

Healthcare Associated Infection & Antimicrobial Resistance & Prescribing Programme (HARP)

Guidance for Maintaining Patency in Long Term Urinary Catheters

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Purpose and Summary of Document:

To provide guidance on the management of a non-draining catheter or leaking long term urinary catheter, the appropriate use of catheter patency solutions and reduce associated urinary tract infection (UTI) and bacteraemia.

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1. Introduction

Approximately 450,000 people in the UK use a long-term indwelling urinary catheter¹. It is estimated that 40-50% of these patients experience catheter blockages^{2,3} with the treatment of catheter blockage impacting heavily on resource of Community Nursing Services and Out of Hours Services^{4,5} as over 4% of community patients have an indwelling catheter⁶. Reducing unplanned admission at an emergency department (ED) or out of hour's services by improving community catheter care pathways are among key priorities identified across Wales. In 2013 /14 the Medical Technology Group (MTG)⁷ identified that across the National Health Service (NHS) £434 million was spent on treating emergency admissions due to UTI's and this sum increased to £530.8 million in 2016/17. As well as the impact on services, a significant complication associated with long-term catheterisation is infection, commonly Catheter Associated Urinary Tract Infection (CAUTI) which can lead to bacteraemia⁸.

Catheter patency solutions (CPS) are used to maintain the patency of a catheter lumen that can become blocked by debris or encrustation. Commonly, a solution of either saline or citric acid is instilled into the bladder with the aim of dissolving alkaline crystals or removing debris from within the catheter lumen to ensure the catheter remains patent and draining. To ensure patient safety, clear guidance is required as registered and non-registered health care workers, patients and/or carers may be involved in their use. Other patency products are being developed but are currently out of the scope of this document until robust evidence on their effectiveness is published.

2. Purpose

This guideline is to support best-evidenced based practice when managing a non-draining or leaking long-term urinary catheter and guide the appropriate use of catheter patency solutions (CPS). It is intended that the guidance will be used to help reduce CAUTI and associated bacteraemia as targeted in Welsh Government Reduction Expectations (WHC 2018/19)⁹ as well as reduce unnecessary pressure on key services for this group. It also supports the prevention, treatment and

management of UTI as detailed in the PHW 'UTI 9' key standards. (Appendix 6)

2a. Objectives:

- To provide an outline of the size of the problem and risk factors associated with blocked or leaking long term urinary catheters
- To provide key information that can be incorporated into local catheter patency and catheter management policies and procedures
- To identify organisational requirements to enable early identification and subsequent management of patients with blocked or leaking long term urinary catheters
- To identify the roles and responsibilities of key staff in the identification, prevention and management of CAUTI
- To provide guidance on carrying out a catheter assessment and review
- To guide the identification of the clinical need for administering a CPS
- To support the safe administration of a CPS using ANTT
- To identify the training, teaching and support of the patient or non-registered individuals needed in the administration of CPS
- To advise on the delegation and supervision of administering CPS to non-registered healthcare nurses, patients or carers

Bladder washout is not within the scope of this document and specific training is required to perform this procedure. There are specific and limited reasons why washout with a 50ml syringe is done i.e. post robotic assisted laparoscopic prostatectomy (RALP) blockage, pus or haematuria, clot retention, recurrent stones, clamenteocystoplasty (mitrofanoff, Indian pouch)

3. Duties and responsibilities

3a. Chief Executive

Ultimately, the Chief Executive in an organisation has responsibility to ensure any policy is adhered to and patients are managed safely.

3b. Continence Advisory Service

The Continence Advisory Service has responsibility to:

- Offer advice and support to registered and non-registered staff and/or carers in all aspects of catheterisation
- Make available bilingual urinary catheter passports for every patient (currently provided as part of urology tender process)
- Offer advice and support to registered and non-registered healthcare staff in all aspects of preventing blockage/leakage of catheters (see management of catheter blockage)
- Ensure the guideline is evidence based and reviewed on a 3 yearly basis or earlier if new evidence becomes available
- Provide evidence based education and training relating to the administration of CPS which can be requested on a departmental basis via the Continence Nurse Specialist Team or Divisional Practice Educators
- Audit the implementation of the guideline utilising electronic systems where available e.g. NWIS/WCCIS digital record
- Prescribe or advise on CPS and medical devices associated with catheterisation
- Provide bilingual patient/carer information on all aspects of catheterisation and catheter blockage.
- Advise and collaborate with the Infection Prevention and Control team

3c. Line Managers

Line Managers have responsibility to:

- Highlight and provide access to the guidance to all clinical staff
- Provide evidence that the guideline has been cascaded within their team or department
- Where appropriate, ensure the new guideline is effectively implemented
- Ensure staff have access to adequate and necessary equipment and resource associated with tasks e.g. catheterisation packs, appropriate PPE and required CPS.
- Ensure that staff access training identified in respect of this guideline.
- Participate in audit of compliance with the policy and report findings through patient safety groups.

3d. Clinical staff

Clinical staff have responsibility to:

- Ensure that the guidance contained herein and 'standards for UTI prevention ('UTI 9') are adhered to and followed
- Accurately document interventions undertaken
- Comply with professional codes for standards of conduct, performance and ethics.
- Ensure competency assessment of non-registered staff, patients or carers where management of the catheter or use of CPS is delegated to non-professionals.
- To complete the theoretical E-Learning modules for Catheter Skills and ANTT through the [Learning@Wales](#) portal
- Complete ANTT_assessment of competency every 3 years.
- Report any accidents, incidents and near misses pertaining to catheter related processes and procedures via Datix and appropriate incident reporting systems.
- Observe and take appropriate action where CAUTI is suspected.
- Adhere to standards for infection prevention and control at all times.
- Communicate effectively with patients and carers and identify risks associated with the urinary catheter.

4. Qualification and training

This guidance applies to all clinical staff. A registered nurse (NMC registered) or health care professional who can demonstrate competence to this professional level may delegate those procedures to non-registered nurses, carers or patients as appropriate¹⁰. However, it is the registered professionals' responsibility to ensure that the non-registered worker, patient/carer competencies are assessed and reviewed.

5. Catheter Leakage/Non Draining and Blocked

A common problem in long-term catheterisation is blockage and/or leakage, though, leakage around the catheter does not necessarily indicate the catheter is blocked. Recurrent blockage is a common problem and occurs in around 40-50% of long-term catheters^{2,3}. A catheter may leak or stop draining for a number of reasons and contributing factors^{11, 12} including:

- Kinked tubing/poorly supported drainage bag/tight clothing
- Overfull draining system
- Bladder spasm
- Bladder stones (many people who have encrusted catheters, also have bladder stones)

- Wrong length/Charriere (gauge/size) of catheter
- Over/under inflated catheter balloon
- Constipation
- Low fluid intake/dehydration
- Blood/debris
- Encrustation
- Urinary tract infection (UTI)
- Drainage bag located above bladder¹³
- Drainage bag too low producing negative pressure causing mucosa to be sucked into outlet eyelets¹⁴

These factors need to be assessed and possible solutions explored (Appendix 1) **before** use of a CPS.

Nearly half of all individuals with a long-term indwelling catheter will experience problems with catheter blockage due to encrustation. Encrustation is caused by micro-organisms like *Proteus mirabilis* in the urine, which produce an enzyme (urease)¹⁵. This enzyme breaks down urea to form ammonia that results in the urine becoming alkaline. Under these conditions, mineral salts such as calcium phosphate and magnesium ammonium phosphate (struvite) are deposited onto the catheter surface causing high urinary pH (alkaline) and encrustation causing blocking. However, there is no evidence that monitoring urinary pH can be used to predict blocking¹⁶.

5a. Management of catheter blockage

When a catheter becomes blocked, a full assessment of the patients' catheter history must be completed¹⁷, rather than attempting to unblock the catheter using CPS, at this point, the catheter must be changed. It is important that the Patient Urinary Catheter Passport is used to record all catheter changes ensuring that the reason for change is clearly documented. This will give a relevant and accurate catheter history which will enable the registered nurse or healthcare professional supported by local continence nurse specialist team to develop an individualised programme of catheter management¹⁷. Copies of the Patient Urinary Catheter Passport may be obtained from the Health Board/Trust Continence Service (Appendix 4) and can be found on PHW internet pages for UTI [prevention](#).

If it is suspected that, a catheter is blocked due to encrustation then this needs to be confirmed before the prescription and use of CPS can be considered. To ascertain encrustation is the cause of blockage the blocked catheter should:

Firstly, be removed using appropriate PPE and equipment.

Be assessed for encrustations by rubbing the thumb and forefinger across the catheter. If it feels gritty, then it is likely that this is encrustation.

On removal, be checked for encrustation as it can often be seen around the balloon and tip of the catheter.

If the above actions confirm/suggest blockage is due to encrustation, the removed catheter must be cut longitudinally^{11,13}. If encrustation is present, it will be visible inside the catheter lumen).

To minimise the risk of blockages, encrustations and CAUTI for patients with a long-term indwelling urinary catheters, practice guidance¹⁸ and NICE^{17,19} recommends:

Document catheter blockages

Develop a patient-specific care regime

Increase fluid intake to improve hydration

Prevent and treat constipation

Consider approaches such as changing the catheter more frequently to avert a future clinical crisis

to reduce the risk of CAUTI, maintain the closed drainage system ensuring that it is only broken when absolutely necessary e.g. change of bag

Do not attempt to use CPS to unblock a blocked catheter

Do not use CPS to prevent CAUTI

Do not use CPS routinely

To reduce the risk of CAUTI specifically Follow [EPIC3](#)²⁰ guidance and PHW [‘UTI 9’](#) (Appendix 6)

6. Catheter Patency Solutions

The instillation of CPS into a urinary catheter carries with it potential risks and should not be administered unless it is prescribed by a prescriber i.e. GP, District Nurse, nurse practitioner or Continence Appliance Prescribing (CAP) Service (services may vary throughout Wales) . The available Cochrane systematic review^{22,23} and NICE guidelines¹⁷ concluded that there is insufficient evidence to guide clinical practice regarding all aspects of using CPS for long term-indwelling catheters. Therefore, it is not known whether use of these solutions convey any benefit to patients. Neither do we know whether they do any harm or if the associated costs are justified but they are in common use.

In order to administer a CPS (Appendix 2), the drainage bag/valve will need to be disconnected from the catheter; this will increase the risk of CAUTI¹⁷. Therefore, it is important that SICP and ANTT are adhered to and appropriate PPE is worn.

Key points about the instillation of CPS:

Minimal physical force should be used on installation to reduce the risk of damage to the bladder mucosa. Do not instil by force, but gentle agitation or according to manufacturer’s guidance (as some use gravity feed).

CPS are only to be used in accordance with a patient specific prescribed plan of care.

CPS come in volumes of 50 or 100ml. Studies using a model of catheterised bladder have shown that an instillation of 50ml of solution G is as effective as 100 ml at reducing encrustation. Other studies have shown that using 2 subsequent instillations can be more effective in reducing encrustation but the evidence base is not robust and using 2 subsequent instillations may further increase the risk of introducing infection by the necessity of disconnecting the catheter twice in order to administer them^{2,12}.

The bladder mucosa plays an important role in the defence against UTI but both neutral and acidic solutions can cause chemical irritation to the bladder wall².

CPS MUST NOT be used to unblock a blocked catheter; it must be removed and replaced.

Evidence for the frequency of use of CPS to keep the catheter patent is unclear and will depend on the clinical judgement of the prescriber. The frequency of use should be considered against how often the catheter blocks, the measures taken to reduce blocking, the extra risk of introducing infection and the manufacturer guidance – usage should be documented

It is imperative that those responsible for administering catheter care work in collaboration with the specialist continence nurse team are trained and assessed as competent to do so.

A record card or document should be kept on CPS usage/frequency and outcome.

It should be recorded within the electronic or other patient notes
 Joint working with DN Teams and Continence Teams may be helpful in recurrent blocking catheter management.

The following box shows commonly used CPS and their uses:-

Solution	Product Licence	Practice Notes / Caution
Citric Acid 3.23% (Solution G)	For the dissolution of struvite crystals which form on the catheter tip and lumen.	Acidic – potential of mucosal irritation if used long term. It is recommended that two instillations of Solution

**Citric Acid 6%
(Solution R)**

Stronger citric acid solution for more persistent crystallisation

G should be used concurrently. The agitation property of this product should be used with care.

Strongly acidic – potential mucosal irritation, resulting in sluffing of the mucosa. Do not use for long periods: 2-3 weeks maximum. It is recommended that two instillations of Solution R should be used concurrently. The agitation property of this product should be used with care, and for a limited period of time Will not dissolve crystal formation

**Sodium Chloride
0.9%
(Solution S)**

For the washing of debris (blood, mucus, pus) from the catheter

NB CATHETER PATENCY SOLUTIONS MUST NOT BE USED TO UNBLOCK A BLOCKED CATHETER IT MUST BE CHANGED

7. Patient consent and information

Prior to administering a CPS the consent of the patient must be verbally or otherwise obtained and documented following a full explanation of the procedures and potential complications.

If the procedure is delegated to the patient/carer, it is the responsibility of the registered or non-registered healthcare staff (subject to their own competency) to assess and teach the patient and/or the carer in appropriate Infection prevention precautions. This includes hand decontamination in accordance with local [and National Infection Prevention and Control Policy](#) for Hand Hygiene and SICP to ensure all staff, patient and carers undertaking this procedure practice in accordance to best principles of Infection Prevention and ANTT.

8. Equipment

Equipment for devices associated with this procedure, need to be agreed and prescribed. Patients in receipt of medical devices associated with catheterisation and catheter patency solutions or their carers will need to ensure the availability of an adequate supply of equipment by ensuring that they can contact the relevant Health care professional or Continence Appliance Prescribing Service for a their prescription. Contacts for advice by telephone or email should be included in Health Board/Trust policy.

Please see [Appendix 2](#) for procedure for the administration of CPS The box below shows equipment required for the administration of CPS.

9. Out of Hours

The aim of this guidance is to reduce the risk of problems occurring out of hours e.g. after 5pm, weekends and bank holiday periods. It is important that the Health Board/Trust provides clear guidance for the patient/carer on the actions to take and how to seek help should the catheter stop draining and/or starts leaking out of hours. This should include:

- Advising the patient/carer to check if the cause can be corrected e.g. Kinked tubing/poorly supported drainage bag/tight clothing, overfull draining system, Low fluid intake/dehydration, drainage bag located above bladder, drainage bag too low producing negative pressure causing mucosa to be sucked into outlet eyelets
- Contact details of who or what service to call
- Advising the patient/carer to have their catheter passport/documentation available for information to any services contacted out of hours.

10. Points to remember

- The best way to determine the cause of the blockage is to examine the catheter visually on removal both internally, externally and by cutting the catheter length ways. If there is no visible evidence of encrustation, and the catheter, when rolled between fingers does not feel gritty, then it is safe to assume that catheter patency solutions are not indicated.
- Catheter patency solutions should not be performed to treat Urinary Tract Infections
- Good hygiene and ANTT is required for catheter patency solutions installation to reduce infection risks.

Final

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Appendices

Appendix 1 – Possible causes and solutions for catheter blockage

PROBLEM	CAUSE	REMEDIAL ACTION
Drainage Systems	Kinks or traction in poorly supported drainage bag system	Straighten tubing. Check is patient is using the leg bag straps or leg bag holder correctly. Ensure draining bag is below bladder level. When using a night bag, secure on a night bag stand. Ensure the length of the leg bag tube is tailored to fit the patient's leg.
	Overfull drainage bag	Empty drainage bag when 1/2 to 2/3 full.
	Failure in non-return valve of the drainage bag	Replace the drainage bag, inform manufacturer and complete Datix-incident report form ensuring it is documented as a catheter related incident.
Bladder Problems	Bladder spasms	These can be caused by the catheter tip irritating the bladder muscle causing the bladder to contract. Bladder spasms may cause lower abdominal cramping pain and urinary leaking and on occasions expulsion of the catheter with balloon intact. (Nazarko, 2008). Consider anti-cholinergic therapy or if appropriate, consider introducing intermittent clean self-catheterisation if it is clinically appropriate for the patient.
	Bladder stones	Discuss with the GP the possibility of the presence of bladder stones.
	Clots and debris	If the patient's fluid intake is low, the urine becomes concentrated and any debris from urothelial shredding or mucous in the bladder is less likely to be "flushed" from the bladder. Blood clots following trauma may form in the bladder blocking the catheter eyes. (Rew, 2005)
Catheter Problems	Wrong catheter size	Female patients use preferably CH10-CH12. For male patients use preferably CH12-CH14. For Suprapubic catheter use CH16 (NICE, 2012)
	Wrong catheter length	USE ONLY standard length for Male patients (NPSA Alert need referencing). Females can use either standard length or female length. USE ONLY standard length for suprapubic unless the patient is very slight
	Over/under inflated balloon	Ensure catheter balloon is inflated according to manufacturers' guidelines. Under inflation can result in a tear shape balloon with deflection of the catheter tip. Over inflation, increases pooled urine in the bladder base and contribute to bladder spasm or bacteriuria. (Cochrane, 2007)
	Constipation	Constipation causes pressure on the bladder that prevents adequate drainage. Implement bowel management regime.
	Encrustation	Encrustation within the catheter lumen will cause blockage by bypassing resulting in urinary leakage. (Rew, 2005)

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Appendix 2 – Administering a Catheter Patency Solution Procedure & Equipment Needed

NO	ACTION	RATIONALE
1.	Explain the procedure to the patient, obtain consent and document on care plan.	To ensure that the patient understands the procedure associated risks and any alternative treatments in order to give informed consent.
2.	Wash hands as per HB/Trust Hand Hygiene Policy. Put on apron and disposable non-sterile gloves.	To minimise risk of cross infection (NICE, 2012)
3.	Prepare working area	To provide a clean working environment
4.	Assist the patient into a suitable position. For a urethral catheter, place the procedure sheet or towel under patient's buttock and thighs; cover genital area. For suprapubic catheter, place the procedure sheet or towel over lower abdomen.	To maintain dignity and comfort To ensure urine does not leak onto bed clothes
5.	Empty leg/night bag	To minimise the risk of spillage
6.	Remove gloves, wash hands and put on disposable non sterile gloves as per All Wales Policy for ANTT	To minimise risk of cross infection (NICE, 2012)
7.	Remove outer packaging from CPS, new leg/night bag or catheter valve.	
8.	Disconnect leg/night bag or valve from the catheter. Place leg/night bag or valve in a receiver for disposal whilst continuing to hold the catheter without touching the open end of the indwelling catheter.	To comply with requirements of ANTT and minimise the risk of cross infection
9.	Remove protective cap from the CPS without touching the insertion tip of the CPS	To minimise the risk of cross infection
10.	Instill the CPS as per the manufacturer's guidelines	To reduce the risk of damage to the bladder mucosa
11.	Disconnect the CPS from the catheter and dispose whilst continuing to hold the catheter without touching the open end.	To minimise the risk of cross infection
12.	Remove the protective cap from the new sterile leg/night bag or valve without touching both connection points. Insert the tip of the leg/night bag or valve into the catheter.	To facilitate drainage of urine
13.	Secure drainage system if appropriate	To prevent tension on the catheter
14.	Remove gloves, wash hands in accordance with HB Hand Hygiene Policy	To minimise risk of cross infection
15.	Record:- <ul style="list-style-type: none"> Type of solution Rationale for use Amount instilled Batch number Colour, odour, appearance of urine 	To record and evaluate procedure

- Frequency of CPS

EQUIPMENT Needed

- **Disposable non sterile gloves (2 pairs)**
- **Disposable plastic apron**
- **Sterile, single use, prescribed CPS at room temperature**
- **New sterile drainage system, i.e., leg/night bag, catheter valve**
- **Nursing procedure sheet or towel**

Final

A Patient Guide for the use of Urinary Catheter Patency Solutions Continence Service

What is a urinary catheter?

A catheter is a thin, clean hollow tube which is usually made of soft plastic rubber, or silicone. It is placed into your the bladder to drain urine away from it and usually goes into the bladder the same route as the urine comes out. Holes at the top of the tube allow urine to flow through it and the end of the tube is attached to a catheter drainage bag which collects the urine. The catheter is held in place in the bladder by a small balloon filled with water. There is a risk, especially for patients with catheters that have to stay in place long-term, that they can leak or stop draining at some point.

What may cause my urinary catheter to stop draining?

Your catheter may leak or stop draining for a number of reasons including:

- Kinked tubing/poorly supported drainage bag
- Overfull drainage bag
- Bladder spasm (a sudden involuntary contraction of the bladder muscle)
- Bladder stones
- Constipation
- Low fluid intake and dehydration
- Blood/debris
- Urinary Tract Infection (UTI).
- Encrustation (a build-up of particles in the urine due to bacteria reducing the acid level of the urine)

What is a Urinary Catheter Patency Solution and Why is it Used?

Catheter patency solutions are medicinal products used to help keep the inside of the catheter free from encrustation or debris which can cause it to leak or stop draining. This group of medicinal products have previously been referred to as Bladder Washouts and/or Catheter Maintenance Solutions. There are number of commonly used solutions:

Types of Catheter Patency Solutions Commonly Used

Sodium chloride (S) -Sodium chloride may be helpful for removing blood clots and mucus.

Citric acid 3.23% (G) -will dissolve encrustation.

Citric acid 6% (R) will dissolve crystals and is twice the strength of the "G" solution.

The nurse will assess and discuss with your GP if there is a need for alternative solutions to these.

When should Catheter Patency Solutions be Used?

- Catheter patency solutions are used as part of your treatment plan. They are not routinely used for every patient with a long term catheter.
- They will only be prescribed after the nurse assesses if you need them to prevent your catheter leaking or blocking due to encrustations.
- Solutions will only be used if other methods have failed or are not suitable for you e.g. changing the catheter more frequently
- They are treatment preparations for dissolving encrustation only, and should only be prescribed for 4 weeks at a time then reviewed.
- **They must only be used when there are signs of encrustation and not 'just in case' they occur.**
- **They must not be used to unblock a non-draining catheter.**
- Catheter patency solutions should not be used to treat Urinary Tract Infections

How do you know if I have Encrustations?

If the catheter blocks the nurse will look for signs of encrustations by:

- Removing the blocked catheter and replacing with new one
- Visually inspecting the outside surface of the catheter and cutting open the inner surface of the catheter to look for encrustations.
- Rolling the catheter between fingers to check if any gritty particles are felt.

If there is no evidence of encrustation then it is safe to assume that catheter patency solutions are not indicated for you.

What are the benefits of using the solutions?

By using a catheter patency solution it may:

- prevent the need for an unplanned catheter change
- reduce the build-up of encrustation inside the catheter.

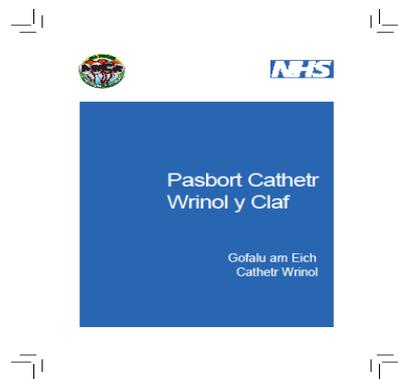
What are the disadvantages of using the solutions?

Solutions must be used correctly and only when deemed for encrustation because:

- every time the catheter is disconnected from the drainage bag, an entry point for infection is created increasing the risk of urine tract infection
- they introduce medicinal fluid into the bladder
- they are medicinal products
- the procedure takes time
- it can cause bleeding and blood clots if not done carefully
- it risks damaging the outer lining of the bladder
- studies show it has no effect on preventing or treating infection
- bladder washouts can induce autonomic dysreflexia in some people with spinal cord injury (*a condition in which your involuntary nervous system overreacts to a bodily stimuli. This reaction can cause a dangerous spike in blood pressure*).

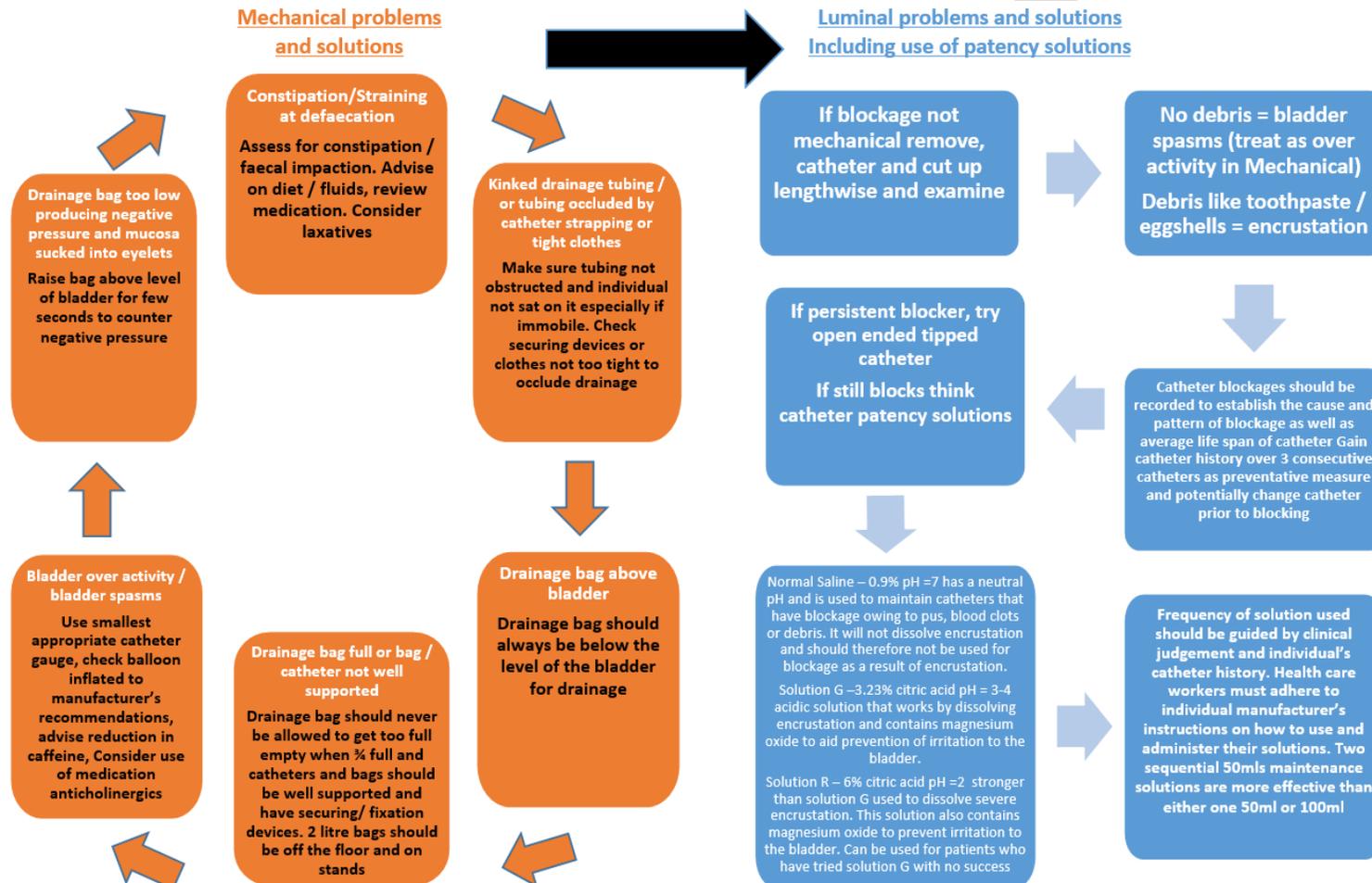
If you would like help or further information regarding catheter care, please contact your relevant Health Professional, Continence Service or Continence Appliance Prescribing Service

Appendix 4 – All Wales Catheter Passport

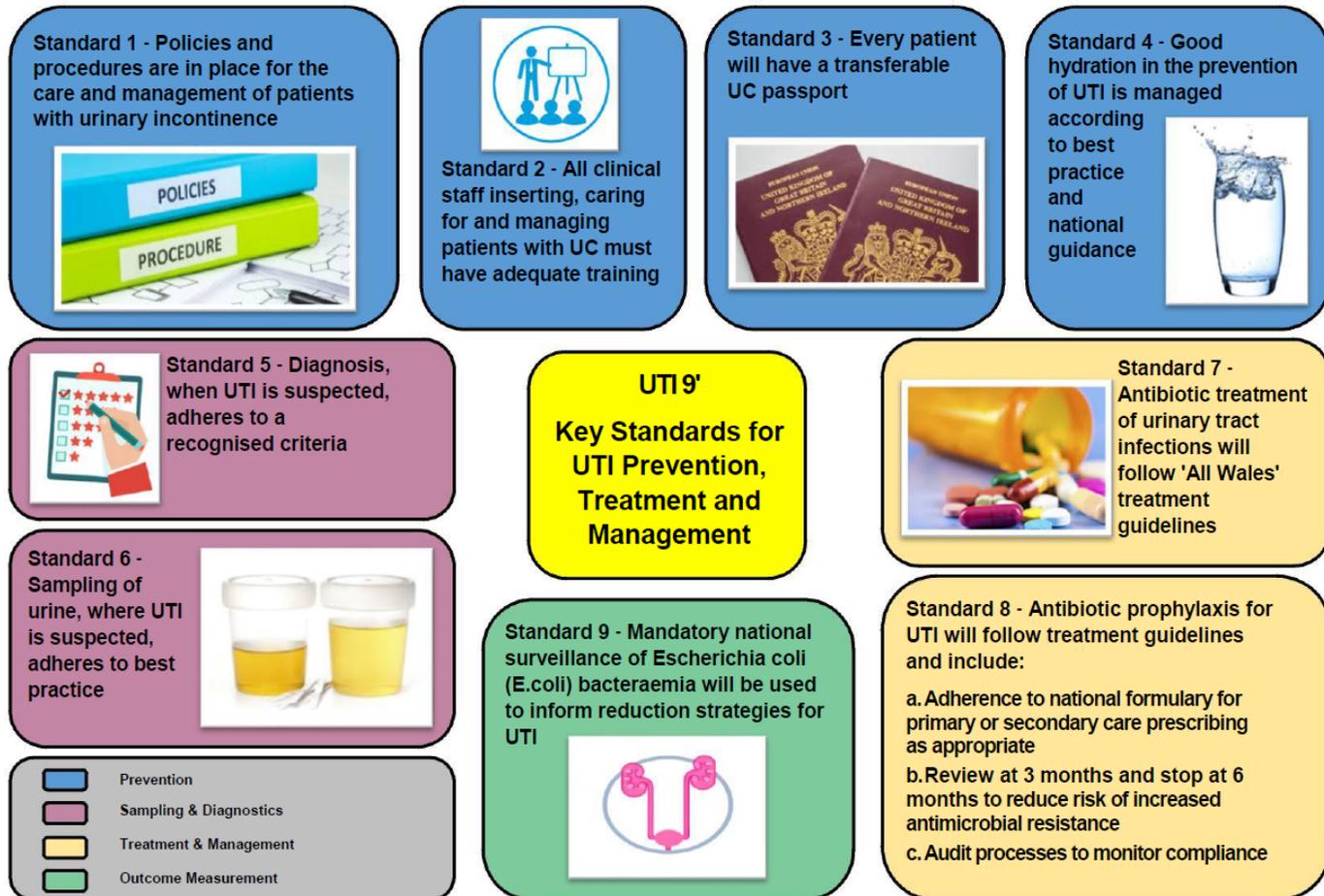


Appendix 5 - Algorithm Urinary Blockage

Please check **Mechanical** problems first, if not resolved follow **Luminal Problems** flowchart



Appendix 6 – ‘UTI 9’. This can also be accessed via the [website](#).



Produced by Betsi Cadwaladr University Health Board

07.11.2018

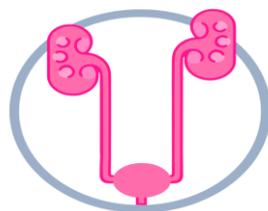
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Appendix 7 – 'UTI Management Framework'

This can also be accessed via the [website](#).

'UTI 9'

Key Standards for UTI Prevention, Treatment and Management



Prevention

Standard 1 – Policies and procedures are in place for the care and management of patients with urinary incontinence.

This includes:

- a. *Continence assessment process and the provision and use of containment products.*

- b. The use and availability of bladder scanners in all inpatient areas to aid decision making*
- c. An evidence based Urinary Catheter (UC) care pathway to support the risk assessment process and need for UC insertion.*
- d. Infection prevention and control policies that support best practice e.g. ANTT, SICP*
- e. Audit processes to monitor compliance with policies*

Standard 2 - All clinical staff inserting, caring for and managing patients with UC must have adequate training.

This includes:

- a. A 4 yearly competence assessment for those inserting catheters and competence assessment in ANTT*
- b. Current mandatory training in Infection prevention and control.*
- c. Keeping accurate records of catheter management i.e. date of insertion, expected/actual date of removal, justification for insertion, daily assessment of need and medical device details.*
- d. Audit processes to monitor compliance*

Standard 3- Every patient will have a transferable UC passport:

This includes:

- a. A continuous accurate record of catheter management.*
- b. Information for patients and/or carers about their device and its management*
- c. Audit processes to monitor compliance*

Standard 4 - Good hydration in the prevention of UTI is managed according to best practice and national guidance:

This includes:

- a. *Risk assessment of individual needs for hydration interventions*
- b. *Engaging the principles of Public Health Wales ‘water keeps you well campaign’ in all settings*
- c. *Compliance with ‘All Wales Nutrition and Catering Standards for Food and Fluid Provision for Hospital Inpatients’ (2011)*
- d. *Involving the patient, and where appropriate their relatives and carers, in understanding the benefits of good hydration*
- e. *Accurate recording of fluid balance so that hydration can be assessed correctly*
- f. *Provision of tools and drinking equipment that allows the patient participate in maintaining their own hydration*
- g. *Audit processes to monitor compliance*

Sampling & Diagnostics

Standard 5 – Diagnosis, when UTI is suspected, adheres to a recognised criteria:

This includes:

- a. *HCW training in accurately assessing the signs and symptoms of UTI according to defined criteria*
- b. *Consider the use of algorithm to assist decision making*
- c. *Accurate recording of the assessment of UTI and the subsequent actions taken.*
- d. *Avoiding the use of dipsticks for UTI diagnosis in all but predetermined patient groups*
- e. *Audit processes to monitor compliance*

Standard 6 –Sampling of urine, where UTI is suspected, adheres to best practice.

This includes:

- a. *HCW training in the correct handling, collection, storage and transport of specimens*
- b. *Policy for the correct handling, collection, storage and transport of specimens*
- c. *Adherence to a current Laboratory Procedure SM1B41: investigation of urine algorithm to assist decision making*
- d. *Audit processes to monitor compliance*

Treatment & Management

Standard 7 - Antibiotic treatment of urinary tract infections will follow 'All Wales' treatment guidelines.

This includes:

- a. *Adherence to the national formulary for primary or secondary care prescribing as appropriate*
- b. *Practicing best principals of antimicrobial stewardship e.g.' start smart then focus'*
- c. *Audit processes to monitor compliance*

Standard 8 - Antibiotic prophylaxis for UTI will follow treatment guidelines and include:

- a. *Adherence to national formulary for primary or secondary care prescribing as appropriate*
- b. *Reviewing the patient at 3 months and stop at 6 months to reduce risk of increased antimicrobial resistance.*
- c. *Audit processes to monitor compliance*

Outcome Measurement

Standard 9 - Mandatory national surveillance of *Escherichia coli* (*E.coli*) bacteraemia will be used to inform reduction strategies for UTI and will include:

- a. *Investigation of all cases and assessment to determine sources linked to UTI.*
- b. *Annual PPS of prescribing will be used to inform prescribing compliance in primary and secondary care setting*