

<p>Policy and Protocol for Indwelling Catheterisation</p>
--

Policy History			Document Information	
Issue	Nursing Approval	Board Approval	Author:	Hilary Oliver / Liz Holmes / Lynn Leaver.
1.0	June 2001	June 2001	Review Date:	Dec. 2006
2.0	PEC Approval		Reviewer:	Continence and Infection Control Teams.
	Oct. 2002			
3.0	ICC Approval	C. Gov. approval	Last edit date	May 2004
	Dec. 2003	awaited		NP 14

Policy and Protocols for Adult Male, Female and Children Urethral Catheterisation, Suprapubic Catheterisation and Catheter Care

Contents List

1.	Introduction.....	3
2.	Rationale.....	3
3.	Criteria for performing the Procedure.....	4
4.	Expectations of the Nurse.....	4
5.	Indications for a qualified nurse to perform male or female indwelling urethral catheterisation	5
6.	Indications for using a Suprapubic Catheter	5
7.	Exclusions and contra-indications for a nurse carrying out catheterisation.....	5
8.	Catheterising for the First Time in One Particular Care Episode.....	5
9.	Caution should be exercised in patients with certain conditions.....	6
10.	Infection Control Aspects of Catheterisation.....	6
	Protocol for Female Urethral Catheterisation.....	10
	Protocol for Male Urethral Catheterisation	11
	Protocol for Supra-Pubic Recatheterisation.....	13
	Appendix 1 Choice of Catheter	14
	Appendix 2 Catheter: Balloon Size and Length	15
	Appendix 3 Problem Solving.....	16
	Appendix 4 Use of Bladder washouts or Catheter Care Solutions	17
	Appendix 5 Recording Catheterisation and Catheter Care	18
	Appendix 6 Flow chart -Risk Assessment for Antibiotic Cover	19
	Appendix 7 Patient / carer information sheet- hand hygiene.....	20,21
	Appendix 8 Catheter record form.....	23
	References.....	24

Policy Statement

This policy and protocol is for indwelling urethral and suprapubic catheterisation and catheter care for male and female adults and children.

1. Introduction

- 1.1. In this policy catheterisation is the passing of a catheter into the bladder via the urethra or a cystostomy (suprapubic). It may be:
 - The insertion for the first time of a urethral foley catheter
 - Routine or emergency change of a urethral foley catheter
 - Routine or emergency change of a suprapubic foley catheter
- 1.2. Catheterisation may be for short or long term bladder management.
- 1.3. Intermittent catheterisation should be used in preference to an indwelling catheter if it is clinically appropriate and practical option for the patient.(NICE 2003) .
- 1.4. For intermittent catheterisation please see the policy and protocols for intermittent catheterisation of male and female adults and children.
- 1.5. In children instructions from the discharging hospital are to be followed.

2. Rationale

- 2.1. The individual nurse practitioner is accountable for their practice under the guidance of the NMC Code of Professional Conduct 2002. Therefore, under no circumstance should a nurse, midwife or health visitor undertake male or female catheterisation unless he or she is competent to do so. It is the responsibility of the individual nurse to inform his or her manager if they do not have the appropriate training.
- 2.2. Catheterisation is an invasive procedure and should only be performed when necessary and after alternative methods of management have been considered after individual assessment. A urinary catheter must only be inserted for the first time after medical consultation and diagnosis.
- 2.3. It has been estimated that urinary tract infection accounts for approximately 15% of all community acquired infection and 25% of all hospital acquired infections (Emmerson et al. 1996).
- 2.4. In the United Kingdom approximately 40-50,000 catheterised patients per annum develop septicaemia due to urinary tract infection. For a small but significant number of these patients (approx. 500 per annum) this can prove fatal (Clifford 1982).
- 2.5. Approximately 50% of all patients catheterised for more than 48 hours will develop a bacteriuria that can lead to further septic complications. This rises to approximately 90% of patients after 17 days of catheterisation (Crow et al, 1986). However a significant proportion of infections are believed to be preventable by adopting appropriate infection control precautions.
- 2.6. The source of infection can be either endogenous or exogenous. Endogenous i.e. self-infection from the patients owns bacterial flora i.e. skin or bowel flora. Exogenous i.e.cross infection from an external source via

contaminated hands of a carer, contaminated environment or equipment such as jugs, commodes, gloves etc.

2.7. The possible entry points for micro-organisms to enter the closed urinary drainage system include:

- Drainage outlet tap
- Junction between the catheter and drainage tubing
- Sample port
- The urethral meatus (ascending along the outside or inside the lumen of the catheter)

2.8. All equipment must be used according to the manufacturer instructions. Deviation from this will create liability on the part of the nurse/doctor and could put patients at risk. Nurses must ensure that the patient or carer is taught how to use the equipment appropriately.

2.9. Nurses are accountable for ensuring that they promote and protect the interests and dignity of patients and clients irrespective of gender age race ability sexuality economic status lifestyle culture religious and political beliefs.(NMC Code of Professional Conduct 2002)

3. Criteria for performing the Procedure

3.1. A qualified nurse may carry out these procedures if they can demonstrate competence. This includes full and part time staff and those on Trust and agency contracts.

3.2. A qualified nurse who can demonstrate competence can delegate these procedures to carers, relatives or patients as appropriate ensuring their competence is assessed and reviewed. The qualified nurse will remain responsible at all times.

3.3. Male/female catheterisation is considered to be a nursing procedure that may also be carried out by other health care professionals

4. Expectations of the Nurse

4.1. Cultural and religious beliefs must be considered before performing catheterisation.

4.2. Informed consent must be obtained. Catheterisation has the potential for abuse and assault.

4.3. The patient's sexual activity must be considered where the catheter is long term as this may influence the type of catheterisation chosen.

4.4. Careful assessment should be carried out offering patients choices such as intermittent catheterisation and the use of valves instead of continuous drainage.

4.5. Check for allergies – latex, soap (lanolin) before proceeding. These must be recorded.

5. Indications for a qualified nurse to perform male or female indwelling urethral catheterisation

- 5.1. Relief and management of acute or chronic retention of urine due to physical or neurological obstruction. (Mallett & Bailey 1996, Royal College of Physicians 1998, Colley 1999.)
- 5.2. Incomplete bladder emptying (Royal College of Physicians 1998).
- 5.3. In the management of urinary incontinence, but only as a last resort (Mallett & Bailey 1996, Royal College of Physicians 1998, Colley 1999).
- 5.4. For pre and post-operative urine drainage.
- 5.5. For accurate measurement of urinary output in the seriously ill patient.
- 5.6. Clients with neurological diseases, e.g. paralysis, spinal cord injury, multiple sclerosis, cerebral vascular accident must only be catheterised if they have one of the above (5.1 –5.5) conditions
- 5.7 The patients clinical need for catheterisation should be reviewed regularly and the urinary catheter removed as soon as possible

6. Indications for using a Suprapubic Catheter

- 6.1. Unable to pass a urethral catheter and the patient is in acute retention of urine
- 6.2. In patients who are sexually active requiring a long-term catheter.
- 6.3. For ease of promoting normal voiding following gynaecological surgery
- 6.4. To minimise urethral trauma in long term catheterised patients

7. Exclusions and contra-indications for a nurse carrying out catheterisation

- 7.1. Lack of consent on the part of the patient. Patient objects to opposite sex carrying out the procedure.
- 7.2. Specific medical instructions that catheterisation is not to take place.
- 7.3. Known urethral obstruction.
- 7.4. If a patient gains sexual satisfaction from catheterisation and the nurse performing it finds it embarrassing, then medical consultation is advised with the inclusion of the patient.

8. Catheterising for the First Time in One Particular Care Episode

- 8.1. The decision to catheterise a patient ideally should be made jointly by the patient, nurse and doctor.
- 8.2. It must be made following a medical diagnosis and prescription clearly identifying the necessity for catheterisation.
- 8.3. Good Clinical Practice will identify patients where unnecessary risks may be taken by a nurse catheterising a patient in their own home.

- 8.3.1. Patients who have a suspected or known residual volume of urine must not be left on his or her own after the procedure. He or she may collapse.
- 8.3.2. Frail patients may collapse. There is a risk of haemorrhage particularly in a patient in acute retention.
- 8.3.3. In chronic or acute retention, there may be altered blood chemistry, either before or after draining the bladder that may induce a systemic collapse in the patient.

8.4. If in any doubt, arrange for the patient to be in a controlled environment before catheterising – usually hospital.

9. Caution should be exercised in patients with certain conditions.

9.1. These include:

- Known urethral stricture
- Previous difficult catheterisation
- Active inflammation of the lower urinary tract, e.g. symptomatic urinary tract infection, prostatitis, cystitis.
- Recent surgery to the lower urinary tract.
- Trauma to the pelvis or abdomen.
- Carcinoma of the lower urinary tract.
- Immuno-suppression
- Recent radiotherapy to the lower urinary tract.
- Tissue fragility
- Haematuria
- Known history of abuse
- Congenital abnormalities.
- Penile/vaginal pain (urethral catheterisation)
- Penile/vaginal bleeding or discharge.(urethral catheterisation)
- Patients who have a heart valve lesion, septal defect, patent ductus or prosthetic valve
- Patients with a history of catheter-associated urinary tract infection following catheter change.

9.2. If any of the above are present contact the Continence Advisor for advice.

9.3. Seek urgent medical advice for patients with spinal injury because of autonomic dysreflexia.

10. Infection Control Aspects of Catheterisation

10.1. The single most important infection control measure concerning urinary catheters is to avoid using them wherever possible. Alternatives to indwelling urinary catheterisation such as continence management and penile sheaths etc. **must always** be considered prior to catheterisation. Removal of the catheter at the earliest stage also reduces the risk of complications (Brummitt et al, 1998)

10.2. Hand washing must be performed before and after all catheter care (see the Trust Infection Control Policy **ICC 1** and appendix 7)

10.3. Appropriate selection of catheter material and size (see pages 14,15.) will also help reduce the incidence and impact of infection by minimising trauma and irritation of the urinary tract.

10.4. Catheter Insertion

- Where a member of health care staff inserts an indwelling urinary catheter an aseptic technique must be used. Hands must be washed hygienically (using an antiseptic) prior to insertion, and sterile gloves must be worn. A non-touch technique and sterile equipment is also required (Mallett and Bailey, 1996)
- Where a one to one carer or patient is carrying out catheter insertion in their own home, a clean technique is required.
- The periurethral area must first be washed with soap and water then sterile normal saline prior to catheterisation. Individual single use sachets of sterile normal saline must be used to avoid contamination (Jenner, 1983)

10.5. Maintenance of a closed drainage system

- After insertion of the catheter, strict maintenance of a sterile closed drainage system prevents bacteria from colonising the catheter bag and ascending up the lumen of the catheter into the bladder (Brumfitt, Hamilton-Miller and Bailey, 1998). Increased frequency of disconnection of the drainage tube from the catheter has been associated with increased rates of bacteriuria (Garibaldi et al, 1974). Thus disconnection of the catheter and drainage tube must be avoided unless essential. Routine prophylactic bladder washout is not therefore recommended. Where bladder washout is required, an aseptic technique must be used. Bladder instillations or washouts must not be used to prevent catheter associated infections. (See Appendix 4)
- Urine specimens must be obtained aseptically via the sampling port only. The port must be cleaned using an alcohol swab prior to sample collection.

10.6. Catheter bags

- Urine collection bags (leg bags) must be changed according to manufacturerd instructions (usually every 7 days -DoH guidelines drug tariff) or if the bag is damaged or leaking or if clinically indicated (NICE 2003 and Checko et al, 1991). Link systems for overnight drainage are recommended, as the closed system is maintained. In a care setting overnight drainage bags must be single use only, and disposed of after each use due to the increased risk of cross contamination. However, within the client's home, reusable overnight bags can be used. These must be rinsed and stored as dry as possible in a clean area when not in use, and must be changed every 5-7 days (Reid et al, 1982). However, disposable single use overnight bags are preferable.
- Urine collection bags must be kept below the level of the bladder to prevent reflux. However, they must never be allowed to touch the floor. They should be emptied frequently enough to maintain urine flow and prevent reflux, and changed when clinically indicated. A disinfected jug / receptacle must be used for emptying each bag, using a non-touch technique to minimise contamination. The drainage tap must be left dry following drainage.

- 10.7. Meatal Care
- Meatal care and observation is best undertaken during normal daily hygiene using unperfumed soap and water, and disposable wash cloths (Classen et al, 1991). The catheter and surrounding area must be washed in a direction away from the meatus to minimise bacterial contamination. Routine use of antiseptics must be avoided to help prevent possible development of resistant bacteria.
 - Indwelling catheters must be properly secured after insertion with a catheter strap, as movement promotes the migration of micro-organisms from the external meatus to the bladder, via the space between the urethral mucosa and the catheter (Garabaldi et al, 1980). The peri-urethral area must be kept as clean and dry as possible.
- 10.8. Fluid Intake
- Clients should be instructed to drink sufficient fluids to produce an adequate flow of urine. In adults this is approximately 2.5 litres if urine every 24 hours. However, a large fluid intake may be contra-indicated for some clients e.g. those with cardiac or renal failure.
- 10.9. Client and carer education
- In order to manage their catheters and urine drainage systems efficiently and to minimise problems such as urinary tract infection, all clients / carers require continued education / teaching and support regarding effective hand washing, changing and emptying catheter bags etc. (Roe, 1990) See appendix 7 for patient information sheet on hand hygiene.
- 10.10. Use of gloves
- Disposable gloves must be worn when in contact with any body fluid
Face masks and eye protection must be worn where there is a risk of blood, body fluids, secretions or excretions splashing into the face and eyes. (See the Trusts Infection Control policy for standard/universal infection control precautions and use of protective clothing. ICC10)
- 10.11. Weekly PH.
- Urine leaving the kidneys is normally sterile and acidic, with a PH in the region of 6.0 (range 4.5 - 8.5) depending on diet, medication and the acid/ base balance within the body. However in the presence of certain micro - organisms, an alkaline urine results (commonly 7.5-9.5). Therefore the PH with encrusted catheters can be higher than the PH of urine flowing from a newly inserted catheter. It is recommended that testing the PH of urine is carried out weekly when the leg bag is changed in order to detect if there is a possibility of the catheter encrusting.
- 10.12. Catheter associated urinary tract infections
- Antibiotic therapy for clients with indwelling catheters and bacteriuria is not recommended unless the client has symptoms of a urinary tract infection. Where the patient is asymptomatic, antibiotics should be avoided in order to prevent the selection of resistant strains of colonising organisms.
 - Where the client has a symptomatic urinary tract infection, removal of the catheter must always be considered.
 - Encrustation of the catheter causes trauma to the delicate lining of the urethra. There can therefore be a risk of bacteraemia when an

encrusted catheter is removed (Jewes et al, 1988, Bregenzer et al, 1997 and Olson & Cookson, 2000).

- Antibiotic prophylaxis when changing catheters should only be used for high risk patients i.e. those with a history of catheter - associated urinary tract infection following catheter change, or for patients who have a heart valve lesion, septal defect, patent ductus or prosthetic valve. (NICE 2003) If antibiotic cover is deemed necessary a single dose of Augmentin (625mg) or, if allergic to penicillin, Ciprofloxacin (500mg) should be given. If unable to tolerate oral medication, I.M. Gentamicin (80 mg) can be given. Antibiotic cover should be given 1/2 - 1 hour before the catheter change. Antibiotics should not be given more frequently than weekly.

Protocol for FEMALE Urethral Catheterisation (Adults and children)

1. Observations prior to catheterisation to be noted and recorded
 - Urine whether clear or cloudy, colour, content, smell, blood clots, amount and where necessary urinalysis (Collect CSU and await result or seek medical advice).
 - Type and use of all drainage equipment, and whether used correctly
 - Any abnormalities of the meatal area
 - Meatal and foreskin hygiene.
 - Meatal erosion, bleeding, discharge, sores, inflammation.
 - Vaginal pain, irritation, or discomfort.
 - Skin condition-groin and vaginal area.
2. Wash hands thoroughly and put on gloves.
3. Get all equipment ready and lay out sterile field.
4. If changing the catheter deflate the balloon by attaching a syringe to the valve. There may not be as much as 10 mls to be withdrawn as some water may have been lost due to osmosis.
5. Withdraw the catheter and observe carefully for:
 - Encrustation
 - Deterioration
 - Blockage for other reasons and record these observations afterwards.
6. Cleanse the vulval area with soap and water
7. Wash hands with antiseptic and put on sterile gloves
8. Use an aseptic technique.
9. Cleanse the vulval area with normal saline(sterile - single use container)
10. Identify the urethral meatus and gently insert local anaesthetic gel (4 ml) (from a single use container). Wait 3-4 minutes.
11. Insert the catheter until urine flows – approximately 6 cm in adults. Continue to insert for another 1-1.5 cm and inflate the balloon as per the manufacturer's instructions.
- 11b. In children this is dependant on age and size
12. Attach the catheter to the leg with a catheter strap to prevent traction.
13. Attach the drainage bag or valve to the end of the catheter.
14. Wash hands with soap and water.
15. Record in the patient's notes details of catheter and catheterisation.

Protocol for MALE Urethral Catheterisation (Adults and children)

1. Observations prior to catheterisation to be noted and recorded
 - Urine whether clear or cloudy, colour, content, smell, blood clots, amount and where necessary urinalysis (Collect CSU and await result or seek medical advice).
 - Type and use of all drainage equipment, and whether used correctly
 - Any abnormalities of the meatal area
 - Meatal and foreskin hygiene.
 - Meatal erosion, bleeding, discharge, sores, inflammation.
 - Paraphimosis.
 - Balanitis.
 - Penile pain, irritation, or discomfort.
 - Scrotum-hydrocele, orchitis, swellings.
 - Skin condition-groin, scrotum and shaft of penis.
2. Wash hands thoroughly and put on gloves.
3. Get equipment ready and lay out sterile field.
4. Explain the procedure to the patient and that he may particularly feel the catheter passing through just before it reaches the bladder.
5. If changing the catheter, deflate the balloon by attaching a syringe to the valve. There may not be as much as 10 ml. (or 3- 5 mls in children sizes) to withdraw as some water may have been lost due to osmosis.
6. Withdraw the catheter and observe carefully for:
 - Encrustation
 - Deterioration
 - Blockage for other reasons and record these observations afterwards.
7. Retract the foreskin if uncircumcised and cleanse the meatus with soap and water
8. Wash hands again with antiseptic and put on sterile gloves.
9. Use an aseptic technique.
10. Retract the foreskin if uncircumcised and cleanse the meatus with sterile normal saline (sterile - single use container)
11. Hold the penis at an angle of 45 degrees and slowly insert local anaesthetic gel – 10 mls (from a single use container). Continue to hold the penis for 3-4 minutes to ensure anaesthesia and lubrication of the urethra. In children instructions from the discharging hospital are to be followed.
12. Insert the catheter into the urethra and pass gently through until urine starts to flow. Resistance may increase as the catheter passes through the prostatic urethra. Ask the patient to cough or “bear down”.

If the catheter will not pass quite easily, discontinue the procedure and call for medical assistance.

13. Continue to insert the catheter to its bifurcation to ensure the balloon is through the prostatic urethra. Inflate the balloon with sterile water as per the manufacturer's instructions.' The patient will show no reaction. If the patient complains of pain, deflate the balloon immediately because it will probably be still in the prostatic urethra. Insert the catheter until it is passed to the bifurcation of the catheter and inflate the balloon.
14. Replace the foreskin.
14. Gently withdraw the catheter until there is resistance
15. Attach the catheter to the patient's leg by using a catheter strap to prevent traction on the bladder neck.
15. Attach a drainage bag or valve.
16. Wash hands with soap or water.
17. Record details of catheter and catheterisation in the patient's notes.

Protocol for Supra-Pubic Recatheterisation (Adults and children)

1. Observations prior to catheterisation to be noted and recorded
 - Urine whether clear or cloudy, colour, content, smell, blood clots, amount and where necessary urinalysis (Collect CSU and await result or seek medical advice).
 - At cystostomy site – discharge granulation, inflammation. (Suprapubic)
 - Type and use of all drainage equipment, and whether used correctly
2. Wash hands thoroughly and put on gloves.
3. Get equipment ready and lay out sterile field.
4. Cleanse the cystostomy site with soap and water.
5. Deflate the balloon by attaching a syringe to the valve.
There may not be as much as 10 mls in adults or 3-5 mls in children to be withdrawn as some water may have been lost due to osmosis.
6. Withdraw the catheter and observe carefully for:
 - Encrustation
 - Deterioration
 - Blockage for other reasons
 - Note length of the catheter beneath the cystostomy site so that you can tell how far to put the catheter back in by.
7. Record these observations afterwards.
8. Wash hands again using antiseptic and put on sterile gloves.
9. Use an aseptic technique.
10. Cleanse the cystostomy site with soap and water
11. Cleanse the cystostomy site with sterile normal saline.(from a single use container)
12. Lubricate the catheter with gel.(sterile from a single use container)
13. Insert the catheter until urine drains out – you may have to wait for a few minutes.
14. Insert it a little further, and then inflate the balloon as per manufacturer's instructions.
15. Attach the catheter to the abdominal wall with a catheter strap.
16. Attach the drainage bag or valve to the end of the catheter.
17. Wash hands with soap and water.
18. Record in the patient's notes details of the new catheter (see appendix 5)

N.B. A suprapubic catheter may be larger than a urethral catheter. Usually in adults the catheter is CH. Size 16-18 but it can be size 20 in some cases. In children the instructions from the discharging hospital is followed.

Appendix 1 Choice of Catheter

Material	Time Limit in Situ	Comments
PTFE Coated Latex	Up to 18 days	<ul style="list-style-type: none">• Soft and flexible• high surface friction discomfort on insertion and removal• causes more urethral tissue inflammation (Bruce et al 1974)• absorption of water and body fluids by latex may lead to an increase in overall diameter and reduction in the size of the lumen (Getliffe 1997)
Hydrogel-coated Latex	Up to 12 weeks	<ul style="list-style-type: none">• absorb aqueous fluids, so producing a slippery surface, reducing trauma on insertion and withdrawal• has been associated with fewer episodes of urinary by-passing and may be retained in situ significantly longer than silicone-elastomer coated catheters (Bull et al 1991)
100% Silicone	Up to 12 weeks	<ul style="list-style-type: none">• minimises tissue irritation (Talya et al 1990, Nacey et al 1986)• allows the slow diffusion of water, in time leading to deflation of the balloon• because there is no coating, the size of the lumen is greater relative to the external diameter –size. This facilitates more effective drainage and will remain patent longer in-patients whose catheters persistently block (Morris & Stickler 1998).

Appendix 2 Catheter: Balloon Size and Length

1. Key message – use the smallest size of catheter which allows good drainage.
2. In adults Size 12 ch. – will drain normal quantities of urine produced by a normal diuresis – if clots, debris or rapid encrustation are present, then a larger size may be indicated (Getliffe 1997). In children the discharging hospital will determine the gauge, dependent on assessment of the child's individual characteristics and predisposition to blockage.
3. In adults Size 10-ml balloon and children 3-5ml balloon – will retain the catheter in the bladder. Larger balloon sizes (30 mls) should be avoided. Not only is there an increased risk of damage if large balloons are expelled, but they also tend to sit higher in the bladder, allowing greater residual urine to collect below them, which may result in urine leakage and greater bacterial growth.
4. Large catheters and balloons are believed to increase bladder irritability, causing spasm and leakage of urine round the catheter. The urethral glands may become occluded, allowing accumulation of debris, which contributes to catheter blockage (Blandy & Moors 1989; Kennedy et al 1983).
5. Large catheters may also exert greater pressure against the urethral or bladder wall, giving rise to potential ulceration and possible structure formation (Getliffe 1997).
6. Where possible, females should be offered female length catheters. This will prevent pooling of urine in the catheter. However females with large thighs, those in wheelchairs or bed rest will use a standard length. Males will always use a standard length catheter.
7. Catheters must be changed within the time limit stated by the manufacturer (see appendix 1), even if there are no apparent problems the catheter may deteriorate in the bladder after that time or the balloon/valve may deteriorate. Failure to comply will mean that product liability will no longer be the responsibility of the manufacturer, but will rest with the nurse responsible for planning care.

Appendix 3 Problem Solving

Urinary bypassing – Urethral Catheters

Check that: -

- The patient is not constipated
- The catheter and drainage system is always kept below the level of the bladder.
- The drainage bag is not allowed to fill to near capacity.
- There are not kinks in the system.

If the patient is in pain or discomfort

- Check for signs of infection
- Anticholinergic treatment
- If the size of the catheter is bigger than 12 ch, then change it to a smaller size.
- May be caused by bladder stones, therefore if symptoms persists, request medical advice, asking for investigation to be done.

No drainage

Check that: -

- The drainage system, including the catheter is below the level of the bladder.
- There are no kinks in the system
- The bag is empty
- Check for constipation
- Ask the patient to move and try gently squeezing the catheter (“milking”)

If the above solutions are unsuccessful in solving the problem **then change the catheter.** Inspect for encrustation or other reason for blockage and record.

The balloon does not deflate

- Try a different syringe and leave it on the valve end of the catheter for several minutes.
- Check for constipation – a full bowel can occlude the inflation channel.
- Insert a small amount of sterile water (1 ml) into the inflation port to dissolve any debris.
- Seek medical advice.

Appendix 4 - Use of Catheter Maintenance Solutions

Bladder instillations or washouts must not be used to prevent catheter - associated infection.

In children the discharging hospitals instructions are to be followed.

When using catheter maintenance solutions a sterile technique must be used, but because the closed drainage system is broken, there is inevitably a risk of introducing infection. Their use should therefore be kept to a minimum. All catheter maintenance solutions must be single packed single use items designed for this use. The solution is **only** allowed to flow into the bladder using gravity by elevating the container. No pressure should be applied which may damage the bladder mucosa.

Suby-g

Only use if encrustation reoccurs.

Patients have been identified as “Blockers or Non Blockers” (Getliffe 1994), and acid reagent solutions are only indicated for “blockers”. -I.e. those whose catheters become encrusted. Therefore, it is necessary to identify patients who block with encrustation by changing the catheter the first time it does not drain before embarking on the use of these products.

It may be necessary to observe more than one catheter on removal before being certain that encrustation is present.

Only small amounts of solution are required. A catheter holds about 4 mls and the purpose of the procedure is to dissolve salts at the tip of the catheter. No more than 30 - 50 mls should be used. The bladder mucosa may be damaged by frequent exposure to large amounts of the solution. (Getliffe 1994).

Catheter maintenance solutions must only be used as part of an individual Care Plan to treat encrustation. The less frequent their use, the better for the patient. Use no more than 3 times per week and leave 24hours break between each instillation.

Solution R

Use only under the guidance of the clinical nurse specialist.

Only use if encrustation is on the outside of the catheter tip and it is painful to withdraw thus causing urethral trauma.

Mandelic Acid

Do not use.

Chlorhexidine - or any other antiseptic bladder washout

These are not recommended. **Do not use.** Chlorhexidine is effective against many of the commonly occurring urinary pathogens, but may remove some of the sensitive bacteria in the normal urethral flora, allowing colonisation of more resistant organisms (Stickler and Chawla, 1987; Davies et al, 1987, Reid et al 1990).

Saline

Only used to remove small blood clots, usually post-operatively. Therefore do not use in the community.

As a result of encrustation, planned catheter changes may sometimes be indicated more frequently than the normal 12 weeks. (see appendix 6)

Appendix 5 Recording Catheterisation and Catheter Care

1. Introduction

Effective record keeping by nurses is a means of:

- Communicating with others and describing what has been observed or done.
- Organising communication and the dissemination of information among members of the team providing care for a patient or client.
- Demonstrating the chronology of events.
- Demonstrating the properly considered clinical decisions relating to patient care. (UKCC 1993)

Records will: -

- Be made as soon as possible after the events to which they relate;
- Aid patient or client involvement in their own care;

Provide “protection” for staff against any future complaint, which may be made. (UKCC 1993)

2. Documenting Catheterisation

Following catheterisation the following information must be recorded. Removable stickers from the catheter packaging should be used.

- The reason for first catheterisation including the date
- The date of any subsequent re-catheterisation
- The reason for the re-catheterisation of the client
- Brand (manufacturer)
- Material – i.e. hydrogel coated latex.
silicone coated latex
all silicone
- Charriere size
- Balloon size
- Length
- Batch number
- Cleansing Agent
- Anaesthetic/lubricant used
- Drainage management
- Date of next planned change
- Expiry Date
- Comments – any problems negotiated
- Signature, Job title and date
- The tendency for catheter blockage should be documented in each newly catheterised patient.

(Ref: R.C.N 1997) - See "Reason for catheterisation documentation form"
Appendix 8

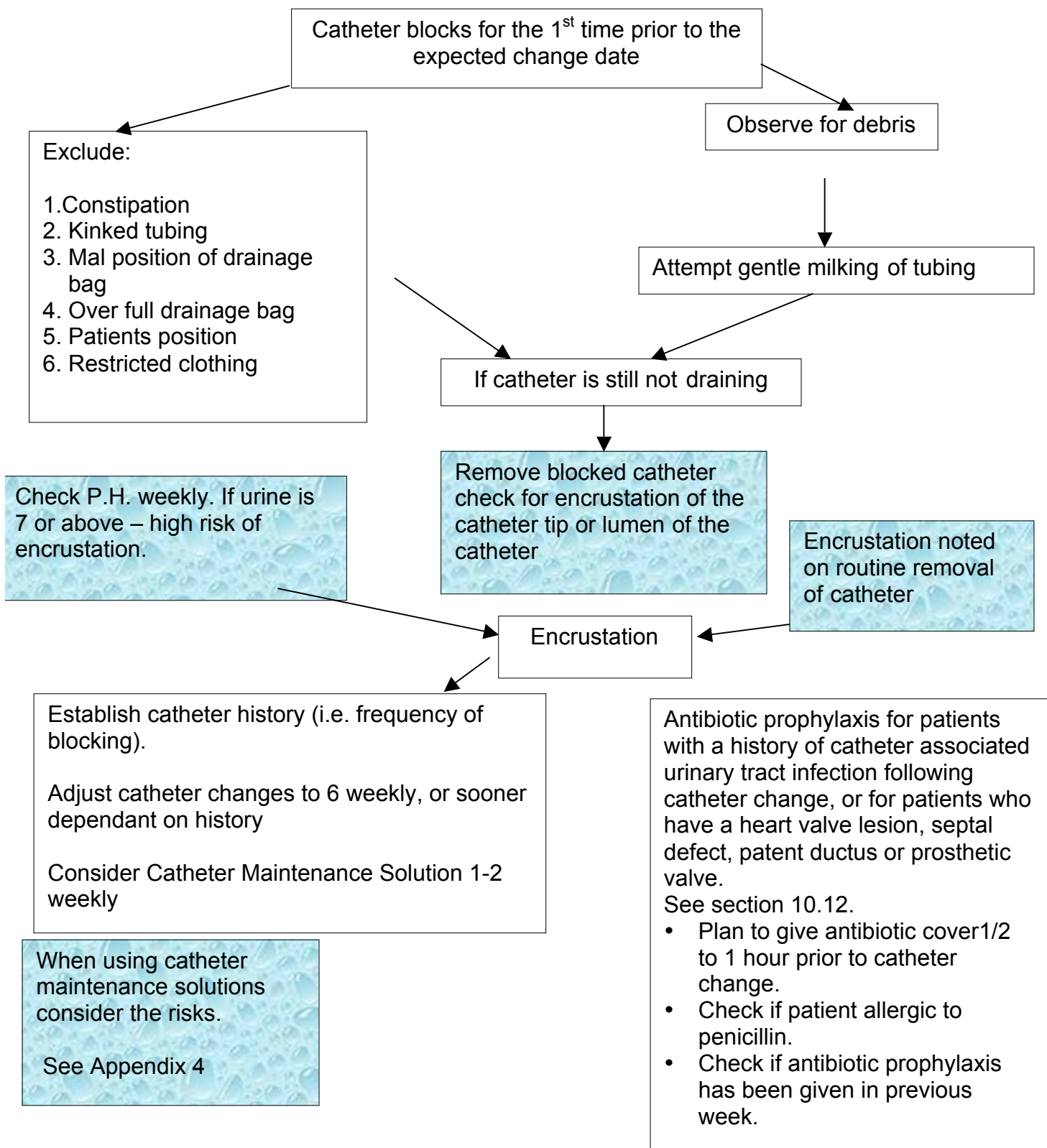
3. **Catheter Care**

Any problems the client may have associated with their indwelling catheter must be recorded in the notes.

The appropriate Care plan must be documented – e.g. the use and frequency of catheter care solutions

Catheter care solutions should not be used unless they are part of planned care documented in the Care Plan.

Appendix 6 Risk Assessment and Antibiotic Cover Prior to Change of Indwelling Long Term Catheters.



Brent Teaching PCT
Patient / Carer Information Sheet
Hand Hygiene

To help prevent any infection, it is very important to wash your hands thoroughly before and after touching any of the equipment.

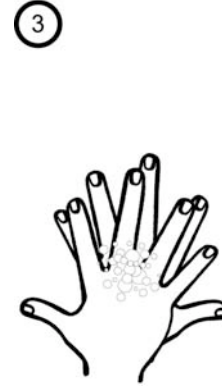
Liquid soap and either a clean dry towel or a disposable paper towel should always be used.



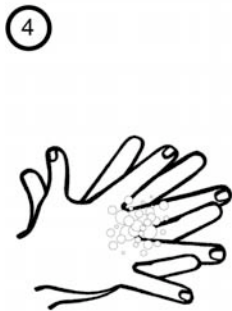
Wet your hands thoroughly and apply liquid soap



Rub hands together palm to palm



Rub back of hands with the palm of the other hand (with both hands)



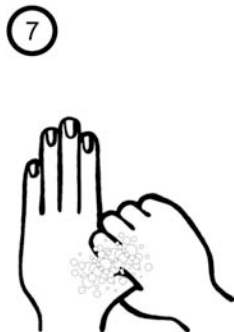
Rub palms together with your fingers interlocked



Interlock fingers as close to the palm as you can and rub fingers together



Rub the backs of the fingers with the palm of the other hand



Clasp your thumb with the palm and rotate your thumb



Rub your fingers in a circular motion



Rinse hands. Pat dry with paper or clean fabric towel from your fingertips to wrist

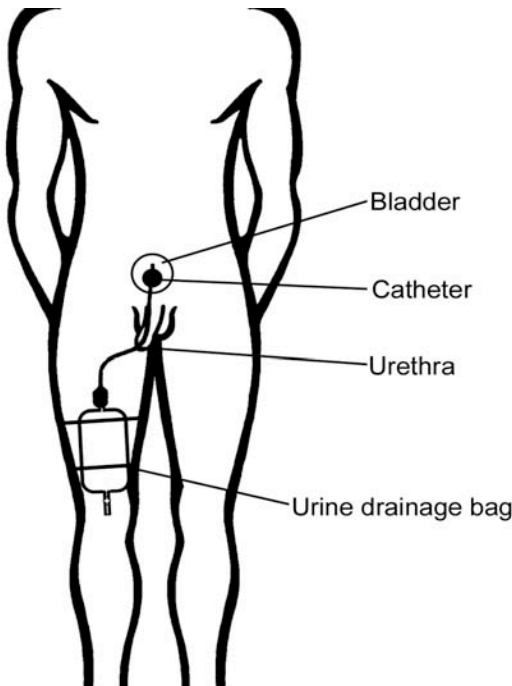
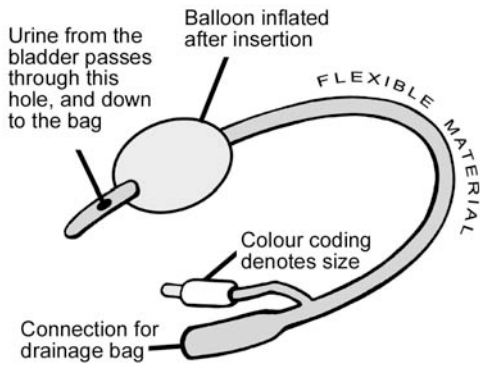
Brent Teaching PCT

Your Guide to Catheter Care

Your Catheter

The tube (called catheters) that you have in place drains urine from the bladder. It is held in place by a balloon that stops it from falling out of your bladder.

The catheter drains urine into a bag that you attach to your leg, and can be emptied from a tap at the base of the bag. The picture below shows the position of the catheter and how it works.



If catheters are not looked after properly, they can cause urinary infections. This guide explains how you can prevent this from happening.

If you do not understand anything, or you have any problems or worries concerning your catheter, contact the district nurse, who will be able to help.

District Nurse Tel. No.....

1. Do not disconnect the catheter from the drainage bag unless it is absolutely necessary.
2. You should drink at least 12-14 cups (1-2 litres) of any kind of fluid you wish eg, tea, coffee or milk. This will help the urine to flow more easily, and prevent infections occurring in the urine. Cranberry juice may help.
3. Your urine should be pale yellow in colour. If there is debris in it, or it is dark yellow in colour with an offensive smell, you may have an infection and need to drink more. You should visit your general practitioner to give him a specimen of urine so he can determine if you do have an infection present.
4. The drainage bag **should always** be lower than the level of you pelvis, on a stand or fixed to your leg or around your waist. Do not put it in your dressing gown pocket or leave it lying on the floor or anywhere else.
5. You can bath or shower with the catheter in place, but be careful not to pull it unnecessarily or hang it on the side of the bath or shower. Please clean around the site where the catheter enters your body at least once a day to keep it clean. Use Inco-wipe for this purpose and soap and water (lukewarm). (Men should clean under the foreskin) If you have any unusual offensive discharge, report it to the district nurse or general practitioner. Do not use talcum powder or cream.
6. Eat plenty of whole meal bread and bran, fruit and vegetables to prevent constipation.
7. Do not allow the catheter tube to kink, as this will prevent the drainage of urine, which may then leak around the outside of the catheter. Leakage of urine around the catheter may also indicate that the bladder is irritated by the catheter, contact your district nurse.
8. If the catheter falls out or you are concerned about any problems related to it please contact the district nurse.

Catheter make.....

Catheter Size.....

Leg Bag.....change.....

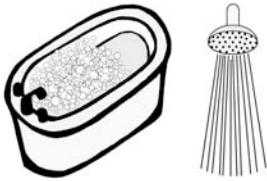
Night Bag..... change.....

Check the Ph. of your urine weekly and record the results on the chart.

Always wash your hands **before** and **after** dealing with the catheter or bags.



A daily shower or bath helps keep the area around the catheter clean



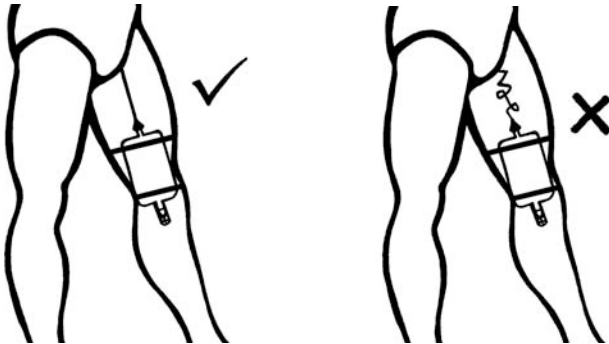
Drink at least 4 pints of fluid every day



Fresh fruit, vegetables, cereals and whole meal bread help avoid constipation



Make sure the catheter and tubing are free of kinks
Leg bags may be strapped to the thigh or calf.



During the day

If your night bag has a tap you can wash it through with warm soapy water rinse it well and hang to dry during the day.

OR

Use a new non - drainable night bag every night.
(Delete as necessary)



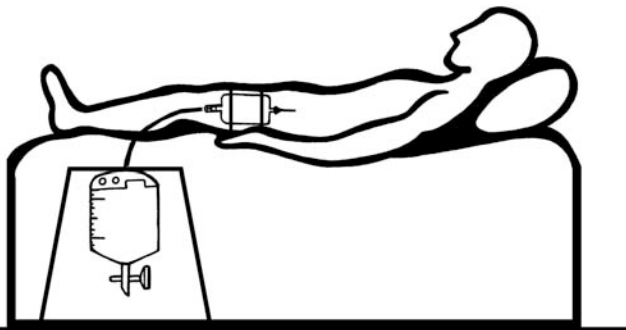
Use a new night bag every few days when the old one deteriorates

When to seek help:

- * If no urine drains into the bag after 2-3 hours.
- * If the urine leaks around the catheter persistently.
- * If the urine becomes thick and cloudy.
- * If the urine becomes smelly.
- * If the catheter feels "gritty" when rolled between your fingers.
- * If any bleeding occurs and it does not clear after drinking extra fluids.
- * If you have prolonged pain or discomfort.

If urine does not drain check:

- * No kinks in all tubing.
- * Drainage bag is below bladder level.
- * How much you've been drinking.
- * That you are not constipated.
- * The drainage bag is not too full.



And at night

References

- Blandy J.P., Moors J. (1989) *Urology for Nurses*. Oxford: Blackwell Scientific 181 –95
- Bregenzer. T, R. Frei, A. Widmer, W. Seiler, W. Probst, G. Mattarelli, W. Zimmerli (1997) Low Risk of Bacteraemia During Catheter Replacement in Patients With Long Term Urinary Catheters. *Archives of International Medicine*. **157**. 521 – 525
- Bruce A.W., Sira S.S., Clark A.F., Awad S.A. (1974) The problem of Catheter Encrustation. *Can Med. Ass J*. 111 238 – 41
- Brumfitt, W., Hamilton-Miller, J.M.T., and Bailey, R.R.1998. *Urinary Tract Infections*. London: Chapman and Hall Medical
- Bull E. et al (1991) Single blind, randomised parallel study of the Bard Biocath catheter and silicone elastomer-coated catheter. *Br. J. Urol*, 68: 394-9
- Checko, P.J., Hierholzer, W.J., Pearson, D.A. 1991. Recommendations for urinary catheter and drainage bag changes. *American Journal of Infection Control*. 19: 255-256
- Classen DC, Larsen RA, Burke JP Stevens LE (1991) "Prevention of catheter-associated bacteriuria: clinical trials of methods to block three known pathways of infection. *Am J. Infect. Contr.* 19 136-42.
- Clifford, C.M. 1982. Urinary Tract Infection: A brief selective review. *International Journal of Nursing Studies*.19:. 213-222
- Colley W (1999) Male Catheterisation Parts 1 and 2. *Nursing Times*. March
- Committee on the Safety of Medicines. www.mhra.gov.uk
- Crow R.A., Chapman R G, Roe B H and Wilson J A (1986) A study of patients with an indwelling catheter and related nursing practice Nursing Practice Research Unit, University of Surrey.
- Davies A.J. Desai H.N., Turtan S., Dyas A (1987) Does instillation of chlorhexidine into the bladder of catheterised geriatric patients helps reduce bacteriuria. *J. Hosp. Infect* 9: 72 –5.
- Emmerson, A.M., Enstone, J.E., Griffin, M., Kelsey, M.C., and Smyth, E.T. 1996. The second national prevalence survey of infection in hospitals – overview of the results. *Journal of Hospital Infection*. 32: 175-190.
- Garibaldi, R.A, Burke, J.P, Dickman, M.L, and Smith, D.B. 1974. Factors predisposing to bacteriuria during indwelling urethral catheterisation. *New England Journal of Medicine*. 291. 215-219
- Getliffe K.A. (1994). The use of bladder washouts to reduce urinary catheter encrustation *Br. J. Urol*, 73: (6), 696 – 700.

- Getliffe K. (1997) Catheters and Catheterisation – chapter in promoting continence A clinical and Research Resource. Ed. Getliffe K and Dolman M. Balliere Tindall P 290.
- Jenner, E.A. (1983). Prevention of catheter associated urinary tract infection. *Nursing. 2nd Series Supplement*. 13 May. 1-3
- Jewes, L.A, W.A. Gillespie, A. Leadbetter, B. Myers, R.A. Simpson, M.J. Stower and A.C. Viant. (1988). Bacteriuria and bacteraemia in patients with long - term indwelling catheters - a domiciliary study. *Journal of Medical Microbiology*. **26**. 61 – 65
- Kennedy A.P., Brocklehurst J.C., Lye M.D.W. (1983) Factors related to the problems of long-term catheterisation. *J. Adv. Nurse*. 8: 207 – 12.
- Kunin C M., (1987) Care of the urinary catheter. In *Detection, Prevention and Management of urinary tract infections*. 4th edn. Philadelphia Lea & Ferbiger Chapters 3, 5 –6
- Mallet – J and Bailey (1996). *The Royal Marsden Manual of Clinical Nursing Procedures*. Fourth Ed. Blackwell Science.
- Olson, E.S and B.D. Cookson (2000). Do antimicrobials have a role in preventing septicaemia following instrumentation of the urinary tract? *Journal of Hospital Infection*. **45**. 85 - 97
- Reid, R.I., Read, P.J., Webster, O., Maskell, R. 1992 Comparison of urine bag-changing regimes in elderly catheterised patients. *Lancet*. 2. 754-756
- Roe, B.H., 1990. Study of the effects of education on the management of urine drainage systems by patients and carers. *Journal of Advanced Nursing*. 15. 517-521.
- Royal College of Physicians (1998) “Clinical Audit Scheme for the management of urinary and faecal incontinence” London.
- Morris N.S. and Stickler D.J. (1998) Encrustation of indwelling urethral catheters by *Proteus mirabilis* biofilms growing in lumen urine. *Journal of Hospital Infection* 39: 227-234.
- Nacey J.N, Horsfall D.J., Delahunt B, Marshall UR. (1986). The assessment of urinary catheter toxicity using cell cultures: validation by comparison with an animal model. *J. Urol* 136: 706 –9.
- NICE Clinical Guideline 2 (2003) Infection Control . Prevention of healthcare- associated infection in primary and community care.
- Reid G., Bruce A.W., Cooke R.L., Llano M. (1990) Effect on urogenital flora of antibiotic therapy for urinary tract infection. *Scand J. Infect Dis*, 22: 43-7.
- Stickler D.J., Chawla J., (1987) The role of antiseptics in the management of patients with long-term indwelling bladder catheters. *J. Hosp. Infect*. 10: 219-28
- Talja M., Korfela A, Jarva K (1990) Comparison of urethral reaction to full silicone, hydrogel-coated and siliconised latex catheters. *Br. J. Urol* 66: 652-7

Name: _____

MPI: _____

GP: _____

Reason for Catheterisation

Review Care at Every Catheter Change

Urethral / Suprapubic (delete as appropriate)

Comments:

Date						
Time						
Name of Catheter		Please stick	Please stick	Please stick	Please stick	Please stick
Size	(Ch)	adhesive	adhesive	adhesive	adhesive	adhesive
	(mL)	catheter	catheter	catheter	catheter	catheter
LOT No. 49-----		label	label	label	label	Label
Expiry Date xx/xx		here	here	here	here	here
Weeks in Situ						
Date of planned change						
Reason For Change						
Problems encountered						
Metal cleansing solution	Type					
	LOT No.					
Lubricant	Type					
	LOT No.					
Signature						

Other Equipment used by patient:

Catheter Retainer Strap

Catheter Valve

Leg bag capacity _____ Inlet tube length _____

Bed bag capacity _____ drainable / non drainable

Other Products _____

Patient/Carer has received verbal and written instructions Y / N