POLICY FOR
CATHETER MANAGEMENT

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1. INTRODUCTION

Urinary catheterisation is the insertion of a specially designed tube into the bladder, using non-touch aseptic technique (NTAT), for the purposes of draining urine, the removal of clots/debris and the instillation of medication (The Royal Marsden Hospital 2011).

There is consistent evidence available to show that infection is a significant risk associated with urinary catheterisation. The risk of infection is associated with the method and duration of catheterisation, and the quality of the catheter care carried out (Pelowe 2007).

Good practice and clinical guidelines agree that urinary catheters must therefore be inserted using sterile equipment and NTAT, to reduce this risk (Department of Health 2011). Every NHS body under The Health and Social Care Act 2008 must protect *patient's workers and others who may be at risk of acquiring an HCAI.*

Nurses are primarily responsible for the insertion and management of urinary catheters, and therefore it is essential that they have the appropriate knowledge and skills to undertake the role safely.

While it is the nurses' responsibility to maintain and improve their professional knowledge and competence, these guidelines have been written to aid nurses and Assistant Practitioners (AP) within East Coast Community Healthcare CIC (ECCH) and standardise practice when inserting urethral catheters. Make the care of people your first concern, treating them as individuals and respect their dignity (Nursing and Midwifery Council 2011).

The policy standards here are related to catheter management for patients in their own homes, Community Hospitals and ECCH premises, which will ensure best practice.

2. PURPOSE and SCOPE

To cover both Community Hospitals and Community based staff that have been trained and are competent to carry out the procedure.

3. POLICY STATEMENT

This policy will be implemented to ensure safe practice and every effort is undertaken to keep the patient as free from micro-organisms as possible.

4. RESPONSIBILITIES

It is the responsibility of all staff to ensure that they adhere to this policy, ensuring best practice.

5. GUIDANCE MONITORING

It is the responsibility of all department heads/professional leads to ensure that the staff they manage adhere to best practice. Yearly audits using Essential Steps to Clean Safe Care will be completed by staff carrying out catheterisation.

6. REVIEW

This policy will be reviewed two yearly by the Infection Prevention and Control Team in conjunction with the Continence Team.

7. REASONS FOR CATHETERISATION

- To empty the contents of the bladder, e.g before or after abdominal, pelvic or rectal surgery.
- To determine residual urine
- To allow irrigation of the bladder
- To bypass an obstruction
- Acute retention of urine
- Chronic retention of urine
- Other reasons, to relieve incontinence when no other means is practicable.

Urinary catheterisation is an invasive procedure and should not be undertaken without full consideration of the benefits and risks. The presence of a catheter can be a traumatic experience for patients and have huge implications for body image, mobility and discomfort (RCN 2011). Patient needs should be assessed and only considered for catheterization as a last resort, or if it is considered the best option available (NICE 2012). Routine catheterization must not be routinely supported by nurses, particularly in specific patient groups such as fracture neck of femur.

The Nursing and Midwifery Council (NMC 2008b), states that nurses performing urinary catheterization should have:

- A good knowledge of the urinary tract anatomy and physiology
- A sound knowledge of the principles of aseptic technique
- A knowledge of equipment and devices available
- Awareness of infection control practice and legislation
- Practice within the limits of competence and be able to recognize when they need to seek help from more experienced staff
- Understanding of the issues of informed consent and a knowledge of the Mental Capacity Act
- The ability to deliver care based on the best available evidence or best practice.

It is the responsibility of the assessing nurse to ensure that the patient/carer is aware of all the potential problems before the decision to catheterise is being made. The nurse must be sure, in consultation with the doctor, patient and/or carer, that the decision to catheterise is made for the right reasons and not for the convenience of the carers.

The reason for continued use of a urinary catheter **must** be reviewed at every change. The nurse should consider alternative methods of treatment or management. This may include:

- Voiding techniques.
- Penile sheath.
- Male/Female urinals.
- Disposable or re-usable incontinence products.

8.0 CATHETER SELECTION

A wide range of urinary catheters are available, made from a variety of materials and with different design features. Careful assessment of the most appropriate material, size and balloon capacity will ensure that the catheter selection is as effective as possible, that complications are minimized and that patient comfort and quality of life are promoted.

Catheters should be used in line with the manufacturer's recommendations, in order to avoid product liability (Royal Marsden 2011).

8.1 MATERIAL AND LENGTH OF USE

The key criterion in selecting the appropriate material is the length of time the catheter is expected to remain in place.

INTERMITTENT

- **Polyvinyl chloride (PVC) non-coated:** are quite rigid and require lubrication prior to insertion.
- **Hydrophilic coated catheters:** impregnated with a coating, which lubricates the catheter throughout the entire catheterisation process. Hydrophilic catheters may require activation with water. Good quality drinking water or from a pre-filled sachet provided can be used.

SHORT TO MID TERM (up to 28 days)

- **Latex:** Latex is a purified form of rubber and is the softest of the catheter materials. It's surface is smooth and has a tendency to form a crust. Latex absorbs water and swells, reducing the size of the lumen. It can also cause urethral irritation and should only be used short term up to 7 days. Patients should always be asked whether they have had an adverse reaction to rubber products before catheters containing latex are utilized (Royal Marsden 2011).
- **Polytetrafluoroethylene (PTFE):** The coating is applied to a latex catheter to render the latex inert and reduce irritation. These catheters are normally for short to mid term, check the manufacturer's recommendations.

LONG TERM (upto 12 weeks)

- **Hydrogel coated latex:** a latex core catheter, coated with a hydrophilic polymer coating provides very smooth internal and external surfaces, which are resistant to encrustation. They are also inert and well tolerated by the urethral mucosa.
- **All silicone:** these are made by an extrusion process, which makes a thin-walled catheter, which has a large D shaped lumen. Due to the inert nature of silicone they can reduce irritation and are suitable for those with a latex allergy. However, they are relatively stiff and some patients find them uncomfortable. Because silicone permits gas diffusion, balloons may deflate and allow the catheter to fall out prematurely.

OTHER MATERIALS

Research into new types of catheter materials is ongoing, particularly examining materials that resist biofilms and urinary tract infection. There is no large scale evidence that they are beneficial and silver toxicity can occur. Catheters coated with antibiotics such as gentamicin, tifampicin, nitrofurantoin are being trialed.

8.2 CATHETER LENGTH

The three lengths available are:-

- **Paediatric** length 30cms
- **Female** length 26cms; the shorter female length is often more discreet and less likely to cause trauma or infections, because movement in and out of the urethra is reduced. Infections may also be caused from a longer catheter looping or kinking. In obese women, or those bed-bound or wheelchair bound, the inflation valve of the shorter catheter may cause soreness by rubbing on the inner thigh and pulling on the bladder neck, therefore a standard length should be used.
- **Standard** (male) length 43cms

8.3 BALLOON SIZE

- **3 to 5ml** Paediatric balloon.
- **5 to 10ml** balloon for adults.
- **30ml** balloon should only be used in specific circumstances such as post prostatic surgery, but their use should always be questioned. The heavier weight and larger balloon may cause bladder spasm, damage the bladder neck and irritation of the trigone.

Catheter balloons should be filled as specified by the manufacturer. They should never be over or under filled, as this can lead to a mis-shaping of the balloon that could interfere with urine drainage.

The balloon should always be filled with sterile water.

Some manufacturers have produced pre-filled catheters. A reservoir of water is included in the catheter packaging and simply needs to be released once the catheter has been inserted.

The catheter balloon should only be inflated once; deflation/re-inflation or topping up are not recommended by the manufacturers, as distortion of the balloon may occur (Royal Marsden 2011).

8.4 CATHETER SIZE

The external diameter of the catheter is measured in charriere (Ch). One Ch equals 1/3 of an mm, therefore 12 Ch=4mm.

- The smallest size should be chosen to provide adequate drainage. Larger sizes can cause irritation and bypassing of urine around the catheter. The larger sizes are usually reserved for clot drainage and stricture dilation. In any other situation their use should be questioned.

Catheter material, length, balloon volume and size must be specified on the prescription.

9.0 INFECTON CONTROL

Catheter associated infection.

Catheterization carries an infection risk. Catheter associated infections are the most common hospital acquired infection, possibly accounting for up to 35-40% of all hospital infection (Roadhouse and Wellstead 2004).

Bladder irrigation, instillation and washouts must not be used to prevent catheter associated infection (Pratt et al., 2007).

Select the most appropriate type of catheter and drainage system to be used.

A NTAT must be used. A urinary tract infection may be introduced during catheterisation because of faulty NTAT, inadequate urethral cleaning, or contamination of the catheter tip. Infection can also be introduced via the drainage system because of faulty handling of equipment, breaking the closed system or raising the drainage bag above bladder level causing urine reflux. (The Royal Marsden 2011).

If a Urinary tract Infection (UTI) is suspected a specimen of urine must be sent for analysis. Urinalysis should not be performed to diagnose UTI in patients with long term catheters as they normally become colonized with bacteria and urine can become offensive due to colonization without infection. Causes for suspicion of UTI include loin pain or temperature below 36.0°c or above 38.3°c, or clinical sepsis and no other source of infection evident as per current guidelines.

The maintenance of a closed drainage system is central in reducing the risk of catheter associated infection. It is thought that micro-organisms reach the bladder by two possible routes: from the urine in the drainage bag, or via the space between the catheter and the urethral mucosa (Getliffe 1995, Gould 1994). To reduce the risk of infection, it is important to keep manipulation of the closed system to a minimum, this includes, changing the drainage bag, unnecessary emptying, or taking samples.

Before handling catheter drainage systems, hands must be decontaminated and a pair of clean non-sterile gloves and disposable apron should be worn. (Pratt et al 2007). Urine samples should only be obtained via specially designed sampling ports, using an aseptic technique.

9.1 Prevention of healthcare-associated infection in primary and community care.

Education.

Patients and carers, should be educated about and trained in techniques of hand decontamination, insertion of intermittent catheters where applicable, and catheter management before discharge from hospital.

Community and primary healthcare personnel must be trained in catheter insertion, including suprapubic catheter replacement and catheter maintenance.

Follow- up training and on- going support of patients and carers should be available for the duration of long-term catheterisation.

9.2 Catheter insertion

All catheterisations carried out by healthcare personnel should be NTAT. After training, healthcare personnel should be assessed for their competence to carry out these types of procedures.

Intermittent self-catheterisation is a clean procedure. A lubricant for single-patient use is required for non-lubricated catheters.

An appropriate lubricant from a single use container should be used during catheter insertion to minimise urethral trauma and infection.

Routinely document the date of insertion and date of removal of the catheter in the clinical records (RCN 2013).

9.3 Routine catheter changes

As part of good practice, as recommended by the ECCH Consultant Microbiologist, patients who are MRSA positive and require a routine catheter change should have Octenisan body washes for 2 days prior to recatheterisation and for 2 days after, including a daily bed linen change. If a catheter requires an unplanned change, the health professional should wash patient with Octenisan at the time of insertion of catheter, the patient should then use Octenisan body wash for two days post insertion.

10. 0 EDUCATIONAL REQUIREMENTS FOR CLINICAL PRACTICE

The NMC (2013), states that as a professional, you are personally accountable for actions and omissions in your practice and must always be able to justify your decisions. The people in your care must be able to trust you with their health and wellbeing. You must have the knowledge and skills for safe and effective practice and work within the limits of your competence. Your knowledge and skills must be kept up to date throughout your working life and you must take part in appropriate learning and practice activities that maintain and develop your competence and performance.

The registered nurse is accountable for ensuring that the delegation of any task is appropriate and in the best interest of the patient (RCN 2011)

Assistant practitioners may undertake scheduled catheter changes only, following a patient assessment by a registered nurse if:

The AP has been deemed competent in the safe removal and insertion of catheters by completing theory and practice training provided by ECCH

The registered nurse agrees that it is appropriate to delegate the catheter task to the particular AP

The patient consents to the AP carrying out the procedure

The AP must be assessed catheterising patients before being deemed competent to undertake the procedure

AP’s have an individual responsibility to ensure they are confident and competent in knowledge and practice skills

A relative or carer may in some circumstances, carry out re-catheterisation (urethral/intermittent/ supra-pubic). In these circumstances, the Nurse/Health professional has the responsibility of ensuring that the carer has the necessary knowledge and competence to both carry out the procedure and manage the catheter/drainage system to a high standard.

Below is a table that guides ECCH staff on the minimum requirements of supervised and observed practice. It is recognized that some individuals may require more supervised and observational practice and it is the responsibility of the individual Nurse to decide when competence has been achieved. A record of practice should be kept in the individual's portfolio as evidence of competence. Updating of skills and knowledge is essential for good practice and individual Nurses will be responsible for availing themselves of the published literature and research evidence on aspects of catheterisation. The Continence Team holds a variety of information.

All ECCH staff that care for or insert catheters should complete the yearly Essential Steps framework that can be located on ECCO.

10.1 Observation/Supervised Practice Guideline (minimum requirements)

Type of Catheterisation	Observation in Clinical Area	Supervision in Clinical Area	Catheterisation carried out by
Female Urethral	Two	Two	Registered Nurse Assistant Practitioner Carers in some circumstances with appropriate training. Student Nurse with supervision.
Male Urethral	Two	Three	Registered Nurse who has attended additional ECCH training workshop. Assistant Practitioner who has attended additional ECCH training workshop Carer in some circumstances with appropriate training. Student Nurse, with supervision, on final elective placement who has attended additional ECCH training workshop.
Female Intermittent	One	One	Patient themselves or Carer in some circumstances with training. Registered Nurse. Student Nurse with supervision.

Male Intermittent	One	One	Registered Nurse who has attended additional ECCH training workshop. Carer in some circumstances with appropriate training. Student Nurse, with supervision, on final elective placement who has attended the trusts additional training workshop.
Supra-pubic	Two	Two	**1st change** by GP or Hospital Consultant if under first 5 weeks or if predicted to be difficult to change. **1st change** after 5 weeks in situ by competent registered nurse who has attended additional ECCH workshop. **Subsequent changes** by: Assistant Practitioner Registered Nurse who has attended additional ECCH workshop. Student Nurse, with supervision, on final elective placement who has attended the trusts additional training workshop. Carers in some circumstances with appropriate training.

11.0 CATHETERISATION PROCEDURES

11.1 Male Urethral Catheterisation

EQUIPMENT

Sterile dressing pack
Sterile gloves.
Protective sheet.
Cleansing fluid (Saline 9%).
Syringe (for removal).
Syringe and sterile water (unless catheter is pre-filled).
Antiseptic lidocaine gel, correct amount for males.
Urinary catheter (appropriate material, length and charriere size).
Drainage bag or valve.
Adequate lighting.
Universal specimen container
Hand washing equipment or alcohol hand rub

PRINCIPLES

1. Explain the procedure to the patient, including any risks and benefits. Ensure the patient has no allergies to latex or lidocaine. Ensure privacy. Gain consent. Wash hands with hot soap water and dry thoroughly, put on sterile gloves and apron.

Prepare treatment area. Help patient into supine position with legs extended. Place protective cover under buttocks.

To ensure the patient understands the procedure and gives his valid consent (NMC 2008).

2. Remove existing catheter by withdrawing water from valve with syringe (see catheter removal), withdrawing catheter slowly and disposing of safely. Dispose of gloves.

Note the condition of the catheter on removal i.e. deterioration in the material, presence of encrustation, partial deflation of balloon etc and document.

3. Wash and dry hands or use alcohol rub, and then prepare sterile field and equipment.
4. Put on sterile gloves.
5. Place sterile towel over groin area to create a sterile field and then cleanse the glans penis with saline and gauze. In non-circumcised patients, retract the prepuce (foreskin) slightly to enable the glans penis to be cleansed and the urethral opening to be visible. Extend the penis to an angle of 90 degrees. Maintain this position until the catheter is in place.

This area is normally colonised by skin and feacal organisms, and so cleaning the area prior to insertion of a catheter will reduce the risk of introducing infection into the urinary tract.

Sterile normal saline is the cleanser of choice, there is no advantage in using antiseptic preparation when cleaning prior to insertion of a catheter.

N.B. Do not fully retract a phimotic foreskin.

6. Release the plunger of the anaesthetic gel prior to insertion. Place the nozzle of the gel gently into the urethral meatus, and slowly squeeze the plunger so that the gel is instilled into the urethra. Remove the nozzle from the urethra and discard the tube.

11ml of instillagel should be used for male catheterisation (Clinimed 2012 and ECCH prescribing formulary 2014).

7. Allow 3 to 5 minutes for the gel to take effect before inserting the catheter.
8. Attach the drainage bag to the catheter to maintain a closed drainage system.
9. Place the catheter tip into the urethra and advance slowly. This will help prevent urethral trauma.
10. Advance the catheter 15 to 25cms until urine flows.

Resistance may be felt if there is spasm of the external sphincter. If resistance is felt, encourage the patient to strain gently, as this may ease the passage. However, never force the catheter. If pain is experienced seek medical assistance. (The Royal Marsden 2011).

11. Advance the catheter until it's almost at its bifurcation. This will ensure that the catheter is correctly positioned in the bladder, and prevent the balloon from being inflated in the urethra.

Inadvertent inflation in the urethra causes pain and urethral damage (The Royal Marsden 2011).

12. Slowly inflate the balloon with 10mls of sterile water, or as the manufacturer's instructions.

13. Withdraw the catheter slightly, so as to ensure that it is positioned correctly in the neck of the bladder.

14. Clean and replace the foreskin over the glans penis.

To prevent the patient from developing paraphimosis.

A paraphimosis is where the foreskin is unable to be replaced over the glans penis, resulting in swelling and painful constriction.

15. When procedure complete, remove gloves, dispose of waste and wash and dry hands.

16. Make the patient comfortable.

17. Ensure that the catheter bag is positioned below the level of the bladder, on a catheter stand or into correctly supported leg bag.

18. Document

- Reason for catheterization.
- Catheter type, length, manufacturer, expiry date and batch number.
- Size (Charriere).
- Balloon size.
- Date and time of insertion.
- Review date or expected date of change.
- Cleaning solution, lubricant/anesthetic gel used.
- If the insertion was easy or difficult.
- If urine is drained, the amount, colour, smell and if necessary dipstix and record the result (blood, protein ,PH, glucose, nitrite, leucocytes).
- If specimen sent and reason why.

19. Discuss the care of the catheter with the patient and record this in the care plan. Provide patient information leaflet.

20. Ensure that all equipment is replaced in the patient's home in readiness for subsequent catheter changes.

21. Encourage the patient to use a catheter diary containing all the above information. This will help predict any problems and ensure continuity of care between community and Hospital.

11.2 Female Urethral Catheterisation

EQUIPMENT.

Sterile dressing
Sterile gloves.
Protective sheet.
Cleansing fluid (Saline 9%).
Syringe (for removal).
Syringe and sterile water (unless catheter is pre-filled).
Antiseptic lidocaine gel, correct amount for females.
Urinary catheter (appropriate material, length and charriere size).
Drainage bag or valve.
Adequate lighting.
Universal specimen container
Hand washing equipment or alcohol hand rub

PRINCIPLES.

1. Explain procedure to patient, including any risks and benefits. Ensure the patient has no allergies to latex or lidocaine. Ensure privacy. Gain consent. Wash hands with warm soapy water and dry thoroughly, put on non-sterile gloves and apron. Prepare treatment area. Help patient into supine position, with knees bent, hips flexed and feet comfortably apart, by about 60cms. Place protective cover under buttocks.

   To ensure the patient understands the procedure and gives her valid consent (NMC 2008).

2. Remove existing catheter by withdrawing water from valve with syringe (see catheter removal), withdrawing catheter slowly and disposing of safely. Dispose of gloves.

Note the condition of the catheter on removal, i.e. deterioration in the material, presence of encrustation, partial deflation of balloon etc and document.

3. Wash and dry hands or use alcohol rub, and then prepare sterile field and equipment.
4. Put on sterile gloves.
5. Place sterile towel between the patients legs and cover the thighs to create sterile field. Clean around the urethral orifice with normal saline using single downward strokes.

Inadequate preparation of the urethral orifice is a major cause of infection following catheterisation (The Royal Marsden 2011).

Sterile normal saline is the cleanser of choice, there is no advantage in using antiseptic preparation when cleaning prior to insertion of a catheter.

6. Release the plunger of the anaesthetic gel prior to insertion. Place the nozzle of the gel gently into the urethral meatus, and slowly squeeze the plunger so that the gel is instilled into the urethra. Remove the nozzle from the urethra and discard the tube.

Slow insertion of the lubricant gel reduces urethral trauma and patient discomfort.

6ml of instillagel should be used for female catheterisation (Clinimed 2012 and ECCH prescribing formulary 2012).

7. Allow 3 to 5 minutes for the gel to take effect before inserting the catheter.
8. Attach the drainage bag to the catheter to maintain a closed drainage system.
9. Place the catheter tip into the urethra and advance slowly in an upward direction. Advance the catheter 5 to 6cms until urine flows.
10. Advance the catheter a further 6 to 8cms. This will ensure that the catheter is correctly positioned in the bladder, and prevent the balloon from being inflated in the urethra.

Inadvertent inflation in the urethra causes pain and urethral damage.

11. Slowly inflate the balloon with 10mls of sterile water, or as the manufacturer's instructions.

The balloon is crucial for the retention of the catheter. However never fill or under fill the balloon, as this will lead to incorrect positioning of the catheter resulting in bypassing, irritation and trauma, ulceration, stricture formation, pain, or failure to drain. Which all increase the risk of infection.

12. Withdraw the catheter slightly, so as to ensure that it is positioned correctly in the neck of the bladder.
13. Clean and dry the area.

If the area is left wet or moist, secondary infection can occur (The Royal Marsden Hospital 2011).

14. When procedure complete, remove gloves, dispose waste and wash and dry hands.
15. Make the patient comfortable.
16. Ensure that the catheter bag is positioned below the level of the bladder, on a catheter stand or into correctly supported leg bag.
17. Document:

- Reason for catheterization.
- Catheter type, length, manufacturer, expiry date and batch number.
- Size (Charriere).
- Balloon size.
- Date and time of insertion.
- Review date or expected date of change.
- Cleaning solution, lubricant/anaesthetic gel used.
- If the insertion was easy or difficult
- If urine is drained, the amount, colour, smell and if necessary dipstix and record the result (blood, protein ,PH, glucose, nitrite, leucocytes)
- If specimen sent and reason why

18. Discuss the care of the catheter with the patient and record this in the Care Plan. Provide patient information leaflet.

19. Ensure that all equipment is replaced in the patient's home in readiness for subsequent catheter changes.

20. Encourage the patient to use a Catheter Diary containing all the above information. This will help predict any problems and ensure continuity of care between Community and Hospital.

11.3 Intermittent Catheterisation (IC) Male/ Female

Intermittent catheterisation is a method of periodically draining the bladder. It involves the patient or carer passing a catheter into the bladder to drain residual urine. It can also be used to prevent urethral strictures and instill intravesical medication.

EQUIPMENT.

The patient will require:

- Urinary catheter (appropriate material and charriere size).
- Bag for waste.
- Adequate lighting.
- Tap water suitable for drink if the catheter requires hydration.
- Hand washing facilities or hand sanitiser.

Receptacle for drained urine, a measuring jug may be required if residual volumes are being recorded.

If teaching or assisting the patient, in addition to the above the Nurse will require:

- Apron.
- Sterile gloves.

If the Nurse is performing the procedure, a sterile technique is required as described in the male or female urethral catheterisation procedures.

PRINCIPLES.

1. Fully explain the procedure to the patient, including any risks and benefits.

A thorough explanation with diagrams is needed so that the patient is fully able to understand the procedure. Some manufacturers produce very good patient literature. Care should be taken to ensure that the leaflet given relates to the particular catheter the patient will be using.

2. Ensure the patient has no allergies. Ensure privacy. Gain consent. Discuss positions for performing the procedure, lying on a bed, positioned over the toilet or in a semi-sitting position are sometimes chosen. For women a mirror may be required so the urethral meatus can be visualised.

To ensure the patient understands the procedure and gives his valid consent (NMC 2008).

3. Ensure patient washes hands with warm soapy water and dries thoroughly. Prepare the procedure area.

Hands must be decontaminated immediately before each clinical activity. An effective hand washing technique involves three stages: preparation, washing and rinsing and drying (NICE 2012).

4. Following the manufacturers guidelines prepare the catheter.

There are 2 main types of intermittent catheters. PVC catheters require lubrication prior to insertion and hydrophilic coated catheters, which are impregnated with a coating, which lubricates the catheter throughout the entire catheterisation process. Hydrophilic catheters may require activation with water. Good quality drinking water or from a pre-filled sachet provided can be used.

5. If clinically indicated the patient should try to pass urine prior to the procedure. Wash hands and dry thoroughly.
6. Choose the preferred position
7. **Female:** With the index and middle finger of one hand, spread the labia apart and gently lift upwards. If using a PVC non-lubricated catheter slowly instill the appropriate amount of lignocaine gel for females. With the other hand, slowly advance the catheter inwards and upwards until urine begins to flow. Make sure the funnel end is pointing into the toilet, jug or drainage bag. When urine starts to flow push the catheter a further 1 or 2cms. When the urine stops flowing, withdraw the catheter slowly. Dispose of urine and equipment.

   Male: Gently retract the foreskin; hold the penis at 90 degrees. If using a PVC non-lubricated catheter slowly instill an appropriate amount of lignocaine gel for males. Slowly advance the catheter inwards until urine begins to flows. Point the penis and the funnel end of the catheter down towards the toilet, jug or drainage bag. When the urine stops flowing, hold the penis at 90 degree again and withdraw the catheter slowly. Dispose of urine and equipment.
8. Wash hands and dry thoroughly.
9. Record procedure in patient's records. Develop an IC plan with the patient and arrange review.

Regular patient monitoring is needed to ensure that IC is an appropriate and manageable technique for the patient and his or her family.

The frequency of bladder emptying should be determined during the assessment and reassessment of the patient to ensure that the bladder is fully emptied on a regular basis, avoiding urinary stasis and the risk of urinary tract infection.

11.4 Supra-pubic Catheter change

Initial supra-pubic catheter insertion is a surgical procedure, usually undertaken by doctors and is performed under local or general anaesthetic. However, a suitably qualified person can undertake supra-pubic catheter change.

Indications for supra-pubic catheterisation:

- Where there has been a persistent problem with urethral catheters, such as irritation, blocking, bypassing or in certain medical conditions where a urethral catheter may not be appropriate.
- Patient preference (sexually active, increase positive body image, improve comfort).

Contraindications for supra-pubic catheterisation:

- Undiagnosed haematuria
- Known or suspected carcinoma of the bladder.
- Small fibrotic bladder.
- Caution should be taken with patients who have had previous or abdominal surgery

EQUIPMENT.

Sterile dressing pack
Sterile gloves.
Protective sheet.
Cleansing fluid (Saline 9%).
Syringe (for removal).
Syringe and sterile water (unless catheter is pre-filled).
Antiseptic lidocaine gel, correct amount for supra pubic changes.
Urinary catheter (appropriate material, length and charriere size).
Drainage bag or valve.
Adequate lighting.
Universal specimen container
Hand washing equipment or alcohol hand rub
Small dressing to apply at the site, if necessary.

PRINCIPLES.

1.Explain procedure to patient, including any risks and benefits. Ensure the patient have no allergies to latex or lignocaine. Ensure privacy. Gain consent. Wash hands with warm soapy water and dry thoroughly, put on non-sterile gloves and apron. Prepare treatment area, place protective cover on bed. Help patient into supine position with legs extended.

To ensure the patient understands the procedure and gives valid consent (NMC 2008).

2. Place the nozzle of the gel gently into the cystomy, and slowly squeeze the plunger so that the gel is instilled into the tract. Remove the nozzle from the cystomy and discard the tube.

Slow insertion of the lubricating gel reduces trauma and patient discomfort

There is no guidance on the strength or volume of gel to be used in supra-pubic catheterisation, but 2 to 4ml should be sufficient.

3. Allow 3 to 5 minutes for the gel to take effect before removing the catheter.
4. Remove existing catheter by withdrawing water from valve with syringe (see catheter removal), withdrawing catheter slowly, observe the amount of catheter that was inside the patient as this is a useful guide for reinsertion. Dispose of catheter and gloves safely.

Observing the amount of catheter that was inside the patient is a useful guide for reinsertion (Addison 2001).

If the catheter becomes stuck following 1 to 2 cms of removal, this may be due to both the detrusor and rectal muscles being stimulated. Gently press down with fingers on the surface of the skin, rotate the catheter and in an upward motion pull the catheter out; often a little force is required (Robinson 2005).

Note the condition of the catheter on removal i.e. deterioration in the material, presence of encrustation, partial deflation of balloon etc. also note the condition of the cystostomy site for discharge, granulation and inflammation, and document.

5. Repeat hand washing, then dry hands with sterile towel from pack and put on sterile gloves.
6. Place sterile towel to surround the cystomy, and then cleanse the area with saline and gauze.

Sterile saline is used to cleanse the site; there is no advantage in using antiseptic preparation when cleaning prior to insertion of a catheter.

7. Attach the drainage bag to the catheter to maintain a closed drainage system.
8. Place the catheter tip into the cystomy and advance slowly.
9. Advance the catheter the same distance as the previous one. Urine might drain from the new catheter.
10. Slowly inflate the balloon with 10mls of sterile water, or as the manufacturer's instructions.

Inflate the balloon with 3 to 5ml. should resistance be felt in trying to inflate the catheter balloon, the catheter may have to be inserted or removed slightly. Gently pull back to feel the catheter balloon anchor to the inside of the bladder wall. Then totally inflate. Always ask the patient whilst doing this if he or she is experiencing any pain or discomfort (Robinson 2005).

11. Ensure the cystomy site is clean and dry. A small dressing can be applied if required. If bleeding is excessive or the patient experiences pain or becomes distressed stop and seek medical advice.
12. When procedure complete, remove gloves, wash and dry hands and dispose of waste.
13. Make the patient comfortable.

14. Ensure that the catheter bag is positioned below the level of the bladder, on a catheter stand or into correctly supported leg bag.

15. Document:

Catheter type, length and batch number.

- Size (Charriere).
- Balloon size.
- Material the catheter is made of.
- Expiry date.
- Date and time of insertion.
- Date of expected change.
- Cleaning solution used.
- Lubricant/ anaesthetic gel used.
- If the insertion was easy or difficult
- If urine is drained, the amount, colour, smell and if necessary dipstix and record the result (blood, protein, PH, glucose, nitrite, leucocytes)

16. Discuss the care of the catheter with the patient and record this in the care plan. Provide patient information leaflet.

17. Ensure that all equipment is replaced in the patient's home in readiness for subsequent catheter changes.

18. Encourage the patient to use a catheter diary containing all the above information. This will help predict any problems and ensure continuity of care between Community and Hospital.

12.0 CATHETER REMOVAL

Catheters should be changed only when clinically necessary or according to the manufacturer's current recommendations (NICE 2012).

Removal of male and female urethral catheters for the purpose of a trial without catheter (TWOC) can be undertaken by a competent Registered Nurse or AP

All indwelling catheters (Whether urethral or supra-pubic) must have the balloon deflated prior to removal.

The water is removed from the balloon using a syringe fitted into the inflation/deflation valve. (Care needs to be taken to avoid violent suction, which will collapse the inflation channel making deflation of the balloon difficult).

If deflation is not achieved through this means:

DO	DO NOT
• Try a different syringe. • Leave the syringe attached for 20 minutes. • Check if the patient is constipated. • "Milk" the catheter along its length between thumb and finger to unblock or remove obstructions caused by debris or encrustation. • Insert a few mls of air and then draw back on the syringe- this creates a vacuum which may precede deflation. • Insert a few mls of sterile water which may help clear a blockage. • If all else fails, attach an orange needle to the syringe and pierce the catheter below the valve, inserting the needle into the inflation chamber, then draw back. This method will bypass a faulty valve. • If the balloon still does not inflate, then seek medical assistance.	• **NEVER** attempt to burst the balloon by over inflating it. • **NEVER** cut the catheter or the inflation arm. Any complications created by either of these methods will be the responsibility of the person performing them. • **NEVER** leave the catheter in situ for longer than the recommended time. The nurse is professionally accountable for using products according to manufacturer's instructions. **ACA (2007).**

Ask the patient to breathe in and out: as the patient exhales (gently but firmly with continuous traction) remove the catheter. Clean the meatus (Royal Marsden 2011).

Document type of catheter, date of insertion/removal, batch number and expiry date as well as any problems encountered on removal. Faulty catheters and valves must be reported immediately for action to be taken.

13.0 DRAINAGE SYSTEMS

A wide variety of drainage bags and systems are available. Selecting a system involves consideration of the reasons for catheterisation, intended duration, the wishes of the patient and infection control issues.

Healthcare personnel should ensure that the connection between the catheter and the urinary drainage system is not broken except for good clinical reasons (NICE 2012).

Leg bags, catheter valves or freestanding drainage bags will normally remain connected to the catheter for 5-7days. More frequent disconnections will break the closed system and increase the risk of infection.

13.1 leg bags and night bags

Some patients will prefer to use a leg bag. These are available in 350, 500 and 750ml volumes, with short, medium or long tubing. There are also some specialist bags like belly bags and pocket bags that may be suitable for some individuals.

Most catheter bags are fitted with an anti-reflux valve to prevent backflow of urine into the bladder. It is important to ensure the bag is below the level of the bladder to maintain drainage. However, the catheter bag should not hang too low (more than 30cm) below the level of the bladder, as this will cause negative pressure resulting in bladder mucosa being sucked into the eyes of the catheter leading to bypassing or blockage. The bag should not be in contact with the floor (NICE 2012).

Patients who require a leg bag by day and a higher capacity bed bag by night should use the “link system”. The leg bag is not disconnected from the catheter, but rather the night bag is connected to the drainage tap of the leg bag.

The urinary drainage bag should be emptied frequently enough to maintain urine flow and prevent reflux (NICE 2012).

Where appropriate, the patient should be given the choice whether they wish to use a drainable or non-drainable night bag. In patients own homes, drainable night bags may be reused for 5-7 days, rinsing through with soap and water and allowing it to dry thoroughly. However, in residential and care homes or where it is assessed that the patient in their own home would be unable to care for a drainable night bag, a new night bag (usually non-drainable) must be used (ACA 2007).

Patients should be encouraged to empty their own catheter bags whenever possible to promote independence and dignity. Hands should be washed before and after the procedure, if the bag is being emptied by a nurse or professional carer, gloves should be worn.

Leg bags should be secured with leg straps or a leg sleeve. The importance of catheter tethering is stressed by the Royal Marsden (2011) to promote patient comfort and to limit potential complications of catheter migration and subsequent need for re-catheterisation. Night bags should be supported on a stand.

13.2 Catheter Valves

Catheter valves were first introduced to the UK in 1986, and have since been shown to be suitable for both male and female patients with indwelling or supra-pubic catheters.
Catheter valves are small devices attached directly to the catheter, allowing control of bladder emptying. The introduction of the catheter valve has widened the choice of therapeutic interventions that are available to the catheterised patient, with the potential for significant clinical benefits.

The Benefits of Valves include; providing independence from cumbersome drainage bags and encourages normal bladder function, maintaining detrusor muscle tone and bladder capacity.

Some patients may not be suitable to use a catheter valve. All patients require individual assessment prior to the use of a valve. Patients and carers should understand the rationale behind the use of a valve and have the mental capacity to remember to release the valve at regular intervals if their bladder sensation is compromised. Valves may be

inappropriate if bladder capacity is very limited. This might be the cause if the patient has been on free drainage for many years. However, capacity can be increased if a regime for the frequency of opening/closing the valve is planned carefully, decreased gradually and support is given to both patient and carer. Catheter valves may be inappropriate for patients with uncontrolled overactive bladder, ureteric reflux or renal impairment (Royal Marsden 2011).

14.0 APPROPRIATE USE OF BLADDER WASHOUTS/INSTILLATIONS

It has been identified that there are a group of patients with indwelling catheters whose catheters block on a regular basis regardless of what has been done to try to prevent the blockage. It has been suggested that for this group, regular catheter changes is best management and by identifying these “blockers” it allows for planned catheter management. It is suggested that keeping a catheter calendar, encourages proactive catheter care, identifying the potential problem before it becomes a real problem ensuring the catheter remains patent (ACA 2007). Changes should be planned regularly according to the pattern of an individual catheter life (Holtom 2004).

Recurrent catheter encrustation leading to blockage occurs in up to half of patients who are catheterised long-term. Bacteria in the urine, most commonly Proteus, produce an enzyme called urease, which splits urinary urea into ammonia and carbon dioxide. This results in an increase in alkalinity, conditions for the development of crystals e.g. Struvite and Calcium Phosphate. The crystals develop around the eyelets, balloon and internal lumen of the catheter (ACA (2007)). Catheter washouts are designed to dissolve the encrustation or reduce growth of the alkaline bacteria.

However, the use of washouts continues to be a contentious issue. There is evidence that supports the use of maintenance solutions in certain circumstances (Getliffe et al 2000). In the past there has been an overuse of these products, which in some cases has lead to resistance to the solution used.

Bladder washouts should never be routinely administered to catheterised patients without a therapeutic intervention and should not be used as a substitute for re-catheterisation if this is what is required (Addison 2000). Do not use to unblock a catheter (RCN 2012)

It is recommended that the nurse be aware of the urinary pH of catheterised patients. The higher the alkalinity, the greater possibility of encrustation developing. Critical pH is 6.8. Testing of the urine on a regular basis can assist in anticipating catheter problems associated with encrustation build up.

Bladder instillations or washouts must not be used to prevent catheter-associated infection (NICE 2012). Smaller volumes of washout (50ml) are as effective as the standard 100ml and two sequential washouts with 50ml are more effective than a single washout (Holtom 2004).

Catheter maintenance solutions are prescription only medication (POM) and should be treated in the same way as any POM medication. The solution should be prescribed for each individual patient as per ECCH prescribing formulary. At present all of the catheter maintenance solutions are available in the Nurse Prescribing formulary. They can therefore be prescribed by nurses who hold a Nurse Prescribing qualification (ACA 2007).

A Healthcare assistant (HCA) may carry out giving of a washout once they have attended ECCH theoretical training session, successfully completed the practical assessment requirements and feel competent and confident to carry out the procedure. The HCA may

carry out a washout on patients who have been assessed by a trained nurse as requiring a prescribed regime of washouts to maintain their indwelling catheter. The use of the washout should be identified in the patient's plan of care. The HCA should not be the sole provider for this aspect of care; it is recommended that the HCA should not carry out more than 2 consecutive washouts before the trained nurse assesses the patient. The HCA should only carry out the washout as part of a plan of care. They should not perform the procedure in cases of acute catheter blockage, as this situation would require assessment by a trained nurse.

15.0 PATIENT INFORMATION

These leaflets are available from the ECCH Continence Team or from ECCO.

16.0 EQUALITY AND DIVERSITY IMPACT ASSESSMENT

Impact Assessments must be conducted for:

- **All ECCH policies, procedures, protocols and guidelines (clinical and non-clinical)**
- **Service developments**
- **Estates and facilities developments**

Name of Policy / Procedure / Service	**Policy for Catheter Management**
Manager Leading the Assessment	**Teresa Lewis**
Date of Assessment	**17/05/2013**

STAGE ONE – INITIAL ASSESSMENT

Q1. Is this a new or existing policy / procedure / service?

☐ New

√ Existing

Q2. Who is the policy / procedure / service aimed at?

☐ Patients

√ Staff

☐ Visitors

Q3. Could the policy / procedure / service affect different groups (age, disability, gender, race, ethnic origin, religion or belief, sexual orientation) adversely?

☐ Yes

√ No

If the answer to this question is NO please sign the form as the assessment is complete, if YES, proceed to Stage Two.

Analysis and Decision-Making

Using all of the information recorded above, please show below those groups for whom an adverse impact has been identified.

	Adverse Impact Identified?
Age	Yes/No
Disability	Yes/No
Gender	Yes/No
Race/Ethnic Origin	Yes/No
Religion/Belief	Yes/No
Sexual Orientation	Yes/No

- Can this adverse impact be justified?
- Can the policy/procedure be changed to remove the adverse impact?

If your assessment is likely to have an adverse impact, is there an alternative way of achieving the organisation's aim, objective or outcome
What changes, if any, need to be made in order to minimise unjustifiable adverse impact?

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18.0 AUTHOR

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