Providence Health Care	Department: **Respiratory Services**	Date Originated: November 1990 Date Reviewed/Revised: **July 2009**
PROCEDURE	Topic: Critical Care – Manual Resuscitation Critical Care (Respiratory Therapy) Number: B-00-12-12005	Related Links: B-00-11-12001

APPLICABLE SITES:

St. Paul's Hospital
Mount Saint Joseph Hospital

EQUIPMENT:

- Manual resuscitator with oxygen connecting tubing and swivel-nut connector
- Oropharyngeal airway
- Resuscitation mask
- PEEP valve
- Oxygen gas source (wall or cylinder)
- Flex-tube with swivel adaptor (if artificial airway in-situ)
- Filter
- Personal protective equipment

PROCEDURE:

Patients without an artificial airway:

1. Connect resuscitator tubing to the oxygen gas source and set flow to 15 L/min. High or flush flow rates are required to provide an FiO_2 of 1.0 with high ventilatory demands.

2. Open and maintain the patient's airway using a head tilt or jaw lift maneuver, and insert the oropharyngeal airway as per B-00-12-12022.

3. Place face mask on patient's face, ensuring the narrow end is at the bridge of the nose. The mask should be held firmly enough to prevent a leak.

4. Compress resuscitator bag and observe the patient for visible rise and fall of the chest wall to confirm ventilation.

5. Compress the resuscitator bag at a rate and depth that will maintain appropriate minute ventilation. If the patient has spontaneous respirations, compress the bag in synchrony with the patient's inspiratory phase.

6. Continue supportive ventilations until:

    - Adequate and effective spontaneous respirations are present
    - Mechanical ventilatory support is initiated

- Instructed to stop as per physician orders

7. PEEP may be provided with manual ventilation to aid in oxygenation, or for the patient with active pulmonary edema or pulmonary hemorrhage.

Patients <u>with</u> an artificial airway:

1. Connect resuscitator tubing to the oxygen gas source and set flow to 15 L/min. High or flush flow rates are required to provide an FiO_2 of 1.0 with high ventilatory demands.

2. Attach flex-tube with swivel adaptor to the manual resuscitator and ventilate via the artificial airway.

   NOTE: If there is an inline suction system in use, the flex-tube with swivel adaptor is not necessary.

3. Compress resuscitator bag and observe the patient for visible rise and fall of the chest wall to confirm ventilation.

4. Compress the resuscitator bag at a rate and depth that will maintain appropriate minute ventilation. If the patient has spontaneous respirations, compress the bag in synchrony with the patient's inspiratory phase.

5. Continue supportive ventilations until:

   - Adequate and effective spontaneous respirations are present
   - Mechanical ventilatory support is initiated
   - Instructed to stop as per physician orders

6. PEEP should be provided at the same level as per the previous ventilation mode settings. PEEP may also be provided with manual ventilation to aid in oxygenation, or for the patient with active pulmonary edema or pulmonary hemorrhage.

SPECIAL CONSIDERATIONS:

1. The flex-tube with swivel adaptor (if applicable) should be changed daily or when soiled.

   NOTE: If the resuscitator flex-tube assembly has not been used, and remains covered with plastic wrap it does not need to be changed routinely.

2. A filter must be used for all patients requiring manual ventilation.

   NOTE: The filter should be changed after use or when visibly soiled. The filter should remain covered with its packaging to indicate it is "clean".