

**SPECIALIZED CLINICAL SERVICES****NEWBORN CARE AND DELIVERY ROOM MANAGEMENT****INTRODUCTION**

Pediatric hospitalists are often asked to support delivery and newborn services. For those who provide these services, the components vary and may include any combination of normal newborn examination and discharge, emergency delivery care, level II neonatal intensive care stabilization, level II neonatal care, or neonatal intensive care transport services. Rendering this care requires medical and procedural skills, as well as leadership and team skills while working with obstetricians, nurses, nurse midwives, advanced practice nurses, primary care providers, neonatologists, and families. Pediatric hospitalists are well positioned to provide care for the immediate newborn and assure effective transition of care at transport or discharge home.

**KNOWLEDGE**

*Pediatric hospitalists should be able to:*

- Describe the role of each team member commonly involved in newborn care, including the obstetrician, prenatal ultrasonographers/radiologists, primary care providers, nurses, lactation consultants, and others.
- Review the basic physiologic differences between the preterm and term infant, attending to cardiopulmonary needs, respiratory control, feeding issues, and other elements.
- Discuss the impact of maternal factors on the fetus and newborn, including abnormal pre-natal labs, maternal diabetes, thyroid disorders, and prescription, non-prescription and illicit drug use.
- Define nursery care levels and give an example of infants should be cared for at each level.
- Describe the normal delivery process and the physiologic transitions of a newborn infant.
- Describe the skills needed to be an effective resuscitation team leader, including critical thinking, evidence-based decision-making, and use of continuous quality improvement principles.
- Describe the benefits of breast milk, formulas and supplements (Vitamin D, Iron) in infant nutrition for term and preterm infants.
- Review the components of newborn screening, and state which tests are performed locally.
- Discuss factors influencing bilirubin levels and summarize current guidelines for treatment of jaundice.
- Review guidelines for common neonatal care such as immunizations, Vitamin K, eye prophylaxis, hearing screening, car seat trials and electrolyte and bilirubin screening.
- Discuss the role of maternal group B streptococcal screen, and presence or absence of chorioamnionitis in the management of the newborn.
- Describe the diagnostic and therapeutic approach toward newborns with common dysmorphisms, including features associated with trisomies, ear pits, cleft-lip/palate, supranummary digits, and clubfoot.
- Describe the approach toward the diagnosis and treatment of common infections and toxic exposures of newborns.
- Describe the pathophysiology of persistent fetal circulation/pulmonary hypertension.
- Describe stabilization techniques and list the differential diagnoses for newborns with seizures.
- Review the role of pre-natal ultrasounds and describe appropriate post-birth follow-up of common findings, such as umbilical cord anomalies, renal abnormalities and heart lesions.
- List the clinical indications for an acute metabolic or endocrine work-up in newborns.
- Compare and contrast the characteristics of benign versus pathologic cardiac murmurs, and describe the role of oxygen saturation testing.
- Discuss the appropriate interventions for a cardiac murmur, including indications for and timing of cardiology consultation
- Describe the elements of a safe discharge, attending to timing and follow-up plans.

**SKILLS**

*Pediatric hospitalists should be able to:*

- Maintain Neonatal Resuscitation Program (NRP) certification.
- Provide care that incorporates current best practices for oxygen at delivery, infant warming, and treatment of asphyxia.
- Correctly order and manage enteral and parenteral nutrition for neonates.

- Perform a comprehensive exam and document normal and abnormal variants, including complications of delivery.
- Initiate an NRP-based infant resuscitation, effectively leading the team in the resuscitation of an extremely premature to term infant.
- Provide leadership for a normal newborn or level II nursery in partnership with neonatologists and other subspecialists as indicated.
- Identify infants with respiratory and cardiac problems and appropriately initiate cardiorespiratory support.
- Accurately perform procedures such as lumbar puncture, placement of enteral tubes, umbilical catheters, venous access, intraosseous placement, exchange transfusion and needle thoracotomy or chest tube placement.
- Correctly identify newborns requiring subspecialty consultation and counseling such as those with ambiguous genitalia, dysmorphisms, and others and effectively coordinate the referral and subsequent care as indicated.
- Recognize and provide initial care for newborns with surgical emergencies, such as infants with gastrointestinal obstruction, diaphragmatic hernia, and others.

## ATTITUDES

*Pediatric hospitalists should be able to:*

- Demonstrate a consistent level of commitment, responsibility, and accountability in rendering patient care for newborns
- Role model professional behavior, demonstrating compassion for women and families during the delivery process, when discussing care options, and consultation or referral need, as indicated.
- Communicate effectively with patients, the family/caregiver and healthcare providers regarding findings and care plans including post-discharge needs.
- Recognize and respect decisions of the family/caregiver regarding care of extremely premature infants or infants with anomalies.

## SYSTEMS ORGANIZATION AND IMPROVEMENT

*In order to improve efficiency and quality in their organizations, pediatric hospitalists should:*

- Lead, coordinate or participate in the development and implementation of cost-effective, evidence-based care pathways to standardize the evaluation, management and discharge process for newborns.
- Work with hospital administration, hospital staff, subspecialists, and other services/consultants to provide appropriate newborn resuscitation services.
- Collaborate with hospital administration and community partners to develop and sustain referral networks between local facilities and tertiary referral centers for newborns requiring tertiary care.