AIRWAY AND TRACHEOSTOMY MANAGEMENT
UPDATED 4/2025
ALL PROVIDERS

❑Focused history and physical exam
- Assess ABC's for evidence of current apnea, airway reflex compromise or difficulty in ventilatory effort.
- Assess medical conditions, burns or traumatic injuries that may have or will compromise the airway.

❑ Continuous cardiac, ETCo2, blood pressure, and pulse oximetry monitoring.

❑ Obtain a 12 Lead EKG when available.

❑ **Treatment Plan**
- Provide basic airway maneuvers to all compromised airways, i.e. jaw-thrust, airway adjuncts, and oxygen.
- Consider suction.
- Identify and treat underlying reversible medical conditions (narcotic overdose, hypoglycemia, etc.).
- Provide supplemental oxygen and assisted ventilation as needed for the patient to maintain an oxygen saturation of 90-94% and ETCO2 of 35-45.
  - Ensure proper documentation of ETCo2 level and waveform as well as lung sounds.
- Always ensure proper care of the C-spine during airway treatment per the ***Spinal Motion Restriction Guideline***.
- Keep NPO. Stop any GI Feedings and do not use GI tube during resuscitation except to vent tube if assisted ventilations are being delivered
- Infants and young children are primary nose breathers. Suction oral and nasal passages as needed to keep clear.
  - Use a 8fr soft tip catheter and suction for no longer than 10 seconds per nare. If in distress, use 1 drop of saline and suction the length measured from the tip of the child's nose to their ear lobe.
- BVM is the preferred method of ventilation below the age of 10 years old.
- Tracheostomy/Home Ventilator
  - Primary caretakers and families are your best resource for understanding the equipment they are using.
  - Disconnect the ventilator and assist ventilations with BVM if the patient is apneic, unresponsive, or has severe respiratory distress. (Disconnecting a vent poses a very HIGH risk for body fluid exposure and can be dangerous to the patient if done incorrectly)
  - If unable to ventilate, suction the tracheostomy, then reattempt ventilatory efforts.
  - If still unable to ventilate, attempt traditional BVM
  - If there is difficulty ventilating, consider "D.O.P.E." (Dislodged? Obstruction? Pneumothorax? Equipment failure?)

ADULT

EMT

❑ Ventilate with BVM when apneic or exhibiting respiratory distress.

❑ Avoid hyperventilation and maintain a ventilatory rate of 10-12 breaths per minute

AEMT

❑ Consider an appropriately sized supraglottic airway device if unable to ventilate with BVM

PEDIATRIC
Pediatric weight-based dosing should not exceed Adult dosing.

EMT

❑ Ventilate with BVM when apneic or exhibiting respiratory distress.

❑ Avoid hyperventilation - recommended pediatric ventilatory rates:
- Infant (0-12 month): 25 breaths per minute
- 1-3 yrs: 20 breaths per minute
- 4-6 yrs: 15 breaths per minute
- >6 years: 12 breaths per minute

AEMT

❑ Consider an appropriately sized supraglottic airway device if unable to ventilate with

- ❑ Document confirmation via ETCo2 waveform capnography and lung sounds.

- ❑ **CPAP/BiPAP** – Consider when the patient is awake but needs assistance with oxygenation and ventilation such as in a CHF/pulmonary edema patient or COPD patient.
  - Explain the procedure to the patient
  - Initially apply the mask and begin the CPAP or BiPAP according to manufacturer instructions.
  - If unable to adequately ventilate return to BVM and consider insertion of supraglottic airway and bag ventilation.

BVM.

- ❑ Document confirmation via ETCo2 waveform capnography and lung sounds.

- ❑ **CPAP/BiPAP** – Only use when the patient is on the machine at home. Maintain home settings and bring machine with the patient. If unable to adequately ventilate return to BVM and consider insertion of a supraglottic airway.

Paramedic

- ❑ **Endotracheal Intubation** - Consider orotracheal intubation using an endotracheal tube (ETT) when indicated
  - Video laryngoscope is the preferred method of achieving first pass intubation.
  - Document confirmation via ETCo2 waveform capnography and lung sounds
  - Secure the ETT for transport
  - Consider NG/OG tube placement or opening active G-tubes for all intubated patients
  - Consider sedation after intubation
  - If endotracheal intubation is unsuccessful, revert to a supraglottic airway device or BVM with appropriate oral/nasal airway. Avoid multiple attempts at intubation.

- ❑ **Surgical Airway - Cricothyrotomy** - Consider only when all other methods of oxygenation, ventilation and securing the airway have failed.
  - Document confirmation via ETCo2 waveform capnography and lung sounds.
  - Gather all equipment before beginning the procedure
  - Once the procedure is done insert a 5.0 or 6.0 cuffed ETT, inflate cuff, and secure.

- ❑ **Tracheostomy Assistance**
  - Provide supplemental oxygen
  - Suction the patient appropriately (use in-line suction if available)
  - Replace Tracheostomy tube if needed

Paramedic

- ❑ **Endotracheal Intubation** - Consider orotracheal intubation using an endotracheal tube (ETT) when indicated
  - BVM ventilations are the preferred method of ventilation in children. However, if oxygenation or ventilation is inadequate with BVM, a trial of a supraglottic airway is indicated. In the rare instance that a supraglottic airway is ineffective, then proceed to ETT.
  - Video laryngoscope is the preferred method of achieving first pass intubation.
  - Pediatric ETT's are sized according to age and are in mm:
    - Preemie: 2.5
    - 0-3 months: 3.0
    - 3-7 months: 3.5
    - 7-15 months: 4.0
    - 15-24 months: 4.5
    - 2-15 years: (age +16) / 4
  - Document confirmation via ETCo2 waveform capnography and lung sounds.
  - Secure the ETT for transport
  - Consider NG/OG tube placement or opening active G-tubes for all intubated patients
  - Consider sedation after intubation
  - If endotracheal intubation is unsuccessful, revert to a supraglottic airway device or BVM with appropriate oral/nasal airway. Avoid multiple attempts at intubation.

- ❑ **Surgical Airway – Cricothyrotomy** - Consider only when all other methods of oxygenation, ventilation and securing the airway have failed.
  - Open Surgical Cricothyrotomy is

- IF unable to ventilate, pass an appropriately sized ETT through the stoma 1-2 inches
- IF unable to pass a tracheostomy tube or endotracheal tube use BVM, orotracheal intubation or Supraglottic device to ventilate the patient.

❑ **Ventilator Management**
- Work with the family to troubleshoot the machine
- Address tracheostomy as above
- If you need to disconnect for transport, provide adequate BVM ventilations similar to home respiratory rate setting

contraindicated in ages < 12 years old.
- Needle Cricothyrotomy patients < 12 years of age.
- Document confirmation via ETCo2 waveform capnography and lung sounds.
- Gather all equipment before beginning the procedure.
- Once the procedure is done insert an appropriately sized cuffed ETT and secure.

❑ **Tracheostomy Assistance**
- Provide supplemental oxygen
- Suction the patient appropriately (use in-line suction if available)
- Replace tracheostomy tube, with patient's back up tracheostomy tube if needed
- IF unable to ventilate, pass an appropriately sized ETT through the stoma 1-2 inches
- IF unable to pass a tracheostomy tube or ETT use BVM, orotracheal intubation or Supraglottic device.

❑ **Ventilator Management**
- Work with the family to troubleshoot the machine
- Address tracheostomy as above
- If you need to disconnect for transport, provide adequate BVM ventilations similar to home respiratory rate settings.