VENTILATORS

Clinical Statement: Ventilators are to be used in the ventilation and resuscitation of patients who are experiencing respiratory distress or insufficiency. Ventilators can be used to ventilate a patient who is being managed by **BLS or ALS means**. For respiratory resuscitation to be most effective, the ventilator needs to be initiated as soon as appropriate for patient care, (*i.e. as soon as assisted ventilations are begun*).

Definition & Terms:

- **Demand Valve**: A valve that delivers gas at a flow related to the inspiratory efforts of the patient.
- **Expiratory Phase**: Interval from the start of the expiratory flow to the start of inspiratory flow.
- Frequency: The number of ventilation cycles per minute (breaths/minute).
- **Inspiratory Flow**: The flow delivered through the patient valve by the ventilator during the inspiratory phase.
- **Minute Volume**: The volume of gas delivered per minute (respiratory rate x tidal volume).
- **Relief Valve**: The valve which limits maximum patient inflation pressure by venting excess gas into the atmosphere.
- **Tidal Volume**: The volume of gas delivered to the patient during the inspiratory phase.

Equipment Needed:

- AutoVent 3000
- Oxygen source
- Ventilator Circuit Tubing
- ETCO2

PROCEDURE: AutoVent 3000 Ventilator

- Connect to gas (oxygen) supply/Turn on oxygen.
- Use Table to set Frequency:

	CPR	Rescue Breathing
Adult	8-10	12
Child	20	12-20
Infant	20	12-20

- ➢ Check function by briefly blocking Patient Valve (check green ball indicator, **see Figure 1.**)
- ➢ Adjust Tidal Volume to Initial Setting (6-8cc/kg of ideal body weight).
- ➢ Connect the ventilator to mask, endotracheal tube, or supraglottic airway.
- ➢ Assess breath sounds and observe for bilateral chest expansion (mid-axillary line)
- ➢ Continue monitoring $ETCO_2$ ($ETCO_2$ must be monitored within 1 minute of ETI or Non-Visualized Airway placement.)
- ➢ Assess proper function of the Vent by monitoring the visual green ball indicator on Patient Valve

Failure of proper movement of green ball indicator:

- ➢ Excessive “Tidal Volume”
- ➢ Incorrectly positioned airway
- ➢ Kinked endotracheal tube
- ➢ Vent Circuit disconnect

Clinical Statement: The AutoVent incorporates a demand valve and has the ability to detect spontaneous breathing by an adult patient and ventilate appropriately to the level of spontaneous breathing.

Figure 1

Green Indicator Ball

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