



Community Infection Prevention and Control Policy for Care Home settings

Urinary catheterisation

URINARY CATHETERISATION

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1. Introduction

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

At least 23% of **all** infections are due to a urinary tract infection (UTI) and of those, 80% are due to the use of urinary catheters. All people with a urinary catheter are at increased risk of acquiring a UTI and the longer a catheter is in place, the greater the risk. It is important that the need for a urinary catheter should be reviewed by a registered nurse on a regular basis.

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

- Method and duration of catheterisation
- Quality of catheter care
- Resident susceptibility to infection

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 residents will develop bacteriuria.

Approximately 24% of residents 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.

Antibiotic treatment is not required for bacteriuria, unless the resident develops signs and symptoms of a CAUTI. Offensive smelling or cloudy urine is not a symptom of CAUTI.

Diagnosing CAUTI solely on a positive dipstick result is not recommended and can result in inappropriate treatment with antibiotics.

Treating a resident with bacteriuria who has no signs or symptoms of a CAUTI will do more harm than good, with the risk of them becoming colonised with multi-resistant organisms or acquiring *Clostridioides difficile* infection.

2. Signs and symptoms of UTI

In a resident without a catheter, UTI is likely if the resident has two or more of the following symptoms:

- Difficulty or pain passing urine
- Need to pass urine urgently
- New or worsening urinary incontinence
- Need to pass urine more frequently
- Visible blood in urine
- Shivering, chills, or a temperature less than 36°C or above 38°C
- New or worsening confusion/agitation, drowsiness
- Pain in the side of the body or above the groin area

In a resident with a urinary catheter, a UTI is likely if the resident has one or more of the following symptoms:

- Shivering, chills, or a temperature less than 36°C or above 38°C
- New pain or tenderness in the flanks or lower back
- New or worsening confusion/agitation, drowsiness

3. Training and monitoring

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

- Personal care givers looking after residents with indwelling devices are not responsible for giving clinical care, but need to have knowledge of asepsis and an understanding of the importance of not introducing contamination to these devices.
- Adherence to the principles of asepsis (refer to the 'Aseptic technique Policy for Care Home settings') 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 and a record of training and audit should be available. An assessment record and audit tool are available to download at www.infectionpreventioncontrol.co.uk.

4. Assessing the need

- The decision to catheterise should be made following a full holistic continence assessment with consideration given to alternative methods of management.
- Assessment should take account of the possible sexual, physical, social, psychological and environmental impact of catheterisation.
- Where appropriate, refer to your local Continence Nurse Specialist or the resident's GP.
- Assess the resident's needs prior to catheterising:
 - Latex sensitivity
 - Lidocaine sensitivity
 - Type of sterile drainage bag and sampling point (urometer, 2 litre bag, leg bag), or catheter valve
 - Dignity and comfort
 - History and previous catheterisation
- Review of the necessity for the catheter should be made regularly and the catheter removed as soon as possible. Further advice can be obtained from your local Continence Nurse Specialist or the resident's GP.

5. Selection of catheter

Select the type and gauge of catheter to be inserted based on the resident's individual characteristics, including:

- Age
- Gender
- Any allergy or sensitivity to catheter materials
- History of symptomatic urinary tract infection
- Resident's preference and comfort
- Previous catheter history
- Reason for catheterisation
- 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 or the resident's GP.

- 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:
 - 10-12 for a female
 - 12-16 for a male

This will minimise the factors below which predispose to CAUTI:

- Urethral trauma
- Mucosal irritation
- Residual urine
- Occasionally residents with urological conditions may require a larger gauge catheter and balloon. Discuss with your local Continence Nurse Specialist or the resident's GP.
- Single use self-lubricating hydrophilic catheters are the recommended choice for intermittent self-catheterisation.

6. Always

- Use standard infection control precautions.
- Clean hands and wear appropriate personal protective equipment (PPE), e.g. gloves (sterile for catheterisation, non-sterile for catheter care), disposable apron, when dealing with all aspects of catheter care. Safety glasses or a visor should be worn when there is a risk of splashing to the eyes, nose or mouth.
- Dispose of all catheter care items as offensive waste if there is no known or suspected infection or as infectious waste if there a known or suspected infection.
- Clean hands after removing and disposing of each item of PPE, e.g. pair of gloves, apron.

7. 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 residents, 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 after each unsuccessful attempt.
- Catheter balloons must only be filled with sterile water.
- Attach the catheter to a sterile closed drainage bag.
- Intermittent self-catheterisation is always an aseptic technique when undertaken by a care worker. When undertaken by the resident, it is a clean technique (where gloves are not required, but strict hand hygiene should be used).

8. Documentation

Urinary Catheter Passport

- The use of a resident 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 resident, which should be shown at 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.

Resident's notes

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

- Resident consent.
- Amount of urine drained, description and colour.
- Specimen collected (if required) and the reason why.
- Any problems or resident discomfort, the number of attempts.
- Reason for catheterisation or catheter change.
- Date of insertion.

- Catheter brand, size, type.
- Balloon size, batch number, expiry date.
- Lubricant used - lot number and expiry date.
- In men, was any obstruction felt at prostatic area.
- No pain related to balloon inflation, free movement of the catheter once balloon inflated.
- Any history of MRSA in the urine.
- Type of cleansing lotion used.
- Name of person catheterising and signature.
- Implement care plan.

9. Catheter hygiene

Routine personal hygiene for residents, such as a daily bath or shower, is important to maintain catheter hygiene. For residents who are unable to bathe or shower, staff should wash the genital area including around the catheter daily with soap and warm water. For female residents it is important to wash the genital area from front to back to prevent contamination from the anal area (back passage).

10. 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. Refer to the 'Aseptic technique Policy for Care Home settings'.
- Catheter valves are sometimes used for residents 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. Refer to the 'Aseptic technique Policy for Care Home settings'.
- 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 back flow and higher rates of infection. The bag must be kept off the floor.
- Use sufficient catheter fixation devices to stop traction on the catheter which causes bladder irritation.
- For mobile residents, 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 2/3 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.
- Do not change catheters unnecessarily, but if the catheter is frequently blocking, bypassing, etc., discuss with your local Continence Nurse Specialist or the resident's GP.
- The external surface of the catheter should also be cleaned daily with liquid soap and water, in a direction away from the body.
- Unnecessary emptying, changing or taking urine samples increases the risk of CAUTI and inappropriate antibiotic prescribing and should be avoided.
- 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.
- 2 litre single use night bags should be added for overnight drainage in residents with body worn (leg bag) systems, using a non-touch clean technique. Refer to the 'Aseptic technique Policy for Care Home settings'.
- Body worn (leg bag) systems should be changed weekly (or in line with manufacturer's instructions). Each change should be documented in the resident's notes.

11. Bag emptying

- Where possible, educate and encourage the resident to empty their own drainage bag, using a clean technique and effective hand hygiene.
- A rigorous non-touch clean technique is required for this 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. A separate single use clean container should be used for each resident to empty the urine into, which is then emptied and disposed of appropriately. If reusable containers are used, they must be heat disinfected in a bed pan washer disinfectant.
- Always avoid contact between the urine drainage bag tap and the container.

12. Catheter specimen of urine

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

- If there is a clinical indication for treatment (symptoms of a CAUTI – see Section 2)
- Following catheterisation for retention of urine
- Samples must be obtained from the self-sealing sampling port of the drainage tubing. 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
- Clean the sampling port with a 70% isopropyl alcohol wipe and allow to dry. Use a sterile syringe to access the sampling port and obtain specimen
- Transfer the specimen into a sterile 30 ml universal container containing boric acid preservative (red top) which prevents bacteria from multiplying in the container. If the sample is less than 5 ml, a white top universal container must be used as the preservative in the red topped bottle will be too potent for a urine sample of less than 5 ml and may kill off any organisms
- The specimen must be sent to the laboratory as soon as possible or placed in a 'specimen only' fridge at 4°C until collection, which must be within 24 hours
- Wipe the sampling port again with a 70% isopropyl alcohol wipe
- Dispose of the empty syringe as infectious waste
- Complete the specimen request form, including details of the type of specimen, clinical details, any antibiotic treatment and symptoms. Refer to the 'Specimen collection Policy for Care Home settings'

13. Catheter maintenance solutions

Bladder instillations or washouts must not be used to prevent CAUTI.

Evidence does not demonstrate any beneficial effect of bladder irrigation, installation or washout with antiseptic or antimicrobial agents for the prevention of CAUTI. The introduction of such bladder maintenance solutions may have local toxic effects and contribute to the development of antibiotic resistance.

Continuous or intermittent bladder irrigation may be required for other urological or catheter management indications.

- If a catheter is blocked/not draining, remove the catheter and re-catheterise.
- Antibiotic prophylaxis when changing catheters should only be used, following discussion with the GP, for residents:
 - 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 2 or more failed attempts of catheterisation

14. Suprapubic catheters

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

<p>Indications for suprapubic catheterisation</p>	<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"> • In sexually active adults • In those for whom a urethral catheter has proved problematic or intolerable • In some wheelchair bound people • In those residents for whom urethral route is not possible
<p>Catheter selection</p>	<p>For long-term drainage the catheter used is:</p> <ul style="list-style-type: none"> • Hydrogel coated latex 16-18 Ch 10 ml balloon • Standard length • For residents with a latex allergy – use a silicone catheter
<p>Catheter management</p> <p>The main principles of care and management of the suprapubic catheter are similar to for those of the urethral catheter.</p> <p>Prevention of infection is the primary aim</p>	<ul style="list-style-type: none"> • Aseptic technique should be used when cleaning the insertion site until the site has healed (7-10 days) • A sterile dry dressing may be required for the first 24/48 hours after initial insertion • When the insertion site has healed, the site and catheter can be cleaned daily using a clean cloth, soap and warm water • The catheter, as it emerges, must be supported at right angles to the abdomen. Clothing must, therefore, not be too tight

First and subsequent routine catheter change	<p>Within 6 weeks, the suprapubic tract should be established. The first catheter change should be undertaken at hospital.</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.

15. Infection Prevention and Control resources, education and training

The Community Infection Prevention and Control (IPC) Team have produced a wide range of innovative educational and IPC resources designed to assist your Care Home in achieving compliance with *The Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance* and CQC registration requirements.

These resources are either free to download from the website or available at a minimal cost covering administration and printing:

- 29 IPC Policy documents for Care Home settings
- 'Preventing Infection Workbook: Guidance for Care Homes'
- 'IPC CQC Inspection Preparation Pack for Care Homes'
- IPC audit tools, posters, leaflets and factsheets
- 'IPC Bulletin for Care Homes'

In addition, we hold educational study events in North Yorkshire and can arrange bespoke training packages and 'Mock IPC CQC Inspections'. Prices vary depending on your requirements and location.

Further information on these high quality evidence-based resources is available at www.infectionpreventioncontrol.co.uk.

16. References

Department of Health (2015) *The Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance*

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 (October 2017) *Literature review of silver-coated urinary catheters – (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*

Oxford Academic Health Science Network Patient Safety *Reducing UTIs through hydration*

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

Royal Marsden NHS Foundation Trust (2020) *The Royal Marsden Hospital Manual of Clinical and Cancer Nursing Procedures 10th Edition*