13TH EDITION

Maternity & Women's Health Care

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THIRTEENTH EDITION

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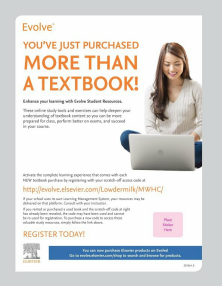

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Deitra Leonard Lowdermilk is Clinical Professor Emerita, School of Nursing, University of North Carolina at Chapel Hill (UNC-CH). She received her BSN from East Carolina University (ECU) and her MEd and PhD in Education from UNC-CH. She is certified in In-Patient Obstetrics by the National Certification Corporation. She is a fellow in the American Academy of Nursing. In addition to being a nurse educator for more than 34 years, Dr. Lowdermilk has clinical experience as a public health nurse and as a staff nurse in labor and delivery, postpartum, and newborn units and has worked in gynecologic surgery and cancer care units.

Dr. Lowdermilk has been recognized for her expertise in nursing education. She has

repeatedly been selected as Classroom and Clinical Teacher of the Year by graduating seniors. She was a recipient of the Educator of the Year Award from both the District IV Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) and the North Carolina Nurses Association. She also received the 2005 national AWHONN Excellence in Education Award.

She is active in AWHONN, has served as chair of the North Carolina Section of AWHONN, and has served as chair and member of various committees in AWHONN at the national, district, state, and local levels. She has served as guest editor for the *Journal of Obstetric, Gynecologic and Neonatal Nursing* and served on editorial boards for other publications. Dr. Lowdermilk also is coauthor of *Maternity Nursing* (8th edition) and *Maternal Child Nursing Care* (7th edition).

Dr. Lowdermilk's most significant contribution to nursing has been to promote excellence in nursing practice and education in women's health through integration of knowledge into practice. In 2005, she received the first Distinguished Alumni Award from ECU School of Nursing for her exemplary contributions to the nursing profession in the area of maternal-child care and the community. She was also Alumna of the Year for ECU in 2005 and was selected as one of the 100 Incredible ECU Women in 2007 for Outstanding Leadership Among Women in the first 100 years of the university's founding.

In the fall of 2010, the ECU College of Nursing named the Neonatal Intensive Care and Midwifery Laboratory in honor of Dr. Lowdermilk. In 2011, she was named one of the first 40 nurses inducted into the College of Nursing Hall of Fame.

KITTY CASHION

Kitty Cashion is a Clinical Nurse Specialist in the Maternal-Fetal Medicine Division, College of Medicine, Department of Obstetrics and Gynecology at the University of Tennessee Health Science Center in Memphis. She received her BSN from the University of Tennessee College of Nursing in Memphis and her MSN in Parent-Child Nursing from Vanderbilt University School of Nursing in Nashville, Tennessee. Ms. Cashion is certified as a high-risk perinatal nurse through the American Nurses Credentialing Center (ANCC).

Ms. Cashion's job responsibilities at the University of Tennessee include providing education regarding low- and high-risk obstetrics to staff nurses in West Tennessee community hospitals. For more than 25 years Ms. Cashion been an adjunct clinical instructor in maternal-child nursing (primarily in labor and delivery) for students in both baccalaureate and associate degree nursing programs.

Ms. Cashion has contributed many chapters to maternity nursing textbooks over the years. She is also a coauthor and editor of several major maternity nursing textbooks, most recently *Maternal Child Nursing Care* (7th edition).

KATHRYN RHODES ALDEN

Kathryn Rhodes Alden is a retired Associate Professor, University of North Carolina (UNC) at Chapel Hill School of Nursing. She received a BSN from the UNC at Charlotte, an MSN from the UNC at Chapel Hill, and a doctorate in adult education from North Carolina State University.

Dr. Alden has extensive experience as a nursing educator, having served on the faculty at the UNC at Charlotte and the UNC at Chapel Hill. Dr. Alden has clinical experience in pediatrics, pediatric intensive care, and neonatal intensive care. She is also experienced in home health care, having provided nursing care to pediatric and obstetric clients. She worked as a nursing administrator and coordinator of quality improvement. As a certified lactation consultant, Dr. Alden provided inpatient and outpatient care for breastfeeding mothers and infants and taught prenatal breastfeeding classes to expectant parents. She taught continuing education courses on breastfeeding throughout North Carolina.

For nearly 30 years as an educator for baccalaureate nursing students at UNC at Chapel Hill School of Nursing, Dr. Alden taught in maternal-newborn nursing courses, providing both classroom and clinical instruction. Dr. Alden coordinated and led the academic counseling program, providing assistance to students and to faculty. She was actively involved in the leadership of the undergraduate nursing program as member and former chair of the Baccalaureate Executive Committee.

She has received numerous awards for excellence in nursing education at UNC, being recognized for clinical and classroom teaching expertise as well as for academic counseling. Dr. Alden was selected for the Great 100 Nurses in North Carolina in 2008.

Dr. Alden was an early adopter of high-fidelity simulation and was instrumental in the use of this instructional strategy at UNC-Chapel Hill at School of Nursing. She was actively involved in interprofessional collaboration with faculty from the UNC schools of Medicine and Pharmacy to offer obstetric and neonatal simulation learning activities to undergraduate nursing students, pharmacy students, and medical students in obstetrics and pediatrics. She has created numerous simulation scenarios including obstetric simulation cases for Elsevier. She has coauthored chapters on high-fidelity simulation and patient safety in publications by the Agency for Healthcare Research and Quality (AHRQ) and the National League for Nursing (NLN). Dr. Alden is an active member of the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN).

Dr. Alden has authored numerous chapters on a variety of topics in maternity texts for Elsevier. She is an editor of *Maternal Child Nursing Care* (7th edition) and *Maternity Nursing* (8th edition).

ELLEN F. OLSHANSKY

Ellen F. Olshansky is Professor Emerita in the Sue & Bill Gross School of Nursing at the University of California, Irvine (UCI), and Founding Director of the Program in Nursing Science at UCI. Dr. Olshansky earned a BA in Social Work from the University of California, Berkeley, and a BS, MS, and PhD from the University of California, San Francisco, School of Nursing. She was previously a faculty member at the schools of nursing at Oregon Health Sciences University, University of Washington, Duquesne University, and University of Pittsburgh. She is a fellow in the American Academy of Nursing and served as co-chair and then chair of its Expert Panel on Women's Health and as a member of the Academy's Board of Directors. She is also a fellow in the Western Academy of Nursing.

Dr. Olshansky previously served as director of the Community Engagement Unit of the UC-Irvine Institute for Clinical and Translational Science, funded by a National Institutes of Health (NIH) Clinical Translational Science Award. Through this position she engaged community members in community-based participatory research, encouraging collaborative research between university faculty and community organizations. She has expertise in qualitative research and community-based participatory research.

Dr. Olshansky also served as Founding Chair of the Department of Nursing that was created as part of the Suzanne Dworak-Peck School of Social Work at the University of

Southern California (USC).

Dr. Olshansky is certified as an emeritus (lifetime) women's health nurse practitioner through the National Certification Corporation (NCC-Emeritus). Her research has focused on women's health across the life span, with a focus on reproductive health. Dr. Olshansky completed the Integrative Nurse Coach Certification Program through the International Nurse Coach Association. She is focused on working with people within their own communities to promote and maintain wellness. She is one of the founders of the Orange County Women's Health Project, which works to promote women's health and wellness in Orange County, California, including holding annual women's health policy summits. She was previously a member of the Board of Directors of MOMS of Orange County, a nonprofit organization that served underresourced pregnant and postpartum women.

She served for 10 years as editor of the *Journal of Professional Nursing*, the official journal of the American Association of Colleges of Nursing. She has published extensively in numerous nursing and other health-related journals as well as authored many book chapters, editorials, op-eds, and two books. She has authored many chapters in previous editions of *Maternity and Women's Health Care* and *Maternal Child Nursing Care* and she is editor of *Maternal Child Nursing Care* (7th edition), all published by Elsevier.

SHANNON E. PERRY

Shannon E. Perry is Professor Emerita, School of Nursing, San Francisco State University (SFSU), San Francisco, California. She received her diploma in nursing from St. Joseph Hospital School of Nursing, Bloomington, Illinois; a baccalaureate in Nursing from Marquette University, an MSN from the University of Colorado Medical Center; and a PhD in Educational Psychology with a Specialization in Child Development from Arizona State University. She completed a 2-year postdoctoral fellowship in perinatal nursing at the University of California, San Francisco, as a Robert Wood Johnson Clinical Nurse Scholar.

Dr. Perry has clinical experience as a staff nurse, head nurse, and supervisor in surgical nursing, obstetrics, pediatrics, gynecology, and neonatal nursing. She has served as an expert witness and legal consultant. She taught in schools of nursing in several states for more than 30 years and was interim director and director of the School of Nursing and director of the Child and Adolescent Development baccalaureate program at SFSU. She was Marquette University College of Nursing Alumna of the Year in 1999 and the University of Colorado School of Nursing Distinguished Alumna of the Year in 2000. She received the SFSU Alumni Association Emeritus Faculty Award in 2005 and the Excellence in Education Award from the Beta Upsilon chapter of Sigma Theta Tau International (STTI) in 2012.

She is coauthor/coeditor of several editions of *Maternity & Women's Health Care, Maternity Nursing*, *Maternal Child Nursing Care*, and *Clinical Companion for Maternity & Newborn Nursing* and has authored numerous chapters and articles on maternal-newborn topics and legal aspects of nursing. She is a fellow in the American Academy of Nursing Education, and a member of Sigma Theta Tau, Association of Women's Health, Obstetrics, and Neonatal Nursing (AWHONN), Arizona Nurses Association, National League for Nursing (NLN), and American Association for the History of Nursing. Dr. Perry's experience in international nursing includes presenting papers at international meetings, teaching international nursing courses in the United Kingdom, Ireland, Italy, Thailand, Ghana, and China; joining in health missions in Ghana, Kenya, Nigeria, and Honduras; and participating in establishing a school of nursing in Kenya. For her "exemplary contributions to nursing, public service, and selfless commitment and passion in shaping the future of international health," she received the President's Award from the Global Caring Nurses Foundation, Inc., in 2008.

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PREFACE

Women's health care encompasses reproductive health care and the unique physical, psychologic, and social needs of women throughout the life span. Maternity care includes care of women during the childbearing cycle and care of normal and high-risk newborns. The specialties of women's health and maternity nursing offer challenges and opportunities. Nurses are challenged to assimilate knowledge and develop the technical and critical thinking skills needed to be reflective practitioners. Each woman, with her individual needs that must be identified and met, presents a challenge to nurses to provide optimal client-centered care. However, the opportunities are sufficiently extraordinary to make this one of the most fulfilling specialties of nursing practice.

The goal of nursing education is to prepare today's students to meet the challenges of tomorrow. This preparation must extend beyond mastery of facts and skills. Nurses must be able to provide safe, quality, client-centered care through the combination of clinical reasoning skills, technical competence, and compassionate caring. They must address the physiologic as well as the psychosocial needs of their clients. They must look beyond the condition and see the woman as an individual with distinctive needs. Yet they must consider her needs in the context of family-centered care and culture, realizing and acknowledging the influence and involvement of family members and significant others. Integral to family-centered care is awareness of and sensitivity to the needs of diverse families. Above all, nurses must strive to improve practice on the basis of sound evidence-based information. Nurses can use evidence-based practice to produce measurable outcomes that can validate their unique and necessary role in the health care delivery system.

Maternity & Women's Health Care was designed to provide students with accurate and up-to-date information so that they can develop the knowledge and skills needed to become clinically competent, to think critically, and to attain the necessary sensitivity to become caring nurses. *Maternity & Women's Health Care* has been a leading maternity nursing text since it was first published in 1977. We are proud of the continued support this text has received. With this 13th edition we have a responsibility to continue this leading tradition.

This edition has been revised and refined in response to comments and suggestions from educators, clinicians, and students. It includes the most accurate, current, and clinically relevant information available. We have had the assistance of expert faculty, nurse clinicians, and specialists from other health disciplines who authored, reviewed, and revised the text. Many exciting updates and additions will be noted throughout the book; they demonstrate the various dimensions of women's health care and areas of rapid and complex changes such as genetics, fetal assessment, and alternative therapies. However, we have retained the underlying philosophy that has been the strength of previous editions: our belief that pregnancy and birth and developmental changes in a

woman's life are natural processes. We have also retained a base in physiology and a strong, integrated focus on the family and on evidence-based practice.

Interprofessional care has been used as an organizing framework for discussion in the nursing care chapters. Interprofessional care is emphasized because this approach demonstrates how nursing collaborates with other health care disciplines to provide the most comprehensive care possible to women and children. In chapters that focus on complications of childbearing and reproductive conditions, medical interventions are included along with nursing care management. Throughout the discussion of assessment and care, we alert the nurse to signs of potential problems and provide informational boxes that highlight warning signs and emergency situations.

In this edition, we have intentionally included content that addresses the diversity among childbearing families. We have paid particular attention to address beliefs and practices of diverse cultural, ethnic, and religious groups without presenting stereotypes. Our emphasis is on teaching nursing students and future nurses the importance of individualized assessment: learning from clients and their families about their cultural, ethnic, and religious beliefs and practices and how these practices may or may not affect their health care. The goal is to provide client- and family-centered care within a social context in which social and structural determinants of health, including structural racism, affect health and health care.

Because our primary focus is on women and infants, we have chosen to use the terms "women" and "mothers" throughout the text. We realize, however, that diverse gender identities and many types of families exist in today's world. All deserve respectful and sensitive nursing care. Therefore we encourage health care professionals to ask individuals the words they use to describe themselves and their preferred pronouns, rather than to assume how they identify themselves, and then to use those words when communicating with clients and families.

The text is also used as a reference for the practicing nurse. The most recent current recommendations and standards of practice based on evidence from research and clinical experts have been included from professional organizations such as the Association of Women's Health, Obstetric and Neonatal Nurses; National Association of Neonatal Nurses; American College of Obstetricians and Gynecologists; American Academy of Pediatrics; American Diabetes Association; Centers for Disease Control and Prevention; and US Preventive Health Services Task Force. The text can be used to prepare for certification courses and for review in graduate programs of study. The text and its electronic resources are excellent references for the nursing unit.

Approach

Professional nursing practice continues to evolve and adapt to the changing health priorities of society. The ever-changing health care delivery system offers new opportunities for nurses to alter the practice of maternity and women's health nursing and to improve the way care is given. Consumers of maternity and women's health care vary in age, ethnicity, culture, language, social status, marital status, sexual orientation, gender identity, and family configurations. They seek care from obstetricians, gynecologists, family practice physicians, certified nurse-midwives, nurse practitioners, nurses, and other health care providers in a variety of health care settings including the

home. Increasingly, many health care consumers are self-treating, accessing web-based information, and using a variety of alternative and complementary therapies.

Nursing education must reflect these changes. Clinical education must be planned to offer students a variety of maternity and women's health care experiences in settings that include hospitals and birth centers, home health settings, clinics and private physician offices, shelters for women who are homeless or in need of protection, prisons, and other community-based settings. Advances in nursing education include the increased use of simulation learning activities. Simulation laboratories in schools of nursing and in health care institutions provide students and staff with opportunities to engage in care of clients in focused, challenging situations while in the safety of a controlled environment. Simulation experiences offer students in maternity and women's health courses opportunities that are otherwise unavailable due to shrinking opportunities for clinical placements, decreased clinical time, and increased numbers of students in clinical rotations. Within these laboratories, opportunities to engage in interprofessional simulations abound.

Today's prelicensure nursing students are challenged to learn more than ever and often in less time than their predecessors. Students are diverse. They may be new high school graduates, college students, or older adults with families. They may be male or female. They may have college degrees in other fields and be interested in changing careers. They may represent various cultures; English may not be their first language. Students may be enrolled in associate degree or diploma programs, in baccalaureate or accelerated baccalaureate nursing programs, or in entry-level master's programs. This 13th edition of *Maternity & Women's Health Care*, with its accompanying teaching and learning package, has been revised to meet these changing needs. Each chapter has been reviewed by a specialist and revised to improve readability and comprehension, especially by a diverse student population. Focused content is presented in a clearly written and easily read manner while retaining the comprehensiveness of previous editions. The text can be used by all levels of nursing education and in courses of varying lengths.

Health care today emphasizes *wellness* and *health promotion*. This focus is an integral part of our philosophy. Likewise, the developmental changes a woman experiences throughout her life are considered natural and normal. In women's health care, the goal is promotion of wellness for the woman through knowledge of her body and its normal functioning throughout her life span, while developing an awareness of conditions that require professional intervention. The unit on women's health care emphasizes the wellness aspects of care as well as social determinants of health and health care and includes information about common gynecologic problems and breast and gynecologic cancers. This unit has been placed before the units on pregnancy because many of the aspects of assessment and care can be applied to later chapters.

Pregnancy and birth are also part of a natural developmental process. We believe that students need to thoroughly understand and recognize the normal processes before they can identify complications and comprehend their implications for care. We present the entire normal childbearing cycle before discussing potential complications.

Features

The 13th edition features a contemporary design and spacious presentation. Students will find that the logical, easy-to-follow headings and attractive full-color design highlight important content and increase visual appeal. More than 450 color photographs (many of them new) and drawings throughout the text illustrate important concepts and techniques to further enhance comprehension. Each chapter begins with a list of *Learning Objectives* designed to focus students' attention on the important content to be mastered. *Key terms* that alert students to new vocabulary are in blue, are defined within the chapter, and are included in a glossary at the end of the book. Each chapter ends with *Key Points* that summarize important content. *Community Focus* exercises are included in most chapters to provide opportunities for students to increase their knowledge of community and web-based resources to enhance client care.

References have been updated significantly, with most citations being less than 5 years old and all chapters having citations within 1 year of publication. An expanded table of contents and index make it easier for readers to locate exactly the information they are seeking. Additional outstanding features include the following:

- ***Care Management*** is used as the consistent framework throughout nursing care chapters to discuss assessment, medical and surgical management, interprofessional care, and, more specifically, the nursing care related to each topic.
- ***Teaching for Self-Management*** boxes emphasize guidelines for the client to practice self-care and provide information to help students transfer learning from the hospital to the home setting.
- ***Emergency*** boxes alert students to the signs and symptoms of various emergency situations and provide interventions for immediate implementation.
- ***Signs of Potential Complications*** boxes alert students to signs and symptoms of potential problems and are included in chapters that cover uncomplicated pregnancy and birth.
- ***Nursing Alert, Safety Alert***, and ***Medication Alert*** boxes highlight critical information.
- ***Evidence-Based Practice*** is incorporated throughout in new boxes that integrate findings from several studies on selected clinical practices and changing practice. In addition, research findings summarized in *The Cochrane Pregnancy and Childbirth Database* and other resources for evidence-based practices are integrated throughout the text.
- ***Cultural Considerations*** boxes describe beliefs and practices about pregnancy, labor and birth, newborn care and feeding, parenting, and women's health concerns and emphasize the importance of understanding cultural variations and client preferences when providing care.
- ***Legal Tips*** are integrated throughout to provide students with relevant information to deal with these important areas in the context of maternity and women's health nursing.
- ***Medication Guide*** boxes include key information about medications used in maternity and women's health care including their indications, adverse effects, and nursing considerations.
- ***Next-Generation NCLEX® Examination–Style Case Studies and Next-Generation NCLEX® Examination–Style Unfolding Case***

Studies are included in most of the patient care chapters. Students will have the opportunity to become familiar with the types of questions that will soon be included in examinations for state licensure.

Organization

The 13th edition of *Maternity & Women's Health Care* comprises eight units organized to enhance understanding and learning and to facilitate easy retrieval of information.

Part 1, Introduction to Maternity and Women's Health Care, begins with an overview of contemporary issues in maternity and women's health nursing practice. Chapter 1 includes a section on historic milestones in maternity, women's health, and neonatal care and provides an overview of important therapies that can be used instead of or in addition to traditional techniques used in maternity and women's health care. Chapter 2 addresses the various forms of family as a unit of care and how family is related to culture and community. This chapter incorporates family theory, cultural aspects of care, diversity, and home care in relation to maternity and women's health nursing. Chapter 3 provides essential discussion about genetics in relation to maternity and women's health care.

Part 2, Women's Health, is a thoroughly revised unit on women's health. Eight chapters discuss health promotion, screening, and physical assessment and then present common reproductive concerns. The chapter on assessment and health promotion incorporates normal anatomy and physiology of the female reproductive system and integrates health promotion for common women's health problems. There are separate chapters on reproductive problems and concerns, sexually transmitted infections and other infections, contraception and abortion, infertility, violence, problems of the breast, and structural disorders and neoplasms of the female reproductive system.

Part 3, Pregnancy, describes nursing care of the woman and her family from conception through preparation for birth. Nursing care during pregnancy includes both physiologic and psychologic aspects of care, as well as information on preparation for birth. A separate chapter on maternal and fetal nutrition emphasizes the important aspects of care, highlights cultural variations in diet, and stresses the importance of early recognition and management of nutritional problems.

Part 4, Labor and Birth, focuses on collaborative care among physicians, nurse-midwives, nurses, and women and their families during the processes of labor and birth. Separate chapters deal with the nurse's role in maximizing comfort during labor and birth and fetal monitoring, both of which have been updated significantly. All four chapters familiarize students with current labor and birth practices and focus on evidence-based interventions to support and educate the woman and her family.

Part 5, Postpartum, deals with a time of profound change for the entire family. Physiologic changes and nursing care based on the changes are addressed. The mother requires both physical and emotional support as she adjusts to her new role. The chapter on transition to parenthood discusses family dynamics in response to the birth of a child and describes ways that nurses can facilitate parent-infant adjustment. Anticipatory guidance for the first few weeks at home and home follow-up care are addressed.

Part 6, The Newborn, has been updated and addresses physiologic adaptations of the newborn and assessment and care of the newborn. Information on the nutritional

needs of the newborn and nursing care associated with breastfeeding and formula feeding are highlighted in a separate chapter.

Part 7, Complications of Pregnancy, discusses conditions that place the woman, fetus, infant, and family at risk. This unit has been revised and updated and includes a chapter on assessment of the high-risk pregnancy and eight other chapters covering specific pregnancy complications including hypertensive disorders, antepartal hemorrhagic disorders, endocrine and metabolic problems, medical-surgical problems, mental health problems and substance abuse, labor and birth complications, and postpartum complications.

Part 8, Newborn Complications, describes the nursing care for high-risk newborns, emphasizing the care of the preterm infant. There is enhanced content on care of late preterm infants in this edition. It addresses the most common acquired conditions of the neonate as well as hematologic disorders and congenital anomalies. All chapters have been revised and updated. A separate chapter on loss and grief discusses care of the family experiencing a fetal or neonatal loss.

Teaching/Learning Package

Evolve, for Students: Evolve is an innovative website that provides a wealth of content, resources, and state-of-the-art information on maternity nursing. Learning resources for students include Case Studies, audio glossary, Content Updates, Printable Key Points, NCLEX®-Style Review Questions, and Answers to all Next-Generation NCLEX® NGN-Style case studies in the text.

Evolve, for Instructors includes these teaching resources:

- *Test Bank in ExamView format* contains more than 1000 NCLEX®-style test items including alternate-format questions. An answer key with page references to the text, rationales, and NCLEX®-style coding is included.
- *TEACH for Nurses* includes teaching strategies; in-class case studies; and links to animations, nursing skills, and nursing curriculum standards such as BSN Essentials.
- *Image Collection*, containing more than 700 full-color illustrations and photographs from the text, helps instructors develop presentations and explain key concepts. Images can easily be inserted into *PowerPoint* presentations, thus helping make lectures more understandable and entertaining.
- *PowerPoint* assist in presenting materials in the classroom.
- Next Generation NCLEX® NGN-Style Case Studies for Maternity Nursing and Answer Keys to Next Generation NCLEX® NGN-Style Case Studies in the text.

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PART 1

Introduction to Maternity and Women's Health Care

OUTLINE

21st-Century Maternity and Women's Health Nursing

Ellen Frances Olshansky

LEARNING OBJECTIVES

- Describe the scope of maternity and women's health nursing.
- Evaluate contemporary issues and trends in maternity and women's health care.
- Examine social concerns in maternity nursing and women's health care.
- Integrate evidenced-based practice into care management.
- Explain risk management and standards of practice in the delivery of maternity and women's health nursing care.
- Discuss legal and ethical issues in perinatal nursing.
- Examine *Healthy People 2030* goals related to maternal and infant care.


http://evolve.elsevier.com/Lowdermilk/MWHC/

Maternity nursing encompasses care of childbearing women, neonates, and their families through all stages of pregnancy, birth, and the first 6 weeks after birth. This chapter covers the **preconception** period, pregnancy (**prenatal** or **antepartum**), labor and birth (**intrapartum**), and the first 6 weeks after birth (**postpartum**). The term **perinatal** is also used to describe all of these periods. Some practitioners include preconception as part of maternity nursing because of the importance of counseling related to planning for pregnancy. Throughout the prenatal period, nurses, nurse practitioners, and nurse-midwives provide care for women in clinics and private offices and teach classes to help families prepare for birth. Nurses and nurse-midwives care for childbearing families during labor and birth in hospitals and birthing centers (e.g., www.birthcenters.org). Nurse-midwives may also care for childbearing families in the home. Nurses with special training may provide intensive care for high-risk neonates in special care units and for high-risk mothers in antepartum units, in critical care obstetric units, or in the home. Maternity nurses teach about pregnancy; the process of labor, birth, and recovery; newborn care; postpartum care; and parenting skills. They

provide continuity of care throughout the childbearing cycle. Gregory, Ramos, and Jauniaux (2021) aptly argued that care of women during the childbearing cycle should be addressed within the larger context of their lives and health across their life spans, and they advocated developing a "reproductive life plan," defined as a compilation of goals related to a woman's own decisions regarding choosing to bear a child or not. Trans people, too, should be included in this care. This chapter presents a general overview of issues and trends related to the health and health care of women and infants, which provides a foundation for a woman's reproductive life plan.

Nurses caring for women have helped make the health care system more responsive to women's needs. They have been critically important in developing strategies to improve the well-being of women, their families, and their infants and have led efforts to implement clinical practice guidelines and to practice using an evidence-based approach. Through professional associations, nurses have a voice in setting standards and in influencing health policy by actively participating in the education of the public and state and federal legislators (e.g., www.nursingworld.org; www.awhonn.org; www.capwhn.ca). Some nurses hold elective office and influence policy directly. For example, Congresswoman Lauren Underwood is a Black nurse who was elected from Chicago, Illinois to represent her district in the US House of Representatives. In fact, nurses have a strong impact worldwide. The World Health Organization (WHO) declared 2020 as the year of the nurse and midwife (WHO, 2019). Box 1.1 presents key milestones in the history of the care of mothers and infants.

Box 1.1

Historic Overview of Milestones in the Care of Mothers and Infants

1847—James Young Simpson in Edinburgh, Scotland, used ether for an internal podalic version and birth; the first reported use of obstetric anesthesia
1861—Ignaz Semmelweis wrote *The Cause, Concept and Prophylaxis of Childbed Fever*
1906—First US program for prenatal nursing care established
1908—Childbirth classes started by the American Red Cross
1909—First White House Conference on Children convened
1911—First milk bank in the United States established in Boston
1912—US Children's Bureau established
1915—Radical mastectomy determined to be effective treatment for breast cancer
1916—Margaret Sanger established first American birth control clinic in Brooklyn, New York
1918—Condoms became legal in the United States
1923—First US hospital center for premature infant care established at Sarah Morris Hospital in Chicago, Illinois
1929—The modern tampon (with an applicator) invented and patented
1933—Sodium pentothal used as anesthesia for childbirth; *Natural Childbirth* published by Grantly Dick-Read

1934—Dionne quintuplets born in Ontario, Canada, and survive partly due to donated breast milk
1935—Sulfonamides introduced as cure for puerperal fever
1941—Penicillin used as a treatment for infection
1941—Papanicolaou (Pap) test introduced
1942—Premarin approved by the Food and Drug Administration (FDA) as treatment for menopausal symptoms
1953—Virginia Apgar, an anesthesiologist, published Apgar scoring system of neonatal assessment
1956—Oxygen determined to cause retrolental fibroplasia (now known as retinopathy of prematurity)
1958—Edward Hon reported on recording of the fetal electrocardiogram (ECG) from the maternal abdomen (first commercial electronic fetal monitor produced in the late 1960s)
1958—Ian Donald, a Glasgow physician, was first to report clinical use of ultrasound to examine the fetus
1959—*Thank You, Dr. Lamaze* published by Marjorie Karmel
1959—Cytologic studies demonstrated that Down syndrome is associated with a particular form of nondisjunction now known as trisomy 21
1960—American Society for Psychoprophylaxis in Obstetrics (ASPO/Lamaze) formed
1960—International Childbirth Education Association (ICEA) founded
1960—Birth control pill introduced in the United States
1962—Thalidomide found to cause birth defects
1963—Title V of the Social Security Act amended to include comprehensive maternity and infant care for women with low income and high risk
1963—Testing for phenylketonuria (PKU), (now known as phenylalanine hydroxylase [PAH] deficiency), begun
1965—Supreme Court ruled that married people have the right to use birth control
1967—Rh_0(D) immune globulin produced for treatment of Rh incompatibility
1967—First known helicopter transport in the US under the nursing care of Sister M. Andre of a preterm infant from place of birth in Zion, Illinois, to Peoria, Illinois, for specialized care
1967—Reva Rubin published article on maternal role attainment
1968—Rubella vaccine became available
1969—Nurses Association of the American College of Obstetricians and Gynecologists (NAACOG) founded; renamed Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) and incorporated as a 501(c)(3) organization in 1993
1969—Mammogram became available
1972—Special Supplemental Food Program for Women, Infants, and Children (WIC) started
1973—Abortion legalized in United States
1974—First standards for obstetric, gynecologic, and neonatal nursing published by NAACOG

1974—Patricia Johnson became the first Neonatal Nurse Practitioner (NNP) prepared at the graduate level
1975—The Pregnant Patient's Bill of Rights published by the ICEA
1976—First home pregnancy test kits approved by FDA
1978—Louise Brown, first test-tube baby, born
1987—Safe Motherhood initiative launched by World Health Organization (WHO) and other international agencies
1991—Society for Advancement of Women's Health Research founded
1992—Office of Research on Women's Health authorized by US Congress
1993—Female condom approved by FDA
1993—Human embryos cloned at George Washington University
1993—Family and Medical Leave Act enacted
1994—DNA sequences of *BRCA1* and *BRCA2* identified
1994—Zidovudine guidelines to reduce mother-to-fetus transmission of human immunodeficiency virus (HIV) published
1996—FDA mandated folic acid fortification in all breads and grains sold in the United States
1998—Newborns' and Mothers' Health Act went into effect
1998—Canadian Obstetric, Gynecologic, and Neonatal Nurses (COGNN) becomes AWHONN Canada
1999—First emergency contraceptive pill for pregnancy prevention (Plan B) approved by FDA
2000—Working draft of sequence and analysis of human genome completed
2006—Human papillomavirus (HPV) vaccine available
2010—Centenary of the death of Florence Nightingale
2010—Patient Protection and Affordable Care Act (ACA) signed into law by President Barack Obama
2011—AWHONN Canada becomes the Canadian Association of Perinatal and Women's Health Nurses (CAPWHN)
2012—US Supreme Court upheld individual mandate but not the Medicaid expansion provisions of the ACA
2012—Scientists reported findings of the ENCODE (ENCyclopedia Of DNA Elements) project showing that 80% of the human genome is active
2016—Zika virus discovered, spread by mosquitos and sexually transmitted by sperm if a male is infected, affects the fetus/neonate (microcephaly)
2020—Coronavirus disease 2019 (COVID-19), first discovered in 2019, led to shutdown of the United States and a worldwide pandemic; effects on maternal-child health continue to need more research
2022—US Supreme Court overturned Roe v. Wade, making abortion illegal in several states

Advances In The Care Of Mothers And Infants

Although tremendous advances have taken place in the care of mothers and their infants during the past 150 years (see Box 1.1), serious problems exist in the United States

related to the health and health care of mothers and infants. Maternal mortality is increasing in the United States despite advances in health care and decreases in maternal mortality globally (WHO, 2018a, 2018b). Chronic medical conditions such as heart disease, diabetes, and obesity are likely contributory factors. Moreover, significant racial disparities exist: Black women face much greater risks of death related to birth than White women (Centers for Disease Control and Prevention [CDC], 2020a). Mayer, Dingwall, Simon-Thomas, et al. (2019) reported that the maternal mortality rate in the United States over the past two decades has doubled, and most troubling is that non-Hispanic Black women have a threefold to fourfold increase in the likelihood of dying as a result of a pregnancy-related condition compared with non-Hispanic White women. Tikkanen, Gunja, Fitzgerald, et al. (2020) found that the United States has the highest maternal mortality rate compared with other developed countries, and one of the factors attributed to this disparity is the lack of nurse midwives and lack of adequate access to health care during the postpartum period.

Systemic racism, perpetuated through our societal structure, is a root cause of many of the negative social determinants of health. Lack of access to prepregnancy and pregnancy-related care for all women and the lack of reproductive health services for adolescents are major concerns. Sexually transmitted infections, including acquired immunodeficiency syndrome (AIDS), continue to adversely affect reproduction. In looking at all the disparities, racism is clearly an important root cause. The Aspen Institute (2020), a nonprofit and nonideological think tank, addresses racism as it promotes ways of combating what is a structural, systemic context that reinforces inequities among racial groups and recognizes privileges that are associated with "whiteness" and disadvantages associated with "color," leading to the perpetuation of inequities among people of color.

Efforts To Reduce Health Disparities

As evidenced in the 2020 US Census report, racial and ethnic diversity is increasing within the United States (US Census Bureau, 2021). A Brookings Institute report (Frey, 2019) projected that by 2045 the United States will be "minority White," with 49.7% of the nation's population being White, 24.6% Hispanic, 13.1% Black, 7.9% Asian, and 3.8% multiracial.

Black, Indigenous, and People of Color (BIPOC), Hispanics, Alaska Natives, Asian Americans, and Asian/Pacific Islanders experience significant disparities in **morbidity** and **mortality** rates compared with Whites. Shorter life expectancy, higher infant and maternal mortality rates, more birth defects, and more sexually transmitted infections are found among these racial and ethnic minority groups. The disparities are thought to result from a complex interaction among biologic factors, environment, socioeconomic factors, and health behaviors. Social determinants of health are nonbiologic factors that have profound influences on health. Disparities in education and income are associated with differences in morbidity and mortality.

McMillan (2022) reported on listening sessions conducted by the National Commission to Reduce Racism in Nursing. These listening sessions found that there were 4 recommendations from nurses who were from Black, Indigenous, People of Color (BIPOC) groups. These recommendations were: (1) mentorship, (2) accountability at the