurses identify individual patient or system problems and implement interventions to manage those concerns. For example, the nurse may identify a hospitalized older adult who is at an increased risk for falls. The nurse implements evidence-based interventions to prevent falls for that specific individual patient using ***clinical judgment.*** By expanding to ***systems thinking,*** the nurse may review the fall rate on the nursing unit where the patient is hospitalized and collaboratively plan interventions for all patients at risk for falls using a QI model (see earlier discussion). Further systems thinking may result in updating of policies within the facility that govern fall protocols. Chapter 2 discusses ***systems thinking*** in more detail.

ETHICS

Definition of Ethics

According to the American Nurses Association (ANA), ***ethics*** is "a theoretical and reflective domain of human knowledge that addresses issues and questions about morality in human choices, actions, character, and ends (ANA, 2015, p. xii). *Applied* professional nursing ***ethics*** is about considering what is right and wrong when using clinical judgment to make clinical decisions. Therefore the primary interrelated concept is ***clinical judgment.***

Categories of Ethics

Clinical decisions are either ethical or unethical and are based on one or more of six principles described under Attributes of Ethics. ***Ethics*** is also described by the type of ethics or setting in which these decisions are made. For example, *organizational* ethics refers to the ethical practices of health care organizations. Applied nursing ***ethics*** is a type of *professional* ethics used in practice by individual nurses.

Attributes of Ethics

Respect for people is the basis for six essential *ethical principles* that nurses and other health care professionals should use as a guide for clinical reasoning and judgment. Respect implies that patients are treated as autonomous individuals capable of making informed decisions about their care. This patient **autonomy** is also referred to as *self-determination* or *self-management.* When the patient is not capable of self-determination, you are ethically obligated to protect him or her as an advocate within the professional scope of practice, according to the American Nurses Association (ANA) Code of Ethics for Nurses (ANA, 2015).

The second ethical principle is **beneficence,** which promotes positive actions to help others. In other words, it encourages the nurse to do good for the patient. **Nonmaleficence** emphasizes the importance of preventing harm and ensuring the patient's well-being. Harm can be avoided only if its causes or possible causes are identified. As described earlier in this chapter, patient ***safety*** is currently a major national focus to prevent deaths and injuries.

Fidelity refers to the agreement that nurses will keep their obligations or promises to patients to follow through with care. **Veracity** is a related principle in which the nurse is obligated to tell the truth to the best of his or her knowledge. If you are not truthful with a patient, his or her respect for you will diminish and your credibility as a health care professional will be damaged.

Social justice, the last principle, refers to equality and fairness; that is, all patients should be treated equally and fairly, regardless of age, gender identity, sexual orientation, religion, race, ethnicity, or education. For example, a patient who cannot afford health care receives the same quality and level of care as one who has extensive insurance coverage. An older patient with dementia is shown the same respect as a younger patient who can communicate. A Hispanic patient who can communicate only in Spanish receives the same level of care as a Euro-American patient whose primary language is English. More information on ethics and ethical principles can be found in your fundamentals textbook.

Examples of Context of Ethics in Nursing and Health Care

Nurses and other members of the interprofessional team are involved in many ethical decisions and dilemmas in daily practice. Examples of these dilemmas include issues surrounding advance directives and aggressive treatment options.

A major resource for nurses and other members of the health care team is the health care organization's *ethics advisory committee*. This diverse group typically consists of clinicians (primary health care providers and nurses), social worker, psychologist, chaplain, attorney, quality improvement manager, and community representatives. The primary goals of the committee are to protect the rights of patients and promote fairness in shared decision making regarding ethical issues through consultation and policy development. Examples of ethical policies include informed consent, organ procurement, and withholding or withdrawing life-sustaining treatments. These issues are discussed as appropriate throughout this textbook.

NCLEX EXAMINATION CHALLENGE 1.2

Physiological Integrity

A nurse assures a client experiencing abdominal surgical pain that comfort measures, including drug therapy, will be provided as the client needs them. Which ethical principles apply in the situation? **Select all that apply.**

A. Beneficence
B. Social justice
C. Autonomy
D. Fidelity
E. Veracity

HEALTH CARE DISPARITIES

Definition of Health Care Disparities

Health care disparities are differences in access to and use of care, quality of care, and health insurance coverage (Ubri & Artiga, 2016). For many groups, they represent gaps in health care experienced by one population when compared with another as a result of numerous factors, including being members of a minority or vulnerable group. Therefore the primary interrelated concepts are ***patient-centered care*** and ***ethics.***

Categories of Health Care Disparities

A major focus of the U.S. *Healthy People 2020* initiative is to decrease ***health care disparities*** caused by poor communication, lack of health care access, inadequate health literacy, and primary health care provider biases and discrimination. The *Healthy People 2030 objectives* call for access to health services for all people (www.healthypeople.gov). Although progress has been made over the past few decades, many minority populations have a high incidence of chronic disease and mortality as a result of Health Care Disparities (Neumayer & Plumper, 2016). The National Center on Minority Health and Health Disparities of the National Institutes of Health leads and coordinates the efforts to reduce these disparities in the United States. Similar organizations in other countries exist for this same purpose.

Attributes of Health Care Disparities

Many factors affect patient access to quality health care services, including geographic location, cultural variables, and resources. For instance, some individuals live in rural areas that do not have quality health care services. In other cases the care is available, but the individual may not have transportation to get to the primary health care provider or value the need for regular preventive health care. Language barriers may also prevent the individual from accessing services. For example, many older individuals in Hispanic communities do not speak English, and most health care professionals do not speak Spanish. This communication barrier and possible mistrust of primary health care providers can prevent access to needed services.

Some individuals remain uninsured or underinsured and cannot afford health care services. "Working poor" patients may have health insurance, but their copayments are too high to seek services. Copayments for a primary health care provider office visit may be $50 or higher. Medication copayments can range from $5 to more than $100 per prescription, depending on which type of insurance the patient has. These expenses are usually not a priority over other personal financial needs such as food and rent.

Examples of Context of Health Care Disparities to Nursing and Health Care

Entire groups of people are vulnerable or likely to experience an inability to access available health care for a variety of reasons. Health care professionals may have biases and beliefs about certain cultures and groups that prevent them from being effective in developing a culturally appropriate individualized plan of care. Examples of these groups include older adults, racial and ethnic minorities, and the lesbian, gay, bisexual, transgender, and questioning/queer (LGBTQ) population.

Special Needs of Older Adults. Older adults are a growing subset of the adult population as "baby boomers" turn 60 to 70. This group of young older adults is different from previous generations as they aged. Many are working well past 65 years of age and have active social lives. Chapter 4 in this text is dedicated to the special health care needs of older adults.

Special Needs of Racial and Ethnic Minorities. Early health care research focused on promoting health or managing health problems among affluent Euro-Americans. More recent research has included implications for or differences in care based on race or ethnicity. ***Health care disparities*** have been identified as they affect various groups and populations. As mentioned earlier in this chapter, many *Patient-Centered Care: Cultural/Spiritual Considerations* features are integrated throughout this textbook to include differences in care needed to meet the special health needs of individuals from a variety of racial and ethnic groups.

Special Needs of the LGBTQ Population. Nurses today have been made aware of cultural variations and learned how to incorporate these differences to individualize patient care. However, one group that is less often addressed in the nursing literature is the LGBTQ population. This terminology is widely accepted by the LGBTQ community and is commonly used, although *LGBT* may be seen more often in health care literature. Questioning and/or queer individuals prefer not having strict labels on their sexualities or genders. Another term that may be used is *LGBTQI* to include intersex individuals. Intersex individuals have sexual or reproductive organs that are not clearly male or female at birth or may have a combination of both male and female organs.

Many studies provide evidence that LGBTQ individuals do not feel comfortable with or trust health care professionals because of previous discrimination. All patients and their families deserve a safe, trusting environment where they can receive health care with dignity (Santori, 2018). Many agencies have signage that assures patients that they are in a Safe Zone (Fig. 1.3).

The *Healthy People 2020* and *Healthy People 2030* initiatives added a category for these individuals because of access to health services in this population and the need to improve LGBTQ health. This textbook includes special health needs of this population as part of its *Patient-Centered Care: Gender Health Considerations* features. A separate chapter in this book on transgender health helps students learn about the special needs of transgender patients.

The health care system, like other facets of society, often overlooks sexualities and genders that are alternative to the mainstream of heterosexuality and clearly delineated maleness or femaleness. *As a health care professional, it is essential to not be restricted by rigid standards of identity.* A good way of rethinking concepts of ***sexuality*** and gender is to think of each as existing along a spectrum rather than categorizing people into heterosexual/homosexual and male/female.

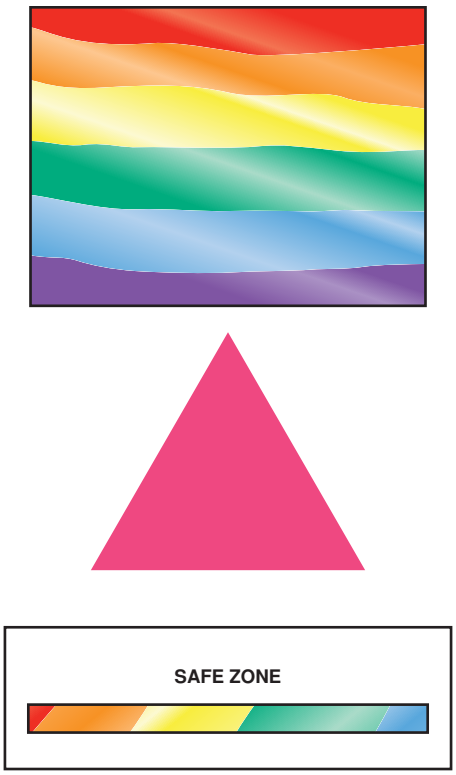

FIG. 1.3 The Safe Zone—Rainbow or Pink Triangles welcome LGBTQ patients in a health care agency.

TABLE 1.4 Recommended Patient Interview Questions About Sexual Orientation, Gender Identity, and Health Care

- Do you have sex with men, women, both, or neither?
- Does anyone live with you in your household?
- Are you in a relationship with someone who does not live with you?
- If you have a sexual partner, have you or your partner been evaluated about the possibility of transmitting infections to each other?
- If you have more than one sexual partner, how are you protecting both of you from infections such as hepatitis B, hepatitis C, or HIV?
- Have you disclosed your gender identity and sexual orientation to your primary health care provider?
- If you have not, may I have your permission to provide that information to members of the health care team who are involved in your care?
- Whom do you consider to be your closest family members?

HIV, Human immune deficiency virus.

To begin to gain trust and show respect for the LGBTQ patient, health care professionals may need to know their patient's sexual orientation and gender identity. Do not assume that every patient is heterosexual or clearly gendered. *Include questions about gender identity and sexual activity as part of your patient's health assessment.* Table 1.4 lists recommended patient interview questions about sexual orientation, gender identity, and health care.

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Key Points

Review these Key Points for each NCLEX Examination Client Needs Category.

Safe and Effective Care Environment

- The Joint Commission requires that health care organizations create a culture of ***safety*** by following the NPSGs. **QSEN: Safety**
- RRTs save lives and decrease the risk for patient harm before a respiratory or cardiac arrest occurs. **QSEN: Safety**
- Remember to always observe for (Notice) changes in patient condition and intervene appropriately using Clinical Judgment. **Clinical Judgment; QSEN: Safety**
- A vital role of the nurse is as an advocate to empower patients and their families to have control over their health care and function as ***safety*** partners. **QSEN: Safety**
- Examples of the provisions of the ANA Code of Ethics for Nurses are listed in Table 1.3. **Ethics**
- Six essential ethical principles to consider when making clinical decisions are autonomy, beneficence, nonmaleficence, fidelity, veracity, and social justice. **Ethics**
- Nurses collaborate by communicating patients' needs and preferences with members of the interprofessional health care team to establish an individualized approach to care. **QSEN: Teamwork and Collaboration**
- The SBAR procedure or similar established method is used for successful hand-off communication between caregivers and between health care agencies. **QSEN: Safety**
- **TeamSTEPPS** A systematic communication approach for interprofessional teams designed to improve safety and quality. **QSEN: Safety, Teamwork and Collaboration**
- When delegating nursing activities, skills, or procedures to LPNs/VNs or assistive personnel (AP), the nurse is always accountable to ensure that they were performed safely and accurately. **QSEN: Safety**
- Evidence-Based Practice (EBP) is the integration of best current evidence to make decisions about patient care. It considers the patient's preferences and values and one's own clinical expertise. **QSEN: Evidence-Based Practice, Patient-Centered Care**
- Nurses are active participants in the systematic Quality Improvement (QI) process in their health care agency and used one of several QI models to improve care and promote patient safety. **QSEN: Quality Improvement**
- Informatics is used for patient documentation, electronic data access, and health care resource tracking. **QSEN: Informatics**
- Systems Thinking is the ability to recognize, understand, and synthesize the interactions and interdependencies in a set of components designed for a specific purpose. **Systems Thinking**

Psychosocial Integrity

- Nurses must show respect and compassion for the uniqueness of every individual to ensure Patient-Centered and family-centered Care. **QSEN: Patient-Centered Care**
- Health Care Disparities are differences in the access or availability of health care; members of minority groups and other vulnerable populations are particularly at risk for health disparities. **Health Care Disparities**
- The lesbian, gay, bisexual, transgender, queer and/or questioning (LGBTQ) population typically does not trust health care professionals; use sensitive questioning about sexual orientation and gender identity as part of your interview with patients in this group (see Table 1.4). **QSEN: Patient-Centered Care**

MASTERY QUESTIONS

1. The nurse provides an SBAR hand-off communication regarding a client whose blood pressure and respiratory rate have decreased. Where will the nurse include these data as part of the SBAR format?
A. **S**ituation
B. **B**ackground
C. **A**ssessment
D. **R**ecommendation

2. The nurse collaborates with the registered dietitian nutritionist to improve the nutritional status of clients on a hospital unit. Which priority professional nursing concepts apply in this situation? **Select all that apply.**
A. Quality Improvement
B. Ethics
C. Health Care Disparities
D. Systems Thinking
E. Teamwork and Collaboration

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2

Clinical Judgment and Systems Thinking

Cherie R. Rebar, Nicole M. Heimgartner

http://evolve.elsevier.com/Iggy/

LEARNING OUTCOMES

1. Discuss elements of critical thinking, clinical reasoning, and ***clinical judgment.***
2. Identify nursing actions within the National Council of State Boards of Nursing (NCSBN) Clinical Judgment Measurement Model.
3. Differentiate environments of care and roles of health care providers within the health care system.
4. Describe the process of incorporating nursing knowledge into ***systems thinking.***
5. Connect the importance of applying appropriate ***clinical judgment*** to ***systems thinking.***

KEY TERMS

clinical judgment The skill of recognizing cues about a clinical situation, generating and weighing hypotheses, taking action, and evaluating outcomes for the purpose of arriving at a satisfactory clinical outcome. Clinical judgment is the observed outcome of two unobserved underlying mental processes, critical thinking and decision making (NCSBN, 2018b).

clinical reasoning The process by which nurses collect cues, process the information, come to an understanding of a patient problem or situation, plan and implement interventions, evaluate outcomes, and reflect on and learn from the process (Levett-Jones, 2013).

critical thinking The skill of using logic and reasoning to identify the strengths and weaknesses of alternative health care solutions, conclusions, or approaches to clinical or practice problems (NCSBN, 2018b).

Evidence-Based Practice A QSEN competency in which the nurse uses the integration of the best current evidence and practices to make decisions about patient care. It considers the patient's preferences and values and the nurse's own clinical expertise for the delivery of optimal health care.

Informatics A QSEN competency in which the nurse uses information and technology to communicate, manage knowledge, mitigate error, and support decision making.

Patient-Centered Care A QSEN competency in which the nurse recognizes the patient or caregiver as the source of control and full partner in providing compassionate and coordinated care based on respect for the patient's preferences, values, and needs.

Quality and Safety Education for Nurses (QSEN) A project addressing the challenge of preparing future nurses with the knowledge, skills, and attitudes (KSAs) necessary to continuously improve the quality and safety of the health care systems in which they work. Competencies include *Patient-Centered Care, Teamwork and Collaboration, Evidence-Based Practice, Quality Improvement, Safety,* and *Informatics.*

Quality Improvement (QI) A QSEN competency in which the nurse uses indicators (data) to monitor care outcomes and develop solutions to change and improve care.

Safety A QSEN competency in which the nurse keeps the patient and staff free from harm and minimizes errors in care.

systems thinking The ability to recognize, understand, and synthesize the interactions and interdependencies in a set of components designed for a specific purpose (Dolansky & Moore, 2013).

Teamwork and Collaboration A QSEN competency in which the nurse functions effectively within nursing and inter-professional teams, fostering open communication, mutual respect, and shared decision-making to achieve quality patient care.

PRIORITY AND INTERRELATED CONCEPTS

The priority concepts for this chapter are:

- ***Clinical Judgment***
- ***Systems Thinking***

The interrelated concepts for this chapter are:

- ***Patient-Centered Care***
- ***Quality Improvement***
- ***Safety***
- ***Teamwork and Collaboration***

OVERVIEW

For over 20 years, nurses have consistently been ranked number 1 in the field of 16 of the most trusted professions, based on their demonstrated honesty and ethics (American Hospital Association, 2018). These are admirable and expected characteristics of nurses, yet just as important as the kind word and gentle touch is the ability to think through decisions that influence care and often make the difference between life and death.

Nurses are present in people's lives when they are the most vulnerable, as well as spend the longest periods of time interfacing with patients in the health care system. Caring holistically requires much more than a kind heart; it requires an elaborate body of knowledge that is used systematically, yet in a patient-centered and personalized manner, each time a nurse cares for a patient.

HEALTH CARE CONCEPTS

At one time in history, knowledge and skills, in addition to a kind heart, were sufficient for a health care provider to meet the needs of an ailing society. Nurses, as well as physicians and other members of the interprofessional health care team, could rely on their appropriate level of education and experience to deliver needed care. As newer treatment options emerged and comorbidities became more common, health care delivery systems expanded. Researchers learned that management of health conditions was no longer well served by only knowledge and experience. Additional factors have been subsequently identified that influence patient outcomes:

- *Behavioral and social determinants of health:* What "health" means to each person within the context of his or her culture, and what actions he or she is willing to take to achieve or maintain it.
- *New approaches to population health management:* Evidence-based methods to reduce health inequities and improve the health of the human population within groups, defined areas, nations, and worldwide using methods of data collection and analysis that allow health care to be proactive rather reactive. A focus on attaining, maintaining, and regaining health, as well as on best practices for improved outcomes, such as those outlined in *Healthy People 2020* and projected in the development of *Healthy People 2030*.
- *Policy and health care reform:* The view that health care is a right rather than a privilege and that individuals should be active participants in health care choices and actions.
- *Available and emerging technologies:* Use of new technologies to assess specific health risks and implement treatment plans based on personal factors rather than on a "one-size-fits-all" traditional approach to prevention and care.
- *Interprofessional practice in the form of* ***teamwork and collaboration,*** *an emphasis on* ***patient-centered care:*** The involvement, coordination, and respect of all members of the health care team to provide competent, precise, and personalized care to meet the needs of individual patients.
- *Shift toward* ***systems thinking*****:** The recognition that health maintenance and health care activities and interventions do not occur in isolation and that a systems approach to prevention and care is more likely to have positive health outcomes than actions taken by a single provider.

Nurses and providers who think globally can better work with patients to achieve desired outcomes. Health care finance, interprofessional ***teamwork and collaboration,*** judicial ***clinical judgment*** (Skochelak & Hawkins, 2017), and ***evidence-based practice*** that drives ***quality improvement*** (Billings et al., 2016) affect these outcomes. This idea is reflected in Fig. 2.1, demonstrating that individual patient care is only the tip of an iceberg, with the systemic components under the surface supporting what can be seen immediately above the water.

INDIVIDUAL PATIENT CARE: CRITICAL THINKING, CLINICAL REASONING, AND DECISION MAKING

As nurses, we desire to see maintenance or improvement in our patients' conditions and overall sense of well-being. The evaluation of nursing care can be phrased in relationship to goals of improving health.

To arrive at a place of evaluation, this nurse must first use critical thinking and clinical reasoning to inform decision making about interventions to use with individual patients. Critical thinking "involves the skill of using logic and reasoning to identify the strengths and weaknesses of alternative health care solutions, conclusions, or approaches to clinical or practice problems" (NCSBN, 2018b). Without critical thinking, safety lapses and errors occur that can lead to harm or death (Schuelke & Barnason, 2017). The nurse's willingness to think critically is predicted by caring behaviors, self-reflection, and insight. The desire to truly help each individual patient versus simply being present to cover an assigned shift improves the clinical reasoning (Chen et al., 2018).

Critical thinking in nursing is informed by information that is directed by nursing standards and practice, as well as national competencies. A solid example that contains many of the fundamental elements of critical thinking can be found in the QSEN competencies (QSEN, 2019):

1. ***Patient-Centered Care***—recognizing that the patient, with his or her own autonomy, is at the center of all decision making
2. ***Safety***—designing all nursing care with the focus on safety at the forefront of planning and execution of care, both at the individual and systems level of care
3. ***Evidence-Based Practice***—using the best evidence in conjunction with clinical experience and patient preference to deliver safe care

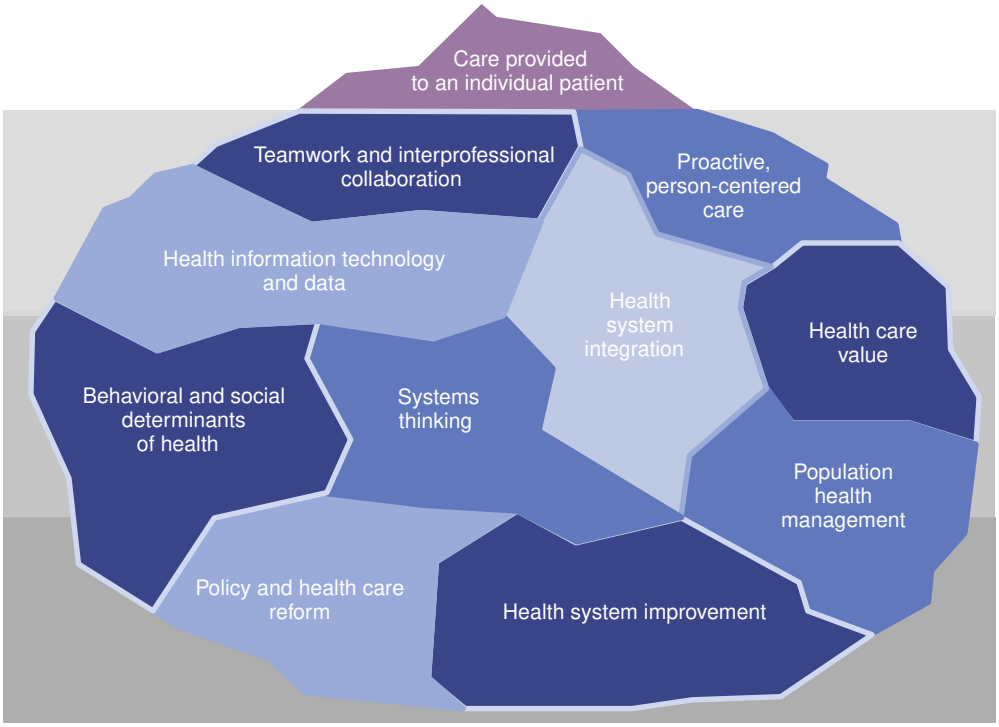

Fig. 2.1 The "Iceberg" of health care concepts impacting health. Numerous factors and concepts are often underappreciated in the provider-patient interaction within a clinic room. Traditionally, these concepts have not been included in the scope of nursing education. (From Skochelak, S., & Hawkins, R. (2017). *Health systems science*. Philadelphia, PA: Elsevier.)

4. ***Informatics***—making use of the most up-to-date technology to support decision making, delivery, and documentation of care
5. ***Teamwork and Collaboration***—functioning well within the interprofessional team; recognizing that shared decision making contributes to safety and quality
6. ***Quality Improvement***—using data to make informed decisions to continually improve health care outcomes

Clinical reasoning is the process by which nurses collect cues, process the information, come to an understanding of a patient problem or situation, plan and implement interventions, evaluate outcomes, and reflect on and learn from the process (Levett-Jones, 2013). It takes place through a process known as ADPIE—Assessing, (Nursing) Diagnosis, Planning, Implementing, and Evaluating (Orlando, 1958, in Toney-Butler and Thayer, 2019; Alfaro-LeFevre, 2020), or AAPIE—Assessing, Analyzing, Planning, Implementing, and Evaluating.

Nursing Process	
• Assessing:	Detecting/**noticing** cues (signs, symptoms, risks)
• Analyzing:	Synthesizing and **interpreting data**; differential diagnosis (creating a list of suspected problems; weighing the probability of one problem against that of another that's closely related)
• Planning:	**Responding**; predicting complications; anticipating consequences; considering actions; setting priorities; decision making
• Implementing:	**Responding**; taking actions; monitoring responses; **reflecting**; making adjustments
• Evaluating:	**Reflecting**; repeating AAPIE as indicated

Adapted from Alfaro-LeFevre, R (2020). *Critical thinking, clinical reasoning, and clinical judgment* (7th ed). St. Louis: Elsevier.

For example, let's assume this nurse is caring for a patient who was admitted to a medical-surgical unit for ongoing dizziness. The patient requests to use the bathroom. When the nurse helps the patient to a sitting position, and then to a standing position, the patient reports feeling light-headed and is noted to seem unstable when standing. The nurse has *assessed* the situation by *noticing* cues: dizziness and instability are noted upon changing positions. At this point, the nurse begins to think through what this could mean and hypothesizes causes associated with this assessment data. The nurse recalls how low blood glucose can cause dizziness and possible instability but then considers that the patient's symptoms began upon changing position. This leads the nurse to think about the pathophysiology associated with orthostatic hypotension. In this process, the nurse has *analyzed* the data collected to *hypothesize* the possible underlying cause. In determining that this is the *most likely* cause of the patient's condition, the nurse then *plans* for management of this concern. Instead of ambulating an unsteady patient, the nurse helps the patient to a urinal or bedpan. Once the patient is safe, the nurse dialogues with the health care provider about obtaining an order for a bedside commode. The nurse *implements* the change via nursing actions by ensuring that the patient is identified as a fall risk. The nurse confirms that a fall risk bracelet is in place, educates other members of the interprofessional team about the patient's status, and *monitors* responses to make sure that these interventions are being consistently put in place. Finally, the nurse *evaluates,* or *reflects* on his or her actions to determine whether the fall risk precautions are working after being put in place. If needed, the nurse can revisit the AAPIE process to make necessary, patient-centered alterations in the plan of care.

INDIVIDUAL PATIENT CARE: CLINICAL JUDGMENT

Clinical judgment**,** as defined by the National Council of State Boards of Nursing (NCSBN, 2018a), is "the observed outcome of critical thinking and decision making. It is an iterative process that uses nursing knowledge to observe and access presenting situations, identify a prioritized client concern, and generate the best possible evidence-based solutions in order to deliver safe client care" (p. 12). This definition shows that clinical judgment is a continually evolving process for each nurse of determining the best course of action based on analysis of observations and presenting patient data. The process improves as a result of each new encounter with a specific patient condition and the application of the nurse's ever-increasing knowledge base. Clinical judgment is demonstrated when a nurse develops the ability to analyze collected data via critical thinking, apply reasoning to that data (which reflects clinical reasoning), and make an appropriate decision based on the context of the specific situation (Victor-Shmil, 2013, in Sommers, 2018).

The NCSBN Clinical Judgment Measurement Model (CJMM), built as an information-processing framework, was developed in response to the understanding that clinical decision making does not happen in an isolated "bubble." Context surrounding situations influences clinical judgment. Factors such as time constraints, risks, and available resources always impact choices that a nurse makes when determining how to formulate and implement a plan of care (Dickison et al., 2019, p. 12). The CJMM "represents a fundamental shift from the current dichotomous measurement models in which something is either right or wrong" (Dickison et al., 2019, p. 12), allowing for evaluation of comprehensive clinical judgment based on layers of collected information and surrounding context.

Under this model, ***clinical judgment*** can be viewed and evaluated according to four levels of information. Each time the nurse encounters a patient, assessment begins. Whether the setting is in a hospital, a health care provider's office, or in the community, the nurse begins receiving and analyzing cues based on objective and subjective assessment. Nursing analysis is heavily based on formal classroom education coupled with what has been learned in personal clinical experiences. This information becomes the foundation on which the nurse will form hypotheses, prioritize decision making, formulate solutions, and then implement nursing interventions based on the designed plan of care.

The most important part of the CJMM is that another layer—the context of the situation—considers and supports ***clinical judgment.*** The factors within this layer, such as environment, time pressure, availability or content of electronic health records, resources, and individual nursing knowledge, have a direct impact on ***clinical judgment.*** For example, the nurse will respond to a patient with an ankle fracture experienced in a mass casualty or disaster situation differently than to a patient who is in a hospital bed after surgical repair of the ankle. ***Clinical judgment*** may be affected by immediate access to a comprehensive, up-to-date electronic health record versus having to wait to document based on computer availability. The physical environment of care can also have an impact on ***clinical judgment.*** Moving within a familiar environment and operating according to a known set of protocols in a familiar facility may feel vastly different than caring for patients in an international mission setting; this difference in environment may impact ***clinical judgment***. In addition, previous experience with other patients who have the same or similar conditions helps the nurses to determine priorities of care.

The NCSBN CJMM (NCSBN, 2018a) provides a six-step process to help guide decision making leading to ***clinical judgment.***

1. **Recognize Cues.** Cues are elements of assessment and data that provide important information. What data are *relevant* (directly related to patient outcomes or the priority of care) versus *irrelevant* (unrelated to patient outcomes or priority of care)? What assessment information is the most important and immediate concern to the nurse? Identify the relevant information *first* to help determine what is most important.
2. **Analyze Cues.** Consider the cues in the context of the patient history and presentation. How do the cues (assessment data) connect to the patient's condition or history? Think about priority collaborative problems that support and contradict the information presented in this situation.
3. **Prioritize Hypotheses.** Consider all possibilities and determine their urgency and risk for the patient. What will happen? Which possible outcomes present the greatest concern?
4. **Generate Solutions**. Use the hypothesis to develop expected outcomes. What interventions will lead to the expected outcomes? What interventions should be *avoided* or are *potentially harmful?* Determine the desired outcomes first to help decide which interventions are appropriate.
5. **Take Action**. Use nursing interventions to address the highest priorities of care and indicate how these will be performed. Consider additional assessment, health teaching, documentation, requested health care provider orders or prescriptions, nursing skills, interprofessional collaboration, etc.
6. **Evaluate Outcomes**. Consider patient outcomes in relation to expected outcomes. What signs indicate an improvement, decline, or unchanged patient condition?

The steps within the CJMM reflect multiple models of care including the nursing process and Tanner's Model of Clinical Judgment (Tanner, 2006). The nursing process includes (1) assessment, which corresponds to recognizing and analyzing cues; (2) diagnosis, which corresponds to prioritization of hypotheses; (3) planning, which corresponds to generating solutions; (4) interventions, which correspond to taking action; and (5) evaluation, which corresponds with evaluating outcomes. Tanner's Model (2006) uses patterns of noticing, interpreting, responding, and reflecting, which you will see exhibited in the concept exemplars throughout this book. The NCSBN has also created an action model to help bridge the gap between what is being measured and what is being taught in nursing education. The action model reflects components of behavior that meld textbook knowledge with clinical skills and critical thinking, resulting in the nurse's clinical judgment (NCSBN, 2019). See the Rebar-Heimgartner Model and Theory Comparison graph (Fig. 2.2).

Model/Theory	Components					
NCSBN Clinical Judgment Measurement Model	Recognize Cues	Analyze Cues	Prioritize Hypotheses	Generate Solutions	Take Action	Evaluate Outcomes
Nursing Process (AAPIE)	Assessment	Analysis		Planning	Implementation	Evaluation
Tanner Model	Noticing	Interpreting		Responding		Reflecting

Fig. 2.2 The Rebar-Heimgartner Model and Theory Comparison graph. (Copyright © 2018.)

Throughout the text, the authors have included Clinical Judgment Challenges to help you actively apply the CJMM to clinical scenarios. In the following example, a Clinical Judgment Challenge is presented along with guided answers.

CLINICAL JUDGMENT CHALLENGE 2.1

Patient-Centered Care; Clinical Judgment

A 27-year-old female client with spina bifida with a history of pressure injuries is sent to the hospital by the home health registered nurse who visits once every 2 weeks. The client has a temperature of 101.9°F and multiple stage 2 pressure injuries on her buttocks. The client is allergic to penicillin and has seasonal allergies to mold. During assessment, the client states, "I don't have a life and I can't work, so I don't have any money." The client appears disheveled and is noted to have body odor.

1. **Recognize Cues:** What assessment information in this client situation is the most important and of immediate concern for the nurse? (Hint: Identify the **relevant** information *first* to help you determine what is most important.)
2. **Analyze Cues:** What client conditions are consistent with the **most relevant** information? (Hint: Think about priority collaborative problems that support and contradict the information presented in this situation.)
3. **Prioritize Hypotheses:** Which possibilities or explanations are **most likely** to be present in this client situation? Which possibilities or explanations are the most serious? (Hint: Consider all possibilities and determine their urgency and risk for this client.)
4. **Generate Solutions:** What actions would most likely achieve the desired outcomes for this client? Which actions should be **avoided** or are **potentially harmful?** (Hint: Determine the desired outcomes first to help decide which actions are appropriate and those that should be avoided.)
5. **Take Action:** Which actions are the most appropriate and how should they be implemented? In what **priority order** should they be implemented? (Hint: Consider health teaching, documentation, requested health care provider orders or prescriptions, nursing skills, collaboration with or referral to health team members, etc.)
6. **Evaluate Outcomes:** What client assessment would indicate that actions were **effective**? (Hint: Think about signs that would indicate an improvement, decline, or unchanged client condition.)

THE HEALTH CARE SYSTEM: ENVIRONMENT OF CARE

Primary Health Care

In order to gain a full understanding and appreciation for **systems thinking,** and how the nurse functions within this continuum, you first must understand the components that contribute to the system. Primary care is perhaps the most recognizable form of care provided, as this serves as a point of entry into the health care system for many people (Shi & Singh, 2019). This is the traditional venue in which a patient first encounters a primary care provider who becomes a "gatekeeper" for the patient's care (Shi & Singh, 2019). Although primary care may look different in various parts of the world, the central theme is the same: initial and essential care afforded to everyone. The World Health Organization (WHO, 2019) states that primary care ranges from prevention to management of chronic health conditions and involves three main areas:

- Empowered people and communities
- Multisectoral policy and action
- Primary care and essential public health functions

Inpatient Care

An inpatient stay involves overnight care of 24 hours or greater in a health care facility such as a hospital (Shi & Singh, 2019). This stay may be for observational or monitoring purposes or to actively care for an injury, illness, or other health condition. The largest portion of U.S. national health care spending continues to be directed toward hospitals (Shi & Singh, 2019), despite efforts to shift care to wellness and health promotion and community-based care.

Community Health Care

Community health care has two branches: community-oriented primary care (COPC) and community-based care. COPC exists in some countries outside of the United States and incorporates the model of primary care delivery with a population-based approach. A barrier to implementation in the United States is the lack of clear direction regarding what constitutes a community and how far reaching that definition should be (Shi & Singh, 2019).

Community-based care, a model that is very common in the United States, continues to grow in function and outreach. See Box 2.1 for types of community-based care systems.

Managed Care

The 1990s saw the rise of managed care within the United States. This type of organized delivery of care provides members with needed health services where costs have been determined by the managed care company and health care providers (Shi & Singh, 2019). Even the most recent sweeping health care reform of the Affordable Care Act of 2010 did not do away with the managed care system, which continues to dominate the U.S. health care system (Shi & Singh, 2019).