

**SCOPE:** National

**REFERS TO POLICY AND PROCEDURES 1.01, 1.02 and 1.04**

## **1 GUIDELINES FOR FREQUENCY OF CATHETER CHANGE**

There is no recommended "standard" interval for catheter change. The goal is to change the catheter frequently enough to prevent problems such as obstruction or encrustation or symptomatic infection.

The catheter should be changed no more frequently than needed for the individual client. The length of time a catheter remains insitu can be lengthened at the urologist's or medical practitioner's discretion.

N.B. There may be exceptional circumstances when a catheter change is not considered best practice for an individual client. E.G in the presence of significant pelvic disease.

This should be discussed with the continence nurse, CON, CNCM, consultant or medical practitioner and the alternative decision/management documented.

If the initial catheter insertion was complicated it may **not** be appropriate to change in the community setting.

As a guide, manufacturers recommend:

- Latex catheters with bonded hydrophilic coating or with silver ion coating may remain insitu for up to 12 weeks.
- Latex catheters without coating are valid for 14 days.
- Silicone catheters, with or without hydrophilic coating may remain insitu for up to 12 weeks.
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### **Change catheter when:**

- Planned routine change as per individual assessment and manufacturer's guidelines.
- Blocked or reduced drainage.
- Commencing antibiotic treatment for symptomatic Urinary Tract Infections.
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## **2 POST INSERTION**

### **Reportable issues/complications-**

**Ensure the client+/- the carer is aware of the following and how to contact the Service for guidance**

**The following require urgent escalation to the Team Lead and possible Medical attention.**

- Persistence or worsening of lower abdominal pain.
- Persistent localised pain.
- Any new pain since catheter insertion.
- Bleeding: - frank blood +/- clots
  - Any minor bleeding post insertion and ongoing 12 hours after being initially reported and investigated.
  - Absence of urine flow.
- Signs and symptoms of local or systemic infection: - fever, malodour or onset of confusion.

## **3 MANAGING BLEEDING**

It is not unusual for a small amount of bleeding to be present post insertion of a catheter. This would **not** present as frank blood- blood tinged urine only.

In the presence of any bleeding the following need to be observed: -

- Daily assessment by the nurse until resolved.
- Daily assessment of the urine for presence of blood(worsening/improving) and clots.
- Daily vital signs.
- Fluid balance
- Advise client and carer of plan of care if the situation worsens /is not resolved.
- Transfer to hospital if persistent or escalates to frank blood, changes in vital signs, increased pain or absence of flow.

#### **4 MANAGING/PREVENTING URINARY INFECTION WHEN INDWELLING CATHETER INSITU**

- Ensure the client /carer is aware of signs of infection and how to contact the service.
- Discuss with client/carers appropriate fluid intake.
- Changing the pH of urine with vitamin C or urinary alkalises can be a way of managing bacterial growth in the urine. Prior to recommending this to the client, consult with medical practitioner or continence nurse/advisor to ascertain whether this is an appropriate action for the particular bacteria present. Vitamin C acidifies the urine, urinary alkalises create alkaline urine. Cranberry juice may deter adhesion of e-coli to the bladder and urethral lining.
- Attend perineal hygiene (showing is the preferred method of cleansing) at least daily and after bowel action.
- Maintain drainage system and tubing in a position to facilitate downward flow of urine and prevent stagnation of urine within the catheter and tubing.
- The type of catheter selected can help reduce the rate of infection in some clients. Consult urologist or continence advisor regarding appropriate catheters.
- Maintain closed system of drainage at all times.
- Change entire system (catheter and attached drainage system) when indicated for encrustation, obstruction or signs and symptoms of infection.

**Always change catheter and drainage system on commencement and completion of antibiotic therapy for urinary tract infection.**

#### **5 GUIDELINES FOR MANAGING URINARY BYPASSING OF INDWELLING CATHETER**

Assess catheter for patency:

- blocked catheter - for management see Bladder Lavage CC-NPM-1.06
- kinked tubing
- over full drainage bag
- clamped catheter

Ensure catheter is in the bladder by gentle tension on the catheter to confirm.

Ensure adequate volume of water in the balloon, as per manufacturer's recommendation. Too large a balloon can act as an irritant to the bladder lining causing unstable contractions. A catheter with a balloon volume of 5-10mls is generally recommended.

Assess and manage faecal impaction or constipation. A full rectum can cause pressure on the bladder leading to unstable bladder contractions and can also occlude the catheter.

Increasing the size of the catheter does not usually resolve the problem of bypassing. Consult with continence advisor/medical practitioner before increasing catheter size. Recommended sizes: 12-14fg for adult female and 14-16fg for adult males. Smaller size catheters are required for children and infants; seek advice from referring medical officer or nurse practitioner.

Severe unstable bladder contractions causing bypassing may be managed with anticholinergics. Consult with medical practitioner or continence advisor.

Regular catheter bypassing/blocking should instigate prompt referral to urologist.

## 6 STABILISING OF CATHETERS

Stabilising catheters can reduce:

- Urethral and bladder neck trauma.
- Hypergranulation of suprapubic catheter sites.
- Bypassing caused by the balloon irritating the trigone of the bladder causing unstable bladder contractions.
- Risk of dislodgement.

Catheters should be stabilised using a catheter strap or adhesive anchoring system. If using tape as an adhesive anchoring system, do not tape catheter so it is sitting on the skin as this can cause a pressure ulcer. The tape should be folded so that there is a flap sitting perpendicular to the skin to which the catheter can be tied through a hole in the flap (or the tape folded around the catheter and secured either side).

When choosing attachment site, ensure that there is no tension on the catheter and avoid any looping of the catheter as this can cause stagnation of urine within the tubing and increase the risk of infection. Rotating the attachment site will reduce the risk of skin/tissue trauma.

## 7 URETHRAL HYGIENE FOR INDWELLING URETHRAL CATHETERS

Good perianal hygiene will reduce the risk of a client acquiring an infection via the migration of bacteria on the external surface of the catheter to the bladder.

- The perineal area (female) or groin and penis (male) should be washed at least daily with warm water and after each bowel action. Showering is the preferred method of cleansing.
- After having a bowel action, the client should be educated to wipe them self from front to back to avoid contamination of the catheter with faeces.
- The peri-anal area or penis should be observed regularly for any redness, irritation or ulceration.
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## 8 CARE OF SKIN AROUND SUPRAPUBIC CATHETER

- A suprapubic catheter site should be dry and free of any erythema or rashes. The exit site of the catheter should be washed with warm water during the normal personal care regime and dried thoroughly (or more frequently if required). Showering is the preferred method of cleaning.
- After being insitu for a few weeks, a suprapubic catheter should not require a dressing.

- Any exudate from the suprapubic catheter site should be assessed and managed as appropriate. Common causes are:
  - 1 Lubricious/hydrogel coated catheters have a low friction coating which when in contact with mucous membrane produces a mucous exudate.
  - 2 An allergy to a catheter.
  - 3 Bypassing of urine around the catheter.
  - 4 Bacterial or fungal infections of the skin at the exit site (antibiotic therapy is indicated if cellulitis is evident).
  - 5 Hypergranulation tissue.
- If a dressing is required use a keyhole dressing of appropriate absorbency e.g. gauze or foam dressing and ensure it is changed when absorbency capacity is reached.

## 9 GUIDELINES FOR THE MANAGEMENT OF ENCRUSTATION

Encrustations within the lumen of the catheter are the product of urase splitting enzymes that produce crystals that adhere to the catheter wall and eventually occlude the lumen.

The presence of encrustation is ascertained by cutting into the internal lumen of the catheter after removal and examining the contents.

Encrustation may be caused by acidic or alkaline urine. Check the pH of the urine and ascertain if it is within normal limits. Consult with the continence advisor for guidelines on changing the urinary pH.

Encrustation may occur as a result of certain foods within the diet. Consult with the continence advisor for guidelines on dietary advice.

Ensure clients' fluid intake is adequate (6 to 8 glasses per day for an adult or active teenager, if not contra-indicated by the client's health status/diagnoses.). Regular intake of oral fluids will reduce sediment and encrustation of catheter.

If encrustation is unable to be prevented it will be necessary to predict the life of the catheter and initiate a timetable for changing the catheter prior to the blockage occurring.

## 10 DRAINAGE BAGS

A drainage bag refers to the leg bag connected to the catheter or the 2 litre drainage bag connected to the leg bag overnight (or directly to the catheter if a leg bag is not used) when an indwelling urethral or suprapubic catheter is in situ.

- A leg bag is recommended if the client is ambulant or mobilises in a wheelchair.
- A two litre drainage bag with appropriate holder is recommended if the client is bed bound.
- The drainage bag that is connected to the catheter at time of insertion remains connected until the catheter is changed (unless the bag is faulty and leaks or if it becomes discoloured or malodorous). This ensures a closed drainage system and minimises the risk of ascending infection.
- The drainage bag should always be changed when the catheter is changed.
- The night drainage bag is connected to the leg bag.
- At no time should the drainage bag connected to the catheter be disconnected for washing or attachment of night drainage system.
- Bags should be emptied of urine and disposed of in the general household rubbish. Urine should be disposed of into toilet or sluice.

If a change of the drainage bag is required:

- 1 Attend hand hygiene.
- 2 Apply disposable gloves.
- 3 Disconnect old bag and discard.
- 4 Reconnect new sterile bag without touching tube connector on bag or outlet of catheter.
- 5 Remove and discard gloves.
- 6 Attend hand hygiene.

Leg bags should be secured to upper or lower leg as preferred by client. Securing devices include straps, holders or bags and should be used as per manufacturer's instructions.

### **OVERNIGHT DRAINAGE BAGS**

An overnight drainage bag refers to the drainage system attached to the outlet of a leg bag at night for the purpose of increasing the holding capacity.

- Attend hand hygiene prior to connecting overnight drainage system to the base of the leg bag.
- All overnight drainage bags while connected to the leg bag should be on a recommended hanger or holder.
- After disconnecting from the leg bag in the morning it should be emptied into a toilet or sluice then washed in warm soapy water, rinsed well with clean water and hung to dry with valve open.
- Overnight drainage bags can be reused for 1 month however will require changing sooner if leakage, discolouration or malodour occurs.
- If used, drainage bottles are cleaned as per manufacturer's instructions.
- Drainage bottles can be reused for up to 6 months or as per manufacturer's instructions.
- If a drainage bottle is attached directly to the catheter then a bottle with a non-return valve must be used.

### **EMPTYING DRAINAGE BAGS**

To reduce the risk of the client acquiring an ascending infection via the internal lumen of the catheter, the following steps should be taken when emptying a drainage system.

- 1 Attend hand hygiene.
- 2 Apply disposable gloves.
- 3 Empty urine from drainage system into a clean receptacle. In a residential facility, the receptacle should be sanitised between each resident to prevent cross infection.
- 4 After emptying, close and dry outlet with toilet paper or tissue.
- 5 Urine to be disposed of in toilet or sluice.
- 6 Attend hand hygiene.

## **11 VALVES**

A valve is an appliance attached to the outlet of an indwelling catheter which allows urine to be drained from the bladder on a prn basis, thus negating the need for a drainage system.

- A valve must never be applied unless authorisation has been obtained from the client's urologist or medical practitioner.

- If the client wishes to connect the valve to a drainage system at night, a valve with an attachment for a drainage system must be used. This ensures a closed system is maintained and reduces the risk of infection.
- When a catheter change is attended a new valve is attached after insertion of the new catheter. The valves are single use only (the same as the leg bags).

## **12 CATHETER BALLOONS-INFLATION AND DEFLATION**

- Ensure only sterile water is used for inflation of catheter balloon.
- Determine amount of sterile water to be inserted into balloon from manufacturer's recommendations on package prior to opening. (N.B. this may vary from the amount written on the balloon inflation channel arm). Document amount of sterile water instilled into balloon, size of catheter and size of balloon in millilitres, on the client's care plan.
- Instil exact amount of sterile water recommended by manufacturer into catheter balloon.
- Use only Luer lok™ syringe for balloon deflation.
- Gently attach syringe to inflation channel valve.
- Allow balloon to self-deflate without drawing back.
- If self-deflation fails to occur, gently aspirate 0.5ml of sterile water from the balloon to stimulate self-deflation.
- If 0.5ml is not able to be aspirated as above, insert 0.5ml sterile water into balloon inflation channel to check patency of valve. If patent, allow to self-deflate as above. The balloon valve inflation channel is not to be cut unless ordered by a medical practitioner or urologist.
- If valve is patent and self-deflation does not occur, gently aspirate with syringe to deflate the balloon.
- If the valve is not patent, the balloon does not deflate totally or you are unable to remove the catheter following normal deflation of the balloon, contact your CON/Clinical Nurse Consultant Manager or Clinical Nurse Specialist.
- Silicone balloons do not have a memory and tend to form ridges when balloon is deflated. If unable to remove catheter once balloon deflated, insert 0.5mls sterile water into balloon to smooth out any balloon ridges.

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