

**Competency Based Goals and Objectives: (online resources at eBooks: Neonatology/Gomella, Obstetrics/Williams, Nelson's/Oski's/Rudolph's**

**Goal 1: Understand antepartum factors that contribute to the need for pediatric attendance at deliveries, impact on neonatal health. (PGY1, 3)**

Resident Objectives:	Instructional Strategies	Evaluation	ACGME Competency Goals
1. Review maternal charts at attended deliveries	<ul style="list-style-type: none"> <li>• Clinical cases</li> <li>• Case conferences</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion with hospitalist at delivery</li> <li>• Medhub</li> </ul>	<p>MK – demonstrate an investigatory and analytic thinking approach to clinical situations.</p> <p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p> <p>PC - Gather essential and accurate information about their patients</p>
2. Describe how to act on abnormal maternal prenatal labs (RPR+, RNI, HepB+, HIV+, GC/CT+, HSV+)	<ul style="list-style-type: none"> <li>• Review Red Book entry on each entity</li> <li>• Clinical cases</li> <li>• Case conferences</li> </ul>	<ul style="list-style-type: none"> <li>• Medhub</li> <li>• Post-assessment</li> </ul>	<p>MK – demonstrate an investigatory and analytic thinking approach to clinical situations.</p> <p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p>
3. Generate a differential diagnosis of fetal and maternal factors that contribute to oligohydramnios and polyhydramnios	<ul style="list-style-type: none"> <li>• Read relevant excerpts from Williams <i>Obstetrics</i></li> <li>• Clinical cases</li> <li>• Case conferences</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion &amp; evaluation in Medhub</li> </ul>	<p>MK – demonstrate an investigatory and analytic thinking approach to clinical situations.</p> <p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p>
4. Explain treatment of PIH and impact of maternal magnesium sulfate therapy on infant	<ul style="list-style-type: none"> <li>• Williams <i>Obstetrics</i></li> <li>• Clinical cases</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion</li> <li>• Medhub</li> </ul>	<p>MK – demonstrate an investigatory and analytic thinking approach to clinical situations.</p> <p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p>
5. Understand the complications of multiple gestation pregnancy	<ul style="list-style-type: none"> <li>• Williams <i>Obstetrics</i></li> <li>• Clinical cases</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion</li> <li>• Medhub</li> </ul>	<p>MK – demonstrate an investigatory and analytic thinking approach to clinical situations.</p> <p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p>
6. Define indications for antenatal steroids	<ul style="list-style-type: none"> <li>• Clinical cases</li> <li>• Read ACOG Consensus statement 2009</li> </ul>		<p>MK – demonstrate an investigatory and analytic thinking approach to clinical situations.</p> <p>MK - Demonstrate sufficient knowledge of the basic and</p>

clinically supportive sciences appropriate to pediatrics

7. Identify different patterns of abnormal placentation (accretia, previa, marginal)

- Williams *Obstetrics*
- Clinical cases

MK – demonstrate an investigatory and analytic thinking approach to clinical situations.  
MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics

**GOAL 2: Understand intrapartum risk factors that may impact a newborn’s health.**

Resident Objectives:	Instructional Strategies	Evaluation	ACGME Competency Goals
1. Demonstrate knowledge of intrapartum risk factors for early-onset neonatal sepsis (GBS, PPROM, PROM, Chorio)	<ul style="list-style-type: none"> <li>• Clinical cases</li> <li>• Case conferences</li> <li>• Read CDC guidelines for intrapartum GBS prophylaxis and management of chorioamnionitis</li> <li>• NICU Guide, Sepsis chapter</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion</li> <li>• Medhub</li> </ul>	MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics
2. List all three major neonatal pathogens for early-onset sepsis and the appropriate antibiotic regimen.	<ul style="list-style-type: none"> <li>• Review Red Book Reading on each entity</li> <li>• Clinical cases</li> <li>• Case conferences</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow/Hospitalist discussion</li> <li>• Medhub</li> </ul>	MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics
3. Describe the newborn exam findings consistent with breech presentation and shoulder dystocia; provide appropriate follow-up tests.	<ul style="list-style-type: none"> <li>• Read the Practice Parameter for DDH in Infants</li> <li>• Clinical cases</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow/Hospitalist discussion</li> <li>• Medhub</li> </ul>	<p>MK – Demonstrate an investigatory and analytic thinking approach to clinical situations.</p> <p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p> <p>PC - Gather essential and accurate information about their patients</p> <p>PC - Perform complete and accurate physical examinations</p>
4. Differentiate caput secundum, cephalohematoma, and subgaleal hematoma, describing the anatomical differences between and implications of these findings.	<ul style="list-style-type: none"> <li>• Directed reading: Nelson’s or Zitelli’s.</li> <li>• Physical Exam findings with Hospitalists, Fellows and Attendings</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow/Hospitalist discussion</li> <li>• Medhub</li> </ul>	<p>MK – Demonstrate an investigatory and analytic thinking approach to clinical situations.</p> <p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p> <p>PC - Perform complete and accurate physical</p>

examinations

5. Review fetal heart tracings and distinguish early, late and variable decelerations.	<ul style="list-style-type: none"> <li>Directed readings Williams <i>Obstetrics</i></li> <li>Review tracings on delivery room patients</li> </ul>	<ul style="list-style-type: none"> <li>Attending/Fellow/Hospitalist discussion</li> <li>Medhub</li> </ul>	<p>MK – Demonstrate an investigatory and analytic thinking approach to clinical situations.</p> <p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p>
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**GOAL 3: Be competent in neonatal resuscitation techniques and understand indications for non-resuscitation.**

Resident Objectives:	Instructional Strategies	Evaluation	ACGME Competency Goals
1. Operate optimally in a team to resuscitate an infant.	<ul style="list-style-type: none"> <li>Review NRP manual</li> <li>Participate in CAPE training</li> <li>Attend newborn deliveries</li> </ul>	<ul style="list-style-type: none"> <li>Feedback during CAPE training</li> <li>Debrief delivery resuscitations with Hospitalist, Senior Resident, Fellow, NNP</li> <li>Reflect on own performance</li> </ul>	ICS - Work effectively with others as a member or leader of a health care team or other professional group
2. Recite the NRP algorithm for neonatal resuscitation, including indications for intubation and medications	<ul style="list-style-type: none"> <li>Review NRP manual</li> <li>Participate in CAPE training</li> <li>Lead CAPE resuscitations in multiple scenarios</li> </ul>	<ul style="list-style-type: none"> <li>Feedback during CAPE training</li> <li>Feedback from hospitalist, fellow, or NNP following delivery</li> </ul>	MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics
3. Know the delivery room management for infants born through meconium stained fluid.	<ul style="list-style-type: none"> <li>Review NRP manual</li> <li>Participate in CAPE training</li> <li>Attend newborn deliveries</li> </ul>	<ul style="list-style-type: none"> <li>Feedback during CAPE training</li> <li>Feedback from hospitalist, fellow, or NNP following delivery</li> </ul>	MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics
4. Evaluate the gestational age of an infant using physical exam findings.	<ul style="list-style-type: none"> <li>Review Ballard exam in Gomella's <i>Neonatology</i></li> <li>Perform Ballard Exam on all infants admitted</li> </ul>	<ul style="list-style-type: none"> <li>Feedback from hospitalist, fellow, or NNP following during admission H&amp;P</li> </ul>	<p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p> <p>PC - Perform complete and accurate physical examinations</p>
6. Describe the NRP indications and legal requirements for resuscitation and non-resuscitation of infants as well as discontinuation of resuscitative efforts.	<ul style="list-style-type: none"> <li>Review NRP Manual</li> <li>Read <i>Pediatrics</i> paper reviewing the Born Alive Infant Protection Act 2002</li> </ul>	<ul style="list-style-type: none"> <li>Feedback during CAPE training</li> <li>Feedback from hospitalist, fellow, or NNP following delivery or resuscitation in NICU</li> </ul>	<p>MK – Demonstrate an investigatory and analytic thinking approach to clinical situations.</p> <p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p>

**GOAL 4: Understand in-hospital morbidities and long term outcomes of infants born prematurely.**

Resident Objectives:	Instructional Strategies	Evaluation	ACGME Competency Goals
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1. Define respiratory distress syndrome, including clinical presentation and X-Ray findings, indications for surfactant therapy. Define BPD/chronic lung disease according to various definitions (VON, NICHD/NRN)	<ul style="list-style-type: none"> <li>• Clinical Cases</li> <li>• Radiology Rounds</li> <li>• Case conferences</li> <li>• NICU Guide for surfactant clinical protocol</li> <li>• Review NICU Guide BPD chapter</li> <li>• Review key articles (Walsh MC paper)</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion</li> <li>• Post assessment</li> </ul>	<p>MK – demonstrate an investigatory and analytic thinking approach to clinical situations.</p> <p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p> <p>PC - Perform complete and accurate physical examinations</p>
2. Categorize the various degrees of intraventricular hemorrhage and subsequent impact on neurodevelopmental outcomes.	<ul style="list-style-type: none"> <li>• Radiology Rounds</li> <li>• Clinical Cases</li> <li>• NICU Guide IVH chapter</li> <li>• Review the Papile article</li> <li>• Review the Laptook article</li> <li>• Review the Broitman article</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion</li> <li>• Post-assessment</li> </ul>	<p>MK – Demonstrate an investigatory and analytic thinking approach to clinical situations.</p> <p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p>
3. Know the indications and timing for ROP screenings.	<ul style="list-style-type: none"> <li>• Review <i>Pediatrics</i> article on ROP.</li> <li>• Clinical cases</li> <li>• NICU Guide ROP chapter</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion</li> </ul>	<p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p>
4. Recognize the clinical symptoms of a patent ductus arteriosus, the diagnostic evaluation, and indications for medical and surgical management.	<ul style="list-style-type: none"> <li>• NICU Guide PDA chapter</li> <li>• Clinical Cases with treatment versus observation approach</li> <li>• Radiology and Cardiology rounds</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion</li> </ul>	<p>MK – Demonstrate an investigatory and analytic thinking approach to clinical situations.</p> <p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p> <p>PC - Perform complete and accurate physical examinations</p>

### Goal 5: Understand complications unique to term infants.

Resident Objectives:	Instructional Strategies	Evaluation	ACGME Competency Goals
1. Describe indications for inhaled nitric oxide or extracorporeal membrane oxygenation to treat persistent pulmonary hypertension.	<ul style="list-style-type: none"> <li>• NICU Guide PPHN/iNO Chapters</li> <li>• Clinical Cases</li> <li>• Calculate oxygenation index in relevant patients</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion</li> </ul>	<p>MK – Demonstrate an investigatory and analytic thinking approach to clinical situations.</p> <p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p>

2. Describe the criteria used to determine eligibility for systemic hypothermia as a treatment for neonatal encephalopathy.	<ul style="list-style-type: none"> <li>• NICU Guide HIE/Cooling chapter</li> <li>• Review Shankaran article (NEJM 2005)</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion</li> </ul>	<p>MK – Demonstrate an investigatory and analytic thinking approach to clinical situations.  MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p>
3. Recognize the clinical presentation and initiate appropriate management of an infant with suspected metabolic disorder.	<ul style="list-style-type: none"> <li>• NICU Guide Hyperammonemia chapter</li> <li>• Clinical cases.</li> <li>• Case Module</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion</li> <li>• Post-assessment</li> </ul>	<p>MK – demonstrate an investigatory and analytic thinking approach to clinical situations.  MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics  PC - Perform complete and accurate physical examinations</p>

**Goal 6: Become comfortable identifying and initiating management for surgical emergencies in the newborn.**

Resident Objectives:	Instructional Strategies	Evaluation	ACGME Competency Goals
1. Recognize the clinical presentations of various surgical emergencies (NEC, malrotation, Imperforate anus, TEF, CDH, myelomeningocele)	<ul style="list-style-type: none"> <li>• Gomella <i>Neonatology</i></li> <li>• Relevant NICU Guide chapters</li> <li>• Clinical Cases</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion</li> </ul>	<p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics  PC - Perform complete and accurate physical examinations</p>

**Goal 7: Be able to recognize the physical findings and pathology associated with common congenital anomalies.**

Resident Objectives:	Instructional Strategies	Evaluation	ACGME Competency Goals
1. Recognize the physical exam findings in most common chromosomal abnormalities (T13, T18, T21, 22q11)	<ul style="list-style-type: none"> <li>• Review Smith's description of each of these anomalies.</li> <li>• Review NICU Guide Genetics section</li> <li>• Attend Case Conferences</li> <li>• Clinical Cases</li> <li>• Genetics rounds</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion</li> </ul>	<p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics  PC - Perform complete and accurate physical examinations</p>
2. Recognize the physical exam in non-chromosomal syndromes such as VACTERL, CHARGE, VCF, Fetal Alcohol Syndrome	<ul style="list-style-type: none"> <li>• Review Smith's description of these.</li> <li>• Clinical cases</li> <li>• Genetics rounds</li> <li>• Physical Exam findings with Fellow and Attendings.</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion</li> </ul>	<p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics  PC - Perform complete and accurate physical examinations</p>

3. Distinguish the clinical presentation between cyanotic and acyanotic congenital heart disease. List the 5 main types of cyanotic heart disease.	<ul style="list-style-type: none"> <li>• Suggested reading: Long-Fetal and Neonatal Cardiology and text by Myung Park</li> <li>• Review NICU Guide CHD section</li> <li>• Review indications for hyperoxia test and pre/post ductal sats on hypoxic infant.</li> </ul>	<ul style="list-style-type: none"> <li>• Attending/Fellow discussion</li> </ul>	<p>MK – demonstrate an investigatory and analytic thinking approach to clinical situations.  MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics  PC - Perform complete and accurate physical examinations</p>
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**Goal 8: Appreciate the complexities of caring for a former premature or critically ill patient upon leaving the hospital and recognize the planning and support required for a safe discharge.**

Resident Objectives:	Instructional Strategies	Evaluation	ACGME Competency Goals
1. Design a discharge plan in cooperation with attending MD and case managers.	<ul style="list-style-type: none"> <li>• Review NICU Guide</li> <li>• Clinical cases: discuss plan with case managers/ attendings.</li> </ul>	<ul style="list-style-type: none"> <li>• Ancillary staff feedback</li> <li>• Attending discussion</li> </ul>	<p>SBP - Partner with health care managers and health care providers to assess, coordinate care  SBP - Advocate for quality patient care and assist patients in dealing with system complexities</p>
2. Provide appropriate communication to receiving physician or private pediatrician for an infant being discharged from LPCH.	<ul style="list-style-type: none"> <li>• Contact Pediatricians.</li> <li>• Senior residents to model behavior and guide interns in this process.</li> </ul>	<ul style="list-style-type: none"> <li>• Senior resident/attending feedback</li> </ul>	<p>ICS - Communicate effectively with physicians, other health professionals, and health related agencies</p>

**Goal 9: Develop communication skills with parents and families in the NICU**

Resident Objectives:	Instructional Strategies	Evaluation	ACGME Competency Goals
1. Provide daily management plan updates to parents.	<ul style="list-style-type: none"> <li>• Role modeling and suggestions from senior resident/fellow.</li> </ul>	<ul style="list-style-type: none"> <li>• Ancillary staff feedback.</li> <li>• Attending/fellow feedback</li> </ul>	<p>PBLI - Participate in the education of patients, families, students, residents and other health professionals  PBLI - Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems  P - Demonstrate sensitivity and responsiveness to patients' culture, age, gender and disabilities  ICS - Create and sustain a therapeutic and ethically sound relationship with patients</p>

2. Participate in care conferences.	<ul style="list-style-type: none"> <li>Observe and reflect on effective communication modeled by other providers.</li> </ul>	<ul style="list-style-type: none"> <li>Attending/fellow feedback</li> </ul>	<p>PBLI - Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems</p> <p>P - Respect for patient privacy and autonomy</p> <p>ICS - Communicate effectively with patients, families, and the public as appropriate, across a broad range of socioeconomic and cultural backgrounds;</p>
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**Goal 10: Refine supervisory and teaching skills (PGY 3)**

Resident Objectives:	Instructional Strategies	Evaluation	ACGME Competency Goals
1. Provide daily management plan updates to parents. (PGY 1, 3)	<ul style="list-style-type: none"> <li>Role modeling and suggestions from senior resident/fellow.</li> </ul>	<ul style="list-style-type: none"> <li>Ancillary staff feedback.</li> <li>Attending/senior resident feedback.</li> </ul>	<p>PBLI Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems</p> <p>P - Respect for patient privacy and autonomy</p> <p>ICS - Communicate effectively with patients, families, and the public as appropriate, across a broad range of socioeconomic and cultural backgrounds;</p>
2. Prepare and present talk once weekly to interns and medical students on such topics as (jaundice, ALTE, fluid management, TPN).	<ul style="list-style-type: none"> <li>Talk to be observed by Fellow or Attending</li> </ul>	<ul style="list-style-type: none"> <li>Observer comments on talk</li> <li>Attending/fellow/ feedback</li> </ul>	<p>MK - Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics</p> <p>PBLI - Participate in the education of patients, families, students, residents and other health professionals</p>
3. Provide weekly feedback and support to interns and medical students regarding workflow efficiency and oral presentations.	<ul style="list-style-type: none"> <li>Experiential learning by providing feedback and reflecting on experience</li> </ul>	<ul style="list-style-type: none"> <li>Peer Evaluation</li> </ul>	<p>PBLI - Incorporate formative evaluation feedback into daily practice</p> <p>PBLI - Set learning and improvement goals</p>