

# **Foundations Frameworks**

# **Approach to the Sick Neonate**

Author: Quentin Reuter, MD Editors: Maneesha Agarwal, MD; Kristen Grabow Moore, MD, MEd

## 1. Rapid Assessment via Pediatric Assessment Triangle

- Appearance: the "tickles" (TICLS) mnemonic
  Tone, Interactivity, Consolability, Look/gaze, Speech/cry
- · Work of breathing: airway sounds, abnormal positioning, retractions, flaring, head bobbing
- Circulation: skin exam (pallor, mottling, cyanosis, cap refill)



### 2. Stabilization of Vitals

Airway/Breathing: assess RR, WOB, oxygen saturation

Respiratory distress or hypoxia -> O2 supplementation -> HFNC -> BVM -> intubate

Circulation: assess end organ perfusion -> cap refill, BP, pulse

Poor perfusion -> IV/IO access, 20 mL/kg fluid bolus (repeat as needed)

No improvement -> vasopressors (NE or epi)

Less then 1 mo old -> consider congenital heart disease and treatment with prostaglandins to open ductus arteriosus

Be prepared for possible apnea and/or hypotension with prostaglandin infusion

Cardiac kids:

Pulmonary flow limited (blue babies with low oxygen saturation) vs Systemic flow limited (hypotensive with wet lungs and an abnormally palpable liver edge) Obtain: pulse ox (blue or red?), CXR, and 4 extremity BP

- Glucose: check fingerstick, if < 50 -> give D10 bolus (5 mL/kg)
- Sepsis: obtain cultures, LP, labs, and start antibiotics (vancomycin, ampicillin, cefotaxime or gentamycin, acyclovir)



#### 3. Run THE MISFITS differential

Trauma, Heart (congenital), Hypovolemia, Hypothermia, Endocrine, Metabolic (hypoglycemia), Inborn errors of metabolisms, Seizure, Formula disasters, Intestinal catastrophe, Toxicologic, Sepsis