

Document Control

Title			
Urinary Catheter in Adults (CAUTI) Policy (Incorporating Prevention of Catheter-Associated Urinary Tract Infection)			
Author		Author's job title	
		Bladder & Bowel Care Clinical Lead Bladder & Bowel Care Specialist Nurse	
Directorate		Department	
Specialist Services		Bladder & Bowel Care Services	
Version	Date Issued	Status	Comment / Changes / Approval
1.0	Jun 2001	Final	Ratified by the Trust Board.
1.1	Mar 2007	Revised	Submitted to Infection Control Committee.
1.2	Aug 2008	Revision	Revised into new format.
1.3	Sep 2008	Revision	Final amends to ensure corporate identity requirements.
1.4	Dec 2009	Revision	Final amends to ensure corporate identity requirements.
1.5	Dec 2010	Revision	Addition of indications for catheterisation and new references; addition of 4.5 & 4.6 roles of CNS Continence and Urology; incorporation of Appendices C, D & E from the NHS Devon (2010) Policy on Urinary Catheterisation of Adults and Children by Clinical Staff. Version 9.8 Approved at PSIPCC October 2010 with amendment to be made to silver catheter use approved by ICT 9/12/10
1.6	Jun 2011	Revision	Amendments by Corporate Affairs to document control report, formatting for document map navigation and header and footer. Hyperlinks to policies and appendices.
2.0	Dec 2012	Final	Harmonised policy as a result of the merging of Northern Devon Healthcare NHS Trust and NHS Devon community services. Approved by IPCC at Dec meeting following consultation.
2.1	Sep 2013	Revision	Minor amendments by Corporate Governance to document control report, formatting for document map navigation and semi-automatic hyperlinked table of contents. Addition of hyperlinks to appendices and Catheter Care SOP (Appendix I). Update to Equality Impact Assessment to include 4 new groups.
2.2	Jan 16	Revision	Review date extended after overview at IPCC Meeting January 2016
2.3	Aug 16	Revision	New template Minor updates. Clarification of compliance monitoring 6.0 and use of lubricating gel 5.6. Approved at IPCC June 2016 with amendments detailed above.
3.0	Jul 17	Final	Advice re glove usage updated. New HII 4 th edition of Saving Lives reference added.

Main Contact Clinical Lead Bladder & Bowel Care Service Franklyn House Franklyn Drive Exeter EX2 9HS		Tel: Direct Dial – 01392 208478
Lead Director Director of Nursing		
Superseded Documents NDHT Prevention of Catheter-Associated Urinary Tract Infection Policy NDHT Urinary Tract Infection Prevention Policy NHS Devon / Devon Provider Services Policy on Urinary Catheterisation of Adults & Children by Clinical Staff		
Issue Date July 2017	Review Date July 2020	Review Cycle Three years
Consulted with the following stakeholders: <ul style="list-style-type: none"> • Community nursing • Quality Improvement Team • Infection Prevention & Control Committee • Urology Nurse Specialist • Stoma Care Nurse Specialist 		
Approval and Review Process <ul style="list-style-type: none"> • Infection Prevention & Control Committee • Bladder & Bowel Care Service 		
Local Archive Reference G:\Infection Control Local Path Infection Control\IC Manual-Policies\New Templates from 2015\Urinary Catheter in Adults (CAUTI) Policy Filename Urinary Catheter in Adults Policy (CAUTI) v3.0 Jul 17		
Policy categories for Trust's internal website (Bob) Infection Prevention & Control, Nursing, Doctors, Midwives, Harmonised		Tags for Trust's internal website (Bob) UTI, CAUTI Catheterisation, Catheterization, Urostomy, Ileal conduit Bacteriuria, Bladder washout, Supra-pubic catheter

CONTENTS

Document Control	1
1. Purpose.....	5
2. Definitions.....	5
2.1 Aseptic Non-Touch Technique (ANTT).....	5
2.2 Bacteriuria.....	6
2.3 Catheter Maintenance Solution	6
2.4 Catheter-associated urinary tract infection (CAUTI)	6
2.5 Catheter valve	6
2.6 Clean procedure/ technique	6
2.7 Encrustation	6
2.8 Foley Catheter	6
2.9 Nelaton catheter	6
2.10 Indwelling urethral/ urinary catheter.....	7
2.11 Clean Intermittent catheterisation	7
2.12 Link system	7
2.13 Single-patient use.....	7
2.14 Supra-pubic catheter/ catheterisation	7
3. Responsibilities	7
3.1 Role of the Director of Nursing	7
3.2 Infection Prevention and Control Team	7
3.3 The Infection Prevention and Control Committee.....	7
3.4 Role of the Bladder and Bowel Team	8
3.5 Role of the Urology Specialist Nurse	8
3.6 Role of Directorate/Divisional Managers	8
3.7 Role of Ward/Clinical Department Managers/ community nurse team leaders	8
3.8 Role of All Staff.....	8
4. Contacting the Infection Prevention and Control and	8
Bladder & Bowel Care Teams.....	8
5. Urinary Catheterisation and Catheter Care	9
5.1 Assessing the Need for Catheterisation	9
5.2 Contraindications to urinary catheterisation.....	9
5.3 Selection of Catheter Type	9
5.4 Clean Intermittent Self-Catheterisation (CISC)	10
5.5 Urethral Catheterisation.....	10
5.5.1 Suprapubic Catheterisation	11
5.6 use of Lubricating Gel.....	11
5.7 Continuing care of catheter	12
5.7.1 Review of the need for urinary catheterisation	12
5.7.2 Changing urinary catheters	12
5.7.3 Trial without Catheter – “TWOC”	13
5.7.4 Patients with new catheters in the community	13
5.7.5 Catheter associated problems	14

5.7.6	Catheter associated urinary tract infection (CAUTI)	14
5.7.7	Specimen Collection	14
5.7.8	Education of Patients and Carers	15
5.7.9	Catheter Ordering Details.....	15
6.	Monitoring Compliance with and the Effectiveness of the Policy	15
	Standards/ Key Performance Indicators.....	15
	Process for Implementation and Monitoring Compliance and Effectiveness	16
7.	Equality Impact Assessment.....	16
8.	References	16
9.	Associated Documentation	17
	Appendix A : Indications for urinary catheterisation	18
	Appendix B: Decision algorithm for urinary catheterisation	19
	Appendix C: Choice of catheter material	20
	Appendix D: Standard operating procedure for clean intermittent self-catheterisation (CISC) and intermittent catheterisation (IC).....	24
	Appendix E: Standard Operating Procedure for Adult Male Catheterisation	27
	Appendix F: Standard Operating Procedure for urethral catheterisation of female patients	29
	Appendix G: Difficulty with insertion of a urethral catheter	31
	Appendix H: Standard Operating Procedure for changing an established suprapubic catheters	33
	Appendix I: Standard operating procedure for catheter care	36
	Appendix J: Resolving catheter related problems.....	38
	Catheter patency solutions	42
	Algorithms for dealing with catheter blockage and catheter leakage	43
	Appendix K: Standard operating procedure for trial without catheter (TWOC)	44

1. PURPOSE

- 1.1** The purpose of this document is to detail Northern Devon Healthcare NHS Trust's guidance for the prevention of urinary tract infections caused by invasive devices being inserted into the urinary bladder. It provides a robust framework to ensure a consistent approach across all clinical areas of the organisation. This policy applies to all adult patients. Catheters in paediatric patients should be managed by paediatric nurse specialists
- 1.2** The purpose of this document is to highlight the infection control precautions needed to reduce the risk of infections associated with insertion and maintenance of indwelling urinary catheter devices
- 1.3** The policy is primarily based on the following guidelines:
- Infection control: prevention of healthcare-associated infection in primary and community care (NICE, 2012) <https://www.nice.org.uk/Guidance/CG139>
 - Epic 3: National Evidence-Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England (Pratt et al, 2014) https://www.his.org.uk/files/3113/8693/4808/epic3_National_Evidence-Based_Guidelines_for_Preventing_HCAI_in_NHSE.pdf
 - Saving Lives : High Impact Intervention No 6 Urinary Catheter Care Bundle (DoH,2007)<http://www.ncuh.nhs.uk/about-us/freedom-of-information/disclosure-log/requests/general-medical/001712-02.pdf>
 - Infection Prevention Society: High Impact Interventions Care processes to prevent infection. Saving Lives HII 4th Edition
 - RCN Guidelines https://www2.rcn.org.uk/_data/assets/pdf_file/0018/157410/003237.pdf

The most important risk factors for catheter associated urinary tract infections are prolonged catheterisation and being female. Other risk factors identified have included catheterisation outside the sterile environment of the operating room, having a urinary tract abnormality, other infections, diabetes, malnutrition and renal failure; and if the drainage tube is above the level of the patient, (Tambyah, 2004)

- 1.4** The policy applies to all Trust clinical staff

2. DEFINITIONS

2.1 Aseptic Non-Touch Technique (ANTT)

The use of sterile equipment and requirement that healthcare personnel wear sterile gloves whilst employing a non-touch aseptic technique (ANTT).

2.2 Bacteriuria

The presence of bacteria in the urine with or without associated symptoms of infection; in the absence of symptoms this is referred to as asymptomatic bacteriuria or, in the case of a patient with an indwelling catheter, catheter colonisation.

2.3 Catheter Maintenance Solution

The introduction into the catheter of a sterile therapeutic fluid which is allowed to drain back out of the catheter after a variable holding time to dissolve encrustation or alter urine PH.

2.4 Catheter-associated urinary tract infection (CAUTI)

The occurrence of local or systemic clinical symptoms or signs attributable to bacteria present either within the urinary tract, or in the bloodstream (with the urinary tract as the source). Infection may arise:

- Either at the time of, or immediately following catheter insertion
- Or subsequently, because the colonising flora within the catheterised urinary tract become invasive (this may occur spontaneously or following catheter manipulation).

2.5 Catheter valve

A valve connected to the catheter outlet allowing the bladder to store urine. Urine is drained by opening the valve at regular intervals.

2.6 Clean procedure/ technique

Hand decontamination before and after the procedure, clean non sterile gloves can be used and equipment must be clean but not necessarily sterile.

2.7 Encrustation

The formation of crystals which occlude the lumen of the catheter, or the drainage eyes at the tip of the catheter, blocking the passage of urine.

2.8 Foley Catheter

A catheter that has a balloon to retain it in the bladder.

2.9 Nelaton catheter

A catheter that has no self-retaining balloon; used for intermittent catheterisation.

2.10 Indwelling urethral/ urinary catheter

A catheter that is inserted into the bladder via the urethra and remains in place for a period of time.

2.11 Clean Intermittent catheterisation

A procedure where a catheter is periodically passed through the urethra into the bladder for the purpose of emptying it of urine – usually performed by the patient.

2.12 Link system

An extension attached to the drainage outlet of the day bag and connected to a larger capacity night drainage bag.

2.13 Single-patient use

Items that can be re-used but are for the use of one patient only. As opposed to single-use which must be discarded after use and must not be reused.

2.14 Supra-pubic catheter/ catheterisation

Supra-pubic catheterisation creates a tunnel from the abdominal wall to the bladder. Urine can then be drained directly from the bladder, via a supra-pubic catheter, into a collection bag.

3. Responsibilities

3.1 Role of the Director of Nursing

The Director of Nursing is responsible for:

- Acting as a second point of contact to support the dissemination and implementation of this policy
- Ensuring that a replacement main contact is identified should the original author be re-deployed or leave the organisation.

3.2 Infection Prevention and Control Team

It is the responsibility of the Infection Prevention & Control Team to support managers in the implementation of this policy. The Infection Prevention & Control Team undertake to provide education and clarification to support the utilisation of this policy prior to and following implementation when requested to do so by the Department Manager (usually Ward or Departmental Manager in charge of the areas to which these statements apply unless specifically stated otherwise in the text).

3.3 The Infection Prevention and Control Committee

Monitoring compliance with the policy

Ensuring that the policy is approved after review and prior to publishing

3.4 Role of the Bladder and Bowel Team

Provide policy and education, to encourage alternative methods of urinary continence management. Advise the Trust on aspects of urinary catheter systems where they are indicated.

3.5 Role of the Urology Specialist Nurse

Provide guidance on specialist cases of urological assessment and procedures relating to infection prevention and control matters. Advise the Trust on aspects of urinary catheter systems where they are indicated

3.6 Role of Directorate/Divisional Managers

Ensure that Clinical Governance systems under their control incorporate infection prevention and control results. Ensure that there is a divisional/directorate level infection control action plan that incorporates hand hygiene objectives and other elements of standard precautions as needed. This must be regularly updated and available for inspection when requested by the IP&C Team and relevant external inspectors.

3.7 Role of Ward/Clinical Department Managers/ community nurse team leaders

Maintain compliance with this policy, including staff education and competency requirements.

3.8 Role of All Staff

All healthcare staff are required to adhere to the information, guidelines and procedures contained within this policy, which provide a framework for safe and best practice, aimed at preventing urinary tract infection.

4. Contacting the Infection Prevention and Control and Bladder & Bowel Care Teams

4.1 North: The Infection Prevention and Control Team can be contacted in hours on 01271 322680 (ext 2680 internal at North Devon District Hospital), via bleep 011 or out of hours by contacting the on-call Medical Microbiologist via North Devon District Hospital switchboard.

4.2 East: The Infection Prevention and Control Team can be contacted in hours on 01392 402355. Out of hours via Royal Devon & Exeter switchboard on 01392 411611

4.3 Bladder & Bowel Care Team:

The Bladder & Bowel Care Team can be contacted in hours on 01392 208478. There is no out-of-hours Service.

5. Urinary Catheterisation and Catheter Care

There are five key elements of urinary catheterisation:

- Assessing the need for catheterisation
- Selection of catheter type
- Catheter insertion
- Continuing care of catheter
- Education of patients, their carers and healthcare workers.

5.1 Assessing the Need for Catheterisation

Indwelling urinary catheters will only be used following careful consideration of alternative methods of management. The indication for catheterisation, and expected duration of catheterisation, must be documented in the appropriate part of the Care Plan and Catheter Passport.

Once inserted, the patient's need for the urinary catheter in the hospital setting must be reviewed daily on the basis of clinical need and recorded in the patient record. In community settings daily review of the patient's need for the urinary catheter may not be feasible but regular review must be undertaken and documented.

The catheter should be removed as soon as it is practicable to do so.

See [Appendix A](#) for indications for urinary catheterization and [Appendix B](#) for clinical algorithm to assist decision on need for short term catheterisation.

5.2 Contraindications to urinary catheterisation

- Mild to moderate excoriation from urinary incontinence. Should be managed by regular toileting and intensive skin care. A urinary catheter may reduce mobility and increase the probability of pressure ulcers.
- Known complex urology / surgery
- Stroke - early catheterisation should be avoided if possible
- Dementia
- Confusion - avoid catheters when possible
- Incontinence - use catheters only when all other options have failed.

5.3 Selection of Catheter Type

The choice of catheter/ drainage system will depend on a comprehensive individual patient assessment. This takes into account the clinical need, anticipated duration of catheterisation, predisposition to blockage, least allergic response and risk of infection. Additionally, within the community setting the prescription of catheter and associated products must take into account the needs of the patient and carers and be within formulary advice / guidance.

All indwelling catheters are FOLEY catheters – this simply means the catheter has a balloon to retain it in the bladder.

All intermittent catheters are NELATON catheters i.e. they have no self retaining balloon and are self lubricating.

The terms FOLEY and NELATON are generic terms.

In order to choose/select the right catheter for the patient the following must be considered: -

- Material to suit length of time catheter is to remain in situ
- Charriere size (Catheter Gauge)
- Balloon size
- Length
- Catheter drainage system

In situations when the catheter is prescribed (e.g. primary care), the above must be specified in the prescription as well as Foley or Nelaton.

Urological patients may require larger gauge sizes and balloons than recommended in this policy - advice can be sought from the Urology Specialist Nurse.

For further details re catheter material, Charriere size, balloon size, length and drainage systems see [Appendix C](#).

5.4 Clean Intermittent Self-Catheterisation (CISC)

See Standard Operating Procedure CISC ([Appendix D](#))

Intermittent catheterisation is recommended by NICE (2015) as the first consideration for all patients when catheterisation as it has a lower infection risk than an indwelling catheter.

Intermittent self-catheterisation is a procedure that requires a high level of personal hygiene, especially hand hygiene, but the patient does not need to wear sterile gloves.

Where a healthcare worker carries out intermittent catheterisation for a patient an aseptic non-touch technique must be used.

5.5 Urethral Catheterisation

Documentation of catheter insertion, care, specimen collection and indications for change of catheter must be documented legibly and accurately in Care Plan and Catheter Passport. The batch number of the catheter must also be documented following insertion, which is normally achieved by inserting the peel off label from the catheter packaging and placing it in the appropriate section of the patient's Catheter Passport.

Other relevant policies in the Infection Control Manual must be adhered to (unless specific advice in this policy contradicts them), in particular:

- [Standard Infection Control Precautions Policy](#)
- [Aseptic and Clean Techniques Policy](#)
- [Waste Management Manual](#)

See Standard Operating Procedures and *Care Plan Records* in the appendices of this policy for further detail.

Only healthcare workers trained in the task must undertake urethral catheterisation. An aseptic non-touch technique (ANTT) must be used for insertion of urethral catheters including the use of sterile gloves. All equipment used must be sterile at the point of use.

See [Appendix E & F](#) for further information re insertion of male and female urethral catheters.

5.5.1 Suprapubic Catheterisation

Only healthcare workers trained in the task must undertake supra-pubic catheterisation. An aseptic non-touch technique (ANTT) must be used for insertion

For adults the size of catheter is usually no smaller than 14ch in adults with a 10ml balloon unless otherwise recommended.

The IP + C Team advise against using the method where 2 pairs of sterile gloves are worn and one set removed after meatal cleansing; this is because it is extremely difficult to remove gloves without contaminating them so removing gloves and decontaminating hands then putting on new sterile gloves is recommended.

See SOP ([Appendix G](#)) for change of suprapubic catheter.

5.6 Use of Lubricating Gel

When changing or inserting an indwelling urethral catheter lubricating gel must be used and may also be considered when changing supra pubic catheters, (Pratt et al 2014), (Yates, 2016). The gel should be instilled into the urethra using a sterile, single use, pre-filled applicator. The catheter should not be lubricated by passing it through gel. The whole syringe full needs to be inserted. With lubricating gel you do not need to wait before inserting the catheter.

The use of anesthetic/antiseptic gels are not recommended as there is a rare, but potential risk of anaphylaxis, other side-effects and interactions with some drugs such as gentamycin and some anti-arrhythmics. It can also cause central nervous system reactions, (BNF), (Clinimed,2014). It is also contraindicated when mucosal membranes are not intact, (Clinimed, 2014).

In the event of an anaesthetic/antiseptic gel being used it must be prescribed and the Health Care Professional satisfied that the patient is at additional risk of reaction due to a pre-existing medical condition or medication. Anaphylaxis training should be up to date as per Trust policy.

5.7 Continuing care of catheter

Continuing catheter care includes:

- Ensuring the catheter is kept clean and that potential microbial contamination is prevented,
- Ensuring that urine can drain freely.
- Undertaking regular review of the need for a catheter and removal as soon as it is no longer required.

For further information re: catheter care, maintaining drainage systems see relevant SOP.

All patients with urinary catheters must have a Care Plan and Catheter Passport which is regularly updated

Prior to manipulating a patient's catheter/ urinary drainage system, hands must be decontaminated and clean non-sterile gloves must be worn. Hands must be decontaminated after removal of gloves. An apron should be worn.

5.7.1 Review of the need for urinary catheterisation

The indication for urinary catheterisation should be reviewed on a regular basis. The frequency of review should be documented in the care plan. For hospital in-patients with temporary catheters, the ongoing need for catheterisation must be reviewed on a daily basis. Catheters inserted for acute illness (e.g. Acute retention, monitoring of fluid balance in a critically ill patient) should normally be removed within 48 hours. Other means of monitoring fluid balance are usually more appropriate after this period.

The reason for on-going use of a temporary catheter (more than 96 hours) must be documented in the patient Care Plan and Catheter Passport by the medical team. There must be documentation that the risks of urinary catheterisation have been discussed with the patient and / or carer where possible.

For in-patients it is the responsibility of nursing staff to ensure that medical teams are aware of patients with temporary catheters, and to document that a review of on-going need for the catheter has been requested.

5.7.2 Changing urinary catheters

Catheters should only be changed when clinically necessary (e.g. Infection / blockage) or according to manufacturer's licensing current recommendations. Short term catheters must be changed at least every 28 days. Long-term catheters must be changed at least every 84 days (approximately 12 weeks), unless stated otherwise.

Most catheter changes are required sooner and routine changes should be planned on a regular routine basis. Catheters must be changed when the patient has a symptomatic urinary tract infection and antibiotics have been

prescribed. The point of change will be as soon as possible following the initiation of antibiotics.

Antibiotic prophylaxis when changing catheters should only be used for patients with a history of catheter-associated urinary tract infection following catheter change, where difficult or traumatic catheterisation is anticipated, or following a traumatic catheterisation. Choice of antibiotic will be determined by local policy but with reference to recent culture results. Artificial heart valves are no longer regarded as an indication for prophylaxis (NICE CG64).

Patients should be encouraged to have a good fluid intake of at least 2 litres per day to reduce risk of infection and to produce dilute urine, facilitate drainage and prevent constipation.

5.7.3 Trial without Catheter – “TWOC”

For in-patients catheter review needs to be documented on a daily basis. Removal needs to be as soon as clinically possible gaining the patient’s consent and after discussion with the multidisciplinary team. Clear explanation needs to be given to the patient that urgency and frequency are to be expected post removal. Fluid intake is paramount 1.5 – 2 litres in 24hrs. It is common to experience urinary incontinence post removal. Reassurance and support needs to be given to the patient and a bladder diary needs to be kept by the patient if possible, if not by the nursing staff.

[See Standard Operating Procedure Appendix K](#)

5.7.4 Patients with new catheters in the community

Patients with new catheters requiring on-going catheterisation on discharge should be sent home from hospital with “Hospital to Home” packs (pre-packed by the company). These contain:

- One leg bag
- Night bags (check with supplier most provide a week’s worth of night bags)
- Leg straps
- Ongoing catheter care advice
- Prescription ordering details

Further advice regarding product choice can be obtained from the Trust formulary:

<https://northeast.devonformularyguidance.nhs.uk/formulary/chapters/7-genito-urinary-system/indwelling-urinary-catheters> Patients also require a Catheter Passport. This provides catheter care information for the patient, contact details for help and advice, prescription details and catheter history; including reason for continued catheterisation. These are available in two sizes, A5 (default size) (Web basket) and A4 size through Bladder & Bowel Care Team.

Patients must be referred to appropriate Service for on-going support.

5.7.5 Catheter associated problems

Some problems associated with catheters include cramping pain, urethral discomfort, haematuria, and blockage or leaking.

See Appendix G and J for advice on management of these issues.

5.7.6 Catheter associated urinary tract infection (CAUTI)

Infection of the urinary tract in the presence of a urinary catheter (or after recent removal of a urinary catheter) is a clinical diagnosis. Note bacteriuria is almost universal in patients with long term catheters. The detection of bacteria in the urine does not indicate infection in the absence of symptoms. Dipstick tests must never be used on catheter urine.

If a patient has a CAUTI –

- Always change catheter
- Change catheter *as soon as possible* after first dose of antibiotic, but always while the patient is still taking the antibiotic course.

For patients with recurrent infections, contact specialist nurse bladder and bowel care, or a consultant microbiologist. The following links may be helpful;

<https://northeast.devonformularyguidance.nhs.uk/formulary/chapters/5.-infections/urinary-tract-infections>

<http://ndht.ndevon.swest.nhs.uk/wp-content/uploads/2015/03/Antibiotic-Guidelines-for-Urological-Indications-in-Secondary-Care-v2-2-180116.pdf>

5.7.7 Specimen Collection

Urine can be sent for microbiological analysis after clinical diagnosis of infection – this is to look for organisms that may be resistant to intended antibiotics. The clinical details and intended antibiotics must be included on the request form for the specimen to be processed appropriately.

Standard Precautions must be utilised i.e. hand decontamination must take place before and after manipulation of the catheter drainage system and following removal of gloves. Non-sterile gloves must be worn for obtaining samples of urine.

Sterile equipment must be used to obtain samples of urine.

Urine samples from catheterised patients must only be taken from the sampling port (never directly from the catheter or bag).

The sampling port must be wiped with a 2% chlorhexidine in 70% alcohol swab and allowed to dry for at least 30 seconds prior to sampling.

For routine culture and sensitivity testing, use the boric acid urine bottle (red top). For urine samples of less than 15ml volume, use white capped sterile universal container, which should be sent to the laboratory as soon as possible.

Urine samples must be transported to the pathology department in a sealed plastic bag, accompanied by the relevant and fully completed request form.

5.7.8 Education of Patients and Carers

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

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

5.7.9 Catheter Ordering Details

- See local formulary
<https://northeast.devonformularyguidance.nhs.uk/formulary/chapters/5.-infections/urinary-tract-infections>

6. Monitoring Compliance with and the Effectiveness of the Policy

Standards/ Key Performance Indicators

6.1 Key performance indicators comprise:

- Reduction in CAUTI (number of catheters and new UTIs) monitored via Safety Thermometer [Click ST link here](#)
- Number of patients with a catheter, rationale and the presence of a catheter passport and person centred care plan (hospital / Health & Social care) monitored via monthly Clinical Effectiveness Tool (documentation audit) by the Quality Improvement Team; distributed to Divisional teams; reported to Patient Safety Operational Group and Safer Care Delivery Group.
- Number of patients with a catheter on an antibiotic to treat a UTI (an antibiotic with urinary cover and no other focus) (Hospital) monitored via monthly Safety Thermometer point prevalence returns by Quality Improvement Team; distributed to Divisional teams; reported to Patient Safety Operational Group.
- Number of patients with bacteraemia attributed to a urinary catheter (Hospital / Health & Social care). MRSA/MSSA/*E.coli* bacteraemias investigated by Divisions and SEA findings for the current month reported to IPCC.

Process for Implementation and Monitoring Compliance and Effectiveness

- 6.2 After final approval, the author will arrange for a copy of the policy to be placed on the Trust's intranet. The policy will be referenced on the home page as a latest news release.

Line managers are responsible for ensuring this policy is implemented across their area of work.

Monitoring compliance with this policy will be the responsibility of the Infection Prevention and Control team. This will be undertaken by Weekly monitoring of incident forms at the Infection Prevention and Control team meetings.

Where non-compliance is identified, support and advice will be provided to improve practice.

7. Equality Impact Assessment

The author must include the Equality Impact Assessment Table and identify whether the policy has a positive or negative impact on any of the groups listed. The Author must make comment on how the policy makes this impact.

Table 1: Equality impact Assessment

Group	Positive Impact	Negative Impact	No Impact	Comment
Age			X	
Disability			X	
Gender			X	
Gender Reassignment			X	
Human Rights (rights to privacy, dignity, liberty and non-degrading treatment), marriage and civil partnership			X	
Pregnancy			X	
Maternity and Breastfeeding			X	
Race (ethnic origin)			X	
Religion (or belief)			X	
Sexual Orientation			X	

8. References

- <http://www.clinimed.co.uk/Portals/10/docs/PID%202439%20SPC%20Instillagel%20v2.pdf> (accessed 18/08/16)

-
- Department of Health. (2010). *The Health and Social Care Act 2008 Code of Practice on the prevention and control of infections and related guidance*. London: Department of Health. Available at: www.dh.gov.uk
 - Infection control: prevention of healthcare-associated infection in primary and community care (NICE, 2012)
<http://pathways.nice.org.uk/pathways/prevention-and-control-of-healthcare-associated-infections> (accessed 16/06/16)
 - Epic 3: National Evidence-Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England (Pratt et al, 2014)
 - <http://www.clinimed.co.uk/Portals/10/docs/PID%202439%20SPC%20Instillage%20v2.pdf>
 - Saving Lives : High Impact Intervention No 6 Urinary Catheter Care Bundle
[Saving Lives HII No6 - Urinary Catheter Care Bundle](#)
 - Infection Prevention Society: High Impact Interventions Care processes to prevent infection Saving Lives HII 4th Edition
 - Royal College of Nursing www.rcn.org.uk
 - Yates A, (2016). Indwelling urinary catheterization: what is best practice? *British Journal of Nursing*, 25 (9).

9. Associated Documentation

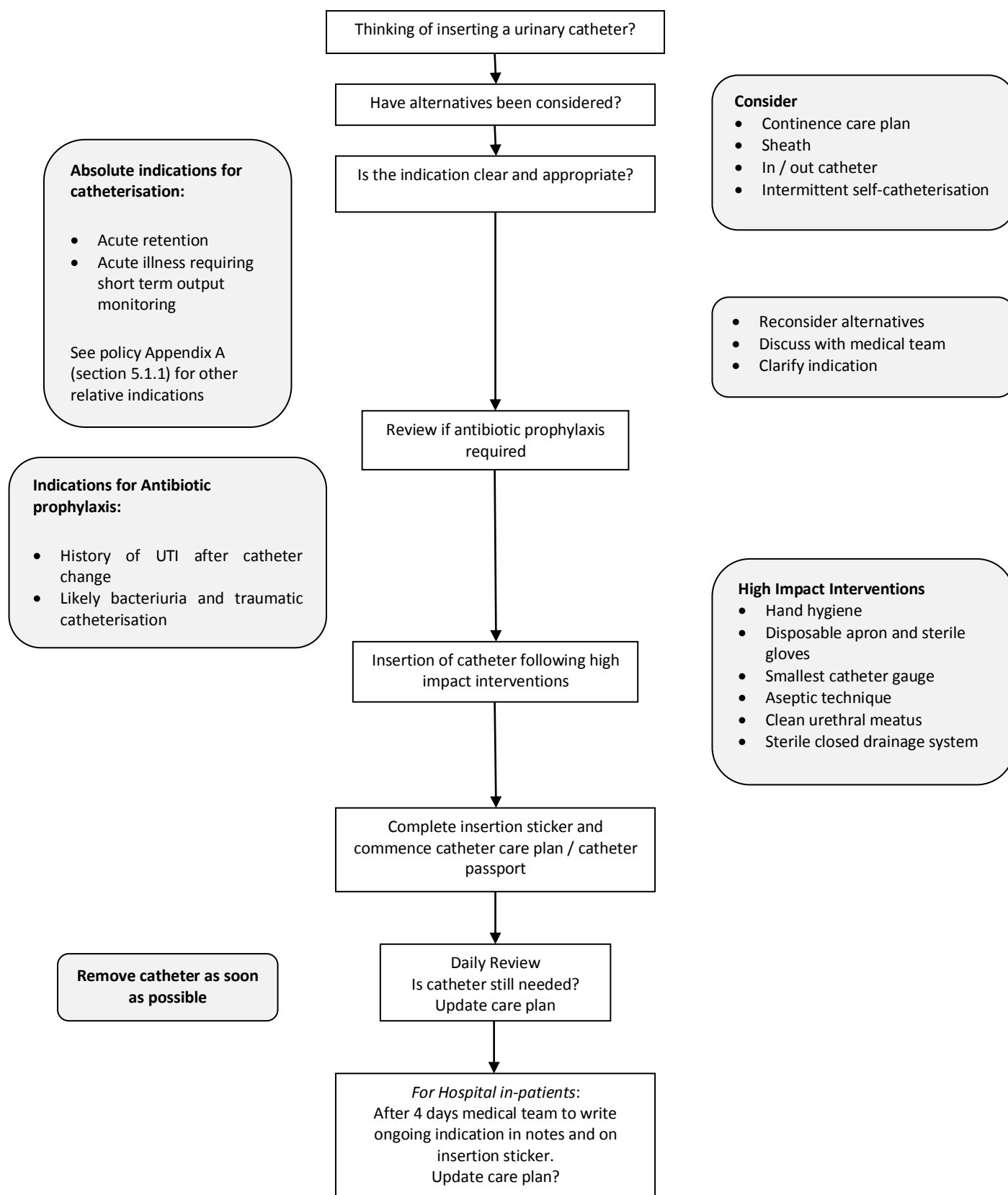
- [Aseptic and Clean Techniques Policy](#)
- [Latex allergy policy](#)
- [Standard Infection Control Precautions Policy](#)
- [Risk Management Training Policy](#)
- <https://northeast.devonformularyguidance.nhs.uk/>

Appendix A: Indications for urinary catheterisation

Indications for urinary catheterisation

- After discussion with consultant, GP, continence or urology nurse specialist.
- For community nurses as above but also within individual's knowledge base and clinical competence in conjunction with family and carers
- Bladder drainage, pre peri post op
- Fluid monitoring in critically ill patient
- Fluid monitoring in acute oliguria
- Acute, chronic retention
- Difficulty emptying/controlling bladder e.g. MS, neurogenic bladder dysfunction, acute spinal injury
- Outlet obstruction distal to bladder e.g. stricture
- Instillation of prescribed drugs
- Investigations
- Measurement of residual urine
- Continuous irrigation for urinary tract haemorrhage
- Urinary incontinence posing a risk to the patient e.g. major skin breakdown or protection of nearby operative site
- Palliative care for terminally ill
- Aid the control of urinary incontinence where other methods have failed
- When advised by continence or urology specialist nurses or Medical Urologist

Appendix B: Decision algorithm for urinary catheterisation



Appendix C: Choice of catheter material

Choice of catheter material

An appropriate catheter material must be selected according to the length of time the catheter is expected to be in situ. In the first instance, a short term catheter should be used in all cases, ensuring the need for a review within 4 weeks before potential extension to long term catheterisation.

Term	Expected duration	Catheter material
Short term	Up to 4 weeks	PTFE coated (Teflon)
Long term	4 - 12 Weeks	Hydrogel coated (or Silicone if latex allergy or catheter blocking)
Recurrent CAUTI	Any term	Silver alloy coated

Coated Latex PTFE (Teflon)

The Teflon bonded coating makes the surface of the catheter smoother. Catheters of this material can be left in situ for up to 28 days.

Hydrogel-coated Latex

This type of catheter currently has the highest compatibility with human tissue, because of the polymers that absorb water to produce a slippery surface. There is less risk of trauma, and evidence shows that this type of catheter is associated with fewer episodes of blocking, bypassing and urinary tract infection due to biofilm and encrustation formation. They can be left in-situ up to 12-weeks.

100% Silicone

Silicone coated catheters for indwelling management are used for longer term use. They should only be used if there is a latex allergy, or a history of catheter blocking with hydrogel coated catheters.

Silicone catheters have a slightly larger lumen because they have thinner walls, which may be a contributory factor to their encrusting less frequently than coated latex. However, the lumen of a silicone catheter is "D" shaped rather than round, which encourages debris to collect in the corners, and can contribute to blockage. The more rigid construction makes them less comfortable. Silicone balloons allow slow diffusion of water into the bladder, which could cause them to deflate. The balloon material on silicone catheters has a tendency to cuff on deflation, which can cause distress and/or injury to the patient when the catheter is removed, particularly when used suprapubically. Silicone catheters can also be coated with hydrogel. They can be left in-situ up to 12-weeks.

Silver and antibiotic impregnated catheters

Silver (alloy not oxide) or other antimicrobial impregnated/coated catheter may be used in the following circumstances:-

- After discussion with Bladder & Bowel Care Team
- Recurrent UTI in presence of urinary catheter
- At any other time as advised by Infection Prevention and Control team.

Latex Allergy

See latex allergy policy.

Catheter gauge (Charriere size)

The smallest gauge catheter should be selected that will allow free flow of urine because smaller gauge catheters minimise mucosal irritation, urethral trauma and residual urine volumes compared to larger catheters.

Choose the smallest size possible which provides adequate drainage:

Female - 12/14Ch Male - 12/14/Ch Suprapubic – 14/18Ch

Larger catheters can cause urethral irritation and by-passing around the catheter and urethral erosion. Larger sizes should only be used if clots or debris are present, post-operatively or for suprapubic catheterisation. Larger charriere sizes (18 – 22 Ch) may be used for suprapubic catheterisation as this helps to avoid blockage. Discuss with Bladder and Bowel Care Specialist Nurse if considering a size above 18Ch.

Catheter balloon

- In general, the catheter balloon should be inflated with 10ml of sterile water. Tap water in the balloon may introduce bacteria to the bladder. Saline may cause crystal formation in the inflation channel. Do not exceed the recommended volume of water – over-inflation will NOT prevent a catheter being expelled. Under inflation and re-inflating balloons will have the same effect as balloon distortion with the risk that the catheter may become dislodged from the bladder or cause trauma. .
- 30 ml balloons must NOT be used for routine catheterisations - these are for post-operative use only. The weight of water in larger balloons may lead to dragging/pulling of the catheter. The larger balloon may also cause bladder spasm and discomfort because it will rest against the delicate trigone of the bladder causing spasm, bypassing, pain, haematuria and possible erosion of the bladder wall. Please refer to the Bladder and Bowel Care Team for further advice if a 10ml balloon is falling out regularly due to an enlarged urethra.

Catheter length

The three lengths available are: -

- Female length 23 - 26 cm – for ambulatory female use ONLY (do NOT use in men. A short catheter used in a male patient can cause severe trauma to the prostatic urethra and must not be used). The shorter length means a leg bag

can be worn which does not show beneath the skirt and also avoids kinking of the catheter or tubing.

- Short length can be used for supra pubic catheters in male or female if reduced length of tubing would be an advantage
- Standard length 40 - 44 cm. Used for male and also for female patients if obese or confined to bed/chair. Also used for suprapubic catheterisation. Changing an obese or bed/chair-bound female from a short length to standard length catheter may resolve problems with by-passing or poor drainage
- Paediatric (30 cm) - for use in children only (male and female).

Catheter drainage system

The choice of drainage system will be influenced by several factors including: intended duration of the catheter, bladder sensation, bladder capacity, patient mobility/dexterity, cognitive function and patient and/or carer choice.

Catheter valves are the preferred system (see 2.6), but the must be manageable for patients and carers.

Leg bags or free standing drainage bags will normally remain connected to the catheter for 5 – 7 days or changed sooner if clinically indicated. More frequent disconnections will break the closed system and increase the risk of infection. The maintenance of a closed system has been shown to reduce infection rates from 80% to 10%.

The catheter must be connected to a sterile closed drainage system once the catheterisation procedure is complete.

Catheter Bags

The following should be taken into consideration when selecting products: Ambulant patients will probably prefer leg bags. Bags are available in 350, 500 and 750 ml volumes, with short, medium or long tubing.

Always ensure the volume and tubing length are specified on prescription, remembering that leg bags are usually worn by women on the thigh, and by men on the calf or thigh (depending on patient preference).

There are different types of tap to facilitate drainage and this is one of the most important factors to take into account when selecting a bag, as patients whose manual dexterity is compromised may not be able to operate certain types of tap. To reduce infection risk, sliding taps should only be used when absolutely necessary.

Choose a tubing length which will prevent kinking or dragging of the catheter and tubing. Attachment of leg bags may be either with straps or a leg bag sleeve.

Non-ambulatory patents may need a 2 litre drainage bag at night to be attached directly to the catheter. This will remain attached for 5 to 7 days and be supported on a stand, and must not be in contact with the floor. The bags should have a drainage tap (lever type) to facilitate emptying, with the stand positioned to prevent any kinking of the catheter and tubing.

Most patients with a long-term indwelling catheter will need to use a leg bag by day and night bag at night. The leg bag is not disconnected from the catheter, but the night bag attached to the drainage port of the leg bag. An extension system can also be used with a catheter valve. Night bags used at night only must be single use (see formulary).

Catheter valves

There is strong evidence to show that catheter valves are preferred by patients and should always be considered where appropriate. There is no significant difference in urinary infection; however, there is some evidence to show that patients using catheter valves may suffer less from encrustation and blocking problems, probably due to the flushing action of emptying.

There are a number of valves available, and these should be selected for ease of use, freedom from leakage and compatibility with the patients' system (see formulary).

Patients should have good cognitive ability if using a valve to prevent overfilling of the bladder. Carers will need to be instructed on emptying.

Catheter retaining strap

A catheter retaining strap should be used to prevent pulling and trauma to the bladder neck.

Appendix D: Standard operating procedure for clean intermittent self-catheterisation (CISC) and intermittent catheterisation (IC)

Introduction

This document sets out Northern Devon Healthcare NHS Trusts standard operating procedure for the performance of male/female intermittent catheterisation (IC) and clean intermittent self-catheterisation (CISC)

IC is where an appropriately trained practitioner performs catheterisation using a Nelaton catheter to relieve significant residual urine. CISC is where a patient is taught by the practitioner to perform the procedure.

IC is the passing of a catheter into the bladder to remove urine. Once urine has finished draining the catheter can be gently removed. Patients who need to undertake IC or CISC have voiding or storage problems, resulting in retention of urine. These patients include those with spinal injuries, spina bifida, outflow obstruction, post-surgery and neurological disorders. A catheter can also be used to dilate the urethra after urethrotomy.

It is important that catheterisation is carried out often enough to prevent kidney damage and bladder distension. The frequency will depend on the individual's bladder assessment. This may be up to six times daily for bladder emptying. Patients are normally taught to undertake the procedure themselves.

Purpose

To reduce the unnecessary insertion of indwelling Foley catheters and reduce CAUTI (NICE, 2012). To promote the safe practice for IC and CISC by Registered Practitioners, patients and medical staff.

Staff undertaking IC and CISC must be able to demonstrate attendance at relevant in house catheterisation training and have received appropriate one to one work based teaching, they should have completed the competency - [Supports and teaches patients to perform CISC](#).

Location

Performance of IC and CISC may be performed in all clinical settings and in the individuals own home.

Required skills of the patient

It is vital that the individual is able to store urine in their bladder. Individuals must be able to understand the technique for CISC, have reasonable dexterity and mobility and be motivated to commit to the procedure. If an individual is unable to undertake this procedure a carer/partner may undertake the catheterisation.

If the procedure is carried out by a healthcare professional an aseptic non-touch technique must be used.

Procedure for performance of IC/CISC.

For IC follow the NDHT Standard Operating procedure (SOP) for male/female urethral catheterisation.

- IC should be performed when required by patient either when they express a desire to void or regularly enough to avoid hyperdistension of the bladder.

To teach and support patients to perform CISC

- The individual must be fully assessed, understand why they have to undertake the procedure and what is involved. Consent must be obtained and recorded.
- Training should be provided at the patient's own pace and may take a number of sessions.
- Individuals should identify apposition comfortable for themselves to undertake CISC, for example sitting on the toilet, standing over the toilet, sitting on a chair or side of the bath, one leg slightly elevated on a stool, sitting in a wheelchair or lying on their side in bed. It is possible to use a urine collection bag attached to the catheter, speak to the Bladder and Bowel Nurse specialist for further advice on this.
- Patients should be instructed on hand hygiene, including cleaning their nails and not to touch anything other than the items needed until the procedure is complete.
- Individuals should prepare the catheter according to the manufacturer's instructions and should try to pass urine prior to the catheterisation if this is possible.
- Wash the genital area. Women should clean away from the urethra towards the anus. Advise them to part the labia with the index and middle finger of the non-dominant hand and identify the urethra. Some women like to use a mirror; others prefer to identify the urethra by touch. Men should retract the foreskin to clean the glans. Advise them to hold the penis with the non-dominant hand pointing in an upward direction towards the stomach, this helps to extend the urethra and makes it easier to insert the catheter.
- Gently insert the catheter into the bladder pointing the funnel end into the toilet or collection receptacle.
- If the individual finds it difficult to insert the catheter it may be helpful to cough or advise them to try to pass urine. Continue to insert the catheter until urine starts to flow.
- When urine stops flowing slowly remove the catheter, if urine starts to flow again wait and then gently begin to withdraw the catheter to catch any last drops. To avoid any dribbles or spillage place a finger over the funnel before finally removing the catheter.
- Dispose of the catheter according to manufacturer's instructions.
- Provide individuals with information leaflets and monitoring charts. They should be advised on hygiene needs, fluid advice, signs of infection, the make and type of catheter they use and how to order further supplies.

-
- Patients who perform CISC need regular support and reviews, once established with performing the procedure reviews should be at least annually.

Discharge from hospital

Patients should be given a choice of using their own local pharmacy or dispensing appliance contractors (DAC) DACs provide home delivery service of products. The patient can be registered on to the DAC prior to discharge.

Patients need to be referred to the Bladder and bowel care service prior to discharge.

Appendix E: Standard Operating Procedure for Adult Male Catheterisation

NOTE: if this is a re-catheterisation procedure the existing catheter should be removed and discarded at the start of the procedure.

Procedure

Check that the patient has given consent to the procedure on each occasion

Obtain medical consent if needed

Check for allergies to include latex/soap (lanolin) before proceeding

Equipment

- Catheter Tray (recommended option)

OR

- 2 pairs of sterile gloves
- Dressing/catheterisation pack
- Normal saline
- Lubricating gel
- Catheter of standard length
- Sterile Receiver
- Drainage Bag
- Apron
- Sterile 10ml Syringe (if removing a catheter)
- Sterile water (10ml) and sterile 10ml syringe for balloon inflation
- Retaining device, bag straps/sleeve

Action

- a) Check that the patient has given required consent to the procedure
- b) Position patient and put on apron
- c) Decontaminate hands
- d) Prepare trolley or sterile field
- e) Decontaminate hands and put on a pair of sterile gloves
- f) If using a bag attach to catheter prior to insertion
- g) Support penis and retract foreskin with non-dominant hand
- h) Cleanse meatus with normal saline swab using dominant hand

-
- i) Gently insert lubricating gel into urethra. Remove sterile gloves. Decontaminate hands, put on another pair of sterile gloves.
 - j) Insert catheter into urethra through prostatic bed into bladder.
 - k) Inflate balloon – NEVER inflate balloon until urine is draining – this may take up to 20 minutes.
 - l) Attach catheter retaining device and secure draining system.
 - m) Replace foreskin over penis.
 - n) Dry skin as, if left wet, secondary infection or skin irritation may occur.
 - o) Clear and clean trolley (or chair/table if in community) and dispose of items as per infection control guidelines.
 - p) Remove PPE and decontaminate hands.
 - q) If a urinary tract infection is suspected on clinic (symptomatic) grounds (e.g. Unexpected acute retention) then take a urine specimen for microbiological analysis. Urine specimens should not routinely be sent for analysis.
 - r) Urine drainage should be observed after catheterisation. If no further urine has drained after 30 minutes then seek medical advice. If the patient is being catheterised for the first time, a recording of the residual urine must be made 10 minutes after insertion of catheter.
 - s) After first catheterisation only, the patient must be contacted 2 hours after catheterisation to check that diuresis is not excessive. If more than 500mls has drained (excluding residual) a doctor must be informed as hospital admission may be required. NB normal diuresis is around 60ml/hour.
 - t) Record on the Care Plan / Catheter Passport
 - If any problems with removal of the old catheter
 - If any stone formation or blockage around the catheter tip
 - The type and size, batch, expiry date and lot number of the new catheter
 - The amount of water inserted into the balloon
 - If any problems with insertion of the catheter
 - Retaining devices used
 - If any problems encountered and inform GP/record in notes
 - Organise and document the date of the next catheter change and, if the patient is going home, ensure that he has a “contact” number
 - Community: Plan with patient for restocking of supplies

Ensure patient and carer are aware of how to care for their catheter and that this information and contact details should be provided in the Catheter Passport.

Appendix F: Standard Operating Procedure for urethral catheterisation of female patients

NOTE: if this is a re-catheterisation procedure the existing catheter should be removed and discarded at the start of the procedure.

Procedure

Check that the patient has given consent to the procedure on each occasion

Obtain medical consent if needed

Check for allergies to include latex/soap (lanolin) before proceeding

Equipment

- Catheter Tray (recommended option)

OR

- 2 pairs of sterile gloves
- Dressing/catheterisation pack
- Normal saline
- Lubricating gel
- Catheter of choice – standard or female length
- Sterile Receiver
- Drainage Bag
- Apron
- Sterile 10ml syringe (if removing a catheter)
- Sterile water (10ml) and sterile 10ml syringe for balloon inflation
- Catheter retraining device and straps

Action

- Check that the patient has given required consent to the procedure
- Position patient and put on apron
- Decontaminate hands
- Prepare trolley or sterile field
- Decontaminate hands and put on a pair of sterile gloves
- If using a bag attach to catheter prior to insertion
- Using non-dominant hand, clean the labia majora and then the minora, using downward strokes with a clean piece of saline gauze for each stroke. Separate vulva using non-dominant hand, then swab urethral meatus using dominant hand.

- Insert gel – remove sterile gloves. Decontaminate hands and apply new pair of sterile gloves.
- Gently insert the catheter into the urethra until urine drains. Force should not be used. If resistance is felt STOP and seek advice.
- Inflate balloon – NEVER inflate balloon until urine is draining – this may take up to 20 minutes
- Dry vulva area as, if the area is left wet or moist, secondary infection and skin irritation may occur
- If a urinary tract infection is suspected on clinical grounds (e.g. Unexpected acute retention) then take a urine specimen for microbiological analysis. Urine specimens should not routinely be sent for analysis
- Clear and clean trolley (or chair/table if in community) and dispose of items as per infection control guidelines
- Remove PPE and decontaminate hands
- Urine draining should be observed after catheterisation. If no urine drainage is observed after 20 minutes then seek medical advice. If the patient is being catheterised for the first time, a recording of the residual urine must be made 10 minutes after insertion of catheter.
- After first time catheterisation only, the patient must be contacted 2 hours after catheterisation to check that diuresis is not excessive. If more than 500mls has drained (excluding residual) a doctor should be informed as hospital admission may be required.
- Record on the Care Plan / Catheter Passport
 - If any problems with removal of the old catheter
 - If any stone formation or blockage around the catheter tip
 - The type and size, batch, expiry date and lot number of the new catheter
 - The amount of water inserted into the balloon
 - If any problems with insertion of the new catheter
 - Retaining devices used
 - If any problems encountered and inform GP/record in notes
 - Organise and document the date of the next catheter change and, if the patient is going home, ensure that she has a “contact” number
 - Community: Plan with patient for restocking of supplies

Ensure patient and carer are aware of how to care for their catheter and that this information and contact details should be provided in the Catheter Passport.

Appendix G: Difficulty with insertion of a urethral catheter

If a urethral catheter does not pass easily into the bladder the following can be tried:-

- In men, altering the angle of the penis.
- Getting the patient to cough.
- Waiting for any bladder spasm to subside.

If insertion is still difficult, stop procedure and medical help should be sought.

Difficulty in identifying the urethral orifice - especially if phimosis present (prepuce cannot be drawn back over the glans penis)

- Do not force the foreskin over the glans penis as this will be painful and may cause paraphimosis (inability to replace the foreskin over the glans penis), leading to oedematous glans penis.
- A little gel should be introduced into the prepuce - this will dilate the prepuce away from the glans and should facilitate identification of the external meatus.
- If meatus is still not visible, procedure should be discontinued and further advice sought from a more experienced nurse in bladder and bowel care or from a medical practitioner.

Retracted penis

Men with a retracted penis and/or where only the prepuce is visible can be difficult to catheterise.

- Gentle finger pressure towards the symphysis pubis on either side of the penis will often result in emergence of glans/shaft of penis.

External sphincter resistance

- Ask the patient to 'bear down' as if trying to pass urine or cough. This may stimulate detrusor contraction and reflex sphincter relaxation facilitating catheter entry.
- If resistance persists or the patient complains of pain, the procedure should be discontinued and advice promptly sought from either a more experienced nurse in bladder and bowel care or a registered medical practitioner.

No drainage on catheter insertion

- Support catheter during this time to prevent it slipping out of the bladder.
- Apply gentle pressure over the bladder.
- Patient to slightly reposition themselves or cough.
- Advance catheter further into bladder.
- Wait until urine begins to drain and then inflate balloon.

Pain on balloon inflation (which may be urethral)

- Withdraw water and see if pain subsides.
- Insert catheter further into bladder, ensure urine is draining and then reinflate.
- If pain does not subside with deflation of the balloon it may be related to the catheter change.
- Ensure urine is still draining.
- Administer analgesics and reassess - obtain medical advice if necessary
- Check drainage.

Appendix H: Standard Operating Procedure for changing an established suprapubic catheters

Note: If this is the first change since initial insertion it will need to take place in hospital.

Procedure

Assess the need for continued catheterisation.

Explain the procedure to the patient and answer questions in order to gain informed consent.

Check for allergies to include latex/soap (lanolin) before proceeding.

Scope

This procedure applies to the following staff groups who may be expected to perform supra-pubic catheterisation:

- Registered nurses
- Midwives
- Operating Department Practitioners
- Medical Staff

Staff undertaking this task must be able to demonstrate attendance at relevant in-house training or have received appropriate one-to-one work based teaching. This should be supported by continued competence as per the Trust's policy on assessing and maintaining competence. Staff should have achieved the competency Changes, secures, monitors and responds to the effects of supra-pubic catheterisation.

Equipment

- Catheter tray (recommended option)

OR

- 2 pairs sterile gloves
- Dressing/catheterisation pack
- Normal saline
- Lubricating gel (optional)
- Catheter of choice- standard or female length
- Sterile receiver
- Drainage bag
- Apron
- Sterile 10ml syringe
- Sterile water (10ml) and sterile 10ml syringe for balloon inflation.

-
- Catheter retaining device and straps.

Action

- a) Check that the patient has given informed consent to the procedure
- b) Position patient in a comfortable, semi-supine or supine position with legs extended, where possible and put on apron
- c) Wash/gel hands put on non-sterile gloves and empty the catheter bag or drain the bladder if patient usually uses a valve.
- d) Wash/gel hands and prepare sterile field.
- e) Put on a pair of sterile gloves, deflate the balloon of the existing catheter using a 10ml syringe allow the plunger to depress under gravity do not use pressure. Wait 3 minutes before removing catheter to allow the balloon to deflate. It may be necessary to rotate the catheter prior to removal.
- f) Note how much of the catheter is outside the abdominal wall and gently remove the catheter. A slight resistance may be felt as the deflated balloon passes into the supra-pubic tract.
- g) Clean the supra-pubic site with saline working in single wipes away from the site.
- h) Remove gloves. Decontaminate hands, apply new sterile gloves.
- i) Lubricate the sterile catheter with sterile lubricating gel (optional)
- j) Gently pass the new catheter into the existing tract until urine drains.
- k) Inflate the balloon only when urine has begun to drain using sterile water (10ml)
- l) Wait for urine to drain (keep supporting the catheter during this time as bladder contraction may partly expel the catheter). This may take up to 20mins.
- m) Ensure the catheter is secured using a catheter retaining device and ensure leg bag is well supported using straps or sleeve.
- n) Dispose of old catheter/ equipment as per infection control guidelines
- o) Remove PPE and decontaminate hands
- p) Ensure patient is comfortable.
- q) Record on the care plan and catheter passport:
 - If any problems with removal of old catheter
 - Any stone formation or blockage around the catheter tip
 - The type and size, batch, expiry date and lot number of the new catheter.
 - The amount of water inserted into the balloon

- Any problems with the insertion of the new catheter
- Retaining devices used
- Organise and document the date of the next catheter change
- Community patients: plan with patient for restocking of supplies.
- Ensure patient/ carer are aware of how to care for their catheter/ this information and contact details for support should be provided in the catheter passport.

Appendix I: Standard operating procedure for catheter care

Introduction

Cleaning a urethral catheter and surrounding area should be considered an integral part of personal care. It is important to remember that where possible, patients should be taught to attend to their own meatal and perineal care to limit the effect of cross infection and to encourage patient responsibility for their own care.

Purpose

This SOP has been written to

- Identify the procedure for assessment, delivery and frequency of urethral catheter care
- To promote optimal care and minimise avoidable complications.

Equipment

- Soap and water (emollient creams for patients with sensitivities)
- Disposable wash cloth
- Clean towel

Procedure

- Explain and discuss the procedure and process with the patient to gain consent and cooperation.
- Ensure that privacy and dignity are respected for the individual.
- Assist the patient into a comfortable position. Ideally the patient should be in a supine position (lying on their back) with knees and hips flexed and slightly apart.
- Wash hands or use alcohol gel as per trust policy.
- Apply gloves and apron
- Use a fresh wipe with soap and water to clean the area.
- Clean the vulval area for females downwards away from the meatus and towards the anus.
- In males retract the foreskin before cleansing and replace afterwards
- Clean the catheter away from the catheter meatal junction
- Ensure the area is rinsed well and pat dry with a clean towel.
- When procedure is complete ensure the patient is left in a comfortable position.
- Remove PPE and decontaminate hands
- Dispose of any equipment as per trust policy
- Document the delivered care in patients care records.

On-going/ continuing catheter care

Re-iterate advice at each intervention

- Ensure patient drinks at least 2 (preferably 3) litres of mixed fluids a day. Caffeine, artificial sweeteners, alcohol and fizzy drinks can be irritant to the bladder and possibly exacerbate spasm which can cause pain and bypassing. Concentrated urine can also cause this to happen.
- Ensure the connection between the catheter and the urinary drainage system is not broken except for good clinical reason.
- If a catheter valve is used it should be opened and emptied regularly (frequency documented in the care plan)
- Urinary drainage bags should be positioned below the level of the bladder but not in contact with the floor. A catheter bag stand should be used (available from bed/night bag manufacturers) for bed/night bags.
- A strap or adhesive fixation device should be used to anchor the catheter to the leg to prevent urethral and bladder neck trauma, the catheter should not be able to move up and down in the fixation device once it is applied.
- The bag should be secured in place with straps or a sleeve.
- If a drainage bag is used it should be emptied frequently enough to maintain urinary flow and prevent reflux. The patient, carer or nurse needs to check the volume of urine in it every 3-4 hours. Empty when approx. half full.
- When emptying the bag use a clean container each time, avoid contact between the urinary drainage tap and the container. In the patient's own home encourage the patient to empty the bag into the toilet or suitable container, avoiding contact between tap and receptacle.
- Each patient must have a care plan and a catheter passport designed to minimise the problems of blockage and encrustation. The tendency for catheter blockage should be documented (The life span of at least 3 catheters and findings on removal) and catheter changes should be planned prior to blockage.
- A link/extension drainage bag system should be used to facilitate overnight drainage to keep the original system intact.
- Overnight drainage bags should be single use disposable (see formulary)
- If patient is nursed in bed a bed/ night bag can be used in place of a leg bag this can be changed weekly to prevent frequent breaking of closed system.
- Change catheter bags or valves as infrequently as possible but in accordance with manufacturer's instructions and DOH guidelines (usually 5 to 7 days).

Appendix J: Resolving catheter related problems

Cramping pain

It is fairly common for some patients to experience abdominal cramps/bladder spasm when a catheter is first inserted. It is possible that the catheter can become dislodged causing pain. Persistent overactive detrusor muscle contractions can also cause pain and may respond to anticholinergic drugs. It is also possible that the tip of the catheter could be irritating the bladder wall. A catheter valve can solve this problem. Changing leg bag from right to left leg instead of leaving the same side all this time may also help.

Urethral discomfort

This may be caused by distension of the urethra by too large a catheter, or occlusion of the para-urethral glands. This may lead to infection, urethritis and an offensive discharge around the catheter. Ensure appropriate catheter selection i.e. size, length, and material. A smaller hydrogel coated latex catheter should relieve any discomfort.

Haematuria

Small amounts of blood are quite commonly found in the urine of catheterised patients as a result of trauma or infection. Severe bleeding, however, warrants an **urgent** medical opinion. Ensure catheter and tubing is well supported and not 'pulling'. Check medical history – carcinoma/bladder/prostate or stones

Purple bag syndrome

Older patients who are immobile may develop purple urinary bag syndrome. This condition is harmless and is brought about by the bacterial decomposition of tryptophan, an essential amino acid, so do not be alarmed.

Problems which may be encountered during suprapubic catheterisation.

Suspected partial or non-deflation of the old balloon:

- Check in the care plan the amount of water initially inserted into the balloon.
- Remove the plunger from the syringe and insert the nozzle of the syringe into the valve and allow time for the water to drain, approximately 30 minutes (Getliffe, 2007). Change syringe.
- Milk the catheter to attempt to remove blockage, or insert no more than 1ml sterile water into the valve to try to dislodge it (Getliffe, 2007).
- Do not cut the catheter inflation arm as this will make it impossible to deflate the balloon.
- Do not try to burst the balloon by inserting water as this could lead to pieces of the catheter material becoming embedded in the bladder.
- Summon medical assistance.
- Do not attempt to remove the catheter until the balloon is deflated.
- Refer to Urologists for removal of catheter under controlled conditions.

The cuffing effect of deflated catheter balloons in 100% silicone catheter

On removal the deflated balloon can become cuffed, therefore increasing the catheter's diameter and causing traction. Two ways of reducing 'cuffing' are:

- Deflate balloon, re-inflate and deflate x2 (assists in silicone memory)
- Add ¼ - ½ ml water after deflating balloon as this slightly 'puffs out' the cuffing and aids removal
- The catheter should be removed firmly but slowly to help prevent the patient from tensing.

Contamination of the new catheter prior to insertion

A contaminated catheter should not be inserted. Ensure a spare catheter is available before commencing the procedure.

Pain on balloon inflation

- Withdraw the water and see if the pain subsides.
- Insert the catheter further into the bladder and re-inflate. Ensure urine draining.
- If the pain does not subside with deflation of the balloon it may be related to the catheter change.
- Administer analgesics and re-assess.
- Planned administration of a muscle relaxant prior to catheter change may help with subsequent changes.
- Seek medical advice if continues

Non-drainage of the catheter or urethral pain on inflation of the balloon in females

- Check that the catheter has not appeared through the urethra.
- Ensure that the balloon is deflated and gently withdraw the catheter to the bladder.
- Wait until urine begins to drain and then re-inflate the balloon.

Difficulty with insertion of a suprapubic catheter

If the new catheter is not inserted within 10 minutes, the abdominal channel will begin to close. If insertion is not possible, medical help or a more senior nurse, if appropriate, may be sought immediately to ensure that the patient does not experience urinary retention and bladder distension. If necessary this may require contacting the patient's urology team or the out of hours Senior House Officer on call. Temporary urethral catheterisation can be considered if there is to be a delay.

Patients in the community should ensure that they always have a spare catheter available in case an emergency change is required.

In some cases, the patient/carer can be taught to change his/her own catheter.

Catheter Leakage

Check whether catheter is blocked. See [Algorithms for dealing with catheter blockage and catheter leakage \(below\)](#).

If no catheter blockage check:

- The patient is not constipated.
- That the catheter is no bigger than a size FG14 and Balloon is size 10mls.
- That the tubing is not kinked or obstructed and full bladder causing leakage.
- If all the above are eliminated, liaise with the Bladder and Bowel Care Service for further clinical advice as it may be that the patient has underlying bladder overactivity.

Catheter Blocking

Short Term Action (Sudden Blockage)

- Check that the drainage bag is below the level of the bladder.
- Check to ensure catheter or tubing is not kinked or obstructed or cap is left on the bag.
- Check that catheter bag is not overfull.
- Check to ensure there is no faecal impaction.
- If the above actions do not relieve the obstruction change the catheter.

Preventing Catheter Blocking

- Ensure good fluid intake (more than 2 litres / 24 hours) for adults if able.
- For children, 6-7 drinks spread throughout the day. Approx. 150mls each aged 6yrs increasing to 250mls for teenagers.
- Advise adults that the drinking of cranberry juice (300 ml a day) might be beneficial. This is contra-indicated in diabetes and for those patients taking warfarin medications.
- Suggest to licensed prescriber (could be non-medical prescribers) the commencement for adults of high dosage Vitamin C (Ascorbic Acid)* 1 gram three times a day.
- Plan the change of catheter before it blocks. It is reasonable in these cases to change catheters every 3-4 weeks if necessary. However, this could be as much as twice weekly, in these instances you must use short term PTFE Catheters
- Catheter patency solutions are of doubtful value, should be used with extreme care and discontinued if not successful.

- Catheter Patency Solutions should only be considered after monitoring the catheter history and accurate assessment and documentation as part of a care regime and not as a one-off measure.
- Clinical Indications for Catheter Patency Solutions :
 - Catheters are blocking more than once a month.
 - Where sediment is visibly present in catheter tubing.
 - Increased fluid intake has proved ineffective.
 - Where frequent catheter changes are painful/traumatic to patient.
 - Constipation, if present, has been resolved with no benefit to catheter problem
- See table for [catheter patency solutions \(below\)](#).
- If ongoing problems persist, contact the Bladder and Bowel Care Service, or urology nurse.
- Discuss 'repeated blockers' with the Bladder and Bowel Care Team, or urology nurse, as leakage / blockage may be due to other causes. Ask the patient to keep a diary of blocking.
- Consider use of a catheter valve for patients – (discuss with Bladder and Bowel Care Team)

Catheter patency solutions

Use a Suby G solution: UroTainer (Braun) or Optiflow (Bard).

Document frequency and type of catheter patency solutions plus batch number in catheter care records.

Solution	Indications for use	Recommended regime
Uro Tainer Suby G	A Citric Acid (3.23%) solution used to prevent or dissolve crystallisation in the catheter.	Use no more than 3 times a week and leave a break of a day.
Twin	A double instillation in a single device which has 2x30 mls twin chamber.	Work out individual regime using 20-30mls of solution depending on severity of case. Clamp and leave in for 5 minutes and document in patients' records.
Optiflow	A citric acid solution used to prevent crystallisation in the catheter	Use no more than 3 times a week and leave a break of a day A course should be for 6-8 weeks then evaluated before continuing. If no effect <u>either</u> consider frequent catheter changes <u>or</u> contact the Bladder and Bowel Care Service.

When instilling a catheter patency solution warm it to body temperature (37°) prior to instillation. Place the container in a jug of lukewarm water

60ml bladder-tip syringes should not be used for bladder irrigation.

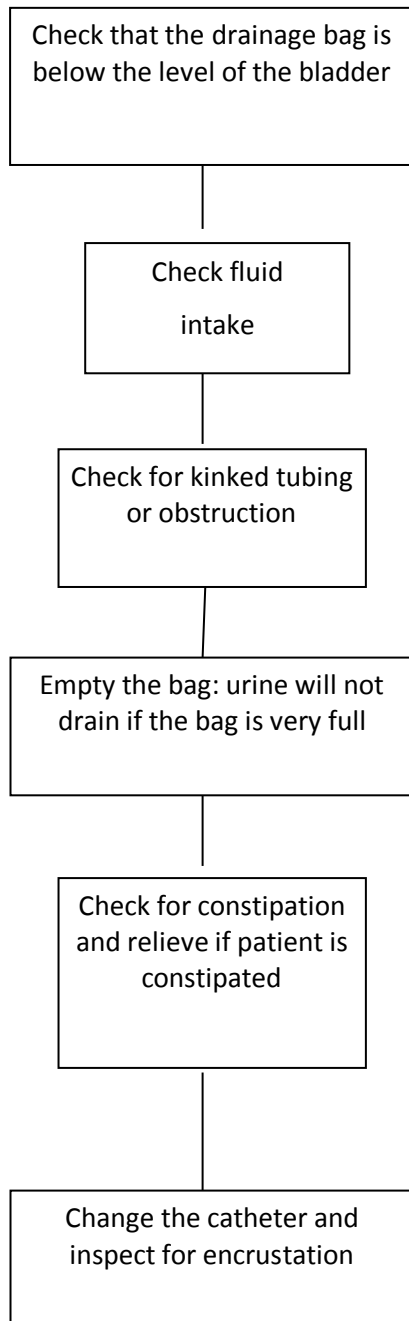
Do not use saline (except if patient has had bladder augmentation or blood clots).

Do not use Mandelic Acid

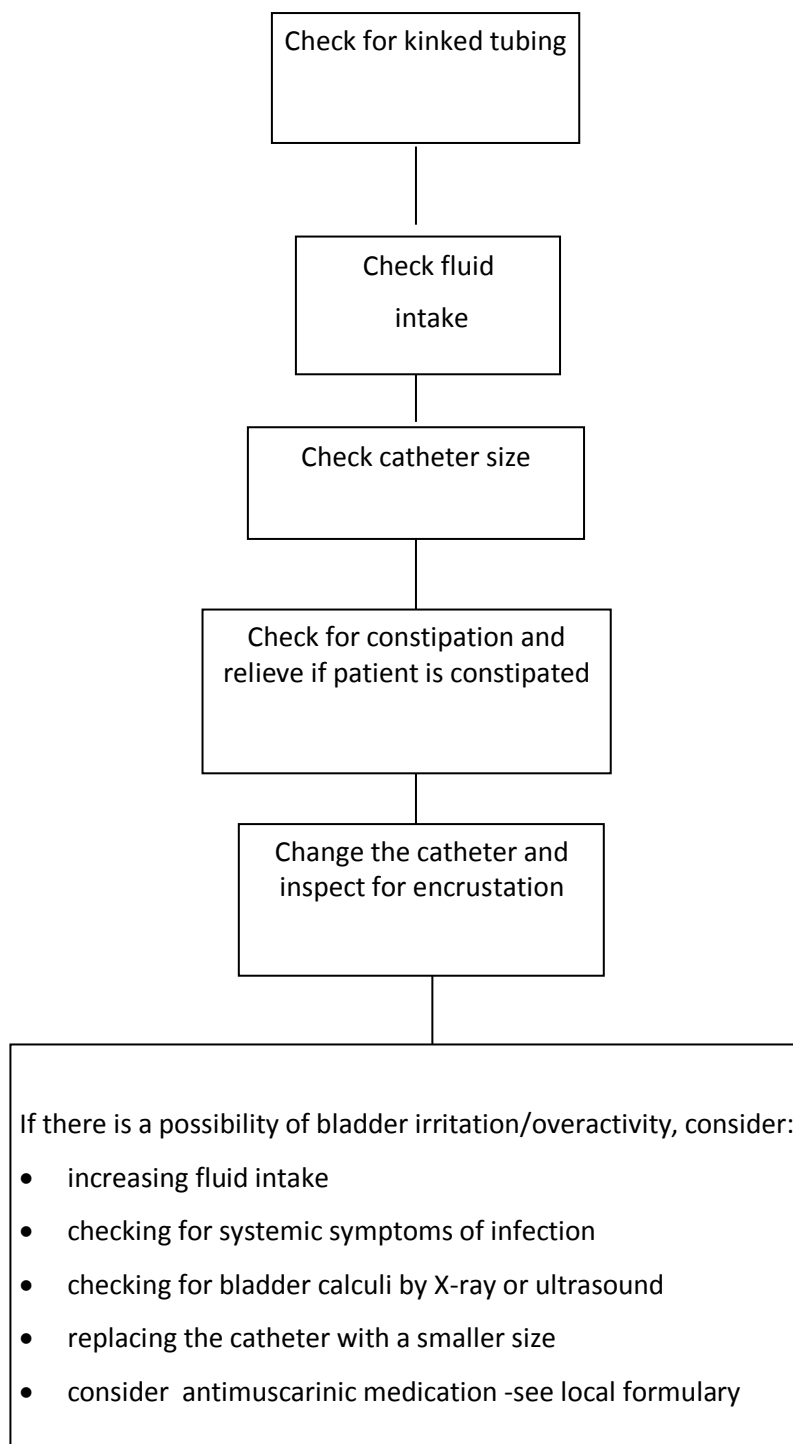
Do not use Solution R except under specific circumstances and with the involvement of the Bladder and Bowel Care Services.

Algorithms for dealing with catheter blockage and catheter leakage

Urine does not drain



Catheter Leakage (Urine Bypass)



Appendix K: Standard operating procedure for trial without catheter (TWOC)

Introduction

This document sets out Northern Devon Healthcare NHS Trust's procedure for performing a TWOC; this procedure replaces all existing guidance/superseded procedures.

Purpose

This standard operating procedure has been written to:

Identify the most effective procedure for performing a TWOC

To minimise the risks associated with the performance of a TWOC and achieve best possible outcome by identifying evidence based safe systems of work.

Scope

This procedure applies to the following staff groups who may be expected to perform or assist with a TWOC

Registered Nurses

Clinical Support workers (Higher level)

Assistant Practitioners

Midwives

Medical staff

Staff undertaking this procedure must be able to demonstrate attendance at relevant in house training or have received one to one work based teaching. This should be supported by continued competence as per the trust's policy on assessing and maintaining competence. Staff should have achieved the NDHT competency undertakes a trial without catheter and supports the patient during the process.

Location

TWOC may be performed in all clinical settings where competent staffs are available to undertake the procedure, including the patient's own home or GP surgery.

Required skills of patient

It is vital that the patient is able to store urine in their bladder and have the potential to pass urine urethrally.

(Previous acute urinary retention does not exclude the patient from a TWOC)

If the TWOC is taking place in a community setting the patient will need to be able to communicate any discomfort or difficulties with passing urine, or be carefully monitored by a relative, carer or member of the community nursing team if unable to do so.

Procedure for performance of trial without catheter.

- Establish the individuals health needs and suitability for a TWOC
- Undertake a risk assessment and use the outcome to determine a suitable method for a trial without catheter, i.e. Setting, time, ability to monitor effects etc.
- Consider using a catheter valve for at least 1 week before the TWOC if the patient has had a long-term catheter in situ, to allow the bladder to retain its compliance.
- Obtain valid consent and confirm that sufficient information has been provided on which to base the decision to perform a TWOC.
- Ensure the environment is suitable and that comfort and dignity are maintained throughout the procedure.
- Apply standard precautions for infection control and take appropriate health and safety measures.
- Remove the existing catheter and dispose of waste in accordance with local guidelines.
- Observe catheter on removal making note of any encrustation, bleeding etc.
- Provide the individual with charts to measure input and output and encourage the individual to drink 1.5 -2 litres of fluid spaced evenly throughout the day.
- Ensure the individual and/or carer understands the importance of reporting discomfort immediately, particularly if associated with problems passing urine:
 1. Instruct the individual not to drink more if this occurs.
 2. Explain that it is normal to experience mild discomfort the first few times they pass urine.
 3. Explain that the urine may be blood stained as a result of trauma following catheter removal.
 4. Ensure the individual and their carers are aware of who to contact if they experience difficulties outside of normal working hours.
- In hospital settings monitor individual's condition as part of regular care, in community setting visit patient 4 hours after TWOC.
- Review intake/output chart, intake should be roughly equal to output and voided volumes consistently higher than 100mls.
- Observe for signs of urinary retention, these can include

1. A palpable bladder that is dull on percussion although a full bladder may not be palpable.
 2. Pain
 3. A desire to void with an inability to pass enough urine to satisfy the desire.
 4. Poor urinary output.
- Perform a bladder scan

OR

- Intermittent catheterisation to assess residual urine and no scanning equipment available.
- If residual more than 100mls discuss with Bladder & Bowel Team or GP.
- If the patient has not passed urine and there is only a small volume in the bladder, a further scan is required 2 hours later.
- Clearly record any interventions, outcomes and complications in catheter passport and care plan.

General points of practice

If a trial without catheter is unsuccessful consider options for future management such as, intermittent catheterisation or re-catheterisation. Consider individuals views, severity of incontinence or voiding success. Discuss with bladder and bowel practitioner if you suspect patient has a significant post void residual.

If a catheter is re-inserted a repeat TWOC is discussed and arranged with the patient.