

ACGME Program Requirements for Graduate Medical Education in Neonatal-Perinatal Medicine

Effective: July 1, 2007

Introduction

Int.A. Scope of Training

- Int.A.1. Neonatal-perinatal medicine programs provide fellows with the background to understand the physiology and altered structure and function of the fetus and the neonate, and to diagnose and manage problems of the neonate.
- Int.A.2. The program must emphasize the fundamentals of clinical diagnosis and management of problems seen in the continuum of development from the prenatal through the intrapartum and neonatal periods, including assessment of outcomes.

VIII. Institutions

An accredited program in neonatal-perinatal medicine must be affiliated with a residency program in obstetrics and gynecology accredited by the Accreditation Council for Graduate Medical Education (ACGME). The obstetrics and gynecology program must be within the same geographic location and have board-certified maternal-fetal medicine specialists.

IX. Program Personnel and Resources

IX.A. Faculty

- IX.A.1. An accredited program must have at least four full-time neonatologists actively contributing sufficient time and effort to the educational program to fulfill the supervisory, teaching, and mentoring requirements of the program.
- IX.A.2. The program must include the full range of pediatric subspecialists necessary for teaching and consultation. In addition, appropriate consultants must be available in related disciplines, including: a pediatric neurologist, a geneticist, a consultant skilled in neurodevelopment, and a pediatric radiologist.
- IX.A.3. Each program must have a full range of surgical subspecialists with experience in pediatrics necessary for teaching and consultation, including consultant faculty in: pediatric surgery, neurosurgery, ophthalmology, orthopaedic surgery, otolaryngology, urology, and cardiothoracic surgery.

IX.B. Other Program Personnel

The following professional staff, skilled in the care of critically ill and/or premature neonates, are essential: nurses, respiratory therapists, pharmacists, nutritionists

skilled in the management of both enteral and parenteral nutrition, therapists skilled in evaluating feeding difficulties initially or in follow up, medical social workers skilled in management of families in crisis and end-of-life care, specialists in physical and occupational therapy applied in a developmentally appropriate way, and specialists in the assessment of hearing.

IX.C. Resources

IX.C.1. A specially-designated neonatal intensive care unit (NICU) must be located in the primary teaching site. Facilities and equipment in that unit must meet the generally-accepted standards of modern intensive care units, and appropriate laboratory services must be available 24 hours a day. The facilities and resources must include: portable x-ray, ultrasound imaging, ECG, neonatal echocardiography, and EEG services on a 24 hour a day basis with 24 hour a day interpretation services.

IX.C.2. The perinatal service must have facilities and equipment which meet the generally-accepted standards for high-risk newborn resuscitation.

IX.C.3. The primary teaching site must meet the generally-accepted standards for modern laboratories and services needed for management of high-risk pregnancies and critically ill neonates. These must include:

IX.C.3.a) microchemistry and hematology laboratories;

IX.C.3.b) blood gas analysis;

IX.C.3.c) perinatal diagnostic laboratory;

IX.C.3.d) pathology services, including those for evaluation of placental pathology;

IX.C.3.e) diagnostic bacteriology and virology laboratories;

IX.C.3.f) blood bank; and,

IX.C.3.g) accessible CT and MRI facilities.

IX.C.4. The teaching sites should also have access to the following within a reasonable period of time:

IX.C.4.a) screening laboratory for inborn errors of metabolism;

IX.C.4.b) clinical toxicology laboratory;

IX.C.4.c) nuclear medicine facilities;

IX.C.4.d) cytogenetics laboratory; and,

IX.C.4.e) audiology services.

- IX.C.5. The program must provide the patient care experiences necessary for the fellows to acquire skill in delivery room stabilization and resuscitation of critically ill neonates. To accomplish this, there must be a sufficient number and variety of high-risk obstetrical patients to ensure that the fellows become knowledgeable in identifying high-risk pregnancies and evaluating fetal well-being and maturation.
- IX.C.6. A sufficient number of discharged infants must be available in a NICU Follow-up Clinic to assure appropriate outpatient experience for each fellow. The clinic must have staff with expertise in performing developmental assessments, as well as skilled neonatal or pediatric faculty as teachers. These experiences should enable fellows to understand the relationship between neonatal illnesses and later health and development, and to become aware of the socioeconomic impact and psychosocial stress that such infants may place on a family.

X. Educational Program

X.A. Patient Care

- X.A.1. Fellows in neonatal-perinatal medicine must be directly involved in the care of critically ill surgical patients in order to acquire the requisite specialty-specific knowledge and skills to attain competence in the evaluation, diagnosis and pre/post operative management of such patients. To meet these goals, the coordination of care and collegial relationships between pediatric surgeons, neonatologists, and critical care intensivists concerning the management of medical problems in these complex critically ill patients are essential.
- X.A.2. Fellows must have experience and instruction adequate for them to manage critically ill neonates. In addition to the general principles of critical care, this should include, but not be limited to, techniques of neonatal resuscitation, venous and arterial access, evacuation of air leaks, endotracheal intubation, preparation for transport, ventilatory support, continuous monitoring, temperature control, and nutritional support.
- X.A.3. Fellows must have instruction in the psychosocial implications of disorders of the fetus, neonate, and young infant, as well as in the family dynamics surrounding the birth and care of a sick neonate. The fellows should have experience in patient consultation, communication with referring physicians, and in organizing transport of neonates within the framework of an integrated regional system with different levels of perinatal care. They should also receive instruction about and participate in the education of physicians and other healthcare professionals regarding emerging issues and factors impacting regional perinatal morbidity and mortality.
- X.A.4. Fellows must learn to identify the high-risk pregnancy, and must become familiar with the methods used to evaluate fetal well-being and maturation. Fellows must become familiar with factors that may

compromise the fetus during the intrapartum period, and recognize the signs of fetal distress. In addition, fellows must participate in the follow-up of high-risk neonates.

X.A.5. Programs must teach fellows to be effective consultants in neonatal-perinatal medicine. All fellows must receive instruction that prepares them to conduct and interpret relevant scholarly efforts in neonatal-perinatal medicine, to teach neonatal-perinatal medicine effectively, and to be effective administrators and leaders in the field.

X.A.6. To become skilled in diagnosis and management, fellows must be exposed to critically ill neonates with diverse medical and surgical conditions. Fellows must participate in the care of a sufficient number of neonates who require ventilatory assistance in order to become skilled in their management; fellows should also participate in the care of neonates requiring major surgery. In addition, fellows must acquire knowledge of, and participate in, the care of neonates requiring cardiac surgical procedures (and their postoperative complications).

X.A.7. A neonatal database of all patient admissions, diagnoses, and outcomes must be used for fellow education. Programs should provide fellows with knowledge about the tabulation and evaluation of an institutional database. Exposure to a regional or national fetal and neonatal morbidity and mortality database is encouraged. There should also be instruction and experience in techniques of collation and critical interpretation of data pertaining to immediate outcome and sequelae of various diseases, for which the presence of a statistician is suggested. This experience should be closely related to the evaluations of various modalities of therapy used in these disorders.

X.B. Medical Knowledge

X.B.1. The program must provide fellows with instruction in related basic sciences. Seminars, conferences, and courses must be offered in the basic disciplines related to pregnancy, the fetus, and the neonate. This should include maternal physiological, biochemical, and pharmacological influences on the fetus; fetal physiology; fetal development; placental function (placental circulation, gas exchange, growth); physiological and biochemical adaptation to birth; cellular, molecular, and developmental biology and pathology relevant to diseases of the neonate; psychology of pregnancy and maternal-infant interaction; breast feeding and lactation; growth and nutrition; and genetics.

X.B.2. Fellows should also participate in regularly-scheduled multidisciplinary conferences, such as case conferences and those that review perinatal mortality and morbidity.

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