



## Community Infection Prevention and Control Policy for Domiciliary Care

# Urinary catheterisation

## URINARY CATHETERISATION

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## URINARY CATHETERISATION

### 1. Introduction

The aim of this guidance is to provide nursing and care staff with research-based evidence, to reduce as much as possible, the infection risks involved with catheterisation and catheter use.

Urinary tract infection (UTI) is the most common healthcare associated infection (HCAI). UTIs account for 19% of all HCAs and between 43% and 56% of these UTIs are associated with urethral catheters. All service users with a urinary catheter are at increased risk of acquiring a UTI and the longer a catheter is in place, the greater the risk.

The risk of acquiring a catheter associated UTI (CAUTI) is associated with the:

- method and duration of catheterisation
- quality of catheter care
- service user susceptibility.

A few days after catheter insertion, micro-organisms may be isolated from the urine, which in the absence of any symptoms of UTI is called bacteriuria. The risk of acquiring bacteriuria increases approximately 5% for each day of catheterisation and within a month of catheter insertion, almost all catheterised service users will develop bacteriuria. Unless the service user develops signs and symptoms of infection, no antimicrobial treatment should be prescribed.

Approximately 24% of service users with bacteriuria develop a CAUTI, of which up to 4% develop a severe secondary infection, e.g., bacteraemia (bloodstream infection), and of these, 10-33% die.

In non-catheterised service users, UTI symptoms are usually frequency of urination and painful urination. Catheterised service users may not experience these symptoms and, therefore, diagnosis may be based on other indicators such as loin or suprapubic tenderness, or a fever.

Host infection risks include immune system compromise, post partum, age and debility.

### 2. Training and monitoring

Nursing and care staff should be trained and competent in the relevant procedures relating to urinary catheters and urine catheter drainage that they undertake in their role, e.g., use, selection, insertion, maintenance and removal of indwelling catheters.

- Adherence to the principles of asepsis (please refer to the Aseptic Technique Guidance) plays a vital role in preventing the transmission of infection in any environment. It is the responsibility of each member of staff who undertakes an aseptic technique to understand the meaning of these principles and to incorporate them into their everyday practice.
- Staff undertaking an aseptic technique should be free from infection, e.g., colds, sore throats, septic lesions.
- It is good practice to undertake peer audits to monitor competency.

A record of training and audit to monitor compliance with these guidelines should be available.

### 3. Assessing the need

- Assessment should take account of the possible sexual, physical, social, psychological and environmental impact of catheterisation.
- The decision to catheterise should be made following a full holistic continence assessment with consideration given to alternative methods of management where appropriate.
- Assess the following service user's needs prior to catheterising:
  - latex allergy
  - length of catheter - standard (male), female or paediatric
  - type of sterile drainage bag and sampling point (urometer, 2 litre bag, leg bag), or catheter valve
  - dignity and comfort.
- Review of the necessity for the catheter should be made at agreed and regular intervals. Further advice can be obtained from your local Continence Nurse Specialist.

### 4. Selection of catheter

- The choice of catheter material is determined by the expected maximum duration that the catheter is to be in situ. Catheters are generally categorised as being for short-term (maximum of 4 weeks duration) or long-term (maximum of 12 weeks duration).
- If the catheter is regularly requiring changing after less than 4 weeks, discuss with your local Continence Nurse Specialist.
- Evidence suggests silver coated (alloy or oxide) catheters reduce the incidence of bacteriuria, but there is insufficient evidence on their effect in

the reduction of CAUTI in short term catheters. These catheters have a duration of 28 days.

- Select the smallest gauge catheter possible with a 10 ml balloon:
  - 6-10 for paediatric
  - 10-12 for a female
  - 12-16 for a male.

This will minimise the factors which predispose to CAUTI:

- urethral trauma
- mucosal irritation
- residual urine.
- Occasionally service users with urological conditions may require a larger gauge catheter and balloon.
- Single use self-lubricating hydrophilic catheters are the recommended choice for intermittent self-catheterisation.

## 5. Catheter insertion

- Catheter insertion should only be undertaken by a practitioner who has received training in the procedure and is deemed to be competent.
- Catheterisation is an aseptic procedure and, therefore, sterile equipment (including a sterile syringe to inflate the balloon) and an aseptic technique must be used.
- The perineum will require cleansing with soap and warm water before commencing the aseptic technique.
- To minimise introduction of bacteria during catheterisation, the urethral meatus should be cleaned using sterile normal saline prior to catheter insertion.
- For both male and female service users, a lubricant or anaesthetic gel from a single use container must be used and inserted directly into the urethra. Anaesthetic gels should be left for the recommended time.
- A new catheter should be used for each attempt.
- Attach the catheter to a sterile closed drainage bag.
- Intermittent self-catheterisation is always an aseptic technique when undertaken by a health and social care worker. When undertaken by the service user, it is a clean technique (where gloves are not required, but strict hand hygiene should be used).

## 6. Documentation

### Urinary Catheter Passport

- The use of a service user held Urinary Catheter Passport will help to provide continuity of care between health and social care providers in both community and hospital settings.
- The required details should be recorded in the Passport for the first catheterisation performed.
- The Passport should then be issued to the service user, who should take the passport to all GP or hospital appointments.
- Each subsequent catheterisation should be recorded in the Passport.
- Information on a Urinary Catheter Passport can be found at [www.infectionpreventioncontrol.co.uk](http://www.infectionpreventioncontrol.co.uk) or contact [ipccommunity@nhdft.nhs.uk](mailto:ipccommunity@nhdft.nhs.uk).

### Service Users Notes

The following details should be documented in the service users' notes (use adhesive label if provided by manufacturer).

- Service user consent.
- Amount of urine drained, description and colour.
- Specimen collected (if required).
- Any problems or service user discomfort.
- Reason for catheterisation or catheter change.
- Date of insertion.
- Catheter size, type, length.
- Balloon size, batch number, expiry date.
- Lubricant used - lot number and expiry date.
- Any history of MRSA in the urine.
- Type of cleansing lotion used.
- Name of person catheterising and signature.
- Implement care plan.

## 7. Drainage bags

Drainage bags may be body-worn, i.e., leg bag, or free standing. There should be effective fixation of the catheter and drainage bag to prevent trauma.

- Maintenance of a closed system is essential to prevent infection.

- Two litre single use drainage bags should be added for overnight drainage in service users with body worn (leg bag) systems, using a non-touch clean technique.
- Body worn (leg bag) systems should be changed weekly (or in line with manufacturer's instructions).

## 8. Catheter care

- The catheter closed drainage system should only be opened for the connection of a new bag every 7 days, as per manufacturer's instructions. More frequent changes always increase the risk of infection.
- When opening the closed system to fit a new bag, a rigorous non-touch clean technique is essential. The tip of the new drainage tube must not be touched before inserting into the catheter.
- Catheter valves are sometimes used for service users with urological conditions as an alternative to a leg bag. They need to be changed every 5-7 days as per manufacturer's instructions, using a rigorous non-touch clean technique.
- Position the urine drainage bag below the level of the bladder to allow good drainage, incorrect positioning, even for a short time, is linked to higher rates of infection. The bag must be kept off the floor.
- For mobile service users, a leg bag should always be used, held in place with a strap to minimise trauma to the bladder neck. The leg bag needs to be the correct size to allow emptying when  $\frac{3}{4}$  full and the inlet tube needs to be the correct length to prevent kinking and/or pressure on the bladder neck.
- Overnight drainage bags connected to a leg bag should be single use. The washing out/reuse of bags is unacceptable practice.
- In a health and social care setting dispose of the catheter and bag as offensive waste if there is no known or suspected infection or dispose of as infectious waste if there is a known or suspected infection. In a service user's own home, it is often acceptable to double wrap and dispose of as household waste (please refer to your local Waste Management Guidance).
- There is no research-based evidence to support the use of antiseptic or antibacterial solutions for cleaning urine drainage bags.
- Do not change catheters unnecessarily, but if the catheter is frequently blocking, bypassing, etc., discuss with your local Continence Nurse Specialist.
- Routine personal hygiene is all that is needed to maintain meatal cleanliness, i.e., a daily bath or shower using liquid soap and warm water. For service users who are unable to bathe or shower daily, the urethral meatus should be washed with liquid soap and warm water by the health



and social care worker daily and also following any incontinent bowel movement.

- Hand washing and wearing non-sterile gloves when performing catheter care is always essential by health and social care worker.

## 9. Bag emptying

- Unnecessary emptying, changing or taking urine samples increases the risk of CAUTI and should be avoided.
- Where possible, educate and encourage the service user to empty their own drainage bag.
- A rigorous non-touch clean technique is required for this procedure.
- Staff should wear a disposable apron and gloves.
- Good hand hygiene and wearing a pair of non-sterile latex, nitrile or vinyl gloves is essential prior to emptying or changing the drainage bag, this procedure always carries a high risk to the service user. Hands must always be cleaned before and after the procedure.
- The bag should be emptied before it becomes completely full, e.g., 2/3 full, to avoid backflow.
- The outlet port should be swabbed with a 70% isopropyl alcohol wipe before and after opening. In health or social care settings, a separate single use clean container should be used for each service user to empty the urine into, which is then emptied and disposed of appropriately. If re-usable containers are used, they must be heat disinfected in a bed pan washer disinfectant.
- In the service user's own home a designated container can be reused to empty the urine into. This must be washed thoroughly after use with detergent and warm water and dried.
- Always avoid contact between the urine drainage bag tap and the container.

## 10. Catheter specimen of urine

A routine catheter specimen of urine (CSU) is **not** necessary from catheterised service users. A specimen should only be obtained:

- if there is a clinical indication for treatment (symptoms of a CAUTI – pyrexia, bacteraemia, pain)
- following catheterisation for retention
- Samples must be obtained from the self-sealing sampling port of the drainage tubing using an aseptic technique, not from the drainage bag.

Never collect a sample of urine from the drainage bag as this does not represent the bacteria in the bladder and could lead to over prescribing of antibiotics.

- Never disconnect the closed system to obtain a urine specimen.
- Wash and dry hands, wear disposable apron and gloves, clean the sampling port with 70% isopropyl alcohol and allow to dry. Use a sterile syringe and needle to puncture the sampling port and obtain specimen.
- Transfer the specimen into a sterile 30 ml container containing boric acid crystals (red top). The specimen must be sent to the laboratory within 2 hours of collection or refrigerated at 4°C until collection, which must be within 24 hours.
- Wipe the sampling port again with 70% isopropyl alcohol.
- Dispose of needle and syringe into a sharps container.
- Remove personal protective equipment and wash hands.
- Complete the specimen request form, including details of the type of specimen, clinical details and symptoms.

## 11. Catheter maintenance solutions

The use of catheter maintenance solutions may be indicated as part of an individualised care plan to prolong the catheter life, remove debris and encrustation in identified service users, and for recurrent catheter blockage. The decision to use a catheter maintenance solution must be made following a risk assessment and advice should be sought from your local Continence Nurse Specialist.

- Bladder/catheter irrigation, installation and washouts do not prevent catheter-associated infections. They actually increase the risk of infection.
- The use of antiseptic solutions such as chlorhexidine is not recommended and may contribute to bacterial resistance.
- If a catheter is blocked/not draining, a catheter maintenance solution could be considered or remove the catheter and re-catheterise.
- Antibiotic prophylaxis when changing catheters should only be used, following discussion with the treating physician or consultant microbiologist, for service users:
  - with a history of catheter associated urinary tract infection following catheter change
  - following traumatic insertion or removal of a catheter, e.g., frank haematuria or two or more failed attempts of catheterisation.

## 12. Suprapubic catheters

The insertion of a self-retaining catheter directly into the bladder via the anterior abdominal wall under aseptic conditions.

Indications for suprapubic catheterisation	<p>Short-term: following urological, gynaecological or other types of surgery.</p> <p>Long-term: as an alternative to urethral drainage:</p> <ul style="list-style-type: none"> <li>• in sexually active adults</li> <li>• in those for whom a urethral catheter has proved problematic or intolerable</li> <li>• in some wheelchair bound people</li> <li>• in those service users for whom urethral route is not possible.</li> </ul>
Catheter selection	<p>For long-term drainage the catheter used is:</p> <ul style="list-style-type: none"> <li>• Hydrogel coated latex 16-18 Ch 10 ml balloon</li> <li>• standard length</li> <li>• for service users with a latex allergy – all silicone catheter.</li> </ul>
<p>Catheter Management</p> <p>The main principles of care and management of the suprapubic catheter are similar to those of the urethral catheter.</p> <p>Prevention of infection is the primary aim with adherence to aseptic technique.</p>	<ul style="list-style-type: none"> <li>• A sterile dry dressing may be required for the first 24/48 hours after initial insertion.</li> <li>• The catheter, as it emerges, must be supported at right angles to the abdomen. Clothing must, therefore, not be too tight.</li> <li>• If a dressing is used as part of routine care, it should be sterile. Dressings are not usually required unless there is a discharge.</li> </ul>
First and subsequent routine catheter change	<p>Within 6 weeks, the suprapubic tract should be established. The first catheter change should be undertaken by the medical team.</p> <p>Catheter changes for long-term catheters can be undertaken 12 weekly by a practitioner who has received training and has been assessed as competent.</p>
Drainage system	As for urethral catheter, although a holster appliance may be more comfortable.

### 13. Additional IPC resources

The North Yorkshire and York Community Infection Prevention and Control (IPC) team have produced a wide range of innovative educational and other IPC resources, including urinary catheterisation, e.g., Urinary Catheter Passport. These resources are designed to assist your organisation in achieving compliance with the Health and Social Care Act 2008 and CQC requirements. Further information on these high quality evidence-based resources is available at [www.infectionpreventioncontrol.co.uk](http://www.infectionpreventioncontrol.co.uk)

### 14. References

Department of Health (2010) *The Health and Social Act 2008. Code of Practice for the Prevention and control of healthcare associated infections*

Department of Health (2007) *Essential Steps to Safe Clean Care Reducing healthcare-associated infections in Primary care trusts; Mental health trusts; Learning disability organisations; independent healthcare; Care homes; Hospices; GP practices and Ambulance services*

Department of Health (2003) *The national plan requiring action to reduce Healthcare associated infections*

European Association of Urology (2012) *Nurses Evidence-based Guidelines for Best Practice in Urological Health Care Catheterisation Indwelling catheters in adults Urethral and Suprapubic*

Ford J, Hughes G and Phillips P (January 2014) *Literature review of silver-coated urinary catheters – draft (SMTL)*

Loveday HP et al (2014) Epic 3: National Evidence Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England *Journal of Hospital Infection* 86S1 (2014) S1-S70

National Institute for Health and Care Excellence (2012) *Infection: Prevention and Control of Healthcare-Associated Infections in primary and community care*

Royal College of Nursing (2012) *Catheter Care RCN guidance for nurses*