



ACI UROLOGY NETWORK - NURSING

NURSING MANAGEMENT OF PATIENTS WITH NEPHROSTOMY TUBES

GUIDELINES AND PATIENT INFORMATION
TEMPLATES

The following pages provide a clinical guideline template to enable clinicians to develop their own resource material relevant to their hospital and Area Health Service. They have been compiled by clinicians for clinicians. If you wish to use this material please acknowledge those that have kindly provided their work to enable use by others. Revise all material with colleagues before using to ensure it is current and reflects best practice.

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NURSING MANAGEMENT OF PATIENTS WITH NEPHROSTOMY TUBE

GUIDELINES AND PATIENT INFORMATION TEMPLATES

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provides a subsidy towards the cost of equipment covering disposable and re-usable continence aids for people living in the community who :..... 14

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EXPECTED OUTCOME

The nephrostomy tube is inserted directly into the collecting system of the kidney to allow permanent or temporary urinary drainage.

The following applies to all patients undergoing insertion or change of a nephrostomy tube.

ACUTE CARE SETTING

- Written patient consent must be obtained prior to insertion or change of the tube.
- A fluid balance chart must be maintained for all patients whilst a nephrostomy tube is insitu.
- A Medical Officer must document the order for irrigation and stipulate the amount of normal saline to be used
- Medical Officer must document the order for removal of a nephrostomy tube.
- Removal of the nephrostomy tube must be attended by a Medical Officer or a Registered Nurse experienced in the procedure and with a Medical Officer's written order (in line with local policy)
- All nephrostomy tubes must be checked once per shift for patency and abnormal signs or symptoms (e.g. pain, leakage or bleeding) or as required in an acute care setting.
- Urea, electrolytes and creatinine (UEC's), must be ordered and monitored by Medical Officer
- All patients and their families/carers must be educated in care of nephrostomy tube well in advance of discharge and provided with a nephrostomy fact sheet and contact telephone numbers in case of problems.
- Patient to be referred to Community Health Nursing for continuity of care

GENERAL: ACUTE/COMMUNITY

- A Medical Officer must order irrigation of nephrostomy tube
- A Medical Officer (MO) or a Registered Nurse (RN) experienced in the procedure must perform irrigation of the nephrostomy tube (in line with local policy)
- A Medical Officer must document the order for irrigation and stipulate the amount of normal saline to be used
- Medical Officer must document the order for removal of a nephrostomy tube.

- Sterile technique must be maintained for irrigation, dressing changes and when obtaining urine specimen.
- All urine specimens must be collected from nephrostomy tube by gravity. Do not use aspiration.
- Nephrostomy tubes must be firmly secured and drainage bag anchored to prevent displacement or kinking of the tube.
- All patients discharged with a nephrostomy tube must be referred to the Community Nurse to ensure that client/carer is monitoring patency of tube and for maintenance of continuity of care

BACKGROUND

Percutaneous Nephrostomy is an image-guided placement of a catheter into the renal collecting system. Nephrostomy tubes are inserted in the Operating Theatre or Radiology Department to provide permanent or temporary urinary drainage following a procedure or to relieve ureteric obstruction. Irrigation of a nephrostomy tube is indicated if there is absence of urine in the drainage system, blood in the urine or if flank pain occurs. Medical Officer orders irrigation of the nephrostomy tube

TYPES OF NEPHROSTOMY DRAINAGE TUBES

Pigtail: The retaining mechanism is a coil which is retained within the renal pelvis (placed in Radiology). There are 2 types of pigtail catheters on the market – Cook Mac-loc and the Boston Scientific. The only difference is the method of unlocking the catheter for removal.

Wide Bore e.g. Malecot or foley catheter (placed in operating theatre)

INDICATIONS FOR INSERTION OF A NEPHROSTOMY TUBE

- To remove renal calculi.
- To decompress an obstructed system and to maintain or improve renal function following ureteric obstruction
- To obtain access to the renal pelvis for radiological procedures. e.g. insertion of ante grade stent

INSERTION OF A NEPHROSTOMY TUBE

PRE- PROCEDURE MANAGEMENT

- Nil by mouth six hours prior to the procedure or as ordered by Medical Officer.
- Confirm with Medical Officer the administration or withholding of anticoagulants and other medication
- Administer analgesia or pre-medication as prescribed.
- Non-insulin dependent diabetic patients must have blood glucose levels (BSL) checked according to facility protocol from fasting time.
- Insulin dependent diabetic patients must have insulin dextrose infusion and hourly BSL checked unless otherwise stated by Medical Officer.
- UECs must be obtained pre-procedure and results to be reviewed by Medical Officer.

POST-PROCEDURE MANAGEMENT

- Administer analgesia as prescribed.
- Patient should be on bed rest for 4 hours
- Nephrostomy tube must be connected to a sterile closed drainage system and drainage bag should be below level of kidney at all times.
- Post procedure vital signs to be monitored half hourly for 2 hours, hourly for the next 2 hours then four hourly for 24 hours.

If temperature is higher than 38 degrees, systolic blood pressure less than 100mmhg and/or pulse greater than 120 beats per minute, Medical Officer must be notified. If Medical Emergency Team criteria exist, call the team

- Measure urine output hourly for 4 hours, then 4 hourly for 24 hours then progress to 8 hourly until stable.
- **If total urine output is less than 30mls/hr notify Medical Officer.**
- Monitor urine for colour and presence of sediment.

- *Note:* It is normal for blood to be present in the urine immediately after nephrostomy insertion but it should decrease within 48 hours.
- Notify Medical Officer if urine flow consistently remains heavily blood stained.
- Strict fluid balance chart must be maintained
- Medical Officer must monitor UEC's until results are stabilized.
- Nephrostomy tube dressing site must be observed every hour for four hours, 4 hourly for 24 hours, then once per shift for bleeding and signs of infection (pain, leakage, redness, swelling, bleeding)
- Report any abnormalities to the Medical Officer.
- Inspect nephrostomy tube to ensure it is secure and no kinking has occurred
- Encourage the patient to drink at least two litres of fluid daily unless contraindicated.
- Observe for leakage at connection joints and seek advice if leakage evident.
- All urine specimens must be collected from nephrostomy tube by gravity. Do not use aspiration.
- Nephrostomy tube must be well secured at all times to prevent dislodgment

ONGOING CARE

IRRIGATION OF NEPHROSTOMY TUBE

IMPORTANT POINTS TO CONSIDER

- This is a sterile procedure
- Irrigation of the nephrostomy tube is required if there is absence of urine, if urine remains heavily blood stained, if patient has persistent flank pain or suspected blockage. Check with attending Medical Officer if standing orders apply.
- Do not flush greater than 10 mls of sterile normal saline.
- Observe for continuous urine flow and signs of infection.
- Notify Medical Officer immediately if the tube cannot be irrigated or if it is dislodged or fallen out. In a community setting refer the patient to the Emergency department.

EQUIPMENT

- Personal Protective Equipment (PPE)
- Dressing pack
- Disposable blue sheet
- Sterile gloves
- Alcohol wipes or 70% alcohol
- 10 ml syringe for Pigtail Catheter)
- Catheter tip Toomey syringe for Foley Catheter)
- Sterile normal saline
- Drainfix dressing

PROCEDURE

- Confirm the order is documented by the Medical Officer in the patient's health care record.
- Explain the procedure to the patient.
- Assemble equipment.
- The patient lies on their side on the opposite side of the nephrostomy tube
- Place the disposable sheet under the patient.
- Wash hands or use alcohol rub
- Wear Personal Protective Equipment (PPE)
- Clean the connection port with 70% alcohol and remove drainage bag.
- Gently instill sterile normal saline. Do not exceed 10mls.
- **Do not aspirate or force, if resistance occurs, ask the patient to lie down on their back and then again on their side. If resistance continues notify Medical Officer. In the community stop procedure and refer client to the emergency department.**
- **Notify Medical Officer if no drainage occurs. In the community refer client to Emergency**
- Document in the patient's health care record and fluid balance chart, the total used for irrigation as well as amount retrieved

NEPHROSTOMY TUBE REMOVAL

Before removal of any type of nephrostomy tube the patient may have a Nephrostogram.

NB: If the patient has a ureteric stent insitu the pigtail nephrostomy tube should be removed in Radiology department under image intensifier to prevent dislodgment of the stent

EQUIPMENT

- Personal protection equipment (PPE)
- Dressing pack
- Stitch cutter
- Sterile normal saline
- Sterile gloves
- Apply pressure dressing (Combine with Hypafix) if there is excessive urine drainage after removal or transparent dressing with absorbent gauze (opside)
- 5ml syringe to deflate the balloon (if Foley Catheter)
- Ostomy or drainage bag (if persistent leakage from site)

PROCEDURE

- Explain procedure to the patient.
- Administer analgesia (if required) prior to the removal of the nephrostomy tube.
- The patient lies on their side on the opposite side of the nephrostomy tube
- Wash hands or use hand rub
- Wear PPE
- Medical Officer/Registered Nurse (experienced in the procedure) removes nephrostomy tube according to type as below

Pigtail

- Cut suture
- Pigtail drain must be uncoiled prior to removal
- Gently remove the drainage bag
- Cut the catheter to release the string that coils the drain in the pigtail formation. Once the pigtail drain has been cut to uncoil the “pigtail”, supporting the surrounding skin, the catheter can be gently removed.
- Apply dressing to the drain site
- If excess leakage occurs apply ostomy or drainage bag
- If any resistance felt abort procedure and seek advice from experienced clinician

Wide bore catheter (Foley type)

- Cut suture
- Deflate balloon with 1-3 mls syringe
- Remove gently

Malecot Catheter (not commonly used)

- Withdraw gently
- If Registered Nurse is removing any type of catheter and if resistance felt, do not force and contact Medical Officer immediately.
- Apply dry dressing to the site
- Following removal of catheter continue to observe site for ongoing drainage and leakage
- If excessive drainage occurs an ostomy bag may be applied over the site
- Educate patient regarding possible leakage from drain site for next 24 hours
- Document procedure in the patient health care record.

PATIENT DISCHARGE

- Provide individualised education to the patient/carers, significant others
- Educate patient/carer to perform tube care under the supervision of a RN before discharge.
- Provide patient/carer with extra 3 drainage bags and 3 drainfix dressings prior to discharge. Normal leg bags are used. The pigtail tubes have an adapter extension that fit normal leg bags.
- Inform patient to arrange an appointment with Medical Officer on discharge. If the tube is to be permanent make a booking in the Radiology Department for routine change every 6 – 8 weeks
- Provide patient/carer with education fact sheet prior to discharge and confirm that they understand the information.
- Refer patient to appropriate services for access to equipment before discharge.
- Refer patient to Community Health Nursing Service to maintain continuity of care.
- Document in the patient's health care record.

FUNDING SCHEMES FOR PRODUCTS

AUSTRALIAN GOVERNMENT FUNDED SCHEMES

These are open to all Australian citizens who meet the eligibility criteria, regardless of which state of Australia they live in.

CONTINENCE AIDS PAYMENT SCHEME (CAPS)

Eligibility Criteria

CAPS is available to people aged five years and over with permanent and severe incontinence due to:

- neurological conditions such as paraplegia, cerebral palsy, multiple sclerosis, spinal bifida or
- permanent and severe intellectual impairment: or
- other causes such as autism, cancer, prostate disease or dementia **and** holds a Pensioner Concession Card (if they are under 16 years of age, their parent / guardian holds a Pensioner Concession Card

Applicants will need to provide a Health Report from an appropriate health professional such as their medical practitioner or continence nurse about their condition.

Eligible CAPS clients receive a sum of money per year on continence products which is lodged into their Bank account

Non - eligibility criteria:

CAPS is not available if the incontinence is one of the following types:

- transient incontinence (not permanent);
- incontinence that can be treated with an existing conservative treatment regime; medication or surgery;
- high care resident in a Australian Government funded aged care home
- They are eligible assistance with continence aids under the Rehabilitation Appliances Program (RAP)n which is available through the Department of Veterans' Affairs
- Receiving an Australian government funded Extended Aged Care at Home (EACH) Package or an extended Aged Care at Home Dementia (EACH D)Package

Further information on eligibility and amount of payment and to obtain an application form contact

CAPS Helpline: Tel: 1800807487

<http://www.bladderbowel.gov.au/doc>

DEPARTMENT OF VETERANS' AFFAIRS (DVA)

The Commonwealth Department of Veterans' Affairs (DVA) provides a range of incontinence products to eligible veterans and ward widow (er) s via the Rehabilitation Appliances Program (RAP). Eligible applicants need to:

- hold a Gold Card ; (eligible for treatment of all conditions whether or not they are related to war service) ;
- hold a White Card and the incontinence is a result of a specific accepted disability;
- have been assessed by a health professional as requiring products for incontinence; or
- products are provided as part of the overall health care management

Gold and White Card holders are not eligible if they are residents receding high level aged care

A form requesting the incontinence products is completed by the assessing Doctor or Continence Nurse Advisor or a Registered Nurse

For all enquiries in regards to continence products and supply arrangements, please Contact the South Australian State Office National Continence Contract Team

Department of Veterans' Affairs

GPO Box 1652

(199 Grenfell St)

Adelaide SA 5001

Phone: 1300 131 945

Or

NSW Dept of Health – Primary Health & Community Partnerships: (02) 9391 9515

Continence Promotion Centre: (02) 8741 5699

FUNDING SCHEMES BY STATE GOVERNMENT IN NEW SOUTH WALES

ENABLE

PROVIDES A SUBSIDY TOWARDS THE COST OF EQUIPMENT COVERING DISPOSABLE AND RE-USABLE CONTINENCE AIDS FOR PEOPLE LIVING IN THE COMMUNITY WHO :

- Have a permanent or indefinite disability
- Have a Health care Card, Health Care Interim Voucher or Pensioner Concession Card
- Are ineligible for assistance from other programs
- Have not received compensation for their injuries or disability, including not being on a Commonwealth Rehabilitation Program or being supplied with aids and appliances under the Motor Accident Act
- Children with a disability and over three years of age

Continence aids are available to people discharged from hospital or acute care.. Clients are required to make a \$100 co-payment each year

Information regards Enable policy is available on the NSW Health website:

Enable: 1800362252

<http://www.health.nsw.gov.au/policie>

Self Funded client can purchase from

- **Chemists:**
- **Bright Sky**
Ph: 1300 88 6601
- Independent Australia:1300788855
- In Touch: 1300134260

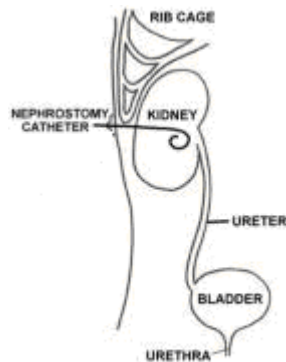
An assessment by a continence nurse advisor is recommended to ensure the most appropriate continence product, including the correct fit and application of the product

REFERENCES

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PATIENT FACT SHEET

A nephrostomy is an artificial opening created between the kidney and the skin which allows for direct drainage of urine from the upper part of the urinary system when normal flow is impeded.



Why do I need a nephrostomy tube?

- You may have a blockage of the ureter (the tube that normally carries urine from the kidney to the bladder).
- There may be a hole in the ureter or bladder causing urine to leak.
- To prepare for surgery or other procedures on the kidney and ureter, such as removal of a large kidney stone

Before the procedure or operation

- You will be given information to prepare you before the procedure or operation.
- Inform your doctor if you are on medications especially blood thinning medication e.g. warfarin or aspirin or Clopidogril. These should usually be stopped 7 to 10 days before surgery as they increase the risk of bleeding. The doctor will inform you when to stop and restart the medications.
- Blood and urine samples will be taken for investigation.

After the procedure or operation

- A dressing will be covering the site of the tube which will be checked by the nursing staff.
- There maybe blood draining from the tube which is normal and will decrease in a few days.
- You should drink 1500mls - 2000mls (6 to 8 glasses of 250mls size) fluid to flush the blood from the kidneys unless otherwise advised.
- Your stay in hospital maybe 2-3 days.
- Generally the tube will be removed before you leave the hospital however you may be discharged with the tube attached to a drainage bag.

How to care for your Nephrostomy tube

- Education to you or a family member of your choice must be provided before leaving the hospital to go home.
- Ask your doctor what is the minimal amount of urine you should expect to pass daily.
- Ask the nursing staff if a community nurse follow-up visit has been arranged.
- Make sure you are provided with drainage bags and given information about how to obtain more supplies

Specific care for your tube

- Empty your drainage bag as required
- Record the amount of urine in your urine drainage bag each time you empty the bag if requested by your doctor
- Drink at least 1500mls - 2000mls (6 to 8 glasses of 250mls size) fluid everyday or as advised by the doctor
- Ensure that tube is kept straight and not bent to allow proper flow of urine
- Keep the tube well secured. Tape to a wafer or comfeel to protect the skin.
-

Dressing around the tube

Dressings around a nephrostomy tube may vary depending on availability. Options include:

- A specialised catheter anchor called a drainfix. This can stay insitu for 2-3 weeks.
- A comfeel wafer placed around the exit site.
- Op site
- Dry dressing
- Waterproof the dressing before shower

Changing your bag

- Change the urine drainage bag every 7 days
- Always wash your hands before and after changing the bag from the nephrostomy tube.
- If another person is assisting with changing your bag they **must** wear disposable gloves and protective eyewear
- Empty your drainage bag into the toilet
- Gently pinch with your fingers the soft nephrostomy tubing to prevent any leakage and gently disconnect your bag
- Connect the new bag and release the tube to allow for urine to drain.
- Make sure your bag is below the level of your kidneys to prevent urine going back into the kidney
- Place your old empty urine drainage bag in a disposal bag before placing it in the household rubbish bin.

When to call your Nurse or Doctor

- The urine amount is below what you were told by your doctor to expect to drain daily.
- Excessive pain (not relieved by medication ordered by your doctor).
- If you have a temperature.
- Chills
- Nausea and vomiting.
- Back pain
- Cloudy and smelly urine.
- Blood in your urine.
- Blood around the tube
- Leaking of urine from insertion site

If the Nephrostomy tube falls out it is essential that it be replaced quickly as the insertion site may begin to close. You will have to go to the hospital Emergency Department immediately for the tube to be replaced.

Ask the Doctor/Nurse the date and day of your next appointment to change or remove the nephrostomy tube

Contact Details:

Family Doctor

Tel No:

Primary Health Nurse

Tel No:

Local Hospital

Tel No: