

## **Neonatal-Perinatal Medicine Rotation Description**

### **Neonatal Intensive Care Units**

#### **Description/Goals:**

Fellows in Neonatal-Perinatal Medicine will rotate through the Neonatal Intensive Care Units during their three years of training. During these rotations, the fellow will develop competency in the management of neonates with medical and surgical disorders requiring varying levels of intensive care. Such competency will range from the time of presentation through discharge and include commonly performed procedures in neonatal-perinatal medicine.

General goals of these rotations include the development of competency in the following areas:

1. The stabilization of neonates of various gestational ages upon presentation
2. The anticipation and recognition of neonatal effects of maternal disease processes and conditions
3. The assessment and diagnosis of the ill neonate
4. The management of neonates and infants with medical and surgical conditions that require varying levels of intensive care
5. The pre-discharge management of infants from the intensive care environment
6. The support of families of infants requiring intensive care
7. End of life management of patients requiring neonatal intensive care and the support of families throughout this process
8. The anticipation and recognition of complications prematurity and complications of intensive care
9. The prevention of complications of prematurity and complications of intensive care
10. The effective management of a team of providers and the integration of parents into decision making
11. Effective communication with members of a health care team in both emergent and non-emergent situations
12. The continuous assessment of team and self performance in critical patient care situations

#### **Supervision:**

The fellow will assume increasing responsibility over the course of NICU-Level III and Level II rotations, as outlined below. Supervision will be by an assigned attending. As the fellow's skills improve, greater independence will be encouraged, although there will always be an attending available to support the fellow on these rotations.

The objectives of these rotations will be met through the fellow's participation in rounds, through the management (under varying degrees of supervision) of neonates with medical and surgical disorders, and through the supervision of a team of health care providers in the intensive care nurseries.

### **Specific Objectives and Competencies Addressed:**

1. Competency 1: Patient Care - to provide family centered patient care that is developmentally and age appropriate, compassionate, and effective for the treatment of health problems AND Competency 2: Medical Knowledge - to demonstrate knowledge about established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, and the application of this knowledge to patient care.
  - a. First Year
    - i. Identify and describe antenatal conditions that impact the health and management of neonates
    - ii. Identify and describe common causes of deterioration in neonates
    - iii. Know anticipated potential outcomes, mortality and morbidity, of preterm delivery at various gestational ages and how fetal growth pattern and postnatal course influence those outcomes.
    - iv. Begin to develop the skills required to effectively and independently resuscitate patients in a neonatal intensive care environment
    - v. Under supervision, evaluate and manage common conditions in the care of the neonate, including those affecting: cardiopulmonary, dermatologic, GI, musculoskeletal, neurological and urogenital systems as well as conditions affecting metabolic state, neonatal nutritional state, perinatal social conditions and genetic conditions
    - vi. Demonstrate an understanding of indications for and complications of common diagnostic tests and studies used in neonatal-perinatal medicine
    - vii. Demonstrate an understanding of monitoring techniques available in the NICU and after discharge
    - viii. Under supervision, anticipate the home needs of families approaching the discharge of infants requiring neonatal intensive care
    - ix. Under direct supervision, anticipate and assess response to various modalities of respiratory support used in the NICU
    - x. Successfully complete ECMO and transport training
    - xi. Provide emotional, social, and culturally sensitive support to families of critically ill neonates while recognizing parental contributions to the health care team
    - xii. Identify methods by which current and emerging scientific evidence may be rapidly accessed and assessed as required for patient care
    - xiii. Develop procedural competency in those procedures commonly performed in the delivery room or the NICU
  - b. Second Year
    - i. Further develop skills learned during the previous rotations
    - ii. Identify and use resources to effectively diagnose and treat infants requiring specialized medical and surgical care, applying evidence to practice
    - iii. Participate in the diagnosis and treatment of infants requiring specialized care

- iv. Begin assuming supervisory responsibilities over a team of providers of neonatal intensive care
  - v. Use a logical and appropriate approach to the assessment and management of seriously ill neonates and their families.
  - vi. Provide emotional, social, and culturally sensitive support to families of critically ill neonates while successfully integrating the family into the medical team
  - vii. Under limited supervision, evaluate and manage common conditions in the care of the neonate, including those affecting: cardiopulmonary, dermatologic, GI, musculoskeletal, neurological and urogenital systems as well as conditions affecting metabolic state, neonatal nutritional state, perinatal social conditions and genetic conditions
  - viii. Under limited supervision, manage and assess response to various modalities of respiratory support used in the NICU
  - ix. Under limited supervision, anticipate and coordinate the home needs of families approaching the discharge of infants requiring neonatal intensive care
  - x. Continue to develop and demonstrate procedural competency in those procedures commonly performed in the delivery room or the NICU
- c. Third Year
- i. Manage and direct the resuscitation and stabilization of most high risk or unstable infants
  - ii. Effectively diagnose and manage common medical and surgical conditions requiring neonatal intensive care
  - iii. Effectively supervise and lead a team of providers in the NICU environment
  - iv. Effectively communicate information regarding diagnosis, therapy and prognosis to families of infants requiring intensive care
  - v. Effectively and compassionately describe the expected course of patients requiring neonatal intensive care to families
  - vi. Compassionately advise patients regarding the option for “comfort care” in specific neonatal situations
  - vii. Recognize the importance of and facilitate the role of parents as a member of the health care team
  - viii. Independently, with limited supervision, evaluate and manage common conditions in the care of the neonate, including those affecting: cardiopulmonary, dermatologic, GI, musculoskeletal, neurological and urogenital systems as well as conditions affecting metabolic state, neonatal nutritional state, perinatal social conditions and genetic conditions
  - ix. Independently, with limited supervision, anticipate and coordinate the home needs of families approaching the discharge of infants requiring neonatal intensive care
  - x. Independently, with limited supervision or with the availability of supervision, manage and assess response to various modalities of respiratory support used in the NICU
  - xi. Appropriately integrate basic scientific information and clinical evidence into the understanding of neonatal illnesses and the care of neonates in the intensive care environment

- xii. Demonstrate procedural competency in those procedures commonly performed in the delivery room or the NICU
- 2. Competency 3: Interpersonal and communication skills – to demonstrate interpersonal and communication skills that result in effective information exchange with families and professional associates.
  - a. First year
    - i. Identify common concerns of parents of infants requiring specialized (intensive and intermediate) care
    - ii. Demonstrate the skills needed to effectively direct the care of patients at referring institutions and in transport
    - iii. Demonstrate respect for all members of the health care team
    - iv. Effectively convey information between (2-way communications) between oneself and other members of the healthcare team.
    - v. Identify and comply with all regulations regarding the transfer of protected medical information, including the scope of federal regulations and their impact on coordination of care
    - vi. Begin to demonstrate teaching skills at the bedside and in didactic sessions
  - b. Second Year through Third Year
    - i. Effectively communicate care plans and orders to providers of neonatal care
    - ii. Effectively communicate with consulting services
    - iii. Effectively communicate recommendations regarding the post-discharge care of neonates to follow-up providers
    - iv. Effectively communicate information to referring physicians
    - v. Effectively transfer information to parents in person and by telephone
    - vi. Recognize the importance of parents as a member of the health care team and a resource to their infant and facilitate that role
    - vii. Demonstrate effective skills as an educator at the bedside and in didactic sessions
    - viii. Participate in reviews of performance after resuscitations and other episodes of emergent care through such activities as “debriefings”
  - c. Third Year
    - i. Effective lead a multidisciplinary team of health care providers and families in the care of critically ill neonates
    - ii. Effectively direct resuscitation and other emergent care through effective, 2-way communication with other members of the health care team
    - iii. Review team performance after resuscitations and other episodes of emergent care through such activities as “debriefings”
- 3. Competency 4: Practice Based Learning and Improvement – to be able to use scientific evidence and methods to investigate, evaluate, and improve patient care practices (all years)
  - a. Identify personal learning needs and develop a plan for the continued acquisition of knowledge and skills
  - b. Critically assess one’s own performance in the NICU setting as a member & leader of a health care team
  - c. Demonstrate mechanisms to appraise group performance after emergent situations, such as “debriefings”

- d. Demonstrate a commitment to the acquisition of knowledge related to neonatal-perinatal medicine
- e. Demonstrate the skills required to critically appraise and apply medical literature to patient care
- 4. Competency 5: Professionalism – to demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to diversity (all years)
  - a. Demonstrate a commitment to carrying out professional responsibilities, including attendance, punctuality, adherence to bylaws and regulations, and adherence to work-hour limitations.
  - b. Effectively communicate in a respectful and empathetic manner with families and health care providers from varying social, ethnic and religious backgrounds
  - c. Demonstrate a commitment to honest communication with families and health care providers
  - d. Accept responsibility for one's own decisions
  - e. Demonstrate a high standard of ethical behavior in the development of patient-physician relationships and relationships with other professionals
  - f. Demonstrate respect for patient privacy and autonomy and the inclusion of parents in decision making
- 5. Competency 6: Systems Based Practice – to practice high quality health care and advocate for patients in the health care system
  - a. First Year
    - i. Demonstrate an understanding of the indications for diagnostic testing
    - ii. Demonstrate an understanding of the indications for commonly used procedures and therapies in the NICU environment
  - b. All years
    - i. Identify key aspects of health care systems and cost control
    - ii. Identify mechanisms of payment in the hospital setting
  - c. Second – Third Years
    - i. Participate in process improvement programs within the NICU
    - ii. Identify potential areas of improvement in NICU care
    - iii. Demonstrate effective coordination of care with continuum of care managers and others to provide high quality, cost effective care to neonates

**Medical Director:**

W. Michael Southgate, M.D.

**Evaluation:**

Evaluations will be managed through e-Value. Specific evaluation tools will include: 1) evaluation of fellow by attendings, 2) peer evaluations, 3) self evaluation, 4) family evaluation of fellows, 5) completion of NRP instructor's training, and 6) completion of ECMO training