



PGY-1

NICU Curriculum

NGMC- Family Medicine Residency Program
Gainesville, Ga

Description of Rotation:

This is a four-week block in the Neonatal Intensive Care Unit with direct supervision by neonatologists. Supplemental longitudinal learning in the FMP supervised by Family Physician Faculty is also expected. Learning will take place in NICU as well as high-risk deliveries.

Overall Goals of NICU Rotation:

Residents will learn to provide evidence-based, compassionate, comprehensive care for neonates. They will complete Neonatal Resuscitation Program. Residents will be able to assist in diagnosis and treatment plans for neonates with complex and critical issues in newborns and premature newborns. Residents will attend high risk deliveries, deliver care to complex and critically ill newborns, and help transition of care to tertiary centers or newborn nursery when applicable.

Patient Care Objectives and Competencies

Residents must demonstrate:

1. Perform an initial assessment and evaluation of a newborn infant and determine the need for resuscitation. (PC-1)
2. Demonstrate competence in neonatal resuscitation and related skills (PC-1)
3. Formulate assessments and plans for patients (PC-1, PC-4, PC-5)
4. Accompany the neonatal transport team when appropriate and time permits
5. Evaluate laboratory test results and correlate them to disease pathophysiology (PC-1)
6. Under direct supervision perform/assist with the following procedures relevant to the care of neonates in the intensive care unit: (PC-1)
 - Bag-Mask Resuscitations
 - PIV Insertions
 - Arterial punctures
 - Umbilical catheters
 - Intubation attempts
 - Lumbar punctures
 - Transport of neonates
 - Tube thoracostomy
7. Evaluations of neonates including the calculation of APGAR scores (PC-1)
8. Communication skills to address risk factors and healthcare of neonate to family and caregivers (PC-4)

Medical Knowledge Objectives and Competencies

Residents must demonstrate:

1. Knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to the care of premature infants and former premature infants with chronic



medical problems (MK-2)

2. Successful completion of Neonatal Resuscitation Program (MK-1)
3. Ability to identify and understand the impact of prenatal and perinatal risk factors (MK-2)
4. Understanding effects of labor and delivery on the infant (MK-2)
5. Understand physiologic adaptations to extrauterine life (MK-1)
6. Perform gestational age assessment (Ballard Score) (MK-1)
7. Ability to apply knowledge based on: (MK-1)
 - Metabolic screening
 - Critical congenital heart defect screen
 - Newborn hearing screen
8. Develop knowledge and skills of neonatal resuscitation and participate in neonatal resuscitation and management including the following: (MK-2)
 - Positioning and tactile stimulation
 - Thermal regulation
 - Airway management (suctioning, endotracheal intubation, gastric tube insertion)
 - Ventilation with a bag valve mask device and/or anesthesia bag
 - Establish vascular access including UVC line placement
 - External chest compressions
9. Develop the knowledge of the following relevant to the care of neonates: (MK-2)
 - Stabilization of critically ill neonates
 - Performance of procedures on neonates.
 - Neonatology ethics
10. Integrate the basic principles of precise fluid, electrolyte, and nutrition management into patient care (MK-1)
11. Diagnostic ability and role-appropriate management of (MK-1, MK-2)
 - Meconium-stained amniotic fluid
 - Perinatal asphyxia
 - Respiratory distress
 - Cyanosis
 - Apnea
 - Bradycardia
 - Seizures
 - Hypoglycemia
 - Possible sepsis
 - Developmental dysplasia of the hip



- Birth-related injuries
- Neonatal abstinence syndrome (in utero drug exposure)
- Anemia
- Rh factor and blood type incompatibility
- Polycythemia
- Jaundice
- Premature and post-date gestations
- Congenital and neonatal infections
- Maternal factors: infection (e.g., HIV, Hepatitis); medical conditions (e.g., diabetes, hypertension)

Topics to cover in rotation/Suggested Reading:

MK Topic	On-Line Resource
Outpatient Care of the Premature Infant	https://www.aafp.org/afp/2007/1015/p1159.pdf
Universal Newborn Hearing Screen	https://www.aafp.org/afp/2007/0501/p1349.pdf
Heart Murmurs	https://www.aafp.org/afp/2011/1001/p793.pdf
Neonatal Fever	http://www.emedicine.com/ped/topic2698.htm
Hip Dysplasia	https://www.aafp.org/afp/2006/1015/p1310.pdf
Neonatal Resuscitation	https://www.aafp.org/afp/2011/0415/p911.html
Common Issues in Sick Neonates	https://www.aafp.org/afp/2002/1101/p1685.pdf
Respiratory Distress	https://www.aafp.org/afp/2015/1201/p994.html
Neonatal Hyperbilirubinemia	https://www.aafp.org/dam/AAFP/documents/journals/afp/registration/hyperbilirubinemia.pdf

Interpersonal and Communication Skills Objectives and Competencies

- Communicate effectively with families while in the presence of their daily preceptor. (C-2)
- Educate families about community resources and common disorders/diseases found in neonates
- Provide families psychosocial support and counseling as indicated (C-3)
- Convey information in a clear and concise manner to patients, families, and other health professionals (i.e., use appropriate vocabulary choice, realistic outcomes, and working with difficult patients and family) (C-1, C-2, C3)

Practice Based Learning and Improvement Objectives and Competencies:

- Develop tools to help meet the needs of patients and families. (PBLI-1)
- Recognize own level of competence in handling neonatal problems and the need for further consultation as appropriate. (PBLI-2)
- Facilitate learning of medical students, residents and other health care professionals to encourage quality



improvement in patient care (PBLI-3)

Professionalism Objectives and Competencies:

- Provide compassionate and high-quality care to all patients regardless of gender, age, culture, race, religion, disabilities, sexual orientation or socioeconomic class (PROF-1, PROF-2)
- Behave in a professional manner when interacting with patients or other health care providers (i.e., integrity, respect, accountability, punctual) (PROF-1, PROF-2)

Systems Based Practice Objectives and Competencies

- Incorporate considerations of cost awareness and risk benefit analysis in patient care (SBP-1)
- Advocate for quality patient care and optimal patient care systems (SBP-3)
- Describe the role of various ancillary modalities of patient care that are available including physical therapy, occupational therapy, respiratory therapy, nutrition services and social services (SBP-4)
- Develop an understanding of coding and billing relevant to neonatal intensive care
- Utilize community resources that are available to assist physicians in their care of neonates. (SBP-4)