PURPOSE:
To minimize infection and maintain airway.

CONSIDERATIONS:
1. Generally in homecare, tracheostomy care is a clean procedure. If the tracheostomy is new (within 4 to 6 weeks) or patient is immuno-compromised, sterile technique should be used. Sterile technique is also recommended if infection is present (until infection resolved) or if the caretaker has an infection.
2. Tracheostomy tubes should be changed every 3 to 4 weeks in adults and every 1 to 2 weeks in children. Verify physician order to change trach tube.
3. It is recommended that suctioning equipment be kept available for an emergency, especially for patients with new tracheostomy tubes or when the patient’s condition requires suctioning to control secretions.
4. Keep two extra sterile tracheostomy tubes and obturators on hand in case of accidental expulsion of the tube or blocked tube. One tube should be the same size the client currently has and one tube should be one size smaller.
5. Outer cannula can only be changed:
   a. After obtaining physician's order.
   b. After outer cannula has previously been changed without problems at doctor's office, hospital or clinic.
6. Cuff should only be inflated with a minimally occlusive volume to maintain seal. A cuff pressure measuring device may also be used to check the cuff pressure.
7. Many masks/mouthpieces distributed for protection while performing artificial respiration are not adaptable for use with a tracheostomy tube. When a patient has a tracheostomy tube and has not been designated as do not resuscitate, special equipment such as a manual bag-valve-mask resuscitator or a mask/mouthpiece that can be used with a tracheostomy tube should be available to protect the nurse, if artificial ventilation is needed.
8. It is recommended that patient be given nothing by mouth (NPO: Nulla Per Os) or has tube feedings held for at least 1 hour before procedure.

EQUIPMENT:
Gloves and other personal protective equipment, as needed (including face shield)
2 sterile tracheostomy tubes (1 being the size of the one in place and 1 a size smaller)
Obturator
Water-soluble lubricant
Scissors
Normal saline
Distilled water
Mirror
4x4 pre-cut gauze tracheostomy or pre-cut surgical sponge dressing
Twill tape or Velcro tracheostomy tube holder.
Magic slate or pad for messages
4x4 gauze sponge soaked with normal saline
5-10 mL syringe for cuffed tracheostomy tube
Suctioning equipment

PROCEDURE:
1. Adhere to Standard Precautions.
2. Explain procedure to patient and caregiver.
3. Prepare new tracheostomy tube for insertion:
   a. Test - inflate the cuff on cuffed tubes.
   b. Fold one end of twill tape up 1/2 (one-half) inch and make a 1/4-inch slit; prepare two pieces, one larger than the other, in this manner.
   c. Slip slit end through side of outer cannula and pull twill tape through slit. Repeat on other side with second piece of twill tape.
   d. If client has a Velcro tracheostomy tube holder, place narrow ends of ties under and through the faceplate slits. Pull ends even and secure with Velcro holders.
   e. Remove inner cannula.
   f. Insert obturator in outer cannula.
   g. Apply a thin film of water-soluble lubricant to the surface of the outer cannula and the tip of the obturator.
4. Suction patient via tracheostomy tube. If cuffed tube is in place, suction orally.
5. Check to see if patient has cuffed tracheostomy tube in place. If he/she does, deflate by attaching a 5-10 mL syringe into the cuff balloon and slowly withdrawing all air from the cuff. Note amount of air withdrawn.
6. Prepare to remove the old tube (allow patient to use mirror if he/she is learning to perform this procedure). Use scissors to cut the twill ties on the old tube. If patient has Velcro tracheostomy tube holder, undo the tabs attached to the Velcro fastener.
7. Remove the old tube by the neck flange using an outward and downward motion. Removal of the tube may trigger a coughing spasm. If coughing produces secretions, cleanse stoma with gauze soaked with normal saline before inserting new tube.
8. Tell patient to take a deep breath and insert new outer cannula with obturator while pushing back and then down. The tube will slide into place as gentle, inward pressure is applied.
9. Once the cannula is properly inserted, immediately remove the obturator and hold tube in place until the patient's urge to cough subsides.
10. Ensure that there is air exchange through the tube.
11. Instruct the patient to flex his/her neck and bring twill ties around to the side of the neck to tie them together in a square knot. Closure on the side will allow easy access and prevent necrosis at the back of the neck when patient is supine. Check ties to make sure they are tight enough to avoid slippage but loose enough to avoid jugular vein constriction or choking. If the patient has a Velcro tracheostomy tube holder, maintain secure hold on tracheostomy tube. Align strap under patient's neck and secure with Velcro fastener. You should be able to slip only one or two fingers between the collar and neck.

12. If tube is cuffed, reinflate:
   a. Attach 5 mL syringe filled with air to the cuff pilot balloon.
   b. Slowly inject amount of air (usually 2-5 mL) necessary to achieve an adequate seal.
   c. Use a stethoscope during cuff inflation to gauge the proper inflation point. During inspiration, place the stethoscope on one side of patient's trachea. Use either minimal leak technique (small air leak or rush of air heard over larynx during peak inspiration) OR minimal occlusive cuff inflation technique (no air leak) for adequate cuff inflation.
   d. No air should be coming from mouth, nose or around tube.
   e. If the tubing does not have a one-way valve at the end, clamp the inflation line with a hemostat.
   f. Remove syringe.
   g. Check for air leaks from cuff. Air leaks may be present if you cannot inject the same amount of air withdrawn, if the patient can speak, and/or if the ventilator fails to maintain adequate tidal volumes.

13. Insert inner cannula and lock in place.
14. Check air exchange by holding hand over cannula.
15. If patient is ventilator dependent, connect to ventilator and observe for chest excursion.
16. Apply tracheostomy dressing around tracheostomy tube, if desired.
17. Discard soiled supplies in appropriate containers.

AFTER CARE:
1. Clean reusable equipment. (See Cleaning and Disinfection of Respiratory Equipment)
2. If tracheostomy tube is disposable, discard per agency policy.
3. Document in patient's record:
   a. Date and time of the procedure.
   b. Size and type of tube inserted.
   c. Quality and quantity of secretions.
   d. Assessment of the stoma site and surrounding skin.
   e. Patient's respiratory status.
   f. Duration of cuff deflation.
   g. Amount of air used for cuff inflation.
   h. Patient's response to procedure.
   i. Complications.
   j. Instructions given to patient/caregiver.
   k. Patient/caregiver understanding of instructions.
   l. Patient's response to procedure.
   m. Communication with physician.