

## Year 2 Pediatric Resident Rotations - PHILLIP C. ETCHES (PCE) NICU at the Royal Alexandra Hospital

**Goal:** The primary goal of the PCE rotation for Year 2 Pediatric Residents is to provide introductory experiences in a Level III NICU. Prior to this rotation, residents will have had the opportunity to rotate through a Level II NICU.

### Learning Objectives:

The general pediatrics residency program is following a competency based education framework as of July 2021, which organizes learning objectives into stages of training. NICU-relevant learning objectives in the second year of pediatric residency can be found within the stages “Foundation of Discipline” and “Core of Discipline”, depending on the time of year the resident is scheduled to be in the NICU. These include:

#### **Foundation of Discipline (PGY1-2):**

- FD1: **Recognizing** deteriorating and/or critically ill patients and **initiating** stabilization and management
- FD2: Managing **low risk** deliveries and **initiating** resuscitation
- FD3: Providing **well newborn care**
- FD4: **Assessing, diagnosing,** and **initiating** management for newborns with common problems
- FD5: **Assessing, diagnosing,** and **managing** patients with common pediatric problems
- FD6: Providing primary and secondary **preventive health care**
- FD7: Performing basic pediatric **procedures** (NICU relevant as follow)
  - Bag valve mask ventilation
  - Cardiopulmonary resuscitation
  - Changing tracheostomy tubes for obstruction or decannulation
  - Intraosseous injection
  - Lumbar puncture (at least 2 in neonates/infants)
  - Needle thoracostomy (at least 1 in a neonate, preferred in clinical setting but simulation acceptable)
- FD8: **Communicating** assessment findings and management plans to patients and families
- FD9: **Documenting** clinical encounters
- FD10: **Transferring** clinical information between health care providers during **handover**
- FD11: **Coordinating transitions** of care for non-complex pediatric patients

#### **Core of Discipline (PGY2-3):**

- CD1: **Resuscitating** and **stabilizing** neonates following delivery
- CD2: **Resuscitating** and **stabilizing** critically ill patients
- CD3: **Assessing** patients with medical complexity
- CD4: **Diagnosing** and **managing** pediatric patients
- CD5: Providing **ongoing management** for patients with chronic conditions
- CD8: **Recognizing** and **managing** suspected child maltreatment and/or neglect
- CD9: Performing core pediatric **procedures** (NICU relevant):
  - Cardiopulmonary resuscitation (defibrillation)
  - Chest tube insertion
  - Intubation (at least 3 intubations in neonates/infant)
  - IV insertion

- Nasogastric tube
- Nasopharyngeal swab
- Obtaining an EKG
- Phlebotomy
- Surfactant administration (at least 2)
- Umbilical arterial line (at least 1)
- Umbilical venous line (at least 2)
- Urinary catheterization
- CD10: **Leading** discussions with patients, families and/or other health care professionals in emotionally charged situations
- CD11: **Coordinating transitions** of care for patients with medical complexity
- CD14: Providing **teaching** and **feedback**

***Scheduled Rotation Learning:***

1. Rotation Orientation:
  - All peds residents (PGY1-4) will meet on the first Monday of their NICU rotation to attend *NICU Bootcamp*, which consists of common procedural skills, simulation scenarios and a NRP refresher.
    - \*\*\*Of note, all pediatric residents will obtain formal NRP certification within the first 3 months of their residency program (Transition to Discipline), AND recertification as part of General Pediatrics Academic Half Day at the beginning of their R3 year.
  - After the morning session, PGY2 residents will travel to the PCE NICU to meet with Melissa Meaver for a unit tour and orientation, and to be introduced to their Week 1 preceptor.
  - The resident will then meet with the PCE RT Educator to discuss an “Introduction to Ventilation in the NICU” and the PCE Dietitians to review “Neonatal Nutrition”.
2. Resus Week: Residents will spend the first week of the PGY2 rotation at the PCE NICU with the multidisciplinary Resuscitation-Stabilization-Triage (RST) Team. This team responds to high-risk deliveries and newborn resuscitations. Residents will work with the RST team, gain familiarity with the delivery and resuscitation environments, and attend all deliveries to which the team is called. Objectives specific to this week can be found here: [PCE NICU Resident Resus Week- Information for Residents](#)
3. Friday ‘Baby Talks’: these sessions are held via Zoom and are protected time for residents from 1:30-2:30pm every Friday. The sessions serve to gather residents rotating through NICU at the various sites to discuss topics relevant to their learning objectives. The general topics to review for pediatric resident in their second year of training include:
  - Outcomes of prematurity and associated ethical issues +/- antenatal consultation
  - Intraventricular and intracranial hemorrhage
  - Necrotizing enterocolitis (medical/surgical)
  - Blue baby/approach to cyanosis
  - Hypoxic ischemic encephalopathy
  - Pulmonary hypertension

It is expected that the neonatologist and NPM trainees on service provide relevant ad hoc and/or bedside teaching during the rotation in addition to the above. Please consider objectives specific to the learner's stage of training when providing teaching.

**Resident Evaluation:**

Entrustable Professional Activities (EPAs) are the main modality of assessment. Ideally, EPAs will be completed with the resident in real time. If completing them after the fact, please try to ensure they are submitted. NICU rotations are the only opportunity the residents have to complete certain EPAs required for promotion to the next stage of training.

**Service Objectives:**

**Daytime service:** Outside of resus week, PGY2s will be expected to take on an active role within their team (green, red, or blue). They will function as a housestaff alongside Neonatal Perinatal Medicine residents and Neonatal Nurse Practitioners/NNP students.

- Appropriate patient assignments and level of resident independence should be determined and assessed on an individual basis

**Calls:** PGY2s will be expected to cover calls at the PCE, buddied with a senior housestaff. The level of independence during these shifts can be determined on an individual basis.

**Procedures in the NICU:**

Neonatal-perinatal procedures require specialized skills developed through practice and experience. Given the risks of adverse events and multiple attempts, it is essential for learners and trainees to achieve consistent competence before performing procedures on particularly vulnerable patients. NICU specific guidelines regarding learner progress in acquiring procedural skills, while consistently providing optimal care to patients in the NICU can be found here:

- [Matching Learners to Procedural Opportunities in NICU](#)
- [Learner Participation in Procedures for Extremely Preterm Infants](#)

ALL procedures should be supervised until the resident is deemed competent and has reviewed the relevant documents on the AHS NICU Insite ([intra.albertahealthservices.ca/nicu/](https://intra.albertahealthservices.ca/nicu/)).

**Rotation Information Provided to Residents:**

Below is a link to the information provided to the residents prior to commencing their NICU rotations:

<https://sites.google.com/a/uAlberta.ca/pediatric-education-external-learners---neonatal/resources-for-learners>