

**TRACHEOSTOMY TUBE – ACUTE CARE UNITS**

- PURPOSE:** To outline the management of patients with a tracheostomy tube in an acute care unit.
- SUPPORTIVE DATA:** The tracheostomy tube is one type of artificial airway. There are several types of tracheostomy tubes. Cuffed tubes have a cuff or balloon which exerts pressure against the tracheal wall. The cuff must be inflated while the patient is being mechanically ventilated.
- When the patient is not receiving mechanical ventilation, it is desirable for the cuff to be deflated in order for the patient to breathe through as well as around the tube. The cuff should be deflated unless there is a specific provider order not to. The patient is at increased risk of obstruction due to mucous plug in the tube if the cuff is not deflated.
- Uncuffed tubes do not have a balloon and allow for air flow around the tracheostomy tube. Tracheostomy tubes also may be fenestrated, meaning that they have one or more openings above the cuff. When the cuff is deflated and the opening of the tracheostomy tube is occluded, the patient may move air via the upper airway through the fenestration(s). Therefore, patient's ability to breathe normally can be assessed prior to removing the trach, and the patient can speak.
- The following are types of tracheostomy tubes used at the medical center and their acronyms:
- LPC: Tracheostomy Tube Cuffed with Inner Cannula  
FEN: Tracheostomy Tube Cuffed with Inner Cannula Fenestrated  
CFS: Tracheostomy Tube Cuffless with Inner Cannula  
CFN: Tracheostomy Tube Cuffless with Inner Cannula Fenestrated
- Pulsating tracheostomy indicates proximity of the trachea to an artery. This proximity may lead to erosion and an arterial bleed. Overinflation of a tracheostomy tube cuff may lead to a tracheal injury.
- Although normal saline lavage with suctioning may stimulate coughing and be useful in unblocking a mucus plug, it may be harmful. Therefore, routine normal saline lavage is not recommended.
- Consult with provider regarding if shallow suctioning versus deep suctioning is needed. For shallow suctioning, the catheters should be inserted to the end of the tracheostomy tube. For deeper suctioning, a soft Red Robinson should be used.
- LOCATION:**
1. Patients with a tracheostomy who are able to self-suction are stable for a bed in a unit that does not have continuous pulse ox monitoring. Patients who are unable to self-suction should be cared for in a unit that has continuous pulse-ox monitoring (Tele, PCU, ICU).
  2. Patients who require more frequent interventions than every 4 hours, must remain in the PCU or ICU setting (including suctioning, med administration, assessments, oxygen monitoring).
- ASSESSMENT:**
1. Assess the following a minimum of every 4 hours:
    - Vital signs
    - Respiratory pattern
    - Signs of respiratory distress (e.g. use of accessory muscles, retractions, nasal flaring)
    - Intermittent O2 saturation via pulse oximeter
  2. Assess the following a minimum of every 4 hours:
    - Breath sounds
    - Chest expansion
    - Skin and nail bed color

- Tracheostomy:
  - Condition of tracheostomy site and skin under trach holder
  - Condition of suture sites (if present)
  - For presence of:
    - Pressure injury/ wounds
    - Neck edema
    - Pulsation of tracheostomy tube (movement of tracheostomy tube with pulse)
    - Mucous plug/partially obstructed inner cannula
- Note: If plug/partially obstructed inner cannula is present, *change* disposable inner cannula or *clean* if it is a non-disposable inner cannula
- Secretions:
  - Assess the need for suctioning a minimum of every 4 hours, and after each breathing treatment
  - Assess secretion quantity, color and characteristics

SUCTIONING:

3. Encourage patient to expectorate secretions via tracheostomy, if possible.
4. Suction artificial airway and mouth as indicated by the following:
  - Patient indicates need for suctioning
  - Secretions present from and around tracheostomy tube
  - Coarse breath sounds/rhonchi present
  - Unexplained respiratory distress
  - Noisy breathing
  - Audible secretions/ gurgling
  - Increased RR, HR and BP
  - Decreased oxygen saturation per pulse oximeter
5. Monitor for signs and symptoms of hypoxia during suctioning, including:
  - Change in level of consciousness
  - Pallor, diaphoresis, cyanosis
  - Sustained shortness of breath
  - Sustained anxiety
6. Ensure patient (with ordered oxygen) has been using oxygen for at least 1 minute prior to suctioning
7. Ensure effective and safe suctioning by using an appropriate size sterile suction catheter or Red Robinson rubber catheter. Negative suction pressure should be between 80-120 mmHg and the suctioning procedure to last no more than 10 seconds
8. Use appropriate sterile suction catheter tray with Chimney valve
9. If ordered by Provider, use a Red Robinson rubber catheter
10. Suction nose then mouth after tracheal suctioning as needed

TRACHEOSTOMY  
TUBE CARE:

11. Clean tracheostomy site every 8 hours or more frequently if soiled
12. Clean non-disposable inner cannula every 8 hours with 1:1 hydrogen peroxide/ normal saline mixture and rinse with normal saline or with solution as ordered. Hold tracheostomy neck plate/ flange to stabilize tracheostomy tube while removing and replacing inner cannula Ensure inner cannula is locked into place
13. Change disposable inner cannula with same size cannula a minimum of every 24 hours and as needed (e.g., if patient has large amount or thick secretions)
14. Change tracheostomy Velcro Ties when soiled or not secure
15. Change foam dressing when soiled:
  - Small foam dressing is used when sutures are present for new tracheostomy. 1st dressing change to be done by the Provider. (Large fenestrated foam dressing may be trimmed to fit)
  - Large fenestrated foam dressing is used after sutures are removed

SAFETY:

16. Ensure the following equipment is always at the bedside:
  - Complete suction set-up
  - Bag-valve-mask
  - Obturator
  - Extra tracheostomy tube kit (same size tube)

- Extra inner cannula of same size (disposable inner cannula only)
17. Provide safety measures for patients whose mental status or developmental age precludes cooperation with airway maintenance (Peds)
  18. Ensure **humidified oxygen** is administered, as ordered (**or humidified air** if oxygen is not ordered).  
Note: Oxygen is ordered by the provider with specific F<sub>i</sub>O<sub>2</sub>
  19. Ensure oxygen/ air humidifier does not run dry

ORAL HYGIENE:  
COMMUNICATION  
NEEDS:

20. Provide/ assist with oral care a minimum of every 4 hours while awake
21. Communicate with patient a minimum of every 4 hours regarding needs
22. Assist patient in developing alternate non-verbal communication and encourage expression of feelings/concern—Request consult to Speech Pathology for PMV-Speaking Valve assessment or alternative communication options if it cannot be met by basic writing or mouthing of words

EMERGENCY  
MANAGEMENT:

23. Use obturator to reinsert a dislodged tracheostomy or to reinsert a new tracheostomy tube to reestablish airway patency.
24. If tracheostomy with inner cannula is occluded, remove inner cannula and replace. If there is no inner cannula and tracheostomy occluded, the tracheostomy is to be replaced.
25. Call provider
  - The provider should replace the tracheostomy tube if the patient has a short, thick neck or known tracheoesophageal pathology. In this situation, if there is an emergency (e.g. the tube is occluded), remove the tracheostomy tube and provide supplemental oxygen via trach mask over the stoma. Call the Rapid Response Team immediately

PATIENT/  
CAREGIVER  
EDUCATION:

26. Instruct on the following:
  - Purpose of tracheostomy tube
  - Report respiratory distress to nurse
  - Report need for suctioning to nurse
  - Method of cleaning/ changing inner cannula (if applicable)
  - Suctioning technique (if applicable)
  - Alternate methods of communication

COLLABORATION:

27. Contact Respiratory Care Department for assessment of newly admitted patient with tracheostomy tube
28. Collaborate with other disciplines as indicated:
  - Wound consultant (if pressure injury develops)
  - Food and Nutrition Services

REPORTABLE  
CONDITIONS:

29. Notify Provider of the following:
  - Tube occlusion/dislodgement
  - Signs/ symptoms of respiratory distress
  - Change in color or consistency of secretions
  - Copious secretions/ need for more frequent suctioning
  - Neck edema
  - Tracheostomy site for:
    - Pressure injury/wound
  - Bleeding or pulsation
  - Signs/symptoms tracheostomy site/ suture site infection:
    - Fever
    - Redness
    - Purulent secretions/ drainage
    - Edema
30. Notify Provider if sutures not removed within 7 days post insertion

ADDITIONAL  
STANDARDS:

31. Refer to the following as indicated:
  - Oxygen Therapy
  - Verbal communication, impaired

DOCUMENTATION: 32. Document in accordance with documentation standards including Tracheostomy Care in iView, Systems Assessment, Artificial Airway add Dynamic Group, Label accordingly.

Initial date approved:	Reviewed and approved by: Critical Care Committee Professional Practice Committee Nurse Executive Council Attending Staff Association Executive Committee	Revision Date: 08/15, 5/19, 12/22
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REFERENCES:

Leddy, R., & Wilkinson, J. M. (2015). Endotracheal suctioning practices of nurses and respiratory therapists: How well do they align with clinical practice guidelines? *Canadian Journal of Respiratory Therapy*, 51(3): 60-64.

Pederson, C. M., Rosendahl-Nielsen, Hjermind, J., & Egerod, I. (2009). Endotracheal suctioning of the adult intubated patient – what is the evidence? *Intensive and Critical Care Nursing*, 25, 21-23.

Pilgrim, J. (2018). Tracheostomy tubes: Suctioning using an open system. Retrieved from Nursing Reference Center Plus.

Tracheostomy cuff and Tube Care. Procedure Manual for High Acuity, Progressive, and Critical Care. 7<sup>th</sup> Edition. Debra L. Wiegand. Elsevier. (2017)

Tracheostomy care. Lippincott Procedures. November 2021