

# SAN FRANCISCO EMERGENCY MEDICAL SERVICES AGENCY

Effective: 01/01/11  
Supersedes: 09/01/06

Protocol: P-044.1

## PEDIATRIC CARDIAC ARREST: NEONATAL RESUSCITATION

### SUBJECTIVE FINDINGS

- Gestational age.
- Multiple gestations.
- Meconium (dark staining of amniotic fluid) if membranes have ruptured.
- Mother's use of drugs.

### OBJECTIVE FINDINGS

30 second cardiopulmonary assessment:

- Airway, breathing (respiratory rate, quality, work of breathing, presence of cry);
- Circulation (skin color, temperature, pulses, capillary refill, mental status).

BLS Treatment	ALS Treatment
<ul style="list-style-type: none"><li>• Dry immediately and stimulate.</li><li>• Position the airway.</li><li>• Suction the mouth and then the nasopharynx.</li><li>• Keep warm with thermal blanket or dry towel .</li><li>• Cover scalp with stocking cap.</li><li>• Clamp and cut the cord.</li><li>• Evaluate respirations.</li><li>• Assisted BVM ventilation 40-60 breaths/min. with 100% oxygen for severe respiratory depression; use blow by or mask with 100% oxygen for mild distress.</li><li>• If SaO<sub>2</sub> is &lt; 95%, give oxygen by mask or blow by or continue with assisted ventilations if respirations depressed.</li><li>• Check heart rate at the base of the umbilical cord and/or auscultate precordium; further treatment depends on heart rate.</li></ul> <p><u>If heart rate is &lt; 60/min:</u></p> <ul style="list-style-type: none"><li>• Continue assisted ventilation.</li><li>• Begin chest compressions at 120/min, compression to ventilation ratio 3:1.</li></ul> <p><u>If heart rate is 60-80/min:</u></p> <ul style="list-style-type: none"><li>• Continue assisted ventilation.</li><li>• If no improvement after 30 seconds of ventilation with 100% oxygen, begin chest compressions.</li></ul> <p><u>If heart rate 80-100/min. and rising:</u></p> <ul style="list-style-type: none"><li>• Give oxygen by mask or blow by or continue with assisted ventilations if depressed respirations.</li></ul>	<p><u>Heart rate &lt; 60/min:</u></p> <ul style="list-style-type: none"><li>• If no improvement with bag-valve mask ventilation and oxygenation after 30 seconds, manage airway according to the Airway Management Protocol (P-004).</li><li>• If no improvement, establish IV or IO of NS, and give <b>Epinephrine</b> (1:10,000) 0.01-0.03 mg/kg (0.1-0.3 ml/kg) IVP or IO; reassess heart rate and respirations; repeat q 3-5 min.</li><li>• Reassess heart rate and respirations en route.</li></ul>

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BLS Treatment	ALS Treatment
<ul style="list-style-type: none"><li>Reassess heart rate after 15 to 30 seconds.</li></ul> <p>If heart rate &gt; 100/min:</p> <ul style="list-style-type: none"><li>Check skin color; if peripheral cyanosis, give oxygen by mask or blow by.</li><li>Reassess heart rate and respirations en route.</li></ul>	

## **DOCUMENTATION**

30 second cardiopulmonary assessment.

Oxygen administered as appropriate.

If heart rate is < 60 bpm, BVM used.

## **PRECAUTION AND COMMENTS**

- If meconium with respiratory distress, perform deep ET suction, using appropriate suction adapter if available.
- After deep ET suctioning, manage airway according to the Airway Management Protocol (P-004).
- Perform chest compressions on the neonate with both thumbs (hands encircling the back), at the lower two thirds of the sternum, at a depth of 1/2 - 1 inch or approximately one third to one half the depth of the chest.
- Avoid **Naloxone** in the neonate.
- Do not give oxygen if heart rate is < 100 and SaO<sub>2</sub> is > 95%. Increased oxygen levels may harm the neonate.