Section 11

Infection Control Guidelines for Indwelling Urinary Catheters

Issue No 4, April 2011 - Section 11
On behalf of Infection Control Policy Review Group
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TITLE: INFECTION CONTROL GUIDELINES FOR INDWELLING URINARY CATHETERS

Policy Reference: Issue No 4, April 2011 - Section 11

Scope: Division Wide

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Expiry Date: April 2015

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Policy Application: Throughout NHS Ayrshire and Arran

RESPONSIBILITIES FOR IMPLEMENTATION

Organisation: Patient Services Management Team and Chief Operating Executive

Directorate: Directors

Corporate: Senior Management

Departmental: Head of Ward / Department / Team

Local: All clinical staff

Policy Statement: It is the responsibility of all staff to ensure that they consistently maintain a high standard of practice during the care and maintenance of indwelling urinary catheters in accordance with this guidance.

Review Date: October 2014

Agreed by: Prevention and Control of Infection Committee

Approved by: Dr R G Masterton Date: 21/04/11

Signature / Designation: Executive Medical Director and Chair – Prevention and Control of Infection Committee
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SECTION 11
INFECTION CONTROL MANAGEMENT OF
INDWELLING URINARY CATHETERS

1.0 INTRODUCTION
The following guidance covers those aspects of routine catheter management that relate to infection control. Additional guidance may be necessary in areas where patients are undergoing specialist urological investigation or care.

Rules of urinary catheter care:
▪ Avoid all unnecessary catheterisations
▪ Remove all catheters as soon as possible

For guidance on catheter selection and catheterisation procedures please refer to:
▪ Clinical Guideline No.27 Male Catheterisation
▪ Clinical Guideline No. 28 Supra-pubic Catheterisation
▪ Continence Nurse Advisor for advice.

1.1 Source of bacteria
The source of the bacteria may either be:
▪ Endogenous e.g. patient’s own faecal flora
▪ Exogenous e.g. from the hands of a health care worker.

The catheter not only provides access to the bladder for microorganisms but also provides a site on which they can become established and multiply. All catheters will develop biofilm on the internal surfaces. This biofilm will protect micro-organisms from antibodies, antibiotics, antiseptics and flushing by urine or bladder irrigations.

The principles of catheter management should be directed at interrupting the routes of transmission of both exogenous and endogenous organisms.

2.0 CATHETER STORAGE
To maintain sterility, catheters must be stored in such a way as to protect the outer wrapping. Storing catheters in drawers or wrapped in elastic bands can damage the packaging, compromise sterility and compress the drainage channels. Catheters may also be damaged by heat and ultra-violet light and therefore should be stored on a shelf away from direct sunlight and radiators, within the packaging supplied by the manufacturer. Expiry date should always be checked before use.
3.0 CATHETER MAINTENANCE (see Appendix 1 - HPS CAUTI insertion checklist)
  ▪ Perform a daily review of the need for the urinary catheter
  ▪ Check the catheter has been continuously connected to the drainage system
  ▪ Ensure patients are aware of their role in preventing urinary tract infection
  ▪ Regularly empty urinary drainage bags as separate procedures, each into a clean disposable container

4.0 HAND HYGIENE (See Section 6, Guidelines for Hand Hygiene)
Hands must be decontaminated as per the WHO ‘Your 5 moments for Hand Hygiene’

1. Before touching a patient
2. Before clean/aseptic procedure
3. After body fluid exposure risk
4. After touching a patient
5. After touching a patient surroundings

NB: Gloves do not replace the need to perform hand hygiene

5.0 CATHETER CHANGE
Catheters should not be left in situ longer than the manufacturers’ recommended time. Where possible change should be planned and based on the assessment of the patient history, circumstances and needs. Catheter changes should also take place when encrustation and blockage occur. The times of catheter changes should be clearly documented in the patient notes.

The existence of biofilms in the catheter will allow bacteria to survive antimicrobial therapy given for a UTI. Once treatment has commenced the catheter and the bag should be changed.

6.0 DRAINAGE SYSTEMS
The maintenance of a closed drainage system is the single most important means of preventing infection in catheterised patients.
  ▪ NB Inpatients’ drainage systems should be changed as soon as possible to a leg bag to reduce infection and prevent trauma
  ▪ When a leg bag is used it should be connected overnight to a non-drainable bag
  ▪ When a leg bag is not used then a suitable stand should be used. This will prevent the bag being placed on the floor and ensure there is no traction on the drainage system
• The bag should be securely supported to prevent pulling on the catheter by using straps pouches or holsters

• Patients with a drainable bag should always ensure that the outlet tap does not touch the floor and also ensure when draining the bag the tap does not contact the container

• The urine collection bag must be kept below the level of the bladder to prevent the backflow of urine into the bladder with the exception of the belly bag

• Document clearly in the care plan when catheter bags and valves require to be changed it may also be helpful to document change date on the drainage bag.

All bags should be fitted with a sampling port on the drainage tube to allow the aseptic collection of catheter specimens of urine.

7.0 EMPTYING AND CHANGING THE DRAINAGE BAG

Bag emptying and bag changing presents a high risk of contamination and subsequent infection. It is therefore, important that such interruptions to the closed system are kept to a minimum and when required, performed with care.

This must be done as an aseptic procedure.
• Perform hygienic hand hygiene
• Wear non-sterile gloves and a plastic apron
• Empty the bag directly into a disposable receptacle without contaminating the tap
• Ensure drainage tap is dried at end of procedure
• Urine must be disposed of appropriately e.g. into toilet/macerator
• Any spillages of urine must be dealt with immediately (see Section 3, Appendix 2 of the Control of Infection Manual, Spillages of Blood and/or Body Fluids)

It is important to empty drainage systems; this will maintain urine flow and prevent reflux. Drainage bags must be emptied when they are two thirds full.

When it is necessary to measure urine volumes the urine should be taken to the sluice in a disposable receptacle and poured into a designated measuring jug.

Measuring jugs should NEVER be used to empty the patient’s urinary catheter bag.
The jug should be washed using warm water and neutral general purpose detergent and dried thoroughly. Alternatively, it can be thermally disinfected in a washer disinfector if such equipment is available in the sluice.

Catheter bag changes should be carried out in the following instances:
- As per manufacturer recommendations
- When there is evidence of discoulouration, damage, odour or sedimentation
- When changing the urinary catheter

As with all catheter care, bag changes should be carried out aseptically.

Any waste from these procedures should be disposed of as per the NHS Ayrshire and Arran Waste Policy.

8.0 SUPRAPUBIC CATHETERS (see Clinical Guideline No.28 Suprapubic Catheterisation)

The above principles also apply to patients who have an indwelling suprapubic catheter. Strict aseptic technique must be adhered to when caring for a patient with a supra-pubic catheter as there is a potential risk of developing urinary tract infection.

It is recommended that patients should drink at least 3000 mls of fluid per day (unless contraindicated) in order to maintain an adequate urinary output. This encourages drainage and reduces the risk of urinary tract infection.

A newly inserted supra-pubic catheter should be changed at 6 weeks, by the appropriately trained nurse. The subsequent changes of catheter should be at 12 week intervals or depending on individual need and catheter material as per manufacturer guidelines.

9.0 BLADDER WASHOUTS

A clearly defined rationale is required before a bladder washout is given. Bladder washouts must be performed as an aseptic procedure.

10.0 SIGNS OF INFECTION

Any signs of UTI in patients with catheters include: fever, flank or suprapubic discomfort, change in voiding patterns, nausea, vomiting, malaise or confusion. Symptoms must be reported to medical staff and a catheter specimen of urine obtained before treatment is commenced.

Routine specimens should not be sent from asymptomatic patients.
11.0 OBTAINING SPECIMENS FOR MICROBIOLOGICAL INVESTIGATION

Routine specimens of urine for microbiological investigation are not required from patients with catheters. A specimen should only be obtained if there are signs and symptoms of a urinary tract infection in patients with catheters (See section 10.0 above). Symptoms must be reported to medical staff.

Urine samples should only be sent for laboratory culture if the patient has clinical sepsis, not because the appearance or smell of the urine suggests that bacteriuria is present.

Following suitable hand decontamination catheter specimens of urine should be obtained from the sampling port on the catheter bag tubing, using an aseptic procedure. Specimens should not be obtained by disconnecting the catheter from the drainage tube as this breaks the closed system and will allow the entry of micro-organisms. The collection of specimens via the bag tap will only show that micro-organisms are present in the bag, not in the patient.

- Select appropriate PPE
- Clean sampling port with 70% isopropyl alcohol
- Allow 30 seconds for alcohol to dry
- Insert a sterile needle to the port and withdraw required volume of urine (If there is insufficient urine available to obtain a specimen, then the catheter bag tubing should be clamped below the sampling port to allow the collection of a suitable quantity of urine)
- Care should be taken to avoid a needlestick injury during this procedure
- Place the urine in a universal container containing boric acid (This will prevent rapid growth of any bacteria present in the urine that may lead to a misdiagnosis in the laboratory)
- Complete the request form with all the relevant patient data including antibiotic therapy and the tests required
12.0 REFERENCES


## CAUTI Maintenance Bundle

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<th>Sample</th>
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<th>4</th>
<th>5</th>
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<tr>
<td>The UC has been continuously connected</td>
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<tr>
<td>The patient is aware of his/her role in minimising the risk of developing a urinary tract infection, or daily meatal hygiene has been performed by nurses*</td>
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<tr>
<td>Empty UC bag often, as a separate procedure, into a clean container</td>
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<td>Hand hygiene performed and disposable apron and gloves worn before &amp; after procedure</td>
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<td>Leave in situ</td>
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*Improving process to improve outcome.*

Assumes ongoing checks for obstruction and monitoring for signs of infection (including observation for/inspection of): urine flow; urine clarity, patient discomfort or fever. And the referring of any abnormal findings to the medical team.

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