Newborn Resuscitation

EMT/ADVANCED EMT STANDING ORDERS

- Routine Patient Care—initial steps identified in Childbirth & Newborn Care Protocol 2.6.
- For premature infants, consider additional warming techniques, including wrapping the baby in food or medical-grade plastic wrap, silver swaddler/space blanket (preferred).
- If the mouth or nose is obstructed or heavy secretions are present, suction oropharynx then nares using a bulb syringe or mechanical suction using the lowest pressure that effectively removes the secretions, not to exceed 100 mm Hg.
- If ventilations are inadequate, or if the chest fails to rise, or the heart rate is less than 100, initiate positive pressure (bag-valve-mask) ventilations at 40 – 60 breaths per minute.
  - Note: resuscitation should be initiated with room air.
  - Inflation pressures should be individualized to achieve an increase in heart rate or movement of the chest with each breath. Be aware that bag-valve-mask pop-off valves may deliver inconsistent results.
- After 30 seconds of ventilations, assess heart rate:
  - Auscultate apical beat with a stethoscope or palpate the pulse by lightly grasping the base of the umbilical cord.
- For heart rate <100, reassess ventilatory technique and continue ventilations.
- For heart rate <60 after attempts to correct ventilations:
  - Initiate CPR at a 3:1 ratio (for a rate of 90 compression/minute and 30 ventilations/minute). Minimize interruptions. Reassess every 60 seconds; if not improving, continue CPR with 100% oxygen until recovery of a normal heart rate, then resume room air.
  - When newborn is stabilized see Childbirth & Newborn Care Protocol 2.6.

PARAMEDIC STANDING ORDERS

- If meconium is present and the newborn is not vigorous (poor muscle tone, weak respiratory effort, or heart rate <100 bpm), perform direct endotracheal suctioning via meconium aspirator.
- If bag valve mask ventilation is inadequate or chest compressions are indicated, consider intubating the baby using a 3.0 mm or 4.0 mm endotracheal tube. (For an infant born before 28 weeks gestation, a 2.5mm endotracheal tube should be used.)
  - Heart rate and EtCO₂ are the best indicators of whether the tube is properly placed in the trachea.
- Establish IV/IO. Obtain blood sample if possible.
  - If hypovolemia is suspected, administer 10 ml/kg bolus over 5 – 10 minutes.
  - If the heart rate fails to improve with chest compressions, administer epinephrine (0.1 mg/mL concentration) 0.01 – 0.03 mg/kg IV (0.1 – 0.3 ml/kg).
  - IV is preferred route for epinephrine—if there is a delay in establishing access, may administer via ETT 0.05 to 0.1 mg/kg (0.1 mg/mL concentration).
  - If glucose level is <60 mg/dl:
    - Administer dextrose per Pediatric Color Coded Appendix A3.

PEARLS:

- ALS NOTES: Flush all meds with 0.5 to 1.0 ml 0.9% NaCl and follow all ETT meds with positive-pressure ventilation.