Newborn/Neonatal (<1 month) patients in cardiopulmonary arrest should be resuscitated because most likely it is resulted from prolonged hypoxia and/or severe circulatory collapse. Ensuring that there is adequate ventilation of the baby's lungs is the most important and effective action in neonatal resuscitation.

NOTE: *When providing care for a newborn, be mindful to continuously assess parent of the newborn, as these are two separate patients. A separate ePCR shall be established for each patient MDFR provides care for. Complete a separate ePCR for the newborn. Do not document the newborn's information on the mother's ePCR report.*

BLS

1. Initial Assessment/Care Protocol 1P
2. Position the newborn on their back with the head in a sniffing position. This may be accomplished by placing a 1-inch thick folded towel beneath the newborn's shoulders.
3. Ensure a patent airway by gentle suctioning of the mouth, then the nose using a bulb syringe and stimulate.
4. Dry and warm the newborn, simultaneously rubbing the back of the to stimulate newborn.
5. Apply two umbilical cord clamps (two inches apart and at least 8 inches from the navel) then cut the cord between the clamps, if not done already.
6. Determine an APGAR score Appendix 8 at one and five minutes.
7. Airway Management Protocol 9P
    a) Provide ventilations via BVM @ 40-60 breaths/min. with supplemental oxygen if HR <100, apneic or persistent cyanosis after high-flow oxygen administration.

ALS

8. If newborn is noted with signs of meconium and showing poor signs of circulation along with minimal activity despite suctioning with bulb syringe:
    a) Intubate and suction with meconium aspirator at a low pressure (no more than 100mmHg)
        1. Suctioning should be performed while the ETT is withdrawn, until ETT is clear or no more than 5 seconds.
        2. May be repeated once if newborn is still showing poor signs of perfusion.
    b) If infant is still breathing insufficiently after meconium suctioning, consider establishing an ETT.

A. If the APGAR is 0-3:

BLS

1. Airway Management Protocol 7P

    a) Provide artificial ventilations by using gentle puffs with a size-appropriate BVM and supplemental oxygen just sufficient to see adequate chest rise, at a rate of 40-60 breaths/minute constantly re-evaluating respiratory status.

2. If newborn's heart rate is <100 beats per minute and not rapidly improving despite adequate ventilations with 100% oxygenation for approximately 30 seconds, perform CPR at a rate of 120/minute with a compression-ventilation ratio of 3:1 for 2 min.

ALS

3. If there is no change after 2 minutes, consider placement of an advanced airway and provide asynchronous compressions-ventilations.

4. Establish vascular access Procedure 13 **or** Procedure 14 Keep in mind that the **priority is with the airway**, IV access is a secondary concern.

5. If attempts to ventilate fail to improve the patient's status and the HR remains <60, continuously provide CPR with minimal interruptions and consider the following treatment where applicable:

    a. **Epinephrine (1:10,000), 0.01 mg/kg IV/IO** (0.1 mL/kg) or 0.02 mg/kg ET

        1. Subsequent doses of Epinephrine should be administered every 3-5 minutes at 0.01 mg/kg (0.1 mL/kg) via IV/IO, if HR <60 with compressions.

        Dose should not exceed 0.1mg or 1mL volume

    b. Fluid bolus, **10mL/kg IV/IO**.

    c. **Narcan, 0.5 mg IV/IO/ET** for suspected narcotic overdose, may be repeated every 2 min. as needed.

    d. **Dextrose 10% (D10%),** 0.5g/kg (5mL/kg) IV/IO if glucose is ≤40 mg/dL.

    e. Consider **Sodium Bicarbonate 4.2%,** 1mEq/kg (2mL/kg) slow IV/IO only for prolonged resuscitation and if the infant is effectively ventilated before administration.

6. Manage the cardiac arrest Protocol 9P

B. If the APGAR is 4-6:

BLS

1. Airway Management Protocol 7P
    1. Aggressively support ventilations with a BVM @ 40-60 breaths/min. and supplemental oxygen effectively in order to provide adequate chest rise. Continually reassess the newborn's status every 2 min.
2. If the newborn's condition deteriorates or does not improve, refer to Section A above.