NEWBORN RESUSCITATION

ALL PROVIDERS / EMT

- ❑ Focused history and physical exam: Term baby? Breathing? Tone?
- ❑ Continuous ECG, CO2, and pulse oximetry monitoring, when available
- ❑ **Treatment Plan**
  - **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
    - Target O2 saturations to 90 – 92%; 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
  - **Next 30 seconds:** 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
  - Check glucose and treat if <30 mg/dl
- ❑ **Key Considerations**
  - As nationally-established neonatal resuscitation guidelines (NALS, NRP, etc.) are updated, these may be integrated into performance, as per agency medical director
  - **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 boluses to avoid volume overload
  - IV required 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 = 0.1-0.3 ml/kg (0.1 mg/ml/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

- ❑ NS (IV or IO) @ 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 physician approval

PARAMEDIC

- ❑ **Endotracheal intubation:**
  - May be indicated if BVM has been ineffective despite repositioning infant and checking equipment and/or chest compressions are necessary.
  - AFTER intubation considerations:
    - Insert a gastric tube in all intubated patients
    - Suction the trachea using a suction catheter through the endotracheal tube. If there is no chest rise despite a successful intubation then apply a meconium aspirator with appropriate pressure and remove the endotracheal tube. Repeat intubation may be indicated if this process is unsuccessful.
- ❑ **Epinephrine**: Endotracheal ET: (IV/IO route preferred) 0.05 to 0.1 mg/kg (0.5 to 1 mL/kg of 0.1 mg/mL (1:10,000) solution) every 3 to 5 minutes until IV access established or return of spontaneous circulation
- ❑ **Dextrose 10%** per ***Glucose Emergencies - Hypoglycemia/Hyperglycemia Guidelines***

Newborn Resuscitation