

## **AUTOMATIC TRANSPORT VENTILATOR**

## **ADMINISTRATIVE 2.1**

### **I. INTRODUCTION**

Use of an Automatic Transport Ventilator requires Medical Control, is at the sole discretion of the base hospital medical director, and must be appropriately documented when used. The medic must be trained in use of specific provider ventilator to be used for transport.

### **II. INDICATIONS**

- A. Any patient requiring ventilatory assistance in conjunction with advanced airway adjuncts.
- B. Any patient requiring ventilatory assistance in conjunction with basic airway adjuncts.
- C. Any patient requiring ventilatory assistance in conjunction with manual airway maintenance.

### **III. CONTRAINDICATIONS**

- A. Patients weighing less than 16 Kg. (35 lbs.)
- B. Pneumothorax - tension pneumothorax
- C. Pulmonary over pressurization syndrome (blast injury, water ascent injury, etc.)

### **IV. PROCEDURE**

- A. Determine that a need for the use of the ATV exists.
- B. Assure that all tubing is free from kinks.
- C. Determine the proper tidal volume setting. This is done by determining the patient ideal weight (approx. weight for any physically fit patient having the same sex, height, frame) and multiplying it by 8-10 ml./kg. Begin with the lowest tidal volume limit.
- D. Set Breaths per Minute (bpm) control to rate of 8-15 per minute.
- E. Check alarm by occluding the patient valve assembly outlet. The audible pressure limit alarm should sound as the ventilator cycles through the delivery phase.
- F. Assess lung compliance and chest rise with a bag valve device. Tidal volume may be adjusted lower if poor lung compliance is found.
- G. Attach the patient valve assembly to the airway device or mask used on the patient.
- H. Assess the ventilation. Listen for bilateral lung sounds. Observe for proper chest rise . . . this should look normal and be symmetrical.
- I. Count the number of complete ventilator cycles for a full minute. The number should be the same as the setting (+/-1).
- J. Assess and manage the airway as you normally would for any patient with controlled ventilation.
- K. If spontaneous breathing begins, it may be desirable to turn the BPM down as long as patient's spontaneous rate is 10-12 per minute.

- L. Check oxygen cylinder pressure level frequently. This device will deplete a "D" cylinder rapidly.

V. SPECIAL CONSIDERATIONS

- A. Due to COPD, chest rise may not appear full . . . do not increase tidal volume (TV) past upper TV limit.
- B. If lung sounds are absent or on one side only: rule out airway obstruction, improper tube placement, or pneumothorax, and check tidal volume ml/bpm settings.
- C. If chest expansion is not adequate, the rescuer should slowly increase tidal volume until chest expansion is adequate, or the uppermost limit (for the patient's ideal weight) is reached.
- D. If chest appears to over expand, decrease tidal volume.

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