## Female, Male Urethral and Suprapubic Urinary Catheterisation Guidelines

<table>
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<tr>
<th>Reference No:</th>
<th>G_CS_69</th>
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<tr>
<td>Version</td>
<td>1.1</td>
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<tr>
<td>Ratified by:</td>
<td>LCHS Trust Board</td>
</tr>
<tr>
<td>Date ratified:</td>
<td>27th October 2015</td>
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**Name of responsible committee / Individual:**  
Quality & Scrutiny Group

**Date issued:**  
December 2017

**Review date:**  
April 2018

**Target audience:**  
All Clinical staff

**Distributed via:**  
Website

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Chair: Elaine Baylis QPM  
Chief Executive: Andrew Morgan
## Version control sheet

<table>
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<tr>
<th>Version</th>
<th>Section/Para/Appendix</th>
<th>Version/Description of amendments</th>
<th>Date</th>
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<tr>
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<td>New Policy to replace G_CS_06</td>
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<td>August 2015</td>
<td>Sue Kinder</td>
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<td>Extension agreed</td>
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<td>Dec 17</td>
<td>Corporate Assurance Team</td>
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ii. Procedural Document Statement

Background

The purpose of this guidance is to implement a co-ordinated and uniformed approach to catheterisation. The guidance has been updated and includes catheter competencies; essential steps audit tool and a patient information booklet. This guidance is particularly relevant to Practitioners undertaking the procedure of catheterisation or for when caring for patients with a urinary catheter.

Statement

This guidance conforms to Lincolnshire Community Health Service statutory and organisational requirements and national guidance to promote holistic and safe practice. As such, it will be formally approved and ratified, disseminated through approved channels and implemented.

Responsibilities

Compliance with the guidance will be the responsibility of clinical Lincolnshire Community Health Service staff.
The guidance has been developed after consultation with Primary and Secondary Care Practitioners with expertise in this speciality.

Training

Practitioners undertaking catheterisation should have completed the appropriate training and competencies as identified within this document.

Dissemination

Websites, Training Website

Resource Implication

Workforce will require access to training

Consultation

The guidance has been developed in line with the NHS Litigation Authority guidelines to provide a framework for staff within NHS organisations to ensure the appropriate production, management and review of organisation wide policies.
## iii. NHSLA Monitoring

This guideline demonstrates compliance with NHSLA Monitoring as outlined below.

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<th>Process for monitoring e.g.: audit</th>
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<th>Frequency of Monitoring/audit</th>
<th>Responsible Individuals/group/committee (multidisciplinary) for review of results</th>
<th>Responsible Individuals/Group/Committee for development of action plan</th>
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<td>County wide professional Lead for Continence Adult Integrated Quality Scrutiny and Clinical Governance and Policy Forum Matrons</td>
<td>Bi-annually</td>
<td>CNS Continence Team Clinical Governance Group Infection Control Committee Workforce Development Team</td>
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Contents
i. Version control sheet ..................................................................................................... 2
ii. Procedural Document Statement ................................................................................... 3
iii. NHSLA Monitoring ......................................................................................................... 4
1. INTRODUCTION ........................................................................................................... 7
2. RATIONALE .................................................................................................................. 7
Indications for urethral indwelling catheterisation............................................................... 8
Limitation to practice/ contraindications: ............................................................................ 8
3. TRAINING...................................................................................................................... 8
Criteria for Competence for registered staff .................................................................... 8
Criteria for Competence for Unregistered Healthcare Workers ......................................... 9
4. RISK ASSESSMENT ................................................................................................... 10
Untoward Incident ........................................................................................................... 11
Patient Discharge from Hospital ...................................................................................... 11
5. Consent ....................................................................................................................... 12
6. First Catheterisation ..................................................................................................... 12
Types of urinary retention and bladder decompression ................................................... 12
7. Intermittent Catheterisation .......................................................................................... 13
Indications for intermittent self-catheterisation and intermittent catheterisation: .......... 15
Advantages of intermittent self-catheterisation and intermittent catheterisation: .......... 15
Indwelling urethral and supra pubic catheterisation............................................................. 16
Materials for indwelling urinary catheters: ...................................................................... 16
Short term catheters (7 to 28 days use): ...................................................................... 16
Long term catheters (up to 12 weeks use): .................................................................. 16
Catheter selection- sizes ................................................................................................. 16
Supra Pubic Catheterisation ............................................................................................ 17
Supra Pubic Catheter Selection ....................................................................................... 17
Catheter Materials relating to Supra Pubic catheterisation ............................................... 18
Catheter valves: .............................................................................................................. 18
8. CATHETER CARE....................................................................................................... 18
9. Urine Specimen Collection: .......................................................................................... 20
10. CATHETER MAINTENANCE SOLUTIONS .............................................................. 21
11. Removal of Catheter.................................................................................................... 22
Procedure........................................................................................................................ 22
12. AUTONOMIC DYSREFLEXIA IN SPINAL CORD INJURY PATIENTS .................. 24
DOCUMENTATION ............................................................................................................ 24
REFERENCES ................................................................................................................... 26
Appendix 1 Patient’s teaching procedure intermittent self-catheterisation- female and male30
Appendix 2: MALE URETHRAL CATHETERISATION - INSERTION PROCEDURE .......... 32
Appendix 3 Female Urethral Catheterisation – insertion procedure............................... 35
Appendix 4: Preparation and Procedure for changing a Suprapubic Catheter.................. 36
Appendix 5: Competency Framework for Male Catheterisation ....................................... 39
Competency Framework for: Male Catheterisation......................................................... 41
Appendix 6: Competency Framework for Female Catheterisation.................................... 43
Competency Framework for: Female Catheterisation..................................................... 46
Appendix 7 competency Framework for Supra Pubic Catheterisation ............................ 47
Appendix 8: Troubleshooting Indwelling Catheter Care Pathway .................................... 49
Appendix 9 Equality Analysis ......................................................................................... 53
1. INTRODUCTION

In order to improve patient care and to reduce the risk of errors in practice, it is the remit of Lincolnshire Community Health services NHS Trust to provide a standardised approach to catheterisation.

The use of urinary catheters is an integral part of patient care. Performing a catheterisation, however, is not a simple task due to the physical, mental and social implications that go beyond the passing of urine. Assessment skills require recognition of the cultural, sexual, social, emotional, physical and practical needs. The ability to plan all of these concepts is essential in demonstrating competency (NMC, 2015).

During individual assessment when instrumental bladder drainage is deemed necessary, consideration needs to be given to the patient's suitability for intermittent, suprapubic or urethral catheterisation (RCN 2012).

A full nursing assessment and a risk assessment must be undertaken before catheterisation is performed and at subsequent catheter changes.

The complications of catheterisation, together with advances in the understanding of alternative treatments, mean that the use of a permanent catheter is now a last resort in treating urinary dysfunction. However there are still some patients, for whom catheterisation is the most appropriate form of care, including people with difficulty in complete emptying of the bladder as a result of neurological disease or injury, those with bladder outlet obstruction and some with chronic urinary incontinence for whom alternative methods are inappropriate or unsuccessful.

Suprapubic catheters are often preferred to urethral catheters for the long term management in the neuropathic population for reasons of convenience and in order to avoid urethral trauma. The option of using a catheter valve rather than continuous drainage into a bag may be considered for some patients (NICE 2012).

This guideline aims to provide a standardised set of measures for urethral/ suprapubic and intermittent catheterisation that can be followed by all healthcare workers giving care in a primary or community setting. It covers the care of patients who are receiving catheter intervention in primary or community care, and is relevant to primary or community healthcare personnel who have direct contact with and make decisions concerning the catheter care of patients.

2. RATIONALE

Catheterisation is recognised as a skilled aseptic procedure that requires appropriate training and competence. (N.I.C.E. Guideline: 2003, 2012).

Urinary catheterisation places patients at significant risk of acquiring a urinary tract infection (Prat et al 2001, 2006). Further serious complications of permanent catheters include trauma, stricture formation, encrustation, bladder calculi, urethral perforation and neoplastic changes (Wilson, 2011 & 2012). Patients with long-term catheters on free drainage may lose
the ability of the bladder to store urine effectively as the dynamic function of the bladder is compromised.

**Indications for urethral indwelling catheterisation**

All patients should have a clinical reason for catheterisation, the following acronym shows these:

Indications:
- H………Haematuria
- O………Obstruction
- U………..Urology surgery (post op)
- D………..Decubitus ulcers
- I………..Input/output monitoring
- N………..Not for resuscitation (palliative care)
- I………..Immobility due to physical restraint, Trovillion E (2011)

**Limitation to practice/ contraindications:**

Lack of patient consent

If the patient has oedematous or ill-defined genitalia, the duty doctor should refer back to the GP.

Patients with acute prostatitis or suspicion of urethral trauma should be referred back to the GP (Geng, 2012).

The healthcare worker may undergo a maximum of two attempts at catheterising the patient before referring back to the team leader or GP (RCN 2012)

Low risk, named female patients may be considered suitable for catheterisation by a trained competent healthcare support worker

Patients in acute retention should be referred to GP (refer to LCHS Continence Promotion in Primary Care pathways document 2014)

Patients presenting with high intravesical pressure should not be offered intermittent catheterisation (IC), but continuous free drainage to avoid renal damage (Vahr, 2013)

### 3. TRAINING

**Criteria for Competence for registered staff**

Line Managers should ensure that newly registered healthcare workers undertake the catheterisation in-house training followed by evidence of satisfactory supervised practice on at least 3 occasions witnessed by a competent nurse mentor. Any limits to competency should be discussed with the appropriate Line Manager.
Line managers should ensure that registered staff new to the Trust who have been performing the skill elsewhere shall self-familiarise with the Trust’s policy and standards of care and undertake a briefing and training session by a competent nurse mentor. Evidence of previous education and training will be required, in order to identify competency levels and further training requirements.

Attendance at catheter training should be repeated as required or every 3 years. It is the responsibility of the line manager to ensure their staffs are up to date with catheter training and evidence of this is recorded on ESR.

A nurse mentor should be a competent experienced nurse who practices catheterisation technique regularly and has attended catheter training within 3 years (evidence of such training has been recorded on ESR). Urology Nurse Practitioners in Secondary Care may also act as mentors.

**Criteria for Competence for Unregistered Healthcare Workers**

The unregistered healthcare worker should have attended the foundation LCHS NHS Trust in-house continence training sessions prior to bespoke (female) intermittent and indwelling catheterisation training sessions. The in-house catheter training course should include simulated practice with training catheterisation manikin.

Once competency is achieved the unregistered healthcare worker should undertake an annual in-house refresher to include continence care and catheter training update. Evidence of attendance should be recorded on the electronic staff record system and the competencies kept in the healthcare workers portfolio.

The unregistered health care worker should be educated to the standard of NVQ level 3 and the task should be identified as part of the unregistered healthcare workers job description.

Line Managers should ensure that designated unregistered healthcare workers undertake the foundation training provided by the LCHS NHS Trust Specialist Continence Nurses followed by evidence of satisfactory supervised practice on at least 5 occasions witnessed by a competent nurse mentor.

The Line Manager should identify a suitable mentor to support the unregistered healthcare workers during their practice supervision framework.

Any limits to attainment of competency or skills should be discussed with the appropriate Line Manager (refer to Appendices for competency framework/supervised framework document).

Competent unregistered healthcare workers may only undertake catheter care and female re-catheterisation procedures following patient assessment (including risk assessment) by a registered nurse.

The principles of delegation and accountability should be fulfilled as per the Royal College of Nursing guidance (RCN, 2008).

Mapping SfH (2008) competencies to this aspect of practice:

- Act within the limits of your competence and authority
4. RISK ASSESSMENT

Using any form of catheter has a number of associated risks. These risks are becoming more serious with the continued development of a wide range of multi-resistant bacteria which cause catheter associated urinary tract infections and associated life threatening complications. It is of great importance that risk assessment becomes an important part in catheter care in all care settings (RCN, 2012, ACA 2008). There are increased CAUTI (catheter associated Infections) risks associated with certain client groups who may already be immunocompromised or risk factors for infection such as those patients with poor bowel control (Pratt 2006).

It is important to assess the need for the catheterisation at each change; refer to the HOUDINI Tool. However, despite risks for infection, catheterisation may be the only treatment or management option for a patient. Moreover it is important to proactively manage infection risks if this is the case. Additionally, patients should be at the centre of any care decisions and identified risks should be discussed with the patient or carer (NMC 2015).

There are also risk factors which may increase the risk of haematuria which need to be taken in to account during assessment. Factors include catheter related trauma, patient prescribed anticoagulants (RCN 2012).

Prior to catheterisation the healthcare worker will ensure that the nursing assessment has been undertaken and includes:

- History of the lower urinary tract;
- Medical/surgical/gynaecological/ obstetric histories;
- Identification of allergy status;
  - Latex catheters use silicone as an alternative choice
  - Soap products
- Lidocaine: Lidocaine should be administered with caution in elderly or debilitated patients or in patients with impaired cardiac conduction, cardiovascular disease, hypovolaemia, shock, impaired respiratory function, epilepsy or myasthenia gravis. Additionally, local anaesthetics should not be applied to damaged skin due to the possibility of systemic absorption and side effects (BNF 68). Proprietary sterile lubricating gel may be used as an alternative.
- History of current medications;
- Checking that informed consent has been obtained and documented;
- Consideration of the patient’s fluid intake;
- Bowel assessment to exclude constipation;
• Patient’s suitability for intermittent, suprapubic or urethral catheterisation;

• Mental health status so that catheterisation of patients who are agitated and/or cognitively impaired is best avoided where possible (Addison, Mould, 2000, MRHA, 2012, Atchmetov et al 2010, Parkes, 2009).

• Ensure the catheter expiry date has not passed and that the package is undamaged. Refer to the LCHS NHS Trust Medical devices policy.

• Only insert a male urinary catheter standard length catheter in accordance with the procedure of male catheterisation (RCN 2008, 2012 NPSA 2009).

• Unregistered Healthcare workers should check dose and expiry date of topical Lidocaine lubricating gel with a registered (nurse) healthcare worker prior to administration (NMC 2010)

Untoward Incident

Any problem with the catheter itself should be recorded in the patient’s records. The manufacturer should be informed and notification sent to the Medicines and Healthcare Regulatory Authority (MRHA 2000) reporting the incident. Where possible the catheter should be sent to the company. A Datix must also be completed.

Any complaint, incident or issues in relation to a health workers performance in respect to catheterisation shall in the first instance be managed in accordance with the LCHS NHS Trust Investigation policy and may result in more formal disciplinary actions in line with the LCHS NHS Trust Disciplinary policy.

Patient Discharge from Hospital

If on assessment the community nurse finds that the following has not occurred, a Datix should be completed and the hospital contacted for the relevant information;

• Lack of notification of a patient being discharged with a urinary catheter in situ to the district nurse and relevant GP.

• Lack of written information on date catheter inserted, type of catheter, balloon size and date of expected next catheter change.
5. Consent

Consent must be obtained from the patient before catheterisation, in accordance with the national guidelines for consent including any issues relating to the patient's capacity to consent (DH 2001a, 2001b, 20001c, 2001d and 2005).

6. First Catheterisation

Registered Practitioners competent and experienced in male/ female catheterisation may make the decision to catheterise a patient for the first time if the assessment identifies that catheterisation is in the best interest of the patient (NMC 2015). However, the decision to catheterise should not be dependent upon the findings of a post voiding urinary residual; refer to LCHS Promoting Urinary Continence in Primary Care Guidance abnormality algorithms (2014).

Where a residual volume of urine is identified and a decision to catheterise is made, it is imperative that the nurse ensures that the route to catheterisation is made within a multidisciplinary team (RCN 2012). Catheterisation is not always indication in all patients such as those with asymptomatic chronic retention (Wareing 2003). However, first catheterisation may be required for certain patient groups such as those patients at end of life.

If first-time catheterisation takes place in primary care, it is safe practice to monitor urine output for 4 hours after catheterisation. If the patient passes more than 200 mls per hour after initial drainage, referral to the Accident and Emergency Unit is required for fluid replacement to reduce risk of hypovolaemic shock (RCN, 2012).

Types of urinary retention and bladder decompression

If urinary retention persists following assessment when constipation or types of medication are excluded as possible causes of retention, then it is usual to refer the patient back to the GP for Urological assessment. This is because there are many categories of urinary retention and it is therefore important to ascertain the correct urological diagnosis before a decision is made to undertake catheterisation/ treatment.

Acute urinary retention may be defined as complete and painful inability to empty bladder and is usually less than 800mls (Brewster 2001). The patient should be referred to the Emergency Department for catheterisation

Acute on chronic urinary retention is usually defined as the complete and painful inability to empty the bladder and is usually a volume of more than 800mls (Brewster et al 2001). Differentiation is also made between high pressure and low pressure acute-on-chronic retention.

High pressure acute-on-chronic retention is characterised by hydronephrosis and elevated serum creatinine of more than 150umol/L. Therefore it is important that renal function is within normal levels and the mode of management is discussed with GP.

Low pressure chronic retention is characterised by no evidence of hydronephrosis as identified by ultrasound scan of kidneys, ureters and bladder (Wareing 2003).
Chronic retention is when patients can void but leave a post void residual of more than 500ml of urine.

Following relief of urinary obstruction, period of significant polyuria may occur. This is a normal physiologic response and known as post obstructive diuresis. This response is due to the volume expansion and solute accumulation occurring during the obstruction. With the return of homeostasis, the period of diuresis ends (Campbell-Walsh 2007).

The majority of patients do not demonstrate a clinically significant post obstructive diuresis following relief of urinary tract obstruction. However, a pathologic post obstructive diuresis may occur. This is characterised by inappropriate renal handling of water or solutes or both, and urine outputs of 200ml/hour or greater may occur. Those susceptible to this phenomenon may have signs of fluid overload, oedema, congestive cardiac failure or hypertension (Campbell-Walsh 2007). This is considered an acute medical condition requiring medical management and hospitalisation (Sullivan 2010).

If first-time catheterisation takes place in primary care, it is therefore, safe practice to monitor urine output for 4 hours after catheterisation. If the patient passes more than 200 mls per hour after initial drainage, then they need to be referred to the Accident and Emergency Unit for fluid replacement as they are at risk of hypovolaemic shock (RCN Guideline, 2012).

7. Intermittent Catheterisation

Intermittent catheterisation is considered to be the gold standard of urine drainage (NICE.2006).

Intermittent catheterisation (IC) may be a short or long term intervention. The procedure involves the episodic introduction of a catheter into the bladder to remove urine (Lapides 1972). Once the bladder is empty the catheter is removed, leaving the patient catheter free between catheterisations. The patient should perform the catheterisation as often as necessary to prevent incontinence or to prevent prolonged retention of urine.

Intermittent self-catheterisation (ISC) is a technique that may be carried out by the patient themselves. IC is a procedure carried out by the competent patient’s carers or by a competent practitioner (Logan 2010).

There are many types of intermittent catheter materials and style, these include:

- Plastic hydrophilic (Polyvinyl chloride /ethylene vinyl acetate ) or Silicone hydrophilic coated nelaton tipped catheters;
- Plastic nelaton catheter set with gel based lubricants
- Single use sterile non-coated plastic nelaton tipped catheters used with a lubricant;
- Catheter systems /complete sets ( impregnated with lubricant/ gel based catheters pre-connected with a urinary bag
- Discreet compact catheters
Available data on intermittent catheters do not provide convincing evidence that single or multiple uses are superior for all clinical settings. This reflects the lack of reliable evidence rather than evidence of the absence of a difference. Currently, clinicians need to base decisions about which type of catheter to use on clinical judgement, in conjunction with the patient. Differential costs of catheters may also influence decision making (Vahr 2013).

A full assessment is undertaken prior to starting ISC/IC which includes symptom profile, renal function, risk assessment, motivation, psychological and physical ability to perform ISC (NMC 2015).

In individuals with continent stoma or bladder substitution use ISC to empty their ‘reconstructed’ bladder regularly.

It is not best practice to initiate intermittent catheterisation based solely on the residual urine status. It is imperative that the importance of the cause is not overlooked by the nurse and that the patient has further investigations or onward referral to reach a diagnosis (RCN Guidelines, 2012).

The bladder should have a capacity to store urine adequately and safely between catheterisations. The bladder capacity should be sufficient to prevent the need for catheterisation more often than 2 hourly (Getliffe, 2007).

Observation of the patient post intermittent catheterisation is important if this is a first time catheterisation as decompression of the bladder may cause bleeding and/or shock. To avoid this occurring, the residual urine should be assessed by bladder scan prior to undertaking the first catheterisation. Renal status should also be checked thus avoiding renal decompression.

Patients should be taught how to deal with common complications associated with intermittent catheterisation which include signs and symptoms of a urinary tract infection colonisation, the indications for antibiotic usage, bleeding, false passage, difficult insertion or removal, how to manage multi-resistant bacterial invasion and initiate unscheduled care for urgent catheter related needs.

The frequency and continued usage of intermittent catheterisation is based on:

- Symptom improvement
- Quality of life and lifestyle indications
- Volumes drained related to times of urinary output
- Clinical requirement
- Renal function
- During periods of infection increased intermittent catheterisation may be needed, not a reduction or withdrawal.
- The voided volume plus the residual volume must not exceed 400-500ml in adults. If this occurs catheterisation should be undertaken more frequently.

When individuals are taught to carry out ISC they are taught a clean procedure.

For competent staff carrying out the procedure of IC an aseptic non touch technique must be used.
ISC will be undertaken to suit the individual patient bladder emptying need and reviewed according to the patient’s condition, minimum of annual review.

Check the size and length of the catheter and check expiry dates of all equipment to be used

It is unlikely that a patient (or carer if performing the procedure) will become competent with intermittent catheterisation with one interaction. Several sessions are required to support learning, problem solving, review experiential learning and related habits. Patient’s require follow-up and review dependent upon their needs.

(NHS Quality Improvement Scotland Urinary Catheterisation and Catheter Care Best Practice Statements 2004 and Royal College of Nursing Catheter Care 2008, 2012)

**Indications for intermittent self-catheterisation and intermittent catheterisation:**

- To provide continence by ensuring the bladder is completely emptied
- To prevent chronic retention and over distension of the bladder
- Reduction of risk of damage to kidneys
- Following failed TWOC
- ISC/IC is the preferred alternative to indwelling catheters for individuals in whom bladder emptying is incomplete

**Advantages of intermittent self-catheterisation and intermittent catheterisation:**

- To promote urinary continence
- Quality of life improvement
- Provides alternative to indwelling catheters which can give freedom to express sexuality
- To reduce the incidence of urinary tract infections due to high residual urine volumes
- Preserve renal function
- Restore normal voiding function
Indwelling urethral and supra pubic catheterisation

Materials for indwelling urinary catheters:

The type of material used will determine the length of time a catheter can remain in situ. Some companies have different warranties dependant on where the catheter is used, e.g.: urethrally or suprapubically.

Short term catheters (7 to 28 days use):

- Uncoated latex should not be left in situ more than 7 days.
- Polytetrafluoroethylene (PTFE) bonded latex should not be left in situ for more than 28 days.
- Silver alloy catheters as instructed by the Manufacturer. This is usually for 28 days. However, there is little evidence to support the use of silver coated catheters.

Long term catheters (up to 12 weeks use):

- Silicone elastomer coated latex (combines the advantages of silicone and latex);
- Hydrogel coated latex (combine’s advantages of hydrogel and latex);
- All silicone catheters;
- Hydrogel coated silicone combine advantages of hydrogel and silicone'.

All catheters should be used as instructed by the manufacturer. Deviation from this will create liability on the part of the Registered Practitioner. All catheters should be checked for quality, CE mark and be within the expiry date (NMC, 2010).

Catheter selection- sizes

- Small gauge catheters i.e.: 10-14 ch should be used unless otherwise indicated. Larger sizes can cause irritation and bypassing of urine around the catheter. The larger sizes are usually reserved for clot drainage and dilatation (NICE Guidelines 2003, 2012) Standard length 40-44cm catheters should be inserted for all male patients; standard length catheters are often used by patients with a supra pubic catheter (Geng 2014).

- The balloon size of 10mls must be used (NICE Guidelines 2003, 2012) unless indicated by an Urologist. 30ml balloons should only be used in specific circumstances such as post-prostatic surgery. Their use should always be questioned. The heavier weight and larger balloon may cause bladder spasm and irritation of the trigone.
The complications associated with suprapubic catheterisation include:

- Urinary tract infection and bacteriuria, although it is generally agreed that the infection rates are significantly lower than urethral catheterisation.
- Granulation tissue at the insertion site.
- Urethral leakage – this is experienced by some females and can be managed by surgical closure of the urethra in severe cases.
- Occlusion of the catheter due to debris or kinking of the tube and spontaneous expulsion of the catheter due to the deflation of the self-retaining balloon.
- Pain – this may be experienced if the catheter tip irritates the trigone area although suprapubic catheters have significantly less pain than urethral catheters.

**Supra Public Catheterisation**

A suprapubic cystostomy is a surgically created connection between the urinary bladder and the skin which is used to drain urine. In order for the abdominal channel to come established the first change should not be attempted before the at least 8 weeks and this is usually performed in secondary care. In the event of catheter blockages experienced within this timeframe should be referred back to secondary care.

In certain circumstances for example if a patient requires hoisting/ frail and return to the hospital is particularly disruptive, then the first supra pubic catheter change may be undertaken by a competent practitioner in the community (ACA 2006).

However, the first catheter change must not be attempted before 8 weeks have elapsed since the catheter insertion due to the possibility of inadequate tract formation. It is advisable to arrange the first catheter change during a weekday so that if problems do occur during catheter removal/ insertion then referral to the Urology Nurse Practitioner is possible rather than via the Accident and Emergency route.

Subsequent catheter changes should be done at 4-12 week intervals depending on the type of catheter material used.

**Supra Public Catheter Selection**

The make, type, length, CH / FG size and balloon size should be specified on the prescription.

Size 16Ch is preferable, but 14Ch or 18Ch is acceptable. The healthcare worker must use the same Ch size catheter for re-catheterisation as the one, which is removed.

**Note: use the same Ch size as the original catheter.**

The length of catheter used is dependent on patient preference but standard length is the mostly used.
The balloon size of 10mls must be used unless indicated by an Urologist. 30ml balloons should only be used in specific circumstances such as post prostatic surgery. Their use should always be questioned. The heavier weight and larger balloon may cause bladder spasm and irritation of the trigone.

**Catheter Materials relating to Supra Pubic catheterisation**

These determine the length of time a catheter can remain in situ. However, it is the product liability stated by the manufacturer that should be heeded. Some companies have different warranties dependant on where the catheter is used, eg: urethrally or suprapubically. Supra pubic catheters are usually changed between 6-8 weeks.

Not all urethral catheters are suitable for suprapubic catheterisation. Check that the catheter is warranted by the manufacturer for suprapublic use.

Hydrogel coated latex catheters appear to be more successful than all-silicone catheters because of the difficulty in removing an all-silicone catheter at change.

All-silicone catheters tend to be more difficult to remove as silicone balloons do not have good ‘memory’ and form a ‘cuff’, which sticks within the tract. They may require a great deal of traction to remove them. However, not all all-silicone catheters are licensed for suprapubic use, so the nurse should check with the manufacturer’s instructions to verify this before use.

Ensure lubrication and anaesthetic agents are licensed for suprapubic usage.

**Catheter valves:**

In patients for whom it is appropriate, a catheter valve may be used as an alternative to a drainage bag (N.I.C.E. Guidelines 2003, 2012, Fader 1997)). However, catheter valves should not be used for clients with:

- Severe cognitive impairment (the patient must be able to recognise the need to empty the bladder through sensation or on a timed schedule)
- Overactive bladder syndrome; might cause urinary leakage,
- Urethral reflux or renal impairment,
- Small or limited bladder capacity; the valve will have to be opened very often,
- Urinary tract infection,
- Poor manual dexterity (Geng, 2012)

### 8. CATHETER CARE

Maintaining a sterile closed system is central to the prevention of infection. Breaches for example when unnecessary emptying of the bag or taking a urine sample can increase the risk of infection. Use of Catheter maintenance solutions may cause toxic effects and contribute to the development of resistant organisms (RCN 2012)

<table>
<thead>
<tr>
<th>Action</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always ensure bag is below the</td>
<td>To ensure continuous drainage and reduce</td>
</tr>
<tr>
<td>waist and is either on a stand</td>
<td>infection</td>
</tr>
<tr>
<td>off the floor or attached with</td>
<td></td>
</tr>
</tbody>
</table>

Chair: Elaine Baylis QPM
Chief Executive: Andrew Morgan
<table>
<thead>
<tr>
<th><strong>fixation devices (e.g. G straps, leg straps or catheter sleeves)</strong></th>
<th><strong>To reduce the risk of infection</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Always connect the urinary catheter to a sterile closed drainage system (Gillespie 1967)</strong></td>
<td><strong>To reduce the risk of infection</strong></td>
</tr>
<tr>
<td><strong>Ensure that the connection between the catheter and the drainage system is not broken</strong></td>
<td><strong>To reduce the risk of infection</strong></td>
</tr>
<tr>
<td><strong>Do not add any antiseptic solutions into the urinary drainage bag</strong></td>
<td><strong>To reduce the risk of infection</strong></td>
</tr>
<tr>
<td><strong>Change the bag in accordance with the manufacturers guidance (usually every 5-7 days, the date should be written on the bag when attached) or more frequent if:</strong></td>
<td><strong>To reduce the risk of infection</strong></td>
</tr>
<tr>
<td>- They become discoloured</td>
<td></td>
</tr>
<tr>
<td>- Are damaged</td>
<td></td>
</tr>
<tr>
<td>- Smell offensive</td>
<td></td>
</tr>
<tr>
<td>- Contain sediment</td>
<td></td>
</tr>
<tr>
<td><strong>Wash hands with soap and water and dry thoroughly. Always use PPE and gloves before manipulating a patient’s catheter. Decontaminate hands on removal of gloves and apron as described in the LCHS NHS Trust hand hygiene guidelines, standard precautions and use of gloves.</strong></td>
<td><strong>To reduce the risk of infection</strong></td>
</tr>
<tr>
<td><strong>Use Aseptic Non Touch Technique (ANTT) when emptying bag (LCHS ANTT Guidelines)</strong></td>
<td><strong>To reduce the risk of infection</strong></td>
</tr>
<tr>
<td><strong>Empty bag into a separate clean container for each patient and avoid contact with the end of the drainage tap. Empty the bag frequently enough to maintain the flow of urine and to prevent reflux</strong></td>
<td><strong>To reduce the risk of infection</strong></td>
</tr>
<tr>
<td><strong>If the patient has a leg bag during the day, a link system with a non-drainable single use non sterile should be used to facilitate overnight drainage, to keep the original system intact. The overnight bag should be discarded on emptying each morning.</strong></td>
<td><strong>To reduce the risk of infection</strong></td>
</tr>
<tr>
<td><strong>Commence patient carer education of care of the catheter as soon as the catheter is inserted and about the prevention of urinary catheter infection</strong></td>
<td><strong>To Promote patient/carer education</strong></td>
</tr>
<tr>
<td><strong>Each patient should have an individual care regime</strong></td>
<td><strong>To Provide continuous care</strong></td>
</tr>
</tbody>
</table>
9. Urine Specimen Collection:
Urine samples must be obtained from a needle free sampling port using an aseptic technique. (NICE Clinical Guidelines 2003, 2012). Note that patients with a long term catheter will have bacteriuria and it is important to draw the distinction between this and the definition of a symptomatic Catheter Associated Urinary Tract Infection (Geng et al, 2012).

Bacteriuria is unavoidable with the use of an indwelling catheters and a catheter inevitably becomes colonised with micro-organisms. However, bacteriuria alone does not always mean that the patient has a urinary tract infection requiring treatment with antibiotics. Dipstick testing should not be used to diagnose a urinary tract infection in catheterised patients. This invariably gives a positive result due to catheter colonisation.

Symptoms of a urinary tract infection in a catheterised patient may include:
- Pyrexia
- Systemically unwell
- Uncharacteristic confusion or worsening confusion
- Pain (lower back, loin, lower abdominal or supra pubic area)
- Visible blood in urine

The patient’s condition should be assessed at each catheter change. This assessment should take into account the health status of the patient prior to catheterisation. If the patient is unwell and febrile with temperature over 39°C, blood cultures are required (RCN Guidelines, 2012) and urgent medical intervention should be made.

Document and report the presence of genital discharge, which may also be a cause of infection.

<table>
<thead>
<tr>
<th>Action</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is important that sample are not taken from the bag (tap) because of the multiplication within this reservoir causing higher numbers of micro-organisms</td>
<td>To reduce the risk of inaccurate reporting of catheter related urinary tract infection and inappropriate antibiotic prescribing</td>
</tr>
<tr>
<td>Use Aseptic Non Touch Technique (ANTT) to obtain specimen as per LCHS ANTT Guidelines</td>
<td>To reduce the risk of infection</td>
</tr>
<tr>
<td>Aspirate the urine from the needless sampling port with a sterile syringe after cleansing the port with a Chlorhexadine 2% and 70% alcohol wipe. Transfer sample to a urine collection bottle</td>
<td>To reduce infection by not breaking the catheter connection and to reduce the risk of contamination</td>
</tr>
<tr>
<td>Identify on the lab request form that the sample is a CSU and note on the form any antibiotics currently prescribed</td>
<td>To correctly identify catheter associated urinary tract infection and appropriate treatment.</td>
</tr>
</tbody>
</table>
10. CATHETER MAINTENANCE SOLUTIONS

Clinical evidence for the use of catheter maintenance solutions is limited. Many of the research papers involve a small number of patients, raising questions about the general application of findings to wider patient groups. There is a risk of introducing a CAUTI when the closed drainage system is broken during the administration of a catheter maintenance solution and therefore this must be an ANTT procedure (RCN, 2012).

A record of catheter life should be considered in the first instance so that the diagnosis of encrustation can be determined. If there is a history of repeated catheter blockage due to encrustation, then pre-emptive catheter changes should be instigated in order to promote dignity and independence. It may be appropriate to teach a named carer to change the catheter in certain circumstances.

However, for some patients there may be benefit in using catheter maintenance solutions to prolong the life of their catheter, thereby avoiding the trauma of re-catheterisation. Installation of acidic catheter maintenance solution (3.23%) may be prescribed on an individual patient basis. The regime, used should be based on the smallest volume and lowest frequency of solution needed to extend catheter life (Getliffe 2007).

Do not use catheter maintenance solutions to unblock a catheter and be aware of the risk of infection in their use.

Where catheter maintenance solutions are ineffective, or cannot be used and blockage due to encrustation remains a problem, Please contact the LCHS Specialist Continence Service for further advice.

<table>
<thead>
<tr>
<th>Solution</th>
<th>Product Licence</th>
<th>Practice Notes/ Cautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid 3.23% (pH4) Solution G</td>
<td>Cleanses catheter length counteracting alkaline deposits</td>
<td>Studies have shown that two sequential solutions are more effective than a single solution</td>
</tr>
<tr>
<td>Citric acid 6% (pH2) Solution R</td>
<td>Stronger citric acid solution for persistent crystallisation</td>
<td>Dissolves blockages and may also be used to smooth away large gritty deposits prior to removal</td>
</tr>
<tr>
<td>Sodium Chloride</td>
<td>For the flushing of debris / mucous deposits</td>
<td>Not effective against encrustation</td>
</tr>
</tbody>
</table>

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Chief Executive: Andrew Morgan
11. **Removal of Catheter**

All patients should have a clinical reason for catheterisation, the following acronym shows these indications:

- **H**……..Haematuria
- **O**……..Obstruction
- **U**...........Urology surgery (post op)
- **D**...........Decubitus ulcers
- **I**............Input/output monitoring
- **N**...........Not for resuscitation (palliative care)
- **I**.............Immobility due to physical restraint, Trovillion E (2011)

However, not all patients are suitable for catheter removal and any decision should be discussed with the relevant medical practitioner.

If the patient has any of the following they will not be suitable:

- Patients who have had a radical prostatectomy or other complex surgical procedures
- Where there are complex clinical conditions which deems the patient is unsuitable for community catheterisation
- Recent history of complications with previous catheterisation
- Patients who are unsupported and have a cognitive impairment
- Patient does not verbally agree to removal of catheter

**Procedure**

Explain the proposed procedure to the patient and gain consent

Ask the patient to record fluid intake and urine output chart

Give advice on fluid intake of not more than 1.2 litres of fluid in 6 hours.

The nurse should arrange to remove the catheter during the morning of the procedure followed by a telephone contact after 3-4 hours.

If the patient is comfortable after 3-4 hours the visit may be delayed until 6 hours following catheter removal. However, if the patient reports discomfort then visit again to review intake/output and perform a bladder scan. If there is a post-void urine residual result of 300mls or more, then the patient should be re-catheterised. Inform the Medical Practitioner of the outcome.

A further visit should be planned 6 hours following catheter removal to perform a post void bladder scan.

**Post-void residual over 300mls**

- Consider outcome as failure of catheter removal and re-catheterise.
Post-void residual 200-300mls

- Review the patient the next morning.
- If the post void residual result is above the previous day’s reading then re-catheterised.
- If the post void residual result remains the same or less, and the patient is comfortable, then give advice about fluid balance and the necessary community nursing staff contact details.

Post void urine residual less than 200mls

- A post void urine residual result of less than 200mls and the patient is comfortable (successful catheter removal). Advise the patient about fluid balance and provide contact details.
- Inform the Medical Practitioner of the outcome.

Mapping SfH competencies to this aspect of practice:

- Insert and secure catheters (CCO2)
- Care of individuals with urethral catheters (CCO3)
- Manage suprapubic catheters (CCO4)
- Undertake trial without catheter (TWOC) (CCO5)
- Enable individuals to carry out intermittent catheterisation (CCO6)
- Review catheter care (CCO7)
12. AUTONOMIC DYSREFLEXIA IN SPINAL CORD INJURY PATIENTS

Autonomic dysreflexia is a condition that develops after spinal cord injury in which potential life-threatening episodic hypertension is triggered by stimulation of sensory nerves below the site of injury. Autonomic dysreflexia may occur in patients with spinal cord injury, usually above T-6. Bladder problems are the most common cause of autonomic dysreflexia:

- Overfull bladder
- Kidney or bladder stones
- High pressure voiding
- Urinary tract infection
- Blocked catheter
- Defective drainage system (e.g.: kinked tubing or leg bag too full)

Treatment: identify the source of the noxious stimulus; removing the stimulus will cause the symptoms to settle.

Check bladder: if the patient is not catheterised and bladder appears full, catheterise immediately and leave on free drainage. Catheter should be lubricated with an anaesthetic gel prior to insertion.

If catheterised, empty leg bag and untwist any kinked tubing. If the catheter appears blocked, change the catheter immediately. DO NOT ATTEMPT A BLADDER WASHOUT; this will only distend the bladder further with potentially fatal consequence.

If infection is suspected commence antibiotic therapy.

Check bowel and check for potential causes and treat appropriately.

DOCUMENTATION

The responsible healthcare worker should document all details of the catheterisation within the patient’s records in accordance with the NMC Standards for Records and Record Keeping. (NMC 2004). Records must be clearly correctly and contemporaneously documented on SystmOne.

Details must include:

- Reason for catheterisation, catheter change or ongoing need for catheter with all its risks.
- If patient is well/unwell/serious health status prior to catheterisation.
- If the patient is taking antibiotics for a urinary tract infection, are they effective?
- Is the patient in any form of localised discomfort or pain?
- Allergy status for example latex, gels and medication.
- Meatal or genital abnormalities observed including discharge.
- If the insertion was easy or difficult.
- Indications used to ensure catheter was inserted correctly (in men amount of catheter inserted, obstruction felt at the prostatic area, patient reaction to passing the prostatic area, urine drained, no resistance to balloon inflation, no patient reaction or pain related to the balloon inflation, free movement of the catheter once balloon inflated).
- Date and time of catheterisation.
- Type of catheter.
- Charriere or French gauge size.
- Length of catheter.
- Balloon size and how much sterile water was used to inflate the balloon.
- Expiry date of the catheter.
- Lot or batch number.
- Results of catheterisation i.e.: passage of urine; colour of urine; if blood stained etc.
- Expected date of catheter change/ reassessment.
- Document information given to patients and carers.
- Ensure that correct documentation is completed; this includes an FP10 prescription for urethral catheter and associated equipment for next change
  - (Royal College of Nursing 2012, N.I.C.E. Guidelines 2012)
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### Appendix 1 Patient’s teaching procedure intermittent self-catheterisation- female and male

**The procedure for female and male intermittent catheterisation**

**Procedure**

When the patient performs the ISC him/herself a non-touch technique is required. When non-touch technique is not feasible, clean technique should be used.

**Catheter type**

The healthcare professional can advise an appropriate catheter and Charriere, size depending on the situation. For instance: female/male/ready-to-use/gel/hydrophilic/lubricated

<table>
<thead>
<tr>
<th>Action</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prepare the patient for ISC with documentation</td>
<td>Booklet/ DVD</td>
</tr>
<tr>
<td>2. Ask patient’s agreement</td>
<td></td>
</tr>
<tr>
<td>3. Prepare patient verbally for ISC</td>
<td></td>
</tr>
<tr>
<td>4. Check patient’s knowledge of ISC</td>
<td></td>
</tr>
<tr>
<td>5. Check patient’s capability of performing ISC</td>
<td>Are there any special devices needed?</td>
</tr>
<tr>
<td>6. Check patient’s motivation in performing ISC</td>
<td>If not enough, try to motivate the patient before the instruction is started</td>
</tr>
<tr>
<td>7. Choose an appropriate catheter</td>
<td></td>
</tr>
<tr>
<td>8. In consultation with patient choose non-touch or clean method for ISC</td>
<td></td>
</tr>
<tr>
<td>9. Choose, together with patient, most appropriate place to perform ISC</td>
<td>Bed, bathroom, toilet, wheelchair</td>
</tr>
<tr>
<td>10. Verbal explanation of insertion procedure</td>
<td>Use chosen technique, non-touch or clean</td>
</tr>
<tr>
<td>11. Explain and practice cleansing of genitals</td>
<td></td>
</tr>
<tr>
<td>12. Decide together with patient whether the first attempt will be done by the healthcare professional or by him/her</td>
<td></td>
</tr>
<tr>
<td>13. If desired : perform the insertion procedure in the patient</td>
<td>As life example for patient</td>
</tr>
<tr>
<td>14. Advise the patient to urinate normally</td>
<td></td>
</tr>
<tr>
<td>15. If desired : Patient performs the insertion procedure by him/herself, supported by verbal instruction</td>
<td>Patient uses the chosen, non-touch clean technique</td>
</tr>
<tr>
<td>16. Remove catheter once urine flow has stopped</td>
<td></td>
</tr>
<tr>
<td>17. Advise the patient to dispose catheter and to clean genitals</td>
<td></td>
</tr>
<tr>
<td>18. Check if patient feels at ease with the ISC procedure and can perform it on his/ her own</td>
<td>If not, seek reason for problem and try to problem solve</td>
</tr>
<tr>
<td>19. Order or give patient catheters until first evaluation</td>
<td>After evaluation the type of catheter sometimes need to be changed</td>
</tr>
<tr>
<td>20. Give further information about the frequency, availability, difficulties</td>
<td></td>
</tr>
</tbody>
</table>
which may occur

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>21. Document the teaching procedure</td>
<td>To provide a point of reference or comparison in the event of later queries</td>
</tr>
<tr>
<td>22. Give voiding diary to patient</td>
<td>To visualise the progress of CISC</td>
</tr>
<tr>
<td>23. Make an appointment for follow up</td>
<td></td>
</tr>
</tbody>
</table>

(Vahr et al 2013)
Appendix 2: MALE URETHRAL CATHETERISATION - INSERTION PROCEDURE

Procedure
Aseptic Non Touch Technique should be used throughout procedure.

Checklist equipment:

- Sterile catheterisation pack containing gallipots, receiver, low-linting swabs, disposable towels.
- Disposable pad for bed protection.
- 2 pairs of sterile gloves.
- Selection of appropriate catheters; **Standard length catheter to be used on all male patients.**
- Sterile anaesthetic lubricating jelly or proprietary lubricating gel if anaesthetic gel is contra-indicated (Booth 2009, Kyle 2009).
- Universal specimen container, if required.
- Normal saline cleansing solution.
- Bactericidal alcohol hand disinfection (optional)
- 10 ml sterile water (inflation of balloon) or as recommended by manufacturer.
- Syringe and needle to draw up sterile water and inflate balloon.
- Disposable plastic apron/protective clothing.
- A closed urinary drainage system, e.g.: a night bag, leg bag or catheter valve.
- A catheter drainage bag stand, if required.

<table>
<thead>
<tr>
<th>Action</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check patient file for past problems, allergies etc.</td>
<td>To ensure the patient understands the procedure.</td>
</tr>
<tr>
<td>During the procedure explain the process to the patient.</td>
<td>Consent.</td>
</tr>
<tr>
<td>Undertake procedure on the patient’s bed or in clinical treatment area using screens/curtains to promote and maintain dignity.</td>
<td>To ensure patient’s privacy.</td>
</tr>
<tr>
<td>Decontaminate hands before patient contact (If appropriate use alcohol rub). Assist the patient to get into the supine position to ensure the penis is accessible.</td>
<td>To maintain patient’s dignity, procedure and comfort.</td>
</tr>
<tr>
<td>Do not expose the patient at this stage of the procedure.</td>
<td></td>
</tr>
<tr>
<td>Using soap and water, wash hands and dry thoroughly</td>
<td>To reduce risk of infection.</td>
</tr>
<tr>
<td>Clean and prepare the area.</td>
<td>To have a clean working surface.</td>
</tr>
<tr>
<td>Take equipment to the patient’s bedside.</td>
<td></td>
</tr>
<tr>
<td>Open the outer cover of the catheterisation pack, check expiry date of catheter.</td>
<td>To prepare equipment.</td>
</tr>
</tbody>
</table>
1. Remove cover that is maintaining the patient's privacy and position a disposable pad under the patient's buttocks and thigh.  
   To ensure urine does not leak onto bed.

2. Using soap and water wash hands and dry thoroughly.  
   Hands may have become contaminated by handling the outer packs.

3. Put on personal protective equipment (PPE) and sterile gloves.  
   To reduce risk of cross infection.

4. Place dressing/protective towel across the patient's thighs and under penis.  
   To create a protective field.

5. Lift the penis and retract the foreskin if present using a gauze swab and clean the glans penis with the solution. Beginning with the foreskin, the glans and urethral meatus at the end. Use a new swab for each part.  
   Lifting the penis straighten the penile urethra and facilitates catheterisation.  
   To reduce the risk of introducing infection.

6. Slowly instil 11 mls of the (anaesthetic) lubricating gel into the urethra holding the penis firmly below the glans with thumb and fingers and the tip of the syringe firmly in the meatus to prevent the gel from leaking out.  
   Adequate lubrication helps to prevent urethral trauma. Use of a local anaesthetic minimises the discomfort experienced by the patient and can aid success of the procedure.

7. Remove the syringe tip from the urethra and keep the urethra closed.  
   To ensure that the gel stays in the urethra.

8. Using soap and water wash hands and dry thoroughly. Apply sterile gloves.  
   To prevent infection.

9. Wait as recommended on the product (3 to 5 minutes)  
   To ensure a maximised anaesthetic effect.

10. Advance the catheter gently to the bifurcation. Hold the penis all the time upright with traction of the other hand (if no urine drains gently apply pressure over the symphysis pubis area.  
    Advancing the catheter ensures that it is correctly positioned in the bladder.

11. Slowly inflate the balloon according to the manufacturer’s direction, having ensured that the catheter is draining urine beforehand.  
    Inadvertent inflation of the balloon in the urethra causes pain and urethral trauma.

12. Withdraw the catheter slightly.  
    Withdrawing the catheter ensures the balloon sits at the bladder base ensuring optimal urine drainage.

13. Connect bag to catheter, secure the catheter using a support strap. Ensure that the catheter does not become taut when patient is mobilising or when the penis becomes erect.  
    To maintain patient comfort and to reduce the risk of urethral and bladder neck trauma.

14. Ensure that the glans penis is cleansed after Retraction and constriction of the foreskin
the procedure and reposition the foreskin if present. Remove sterile gloves and decontaminate hands.

behind the glans penis resulting in paraphimosis may occur if this is not done.

2. Help the patient into a comfortable position. Ensure that the patient’s skin and the bed are both dry.

If the area is left wet or moist, secondary infection and skin irritation may occur.

3. Use gloves and PPE. Measure the amount of urine.

To be aware of bladder capacity for patients with previous occurrences of urinary retention.

To monitor renal function and fluid balance.

If the area is left wet or moist, secondary infection and skin irritation may occur.

4. Take a urine specimen for laboratory examination, if required.

To rule out urinary tract infection.

5. Dispose of equipment in a plastic clinical waste bag and seal the bag. Remove PPE and wash hands.

To prevent environmental contamination.

6. Record information in relevant documents, this should include:

- reasons for catheterisation
- date and time of catheterisation
- catheter type, length and size
- amount of water instilled into the balloon
- batch number and manufacturer
- drainage system used
- problems negotiated during the procedure
- Review date to assess the need for continued catheterisation or data or change of catheter.

To provide a point of reference or comparison in the event of later queries.

7. Record patient experience and any problems.

To provide a point of reference or comparison in the event of later queries.

- Should the catheter become contaminated in the process, it must be discarded and another used. **Never reinsert a catheter**; a new one must always be used.
- Whilst completing the procedure, observe the patients general condition.
- If there are any signs of shock, stop the procedure and take appropriate action.

Stop and seek medical advice if any of the following occur;

- The catheter, during any stage of insertion cannot easily be passed.
- The patient complains of undue pain.
- Bleeding other than that associated with minor trauma (Geng et al 2006)
Appendix 3 Female Urethral Catheterisation – insertion procedure

Procedure
Aseptic Non Touch Technique should be used throughout procedure.

Assemble equipment as listed in the male catheterisation procedure above; female length Foley catheter may be used and 6mls sterile anaesthetic/ lubricating jelly) Unregistered healthcare worker should check Lidocaine gel with a registered member of staff.

<table>
<thead>
<tr>
<th>Action</th>
<th>Rational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Until point 12 the procedure is the same as for male catheterisation.</td>
<td></td>
</tr>
<tr>
<td>13. Place dressing/protective towel under the patient.</td>
<td>To create a protective field.</td>
</tr>
<tr>
<td>14. Wash hands using soap and water and dry thoroughly. Put on PPE and sterile gloves.</td>
<td>To reduce a risk of cross infection.</td>
</tr>
<tr>
<td>15. Clean the meatus: labia majora, then the labia minor and finally the urethral meatus. One swab – one wipe anterior to posterior.</td>
<td>To avoid wiping any bacteria from the perineum and anus forwards towards the urethra.</td>
</tr>
<tr>
<td>16. Separate the labia with one hand and give traction upwards.</td>
<td>To have a good view on the meatus and to minimise the rise of contamination or the urethra.</td>
</tr>
<tr>
<td>Apply a little lubrication to the meatus and then insert the conus of the syringe with (anaesthetic) lubrication in the meatus and slowly instil 6ml or the gel into the urethra. Then remove the nozzle from the urethra.</td>
<td>Adequate lubrication helps to prevent urethral trauma. Use of a local anaesthetic minimises the discomfort experienced by the patient and can add to the success of the procedure.</td>
</tr>
<tr>
<td>18. Wash hands using soap and water and dry thoroughly and put on sterile gloves</td>
<td>To prevent infection.</td>
</tr>
<tr>
<td>19. Pick up the catheter with the hand with the sterile glove. Insert the catheter in the meatus and gently advance the catheter along the urethra until it reaches the bladder and urine flows out. Then insert the catheter 2cm deeper. Inflate the retention balloon.</td>
<td>Inadvertent inflation of the balloon in the urethra causes pain and urethral trauma. To be sure that the balloon is in the bladder.</td>
</tr>
<tr>
<td>20. Withdraw the catheter slightly.</td>
<td>Withdrawing the catheter ensures the balloon sits at the bladder base ensuring optimal urine drainage.</td>
</tr>
<tr>
<td>21. Connect the bag to catheter. If the patient desires secure the catheter using a support strap. Ensure that the catheter does not become taut when patient is mobilising.</td>
<td>To reduce risk of cross infection. To maintain patient comfort and to reduce the risk of urethral and bladder neck trauma.</td>
</tr>
<tr>
<td>Ensure that the labia are cleaned after the procedure. Remove gloves and decontaminate hands.</td>
<td>To avoid skin irritation.</td>
</tr>
<tr>
<td>Help the patient into a comfortable position. Ensure that the patient’s skin and the bed are both dry.</td>
<td>If the area is left wet or moist, secondary infection and skin irritation may occur.</td>
</tr>
<tr>
<td>The same procedure as in men from point 25 et seq.</td>
<td></td>
</tr>
</tbody>
</table>

(Geng et al 2006)
**Appendix 4: Preparation and Procedure for changing a Suprapubic Catheter.**

**Procedure**
Aseptic Non Touch Technique should be used throughout procedure.

**Checklist Equipment:**
- Sterile catheterisation pack containing gallipots, receiver, low-linting swabs, disposable towels.
- Disposable pad for bed protection.
- Two pairs of sterile gloves.
- Selection of appropriate catheters
- Sterile anaesthetic lubricating jelly or proprietary lubricating gel.
- Universal specimen container, if required.
- Normal saline cleansing solution.
- Bactericidal alcohol hand disinfection (optional)
- 10ml sterile water (inflation of balloon) or as recommended by manufacturer.
- Syringe and needle to draw up sterile water and inflate balloon.
- Disposable plastic apron/protective clothing.
- A closed urinary drainage system, eg: a night bag, leg bag or catheter valve.
- A catheter drainage bag stand, if required.
- Dressing and wound care set (supplementary pack).

<table>
<thead>
<tr>
<th>Action</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Check patient file for past problems, allergies etc. During the procedure explain the process to the patient.</td>
<td>To ensure the patient understands the procedure.</td>
</tr>
<tr>
<td>2. Undertake procedure on the patient’s bed or in clinical treatment area using screens/curtains to promote and maintain dignity. Decontaminate hands before touching the patient and apply PPE. Assist the patient to get into a comfortable supine position to ensure the suprapubic tract is accessible. Do not expose the patient at this stage of the procedure.</td>
<td>To ensure patient’s privacy. To reduce risk of cross infection from micro-organisms on uniform. To maintain patient’s dignity, procedure and comfort.</td>
</tr>
<tr>
<td>3. Wash hands using soap and water and dry thoroughly</td>
<td>To reduce risk of infection.</td>
</tr>
<tr>
<td>4. Clean and prepare work surface. Assemble all of the necessary equipment. Check the expiry date of catheter. The catheter size and amount of water instilled in the balloon should be the same as the existing suprapubic catheter.</td>
<td>Ensure clean working surface. To ensure you have all required equipment.</td>
</tr>
<tr>
<td>5. Open the outer cover of the catheterisation pack.</td>
<td>To prepare equipment.</td>
</tr>
<tr>
<td>6. Using an aseptic technique, open the supplementary packs.</td>
<td>To reduce the risk of cross infection.</td>
</tr>
<tr>
<td>7. Remove cover that is maintaining the patient’s privacy and position a disposable</td>
<td>To ensure urine does not leak onto bed.</td>
</tr>
<tr>
<td>Step</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>pad under the patient’s buttocks and thighs.</td>
<td>Hands may have become contaminated by handling the out packs.</td>
</tr>
<tr>
<td>8.</td>
<td>Wash hands using soap and water and dry thoroughly.</td>
</tr>
<tr>
<td>11.</td>
<td>Observe the current suprapubic site for the lie of the catheter, angle of insertion and how much of the catheter length is visible outside the body as this information will be a useful guide for the insertion technique for the new catheter.</td>
</tr>
<tr>
<td>12.</td>
<td>Place dressing/protective towel across the patient’s abdomen. Clean around suprapubic insertion site with normal saline. Turn catheter through 180 degrees. If using anaesthetic gel/ lubricant, insert around the side of the catheter.</td>
</tr>
</tbody>
</table>
| 13. | Deflate balloon (without suction) of existing catheter and remove catheter.  
   (Note the length of the catheter within the bladder and use this as a guide as to how far to insert the new catheter) |
| 14. | Wash hands using soap and water and dry thoroughly. Put on sterile gloves |
| 15. | Remove the pre-perforated front part of the intern package so that the first 5cm or 2 inch of the catheter is free. Advance the catheter into the tract the length recorded from catheter withdrawal. |
| 16. | Slowly inflate the balloon according to the manufacturer’s direction, having ensured that the catheter is draining urine beforehand. |
| 17. | Open the rest of the package by the pre-perforated part and remove the package. |
| 19. | Withdraw the catheter slightly. |
| 20. | Using an aseptic technique, connect the bag to the catheter at this stage. |
| 21. | Connect the bag to catheter. Secure the catheter using a support strap. Ensure that the catheter does not become taut when patient is mobilising. Remove gloves and decontaminate hands. |
| 22. | Help the patient into a comfortable position. Ensure that the patient’s skin and the bed are both dry. Assist the patient with dressing into own clothing. |
| 23. | Use PPE and put on gloves Measure the To be aware of bladder capacity for patients with
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| amount of urine. | previous occurrences or urinary retention.  
To monitor renal function and fluid balance.  
It is not necessary to measure the amount of urine if the patient is having the urinary catheter routinely change. |
| 24. Take a urine specimen for laboratory examination if required. | To rule out urinary tract infection. |
| 25. Dispose of equipment in a plastic clinical waste bag and seal the bag. Remove PPE and wash hands. | To prevent environmental contamination. |
| 26. Record information in relevant documents, this should include:  
  - Reasons for catheterisation  
  - Residual volume  
  - Date and time of catheterisation  
  - Catheter type, length and size  
  - Amount of water instilled into the balloon  
  - Batch number and manufacturer  
  - Drainage system used  
  - Problems negotiated during the procedure  
  - Review date to assess the need for continued catheterisation or date of change of catheter.  
  - Observation of cystostomy site | To provide a point of reference or comparison in the event of later queries. |
| 27. Record patient experience and any problems. | To provide a point of reference or comparison in the event of later queries. |

(Geng et al 2006)
Appendix 5: Competency Framework for Male Catheterisation

Competency Framework for: Male Catheterisation

Name of healthcare worker: .............................................. Contact Address: ..............................................

Assessors Name: ..................................................... Contact Address: ..............................................

To be completed by a trained nurse who has undertaken in-house training and who feels competent in male catheterisation.

<table>
<thead>
<tr>
<th>Area of Practice</th>
<th>Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assessment of need, consent and preparation</td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Appropriate selection and use</td>
</tr>
<tr>
<td>Procedure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Safe and aseptic catheterisation</td>
</tr>
<tr>
<td>Documentation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reflects on procedure</td>
</tr>
<tr>
<td></td>
<td>Prepares for next change</td>
</tr>
</tbody>
</table>

Signature of healthcare worker: ................................. Signature of Assessor ............................

Date: .................................................................

Please file this copy in your portfolio and email OLM E-Workforce once competency has been achieved/updated.
<table>
<thead>
<tr>
<th>Area of Practice</th>
<th>Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient</td>
<td>Assessment of need, consent and preparation</td>
</tr>
<tr>
<td>Equipment</td>
<td>Appropriate selection and use</td>
</tr>
<tr>
<td>Procedure</td>
<td>Safe and aseptic catheterisation</td>
</tr>
<tr>
<td>Documentation</td>
<td>Reflects on procedure</td>
</tr>
<tr>
<td></td>
<td>Prepares for next change</td>
</tr>
</tbody>
</table>

Signature of healthcare worker: ..................................  Signature of Assessor  ..................................

Date: .................................................................

Please file this copy in your portfolio and email OLM E-Workforce once competency has been achieved/updated.
## Competency Framework for: Male Catheterisation

<table>
<thead>
<tr>
<th>Competency</th>
<th>Competency Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of patient</td>
<td>assesses need for catheterisation</td>
</tr>
<tr>
<td></td>
<td>ability to explain procedure to patient</td>
</tr>
<tr>
<td></td>
<td>gains consent and records, considers allergies</td>
</tr>
<tr>
<td></td>
<td>maintains patient comfort and dignity</td>
</tr>
<tr>
<td>Selection of equipment</td>
<td>assembles and utilises appropriate catheter and drainage system supplying clear supportive rationale</td>
</tr>
<tr>
<td></td>
<td>checks size, material, expiry date of catheter/gel and ensures sterility of items</td>
</tr>
<tr>
<td>Procedure</td>
<td>pays particular attention to infection control measures including use of apron and hand decontamination</td>
</tr>
<tr>
<td></td>
<td>prepares skin appropriately</td>
</tr>
<tr>
<td></td>
<td>uses correct amount of gel and allows appropriate time to anaesthetise area.</td>
</tr>
<tr>
<td></td>
<td>demonstrates correct insertion technique for male</td>
</tr>
<tr>
<td></td>
<td>maintains asepsis throughout procedure</td>
</tr>
<tr>
<td></td>
<td>successfully performs catheterisation</td>
</tr>
<tr>
<td></td>
<td>replaces foreskin if correctly appropriate</td>
</tr>
<tr>
<td></td>
<td>correctly attaches drainage system</td>
</tr>
<tr>
<td>Documentation</td>
<td>reflects on procedure</td>
</tr>
<tr>
<td></td>
<td>ensures equipment available for next catheter change</td>
</tr>
<tr>
<td></td>
<td>gives patient appropriate advice and information regarding: blockage haematuria UTI</td>
</tr>
<tr>
<td></td>
<td>documents procedure</td>
</tr>
<tr>
<td>Area of Practice</td>
<td>Achieved</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------------------------------------------</td>
</tr>
<tr>
<td>Patient</td>
<td>Assessment of need, consent and preparation</td>
</tr>
<tr>
<td>Equipment</td>
<td>Appropriate selection and use</td>
</tr>
<tr>
<td>Procedure</td>
<td>Safe and aseptic catheterisation</td>
</tr>
<tr>
<td>Documentation</td>
<td>Reflects on procedure</td>
</tr>
<tr>
<td></td>
<td>Prepares for next change</td>
</tr>
</tbody>
</table>

Signature of healthcare worker: ........................................ Signature of Assessor ......................................

Date: .................................................................

Please file this copy in your portfolio and email OLM E-Workforce once competency has been achieved/updated.


Appendix 6: Competency Framework for Female Catheterisation

Competency Framework for: Female Catheterisation

Name of healthcare worker: ………………………… Contact Address: ……………………………
Assessors Name: …………………………………… Contact Address: ……………………………

To be completed by a trained practitioner who has undertaken mandatory training and who feels competent in female catheterisation.

<table>
<thead>
<tr>
<th>Area of Practice</th>
<th>Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient</td>
<td>Assessment of need, consent and preparation</td>
</tr>
<tr>
<td>Equipment</td>
<td>Appropriate selection and use</td>
</tr>
<tr>
<td>Procedure</td>
<td>Safe and aseptic catheterisation</td>
</tr>
<tr>
<td>Documentation</td>
<td>Reflects on procedure</td>
</tr>
<tr>
<td></td>
<td>Prepares for next change</td>
</tr>
</tbody>
</table>

Signature of healthcare worker: …………………………… Signature of Assessor ……………………………

Date: ……………………………………………………

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<table>
<thead>
<tr>
<th>Area of Practice</th>
<th>Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient</td>
<td>Assessment of need, consent and preparation</td>
</tr>
<tr>
<td>Equipment</td>
<td>Appropriate selection and use</td>
</tr>
<tr>
<td>Procedure</td>
<td>Safe and aseptic catheterisation</td>
</tr>
<tr>
<td>Documentation</td>
<td>Reflects on procedure</td>
</tr>
<tr>
<td></td>
<td>Prepares for next change</td>
</tr>
</tbody>
</table>

Signature of healthcare worker: ................................ Signature of Assessor ................................

Date: ..........................................................

Please file this copy in your portfolio and email OLM E-Workforce once competency has been achieved/updated.
<table>
<thead>
<tr>
<th>Area of Practice</th>
<th>Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient</td>
<td>Assessment of need, consent and preparation</td>
</tr>
<tr>
<td>Equipment</td>
<td>Appropriate selection and use</td>
</tr>
<tr>
<td>Procedure</td>
<td>Safe and aseptic catheterisation</td>
</tr>
<tr>
<td>Documentation</td>
<td>Reflects on procedure</td>
</tr>
<tr>
<td></td>
<td>Prepares for next change</td>
</tr>
</tbody>
</table>

Signature of healthcare worker: ..........................  Signature of Assessor
..........................

Date: ..........................................................

Please file this copy in your portfolio and email OLM E-Workforce once competency has been achieved/updated.
### Competency Framework for: Female Catheterisation

<table>
<thead>
<tr>
<th>Competency</th>
<th>Competency Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of patient</td>
<td>assesses need for catheterisation</td>
</tr>
<tr>
<td></td>
<td>ability to explain procedure to patient</td>
</tr>
<tr>
<td></td>
<td>gains consent and records, considers allergies</td>
</tr>
<tr>
<td></td>
<td>maintains patient comfort and dignity</td>
</tr>
<tr>
<td>Selection of equipment</td>
<td>specifically checks catheter suitable for suprapubic use</td>
</tr>
<tr>
<td></td>
<td>assembles and utilises appropriate catheter and drainage system supplying clear supportive rationale</td>
</tr>
<tr>
<td></td>
<td>checks size, material, expiry date of catheter/gel and ensures sterility of items</td>
</tr>
<tr>
<td>Procedure</td>
<td>pays particular attention to infection control measures including use of apron and hand decontamination</td>
</tr>
<tr>
<td></td>
<td>prepares skin appropriately</td>
</tr>
<tr>
<td></td>
<td>uses correct amount of gel and allows appropriate time to anaesthetise area.</td>
</tr>
<tr>
<td></td>
<td>demonstrates correct insertion technique.</td>
</tr>
<tr>
<td></td>
<td>maintains asepsis throughout procedure</td>
</tr>
<tr>
<td></td>
<td>successfully performs catheterisation</td>
</tr>
<tr>
<td></td>
<td>drainage system attached</td>
</tr>
<tr>
<td>Documentation</td>
<td>reflects on procedure</td>
</tr>
<tr>
<td></td>
<td>ensures equipment available for next catheter change</td>
</tr>
<tr>
<td></td>
<td>gives patient appropriate advice and information regarding:</td>
</tr>
<tr>
<td></td>
<td>blockage</td>
</tr>
<tr>
<td></td>
<td>haematuria</td>
</tr>
<tr>
<td></td>
<td>UTI</td>
</tr>
<tr>
<td></td>
<td>skin care</td>
</tr>
<tr>
<td></td>
<td>documents procedure</td>
</tr>
</tbody>
</table>
Appendix 7 competency Framework for Supra Pubic Catheterisation

<table>
<thead>
<tr>
<th>Area of Practice</th>
<th>Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient</td>
<td>Assessment of need, consent and preparation</td>
</tr>
<tr>
<td>Equipment</td>
<td>Appropriate selection and use</td>
</tr>
<tr>
<td>Procedure</td>
<td>Safe and aseptic catheterisation</td>
</tr>
<tr>
<td>Documentation</td>
<td>Reflects on procedure</td>
</tr>
<tr>
<td></td>
<td>Prepares for next change</td>
</tr>
</tbody>
</table>

Signature of healthcare worker: .....................................  Signature of Assessor  ........................................

Date: ..............................................................
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<table>
<thead>
<tr>
<th>Area of Practice</th>
<th>Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient</td>
<td>Assessment of need, consent and preparation</td>
</tr>
<tr>
<td>Equipment</td>
<td>Appropriate selection and use</td>
</tr>
<tr>
<td>Procedure</td>
<td>Safe and aseptic catheterisation</td>
</tr>
<tr>
<td>Documentation</td>
<td>Reflects on procedure</td>
</tr>
<tr>
<td></td>
<td>Prepares for next change</td>
</tr>
</tbody>
</table>

Signature of healthcare worker: ................................ Signature of Assessor ................................

Date: .........................................................

Please file this copy in your portfolio and email OLM E-Workforce once competency has been achieved/updated.
### Appendix 8: Troubleshooting Indwelling Catheter Care Pathway

<table>
<thead>
<tr>
<th>Catheter symptom</th>
<th>Check list</th>
</tr>
</thead>
</table>
| Urine does not drain: Catheter previously draining    | • Mechanical obstruction?  
• Check for kinked tubing?  
• Is the bag valve occluded?  
• Is the drainage bag below the level of the bladder?  
• Does the drainage bag need to be emptied?  
• Check that the catheter is correctly positioned in the bladder? |
| Catheter does not drain urine                         | • Eyelets of catheter may be occluded by the urothelium due to hydrostatic suction. Try raising the bag above the level of the bladder for 1-15 seconds                                                                 |
| Blockage of catheter; due to encrustation              | • Look at catheter history for blockages Main cause is struvite formation (calcium phosphate and magnesium ammonium phosphate salts); struvite forms as a result of precipitation of these salts from the urine when it becomes alkaline because of urease forming bacteria (Rigby et al 2008).  
• Assess ‘catheter life’ by observing at least three catheters;  
• Implement planned catheter changes to avoid blockage.  
• A prescribed regime of acidic catheter maintenance solutions  
• If recurrent nature of the blockage can sometimes be ascertained by external examination of the catheter or if necessary catheter dissection (Moore 2010).  
• For appropriate catheter solution refer to section  
• Implement proactive catheter changes dependent on life of catheter.  
• Evidence of catheter maintenance solution limited some patients may gain some benefit especially persistent blockers. Restrict use of catheter maintenance solutions to selected patients + review need to continue on regular basis.  
• Risk of infection as breaking closed link system (RCN 2012) |
| **Bladder Spasm / Irritation** | • Consider anticholinergic / anti-muscarinic medication.  
• Consider small Charriere size.  
• Consider catheter material irritation.  
• Exclude Urinary tract infection as cause; If systemically unwell (loin pain, fever, delirium), seek medical attention and immediate treatment (NICE CKS, 2015)  
• Increase fluid intake to dilute urine.  
• Exclude presence of bladder stones.  
• Check drainage bag is in correct position i.e.: below level of the bladder. |
|---|---|
| **Haematuria** | • Small blood stained particles seen as debris in the inlet tube or drainage bag are a common occurrence in most urinary drainage systems and may be the result of infection or trauma. Increasing fluid intake may help to ‘flush’ this through the system.  
• Solution ‘R’ and ‘G’ must NOT be used on patients with haematuria.  
• Exclude other causes for haematuria for example prostatic enlargement and calculi and other pathology  
• Seek medical advice if haematuria persists (NICE CKS 2015). This may result in an urgent urology referral  
• Exclude enlarged prostate gland as a cause. May require medical treatment if enlarged prostate gland is found. |
| **Urine bypassing** | • Check tube kinking and/or constipation.  
• If due to bladder spasm or irritation consider anticholinergic medication; consider a smaller catheter gauge, check balloon size; consider catheter material (latex allergy); consider urinary tract infection; check for symptomatic systems symptoms of urinary tract infection |
| **Abdominal cramping** | • This should subside after 24 hours of initial insertion; if it persists, it may be bladder spasm and anticholinergic therapy should be considered. |
| **Urethral discomfort** | • May be due to distension of urethra by too large a catheter or by occlusion of the paraurethral glands – change to a smaller catheter gauge. |
| **Urethral discharge** | • During normal micturition a mucus substance is produced by the paraurethral glands (which line the urethra) to protect against ascending infection and is usually flushed away. However, |
in the catheterised patient, the mucus drains through peristaltic action and gravity rather than
being flushed away and can result in presence of mucus outside the urethra and on the
catheter surface (Robinson, 2001).

<table>
<thead>
<tr>
<th>Blocking due to debris in the urine</th>
<th>Sludgy mucus type debris can block catheter. Expert opinion suggests using a valve in this situation to encourage natural flushing of the catheter inner; check with Pathlink for advice before treatment with antimicrobial.</th>
</tr>
</thead>
</table>
| The Catheter Balloon Fails to Deflate | Remove the syringe and try a different one.  
- Leave the syringe attached for 15-20 minutes.  
- Check if the patient has a kinked catheter or is constipated.  
- Pressure of debris, encrustations or foreign material can prevent deflation. The catheter can be ‘milked’ along its length by rolling it between thumb and finger to unblock it or remove any obstruction. A few mls of sterile water added to the valve may clear any obstruction.  
- Do not attempt to burst the balloon by over-inflating it. If a balloon should burst, cystoscopy may be required to remove balloon fragments.  
- Gently instil 1-2 mls sterile water via valve in case of particular blockage and check valve.  
- Use a 25 gauge needle and syringe to aspirate the inflation arm just above the valve.  
- Do not cut the catheter during removal. The inflation funnel should remain attached. Cutting the catheter shaft above the bifurcation point can create problems and shortening the length of the catheter makes removal difficult and takes it close to the external urethral opening.  
- Report product failure to the Manufacturer, submit Datix and report incidence to Clinical Governance Lead. |

| The balloon has burst whilst the catheter is in situ in the patient’s bladder | \- The patient may or may not be aware this has occurred.  
- Nurses can re-catheterise immediately after this even if there is no haematuria or no pain is experienced by the patient.  
- The nurse must liaise with the GP regarding abdominal X-ray to exclude bladder stones causing the balloon to burst. |

| Catheter rejection | If a patient pulls their catheter out with a balloon inflated due to a confused state, consider alternative method to manage bladder problem. |
- On occasions, catheters may be expelled due to a combination of weak pelvic floor muscles, urethral dilatation and bladder over-activity (Rew and Woodward, 2001)
- Other means of continence care/management should be sought.
Appendix 9 Equality Analysis

A. Briefly give an outline of the key objectives of the policy; what its intended outcome is and who the intended beneficiaries are expected to be.

The purpose of this guidance is to provide a standardised approach to the delivery of catheter care for all patients referred to LCHS NHS Trust. The guidance will inform staff about the need for risk assessment, consideration for alternatives to catheter care as well as training and audit requirements to deliver a package of care.

B. Does the policy have an impact on patients, carers or staff, or the wider community that we have links with? Please give details

No

C. Is there any evidence that the policy/service relates to an area with known inequalities? Please give details

No

D. Will/does the implementation of the policy/service result in different impacts for protected?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disability</td>
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<tr>
<td>Sexual orientation</td>
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<tr>
<td>Sex</td>
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<tr>
<td>Gender re-assignment</td>
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<tr>
<td>Race</td>
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<tr>
<td>Marriage / civil partnership</td>
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<tr>
<td>Maternity / pregnancy</td>
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<tr>
<td>Age</td>
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<tr>
<td>Religion or belief</td>
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<tr>
<td>Careers</td>
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</tbody>
</table>

The above named policy has been considered and does not require a full equality analysis.

Equality Analysis Carried out by: Suzanna Kinder
Date: 16 September 2013
Agreed by: Equality and Human Rights Lead
Date: