Extubation of Endotracheal Tubes

Procedure

To standardize the procedure for extubating patients with endotracheal tubes.

Scope

It is the policy of the Department of Respiratory Care Services to maintain artificial airways and removal of artificial airways upon physician prescription.

- Extubations will be done by a Licensed Respiratory Care Practitioner with understanding of age specific requirements of the patient population treated under general supervision of the Supervisor.
- A physician must be present or in the immediate area during the extubation procedure so that the physician can take the necessary action, should a complication arise that would warrant reintubation.

Equipment

Suction catheter of appropriate size

- Normal Saline
- Scissors
- 10cc syringe (for cuffed endotracheal tubes)
- Appropriate oxygen delivery system
- Hand held nebulizer with racemic epinephrine (if ordered)
- Manual Resuscitator with face mask

Procedure

Oral Tubes:

Step	Action
1	Verify physician's order and patient using two patient identifiers. Wash hands.
2	Verify the presence of emergency resuscitation equipment at the bedside.
3	The procedure must be explained to the patient, in the degree of detail they can comprehend. It is desirable to have the patient's cooperation during and after the extubation. Position the patient as upright as possible.
4	Increased inspired oxygen should be administered. This is done by increasing the FIO_2 to 100% (In the ISCU, hyperoxygenation to 20% above the baseline FiO2 is

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	appropriate unless otherwise directed by physician or practitioner).
5	Secretions must be aspirated from the trachea, if indicated, the oropharynx (in that order). Nasopharyngeal suctioning is not advocated unless indicated, due to the increased risk of nose bleed.
6.	For Cardiothoracic (CT) patients, remove patient's nasogastric/ orogastric tube prior to extubation, per CT protocol
7	The lungs should be hyperinflated, so that the patient will be exhaling as the tube is withdrawn and adequate oxygenation and ventilation is maintained. For adult patients (and some pediatric patients), positive pressure is administered with a manual resuscitator. At the end of peak inspiration, the tube is removed rapidly but gently. This occurs immediately after cuff deflation. For infants (and some pediatric patients), the tube is removed rapidly but gently while the patient continues on mechanical ventilation.
8	Appropriate oxygen is immediately administered as per physician order.
9	The patient is immediately evaluated for signs of obstruction, stridor, difficulty breathing and ability to speak. The patient should be encouraged to take deep breaths and to cough.
10	The patient must not be left unattended, while there is doubt of his ability to function without the artificial airway.

Nasotracheal Tubes:

Step	Action
1	Standard procedure is followed except after cuff deflation slowly remove tube from nares allowing patient to cough during removal. This decreases potential trauma to nasopharyngeal tissues and facilitates removal of oral and nasal pharyngeal secretions.

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Adverse Reactions

Laryngospasm

- Definition: Spasmodic contraction of the larynx.
- Signs and Symptoms: Crowing sound on inspiration dyspnea, shortness of breath, tachypnea and cyanosis.
- Action: Administer oxygen, maintain ventilation, and administer appropriate emergency care if necessary. Alert physician; do not leave patient unattended, and complete appropriate documentation.

Documentation

Document in Epic as outlined in Respiratory Care Services Policy # 7.1.1.

Infection Control

Follow procedures outlined in Healthcare Epidemiology Policies and Procedures #2.24; Respiratory Care Services.

Corresponding Policies

RCS Policy and Procedure Manual, Endotracheal Tube Placement, # 7.3.46.

RCS Policy and Procedure Manual, Care of Endotracheal, Nasotracheal, and Tracheostomy Tubes, # 7.3.47

References

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