SKILL 47 Tracheostomy Tube Change

EQUIPMENT

Appropriately sized resuscitation equipment (mask, valve, bag)
Oxygen and humidity delivery source
Suction source, canister, and connecting tubing
Gloves, mask, goggles, gown (as appropriate)
Spare tracheostomy tubes (see note below)
Spare tracheostomy tube holder
Appropriately sized suction catheter pack (#8 to #10 French for children, #5 to #8 French for infants)
Oxygen flow meter and blender
Pulse oximeter
Cardiorespiratory monitor
Bandage scissors and small hemostats
Pre-slit Sof-Wick dressing, cotton-tipped applicators
Tracheostomy tube with obturator
5 cc syringe if tube has cuff
Normal saline or sterile water
Water-soluble gel lubricant
Precut twill tape
Towel

NOTE: For a new tracheostomy, spare tracheostomy tubes should include same size and $^1/_2$ size smaller. For an established tracheostomy, spare tracheostomy tubes should be same size.

SAFETY

1. The doctor will be the first person to change the tracheostomy tube after surgery. After that, agency procedures regarding who changes the tracheostomy tube should be followed.
2. Do not use gauze dressing as loose filaments may be inhaled into the tracheostomy.
3. All tracheostomy tube changes/replacements are a two-person procedure.
4. Be gentle in all aspects of care. *Clients should not feel any discomfort or unpleasant feelings at the site.*
5. Be alert to complications including obstruction, hemorrhage, subcutaneous emphysema, tube dislodgement, periostomal irritation, redness, or breakdown.
6. Notify physician immediately if complications arise. Maintain patent airway via stoma or mouth/nose ventilation.
7. Initiate "Code Blue" and provide resuscitation if child experiences respiratory failure or does not have a patent airway.

PROCEDURE

1. Gather equipment. *Improves organization and effectiveness.*
2. Wash hands. *Reduces transmission of microorganisms.*
3. Identify an assistant to help position, assist in tube change, hold and comfort child as necessary.
4. Prepare child and family. Provide child/family with age-appropriate explanation of procedure. Consider having someone support or comfort the child. *Enhances cooperation and parental participation and reduces anxiety and fear.*
5. Perform baseline respiratory assessment.
6. Don mask, gloves, goggles, and gown (as needed). Observe standard body substance precautions according to policy.
7. Assemble supplies and equipment. Ensure spare tracheostomy tube of appropriate size and type is at bedside. Open Sof-Wick dressing packets (as needed), pour normal saline/sterile water into containers.
8. Prepare new tracheostomy tube. Attach tube holder. If a cuffed tube is being used, check cuff for leaks by injecting a small amount of air into the cuff. Deflate cuff completely. Insert obturator. Lubricate the tube with water-soluble gel or sterile water.
9. Position child by exposing the neck and straightening the airway (avoid hyperextension). If necessary, a rolled towel or diaper may be placed under the child's shoulders, and the neck extended. The sniffing position is ideal. Use the least restrictive immobilizing methods when positioning the child. (Figure 31A)

FIGURE 31A Placement of towel under child's shoulders and neck to allow for straightening of the airway.

continued

SKILL 47 Tracheostomy Tube Change *continued*

10. Preoxygenate child as needed (and at any time during the procedure). Continually assess child for oxygenation and respiratory distress during the entire procedure.
11. Remove the soiled dressing.
12. Deflate cuff (as appropriate), remove or cut tube holder while holding the tube to prevent accidental dislodgment or displacement.
13. Remove the old tube with a gentle steady motion, outward and downward following the natural curvature of the tracheostomy tube.
14. Insert the new tracheostomy tube. Use a gentle, arcing motion following the natural curvature of the tube. Do not force. If difficulty in encountered, pull the tube away from stoma, readjust entry angle, and reattempt tube placement. Use a gentle steady upward or downward traction of the skin on the neck above or below the stoma to facilitate tube placement.
15. Immediately remove the obturator. Provide oxygen, ventilation, or suction as needed while holding the tube in place.
16. Inflate the cuff as appropriate, using minimal leak technique. (Minimal leak technique: place stethoscope over the neck at cuff site. Slowly inject air into the cuff during positive inspiration until leak stops. Remove a small amount of air to allow a slight leak during peak inspiration. The leak is heard with the stethoscope.)
17. Observe for correct placement of the tube, chest movement, color, vital signs, bilateral breath sounds. Note signs of respiratory distress or hypoxia.
18. Secure the tube with the tube holder.
19. Place new Sof-Wick dressing under the tracheostomy tube flanges (if used) using hemostats and fingers. While assistant holds the tube in place, remove soiled ties from flange. Attach twill tape to the flange and tie securely. This should be tight enough to prevent dislodgement, but loose enough to fit one finger between tie and child's neck. (Figures 31B and 31C)
20. Clean old tube and obturator following procedure.
21. Monitor respiratory status and client response to procedure.

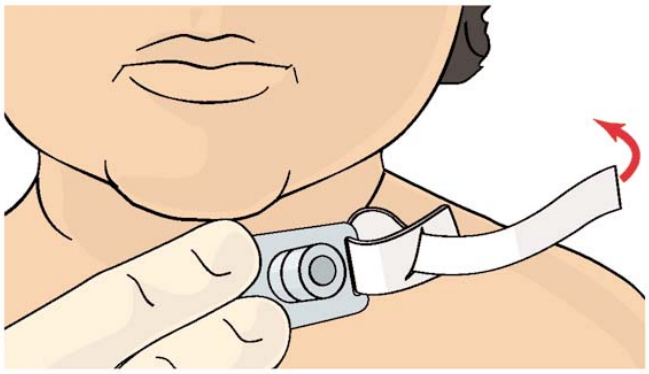

FIGURE 31B Attach twill tape to the flange and tie securely.

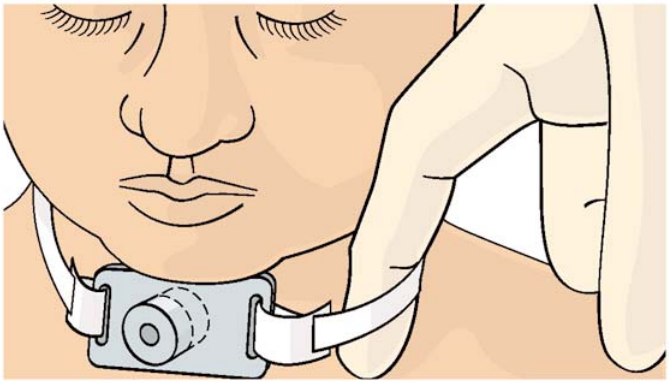

FIGURE 31C Check that tape is tighten enough too secure but loose enough to fit one finger between tie and child's neck.

DOCUMENTATION

1. Procedure, child's preparation and response to procedure, including respiratory status and breath sounds.
2. Reason for tracheostomy tube change, tracheostomy tube size and type, condition of stoma.
3. Complications that might have occurred.
4. Quantity and viscosity of respiratory secretions.