

<b>Stony Brook Pediatric Residency Program</b> <b>Newborn Nursery</b> <b>Goals and Objectives</b>	
<b>Primary Goals for this Rotation</b>	<b>Competencies</b>
<b>GOAL I: Early post-delivery management in a Level I Nursery</b>	
1. Pass a course in neonatal life support (e.g., AAP/AHA Neonatal Resuscitation Program).	K, PC
2. Demonstrate the immediate management of infants born to mothers with abnormal prenatal screening tests (antibody screening; rubella screening; HIV, HSV, syphilis, gonorrhea, hepatitis B, Group B Strep, tuberculosis and chlamydia testing).	K, PC
3. Describe the rationale and use of eye prophylaxis, vitamin K1 administration, and hepatitis B vaccine and HBIG.	K, PC
4. Discuss immediate breastfeeding and early bonding between baby and family and describe how hospital routines can facilitate or impede these natural processes.	K, PC, IPC, SBP
5. Describe how obstetricians and pediatricians can communicate and work together as a team to improve outcome at high-risk deliveries.	IPC, P, SBP
6. Describe the care and treatment of an infant following delivery that occurred unexpectedly at home or in transit to hospital.	K, PC
<b>GOAL II: Comprehensive Care in Level I Nursery. Provide comprehensive care in a level I nursery.</b>	
1. Explain the role of the primary care pediatrician in the level I nursery and how it relates to the continuum of office health supervision care.	PC, SBP
2. Effectively communicate with the mother's obstetrician during the hospital stay and her primary care provider prior to the infant's discharge.	PC, IPC
3. Describe normal physiologic changes in neonatal transition, signs of abnormal responses and strategies for their management.	K, PC
4. Describe the rationale behind various nursery and delivery routines and how these affect the health and well-being of families and newborns (e.g., rooming in, on-demand feeding, 24-hour discharge of the newborn, glucose water feeds).	K, PC
5. Function as a pediatric consultant to health professionals in the newborn nursery, obstetrical ward, and delivery room for routine, normal pregnancies, deliveries and newborn care.	K, IPC
6. Identify the role and scope of practice of general pediatricians, neonatologists, perinatologists, obstetricians, family physicians, nurse midwives, lactation consultants, primary care nurses for OB/Newborn, and social workers in relation to the normal nursery; and work collaboratively with these professionals in the care of newborns.	SBP
<b>GOAL III: Assessment, Screening and Prevention (Normal Newborns). Assess newborns, using history, physical exam and routine screening procedures, and provide preventive counseling and intervention as indicated.</b>	

<p>1. Obtain and interpret information relevant to newborn health including:</p> <ul style="list-style-type: none"> <li>a) Maternal medical, prenatal and obstetric history</li> <li>b) Family history</li> <li>c) Results of maternal screening tests (e.g., Rh), rubella, hepatitis B and C, serology for syphilis, HIV, tuberculosis, illicit drugs, blood type, group B streptococcus, herpes simplex virus, gonorrhea, and chlamydia</li> <li>d) Maternal medication use or substance use/abuse</li> <li>e) Results of prenatal ultrasound testing</li> </ul>	K, PC, IPC
<p>2. Obtain and interpret a social history to assess the physical and psychosocial environment in the infant's home.</p>	K, PC, IPC
<p>3. Understand and demonstrate appropriate timing for newborn exams and define the key reasons for doing the exams (e.g., determine state of transition, assess risks, identify abnormalities, and demonstrate normal findings and behaviors to parents).</p>	K, PC
<p>4. Perform a neonatal physical examination and identify normal and abnormal findings related to:</p> <ul style="list-style-type: none"> <li>a) Gestational age assessment and growth category (AGA, SGA, LGA)</li> <li>b) Vital signs and measurements</li> <li>c) General appearance and identification of anomalies</li> <li>d) HEENT (red reflex, intact palate, short frenulum, caput, cephalohematoma)</li> <li>e) Neck and clavicles</li> <li>f) Neurologic system (symmetry, tone, reflexes, suck, behavioral state, head size and shape, spine)</li> <li>g) Respiratory effort</li> <li>h) Skin</li> <li>i) Chest and breasts</li> <li>j) Heart</li> <li>k) Lungs</li> <li>l) Abdomen (including umbilical cord)</li> <li>m) Genitalia</li> <li>n) Femoral and brachial pulses</li> <li>o) Hips (Ortolani and Barlow maneuvers)</li> <li>p) Extremities</li> </ul>	K, PC
<p>5. Describe current standards for newborn screening, including:</p> <ul style="list-style-type: none"> <li>a) National (AAP) recommendations for universal newborn hearing screening</li> <li>b) State neonatal blood-screening program, including diseases screened for, timing, testing procedures and process for notification of abnormal results</li> <li>c) Current recommendations for maternal Group B Streptococcus screening and the evaluation of exposed neonates</li> <li>d) Appropriate use of other screening tests or protocols and their indications (e.g., blood type and Coombs, glucose, hematocrit)</li> </ul>	K, PC

e) Appropriate use of testing to identify prenatal exposure to substances of abuse	
6. Communicate effectively with parents and family in a professional and caring manner that honors family values and enhances their parenting skills and confidence.	PC, IPC
7. Provide anticipatory guidance and prevention counseling throughout hospital stay and at time of discharge, according to recommended guidelines (e.g., AAP, Bright Futures).	K, PC, IPC
<b>GOAL IV: Common Signs and Symptoms (Normal Newborns). Evaluate and appropriately treat or refer newborns with these commonly presenting signs and symptoms.</b>	
1. Recognize, describe clinical significance of, and develop a strategy to evaluate, manage and/or refer newborns with these common newborn signs and symptoms: <ul style="list-style-type: none"> <li>a) Large birth marks (mongolian spots, hemangiomas, port wine spots)</li> <li>b) Rashes and markings secondary to birth trauma</li> <li>c) Papular and pustular rashes (erythema toxicum, pustular melanosis, staph. Pustulosis, milia)</li> <li>d) Peripheral and central cyanosis</li> <li>e) High or low temperature</li> <li>f) Tachypnea</li> <li>g) Heart murmur-asymptomatic and symptomatic</li> <li>h) Abdominal distension and masses</li> <li>i) Two vessel umbilical cords</li> <li>j) Abnormal findings on the Barlow or Ortolani</li> <li>k) Swollen breasts</li> <li>l) Vaginal bleeding</li> <li>m) Subconjunctival hemorrhages</li> <li>n) Corneal opacities or absent red reflex</li> <li>o) Facial palsy</li> <li>p) Fractured clavicle</li> <li>q) Brachial plexus injury</li> <li>r) Cephalohematoma or caput</li> <li>s) Ear tags, pits</li> <li>t) Palate abnormalities (cleft, submucous cleft)</li> <li>u) Polydactyly</li> <li>v) Syndactyly</li> <li>w) Plethora</li> <li>x) Pallor</li> </ul>	K, PC, IPC

<ul style="list-style-type: none"> <li>y) Respiratory distress</li> <li>z) Abdominal mass</li> <li>aa) Genitourinary abnormalities (ambiguous genitalia, hypospadias, undescended testicle)</li> <li>bb) Microcephaly</li> <li>cc) Macrocephaly</li> <li>dd) Sacral dimple, pit, hair tuft</li> </ul>	
<p><b>GOAL V: Common Conditions (Normal Newborns) and Assessment. Evaluate and appropriately treat or refer newborns with these commonly presenting conditions.</b></p>	
<p>1. Recognize, describe clinical significance of, and develop a strategy to evaluate, manage and/or refer newborns with the following common newborn clinical situations:</p> <ul style="list-style-type: none"> <li>a) Large and/or small for gestational age babies</li> <li>b) Infant of a diabetic mother</li> <li>c) Infant of substance abusing mother</li> <li>d) Child with ABO/Rh incompatibility</li> <li>e) Polycythemia</li> <li>f) Premature/postmature infant</li> <li>g) Jitteriness</li> <li>h) Transient metabolic disturbances (hypoglycemia, etc.)</li> <li>i) Delayed urination</li> <li>j) Delayed stooling</li> <li>k) Vomiting feeds/bilious emesis</li> <li>l) Poor/delayed suck</li> <li>m) Respiratory distress with feedings</li> <li>n) Jaundice</li> <li>o) Infant with risk factor for DDH (girl breech, +family hx)</li> <li>p) Infant with abnormalities on prenatal ultrasound (pyelectasia, hydronephrosis, choroids plexus cyst)</li> <li>q) Dysmorphic infant or infant with known chromosomal abnormality (e.g., Trisomy 21)</li> <li>r) Multiple births (near and at term)</li> <li>s) Eye discharge</li> <li>t) Abnormal newborn hearing screen results</li> <li>u) Infant born to a mother with a significant medical condition (lupus, seizure disorder, obstetrical condition such as HELLP syndrome)</li> </ul>	<p>K, PC, IPC</p>

2. Use and/or interpret clinical tests commonly used in Newborn Nursery setting, such as:	
<ul style="list-style-type: none"> <li>a) Physiologic monitoring (HR, RR, pulse oximetry, blood gas, doppler BP measurement)</li> <li>b) CBC, ABO typing and Coombs testing, blood glucose/glucometer, bilirubin (serum and transcutaneous), maternal cord blood antibodies</li> <li>c) X-ray of chest, abdomen</li> <li>d) Ultra sound of kidneys/bladder, head, hips, lower spine</li> </ul>	K, PC
3. Be familiar with common assessment tools and studies used by obstetricians to assess normal pregnancies and infant well-being close to term and during the labor and delivery process.	K, PC
4. Discuss how common post-delivery obstetrical issues that mothers face and how they may affect the mother's recovery and ability to care for their newborn:	
<ul style="list-style-type: none"> <li>a) C-section delivery</li> <li>b) Tubal ligation</li> <li>c) Retention of placenta</li> <li>d) Post-partum hemorrhage</li> <li>e) Post-partum depression</li> <li>f) Post-partum infections</li> <li>g) Hypertension</li> </ul>	K, PC
5. Discuss care and communication issues for an infant being placed for adoption (including both birth and adoptive parents).	K, PC, IPC, SBP, P
<b>GOAL VI: Nutrition (Normal Newborns). Manage breast- and bottle-feeding in the newborn period.</b>	
1. Assess a newborn's nutritional status based on maternal medical and obstetrical history and infant's history (e.g., illness, feeding, stools, urination) and physical exam (e.g., weight expected for gestational age, subcutaneous fat, hydration, neurologic or oral/facial anomalies) and implement appropriate feeding plans.	K, PC
2. Counsel parents about feeding choices and assess for potential risks/difficulties.	K, PC, IPC
3. Encourage and support mothers who are breastfeeding.	K, PC, IPC
4. Counsel and support mothers who are formula feeding.	K, PC, IPC
5. Appreciate available resources to refer mothers (WIC and other resources for assistance with food purchase, nutrition education, and breastfeeding support equipment).	PC, IPC, SBP

6. Recognize and manage these conditions:	
<ul style="list-style-type: none"> <li>a) Common problems for breastfeeding infants and mothers</li> <li>b) Maternal use of medications that are transmitted via breast milk</li> <li>c) Maternal infections and risk of transmission (Hepatitis B, Hepatitis C, HIV)</li> <li>d) Preserving breastfeeding while managing jaundice</li> <li>e) Newborn who is a poor feeder</li> <li>f) Feeding plans for the SGA or premature infant</li> <li>g) Feeding plans for the infant of a diabetic mother</li> <li>h) Feeding plans for the infant with a cleft palate</li> <li>i) Feeding plans for neurologically depressed/abnormal newborn</li> </ul>	K, PC
<b>GOAL VII: Infections (Normal Newborns). Assess and manage common infections in the normal newborn nursery.</b>	
1. Identify common and important perinatal infections.	K
2. Discuss methods for screening and, where appropriate, preventive treatment of mother and infant (chlamydia, CMV, gonorrhea, group B strep, hepatitis B, hepatitis C, HSV, HIV, tuberculosis, HPV, parvovirus, rubella, syphilis, toxoplasmosis, and varicella).	K, PC
3. Identify newborns at risk for bacterial sepsis by history, physical exam, and laboratory studies.	K, PC
4. Practice the AAP/ACOG accepted policies for infection reduction in the newborn nursery.	K, PC
5. Describe why umbilical cord care is routinely performed and what methods are available.	K, PC
6. Counsel parents about recommendations on routine Hepatitis B vaccination, including risks, benefits, alternatives, and common side effects.	K, PC, IPC, P
<p>Recognize and manage:</p> <ul style="list-style-type: none"> <li>a) Newborn with signs of sepsis (e.g., fever, poor feeding, tachypnea, low temperature)</li> <li>b) Infant born to mother with fever</li> <li>c) Infant born to mother with a history of a perinatal infectious disease (e.g., group B strep, chlamydia, syphilis, HSV)</li> <li>d) Infant born to mother with prolonged rupture of membranes</li> <li>e) Infant born to mother who received antibiotic during delivery</li> </ul>	K, PC
<b>GOAL VIII: Jaundice. Recognize and manage jaundice in the newborn period.</b>	
1. Interpret maternal history for factors contributing to jaundice (Rh, blood type, gestational age, infection, family history of jaundice in infants, etc.).	K, PC
2. Interpret infant's history for possible etiologies of jaundice (e.g., infrequent or ineffective feeding, poor urine or stool output, acholic stool, blood type, risk factors for infection, metabolic disease).	K, PC
3. Perform a physical exam to assess for jaundice or other evidence of hepatic dysfunction (e.g., skin color, sclerae, bruising, cephalhematoma, organomegaly).	K, PC

4. Obtain laboratory tests judiciously for management of the jaundiced infant (blood type/Coombs, total, fractionated bili, Hct, peripheral blood smear).	K, PC, SBP
5. Correctly interpret test results to evaluate jaundice in the clinical setting.	K, PC
6. Counsel parents about types of jaundice (physiologic, insufficient breastfeeding, breast milk, hemolytic, etc.) and their natural history.	K, PC, IPC
7. Counsel parents about when to be concerned about jaundice (e.g., icterus beyond the face and chest, poor feeding, fever, irritability).	K, PC, IPC
8. Discuss the current AAP practice parameters regarding diagnosis and management of the jaundiced infant.	K, PC
9. Interpret the significance of a total serum bilirubin level in the context of early discharge of newborns, with reference to normative data based on age in hours.	K, PC
10. : Describe indications for phototherapy and exchange transfusions.	K, PC
11. Describe the use of phototherapy in both the hospital and the home and explain risks (e.g., dehydration, eye injury, and disruption of breastfeeding routines).	K, PC
12. Counsel parents about ways to improve jaundice at home (e.g. frequent feedings, exposure to sunlight, etc.).	K, PC, IPC
<b>GOAL IX: Late-Preterm Newborn. Recognize issues particular to the late-preterm newborn infant.</b>	
1. Understand and manage temperature instability, hypoglycemia, feeding difficulties, need for car seat testing	K, PC
<b>GOAL X: Anticipatory Guidance. Provide anticipatory counseling at nursery discharge that relates to newborn behavior, family adjustment, injury prevention, and access to medical services.</b>	
1. Discuss priorities for anticipatory counseling, especially in face of time constraints due to "early discharge."	K, PC
2. List resources that can be used to supplement counseling by the physician.	K, PC, IPC
3. Provide routine counseling on topics such as: <ul style="list-style-type: none"> <li>a) Routine follow-up appointment time (e.g., 3-5 days of age for early discharge and breastfeeding infants)</li> <li>b) How and when to contact the office for advice or earlier appointment</li> <li>c) For infants discharged early: warning signs of jaundice, infection, dehydration, and feeding problems; interaction with visiting nurse, need to do repeat newborn screening blood tests</li> <li>d) Needed medical, social, and WIC services</li> <li>e) Normal infant behaviors related to crying, sleep, and wakefulness and how to deal with common problems (hiccups, sneezes, vaginal bleeding, breast masses/discharge, care of umbilical cord, care of penis)</li> <li>f) Postpartum adjustment including the need for rest and support, and the potential for postpartum "blues" (e.g., depression, anxiety, feelings of inadequacy, fear, resentment)</li> <li>g) Uniqueness of each infant's temperament and how to identify and respond to this</li> <li>h) Potential for sibling rivalry and ways to handle this</li> </ul>	K, PC, IPC, SBP

<ul style="list-style-type: none"> <li>i) Injury prevention (e.g., car seat for discharge, crib safety, water temperature settings, smoke alarm, constant supervision of newborn with siblings or pets, sleep position, environmental exposures like cigarette smoke)</li> <li>j) Significance of increasing jaundice, feeding problems or fever in this age group and the rapidity with which medical care should be sought</li> </ul>	
4. Provide written discharge instructions, documentation of immunization (HBV) given, and results of hearing screen.	K, PC, IPC
<b>GOAL XI: Demonstrate high standards of professional competence while working with patients in the normal newborn nursery.</b>	
1. Provide sensitive support to patients and their families in the delivery room and level 1 and 2 newborn nurseries.	P, IPC
2. Demonstrate a commitment to acquiring the knowledge needed for the care of newborns in the delivery room and level 1 and 2 nurseries.	PBLI
3. Know and/or access medical information efficiently, evaluate it critically, and apply it to newborn care appropriately.	K, PBLI
4. Communicate and work effectively with staff, health professionals, specialists, referring and primary care providers to create and sustain information exchange and teamwork for patient care.	IPC, P
5. Maintain accurate, legible, timely, and legally appropriate medical records for newborns (summary of maternal record, labor and delivery note, admission note, daily progress notes, consultant notes and discharge summaries).	IPC
6. Demonstrate sensitivity to diversity.	P
<b>Procedures</b>	
<b>GOAL XII: Technical and therapeutic procedures.</b> Describe the following procedures, including how they work and when they should be used; competently perform those commonly used by the pediatrician in practice.	
Breast pump use	
Capillary blood collection/ Heelstick blood draw (PKU, hct)	
Conjunctival swab	
Suctioning: nares	
Suctioning: oral pharynx	



<b>GOAL XIII: Diagnostic and screening procedures.</b> Describe the following tests or procedures, including how they work and when they should be used; competently perform those commonly used by the pediatrician in practice.	
Hearing screening	
Monitoring interpretation: pulse oximetry	
Radiologic interpretation: chest X-ray, clavicle x-ray	

**KEY:**

**Core Competencies:** **K** - Medical Knowledge  
**PC** - Patient Care and Procedural Skills  
**IPC** - Interpersonal and Communication Skills  
**P** - Professionalism  
**PBLI** -Practice-Based Learning and Improvement  
**SBP** - Systems-Based Practice

**Performance Expectations by Level of Training**

		<b>Beginning</b>	<b>Developing</b>	<b>Accomplished</b>	<b>Competent</b>
		Description of identifiable performance characteristics reflecting a <b>beginning level</b> of performance.	Description of identifiable performance characteristics reflecting <b>development and movement toward mastery</b> of performance.	Description of identifiable performance characteristics reflecting <b>near mastery</b> of performance.	Description of identifiable performance characteristics reflecting the <b>highest level</b> of performance.
	Medical Knowledge	PL1	PL1, PL2	PL2, PL3	PL3
	Patient Care and Procedural Skills	PL1	PL1, PL2	PL2, PL3	PL3
	Interpersonal and Communication Skills	PL1	PL1, PL2	PL2, PL3	PL3
	Professionalism		PL1	PL2, PL3	PL3
	Practice-Based Learning and Improvement	PL1	PL1, PL2	PL2, PL3	PL3
	Practice-Based Learning and Improvement	PL1	PL1, PL2	PL2, PL3	PL3

Milestones assessed on this rotation are:

<b>Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth</b>				
<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
Participates in feedback sessions	Demonstrates openness to feedback and performance data	Seeks and incorporates feedback and performance data episodically	Seeks and incorporates feedback and performance data consistently	Role models and coaches others in seeking and incorporating feedback and performance data
Develops personal and professional goals, with assistance	Designs a learning plan based on established goals, feedback, and performance data, with assistance	Designs and implements a learning plan by analyzing and reflecting on the factors which contribute to gap(s) between performance expectations and actual performance	Adapts a learning plan using long-term professional goals, self-reflection, and performance data to measure its effectiveness	Demonstrates continuous self-reflection and coaching of others on reflective practice

<b>Professionalism 3: Accountability/Conscientiousness</b>				
<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
Performs tasks and responsibilities, with prompting	Performs tasks and responsibilities in a timely manner in routine situations	Performs tasks and responsibilities in a thorough and timely manner in complex or stressful situations	Coaches others to ensure tasks and responsibilities are completed in a thorough and timely manner in complex or stressful situations	Creates strategies to enhance others' ability to efficiently complete tasks and responsibilities