

Subject: Treatment Guidelines – ALS
Neonatal Resuscitation

Associated Policies:

I. Priorities

- A. Determine “possible” gestational age.
- B. Assess breathing (crying) and tone. Warm, clear airway if necessary, dry and stimulate.
- C. Determine heart rate and assess respiratory effort. Gasping or apnea, provide positive pressure ventilations.
- D. Apply Cardiac Monitor. Begin chest compressions if heart rate < 60/min.

II. Neonatal Resuscitation

- A. Attempt to identify the gestational age of the infant from the mother as this may help anticipate expected complications especially if the infant is preterm.
- B. Always provide warmth, clear airway only when necessary, dry effectively and reassess frequently even with term infants. Do not routinely suction a clear airway as this can cause bradycardia. Wipe secretions from the face.
- C. When an infant requires resuscitation, the most important and effective action in neonatal resuscitation is ventilation of the baby’s lungs.
- D. Steps of Neonatal Resuscitation:
 - 1. Airway:
 - a. Place infant’s head in “sniffing” position
 - b. Clear secretions with suctioning only if copious or obstructing the airway. Do so gently as to not cause further bradycardia.
 - c. Wipe face of any fluid.
 - 2. Breathing
 - a. Positive Pressure Ventilation with Bag Value Mask device for apnea, gasping or pulse less than 100 bpm. PPV should not be delayed to attach oxygen. Administering oxygen is not the priority, expanding the lungs is.
 - b. Ventilate at rate of 40 to 60 breathes per minute.
 - c. Listen for rising heart rate, audible breath sounds.
 - d. Look for slight chest movement with each breath.
 - e. Attach a pulse oximeter to right hand. Supplemental oxygen should only be given when adequate ventilations are verified and oxygen saturations remain below 90% after 5 minutes.
 - f. If there is no chest rise with ventilations repeat corrective steps.

M – Mask Adjustment

R – Reposition airway

S –Suction mouth and nose

O –Open mouth

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P – Pressure increase

A- Airway alternative.

- g. Use CO2 monitoring when available.
- 3. Circulation
 - a. Apply Cardiac Monitor.
 - b. Start compressions if heart rate is less than 60 after 30 seconds of effective PPV.
 - c. Give 3 compressions to 1 breath every 2 seconds.
 - d. Compress one-third of the anterior-posterior diameter of the chest.
 - e. IV access should be attempted prior to any IO access attempt. IO access can be difficult in the newly born. Consider IV access to hands, feet or scalp.
 - f. Always obtain blood glucose on a depressed newborn. Should be obtained from a heel stick.
- 4. Medications
 - a. Give epinephrine if heart rate is less than 60 after 45 to 60 seconds of compressions and ventilations.
 - b. Administer Dextrose 10% if blood glucose reading is below 60.
 - c. If heart remains below 60 after epinephrine consider other causes:
 - 1. Hypovolemia
 - 2. Assess for pneumothorax.

III. Caring for the Premature Infant

- A. Any infant less than 37 weeks gestation is considered premature. With the advancement of medical care the survival of the extremely premature is increasing. Managing a preterm infant in the pre-hospital setting will be challenging.
- B. Determining the gestation age of a pregnancy may help determine viability in the hospital setting but is of little help when caring for a premature infant in the pre-hospital setting where the weight and age is not actually known.
- C. Never delay transport to await the delivery of a possible premature infant.
- D. When presented with a premature infant, the paramedic needs to provide as much care as possible with the limitations that are sure to exist.
- E. Prevent hypothermia. Limit exposure by placing the premature infant in a clean plastic wrap with the head exposed. **DO NOT ATTEMPT TO DRY A PREMATURE INFANT.** Use the wrapping from the OB kit or other clean bag. Cover the head and wrap infant in dry towels or blankets. Provide external heat source when available. (i.e.: Infant heating blanket. Use caution with hot packs and never place against the neonate's skin.)
- F. Manage the airway with gentle suction only if there are copious secretions

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or obstructions. Provide PPV with gentle breathes at rate of 40 to 60.
Look for slight chest movement with each breath.

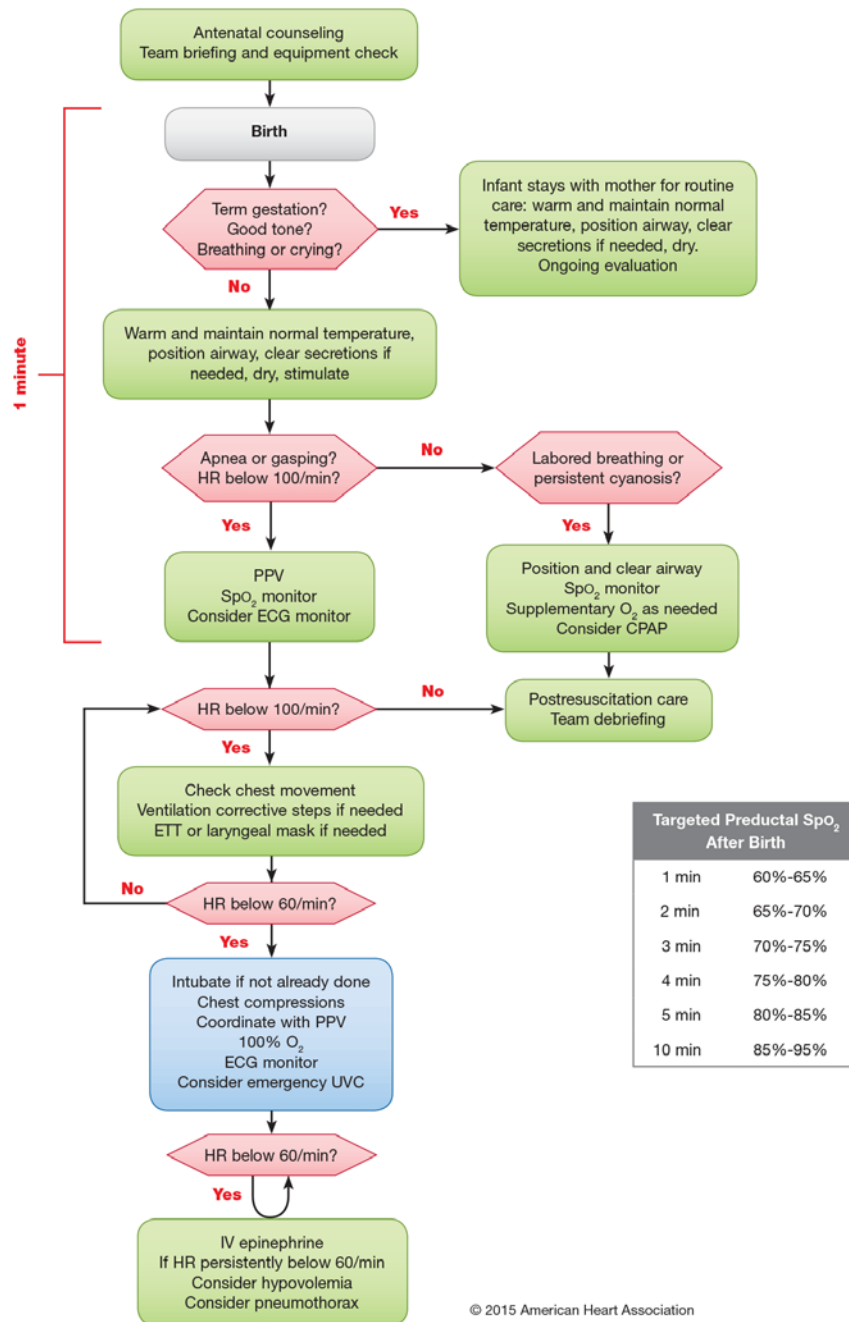
- G. Use pulse Ox if available. Place on right hand. Provide oxygen if pulse Ox remains below 90% or heart rate remains below 100. Focus on ventilating the lungs and not the oxygen administration.
- H. Apply cardiac monitor and provide chest compressions if heart rate is less than 60. If heart rate is less than 100 take ventilation corrective steps and monitor closely for improvement.
- I. Handle premature infants gently as their skin can tear.
- J. Manage premature infants with minimal interventions and rapid transport.
- K. Do not delay transport to attempt aggressive interventions.
- L. IO access should not be attempted on the severely premature infant as most IOs are too large.
- M. Notify the hospital early.

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Associated Policies:

RESUSCITATION Reference Chart

Neonatal Resuscitation Algorithm—2015 Update



3/2018

Approved: _____

Approved as to Form: _____