DEFINITIONS:

**Fresh Tracheostomy Stoma** - Stoma that has not yet had initial tracheostomy tube change.

**Non-Established Tracheostomy Stoma** - Stoma that has had an initial uncomplicated tracheostomy tube change (usually done at 7-10 days post op, but is not yet 14 days old).

**Established Tracheostomy Stoma** - Stoma that is more than 14 days post-op and that has had 2 uncomplicated tracheostomy tube changes.

**Tracheostomy Care** - tracheostomy care includes:
- assessment of patency
- changing of inner cannula
- stoma care/dressing change
- changing of tracheostomy tube holders

**Qualified Personnel for Tracheostomy Care:**
- **For Fresh Tracheostomy Stoma:** Registered Nurse (RN), Registered Nurse (Nurse Practitioner) RN (NP), Registered Respiratory Therapist (RRT), and Paramedics.
- **For Non-Established Stoma:** as above, and RPN/GN, LPN/GPN and Physiotherapist (PT).
- **For Established Stoma:** as above and patients, parents and/or family following education and demonstrated competency in this process, and when patient stability deemed appropriate by Physician and supervision by qualified personnel.

**Authorized Practitioner** - Physician, Registered Respiratory Therapist (RRT), Registered Nurse (Nurse Practitioner) RN (NP) who has the knowledge and skill in tracheostomies.
1. **PURPOSE**

1.1 To minimize risks of infection and other complications associated with tracheostomy care.

2. **POLICY**

2.1 Nursing staff will notify the Respiratory Therapy department as soon as possible when a patient is admitted or transferred to the unit with a tracheostomy.

**Note:** In sectors where an RRT is not available, nursing staff will notify an authorized practitioner.

2.1.1 In the acute care setting an RRT will assess patients with a tracheostomy at a minimum of once every 24 hours and more often if clinically required.

2.1.2 In sectors where an RRT is not available, the patient with a tracheostomy will be assessed by another authorized practitioner.

2.2 When planning transfers of patients with tracheostomies to rural or long-term care, nursing staff will alert the receiving site as soon as possible, so appropriate resources and/or staff training can be determined.

2.3 Aseptic technique will be used for care of fresh tracheostomies and for patients that are immunocompromised or in critical care. Clean technique, using sterile supplies, will be used for care of non-established and established tracheostomies.

2.4 **Assessment of tracheostomy tube patency** will be performed every 2 hours (neonates & pediatrics) or every 4-6 hours (adults) and p.r.n. by assessment of respiratory status.

2.4.1 Tracheostomy tube patency will be assessed by inspecting the inner cannula for cleanliness and integrity. Tracheostomies without an inner cannula will be assessed for signs of tracheostomy obstruction (i.e., increase work of breathing, lower oxygen saturations).

2.4.2 Tracheostomy tubes with inner cannula should have inner cannula changed q24 hours & more frequently if required.

2.5 Humidification and hydration are important factors in the care of a patient with a tracheostomy tube. The artificial airway bypasses upper airways, which normally warm, filter, and humidify inspired air. Ensuring adequate humidification and hydration with oral or IV fluids helps thin secretions and facilitates removal by suctioning.

2.6 **Tracheostomy Stoma Care**

**Fresh Tracheostomy Stoma:** initial tracheostomy dressings are left for the first 24 hours post-operatively unless otherwise ordered by physician. During this time, dressings may be reinforced as required.

After 24 hours, dressings may then be changed every 6 hours or p.r.n. utilizing aseptic technique and 2 qualified personnel. Use extreme caution to not dislodge or over manipulate the tracheostomy tube.
Non-Established & Established Tracheostomy Stoma: stoma care is provided every 6-12 hours and p.r.n. utilizing clean technique by qualified personnel. If patient is immunocompromised or in critical care, sterile technique will be utilized.

2.6.1 Tracheostomy stoma should be cleansed with sterile normal saline.

2.6.2 No creams or ointment should be applied to stoma site without a physician/RN(NP) order. Caution should be utilized to ensure prescribed creams/ointments do not enter the airway. Powders should not be used around tracheostomy stoma site.

2.6.3 If a dressing is required, utilize non-fraying materials such as pre-made tracheostomy sponges. Regular gauze should not be used for tracheostomy stoma dressings as frayed edges may irritate or enter the stoma and airway.

2.6.4 Polyurethane foam dressings with high moisture vapour transmission rates may be utilized on highly exuding stomas to help decrease maceration of the surrounding skin and hypergranulation of the stoma. These foam dressings may be cut to fit.

2.6.5 Dressings are not necessary for long-term or permanent tracheostomies, providing site is healed and exudate is minimal.

2.7 Securing of Tracheostomy tube

Fresh Tracheostomy Stoma: A tracheostomy securement device (twill tape or Velcro tube holder) will be used to secure fresh tracheostomy tubes for the first 24 hours post-operatively and should not be changed or adjusted without physicians order and supervision. After 24 hours, the securement device may be changed by 2 qualified personnel following consultation with authorized practitioner. Extreme caution must be taken not to dislodge the tube or over manipulate the tracheostomy tube.

Non-Established & Established Stomas: Tracheostomy securement devices should be changed once a day (neonates/pediatrics) or once a week (adults) and p.r.n. by 1 qualified personnel and 1 assistant.

2.7.1 Assessment of tracheostomy tube securement device security should be performed every 1-2 hours and p.r.n. Adjustments should be made to ensure the ties are not too tight or not too loose by ensuring one finger is able to be placed under the tracheostomy securement device.

2.8 Tracheostomy Tube changes

Note: During the first 24 hrs post-operatively the stoma is particularly precarious in that it is subject to bleeding caused by accidental removal or manipulation of the tube. Displacement of the tracheostomy tube may result in rapid closure of the stoma, making reinserterion of the tracheostomy tube difficult or impossible. Reinsertion of the tracheostomy tube at this time can result in trauma and creation of a false passage, interstitial emphysema or pneumomediastinum. Inability to reinsert tracheostomy tube could result in loss of a patent airway.

2.8.1 The initial tracheostomy tube change should be performed by a physician specialist, preferably the surgeon who performed the tracheostomy, or other delegates – ENT, respirologist, ICU/PICU attending, anesthetist.
Note: If the initial tracheostomy tube change is performed by a RRT, a physician specialist must be contacted and be immediately available to assist or problem solve.

2.8.2 Once the surgeon has deemed that a stoma is established, subsequent scheduled tracheostomy tube changes are done by an authorized practitioner or certified Registered Nurse (RN) on targeted units – refer to nursing policy #1120 Special Nursing Procedure – Appendix A.

2.8.3 Tracheostomy tubes with inner cannula should be changed every thirty (30) days and p.r.n.

2.8.4 Tracheostomy tubes without inner cannula should be changed weekly to monthly, as per physician/RN(NP) order and/or patient need; as secretions can build up in tracheostomy tube lumen resulting in increased work of breathing.

2.8.5 Tracheostomy tubes may require reinsertion on an emergent basis due to airway obstruction or unplanned decannulation. An RN, LPN or PT may perform this skill in an emergency situation when an authorized practitioner is not readily available.

2.9 Supplies for tracheostomy care and emergent tracheostomy tube replacement/change must be available at the bedside or in a readily accessible location at all times, including during patient transport or anytime the patient leaves the unit.

2.9.1 Tracheostomy care equipment and supplies (see Appendix A)

2.9.2 A tracheostomy insertion tray will be available on the unit for the first 14 days post-operatively or until after first tracheostomy tube change, for use in case of accidental decannulation.

3. PROCEDURE

3.1 Gather supplies that are required at bedside – see Appendix A.

3.2 Explain procedure to patient/family and how they may assist as appropriate.

3.3 Analgesics may be required before providing tracheostomy care, especially if tracheostomy is fresh.

3.4 Place adult patients in semi-fowlers position, with neck slightly extended (unless contraindicated). Pediatrics: Placement of rolled towel under shoulders may be helpful to hyperextend neck (if not contraindicated).

3.5 Perform hand hygiene and apply gloves and face shield or goggles and mask.

3.6 Assess the patient’s respiratory status. If necessary, encourage coughing or suction the patient to remove secretions (refer to nursing policy #1019 Suctioning Adult Patients with Artificial Airways or nursing policy #1051 Suctioning – Pediatric/Neonate Patients Non-ventilated with Tracheostomy). Refer to Appendix B for corresponding suction catheter sizes.

3.7 Assessment of Patency and Changing of Inner Cannula
Note: Fresh and non-established tracheostomies require 2 qualified personnel to change the inner cannula.

Note: Neonatal, pediatric and some adult tracheostomy tubes have no inner cannulas.

3.7.1 Change the inner cannula q 24 hour and p.r.n.

3.7.2 Method 1: Disposable inner cannula

3.7.2.1 Stabilize the neck plate of the tracheostomy tube with one hand. With the other hand, gently squeeze the snap lock and remove the inner cannula in a downward motion. Some disposable tracheostomies (such as the extended length tracheostomy) have a twist to lock and unlock the inner cannula.

3.7.2.2 Quickly inspect inner cannula for cleanliness and integrity.

3.7.2.3 A clean and intact cannula can be reinserted after rinsing it with sterile 0.9% sodium chloride.

3.7.2.4 A cannula which is encrusted with blood or secretions, or is damaged must be discarded and replaced with a new disposable inner cannula.

3.7.2.5 Lubricate new inner cannula with sterile 0.9% sodium chloride before insertion, ensuring the part of the inner cannula entering the patient remains sterile.

3.7.2.6 Ensure that the inner cannula is securely locked in place.

3.7.3 Method II: Non-disposable inner cannula

3.7.3.1 Open Tracheostomy Care tray (where available) using aseptic technique. Fill compartments with sterile 0.9% Sodium Chloride. Use one compartment for cleaning and the second compartment for rinsing.

3.7.3.2 To remove the inner cannula, stabilize the neck plate with one hand and with the other hand, rotate the inner cannula counter-clockwise to unlock it. Gently pull the inner cannula out in a downward motion, following the natural curvature of the tracheostomy tube.

3.7.3.3 To maintain the integrity of the inner cannula, hold it by the top only. Cleanse the inner cannula by scrubbing it gently with a pipe cleaner or brush provided.

3.7.3.4 Rinse the inner cannula with the sterile 0.9% Sodium Chloride solution. Gently drain excess solution.

3.7.3.5 Stabilize neck plate while reinserting the inner cannula; rotate clockwise to lock it in place.

3.8 Stoma Care

Note: Fresh and non-established tracheostomies require 2 qualified personnel for stoma care. One person stabilizes the tracheostomy tube while the other person removes the dressing.

3.8.1 If applicable, removed soiled tracheostomy dressing.

3.8.2 Using sterile cotton-tipped applicators, 2x2 gauze and 0.9% sodium chloride clean the tracheostomy stoma starting at the stoma site under faceplate extending 1-2 cm (neonates/pediatrics) or 5-10 cm (adults) in all directions from the stoma. Clean in a circular motion from stoma site outward. Discard applicator and repeat the action until the stoma and surrounding skin are clean. Clean the exposed outer cannula surfaces and faceplate.
3.8.3 Using a dry gauze or dry cotton tipped applicators, pat lightly at skin and exposed outer cannula surfaces.

3.8.4 Apply a new sterile tracheostomy dressing (if required).

3.8.5 Ensure tracheostomy tube holder or twill tapes are not too tight or too loose following dressing application.

3.9 Provide oral care.

3.10 **Changing twill tapes or tracheostomy tube holder**

**Note:** Fresh and non-established tracheostomies require 2 qualified personnel to change twill tapes or tube holders.

Established tracheostomies require 1 qualified personnel and 1 assistant to change trach tube holders. Pediatric patients may require 2 qualified personnel to ensure safety.

3.10.1 Stabilize the neck plate of the tracheostomy tube

3.10.1.1 Fresh or non-established tracheostomy: secure new twill tape or tracheostomy securement device prior to removing old tapes/devices.

3.10.1.2 Established tracheostomy: remove the old tracheostomy holder by cutting the old twill tape or releasing the Velcro while assistant stabilizes tracheostomy. If tracheostomy is cuffed, be careful not to cut the pilot balloon tubing.

3.10.1.3 Thread the new twill tape or Velcro through the openings in the neck plate.

**Note:** Assistant must maintain stability of the neck plate while tracheostomy tube holder is being exchanged.

3.10.1.4 Secure the Velcro securement device per package directions, or tie the twill tape at the side of the neck using a square (double) knot.

3.10.2 Check that twill tape or securement device is not too tight or loose by placing one finger under the tracheostomy tube holder. Adjust as required.

3.10.3 Adjustment of tracheostomy tube holder security should be performed every 1-2 hours and p.r.n. with adjustments made.

3.11 **Accidental Decannulation**

**Note:** If the tracheostomy tube is not completely dislodged, insert the obturator and attempt to gently reinsert tracheostomy tube. Do not force.

3.11.1 In the event of accidental decannulation, call for help.

3.11.2 Attempt to quickly re-insert a new sterile tracheostomy tube of same size, if possible.

3.11.2.1 If unable to insert tracheostomy of same size, try insertion of next smaller size. If this is not possible, insert end of a sterile suction catheter into stoma to help maintain opening. DO NOT connect catheter to suction.
Note: A stoma that is less than 48 hours old is not fully formed – if dislodged it will close quickly and reinsertion of tracheostomy tube may require use of the stay sutures placed during surgery.

3.11.3 If unable to reinsert, use a bag-valve-mask (BVM) resuscitation device (or pocket mask) to ventilate the patient by mouth while covering the tracheostomy stoma with a gloved finger. However, if the patient has complete upper airway obstruction, a gaping stoma, or a laryngectomy, mask-to-stoma ventilation must be performed.

3.12 Documentation and Reporting

3.12.1 Document of the progress or nursing record:
- the time of tracheostomy care
- color, amount and consistency of secretions
- condition of stoma and surrounding skin
- drainage from stoma and dressing change (if applicable)
- changing of disposable inner cannula (if applicable)
- changing of securement device (if applicable)
- patient response
- patient and family teaching

3.12.2 Document on the patient care plan: the frequency of tracheostomy care required

3.12.3 Report any swelling, redness, bleeding, discomfort, drainage, and/or signs of infection related to the tracheostomy to physician and document in progress notes.

3.12.4 Communicate concerns, complications and/or recommendations to the physician or authorized practitioner and RRT (if applicable) and document in progress notes.

4. REFERENCES:


Doncaster and Bassetlaw Hospitals. (2011). Tracheostomy Care Policy (Guideline for Best Practice). The Collaborative Tracheostomy Team. NHS Foundation Trust


Appendix A

Tracheostomy Equipment & Supplies Required at Bedside or Readily Accessible Location on the Unit

- Tracheostomy Insertion Tray (until tracheostomy is established)
- Manual Resuscitation Unit (Resuscitation bag and mask of appropriate size) or Neopuff (neonates) or other barrier device, such as pocket mask.
- Oxygen flowmeter
- Suction regulator (continuous/tracheal) with collection cannister and tubings
- Yankeur suction device (if required for mouth care/oral suctioning)
- Tracheostomy tube obturator (in a plastic bag, taped to the head of the bed)
- Spare tracheostomy tubes (as listed below):
  - Tracheostomy tube of same size and type (i.e. cuffed or uncuffed)
  - Tracheostomy tube one size smaller and type
- 10ml syringe for inflating/deflating cuff (if tracheostomy is cuffed)
- Clean gloves
- Sterile gloves if tracheostomy is fresh or patient is immunocompromised or in critical care.
- Face shield or goggles and mask
- Humidification supplies (tracheostomy mask, corrugated tubing, humidity bottle, sterile water) OR Humidity filter (heat moisture exchange (HME) attachments)

Supplies for Tracheostomy Care:
- Tracheostomy Care Tray (if non-disposable inner cannula)
- Disposable inner cannulas of appropriate size (if applicable)
- Dressing set (if required)
- Sterile cotton tip applicators
- 0.9% Sodium Chloride, 15 ml ampoules for stoma cleaning and lubricating inner cannula
- Tracheostomy dressings
- Tracheostomy twill ties or tube holders

Supplies for Tracheostomy Suctioning:
- Tracheal suction catheters of appropriate size (see Appendix B for size chart)
- 0.9% Sodium Chloride, sterile 250 ml bottle
- 0.9% Sodium Chloride, 15 ml ampoules, for instillation if ordered
- Sterile gloves
Appendix B

Note: Pediatric and Neonate tracheostomies of the same diameter differ in length, so are not interchangeable. See product box for measurements

**CORRESPONDING SIZES**

<table>
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<tr>
<th>Shiley Product Size</th>
<th>Inner Diameter</th>
<th>Suction Catheter to Use</th>
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<tbody>
<tr>
<td>PED/NEO 3.0</td>
<td>3.0 mm</td>
<td>5/6 Fr</td>
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<tr>
<td>PED/NEO 3.5</td>
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<tr>
<td>10 DCT</td>
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<td>16 Fr</td>
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*These are the most commonly used tracheostomy tubes. There are other sizes and makes. To determine the correct suction catheter to use, double the inner diameter and use the next smallest size catheter. Ex: 6.0 mm ID x 2 = 12, next smallest catheter is 10 Fr