

SAMPLE PROTOCOL

TITLE: **Automatic Resuscitator** Model 2131B

Date Adopted: _____
Policy Number: _____
Dates Reviewed: _____
Dates Revised: _____

1.0 POLICY STATEMENT:

This policy/protocol is intended for use with patients requiring short-term ventilatory support while being monitored by a licensed clinician trained in the use of mechanical ventilation.

2.0 PURPOSE:

To provide clinically appropriate recommendations and guidelines for the use of the Automatic Resuscitator device, including clinical indications, device set-up, bedside application, potential hazards, and documentation.

3.0 DESCRIPTION:

The Automatic Resuscitator provides constant flow, pressure-cycled, ventilatory support in either pressure control or pressure support modes. The device includes a pulmonary modulator (an exhalation valve that opens at PIP and closes at PEEP) and a patient connector tee to supply gas flow, entrain additional air, and provide a redundant pop-off valve for safety.

4.0 PROCEDURE:

4.1 INDICATIONS

- 4.1.1 Patients in need of emergency, short term, constant flow, pressure-cycled ventilatory support.
- 4.1.2 Patients unable to maintain an adequate acid-base status during unassisted ventilation.

4.2 CONTRAINDICATIONS

- 4.2.1 Patients requiring greater than 50 cmH₂O or less than 20 cm H₂O.

4.3 HAZARDS/PRECAUTIONS

- 4.3.1 Do not use in the presence of smoking or open flames.
- 4.3.2 Do not leave any patient unattended.
- 4.3.3 Do not use with oil or petroleum based products.
- 4.3.4 Discontinue therapy if there is any equipment malfunction and initiate the use of another Automatic Resuscitator, a manual BVM device, or begin mouth-to-mouth resuscitation.

4.4 SET-UP INSTRUCTIONS

- 4.4.1 Remove the Automatic Resuscitator from its package and connect oxygen tubing to flow source.
- 4.4.2 Select desired Tidal Volume, I-time, and Flow (See tidal volume table).
- 4.4.3 Set desired flow rate.

Note: Perform a FUNCTIONAL CHECK by occluding the patient port with supply gas flowing and verify that the pressure DOES NOT EXCEED 54 cm-H₂O.

Note: Typical required gas supply pressure is 45 to 55 PSI. Supply pressures from 39 to 80 PSI may be used if the flow is adjusted to 40 L/min \pm 10%. The Automatic Resuscitator will deliver 40L/min against a patient pressure of 20 to 40 cm-H₂O when connected directly to a 50PSI gas source. Lower flows are obtainable with flowmeter adjustment. Use a minimum flowrate of 15-20L/min for best results.

- 4.4.4 Adjust Pressure dial to achieve desired peak pressure.

Note: Indicated pressures are approximate and may vary depending on conditions and setting. Verify with a manometer.

- 4.4.5 For use with a mask, clear mouth and airway of visible foreign bodies and use accepted techniques to ensure correct position of airways. Hold mask firmly against face while keeping head positioned. For use with endotracheal tube, connect endotracheal tube directly to patient adapter.

Note: It is very important to be trained in the correct application of the face mask before any attempt is made to use the Automatic Resuscitator.

- 4.4.6 Indicated peak pressure is printed on the pressure dial. PEEP is typically 1/10th of PIP. Indicated pressures are approximate and depend on conditions and settings. Verify with a manometer by connecting a manometer between the modulator and the patient connector tee. I-time is counted off manually (1-1000, 2-1000, etc.) or with a watch.
- 4.4.7 Adjust Rate dial to achieve desired respiratory rate. The Automatic Resuscitator may be set for spontaneous pressure support mode by adjusting rate dial clockwise until mandatory rate stops. To return to automatic cycling, rotate rate dial counterclockwise until desired rate is achieved.

- 4.4.8 Observe the rise and fall of the chest corresponding to inhalation and exhalation of the patient. Listen for expiratory flow from modulator. Listen to chest sounds of the patient.
- 4.4.9 If the patient vomits, disconnect patient adapter from modulator and remove the rate dial if necessary. Tap out vomitus on a hard surface to dislodge it, then reassemble. Clear the patient's airway and reconnect. This clearing procedure should take less than 20 seconds. Check that inhalation and exhalation occur without obstruction.
- 4.4.10 The Automatic Resuscitator is pressure limited and is equipped with a redundant pressure pop-off valve which will activate at 60 cm-H₂O.
- 4.4.11 Changes in the patient's lung compliance will result in respiratory rate changes. In such an event, make the appropriate clinical changes.
- 4.4.12 If the patient draws air through the patient entrainment port, the oxygen concentration delivered to the patient may differ from the concentration at the gas inlet of the patient connector.

4.5 CAUTIONS

- 4.5.1 Patients connected to this device are to be monitored continuously by persons having adequate training. Do not leave the patient unattended.
- 4.5.2 This device may entrain outside air. This may be hazardous to patients in contaminated environments unless entrainment is prevented by occluding the patient demand valve.
- 4.5.3 When the patient airway is occluded, patient pressure will be limited and the Automatic Resuscitator will stop cycling.
- 4.5.4 Switch immediately to another Automatic Resuscitator, a manual resuscitator (BVM), or use mouth to mouth.
- 4.5.5 Adequate ventilation should always be checked by watching the movement of the chest, listening to the expiratory flow from the modulator, and using sound clinical judgment.
- 4.5.6 Positive End Expiratory Pressure (PEEP) is intrinsic to this device. PEEP is usually 1/10th PIP and will range from 2 to 5 cm H₂O depending on the pressure settings. Verify actual PEEP with a manometer.
- 4.5.7 For a minute ventilation of 10 L/min and an I:E ratio of 1:1, the Automatic Resuscitator operates for 30 minutes (\pm 10%) on a cylinder volume of 625 liters.

APPROVED BY: _____

Name _____

Title _____

Department _____