# AutoVent 3000 Protocol

Scope of Practice:

* Transporting provider must be a Paramedic
* EMT’s and AEMT’s may assist with setup, use, and monitoring under the direction of a Paramedic
* Providers with an EMT level certification and greater will be trained annually on the use and administration in accordance with protocol, Ohio scope of practice, and Medical Director approval.

Indication:

* Any patient whom has a confirmed endotracheal tube/tracheostomy in place and the expectation is mechanical ventilations will be needed for longer than five minutes

Contraindications:

* Patients less than 16 years old
* Patients less than 4’ tall
* Patients with a pneumothorax or pulmonary over-pressurized syndrome (blast injury, water ascent injury, etc.)
* Pneumonia patients must have lower volume settings and increased respiratory rates, as they have a portion of their lung unable to take in air volume.
  + Start at half the volume and increase the rate to meet the EtCO2 of 35 to 45 mmHg.
* Cannot be used on patients with a rescue airway/supraglottic (King Airway, LMA, ETC)

**WARNING: If at any time ETCO2 is unavailable, stops working, or there are any indications that the patient is not being properly ventilated, STOP USE OF THE AUTOVENT and return to BVM ventilations!**

Procedure:

* Once a confirmed advanced airway is in place BVM ventilations will immediately be used to ventilate the patient. During this time, the AutoVent will be prepared for use.
  + **Preparing the AutoVent:**
    - Connect the oxygen source (green hose)
    - Connect the breathing circuit (disposable filter and hose)
    - Select the Inspiratory Time
      * Select Child setting – 1 second for all patients
        + Adjust to Adult setting – 2 seconds if needed
    - Select the desired BPM
      * 12 BPM for any cardiac arrest patient
      * 20 BPM for patients who were tachypneic before intubation
      * Patients with suspected ICP should be ventilated to 30 mmHg CO2, not to exceed 20 BPM
    - Select the desired Tidal Volume

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| --- | --- |
| Height/ft | Tidal Volume Setting |
| 4’ to 5’ | 300 |
| 5’ to 5’6’’ | 400 |
| 5’6’’ and up | 500 |

* + - * Adjust accordingly to achieve appropriate chest rise
    - Check the pressure limit alarm by occluding the outlet of the Patient Valve Assembly
    - Connect the patient breathing circuit to the Patient Valve Assembly and the patient
      * Inline capnography should be added during this step
    - Verify the patient is receiving good ventilation
      * Make sure the patient has adequate chest rise and fall
      * Chest rise should be even and should return to normal position
      * If the patient does not have adequate chest rise and fall check the tidal volume settings and check for possible obstructions. If there are still issues, discontinue the AutoVent and resume BVM ventilations.
      * The top of the Patient Valve Assembly should display bright green as gas flows during inspiration, indicator is clear during expiration.
    - Monitor and reassess every five minutes for:
      * ETCO2
      * Heart Rate
      * Pulse Ox
      * Lung Sounds
      * Physical patient changes
* **For vent assisted patients:**
  + For patients with spontaneous respirations requiring ventilatory assistance, set the BPM (breaths per minute) dial to 0. This will allow the machine to administer a breath when inspiratory efforts are sensed.