

**NEONATAL-PERINATAL MEDICINE
SUBSPECIALTY TRAINING PROGRAM
THE UNIVERSITY OF TENNESSEE**

GOALS AND OBJECTIVES

Neonatology Faculty Supervisors:

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Ramasubbareddy Dhanireddy, M.D.
Sheldon B. Korones Professor of Pediatrics
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Professor of Pediatrics and
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Professor of Pediatrics, Obstetrics and Gynecology
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Associate Professor of Pediatrics
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General Description:

The Neonatal-Perinatal Medicine subspecialty program is a 3-year program that provides training in neonatal clinical care, teaching, research and administration. Upon completion, the trainee will have acquired the knowledge and clinical skills to manage most neonatal clinical conditions and understand the principles and practice of evidenced-based neonatology. The trainee will also acquire the skills to teach others involved in neonatal care as well as knowledge/skills fundamental to the initiation and completion of a 'scholarly work product' as defined by the American Board of Pediatrics.

Goals and Objectives: To be accomplished by the end of the 3-year training period:

1. Clinical Care

- Demonstrate an in-depth understanding of fetal-neonatal physiology and patho-physiology of common neonatal disorders.

**Neonatal-Perinatal Medicine
Subspecialty Training Program
The University of Tennessee
Page 2**

- Achieve clinical competency in the diagnosis and management of neonatal disorders, emergent, acute and chronic.
- Achieve proficiency in performance of procedures for monitoring, diagnostic and/or therapeutic intervention.
- Identify the effects of high-risk pregnancy disorders and their management on fetal development and neonatal outcome.
- Provide obstetric consultation for the ‘normal’ and high-risk pregnancy, inasmuch as fetal-maternal intervention may affect outcome.
- Demonstrate competency in stabilization of neonates in the delivery room, stabilization for transport and/or care during transport.
- Provide consultation to general pediatricians and other primary care providers in the management of the sick newborn infant.
- Identify the short-term and long-term outcomes of low-birth-weight infants, premature infants and high-risk neonates and the screening or identification of those who demonstrate developmental delay, neurologic problems, neuro-sensory deficits, language disorders and mental retardation.
- Understand the basics of evidenced-based practice; i.e., searching the literature, critical literature review and implementing evidence-based findings.

2. Teaching

- Demonstrate an understanding of the principles of adult learning.
- Demonstrate the skills to participate in curriculum development, delivery of information, provision of feedback to learners and assessment of educational outcomes.
- Demonstrate the skills to teach individuals or groups in different settings; i.e., bedside, classroom, lectures, seminars, etc. using different modalities of teaching.

3. Research

- Demonstrate a basis understanding of: biostatistics, research methodology, study design, preparation of application for funding and/or approval of clinical or research protocols, and ethical principles of clinical research.
- Demonstrate skills relating to critical literature review analyses, assimilation of new information, formulation of concepts, generation of testable hypotheses, etc.
- Develop and present a proposed ‘work product’, as defined by the American Board of Pediatrics, to a Scholarship Oversight Committee (SOC), that demonstrates skills outlined above. Upon approval, initiate, complete, write up and present the finding(s) of the ‘work product’ to the SOC to be followed by a ‘written’ report for approval.

**Neonatal-Perinatal Medicine
Subspecialty Training Program
The University of Tennessee
Page 3**

To achieve these goals, the training program is structured so that the resident rotates through the clinical service at Newborn Center at The Med and LeBonheur Children's Hospital, the neonatal follow-up program at The Med, is assigned transport calls and night calls at the Newborn Center, attends teaching sessions 3-4 times/week and attends various workshops and national meetings, presents at teaching sessions, attends structured teaching sessions at the University of Tennessee Health Science Center as well as UT library and is directly supported/mentored while undertaking a scholarly work product.

**NEONATAL-PERINATAL MEDICINE FELLOWSHIP PROGRAM:
PEDIATRIC CARDIOLOGY ROTATION**

Supervisor: Thomas K. Chin, M.D.

Duration: One Month

Objectives:

1. Subspecialty residents will identify the differences in fetal, transitional and newborn cardiac physiology.
2. Subspecialty residents will demonstrate ability to diagnose and manage neonates with acyanotic and cyanotic congenital heart disease.
3. Subspecialty residents will be able to interpret ECG's and Echocardiograms, and interpret chest roentgenograms and cineangiograms in patients with cardiac disease.
4. Subspecialty residents will discuss management of pre- and post-op neonates undergoing surgery for congenital heart disease.

Responsibilities during the Cardiology rotation will include the following:

1. Neonatal-Perinatal Medicine didactic and Morbidity/Mortality conferences
2. Weekly Cardiology/CT surgery pre-op conference
3. Weekly Pediatric Grand Rounds
4. Routine neonatology night-call and Follow-up Clinic responsibilities
5. "Ears-on" programmed software for heart murmurs associated with congenital heart disease
6. "Introduction to Pediatric Echocardiograms" video (RG Williams, through ACC)

**NEONATAL-PERINATAL MEDICINE TRAINING PROGRAM
MATERNAL-FETAL MEDICINE ROTATION**

Supervisor: Norman Meyer, M.D.

Duration: One Month

Objectives:

1. To review prenatal assessment of mothers identified to have a high-risk pregnancy.
2. To summarize the assessments, management and complications associated with various conditions during pregnancy.
3. To identify various procedures of determining fetal status during the antepartum and intrapartum period.
4. To review the intrapartum recognition, surveillance and management of the high-risk fetus (e.g., in fetal distress) and how these relate to the neonatal condition at delivery.

How objectives are achieved:

1. One-month rotation with Maternal-Fetal Medicine Division.
2. Observations with Maternal-Fetal faculty in the prenatal clinics, antepartum assessment area, and delivery rooms.
3. Clinic/bedside discussions related to patients seen in the clinics and delivery room.
4. Independent reading; materials as suggested by faculty attending.

Evaluation of rotation, faculty, and residents at the end of rotation.

Other expected responsibilities:

1. Attend Maternal-Fetal Medicine lectures.
2. Attend all required lectures.
3. Attend multi-disciplinary conferences.
4. Other OB conferences as assigned by OB faculty.
5. Night calls in the Newborn Center.
6. Assigned clinic rotation.

**NEONATAL-PERINATAL TRAINING PROGRAM
SURGICAL ROTATION: LEBONHEUR CHILDREN'S MEDICAL CENTER
NEONATAL INTENSIVE CARE UNIT**

Supervisor: Marilyn B. Robinson, M.D.

Duration: Two Months

Objectives:

1. To recognize the immediate management of pre- and post-operative medical needs of infants requiring surgery. This objective will be easily met by the fellow's involvement with medical management of the infants in the NICU or PICU. Examples of neonatal cases will include but not be limited to necrotizing enterocolitis, congenital abdominal/GI malformations, tracheo-esophageal fistula, diaphragmatic hernia, neonatal ECMO and infants with congenital heart disease.
2. To review the complications and their management and complications as may be encountered during post-operative care of these infants.
3. To observe surgical procedures and summarize the principles of anesthetic management in relation to respiratory care, fluid/electrolyte balance and cardiovascular support during surgery.

Other expected responsibilities:

1. Attend Neonatal-Perinatal Medicine Lectures: Tuesdays at 12:00 noon.
2. Assigned NICU night calls.
3. Assigned Follow-up Clinic days (2 per month).
4. Surgical conferences, as assigned by Dr. Robinson.

Reading assignments: As suggested by Dr. Robinson, the PICU and/or the surgical teams.

**NEONATAL-PERINATAL MEDICINE TRAINING PROGRAM
PEDIATRIC SURGERY ELECTIVE ROTATION**

Individuals Responsible for the Teaching, Supervision, and Evaluation of Neonatology Fellows rotating through Pediatric Surgery

Max R. Langham, Jr., M.D.
Professor of Surgery and Pediatrics, University of Tennessee
Director, Pediatric Surgery Residency Program

Martin L. Blakely, M.D.
Professor of Surgery and Pediatrics, University of Tennessee
Director, Pediatric Surgery Residency Program

Douglas Hixson, M.D.
Clinical Assistant Professor of Surgery, University

Trey Eubanks, M.D.
Clinical Assistant Professor of Surgery, University of Tennessee

Educational Rationale and Consent: The Division of Pediatric Surgery, University of Tennessee Health Science Center has agreed to allow Neonatology Fellows in the UT GME Program to participate in the care of patients on the Surgery Service at LeBonheur Children's Medical Center, and the Newborn Center at The Med under the supervision of on-site faculty of the University of Tennessee, Department of Surgery, Division of Pediatric Surgery. The assignment of residents to this rotation will be consistent with the ACGME curricular requirements for residency training in Neonatology. Residents will receive training in general Pediatric Surgery practice including the pre-operative and post-operative management of neonates requiring surgery. This will include the direct involvement of the neonatal fellows in the management of neonates in the LeBonheur Children's Medical Center NICU, the Special Care Nursery, and consultation and management of neonates at The Med's NICU. Examples of neonatal cases will include but not be limited to necrotizing enterocolitis, congenital diaphragmatic hernia, tracheo-esophageal fistula, abdominal wall defects, congenital malformations of the GI tract, inguinal hernias, and neonatal ECMO. Didactic assignments, and participation in discussion of complications, their management and prevention will be required. Adequate time for observation of surgical procedures, and anesthetic management will be provided. Fluid/electrolyte therapy and resuscitation will be emphasized during the rotation.

Duration: Rotations will be 1 month in length and can be scheduled at any time with advanced notice.

Policies and Procedures Governing Resident Education: The University of Tennessee directly pays the medical residents and provides benefits. Residents assigned to this rotation will follow all clinic rules and policies regarding the provision of care to patients seen at this site. Residents remain employees of the University of Tennessee and will be governed by University work rules and policies while at this site. Residents have liability protection under the Tennessee Claims Commission Act while rotating to

**Neonatal-Perinatal Medicine
Subspecialty Training Program
The University of Tennessee
Page 7**

Pediatric Surgery Elective Rotation (cont'd):

this site. Residents will be supervised by University of Tennessee faculty while assigned to this site in accordance with the residency program's supervisory policy. The program director, Max R. Langham, Jr., M.D. is ultimately responsible for the coordination and scheduling of all educational activities of the Pediatric Surgery Training Program at each participating site.

Other Key Resident Education Policies: Neonatology Fellows will be free to attend Neonatal-Perinatal Medicine lectures, to participate in assigned NICU night call, and Follow-up clinic. Call coverage for the Surgical Service will be coordinated to maximize educational benefit while complying with all ACGME regulations.