Pediatric Respiratory Distress, Failure or Arrest

1. Follow **1.1 General Pre-hospital Care-Treatment Protocol.**
2. Pediatric patients (≤ 14 years) utilize MI MEDIC cards for appropriate medication dosage. When unavailable utilize pediatric dosing listed within protocol
3. Assess the patient's airway
   A. If unable to ventilate patient after airway repositioning refer to **1.10 Foreign Body Airway Obstruction-Treatment Protocol** and/or **7.9 Airway Management-Procedure Protocol**
   B. Consider anaphylaxis refer to **1.6 Allergic Reaction/Anaphylaxis-Treatment Protocol**
4. Allow the patient a position of comfort that also maintains an open airway.
5. Titrate SpO2 to 94%
   A. Have a parent assist with oxygen via blow by or mask support.
6. Airway should be managed by least invasive method possible.
7. Suction secretions if needed.
8. Consider CPAP if appropriate size available, follow **7.5 CPAP-Procedure Protocol**
9. Do not delay transport for interventions.
10. Attempt vascular access only if necessary for patient treatment.

<u>Suspected Bronchospasm (Wheezing):</u>

1. Assist the patient in using their own **albuterol** Inhaler, if available and medication has not expired and is prescribed to patient.
2. Administer **albuterol 2.5 mg/3ml** NS nebulized (Per MCA selection may be EMT skill) per **9.1 Medication Administration-Medication Protocol**

Nebulized **albuterol** administration per MCA selection ☐ EMT

3. Consider CPAP if appropriate size available, follow **7.5 CPAP- Procedure Protocol**
4. In cases of respiratory failure administer **epinephrine auto-injector**

<u>MCA Approval of **epinephrine** auto-injector IM</u> ☒ MFR MCAs will be responsible for maintaining a roster of the agencies choosing to participate and will submit roster to MDHHS.

   A. If child appears to weigh less than 10 kg (approximately 20 lbs.), contact medical control prior to epinephrine if possible.
   B. If child weighs between 10-30 kg (approximately 20-60 lbs.), administer **pediatric epinephrine auto-injector** IM.
   C. Child weighing greater than 30 kg (approximately 60 lbs.), administer **epinephrine auto-injector** IM.
5. In cases or respiratory failure administer **epinephrine** 1 mg/ml IM (per MCA selection may be BLS or MFR skill).

NOTE: BLS not carrying epinephrine auto-injector MUST participate in draw up epinephrine.

MCA Approval of draw up **epinephrine.**
☒ MFR
☒ BLS
Personnel must complete MCA approved training prior to participating in draw up **epinephrine.**

MCAs will be responsible for maintaining a roster of the agencies choosing to participate and will submit roster to MDHHS.

A. If child appears to weigh less than 10 kg (approximately 20 lbs.), contact medical control prior to epinephrine if possible.
B. If child weighs between 10-30 kg (approximately 60 lbs.), administer **epinephrine** (concentration of 1mg/1mL) 0.15 mg (0.15mL) IM
C. Child weighing 30 kg or greater; administer **epinephrine** (concentration of 1mg/1mL) 0.3 mg (0.3 mL) IM

6. Per MCA selection, administer **prednisone** 50 mg PO to children > 6 years of age (if available per MCA selection) .

Additional Medication Option:

☒ **Prednisone** 50 mg tablet PO
(Children > 6 y/o)

A. If prednisone is not available, patient is ≤ 6 years of age, or patient is unable to receive medication PO, administer **methylprednisolone** IV/IO/IM:
   i. Pediatrics: 2mg/kg

Stridor/Suspected Croup:

1. Croup is most common in children 6 months to 6 years of age
2. Commonly associated with recent upper airway infection or fever
3. If foreign body is suspected, and unable to be removed contact Medical Control prior to administration of nebulized **racepinephrine/epinephrine** See **1.10 Foreign Body Airway Obstruction-Treatment Protocol**
4. Consider humidified oxygen
5. If patient presents with stridor at rest without suspected airway obstruction administer nebulized **epinephrine** per MCA selection (Medical Control contact not required):

MCA Selection

☒ **Racepinephrine** 2.25% inhalation solution via nebulizer

Administer by placing 0.5 mL of **Racepinephrine** 2.25% inhalation solution in nebulizer and dilute with 3 mL of normal saline.

☐ **Epinephrine** 5 mg (1mg/1ml) nebulized

6. Do not delay transport.

Respiratory Failure or Arrest:

1. Ventilate the patient using an appropriately sized BVM with supplemental oxygen.
   A. Chest rise is the best indicator of successful ventilation.
   B. Ventilate at a rate appropriate for the patient:
      i. Infant: 30 breaths per minute
      ii. Child: 20 breaths per minute
   C. Utilize capnography per **7.24 End Tidal Carbon Dioxide Monitoring-Procedure Protocol** to maintain end tidal CO2 35-45 mm Hg.
2. Bag Valve Mask is the preferred method of ventilation for kids under 8 years old.
   A. When unable to ventilate with BVM and basic airway adjuncts, consider advanced airway see **7.9 Airway Management-Procedure Protocol**
3. If opioid overdose is suspected, administer **naloxone** according to MI-MEDIC cards. If MI-MEDIC is unavailable, administer **naloxone** per **1.9 Opioid Overdose Treatment and Prevention-Treatment Protocol**.
4. Monitor EKG and refer to **4.9 Pediatric Crashing Patient/Impending Arrest-Treatment Protocol** or appropriate cardiac protocol as required.

Medication References

Albuterol
Epinephrine
Methylprednisolone
Prednisone
Racepinephrine

Protocol Source/Reference: Michigan 4.6 Pediatric Respiratory Distress, Failure, or Arrest; Version 5/24/23.