Manual Resuscitators

Purpose

To standardize the provision of adequate ventilation and high oxygen concentrations when a ventilator is not available for special procedures, CPR, or suctioning.

Policy

Respiratory Care Services provides manual resuscitators for use with patients who have artificial airways in place and for patients on continuous mechanical ventilation.

Accountability/Special Training

- A Licensed Respiratory Care Practitioner may perform this procedure.
- Training must be equivalent to the minimal entry level for Respiratory Therapists with age specific recognition of requirements of population treated.

Indications

Any situation in which the patient requires ventilation and a mechanical ventilator is either unavailable or not indicated.

Descriptio n of Equipment

- A manual resuscitator combines a non-rebreathing valve mechanism, a self-inflating bag and oxygen reservoir into a single unit that may be attached to a mask or endotracheal tube for manual ventilation of a patient.
- Flow meter attached to an Oxygen Source (NOTE: In cases where Oxygen is not available the Manual Resuscitator can still be used in an emergency). Use with Oxygen is preferred.

Procedure

Note: (Any patient with an artificial airway should have a Manual Resusicator fully assembled and ready fot use attached to Oxygen flow meter set 10 lpm in adult areas and 6-8 lpm in pediatric. In a code the flow should be increased to flush.

For Non-Intubated Patients:

Step	Action
1	Tilt head back. In an unconscious person, the tongue may block the airway. Tilting the head back moves the jaw and tongue forward thus clearing the airway. Refer to the Neonatal Intubation Policy # 7.3.44 for bag mask ventilation of a neonate.
2	Apply mask firmly to patient’s face with rounded cushion between lower lip and chin and the narrow end as high on bridge of nose as possible.
3	Hold mask firmly against face with thumb and index finger keeping chin and head back with other three fingers.

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Procedure Continued

For Non-Intubated Patients Continued:

Step	Action
4	Squeeze the bag firmly with other hand and watch chest rise. Release and let the patient exhale. Ventilate at the rate current with CPR standards or as required for suction or procedure. If the chest does not rise and fall: • Make sure the mask is tightly fitted. • Make sure the head is tilted back. • Make sure the patient throat is clear (if not, turn head to side to allow fluids to drain - or aspirate if suction is available).
5	Continue resuscitation until the patient breathes naturally or until resuscitation attempts are officially discontinued.

For Intubated Patients:

Step	Action
1	Remove the mask from the manual resuscitator and attach to the ET tube.
2	Squeeze the bag firmly and watch chest rise. Release and allow the patient to exhale.
3	Ventilate at rate required to maintain adequate oxygenation or at current CPR standards.
4	Continue resuscitation until the patient breathes naturally or until resuscitation attempts are officially discontinued.
Note:	Always keep manual resuscitators fully assembled (mask, valve and bag together) so that it will be ready for immediate use. Manual resuscitators are designed for one patient use. Resuscitators should be discarded when patient is discharged or when badly soiled.

Infection Control

Follow as outlined in the Healthcare Epidemiology Policies and Procedures #2.24; Respiratory Care Services
http://www.utmb.edu/policy/hcepidem/search/02-24.pdf

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References

AARC Clinical Practice Guidelines; Resuscitation in Acute Care Hospitals. Respiratory Care. 1993; 38:1179-1188.

Marshak AB, Scanlan CL; Emergency life support. In: Scanlan CL, Wilkins RL, Stoller JK, Eds. Egan's Fundamentals of Respiratory Care. 7th ed. St. Louis: Mosby; 1999.

Wheatley S, Thomas AN, Taylor RJ, Brown T. A Comparison of Three Methods of Bag Valve Mask Ventilation. Resuscitation. 1997; 33:207-10.

Bircher NG; Cardiopulmonary Resuscitation. In: Dantzker DR, MacIntyre NR, Bakow ED, Eds. Comprehensive Respiratory Care. Philadelphia: WB Saunders; 1995.

American Heart Association, Text of ACLS 2000.