NCCC-PICU ECLS COMMUNICATION GUIDELINES

Purpose: To improve the communication, coordination of care and handoff between the NCCC, PICU, and Pediatric Surgery teams when caring for critically ill neonates that may qualify for Extracorporeal Life Support (ECLS). ***Excluding CDH babies***

Goal: Early identification of neonates that may benefit ECLS followed by earlier consultation of the PICU and Pediatric Surgery teams. Early involvement of ECLS providers will allow adequate time to determine ECLS candidacy, provide a multidisciplinary team approach to optimize medical management, and if needed, allow for safer transport to PICU.

Guidelines for Initial Consult:

1. **Identify patient that could possibly benefit from ECLS**

    Patient Inclusion Criteria:
    Neonates with respiratory failure and/or pulmonary hypertension secondary to:
        Idiopathic PPHN
        Meconium Aspiration
        Pneumonia
        Sepsis
        RDS
    Gestational age ≥ 34 weeks, weight ≥ 2 kg (there is some variability, so please call a consult if there is a question)

    Relative Exclusion Criteria:

    - Life limiting chromosomal disorders or congenital anomalies will be considered on a case by case basis
    - Gestational age <34 weeks, birth weight <2000 g
    - Grade III or higher IVH
    - Grossly abnormal neurologic exam
    - Prolonged CPR (>30 min or >1 occasion)
    - Immune suppressed with terminal disease
    - Non-reversible pulmonary or cardiac dysfunction

    Timing of Formal Consult:

    - Oxygenation Index (OI) >30 on consecutive blood gases over 3 hours despite escalating intervention for pulmonary hypertension
    - Acidosis and shock unresponsive to medical management (requiring 2 pressors at high doses)
    - 2 or more signs of significant barotrauma
        - Pneumothorax
        - Pneumomediastinum

- Pneumopericardium
- Pneumoperitoneum
- Subcutaneous emphysema
- PIE
- MAP >20
- Recurrent air leak for 24 hours

2. **Call a consult for a possible ECLS patient**

   NCCC provider contacts:

   1. PICU: call PICU Fellow phone 984-974-5488 or Vocera "PICU Fellow" (or page PICU attending on call, Vocera "PICU Attending")
   2. Pediatric Surgery (Senior Resident and/or Attending on call)
   3. Notes:
      a. Keep in mind that calling a consult is NOT committing a baby to ECLS.
      b. Avoid heads up calls although bed availability calls are welcome.
      c. Please call a consult if there are questions about candidacy for ECLS.

*This guideline currently excludes babies with congenital diaphragmatic hernia (The PICU would still prefer to know about these babies as early as possible, however, the Pediatric Surgery service will be heavily involved from birth in these cases.)

The PICU and Pediatric Surgery representatives will be responsible for evaluating the patient, writing a note, and providing recommendations. The goal is to initiate a dialogue about the care of the patient.

3. **Guidelines for Transfer to PICU**:
   *Remember that not all patients transferred down will need ECLS.

   Consider transfer to PICU when there is a failure of maximum conventional therapy:

- Need for manual ventilation, unrelated to nursing interventions, twice in 12 hours to maintain PO2 > 40
- OI > 40 on consecutive blood gases over 2-3 hours
- Acidosis and shock unresponsive to medical management (pH < 7.25 for >2 hours or with significant hypotension despite inotropic support)
- Signs of significant barotrauma (see above list)
- Evidence of right ventricular dysfunction