

Guidelines for
**PERINATAL
CARE** Seventh Edition

American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

The American College of
Obstetricians and Gynecologists

WOMEN'S HEALTH CARE PHYSICIANS



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Guidelines for Perinatal Care was developed through the cooperative efforts of the American Academy of Pediatrics' (AAP) Committee on Fetus and Newborn and the American College of Obstetricians and Gynecologists' (the College) Committee on Obstetric Practice. The guidelines should not be viewed as a body of rigid rules. They are general and intended to be adapted to many different situations, taking into account the needs and resources particular to the locality, the institution, or type of practice. Variations and innovations that improve the quality of patient care are to be encouraged rather than restricted. The purpose of these guidelines will be well served if they provide a firm basis on which local norms may be built.

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American Academy of Pediatrics

141 Northwest Point Boulevard

PO Box 927

Elk Grove Village, IL 60009-0927

The American College of Obstetricians and Gynecologists

409 12th Street, SW

Washington, DC 20090-6920

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 Ann L. Jefferies, MD, FRCPC
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 NNP-BC
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 NNP-BC
 Tonse N. K. Raju, MD, DCH, FAAP
 Kasper S. Wang, MD, FACS, FAAP

Consultants

The committee would like to express appreciation to the following consultants:

David H. Adamkin, MD
 Jill E. Baley, MD, FAAP
 Capt. Wanda D. Barfield, MD, MPH, FAAP
 William H. Barth Jr, MD, FACOG
 Vinod K. Bhutani, MD
 Waldemar A. Carlo, MD, FAAP
 Nancy C. Chescheir, MD, FACOG
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 Molly J. Stout, MD
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 Kristi Watterberg, MD, FAAP
 Robert White, MD

Preface

The seventh edition of *Guidelines for Perinatal Care* is a user-friendly guide that provides updated and expanded information from the sixth edition. Multiple chapters have been reorganized and rewritten. The chapters are supplemented by 10 appendixes (A–J) that provide a wealth of additional information and resources for readers. This edition maintains the focus of the past edition on reproductive awareness and regionally based perinatal care services but with an added focus on patient safety and quality improvement in obstetrics and neonatology, which is highlighted in a new chapter dedicated to this topic.

Guidelines for Perinatal Care represents a cross section of different disciplines within the perinatal community. It is designed for use by all personnel who are involved in the care of pregnant women, their fetuses, and their neonates in community programs, hospitals, and medical centers. An intermingling of information in varying degrees of detail is provided to address their collective needs. The result is a unique resource that complements the educational documents listed in Appendix I, which provide more specific information. Readers are encouraged to refer to the appendix for related documents to supplement those listed at the end of each chapter. A list of web site resources also is included in this edition. The list includes the web sites of relevant health care-related organizations (Appendix J).

Both the American Academy of Pediatrics (AAP) and the American College of Obstetricians and Gynecologists (the College) will continue to update information presented here through policy statements and recommendations that both organizations issue periodically, particularly with regard to rapidly evolving technologies and areas of practice.

Guidelines for Perinatal Care is published as a companion document to the College's *Guidelines for Women's Health Care*, which is in its third edition. Although each book is developed with the aid of a separate committee,

the contents are coordinated to provide comprehensive reference to all aspects of women's health care with minimal duplication.

The most current scientific information, professional opinions, and clinical practices have been used to create this document, which is intended to offer guidelines, not strict operating rules. Local circumstances must dictate the way in which these guidelines are best interpreted to meet the needs of a particular hospital, community, or system. (For instance, the term *readily available*, used to designate acceptable levels of care, should be defined by each institution within the context of its resources and geographic location. Therefore, it is reasonable to tailor the time to delivery to local circumstances and logistics.) Emphasis has been placed on identifying those areas to be covered by specific, locally defined protocols rather than on promoting rigid recommendations.

The content of this newest edition of *Guidelines for Perinatal Care* has undergone careful review to ensure accuracy and consistency with the policies of both AAP and the College. The guidelines are not meant to be exhaustive, nor do they always agree with those of other organizations; however, they reflect the latest recommendations of AAP and the College. The recommendations of AAP and the College are based on the best understanding of the data and consensus among authorities in the discipline. The text was written, revised, and reviewed by members of the AAP Committee on Fetus and Newborn and the College Committee on Obstetric Practice; consultants in a variety of specialized areas also contributed to the content. The pioneering efforts of those who developed the previous editions also must be acknowledged. To each and every one of them, our sincere appreciation is extended.

Introduction

Throughout its prior six editions, *Guidelines for Perinatal Care* has focused on improving the outcomes of pregnancies and reducing maternal and perinatal mortality and morbidity by suggesting sound paradigms for providing perinatal care. Its strong advocacy of regionalized perinatal systems, including effective risk identification, care in a risk-appropriate setting, and maternal or neonatal transport to tertiary care facilities when necessary, has had a demonstrable effect on perinatal outcomes. The current edition incorporates evidence-based data to further refine optimal regionalized care, including revised definitions of levels of neonatal care. This edition also includes evidence-based recommendations on the use of safe and effective diagnostic and therapeutic interventions in both maternal–fetal medicine and neonatology.

The full spectrum of high-quality perinatal care is covered by this seventh edition of *Guidelines for Perinatal Care*, from the principles of preconception counseling and the provision of antepartum and intrapartum care in routine and complex settings to guidelines for routine and complex neonatal and postpartum care. The preconception and antepartum care chapter has been expanded to include new information on prenatal care of women with intellectual and developmental disabilities and updated guidelines on immunization, nutrition, diet, weight gain, and the prevention of perinatal group B streptococcal disease. Intrapartum and postpartum information includes coverage of new topics, such as planned home birth and underwater birth, and provides revised postpartum contraception recommendations that are aligned with the *U.S. Medical Eligibility Criteria for Contraception* published by the Centers for Disease Control and Prevention. The chapter on obstetric and medical complications has been expanded with new information and evidence-based recommendations to guide clinical practice in these specialized areas.

The chapters on care of healthy and high-risk infants include updated recommendations on neonatal resuscitation, screening and management of hyperbilirubinemia, and neonatal drug withdrawal. The addition of information

on late preterm infants reflects the importance of this group of infants to the rate of prematurity and their increased vulnerability compared with term infants.

Updated recommendations for the conduct of perinatal care in a hospital setting are presented with an emphasis on family-centered and patient-centered care, wherein patients and families are recognized and respected as true partners of their health care team. The roles of hospitalists and laborists are also discussed because these members of the labor management team are increasingly seen in perinatal care centers across the country.

As in previous editions, the concept of quality improvement in all aspects of perinatal care is a focus. Because the data on the importance and effect of quality improvement specific to obstetrics and neonatology has accumulated since the most recent edition, a new chapter entitled “Quality Improvement and Patient Safety” is included. This chapter provides commentary on the need for procedures and policies to ensure effective communication among caregivers and between caregivers and patients because communication remains a critical component of quality perinatal care. The concepts of team training, simulation, and drills and their roles in improving perinatal care are also featured. Quality control and patient safety in the neonatal intensive care unit is highlighted, with information on neonatal intensive care unit data collection, rapid cycle improvement, and quality improvement collaboratives, reflecting the increasing importance of these topics in the field of neonatology.

Achieving the goal of optimal outcomes for newborns and mothers requires a coordinated system of perinatal care, including a multidisciplinary team of physicians working in concert with the patient and within a supportive community. This seventh edition of *Guidelines for Perinatal Care* provides a framework of recommendations based on the best available evidence. Wide implementation of these recommendations will bring health care providers closer to the goal.

Guidelines for
PERINATAL CARE

Seventh Edition

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Chapter 1

Organization of Perinatal Health Care

The organization of perinatal health care on a regional basis emerged as an ideal model of health care delivery beginning in the 1970s and 1980s. Regional organization of perinatal care was endorsed in a 1976 report by the March of Dimes Foundation, *Toward Improving the Outcome of Pregnancy*, which was prepared by the Committee on Perinatal Health, an ad hoc committee of representatives appointed by participating professional organizations with support from the March of Dimes Foundation. The importance of regional organization was further emphasized in the second edition and third edition of *Toward Improving the Outcome of Pregnancy* published in 1993 and 2010, respectively. Although a comprehensive, integrated perinatal care delivery system is optimal, this goal has not been attained in many areas of the country, where financial incentives promote competing systems and duplication of services.

Health Care Delivery System

A regionalized system of perinatal care with integrated delivery of services should address the care received by the mother before pregnancy and during pregnancy, the management of labor and delivery, postpartum care, and neonatal care. A health care system that is responsive to the needs of families, and especially women, requires strategies to

- ensure access to services
- identify risks early
- provide linkage to the appropriate level of care
- ensure adherence, continuity, and comprehensiveness of care
- promote efficient use of resources

Structural, financial, and cultural barriers to care need to be identified and eliminated. The regionalized organization and integration of perinatal care must evolve within the framework of the general health care delivery system

while avoiding unnecessary duplication of services. Five aspects can be identified as essential responsibilities of the successful perinatal health care system: 1) provide access to comprehensive perinatal health care services, 2) embrace a patient-centered and family-centered approach to health care, 3) deliver culturally and linguistically appropriate care, 4) educate the public about reproductive health, and 5) be accountable for all components of the health care delivery system.

Comprehensive Perinatal Health Care Services

The integration of a spectrum of clinical activities, basic care through subspecialty care, within one system or geographic region potentially provides timely access to care at the appropriate level for the entire population. The primary goal of providing the appropriate level of care is facilitated by early and ongoing risk assessment to prevent, recognize, and treat conditions associated with maternal and neonatal morbidity and mortality. A secondary goal is to improve referral and consultation among institutions that provide different levels of care. When populations that are in need of reproductive health care are widely dispersed, both geographically and economically, a carefully structured, well-organized system of supportive services becomes necessary to ensure access to appropriate care for all pregnant women and newborns. Networks and other forms of vertically integrated systems within a region should be structured to provide all the necessary services, including health care, transportation, public and professional education, research, and outcome evaluations with data organized in standard format. All components are necessary to minimize perinatal mortality and morbidity while using resources efficiently and effectively.

Patient-Centered and Family-Centered Health Care

The perinatal health care system should be oriented toward providing patient-centered and family-centered health care because the family often is the primary source of support for individuals receiving health services. The Institute for Patient- and Family-Centered Care importantly notes that the term family is defined by the patient, as is the degree to which the family is involved in care. The term “family” as it is used here includes the expectant mother and her support system, which may include any or all of the following individuals: a spouse or partner, relatives, and friends. Health care providers should strive to engage the family as co-providers and decision-making partners, as long as this is in accordance with the mother’s personal situation, beliefs, and desires.