NEWBORN RESUSCITATION
UPDATED 1/2024

ALL PROVIDERS / EMT

- ❑ Focused history and physical exam: Term baby? Breathing? Tone?
- ❑ Continuous ECG, ETCo2, and pulse oximetry monitoring
- ❑ **Treatment Plan**
  - **Obtain APGAR (Appearance, Pulse, Grimace, Activity, Respiration) score at 1 minute, 5 minutes.**
    - **For infants with a score less than 7, continue every 5 minutes until hospital arrival.**
  - **If the newborn is crying, pink and has good tone; newborn can stay with mother and breast feed**
  - **If the newborn is apneic, slow to respond, has slow or gasping respirations, or persistent central cyanosis**
    - **First 30 seconds**: Warm, dry, and stimulate the baby. Consider suction (bulb syringe) mouth, then nose.
    - Evaluate respirations, heart rate, and activity
    - **Next 30 seconds:** If after first 30 seconds the baby remains apneic, lethargic, and/or has HR <100, then perform 30 seconds of positive pressure ventilation (PPV) with BVM with a rate of 40-60 breaths/minute
      - Watch for chest rise to ensure adequate ventilation. If none, reposition mask seal and increase pressure slightly
      - Start at room air resuscitation and gradually increase O2% if no improvement is noted.
      - Target O2 saturations to 90%; excessive oxygenation can be harmful to the newborn brain
      - Target PPV efforts to improving tone and increasing heart rate; titrate up O2 if HR remains <100 despite adequate PPV
    - **After 1 minute:** If after an additional 30 seconds of effective PPV the baby continues to have a HR<60, begin CPR with a breath/compression ratio of 1:3.
      - Use 2 thumb encircling technique for CPR, rate of 120 compressions/min
- ❑ **Key Considerations**
  - As nationally established neonatal resuscitation guidelines (NALS, NRP, etc.) are updated, these may be integrated into performance, as per agency medical director
  - Check glucose and treat if <30mg/dl
  - **Keep baby as warm as possible**

AEMT

- ❑ Supraglottic airway device placement may be indicated when:
  - BVM has been ineffective despite repositioning infant and checking equipment
  - Chest compressions are necessary
- ❑ IV or IO at a keep open rate (approx. 10ml/hr) after 1 bolus to avoid volume overload
  - IV only when required for fluid resuscitation or parenteral medication
  - IO infusions are only indicated when life-threatening conditions are present
- ❑ **Epinephrine**
  - **IV/IO- 0.01-0.03 mg/kg (1:10,000)** for HR <60/min despite 30 seconds of effective CPR with PPV. Repeat every 3-5 minutes until spontaneous heart rate remains >60 bpm

EVIDENCE OF HYPOPERFUSION OR HYPOVOLEMIA

- ❑ IV/IO NS or LR @ 10 mL/kg syringe bolus over 5-10 min
- ❑ Run D10 if available for maintenance fluid at 10 ml/hr after bolus
- ❑ Additional boluses require OLMC

PARAMEDIC

- ❑ Endotracheal intubation may be indicated when:
  - BVM has been ineffective despite repositioning infant and checking equipment
  - Chest compressions are necessary
  - Insert a gastric tube in all intubated patients
  - Suction the trachea using a suction catheter through the endotracheal tube or directly suction the trachea with a meconium aspirator for poor chest rise despite successful intubation
- ❑ **Epinephrine**: IV/IO 0.01 to 0.03 mg/kg (1:10,000) every 3 to 5 minutes until return of spontaneous circulation or HR >60 BPM
- ❑ **Dextrose 10%** per ***Glucose Emergencies - Hypoglycemia/Hyperglycemia Guidelines***