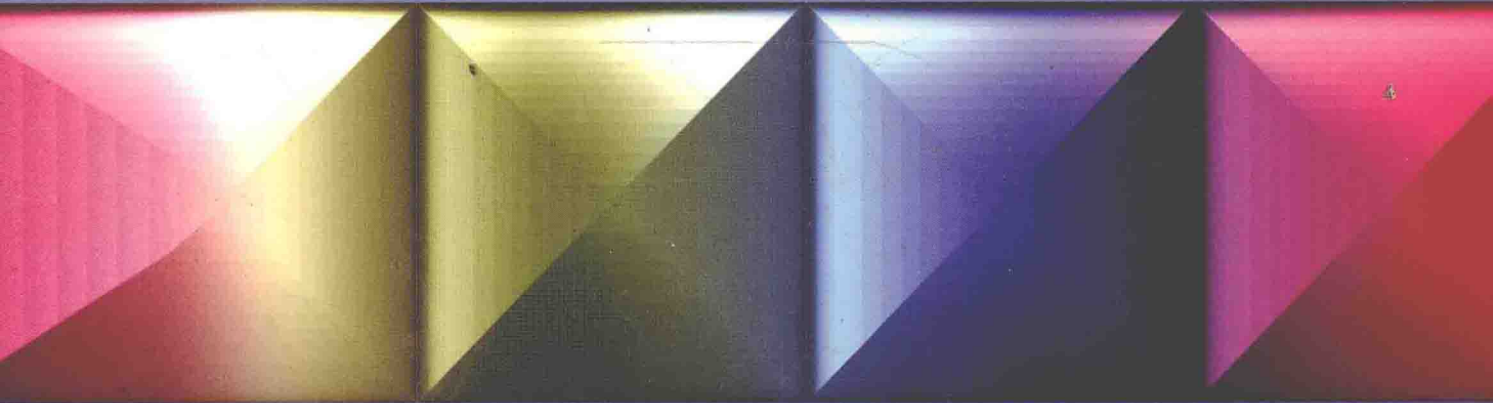


F I F T H E D I T I O N

Contemporary Maternal- Newborn Nursing Care



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Contemporary Maternal-Newborn Nursing Care

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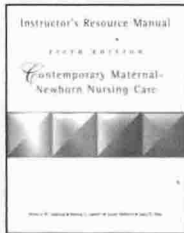
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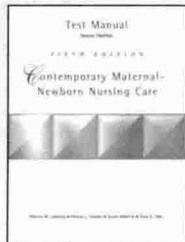
Supplements and New Media

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This manual contains a wealth of material to help faculty plan and manage the maternal-newborn nursing course. It includes chapter overviews, detailed lecture suggestions and outlines, learning objectives, demonstrations and activities, teaching tips, and more for each chapter. The IRM also guides faculty in how to assign and use the text-specific Companion Website, www.prenhall.com/ladewig, and the CD-ROM that accompany the textbook.



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Dedication

*T*ruly effective health care is not the responsibility of any one profession. It requires commitment, dedication, and collaboration on the part of many.

And so, we dedicate this book to our colleagues in health care . . .

To childbirth educators, certified nurse midwives, and physicians;
To physical therapists, medical technologists, and genetic counselors;
To dietitians, occupational therapists, and radiologic technologists;
To psychologists, social workers, and counselors;
To nurse anesthetists, paramedics, and respiratory therapists;
To audiologists, speech pathologists, and physician assistants;
To pharmacists, public health workers, and health information management professionals;
and to all those who provide care to childbearing women and their families.

Because together we touch lives,
Together we meet needs,
Together we make the world a better place
. . . one family at a time.

And, as always, we remember our beloved families —
Tim Ladewig, Ryan, and Erik
David London, Craig, and Matthew
Marty Moberly, Amanda, and Adam (AJ)
Joe Olds, Scott, Roy, Allison, and Dave

PWL MLL SMM SBO

Preface

Today, more than ever before, nurses play a central role during pregnancy and the experience of birth, and in how families feel about the experience afterward. Nevertheless, nurses working with childbearing families are challenged by a variety of forces affecting the provision of nursing care. Shortened lengths of stay, the trend toward greater use of community-based and home care, the impact of HIV/AIDS, the increased use of unlicensed assistive personnel, downsizing and mergers of health care systems, and the general aging of the population all impact the way we practice nursing today and will continue to do so in the future.

The underlying philosophy of *Contemporary Maternal-Newborn Nursing Care* (formerly *Maternal-Newborn Nursing Care: The Nurse, the Family, and the Community*) remains unchanged. We believe that pregnancy and childbirth are normal life processes and that family members are coparticipants in care. We remain committed to providing a text that is accurate and readable, a text that helps students develop the skills and abilities they need now and in the future in an ever-changing health care environment.

Evidence-Based Practice

Health care professionals are increasingly aware of the importance of using reliable information as the basis for planning and providing effective care. This approach, referred to as *evidence-based practice*, draws on information from a variety of sources including nursing research. To help nurses become more comfortable in using evidence-based practice, we have included a brief discussion of it in chapter 1 and then provided examples of evidence-based practice as it relates to maternal-newborn nursing throughout the text. We are very proud that Lisa Sams, RN, MSN, a noted authority on the use of evidence-based practice in nursing care, developed this content for the text.

Community-Based Nursing Care

Although pregnancy, birth, and the postpartal period cover a period of many months, in reality most women spend only two to three days (if any) in an acute care facility. Thus, by its very nature, maternal-newborn nursing is primarily community-based nursing. Moreover, because of the changes resulting from managed care, even women with high-risk pregnancies are receiving more care in their homes and in the community and are spending less time in hospital settings.

This greater emphasis on nursing care provided in community-based settings is a driving force in health care today and, consequently, forms a dominant theme through this edition. We have addressed this topic in focused, user-friendly ways. **Community-Based Nursing Care** is a special heading used throughout this text and indicated by an icon to assist students in recognizing this content. Because we consider home care to be one form of community-based care, it often has a separate heading under Community-Based Nursing Care. Even more important, a separate chapter, **Home Care of the Postpartal Family**, provides a thorough explanation of home care, both from a theoretical perspective and as a significant tool in caring for childbearing families.

Emphasis on Client and Family Teaching

Client and family teaching remains a critical element of effective nursing care, one that we continue to emphasize and highlight in this new edition. Again, our focus is on the teaching that nurses do at all stages of pregnancy and the childbearing process—including the important postpartal teaching that is done before and after families are discharged. Throughout the text, detailed discussions of

client and family teaching are summarized in **Teaching Guides** such as the one on sexual activity during pregnancy. These Teaching Guides help students plan and organize their client teaching. The tear-out **Client-Family Teaching Cards** are also handy tools for the student to use while studying or as a quick reference in the clinical setting. Two new cards for Spanish phrases and sign language have been added to the new edition of this text. In addition, a foldout, full-color **Fetal Development Chart** depicts maternal and fetal development by month and provides specific teaching guidelines for each stage of pregnancy. Students can use this chart as another study tool or as a quick clinical reference.

Commitment to Diversity

As nurses and educators we feel a strong commitment to the importance of recognizing and honoring diversity and multiculturalism. Thus we continually strive to make our text ever more inclusive. Achieving such a goal is difficult, but we feel our success in this regard cannot be measured simply in terms of specific photos, charts, or tables. Instead, we believe that with its subtle integration of a variety of issues and scenarios affecting maternal-newborn nursing care—beyond the emphasis on ethnicity alone—our approach is more accessible overall.

Organization: A Nursing Care Management Framework

As educators and nurses, we have organized this text to flow logically. Nurses today must be able to think critically and problem solve effectively. For these reasons, we begin with an introductory unit to set the stage by providing information about maternal-newborn nursing and important related contents. Subsequent units progress in a way that closely reflects the steps of the *nursing process*. The nurse's role is clearly delineated within this framework. Thus the units related to pregnancy, labor and birth, the newborn period, and postpartum begin with a discussion of basic theory followed by content or chapters on nursing assessment and then nursing care for essentially healthy women or infants. Within the nursing care chapters and content areas, we use the heading **Nursing Care Management** and the subheadings **Nursing Assessment and Diagnosis, Planning and Implementation, and Evaluation**.

Complications of a period are the last chapter or chapters in each unit, also organized using the nursing process. We believe that students can more clearly grasp the complicated content of the high-risk chapters in a

given unit once they have a good understanding of the normal process. However, to avoid overemphasizing the prevalence of complications in such a wonderfully normal process as pregnancy and birth, we have avoided including units that focus only on complications. More specialized or distinctive material is sometimes focused in a single chapter, as, for example, the chapters on maternal nutrition, adolescent pregnancy, special diagnostic procedures, and newborn nutrition.

In keeping with the changing approaches to nursing care management, **Critical Pathways** are featured throughout the text. Four critical pathways—intrapartal, newborn, postpartal, and cesarean birth—are designed to help students plan and manage care within normally anticipated time frames. In addition, we provide critical pathways that address nursing care for women with complications such as pregnancy-induced hypertension and diabetes mellitus as well as for high-risk newborns. This information is designed to help students become familiar with this approach to managing care so that they are better prepared in the clinical setting.

Notable Features

Instructors and students alike value the in-text learning aids included in our textbooks. With this edition, we have once again developed a text that is easy to learn from and easy to use as a reference. Each chapter begins with **Objectives** and a list of **Key Terms**. Page numbers are included with each key term to identify the place where the term first appears in the chapter. Each chapter ends with a chapter review that consists of a summary of **Chapter Highlights**, a list of **References**, and a *new* section entitled **Maternal-Newborn Nursing Online**. This last section encourages students to use the additional chapter-specific NCLEX review, exercises, and resources available on the accompanying free Student CD-ROM and the Companion Website at www.prenhall.com/ladewig. Finally, a **Glossary** of terms commonly used in the field of maternal-newborn nursing can be found at the back of the text.

New Chapter Opening Vignettes from nurses in a variety of maternal, newborn, and women's health roles illustrate the diversity of career options and settings available to nurses in this field and reflect the deep satisfaction that these nurses experience in their profession.

Moreover, *new Hints for Practice* offer hands-on suggestions and clinical tips for specific procedures and interventions.

The **Assessment Guides** incorporate physical assessment and normal findings, alterations and possible causes, and guidelines for nursing interventions. **Procedures**

describe actions specific to maternal-newborn nursing care in a step-by-step fashion.

To support the development of critical thinking skills, **Critical Thinking in Practice** boxes provide brief scenarios that ask students to determine the appropriate response. Suggested answers to the scenarios are provided in Appendix I so that students will have immediate feedback on their decision-making skills.

Community-Based Nursing Care is a special heading and icon throughout the text that identifies specific aspects of maternal-newborn nursing care that occurs in community or home settings.

Drug Guides for those medications commonly used in maternal-newborn nursing are included to guide students in correctly administering the medications.

Key Facts to Remember provide a quick review of important content in convenient boxed format.

Comprehensive Teaching and Learning Package

To enhance the teaching and learning process, the following supplements have been developed in close correlation with the new edition of this textbook. The full complement of supplemental teaching materials is available to all qualified instructors from your Prentice Hall Health Sales Representative.

Student CD-ROM. A new addition to this package, the Student CD-ROM includes NCLEX-style multiple-choice questions that emphasize the application of nursing care. Students can test their knowledge and gain immediate feedback through rationales for right and wrong answers. The CD-ROM also provides several video clips and animations to help students understand and visualize difficult concepts in maternal-newborn nursing care. Finally, the CD-ROM allows access to the Companion Website described later in this section. This CD-ROM is packaged free with every copy of the textbook.

Student Workbook. This useful workbook has been revised, streamlined, and updated in keeping with the changes made to this new edition. It provides a concise review of essential content and includes exercises and strategies to help students focus their study.

Clinical Handbook. This portable handbook provides students with a succinct, quick-reference guide for use in the clinical setting. Content is organized by each stage of the childbirth process and includes normal and at-risk information. Procedures, tables, photos, and illustrations are integrated throughout.

Instructor's Manual. This effective and timesaving aid has been revised and streamlined. It provides sugges-

tions for covering important content and is organized by topics according to subject matter.

Test Bank. Available in printed or electronic formats, this updated test bank helps faculty quickly and easily create numerous unique examinations. Test items follow the NCLEX format and are classified by cognitive level, nursing process step, and client need.

Instructor's Resource CD-ROM. New to this package, the Instructor's Resource CD-ROM provides two resources in an electronic format. First, the CD-ROM includes the complete test bank in a PC-compatible format. Second, it includes a comprehensive collection of images from the textbook in PowerPoint format, so faculty can easily import these photographs and illustrations into their own classroom lecture presentations.

Companion Website and Syllabus Manager®. New to this package is a free Companion Website at www.prenhall.com/ladewig. This website serves as a text-specific, interactive online workbook to *Contemporary Maternal-Newborn Nursing Care*, 5th edition. The Companion Website includes modules for objectives, chapter outlines, key terms and definitions, discussion questions with essay responses, NCLEX review questions with automatic grading, links to other sites for student research and essay responses, and more. Instructors adopting this textbook for their courses have free access to an online Syllabus Manager with a whole host of features that facilitate the students' use of this Companion Website and allow faculty to post their syllabi online for their students. For more information or a demonstration of Syllabus Manager, please contact your Prentice Hall Health Sales Representative or go online to www.prenhall.com/demo.

Online Course Management Systems. Also new to this package are online course companions available for schools using Blackboard, WebCT, or Course Compass course management systems. For more information about adopting an online course management system to accompany *Contemporary Maternal-Newborn Nursing Care*, 5th edition please contact your Prentice Hall Health Sales Representative or go online to www.prenhall.com/demo.

Acknowledgments

With each revision, our goal remains constant—to ensure that our text reflects the most current research and the latest information about nursing. This would not be possible without the support of our colleagues in clinical practice and nursing education. Their suggestions, contributions, and words of encouragement help us achieve this goal. We recognize the intense commitment of nurses everywhere to excellence in clinical practice. And so we thank our colleagues.

We are grateful, too, to our students past, present, and future. They stimulate us with their interest; they reinvigorate us with their enthusiasm; they challenge us with their questions to make this text as clear and readable as possible. We learn so much from them.

In publishing, as in health care, quality assurance is an essential part of this process—and this is the dimension that reviewers add. Some reviewers assist us by validating the content, some by their attention to detail, and some by challenging us to examine our ways of thinking to develop a new awareness. Thus we extend a sincere thanks to all those who reviewed the manuscript for this text. Their names and affiliations are listed following this preface.

We also wish to thank the contributors to the 6th edition of our other text, *Maternal-Newborn Nursing: A Family and Community-Based Approach*. They include the following:

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A project of this scope is not possible without the skill and expertise of many people. And so we extend special thanks to the following people.

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thinking are awe inspiring and challenge us to give our best. We anticipate a long and exciting relationship with this very special woman.

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This is a time of possibilities for nursing. The need for skilled nurses has never been higher, nor have the opportunities to make a real difference in the lives of child-bearing families ever been greater. Time and again we have seen the difference a skilled nurse can make in the lives of people in need. We, like you, are committed to helping all nurses recognize and take pride in that fact. Thank you for your letters, your comments, and your suggestions. We feel embraced by your support.

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Patricia A. Wieland Ladewig received her BS from the College of Saint Teresa in Winona, Minnesota. After graduation, she worked as a pediatric nurse before joining the Air Force. After completing her tour of duty, Dr. Ladewig relocated to Florida, where she accepted a faculty position at Florida State University. There she discovered teaching as her calling. Over the years, she taught at several schools of nursing while earning her MSN in maternal-newborn nursing from Catholic University of America in Washington, DC, and her PhD in higher education administration from the University of Denver in Colorado. In addition, she became a Women's Health Nurse Practitioner and maintained a part-time clinical practice. In 1988 Dr. Ladewig became the first director of the nursing program at Regis College in Denver, and, in 1991, when the college became Regis University, she became



Patricia A. Wieland Ladewig

dean of the School for Health Care Professions. Under her guidance, the Department of Nursing has added a graduate program and the School for Health Care Professions has added two departments: the Department of Physical Therapy and the Department of Health Services Administration and Management. Dr. Ladewig feels that teaching others to be excellent, caring nurses gives her the best of all worlds because it keeps her in touch with the profession she loves and enables her to help shape the future of the nursing profession. When not at work or writing textbooks, Pat and her husband, Tim, enjoy skiing, climbing Colorado's 14'ers (14,000-foot mountains, 15 of which she has climbed to date), and traveling. They are the parents of two sons, Ryan, who recently graduated with a master's degree in computer science, and Erik, a student at Regis University.

Marcia L. London has been able to combine her two greatest passions by being both a nurse caring for children and families and a teacher for almost 30 years. She received her BSN and School Nurse Certificate from Plattsburgh State University in Plattsburgh, New York. After graduation, she worked as a pediatric nurse at St. Luke's Hospital in New York City, then moved to Pittsburgh, where she began her teaching career. Mrs. London accepted a faculty position at Pittsburgh's Children's Hospital Affiliate program and received her MSN in pediatrics as a clinical nurse specialist from the University of Pittsburgh in Pennsylvania. Mrs. London began teaching at Beth-El School of Nursing and Health Science in 1974



Marcia L. London

after opening the first intensive care nursery at Memorial Hospital of Colorado Springs. She has served in many faculty positions at Beth-El, including assistant director of the School of Nursing. Mrs. London obtained her post-master's Neonatal Nurse Practitioner certificate in 1983 and subsequently developed the Neonatal Nurse Practitioner (NNP) certificate and the master's NNP program at Beth-El. She is active nationally in neonatal nursing and was involved in the development of the Neonatal Nurse Practitioner Educational program guidelines. Mrs. London is also actively involved in nurse practitioner education in general. She is involved in the revision of the Core Competency for Nurse Practitioners and

continue

Curriculum Guidelines for Nurse Practitioner Education, as a member of the Education Committee of the National Organization of Nurse Practitioner Faculties. Mrs. London is currently completing her PhD in higher education administration and adult studies at the University of Denver in Colorado. She feels fortunate to be involved in the education of her future colleagues and her

teaching philosophy is that, with support, students can achieve more than they may initially believe they are capable of. Mrs. London and her husband have two sons and two dogs (Samantha and Betsy, daughters by proxy). Her two sons, Craig and Matthew, are studying computers and computer animation in college and are more than willing to give Mom helpful hints.

Susan M. Moberly is a relative newcomer to maternal-newborn nursing, but not to the vital issues of consumer advocacy, women's health, and childbearing choice. Sue began caring for expectant parents as a certified childbirth educator over 15 years ago, specializing in prenatal classes developed for those individuals with special needs and circumstances. She has taught childbirth education in many settings, both hospital and community based. In 1990 Ms. Moberly successfully completed the national certification program with the International Childbirth Education Association (ICEA), which she continues to maintain. In 1996 she graduated with her BSN from Beth-El College of Nursing and began practice as a labor and delivery nurse at Penrose Community Hospital in Colorado Springs. In 1999 Sue completed the RN certification for in-patient obstetrics.

Early in Ms. Moberly's undergraduate studies, she became convinced that the concepts of political professional development, holistic nursing practice, and career involvement *must* begin at the student level. During her time at Beth-El, Sue was a leader in both the local and state



Susan M. Moberly

chapters of the National Student Nurses Association (NSNA), was selected as a charter member of the then newly formed Xi-Phi chapter of Sigma Theta Tau, and was active in the American Holistic Nurses Association. In 1995 Sue Moberly was honored to be chosen as the NSNA Helene Fuld Fellow for Colorado. She attended the Fuld Conference on Holistic Nursing Practice in Edinburgh, Scotland, and participated in a study tour of London. Following graduation, Ms. Moberly continued her involvement with the Student Nurses Association as an adviser and served as vice president of her Sigma Theta Tau chapter for three years. She is also an active member of the Colorado Nurses Association and AWHONN.

Currently Sue is completing final requirements for her certification in nurse-midwifery at the University of Colorado Health Sciences Center. In addition, she is trying to stay sane while working in labor and delivery, coauthoring this textbook, and raising two adolescents: her 16-year-old daughter, Amanda, and her 12-year-old son, AJ. Thanks to the support of her husband, Marty, she is succeeding!

Sally B. Olds has provided hands-on maternal-newborn nursing care and has mentored students and colleagues for more than 30 years. She received her BSN from the University of Kansas and her MS in nursing from the University of Colorado. Completing her master's degree provided Mrs. Olds with the opportunity to achieve one of her life's goals: teaching nursing students. She began teaching at the Beth-El School of Nursing and Health Science in 1975, eventually becoming the chair of the Department of Holistic Nursing, and was instrumental in developing the Clinical Nursing Specialist Program in Holistic Health for the master's program.



Sally B. Olds

Her teaching philosophy has been to nurture and support students as they learn, to focus on the positive aspects of learning, and to teach students the importance of respecting the client and family for whom they provide care. Mrs. Olds taught at Beth-El for over 22 years before retiring in 1997 and was named professor emerita. She became a Sexual Assault Nurse Examiner (SANE), working one-on-one with sexual assault survivors in 1996, and she continues her involvement with issues affecting women and children. Since her retirement,

Mrs. Olds has had more time to spend with her husband, two grown children, and Old English sheepdog.

A GUIDE TO Contemporary Maternal-Newborn Nursing Care

FIFTH EDITION

Nurses working with childbearing families play a special role during pregnancy and birth experience. They also face a unique set of challenges, from shortened lengths of stay and the impact of HIV to the increased use of unlicensed assistive personnel. The new Fifth Edition of **Contemporary Maternal-Newborn Nursing Care** (formerly *Maternal-Newborn Nursing Care, 4/e*) continues to foster the vital skills nurses need to meet these challenges—flexibility, critical thinking, and problem-solving—within the framework of the nursing process.

The new Fifth Edition is supported by robust pedagogy and a suite of user-friendly supplements, including new CD-ROMs for both students and

instructors and free Companion Website. Visit www.prenhall.com/ladewig for chapter outlines, discussion questions with essay responses, NCLEX review questions with automatic grading, links to other sites of student research and essay responses, and much more.

Chapter Opening Vignettes offer from the heart commentary by nurses in a variety of maternal, newborn, and women's health roles, illustrating not only the diversity of career options available, but also the deep satisfaction enjoyed by these practitioners.

Evidence-Based Practice boxes draw on the latest research as the basis for planning and providing effective care. The new fifth Edition introduces readers to the concept of evidence-based practice in Chapter One, with detailed examples related to maternal-newborn nursing throughout the text.



ASSESSMENT GUIDE: POSTPARTAL—FIRST HOME VISIT AND ANTICIPATED PROGRESS AT 6 WEEKS

Physical Assessment/
Normal Findings

Alterations and Possible
Causes*

Nursing Responses
to Data†

Vital Signs

Blood pressure: Return to normal prepartum level.

Pulse: 60–80 beats/minute (or prepartum normal rate).

Respirations: 16–24/minute.

Temperature: 36.3–37.8°C (98–99.8°F).

Weight

2 days: Possible weight loss of 12–20+ lb.

8 weeks: Returning to normal prepartum weight.

Breasts

Nonengorging.

2 days: Milk

Elevated blood pressure (anxiety, essential hypertension, renal disease).

Increased pulse rate (anxiety, anxiety, cardiac disorders).

Marked tachypnea or abnormal patterns (respiratory disorders).

Increased temperature (infection).

Minimal weight loss (fluid retention, pregnancy-induced hypertension [PIH]).

Retained weight (excessive caloric intake).

Extreme weight loss (anxiety, excessive caloric intake).

Review history, evaluate normal baseline, refer to physician or CNM if necessary.

Count pulse for full minute and note irregularities; marked tachycardia or heart irregularities require additional assessment and possible physician or CNM referral.

Evaluate for respiratory disease; refer to physician or CNM if necessary.

Assess for signs and symptoms of infection or disease state.

Evaluate for fluid retention; deep tendon reflexes.

Evaluate for fluid retention; deep tendon reflexes.

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Assessment Guides assist students with diagnoses by incorporating physical assessment and normal findings, alterations and possible causes, as well as guidelines for nursing interventions.

Using the nursing process as a framework, detailed **Teaching Guides** helps students successfully plan and organize their patients instruction sessions. The guide includes suggestions for what to teach and how to teach it, as well as expected outcomes.

TEACHING GUIDE

Preterm Labor

Nursing Plan and Implementation
Teaching focuses on the risks of preterm labor, the functions of and procedures for home monitoring, and self-care activities to decrease the risk of preterm labor.

Clear Goals

1. At the completion of the teaching the woman will be able to:
2. Discuss the risks of preterm labor.
3. Describe the purpose of home monitoring.
4. Demonstrate the correct procedures for doing home monitoring.
5. Explain self-care measures that help decrease the risk of preterm labor.

TEACHING METHOD

Discuss the risks specifically. Many people understand in a general way that preterm labor can be dangerous, but they fail to understand how the baby is affected.

Use handouts during the discussion. Help the woman clearly understand the value of the program because, to be successful, it requires a real commitment on her part.

Teach the woman how to palpate for uterine contractions. Demonstrate and ask for a return demonstration.

Provide opportunities for discussion. Provide opportunities for discussion. Provide opportunities for discussion.

NURSING CARE MANAGEMENT

See the Critical Pathway for a woman with pre-eclampsia or eclampsia for a detailed summary of nursing care management.

Nursing Assessment and Diagnosis

Blood pressure is taken and recorded during each antepartum visit. If the blood pressure rises, or if the normal slight decrease in blood pressure expected between 28 weeks of pregnancy does not occur, the woman should be followed closely. The woman's urine is checked for proteinuria at each visit.

If hospitalization becomes necessary, the nurse then assesses the following:

- **Blood pressure:** Blood pressure should be assessed every 1 to 4 hours, or more frequently if indicated by the woman's status.
- **Temperature:** Temperature should be taken every 4 hours, or every 2 hours if elevated.

HINTS FOR PRACTICE

Common errors in measuring blood pressure include the following:

1. Incorrect cuff size—a cuff that is too small results in a falsely elevated blood pressure, whereas one that is too large falsely lowers blood pressure.
2. Elevating the arm above the level of the heart, such as occurs when a woman lies on her left side using her right arm for a blood pressure measurement, will falsely lower the blood pressure to 10 to 20 mm Hg.
3. Korotkoff's phase—when blood pressure is checked during pregnancy, the disappearance of sound (phase V) may be unusually low. To standardize measurements, the muffling of sound (phase IV) is the preferred indicator.
4. Anxiety and exercise can elevate blood pressure. Wait 10 minutes after the woman's arrival to check a resting blood pressure.

Students will benefit from the relevant **Hints for Practice**—hands-on suggestions and clinical tips for specific procedures and interventions including common protocols and errors to avoid.

Students are guided through the specific aspects of maternal-newborn nursing care that may occur in a community or home setting versus hospital-based care. Each **Community-Based Nursing Care** section offers detailed guidelines for not only physical patient care but also emotional support.

Brief yet detailed scenarios found in **Critical Thinking in Practice** prompt students to assess possible situations and offer appropriate responses. An appendix of suggested answers provide immediate feedback and reinforcement of clinical decision-making skills.

Outlining antepartal, intrapartal, and postpartal management, the **Critical Pathways** are designed to help students plan and manage care within normal anticipated time frames. With information ranging from referral sources to nursing care management and reports, Critical Pathways help students better prepare for the realities of the clinical setting.



DRUG GUIDE

BETAMETHASONE (CELESTONE SOLUPAN)

Overview of Maternal-Fetal Action

Studies have provided ample evidence that glucocorticoids such as betamethasone are capable of inducing pulmonary maturation and decreasing the incidence of respiratory distress syndrome in preterm infants. The mechanism by which corticosteroids accelerate fetal lung maturation is unclear, but it is related to the stimulation of surfactant by the enzyme. The enzyme is required for biosynthesis of surfactant. The enzyme is required for the lung in that it decreases the surface tension of the alveoli. Glucocorticoids also increase the rate of glycoprotein synthesis, which leads to thinning of the interalveolar septa and increases the size of the alveoli. The thinning of the epithelium brings the capillaries into closer proximity with the air spaces and improves oxygen exchange.

Route, Dosage, Frequency

Prenatal maternal intramuscular injections of 12 mg of betamethasone may also be given in doses of 6 mg every 24 hours for four doses (Guinn & Lee, 2000). Duration of effect: results, birth should be 24 hours after completion of the last dose.

Maternal Side Effects

Increased risk for infection has not been supported in large studies. There may, however, be some increase in the incidence of infection in women with premature rupture of the membranes. Maternal hyperglycemia may occur during corticosteroid administration. Insulin-dependent diabetes may require insulin infusions for several days to prevent monony edema, especially when used concurrently with tocolytics (Jarms, 1996a; National Institute of Health, 1994).

Effects on Fetus or Neonate

Lowered cortisol levels at birth, but rebound occurs by 2 hours of age.
Hypoglycemia
Increased risk of neonatal hypocalcemia

Detailed, easy-to-follow **Drug Guides** outline the usage, side effects, contraindication, and nursing considerations for medications commonly used in maternal-newborn nursing.

Procedure 17-1

Performing Nasal Pharyngeal Suctioning

Rationale

This avoids spillage of secretions and prevents air from leaking out of the lid.

Nursing Action

OBJECTIVE: CLEAR SECRETIONS FROM THE NEWBORN'S NOSE OR OROPHARYNX IF RESPIRATIONS ARE DEEPENED OR IF AMNIOTIC FLUID WAS MECONIUM STAINED.

- Tighten the lid on the DeLee mucus trap or other suction device collection bottle.
- Connect one end of the DeLee tubing to low suction.
- Insert the other end of the tubing 3 to 5 in into the newborn's nose or mouth (Figure 17-8).



For a brief summary of PPH, see Key Facts to Remember: Preeclampsia-Eclampsia.

Evaluation

Expected outcomes of nursing care include the following:

- The woman is able to explain PPH, its implications, and possible complications.
- The woman suffers no eclamptic seizures.
- The woman and her caregivers detect early evidence of increasing severity of the PPH or possible complications so that appropriate treatment measures can be instituted.
- The woman gives birth to a healthy newborn.

KEY FACTS TO REMEMBER

Preeclampsia and Eclampsia

- Preeclampsia, which occurs after the 20th week of pregnancy, involves elevated BP, edema, and proteinuria. It may be mild or severe.
- A woman with preeclampsia who has a seizure is said to have eclampsia.
- The exact cause of preeclampsia is unknown.
- Vasospasm is responsible for most of the clinical manifestations, including the CNS signs of headache, hyperreflexia, and convulsion. Vasospasm also causes poor placental perfusion, which leads to IUGR.
- The only known cure for preeclampsia is birth of the infant, but symptoms may develop up to 48 hours postpartum.
- Management is supportive and includes anticonvulsant therapy, generally with MgSO₄; prevention and careful assessment of fetal well-being.
- Nursing care focuses on implementing appropriate interventions based on the data gathered from regular assessment of vital signs, reflexes, degree of edema and proteinuria, response to therapy, fetal status, detection of developing complications, knowledge level and psychologic state of the woman and her family.

CHRONIC HYPERTENSIVE DISEASE

Chronic hypertension exists when the blood pressure is 140/90 mm Hg or higher before pregnancy or before the 20th week of gestation or when hypertension persists indefinitely following childbirth (Branch & Porter, 1999). If the diastolic blood pressure is greater than 80 mm Hg during the second trimester, chronic hypertension has not been determined. The cause of chronic hypertension is not known. In most women with chronic hypertension the disease is mild.

The goals of care are to prevent the development of preeclampsia and to ensure normal growth of the fetus. The woman is seen regularly for prenatal care (every 2 weeks until 28 weeks and then weekly until birth). The woman is taught the importance of daily rest periods in the left lateral recumbent position and also learns to monitor her blood pressure at home. Sodium intake is restricted to about 2 g/day. Antihypertensive medication is continued throughout pregnancy in women with severe chronic hypertension (blood pressure over 160/100 mm Hg). The drug of choice is methyldopa (Aldomet). Serial measurement of hematocrit, serum creatinine, serum uric acid, creatinine clearance, serum 24-hour output of urine protein may be necessary (Branch & Porter, 1999).

Nursing care is directed at providing sufficient information so that the woman can meet her health care needs. She is given information about her diet, the importance of regular rest, her medications, the need for blood pressure control, and any procedures used to monitor the well-being of her fetus.

CHRONIC HYPERTENSION WITH SUPERIMPOSED PREECLAMPSIA

Preeclampsia may develop in a woman previously found to have chronic hypertension. Close monitoring and careful management are indicated if the following signs develop: (1) elevations of systolic blood pressure to 160 mm Hg above the baseline or diastolic blood pressure to 110 mm Hg above the baseline; (2) proteinuria; and (3) edema occurring in the upper half of the body. A woman with chronic hypertension who develops superimposed preeclampsia often progresses quickly to eclampsia, sometimes before 30 weeks of pregnancy.

LATE OR TRANSIENT HYPERTENSION

Late hypertension exists when transient elevation of blood pressure occurs during labor or in the early postpartum period, returning to normal within 10 days after birth.

Procedures describe actions specific to maternal-newborn nursing in a step-by-step fashion. Each procedure guides your students through nursing actions, identifying objectives and rationale for each step.

The bulleted, concise lists found in **Key Facts to Remember** provide a convenient recap of vital information—ideal for pre-exam review.