Treatment and Interventions

1. If immediate resuscitation is required and the newborn is still attached to the mother, clamp the cord in two places and cut between the clamps. If no resuscitation is required, warm/dry/stimulate the newborn, and then cut/clamp the cord after 60 seconds or the cord stops pulsating
2. **Dry, warm, and stimulate**
    a. Wrap infant in dry towel or thermal blanket to keep infant as warm as possible during resuscitation; keep head covered if possible
    b. If strong cry, regular respiratory effort, good tone, and term gestation, infant should be placed skin-to-skin with mother and covered with dry linen
3. If weak cry, signs of respiratory distress, poor tone, or preterm gestation then position airway (sniffing position) and clear airway as needed. If signs of respiratory distress with airway obstruction, suction mouth then nose; routine suctioning is not recommended
4. Apply cardiac monitor, if available
5. If heart rate greater than 100 BPM
    a. Monitor for central cyanosis — provide blow-by oxygen as needed
    b. Monitor for signs of respiratory distress. If apneic or in significant respiratory distress:
        i. **Ventilate**: BVM ventilation with room air at 40–60 breaths per minute
            1. Positive pressure ventilation (PPV) with bag-mask device may be initiated with room air (21% oxygen) in term and late preterm babies; otherwise use 100% oxygen
            2. Goal: SPO_2 at 10 minutes is 85–95%
        ii. Consider endotracheal intubation per local guidelines
6. **Evaluate**: If heart rate less than 100 BPM
    a. Initiate BVM ventilation with room air at 40–60 breaths per minute for 90 seconds with room air
        i. Primary indicator of effective ventilation is improvement in heart rate
        ii. Evaluate heart rate every 30 seconds
        iii. Rates and volumes of ventilation required can be variable, only use the minimum necessary rate and volume to achieve chest rise and a change in heart rate; can control rate and volume by saying “squeeze, release” – squeeze the bag just until chest rise is indicated then release to allow for exhalation
    b. If no improvement after 90 seconds, change oxygen delivery to 30% FiO_2 (fraction of inspired oxygen) if blender available, otherwise 100% FiO_2 until heart rate normalizes
    c. Consider endotracheal intubation or supraglottic airway per local guidelines if BVM ventilation is ineffective
7. **Resuscitate**: If heart rate less than 60 BPM:
    a. Ensure effective ventilations with supplementary oxygen and adequate chest rise
    b. If no improvement after 30 seconds, initiate chest compressions — two-thumb-encircling-hands technique is preferred
    c. Coordinate chest compressions with positive pressure ventilation (3:1 ratio, 90 compressions and 30 breaths per minute)
    d. Consider endotracheal intubation or supraglottic airway per local guidelines
    e. Administer epinephrine (0.1 mg/mL) 0.01 mg/kg IV/IO (preferable if access obtained) or 0.1 mg/kg via the ETT (if unable to obtain access) q 3–5 min if heart rate remains less than 60 BPM