



## CLINICAL GUIDELINE

# Urinary Catheterisation for Adults Clinical Guideline

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

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### Important Note:

The Intranet version of this document is the only version that is maintained. Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

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NHS Greater Glasgow and Clyde (NHSGG&C) has made every effort to ensure this clinical guideline does not have the effect of discriminating, directly or indirectly, against employees, patients, contractors or visitors on grounds of race, colour, age, nationality, ethnic (or national) origin, sex, sexual orientation, marital status, religious belief or disability. This clinical guideline applies to all staff employed by (NHSGG&C), locum staff on fixed term contracts and volunteer staff. All (NHSGG&C) clinical guidelines can be provided in large print or Braille formats if requested, and language line interpreter services are available to individuals of different nationalities who require them.

This clinical guideline should be used in conjunction with other relevant legislation, guidelines and standards. Standard Infection Control Precautions (SICPs) should be embedded into all care delivery.

Specific consideration should be given to NHSGG&C Infection Prevention and Control, Standard Operating Procedures (SOPs), NHSGG&C Consent Policy and Health Protection Scotland (HPS) National Infection Prevention and Control Manual and NHSGG&C Urology Formulary. The information contained is based on current information available. Quality improvement, audit and research within clinical areas mean that this evidence base is constantly evolving. Practitioners should endeavour to use the most up-to-date evidence on which to base their practice and be mindful of their professional responsibilities in line with the relevant professional guidance.

## **Scope**

This clinical guideline applies to all Health Care Practitioners (HCPs), within NHSGG&C who undertake adult urinary catheterisation. This clinical guideline includes male and female urethral catheterisation and suprapubic re-catheterisation. The clinical guideline does not cover intermittent self-catheterisation.

Pre-registration Health Care Practitioners may undertake urinary catheterisation under the direct supervision of a registered health care professional. Pre-registration nursing and midwifery students from all fields may participate in the insertion, management and removal of urinary catheters, for all genders, where appropriate. This must be under the direct supervision of a registered healthcare professional, who is competent in this skill. In relation to catheterisation of male genitalia only, students will have undertaken theoretical preparation as directed by the University and may only participate in this skill once this theory has been completed.

## **Urinary Catheterisation - Operational Definition**

For the purposes of this guideline, urinary catheterisation is described as an invasive procedure to enable the emptying of the bladder by the insertion of a specially designed sterile tube (urinary catheter). A urinary catheter is a thin, hollow, flexible tube which can be inserted into the bladder either through the urethral or suprapubic channel.

Urinary catheterisation is associated with a high risk of infection and should always be performed by a HCP. Urinary catheters are inserted using an aseptic non-touch technique (ANTT®) NHSGGC ANTT Guideline 2019 (under review)

## **Privacy, Dignity and Consent**

Ensure that the patient's privacy and dignity are maintained throughout the procedure. Practitioners must ensure the correct consent is gained from the patient in line with [NHSGG&C Consent Policy](#). Urinary catheterisation should only be carried out when there is a clinical need.

## Decision to Catheterise

The use of a catheter for urinary incontinence should only be undertaken when all other non-invasive management interventions have been considered

Patients, carers and families, where appropriate and possible, should be involved in any discussion regarding the advantages and disadvantages of urinary catheterisation when a catheter is likely to be long term.

Assessment and care planning for this procedure should consider the suitability of free drainage systems versus use of a catheter valve to maintain bladder control and function.

## Training and Competence

For the care and maintenance of any urinary catheter, HCPs should be appropriately trained and supervised until considered competent. A Practitioner can be described as competent if they have the necessary training, clinical experience, skills and knowledge to undertake the procedure safely and without supervision.

## Competence

For HCPs undertaking [Male Catheterisation](#) this supporting guidance and competency framework should be followed.

## Education

For HCPs involved in care of Urinary Catheters the following module must be completed to support competence: LearnPro: NES: Urinary Catheterisation and NES: Aseptic Technique Module 4 - Inserting an indwelling Urethral Catheter [www.Learnpro.uk.com](http://www.Learnpro.uk.com)

**Indications for Urinary Catheterisation** (this is not an exhaustive list)

## **Drainage**

- Incomplete bladder emptying
- Bladder outflow obstruction
- Acute or chronic retention of urine
- Peri-operative
- Accurate measurement of urinary output in acutely ill patients
- Urodynamic studies
- Intravesical medication

## **Exclusion Criteria for Urinary Catheterisation (this is not an exhaustive list)**

- Urethral trauma
- Strictures
- Urological malignancy (seek guidance from Urology)
- Prostatitis
- Recent prostate surgery (seek guidance from Urologist)
- History of bacteraemia associated with catheterisation unless the patient has adequate antibiotic cover for procedure
- Priapism

## **Potential Complications (this is not an exhaustive list)**

- Infection
- Urethral trauma
- Bypassing of urine around catheter
- Urethral stricture
- Encrustation and bladder calculi

- Urethral perforation
- Bladder spasm
- Latex sensitivity

For suprapubic catheters, reinsertion within 4 - 6 weeks of initial insertion is contraindicated. Should the suprapubic catheter be dislodged within this period, advice should be sought from Urology regarding reinsertion.

### **Urinary Catheter Selection:**

#### **Length of Catheter**

This should consider patient's lifestyle, gender and mobility. It is recommended that the smallest catheter size is used initially unless contraindicated:

- Catheter Lengths Male (standard length) 41-43cm
- Catheter Lengths Female 21-26cm

Care should be taken in choosing the correct length/type of catheter for the correct gender. A female length catheter should never be inserted into a male.

In some circumstances for example female obesity or female wheel chair users, a standard length (male) urethral catheter may be used to prevent discomfort.

#### **Size of Catheter**

Catheters are sized in the French Charrière scale (Ch) which measures catheter's diameter: 1Ch = 1/3 mm.

The smallest size catheter should be selected that will drain bladder:

- Male 12-16Ch
- Female 10-14Ch

Larger sizes may cause pain, discomfort, trauma and bypassing of urine around the catheter and may also be associated with abscess formation and increased risk of infection.

#### **Catheter Balloon size**

The catheter balloon is inflated to the size stated by manufacturer (usually 10ml) using sterile water. Over inflation can result in irritation of bladder, spasm and can cause necrosis.

## **Type of Catheter - Procurement, Prescribing and Access to Medical Devices**

Urinary Catheters should be accessed via Procurement. Lists are available for Acute and for Primary Care / Partnerships and are accessed via Urology Formulary:

[Acute Procurement Guide](#)

[Partnerships Procurement Guide](#)

Choices are made to provide comfort, ease of insertion, removal and minimise risk of complications.

To reduce the risk of adverse reactions, 100% silicone catheters (latex free) should be first choice. Please note that due to different supply routes, there may be variances in choice of products between health care settings. The patient should be reassured that this will not impact on equity and quality of care.

For unscheduled care, the patient should have a spare catheter at all times in their home: initial supply is for three catheters, with replacement follow up catheters when one is used.

The patient / carer should ensure that they do not have an excessive stock of catheters or drainage bags in their homes.

Community patients should be encouraged to report issues or concerns regarding their catheter or supplies to their District Nurse or GP.

### **Maintenance & Care (Urethral and Supra-Pubic Catheters)**

Care must be taken to ensure that the connection between the catheter and the urinary drainage system is not broken except for good clinical reason e.g. when renewing catheter bag. Urine drainage bags should be emptied once 70% full and changed as per manufacturer's instructions. Similarly catheter valves should be changed as per manufacturer's instructions.

HCPs must undertake hand hygiene, wear a disposable apron and non-sterile gloves before manipulation of the catheter system.

Unperfumed soap and water is sufficient for daily meatal and suprapubic site care. Care should be taken to cleanse away from the urethra or suprapubic site. Talcum powder and creams (unless prescribed) should not be used around catheter sites. Uncircumcised men should gently ease down foreskin over catheter after cleansing.

## **Drainage System and Catheter Valves**

Choice of this follows individual assessment and patient choice. A closed system should be used to minimise risk of urinary tract infection (UTI). Night bags should be attached at the outlet of the leg bag. Leg bags should be changed as per manufacturer's instructions.

Drainage bags should be positioned below bladder level to promote drainage and secured with 2 leg straps or statlock / catheter stabilisation device to prevent trauma to the urethra.

Catheter valves can be considered as an alternative to a urine drainage bag as their use maintains bladder control and function.

## **Decision to Remove the Urinary Catheter**

The requirement for the urinary catheter (short or long term) should be regularly reviewed. Remove catheters at the earliest opportunity. Catheters should be removed following thorough assessment of the individual's ongoing condition and after joint discussion with patient / carer and wider healthcare team. A follow up plan should be in place to support best practice.

## **Use of Catheter Maintenance Solutions / Bladder irrigation Fluids**

Routine use of bladder irrigation or catheter maintenance solutions should be avoided unless clinically indicated by appropriate Health Care Professional.

## **Identification of Catheter Associated Asymptomatic Bacteriuria (CA-ASB) and Catheter Acquired Urinary Tract Infection (CAUTI)**

Catheter Associated Asymptomatic Bacteriuria (CA-ASB) is defined as the presence of bacteria in the urine without clinical signs and symptoms indicative of CAUTI. However, the presence of bacteria in the urine in a patient with an indwelling urinary catheter does not always mean that the patient has a UTI requiring treatment with antibiotics.

Urinary catheters are a focus for biofilm formation. A few days following urinary catheterisation, micro-organisms will be isolated from the urine and within a week of a urinary catheter being in place, approximately 90% of patients will have bacteriuria.

### Clinical Signs and Symptoms of CAUTI

- Hypothermia (<36.0°C) or fever (>37.9°C or 1.5°C above baseline occurring on 2 occasions in a 12 hour period)
- New costovertebral (central lower back) tenderness
- Suprapubic tenderness
- New onset or worsening delirium

For a full catalogue of preventing catheter associated UTIs in the acute setting, click [here](#)

NB – DO NOT rely on classical signs and symptoms of UTI in the diagnosis of CAUTI. Appearance and odour of urine are not indicators of CAUTI. Ensure all other sources of infection have been excluded including respiratory, gastrointestinal and skin / soft tissue. For further information, please refer to: [a decision aid for diagnosis and management of suspected urinary tract infection \(UTI\) in people with indwelling catheters.](#)

### Autonomic Dysreflexia

In patients with spinal cord injury, increased spasticity, autonomic dysreflexia, or sense of unease are also compatible with CAUTI. See [Section 2.5 of the Queen Elizabeth National Spinal Injuries Unit Medical Handbook.](#)

In catheterised patients who present with fever:

- look for associated localising (loin or supra-pubic tenderness) or systemic features
- exclude other potential sources of infection
- send off an appropriately taken urine sample for culture to determine the infecting organism and susceptibility to antibiotics
- consider antibiotic therapy taking into account the severity of the presentation and any co-morbidity factors

Only send urine samples for laboratory culture if the patient has clinical sepsis, not because the appearance or smell of the urine suggests that bacteriuria is present.

## **The National Urinary Catheter Passport (NUCCP)**

The National Urinary Catheter Passport has been developed to support the management of urinary catheters. The passport should be commenced with adult patients who are at point of discharge from acute services and who will most likely have the urinary catheter in situ for 4 or more weeks.

Patients who are admitted to acute services with a catheter in situ and have a passport, will be commenced on the NHS GG&C Urethral Urinary Catheter (UUC) Care Plan for the duration of their stay while the catheter is in place. Their passport will be updated accordingly including at discharge. Community staff will be alerted to the fact that the patient has been discharged with a urinary passport on the discharge form (or equivalent) PECOS Code for NUCCP: PECOS (SKU code 223848).

Additional information is included in Appendix 1.

## References

Health Improvement Scotland (2013) [Bundle for Preventing Infection When Inserting and Maintaining a Urinary Catheter](#) (acute settings)

Health Protection Scotland (2016) 'National Point Prevalence Survey of Healthcare associated Infection and Antimicrobial Prescribing 2016' Glasgow: Health Protection Scotland

Health Protection Scotland (2017) 'Urinary Catheter Care Passport' Glasgow: Health Protection Scotland

Health Protection Scotland (2018) National Infection Prevention and Control Manual [online]. Available from <http://www.nipcm.hps.scot.nhs.uk/> [10 August 2018]

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Loveday, H.P., Wilson, J.A., Pratt, R.J., Golsorkhi, M., Tingle, A., Bak, A., Browne, J., Prieto, J. and Wilcox, M. (2014) 'epic 3: National Evidence-Based Clinical guidelines for Prevention Healthcare-Associated Infections in NHS Hospitals England'. Journal of Hospital Infection (86S1)

NHS QIS (2004) Urinary Catheterisation and Catheter Care Best Practice Statement

NHS Education for Scotland (2018) Urinary Catheterisation eLearning Module [online]. Available from <http://www.learnpro.co.uk/> [08 March 2018]

NHS Greater Glasgow and Clyde (2013) Acute Services Nursing and Midwifery Practice Development Forum – Record of Achievement of Competence in Male Urethral Catheterisation [online]. Available from [NHSGG&C Urethral Urinary Catheter Care Hub](#) [10 August 2018]

NHS Greater Glasgow and Clyde (2016) Professional Standards for Record Keeping Policy. Available from <http://www.staffnet.ggc.scot.nhs.uk/Applications/PM/Policy Documents/Professional Standards for Record Keeping May 2016.doc>

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NHS Greater Glasgow and Clyde (2018) Adult Urethral Urinary Catheter (UUC) Insertion and Maintenance Care Plan [online]. Available from <http://www.nhsggc.org.uk/media/244110/uuc-care-plan.pdf> [10 August 2018]

NHS Greater Glasgow and Clyde Safe Use of Latex 2010  
[http://www.nhsggc.org.uk/media/234133/nhsggc\\_health\\_safety\\_policy\\_latex.pdf](http://www.nhsggc.org.uk/media/234133/nhsggc_health_safety_policy_latex.pdf)

[NES Urinary Catheter Care Passport](#) (Partnerships)

[NICE Pathway](#): Preventing Infection Related to Long Term Urinary Catheters

Quality Prescribing (2019): [Scottish Reduction in Antimicrobial Prescribing \(ScRAP\) Programme Version 2 – Support Pack](#)

The Royal Marsden NHS Foundation Trust ((2015) The Royal Marsden Manual of Clinical Nursing Procedures 9th edition. West Sussex: Wiley Blackwell

Scottish Antimicrobial Prescribing Group (2014) [Decision Aid for Diagnosis and Management of Suspected Urinary Tract Infection \(UTI\) in People with Indwelling Catheters](#). Glasgow: Scottish Antimicrobial Prescribing Group

Scottish Intercollegiate Clinical Guidelines Network (2012) Sign 88: Management of suspected bacterial urinary tract infection in adults. Edinburgh: Scottish Intercollegiate Clinical Guidelines Network

[Scottish Reduction in Antimicrobial Prescribing Group](#) (ScRAP) (2019)

## **Appendix 1**

### **The National Catheter Passport**

#### [NES Urinary Catheter Care Passport](#)

### **The Health Protection Scotland (HPS) Urinary Catheter Care Passport (UCCP)**

UTIs are the most common type of infection in acute and primary care settings in Scotland (HPS 2016). In an effort to reduce UTIs many quality improvement interventions have been developed both nationally and locally in NHS Scotland. One national quality improvement intervention is the introduction of the HPS UCCP (HPS 2017).

The primary function of the HPS UCCP is:

- An education tool for the person who has a urinary catheter
- A communication tool for health and social care staff around the person's catheter, why they have it, when it was inserted and future plans including trial without catheter

It is hoped that this will promote seamless care for patients with urinary catheters as they move through the various pathways of health and social care, but more importantly as a means of encouraging self- management of their device in a way which will reduce the risk of complications such as catheter associated urinary tract infections (CAUTI). The patient should also be directed to the troubleshooting guide within the passport which provides simple solutions to possible catheter problems as well as signposting appropriate help.

When the UCCP is issued to patients, it is important that the healthcare provider provides guidance for its use. The patient should be advised to bring the catheter passport with them if they have clinic appointments or a hospital admission.

**Appendix 2**  
**Short Life Working Group Contributors**

<b>Name</b>	<b>Designation</b>
Rona Agnew	Service Manager, SPHERE Bladder and Bowel Service
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Jacqui Fordyce	Lead Nurse, Glasgow City HSCP
Emma Henderson	Practice Development Nurse, Acute Services
Gillian Mills	Acting Lead Nurse, Infection Prevention & Control, Acute Sector
Lynne Watret	Interim Non Medical Prescribing Lead, Corporate Services

## **Appendix 3**

### **Standard Operating Procedures (SOPs)**

All staff performing the following tasks must adhere to [NHSGGC Infection Prevention and Control policies](#) and SOPs:

- 1. Insertion of Urethral Urinary Catheter (Male and Female)**
- 2. Removal of Urethral Urinary Catheter (Male and Female)**
- 3. Removal of a Suprapubic Urinary Catheter**
- 4. Reinsertion of Suprapubic Urinary Catheter**
- 5. How to Obtain a Catheter Specimen of Urine (CSU)**

## SOP1. Insertion of Urethral Urinary Catheter (Male and Female)

Equipment
<ul style="list-style-type: none"><li>• Dressing Trolley (if in home environment, a clean flat surface)</li><li>• Alcohol Based Hand Rub (ABHR)</li><li>• Urinary catheter</li><li>• Sterile foil bowl (for cleansing)</li><li>• Catheter valve and / or sterile drainage bag</li><li>• Procedure pack (includes sterile gauze, drape, disposable pad and disposal bag)</li><li>• 10ml slip syringe filled with sterile water</li><li>• 0.9% sterile saline for cleansing</li><li>• Pre-packed sterile anaesthetic / lubricating gel (check for contraindications)</li><li>• Decontamination wipes</li><li>• Non sterile gloves</li><li>• 2 pairs of sterile gloves</li><li>• Several Disposable aprons (minimum of 3)</li><li>• Urinary catheter drainage bag stand or 2 leg straps</li><li>• NHSGG&amp;C Adult Urethral Urinary Catheter (UUC) Insertion and Maintenance <a href="#">Care Plan</a> (For Acute Setting only - order via PECOS)</li><li>• Information About Urethral Urinary Catheter Care' patient information leaflet (Acute order via Pecos code 222581)</li><li>• Fluid Balance Chart (Acute)</li></ul>

Pre-procedure (Female and Male)	
1.	Provide the 'Information About Urethral Urinary Catheter Care' patient information leaflet (Acute)
2.	Offer a Chaperone
3.	Explain the procedure to the patient and discuss; alternatives to urinary catheterisation; the reason for urinary catheterisation; steps involved during insertion of the catheter; aftercare and the importance of diet and fluid intake to promote a healthy bladder and bowel pattern
4.	Obtain consent
5.	Perform hand hygiene
6.	Clean procedure trolley with detergent wipes.  In patient's homes prepare suitable clean flat surface.

<b>Pre-procedure (Female and Male)</b>	
	<a href="#"><u>Minimise risk of infection</u></a>
7.	Perform hand hygiene
8.	Gather equipment and place on bottom shelf of procedure trolley. In patients' homes place items on suitable clean flat surface
9.	Adjust height of bed and assist patient into supine position as able (Female patients should have knees bent, hips flexed and feet apart). For patients being catheterised at home, make appropriate adjustments in line with moving and handling risk assessment
10.	Maintain patient's dignity and position a disposable pad under the patient's buttocks. In patient's homes, use appropriate items to protect patient's bedding, fold upper bedding to expose patient's lower body
11.	Perform hand hygiene
12.	Put on disposable apron
13.	Open sterile dressing pack onto the top surface of trolley (in patient's home use a flat clean surface) Open and place equipment onto the field using a non-touch technique
14.	Perform hand hygiene

<b>Procedure - Female Only</b>	
1.	Put on first pair of sterile gloves and apron
2.	Connect catheter to drainage bag using ANTT (if valve is being used omit this step)
3.	Clean urethral meatus with sterile saline using clean and dirty hand technique. Use a single swab each time. Clean using a top to bottom approach, left labia, right labia and urethral orifice. Use a new swab for each wipe and dispose into waste bag / disposal bag
4.	Insert prescribed single use anaesthetic / lubricating gel slowly into urethral meatus and leave for recommended manufacturer's time (around 5 minutes)

<b>Procedure - Female Only</b>	
5.	Remove gloves and dispose into clinical waste bin / disposal bag
6.	Perform hand hygiene and put on second pair of sterile gloves
7.	Place sterile drape over patient leaving the pubic area exposed
8.	<p>Insert catheter by only touching plastic wrapping approximately 5 - 6cms along urethral tract until urine has started to flow, then advance a further 2 - 3cm</p> <p>(If the patient at anytime experiences pain or there is resistance when passing the catheter, stop and seek advice)</p>
9.	<p>Slowly inflate the balloon with 10mls of sterile water according to manufacturer's instructions. Balloon inflation should be pain free</p> <div data-bbox="549 891 1168 1323" data-label="Image"> <p>The diagram shows a cross-section of the female bladder and urethra. A yellow catheter is inserted into the urethra, and a grey balloon is inflated inside the bladder. The catheter is connected to a tube that exits the body. The bladder is shown in a reddish-brown color, and the urethra is shown in a yellowish color. The diagram is set against a light blue background.</p> </div> <p>Image courtesy of NES 2018</p> <p>(If the patient is experiencing any pain or discomfort during balloon inflation, the balloon might be positioned in the urethra. Deflate the balloon and advance the catheter a few more centimetres before trying again)</p>
10.	Measure the amount of urine and record in appropriate clinical notes
11.	Ensure the patient is comfortable and the genital area is dry
12.	Wrap sterile field and dispose of all waste into clinical waste / disposal bag
13.	Remove gloves then apron and dispose into clinical waste bin / disposal bag
14.	Perform hand hygiene

<b>Procedure - Male Only</b>	
1.	Put on apron and first pair of sterile gloves
2.	Connect catheter to drainage bag (if valve is being used omit this step)
3.	Hold penis with gauze swab and retract foreskin (if not circumcised), clean around the glans and urethral orifice with sterile normal saline (0.9%)  Begin at urethral opening and moving towards the shaft of the penis make a complete circle with each swab. Dispose of swab into waste/disposal bag
4.	Insert prescribed single use anaesthetic / lubricating gel slowly into urethral meatus and leave for recommended manufacturer's time (around 5 minutes)  Hold the urethra closed by holding the shaft of the penis between the thumb and first finger
5.	Remove gloves and dispose into clinical waste bin / disposal bag
6.	Perform hand hygiene and put on second pair of sterile gloves
7.	Place sterile drape over patient leaving the pubic area exposed
8.	Wrap sterile folded gauze around the penis and use to support the penis at a 90 degree angle
9.	Insert the catheter slowly into urethral meatus and gently advance approximately 20cms until urine begins to flow  There may be a slight resistance at the external sphincter/ If so ask the patient to cough or try to pass urine and the catheter should pass easily
10.	If resistance felt and unable to progress the catheter, stop and seek help. Do not force the catheter further into the urethra  If patient experiences pain or bleeding during the procedure, this should be ceased immediately and medical advice sought
11.	Insert catheter until urine has started to drain, then advance catheter a further 2 - 3cm or almost up to the bifurcation
12.	Slowly inflate the balloon with 10mls of sterile water according to manufacturer's instructions. Balloon inflation should be pain free

## Procedure - Male Only

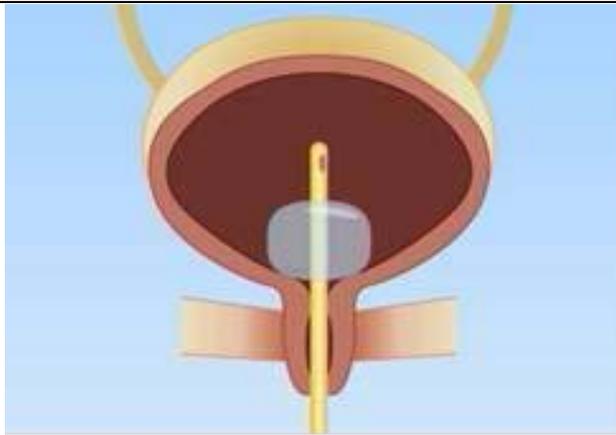


Image courtesy of NES 2018

(If the patient is experiencing any pain or discomfort during balloon inflation, the balloon might be positioned in the urethra. Deflate the balloon and advance the catheter a few more centimetres before trying again)

- |     |  |
|-----|--|
| 13. | Record the amount of urine in appropriate clinical notes   |
| 14. | Ensure the patient is comfortable, the genital area is dry. Replace foreskin<br>Return bed and bedding to normal state |
| 15. | Wrap and fold and dispose of all waste into clinical waste bag / disposal bag  |
| 16. | Remove gloves then apron and dispose into clinical waste bin / disposal bag  |
| 17. | Perform hand hygiene   |

## Post - Procedure (Female and Male)

- |    |   |
|----|---|
| 1. | Position drainage bag and secure with 2 leg straps or catheter drainage bag stand if a drainage bag is in use<br>Ensure catheter valve in place if being used |
| 2. | Write 'today's' date on urine drainage bag  |
| 3. | Perform hand hygiene  |

## Post - Procedure (Female and Male)

4. The HCP who inserts the UUC must accurately complete the following documentation:
- NHSGG&C Adult Urethral Urinary Catheter (UUC) Insertion and [Maintenance Care Plan](#) (Acute) (order via PECOS)
  - 'NES Urinary Catheter Care Passport'
  - NHSGG&C Care Plan (Inpatients)
  - NHSGG&C Active Care, review frequency (inpatients only)
  - NHSGG&C Nursing Evaluation
  - NHSGG&C Fluid Balance Chart (where indicated)

## SOP2. Removal of Urethral Urinary Catheter (Male and Female)

Equipment
<ul style="list-style-type: none"><li>• Apron</li><li>• Non- sterile Gloves</li><li>• 10ml slip Syringe</li><li>• Gauze swabs</li><li>• 0.9% Sterile Saline</li></ul>

Procedure (Male and Female)	
1.	Catheters are usually removed early in the morning
2.	Explain procedure to patient and inform him or her of potential post-catheter symptoms, i.e. urgency, frequency and discomfort, which are often caused by irritation of the urethra by the catheter
3.	Perform Hand Hygiene
4.	Put on apron and gloves
5.	<p>Cleansing area</p> <p><b>Female</b></p> <p>Use saline to clean the meatus and catheter, always swabbing away from the urethral opening. Never clean from the perineum / vagina towards the urethra</p> <p><b>Male</b></p> <p>Hold penis with gauze swab and retract foreskin (if not circumcised), clean around the glans and urethral orifice with sterile normal saline (0.9%). Return foreskin to original position.</p> <p>Begin at urethral opening and moving towards the shaft of the penis make a complete circle with each swab. Dispose of swab into waste/disposal bag</p>
6.	Having checked volume of water in balloon (see patient documentation), use syringe to deflate balloon

<b>Procedure (Male and Female)</b>	
7.	Ask patient to breathe in and then out; as patient exhales, gently (but firmly with continuous traction) remove catheter
8.	Male patients should be warned of possible discomfort as the deflated balloon passes through the prostate gland
9.	Clean meatus with sterile saline, tidy away equipment, and make the patient comfortable  Encourage patient to mobilise and drink 2 - 3 litres of fluid per day

Remove Urethral Urinary Catheters at the earliest opportunity. The catheter should be removed by deflating the balloon with a 10 ml syringe (Only remove when the catheter when the balloon is fully deflated and no resistance is experienced. The balloon valve should NEVER BE CUT OFF. If you are unable to remove a catheter seek advice from local Urology department.

### SOP3. Removal of a Suprapubic Urinary Catheter

Equipment
<ul style="list-style-type: none"><li>• Dressing trolley (if in home environment, a clean flat surface)</li><li>• Alcohol based hand rub (ABHR)</li><li>• Detergent wipes</li><li>• Sterile foil bowl or galipot</li><li>• Disposable gloves x2 pairs</li><li>• Apron x2</li><li>• Disposal bag</li><li>• Syringe 10ml</li><li>• Gauze</li><li>• 0.9% Saline</li></ul>

Procedure for removal of a Suprapubic Catheter	
1.	Explain the procedure to the patient
2.	Check the patient's records to determine how much water was used to inflate the balloon
3.	Perform hand hygiene
4.	Put on a disposable apron and non-sterile gloves
5.	Clean procedure trolley with detergent wipes In patients' home prepare a suitable clean flat surface
6.	Remove gloves then apron and dispose into clinical waste bag or disposal bag
7.	Perform hand hygiene
8.	Put on a disposable apron
9.	Assist the patient into a suitable position
10.	Perform hand hygiene
11.	Put on disposable gloves
12.	Empty the drainage bag
13.	Cleanse cystostomy site with sterile saline
14.	Release the catheter and drainage bag support / straps

<b>Procedure for removal of a Suprapubic Catheter</b>	
15.	Deflate the balloon using a 10 ml syringe. If unable to deflate the balloon, seek medical advice
16.	Gently remove the catheter. Place fingers as close to the skin as possible. As you withdraw the catheter from the tract, you may need to use a slight corkscrewing action  Have some gauze ready to cover cystostomy (change all) area  Note the angle at which the catheter is removed  There may be a gush of urine as you withdraw the catheter
17.	Clean around supra-pubic cystostomy using saline
18.	Dispose of equipment into clinical waste bag or disposal bag
19.	Remove gloves then apron and dispose into clinical waste bag or disposal bag
20.	Perform hand hygiene
21.	If supra-pubic catheter is to be reinserted, please refer to the SOP "Reinsertion of supra-pubic catheter"
22.	Information to be recorded in the patients records <ul style="list-style-type: none"> <li>• Reason for removal</li> <li>• Any problems on removal</li> </ul>

#### SOP4. Reinsertion of Suprapubic Urinary Catheter

After insertion of the first supra-pubic, the catheter should be changed after four to six weeks or as directed by Urology. Changes required prior to the fourth week should be undertaken by Urology. Subsequent changes should be undertaken every six to eight weeks or as directed by Urology Services using a Standard (Male length) catheter minimum size 16 Ch.

#### Equipment

- Dressing Trolley (if in home environment, a clean flat surface)
- Alcohol Based Hand Rub (ABHR)
- Suprapubic catheter
- Sterile foil bowl (for cleansing)
- Catheter valve and / or sterile drainage bag
- Procedure pack (includes sterile gauze, drape, disposable pad and disposal bag)
- 10ml slip syringe filled with sterile water
- 0.9% sterile saline for cleansing
- Pre-packed sterile anaesthetic / lubricating gel (check for contraindications)
- Decontamination wipes
- Non sterile gloves
- 2 pairs of sterile gloves
- Several Disposable aprons (minimum of 3)
- Urinary catheter drainage bag stand or 2 leg straps
- Fluid Balance Chart (Acute)
- 'NHSGG&C Adult Urethral Urinary Catheter (UUC) [Insertion and Maintenance Care Plan](#)' (For Acute Setting only - order via PECOS)
- Information About Urethral Urinary Catheter Care' patient information leaflet (Acute order via Pecos code 222581)

<b>Pre-Procedure</b>	
1.	Provide the 'Information About Urinary Catheter Care' patient information leaflet and National Catheter Passport
2.	Offer a Chaperone
3.	Explain the procedure to the patient and discuss; alternatives to urinary catheterisation; the reason for urinary catheterisation; steps involved during insertion of the catheter; aftercare and the importance of diet and fluid intake to promote a healthy bowel pattern
4.	Obtain verbal consent
5.	Perform hand hygiene
6.	Put on disposable apron then non-sterile gloves
7.	Clean procedure trolley with detergent wipes In patient's home prepare a suitable clean flat surface
8.	Remove gloves then apron and dispose into clinical waste bin/disposal bag
9.	Perform hand hygiene
10.	Gather equipment and place on bottom shelf of procedure trolley In patient's home place equipment on a suitable clean flat surface

<b>Pre-Procedure</b>	
11.	Adjust height of bed and assist patient into supine position as able  In patient's home appropriate adjustments in line with moving and handling risk assessment
12.	Protect bedding, maintain patient's dignity and position a disposable pad under the patient's buttocks  In patient's homes use appropriate items to protect patient's bedding, fold upper bedding to expose patient's lower body
13.	Perform hand hygiene
14.	Put on disposable apron
15.	Open sterile dressing pack onto the top surface of trolley (in patient's home use a flat clean surface), then open and drop equipment onto the field using a non-touch technique / not touch component part
16.	Remove apron and dispose into clinical waste bin / disposal bag
17.	Perform hand hygiene
18.	The HCP who inserts the UUC must accurately complete the following documentation: <ul style="list-style-type: none"> <li>• NHSGG&amp;C Adult Urethral Urinary Catheter (UUC) Insertion and Maintenance <a href="#">Care Plan</a> (Acute) (order via PECOS)</li> <li>• 'NES Urinary Catheter Care Passport'</li> <li>• NHSGG&amp;C Care Plan (Inpatients)</li> <li>• NHSGG&amp;C Active Care, review frequency (inpatients only)</li> <li>• NHSGG&amp;C Nursing Evaluation</li> <li>• NHSGG&amp;C Fluid Balance Chart (where indicated)</li> </ul>

<b>Procedure for Reinsertion of Suprapubic Catheter</b>	
1.	Connect catheter to drainage bag
2.	Place sterile drape over patient leaving the cystostomy area exposed
3.	Cleanse around the supra-pubic cystostomy with sterile saline
4.	Remove sterile gloves, decontaminate hands with ABHR and put on a pair of sterile gloves

## Procedure for Reinsertion of Suprapubic Catheter

5. Insert the catheter at the same angle into the abdominal tract within 30 to 40 minutes of removal
- Advance the catheter slightly further than the length of the catheter that was removed
- You may need to use a corkscrewing action
- Please note that the cystostomy tract can close quickly due to detrusor contraction

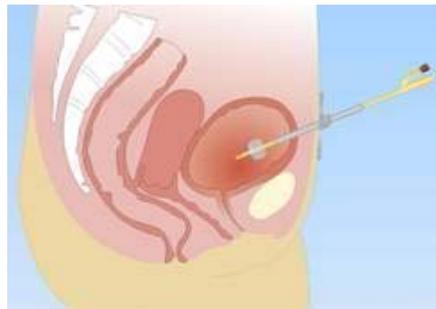


Image Courtesy of NES 2018

6. Slowly inflate the balloon with 10mls of sterile water according to manufacturer's instructions
7. Withdraw the catheter slightly and connect to the new sterile drainage system
- Observe for urine, which may not be immediate and might be a little blood stained
8. Dispose of equipment
9. Remove gloves then apron and dispose into clinical waste bag or disposal bag
10. Perform hand hygiene
11. Record information in patient record, including:
- Catheter type, size, make and batch number
  - How much sterile water is used to inflate the balloon
  - Date of insertion
  - Batch No of lubricant
  - Date of next catheter change and subsequent review

## Procedure for Reinsertion of Suprapubic Catheter

	Record any variances
12.	<p>Instruct patient / carer on effective catheter care as follows</p> <ul style="list-style-type: none"><li>• Wash hands before and after dealing with the catheter and drainage system</li><li>• The insertion area of the catheter should be washed with soap and water and does not require a dressing unless indicated</li><li>• Check the drainage bag is below the level of the bladder</li><li>• Check that catheter and drainage bag are correctly secured</li><li>• Maintain closed system</li><li>• Advice on when and how to change / attach drainage system</li><li>• Drink at least 1.5 litres of fluids over the next 12 – 24 hours unless contraindicated</li><li>• Avoid constipation</li><li>• How to dispose of equipment</li></ul> <p>Advise patient on problems that may occur e.g. symptoms of infection, blockage, pain, haematuria</p>

## **SOP5. How to Obtain a Catheter Specimen of Urine (CSU)**

If the patient has clinical signs and symptoms of CAUTI (see above) then a CSU should be obtained and sent to the Microbiology lab for culture. This will ensure that the patient is treated with the most appropriate antibiotic.

A CSU must be obtained from the catheter sampling port and not directly from the urine drainage bag due to the presence of bacteria. This maintains the closed drainage system and helps to reduce the risk of CAUTI. If the patient has a valve in place, the sample can be obtained directly, discarding the initial flow of urine.

All urethral catheter sampling ports are needleless. **DO NOT USE A HYPODERMIC NEEDLE or ANY NEEDLE** to obtain a CSU. A syringe should be used (minus a needle to withdraw the CSU)

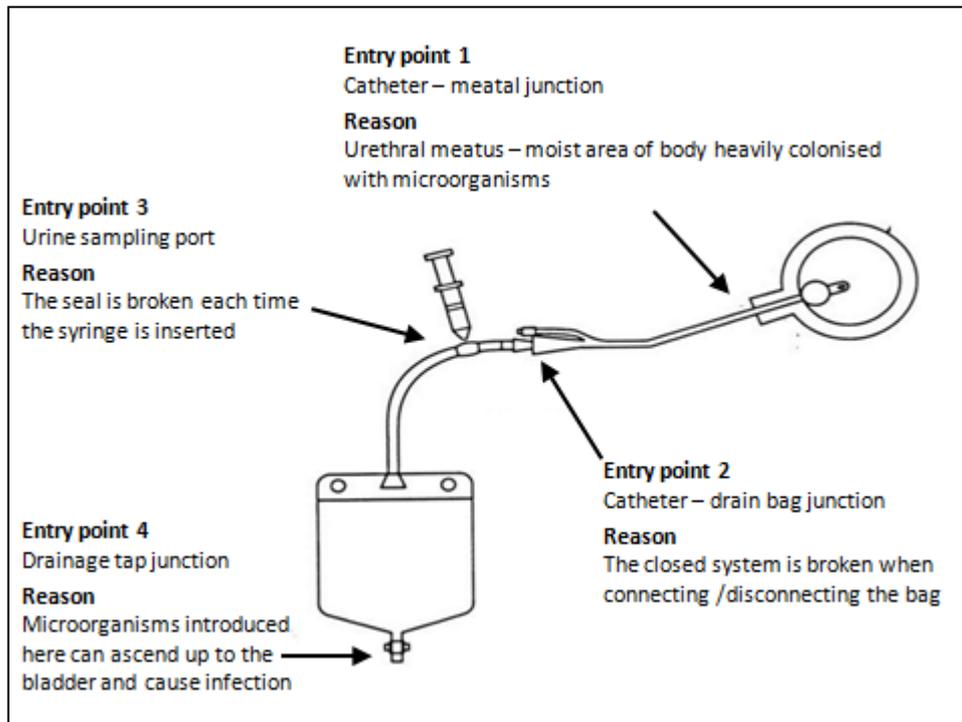


Figure1 - NHS Greater Glasgow & Clyde 2019

### Equipment

- Apron
- Non sterile gloves
- 1 x 10 ml Syringe
- Alcohol swab
- Red top boric acid container
- Appropriate specimen request form

### Procedure for Obtaining a Catheter Specimen of Urine

- |    |  |
|----|--|
| 1. | Explain the procedure to the patient           |
| 2. | Obtain informed consent                        |
| 3. | Perform hand hygiene                           |
| 4. | Put on disposable apron and non-sterile gloves |

<b>Procedure for Obtaining a Catheter Specimen of Urine</b>	
5.	Clean the catheter sampling port for a minimum of 15 seconds with an alcohol swab and allow to dry (see entry point 3 on Figure 1)
6.	Insert the needleless syringe into the sample port and aspirate urine. Samples less than 10mls may give false result when analysed by microbiology.  <b>Do not insert a hypodermic needle at any time into the sample port</b>
7.	Remove the syringe and clean the sample port with an alcohol swab
8.	Put the urine into the red top boric acid specimen container and dispose of the syringe into clinical waste
9.	Remove gloves and apron and dispose into clinical waste
10.	Perform hand hygiene
11.	Ensure all appropriate details are recorded on specimen container and specimen request form
12.	Document in clinical record that a CSU has been sent to Microbiology

NB - Specimens <10mls may give false negative results. Specimens <2mls and those not in red top boric acid containers will be discarded by Microbiology laboratory and repeat specimen requested.

## Appendix 4 - Catheter Problem Solving Guide

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## Newly inserted catheter is not draining urine

### **Eyelets may be blocked by anaesthetic gel**

- Allow time for the urine to drain.

### **Incorrectly sited**

- Urethral catheter – check that the catheter is correctly sited. Advance the catheter further into the bladder prior to inflating the balloon.
- Suprapubic catheter – ensure the urethral catheter has not advanced too far into the bladder and entered the urethra. The external length of the catheter (and entire catheter length) should be documented in the nursing care plan. The catheter should be advanced just beyond this external measurement before inflating the balloon.

### **Bladder may be empty**

- If possible encourage a good fluid intake prior to catheterisation and change the position of the patient.

If there is still no urine and are unsure of the position liaise with Senior Health Care Practitioners

## No urine is draining into the drainage bag

### **Kinking/compression of the catheter or drainage bag tube**

- Check the tubing and remove any kinks and obstructions. Check the position of the leg straps. Adjust the position of the patient.

### **Incorrect positioning of the drainage bag**

- Check the tubing. Ensure the drainage bag is below the level of the bladder (unless using a belly bag). The urothelium may get sucked into eyelets of the catheter preventing the flow of urine. Raise the level of the drainage bag above the level of the bladder briefly. This may release the vacuum and allow the urine to drain freely again.
- Document the normal position of the drainage bag.

### **Drainage bag is pulling the catheter down**

- Instruct the patient/carer to empty the leg bag when two thirds full.
- Review current method of supporting drainage bag.
- Ensure the catheter is secure by using a thigh or abdominal catheter retainer strap to prevent unnecessary pull on catheter or drainage bag.

### **Air block in the catheter**

- Always leave a small amount of urine in the bag (5 to 10mls). The plastic sides of the bag can sometimes stick together creating a vacuum which stops the flow of urine.
- Try lifting the leg bag above the level of the bladder for 20 to 30 seconds.
- Disconnect the catheter from the tubing and see if the urine starts to flow.

### **Catheter may be blocked by debris**

- Review fluid intake and increase if appropriate.
- Consider changing the catheter.
- If there is debris consider changing the catheter to an all silicone possibly with larger Charrière or open ended catheter.
- “Flushing” a blocked catheter is not advocated. Consideration could be given to administering a urotainer normal saline solution (100mls) if advised by urology.

- If debris is a recurring problem despite the above, liaise with urology for consideration of bladder irrigation procedure.

**NB. The use of Suby G or Solution R urotainer may increase the production of debris and is not advocated.**

#### **Catheter may be blocked by encrustation**

- Check the patient's catheter record sheet for a history of encrustation.
- Check pH of urine.
- Inspect the catheter on removal to identify the reason for the blockage. Cut the catheter lengthways. Feel for encrustation with a gloved hand.
- If the blocking pattern has been established, plan a date for the next change of catheter at an earlier interval.
- Consider changing the catheter or use of catheter maintenance solutions.

#### **Poor fluid intake**

- Encourage the patient to drink 1.5 to 2 litres daily, unless contraindicated, avoiding caffeine and other bladder irritants.

#### **Constipation**

- Review diet and fluid intake
- Use of bowel diary

## Urine is not draining from patient with spinal injury

**Some patients are at risk of developing autonomic dysreflexia (NHS QIS 2004).**

- Re-catheterise immediately. Should any difficulties occur during re-catheterisation this is a **medical emergency** and the patient should be referred to accident and emergency department immediately.
- Where autonomic dysreflexia occurs, treatment should be undertaken as directed by Spinal Injury Unit

Please refer to [NHS QIS \(2004\) Urinary Catheterisation and Catheter Care Best Practice Statement \(autonomic dysreflexia, page 23\)](#).

## By-passing or urine around urethral catheter

### Kinks in catheter or drainage bag tubing

- Ensure the catheter equipment is not obstructed in any way.

### May indicate the presence of infection

- Obtain a catheter specimen if other signs of infection are present.
- Refer to (SIGN 2012) Management of suspected bacterial urinary tract infections in adults and CAUTI bundle.

### Constipation

- Review diet and fluid intake
- Use of bowel diary
- Refer to [NHS GG&C guidelines for the management of constipation](#).

### Fluid intake

- Normalise fluid intake (1.5 to 2 litres daily, unless contraindicated) avoiding bladder irritants, for example caffeine, dark berry juice and tomatoes.

### Incorrect positioning of drainage system

- Refer to manufacturing guideline

### Encrustation

- Check the patient's catheter record sheet for a history of encrustation.
- Check pH of urine.
- Inspect the catheter on removal to identify the reason for the blockage. Cut the catheter lengthways. Feel for encrustation with a gloved hand.
- If the blocking pattern has been established, plan a date for the next change of catheter at an earlier interval.
- Consider changing the catheter
- The use of catheter maintenance solutions should only be considered as part of individualised care plan (refer to RCN Catheter Care: guidance for nurses).

**Latex allergy**

- Check the patient does not have a latex allergy prior to catheterisation.
- Use an all silicone catheter.

**Size of catheter**

- Try smaller size of catheter for urethral bypassing to minimise irritation (unless it has been established that bypassing is caused by grit or debris).

**Bladder stones**

- If blocking and bypassing problems persist with several catheter changes, discuss with medical staff and consider CT KUB scan (kidneys, ureter and bladder).
- If bladder stones are present, grit may be seen in the drainage bag and/or the catheter may fall out when the balloon is pierced by bladder stone.

**Bladder spasm / detrusor instability**

- Consider the use of anti-spasmodic medication with caution.
- Referral to urology may be required.

## **Cloudy, strong smelling urine, pain or discomfort**

### **Urinary tract infection (UTI)**

- Encourage the patient to drink 1.5 to 2 litres daily, unless contraindicated, avoiding bladder irritants for example caffeine, dark berry juice, tomatoes.
- The patient should contact their nurses or doctor if symptoms persist for more than 24 hours.
- Test the urine. Send a specimen for culture and sensitivity. Refer to (SIGN 2012) Management of suspected bacterial urinary tract infection in adults and CAUTI bundle.

## Haematuria in catheterised patients

**May be due to trauma, UTI, calculi or carcinoma**

- Observe output and document the severity of haematuria.
- Seek medical advice if haematuria persists.
- Encourage fluid intake.

## Catheter expelled or pulled out

### Catheter expelled

Review the need for indwelling catheter and consider appropriate alternative short and long term options, for example intermittent catheterisation, urosheath, bodyworn pads.

#### Reasons for catheter expulsion:

##### Constipation

- Review diet and fluid intake
- Use of bowel diary
- Refer to [NHSGG&C guidelines for the management of constipation](#).

##### Bladder spasm

- Consider use of antimuscarinic medication. This can take 6 to 8 weeks for an optimum result.
- Liaison with urology may be required if frequent expulsion continues and there has been no effect from the antimuscarinic(s).

##### Neurological cases

- Consider referral for a suprapubic catheter.
- Liaise with urology. Botox to bladder may be an option.

##### Bladder stones

- If catheter is expelled and on inspection balloon is deflated, consider bladder stones or faulty product. If bladder stones are suspected, refer to Urology

### Catheter pulled out

- Review the need for indwelling catheter and liaise with medical staff. Consider appropriate short and long term options, for example intermittent catheterisation, urosheath, bodyworn pads.
- Re-catheterise if necessary.

## **Catheter retaining balloon will not deflate**

### **Valve port and balloon inflation channel may be compressed**

- Check there is no external compression problems.

### **Faulty valve mechanism**

- Valve port should always be aspirated slowly to allow spontaneous deflation. If it is done forcefully the valve mechanism may collapse.
- If attempts to deflate the balloon fail, consider re-inflating the balloon with up to 5mls of sterile water and then try and deflate it again. If this is unsuccessful, urology advice must be sought.
- Defective catheter equipment should be reported to the supply source along with a short narrative about the specific product plus the lot or batch number. If available, a sample of unused product from the same box should be returned for testing. The manufacturer will investigate the defect and provide feedback to the supply source.

### **Difficulty in removing existing suprapubic catheter**

- Follow the procedure for removal of a suprapubic catheter.
- If the catheter is difficult to remove, consider re-inflating the balloon with 1-2mls of sterile water and attempt to remove the catheter slowly.
- If unable to remove the catheter, contact urology or medical staff for further advice.
- To avoid recurrence consider an alternative catheter material, for example, hydrogel.

## Difficulty with insertion of a new suprapubic catheter

### **Cystostomy site may close over as detrusor fibres contract very quickly**

- Ensure the catheter is replaced immediately after removal. Community patients should have the contact details of the Community Nursing Team.
- Some resistance may be felt as the catheter passes through the bladder wall. Ask the patient to relax and breathe slowly and deeply.
- If the regular size of catheter cannot be inserted, try insertion of a smaller Charrière catheter.
- Urgent urology advice should be sought if the problem cannot be resolved.
- May need to consider inserting an indwelling urethral catheter if concerned about urinary retention.
- Recurrent problems may be due to bladder spasm. Discuss management options with medical/urology staff.

## **Pain during inflation of balloon in suprapubic catheterisation**

### **Catheter may be incorrectly positioned**

- Advance the catheter a further 2-3cm and continue inflating the balloon. Discontinue of pain experienced by patient.
- Request / assist patient to change position as this may alleviate discomfort.
- If pain continues liaise with medical/urology staff for advice.

## Urine is bypassing urethrally in suprapubic catheter

### **Kinking, compression of catheter or drainage tubing**

- Adjust the patient's position, checking catheter, tubing and drainage system.
- Consider the use of an abdominal retainer strap.
- Consider short tube leg bag, belly bag or catheter valve.

### **Constipation**

- Consider oral laxative to help resolve immediate problem.
- Consider digital rectal examination and administration of suppositories/micro enema, if appropriate.
- Complete bowel assessment form
- Refer to [NHSGG&C guidelines for the management of constipation](#).
- Prevent recurrence.

### **Infection**

- Obtain catheter specimen of urine and treat if appropriate (SIGN 2012). Management of suspected bacterial urinary tract infections in adults and CAUTI bundle.

### **Bladder spasm/detrusor instability**

- Consider the use of antimuscarinic medication. This may take 6 to 8 weeks to be effective. A trial of an alternative antimuscarinic may be required if initial choice is not effective. Awareness of side effects of antimuscarinics (including urinary retention) should be a factor in decision making.
- Referral to urology may be required if alternative antimuscarinics have been unsuccessful.

## Overgranulation of cystostomy site

Overgranulation of cystostomy site may occur as a response to a foreign body (catheter). This may be accelerated by an increased bacterial load, trauma caused by friction or pulling of the catheter or an occlusive micro-environment.

### Essential cystostomy site care

- Clean the area with non-perfumed soap and warm water. Rinse and dry carefully.
- Ensure the catheter is correctly positioned and secure with a catheter retention strap if required.
- Do not apply dressings to the site.
- Ensure clothes are not too tight at cystostomy site.

### Treatment of overgranulation

#### If infection is suspected

- Assess the site for signs of critical colonisation or infection and follow local guidelines
- Take a swab for culture and sensitivity and treat with an appropriate systemic antibiotic/antifungal as indicated by microbiology. Topical antimicrobials may not be effective as the infection may be within the tract and not just superficial.

#### If no infection present

- Consider seeking advice from Tissue Viability Services in relation to wet or dry granulation

#### All sites requiring treatment

- Apply a secondary dry keyhole dressing
- Avoid occlusive dressings as these promote granulation.
- Assess whether a catheter retention strap or fixation device is required to minimise friction and trauma.

Review after 2 weeks. If no improvement contact tissue viability for advice.

## **Urine is leaking around the cystostomy site**

### **Trauma/pulling of catheter**

- Review how current drainage system is secured.
- Consider use of a catheter retainer strap or fixation device.

### **Infection**

- Obtain catheter specimen of urine and treat if appropriate (SIGN 2012). Management of suspected bacterial urinary tract infections in adults and, CAUTI bundle.
- Whenever possible, do not use a dressing.

### **Catheter may irritate the bladder mucosa causing bladder spasm**

- Consider an alternative catheter material (hydrogel/all silicone).
- Contact urology for advice about alternative catheter selection (larger Charrière may be suggested).
- Consider an antimuscarinic.

## Swelling and redness at cystostomy site

### Infection

- Ensure clothing is not too restrictive around the site of the catheter.
- Ensure the catheter and drainage system are supported adequately with a catheter retainer strap.
- Obtain a wound swab from cystostomy site.
- Consider topical or systemic treatment following results.

## **Balloon cuffing noted on removal of urethral or suprapubic catheter**

### **To avoid problems with removal on subsequent re-catheterisation**

- Consider an alternative catheter, for example hydrogel.
- Liaise with urology if problem continues.