Policy Name **NEPHROSTOMY TUBES: MAINTENANCE, DRESSINGS AND IRRIGATION**	Policy Number: **0246**
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POLICY

Registered Nurses are able to care for and maintain nephrostomy tubes using the appropriate standards and procedures.

DEFINITION:

Percutaneous nephrostomy tube is a soft small-lumened catheter positioned in the renal pelvis of the kidney through the patient's back or side. These tubes are usually inserted by a radiologist using local anesthetic and fluoroscopy. A common reason a nephrostomy tube may be inserted is for blockage of the ureter leading fromthe kidney to the bladder.

COMPLICATIONS:

The most common complications associated with nephrostomy tubes are dislodgement, blockage, infection and possible hemorrhage.

Dislodgement may be manifested by obvious displacement, flank pain, scantdrainage from the tube or excessive or increased drainage around the tube.

Blockage may be manifested by excessive or increased drainage around the tube, pain or swelling.

Infection may be manifested by foul-smelling urine, fever, chills and/or flank pain or signs of localized infection at insertion site-red, swollen, warm area and/or purulent drainage around site.

Hemorrhage may be manifested by gross hematuria, edema and bruising in the patient's flank area.

MAINTENANCE

1. Nephrostomy tubes should be stabilized to the skin at all times to prevent unnecessary movement of the catheter in the kidney.
2. The collection tubing should be coiled and secured as a "safety loop" to prevent accidental pulling or tugging on the tube.
3. The collection tubing and bag must be placed to prevent kinking, unnecessary tension or accidental tugging on the nephrostomy tube.
4. The collection bag must be positioned below the kidneys at all times and should be emptied when half full to prevent reflux back into the kidneys.

PROCEDURE

Transparent nephrostomy tube dressings should be changed **every seven (7) days** and **as required if it becomes soiled, wet, or loose.** When using a transparent dressing, a small gauze like dressing can be placed over the insertion site to protect the site and help prevent pulling the tube when removing the transparent dressing.
Gauze nephrostomy tube dressings should be changed **daily** and **as required.** Gauze dressings are useful in "wicking" away drainage from the nephrostomy tube insertion site and the surrounding area.
Nephrostomy tube drainage bag should be changed when the bag becomes soiled or discolored.

Equipment Required

- Non-sterile gloves
- Sterile gloves
- Sterile 4X4 gauze (used to hold tubing)
- 2 Chlorhexidine swabs
- 4 alcohol swabs
- 1 sterile drain gauze
- 2 sterile 4X4 gauze dressings — If using gauze dressings
- Mefix tape
- 1 large occlusive dressing (tegaderm)
- plastic backed disposable pad

Drainage Bag Change: In addition to the above supplies add;

- Plastic clamp
- Litebag 600 Deluxe drainage bag with tubing attached

Dressing Change

1. Prepare clean surface
2. Wash hands
3. Place disposable pad beneath the nephrostomy site
4. Open dressing packages to create a sterile field for materials
5. Wearing non-sterile gloves remove resident's old nephrostomy dressing
6. Remove non-sterile gloves and wash hands
7. Don sterile gloves
8. Use sterile 4X4 gauze to hold the nephrostomy tube
9. Cleanse around the insertion site with Chlorhexidine swabs
   Always cleanse from the insertion site moving in an outward direction
10. Cleanse the tubing using the alcohol swabs, starting at the insertion site and moving outwards

11. Assess the insertion site noting any changes or signs of infection, suture status (if present) and/or problems with the catheter
12. If there is drainage from around the insertion site, apply sterile drain gauze and sterile 4X4 gauzes, held in place with mefix tape. (A gauze dressing helps wick moisture away from the site and allows daily assessment of the site.)
13. If there is no drainage from around the insertion site, an occlusive clear dressing may be used. To help protect the skin and prevent pulling on the tubing when removing the clear dressing, a small gauze type dressing can be positioned over the insertion site and tubing. Ensure that the edges of the occlusive dressing are well sealed.

Drainage Bag Change

Change the drainage bag system if it is soiled or discolored. This may be done when doing the dressing change.

1. Open the new drainage bag package, creating a sterile field
2. Wearing sterile gloves and using a sterile 4X4 gauze to hold the tubing, cleanse around the connection port with an alcohol swab for 30 seconds.
3. Allow to dry
4. Carefully clamp the nephrostomy tube. To help prevent damage, put gauze around the tube before clamping. Hold the clamp with a sterile gauze or clamp prior to donning sterile gloves.
5. Disconnect the old drainage bag from the nephrostomy tube
6. Cleanse around the connection port with an alcohol swab for 30 seconds
7. Allow to dry
8. Attach the new drainage bag ensuring the connection is tight
9. Unclamp the nephrostomy tube

It is possible for a resident to have excessive drainage from around the nephrostomy tube insertion site. An ostomy appliance may be applied over the insertion site to allow for collection of drainage and help maintain skin integrity.

Irrigation of Nephrostomy Tubes

Intermittent irrigation of nephrostomy tubes in **ONLY** done when ordered by the physician. The **order must include** the solution and the amount to be used along with the frequency of the irrigation. Generally 5-10 mls (milliliters) of sterile normal saline is used for intermittent irrigation but individual physician orders may vary.
The irrigation solution is allowed to drain out by **gravity** unless otherwise ordered by the physician to aspirate the solution.

When irrigating a nephrostomy tube **never use force.** Stop the irrigation if resistance is met or the resident complains of pain.
Aseptic technique is used when irrigating a nephrostomy tube.

<u>Equipment Required</u>

- Alcohol swabs
- Sterile normal saline or ordered irrigation solution
- 5 – 10 ml syringe (may use pre-drawn saline syringe, if appropriate)
- Sterile gloves
- Plastic clamp (if 3-way stopcock is not in place)
- Sterile 4X4 gauze

<u>Irrigation Procedure</u>

1. Create a clean work space
2. Wash hands
3. Open packages to create a sterile field
4. Don sterile gloves
5. Use the sterile 4X4 gauze for holding the tubing if necessary
6. Wipe the connection port with alcohol swab for 30 seconds and allow drying
7. Clamp the nephrostomy tube. To prevent damage, place a gauze around the tube prior to clamping. Hold the clamp with a sterile gauze or clamp prior to donning sterile gloves.
8. Disconnect the drainage bag tubing from the nephrostomy tube. Place the ends of the tubes on a sterile surface (i.e. the inside of the sterile gloves package)
9. Attach the syringe to the nephrostomy tube
10. Unclamp the nephrostomy tube and gently irrigate. Stop if any resistance is felt or if the resident complains of pain'
11. Reattach the drainage bag tubing and allow the irrigation fluid to drain by gravity unless otherwise ordered.

<u>Disposal of Drainage</u>

Nephrostomy tube drainage bags **should be emptied** when **half full** to prevent reflux back into the kidneys.

1. Wear non-sterile gloves
2. Wipe the drainage valve with alcohol swab and allow drying
3. Empty the contents of the drainage bag into a urinal or graduate cylinder
4. Close the drainage valve and cleanse again with alcohol swab
5. Note the color, consistency, odor and amount of the drainage
6. Dispose of the drainage in the toilet and flush.

Documentation

1. Document dressing changes, bag changes, and/or irrigations in the resident's progress notes including:
   - the amount and color of the drainage
   - the appearance of the insertion site including any signs of infection
   - the dressing change
   - the drainage bag change and/or irrigation of the tube, if appropriate
   - resident's tolerance of the procedure.
2. Report any concerns to the physician
3. Note in the resident's care plan any specifics regarding the care of the nephrostomy tubes or resident's concerns, as a reference for other staff.

CROSS REFERENCES

0244 – Biliary Drainage
0243 – Peritoneal Drainage (Using Cook or Tenkoff Drains)

REFERENCES

Alberta Health Services (AHS), (Calgary Regional Health Authority) – Nursing Policy and Procedure Manual; # N-1 – Nephrostomy Tube, Percutaneous: Post-Insertion Care and Maintenance – Date – 00.01

AHS (Calgary Regional Health Authority) – Nursing Policy and Procedure Manual; # N-2 – Nephrostomy Tube Percutaneous: Dressing Change – Date – 00.01

AHS (Calgary Regional Health Authority) – Nursing Policy and Procedure Manual; # N-3 – Nephrostomy Tube, Percutaneous: Irrigation Intermittent and Continuous- Date – 00.01