

CPER digest

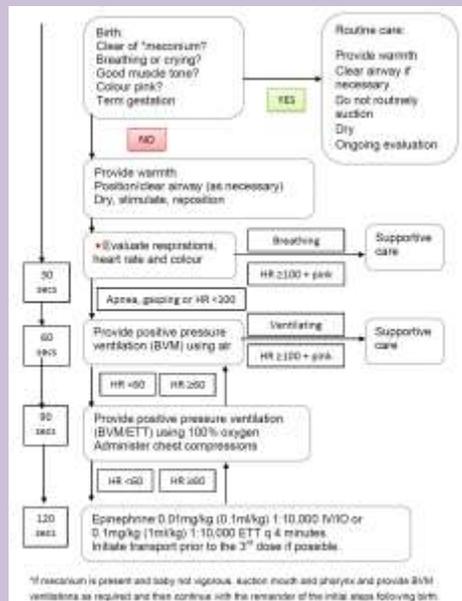
January 2017

You and your partner are called for a 24 day old neonate who is unresponsive. Upon your arrival the mother indicates that the patient had just been put down for a nap after breastfeeding when he became cyanotic. The mother states that the patient was full term, with no complications during pregnancy or delivery and has been feeding normally. Your 30 second initial assessment reveals the following: HR 80bpm weak and regular, RR 0/min, absent. You note that the patient's lips are cyanosed and there is milk in his mouth and oropharynx which you suction as you set up your equipment.

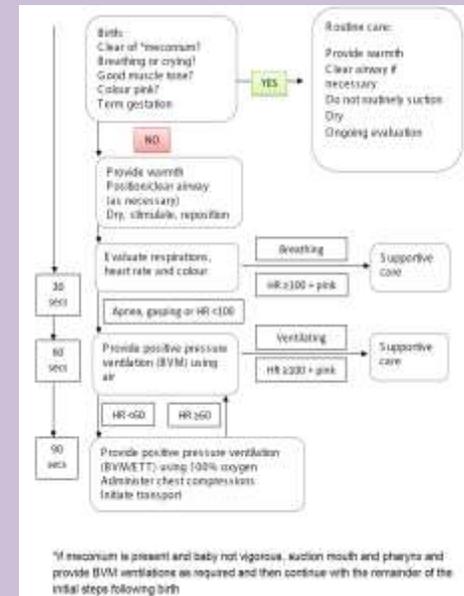
What would be your treatment plan for this patient? If you said provide positive pressure ventilation via BVM using room air for 30 seconds you are correct! As per the Neonatal Resuscitation Medical Directive (ACP Medical Directive book, Cardiac/Circulation section, pages 69-71, and the PCP Medical Directive book, Cardiac/Circulation section, pages 59-61), if the patient who is newborn or <30 days of age is apneic, gasping or has a HR <100bpm, positive pressure ventilation (PPV) for 30 seconds using a BVM with room air is indicated. SPO2 can assist with heart rate monitoring.

After 30 seconds you re-evaluate your patient to find that he has a HR of 54bpm and he remains apneic. As per the Neonatal Resuscitation Medical Directive you continue PPV via BVM now adding 100% oxygen and initiate chest compressions. Chest compressions (2 thumb technique – encircling the chest) and ventilations is 3:1 and are synchronized to complete 90 compressions and 30 breaths per minute. Next steps for PCPs include ongoing quality CPR and transport. ACPs should consider quality CPR, intubation, parenteral epi and then transport. Intubation may be appropriate early to establish a more definitive airway given the likely respiratory cause of the arrest. Administration of Epi 1:10,000 via IV/IO or ETT (if IV/IO will be delayed) is also important. ACPs should initiate transport prior to the 3rd dose if possible.

What would be your treatment if the patient is vital signs absent and the midwife/bystander has initiated CPR? If you said re-assess the patient which would include a pulse check and airway management evaluation you are correct! Once your re-assessment confirms cardiac arrest, synchronized chest compressions and ventilations via BVM with 100% O2 would be initiated with continued management and re-assessment as per the algorithm. The following link from the 2017 [American Heart Association \(AHA\)](https://eccguidelines.heart.org/index.php/circulation/cpr-ecc-guidelines-2/part-13-neonatal-resuscitation/) guideline discusses the rationale for the algorithm and the importance of airway management for this specific patient population <https://eccguidelines.heart.org/index.php/circulation/cpr-ecc-guidelines-2/part-13-neonatal-resuscitation/>



ACP Neonatal Resuscitation Algorithm (page 70)



PCP Neonatal Resuscitation Algorithm (page 59)