

Livewell Southwest

Urinary Catheter Policy

Version No 4.6

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Notice to staff using a paper copy of this guidance

The policies and procedures page of Intranet holds the most recent version of this guidance. Staff must ensure they are using the most recent guidance.

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Contents		Page
1	Introduction	5
2	Purpose	5
3	Definitions	5
4	Duties	5
5	Catheterisation Guidelines	7
6	Monitoring Compliance and Effectiveness	16
7	References	17
Appendix A	Catheter Type	20
Appendix B	Suprapubic / Urethral check list	21
Appendix C	Procedure for catheterisation.	22
Appendix D	Problem solving	25
Appendix E	Optiflow PGD'S/ catheter care pathway	27
Appendix F	Autonomic Dysreflexia	28
Appendix G	Sepsis flow chart - Managing suspected sepsis in adults and young people aged 18 years and over (outside an acute hospital setting) and Sepsis flow chart - Managing suspected sepsis in adults and young people aged 18 years and over (in an inpatient hospital setting).	29

Urinary Catheter Policy

1. Introduction

- 1.1 This policy aims to inform healthcare practitioners within Livewell Southwest (LSW) of best practice in the procedure of urinary catheterisation in adults. This guideline applies to all staff, including unqualified staff, locums and bank staff.
- 1.2 The Mental Capacity Act 2005 came into force on the 1st October 2007. Staff reading this policy, guidance or strategy document should refer to the principles of the MCA 2005 when interpreting or applying the principles of this document.
- 1.3 In addition, health care practitioners should refer to the Guidance for the Management of patients who lack capacity and require health and social service interventions.

2. Purpose

- 2.1 The purpose of this policy is to ensure that all LSW health care practitioners are:
 - aware of best practice in regards to urinary catheterisation.
 - that urinary catheters should only be used when alternative methods have been exhausted.
 - they understand the risks associated with urinary catheterisation.

3. Definitions

- 3.1 **A urethral catheter** is a hollow tube inserted into the urinary bladder, for the purpose of draining urine or instilling fluids as part of medical treatment Association of Continence Advisors (ACA 2007).
- 3.2 **A supra-pubic catheter** is a hollow tube inserted into an artificial tract in the abdominal wall, just above the pubic bone and into the dome of the urinary bladder for the purpose of draining urine or instilling fluids as part of medical treatment Association for Continence Advisors (ACA 2007).

4. Duties

This Policy relies heavily on staff taking responsibility for infection prevention and control. The responsibilities necessary for the management and control of infection are outlined below.

- 4.1 The **Chief Executive** is ultimately responsible for infection prevention and control and the content of all Policies and their implementation. The Chief Executive delegates the day to day responsibility of implementation of the policies to the **Director of Infection Prevention and Control (DIPC)** and the Infection Prevention and Control team (IPCT).

4.2 Infection Prevention and Control Team

The Infection Prevention and Control Team (IPCT) is responsible for delivering, managing and developing LSW infection prevention and control

service. The IPCT comprises of the Director of Infection Prevention and Control, Consultant nurses Infection Prevention and Control, Sister Infection Prevention and Control, Infection Control staff nurse and an administrator. This is a nurse led service with an SLA from the local infection control doctor for advice. The IPCT will:

- Assist ward staff and the clinical nurse specialist in patient risk assessment in the use of urinary catheterisation
- Advise the Senior Management team, DIPC and clinical staff on the management of outbreaks of infection related to urinary catheters.

4.3 **Directors** are responsible for identifying, producing and implementing LSW Policies relevant to their area.

4.4 The **Locality Manager** will support and enable operational Clinical Leads and Managers to fulfil their responsibilities and ensure the effective implementation of this Policy within their speciality.

4.5 The **Modern Matron, Community Matron/ Clinical lead** is responsible for ensuring that the development of local procedures / documentation doesn't duplicate work and that implementation is achievable.

4.6 **All HEALTH CARE PRACTITIONERS** - It is the responsibility of all health care practitioners to be confident and competent when undertaking this clinical procedure (RCN 2008). A Registered nurse and Medical Practitioners must take into consideration:

- The NMC code of professional conduct: standards for conduct, performance and ethics (NMC 2015)
- Guidelines for records and record keeping (NMC 2014)
- Relevant Organisational Policies
- The GMC codes of conduct

Informed consent to undertake an initial insertion or renewal of a catheter must be obtained from the patient where possible and with approval from the person with continuing medical responsibility for the patient. This consent should be recorded in the patient notes or other appropriate documentation. Where mental capacity or other disability means consent cannot be gained, then clear rationale for acting on patient's best interest **MUST** be made in the record. This must include explanations to the patient and to any authorised agent advocating for the patient.

4.7 **Registered Nurses** - Registered nurses who delegate insertion of an indwelling urinary catheter to suitably trained health care assistants (HCA) community nursing assistants (CNA) or Assistant Practitioners (AP) under specific direction, are reminded that they are at all times accountable for the delegated task:

- the HCA/CAN/AP has received training and assessment of competence in the insertion and care of indwelling urinary catheters.
- the HCA/ CAN/AP undergoes regular supervision to ensure their competence to carry out these tasks.
- the HCA/ CAN/AP will only insert an indwelling urinary catheter to a previously identified patient (those with routine, uncomplicated re-catheterisations) under direct delegation from a registered nurse who is prepared to be accountable for the delegated task.

5. Catheterisation Guidelines

5.1 Good Practice Statement

Only use indwelling urinary catheters after alternative methods of management have been considered e.g. intermittent catheterisation. The health care practitioners should consider alternative measures to avoid urinary catheterisation where possible and understand the high level of risk associated with short and long-term catheterisation.

Supporting documentation for this guideline include the EPIC Guidelines (Pratt et al 2007) for the maintenance of short-term indwelling catheters in acute care and the Infection Control Guidelines (NICE 2004) for care of patients with long-term urinary catheters. Additionally, 'Essential steps to safe, clean care' provides a review tool to enable self-assessment of care delivery against risk elements associated with urinary catheter care (DH 2006).

5.2 Decision to Catheterise

The competent health care practitioners can make a clinical decision to undertake an initial urethral catheterisation. Initial suprapubic catheterisation will be performed by medical staff. Ideally, indwelling catheterisation should be performed following discussion with the patient's responsible Medical Officer. If this is not possible, the GP should be informed that the patient has been catheterised in order that medical decisions regarding subsequent treatment/care can be made (Chorley & South Ribble PCT 2004).

Wherever possible, intermittent catheterisation should be the preferred alternative. However, if it is determined that this is unacceptable or unsafe, then, indwelling catheterisation may be considered as the next best option. Therefore the assessment and decision to use indwelling urinary catheterisation should be clearly documented, along with the rationale, in the patient notes. The locally approved insertion/review record form should be used.

The indications for catheterisation are as follows:

Drainage – e.g. prostatic hyperplasia; acute or chronic retention; hypotonic bladder; pre and post pelvic surgery

Investigations – e.g. urodynamics; measurement of residual volumes (less invasively achieved by a portable bladder scanner)

Instillation – e.g. chemotherapy

Incontinence – for the management of intractable incontinence. This is only when all other methods have been tried and assessed as not suitable for the care of the individual patient.

ALL PATIENTS MUST HAVE THEIR ALLERGY STATUS CHECKED FOR LATEX, ANAESTHETIC LUBRICATING GEL OR CHLORHEXIDINE PRIOR TO CATHETERISATION.

There are clear contraindications/cautions for use of Instillagel™ on the manufacturer's website: www.clinimed.co.uk/urology due to the gel contents and for patients who have trauma, abrasions or lesions on the penis or urethral orifice, which may increase absorption of lidocaine systemically, leading to symptoms of cardiac shock/anaphylaxis. This is supported by the Royal Marsden which cites research from the BNF (2011) regarding using lidocaine gels in the elderly and for patients with dysrhythmias due to increased risk of lidocaine absorption during the catheterisation procedure.

5.3 Selection of Catheter

To determine the length of time a catheter can remain in place the manufacturer's product liability should be heeded (Appendix 1). Factors to consider when deciding whether to recommend or perform supra-pubic or urethral catheterisation are seen in Appendix 2 (Peate 2001).

5.4 Catheter Material

Hydrogel-coated, latex catheters appear to be more suitable than all-silicone catheters. The latter can be difficult to remove due to the cuff formation and the balloon having a poor 'memory' (Medical Devices Agency 2001). All silicone catheters are not recommended for supra pubis use unless the patient has a latex allergy. Choice of catheter material may depend on clinical experience, patient assessment and anticipated length of time the catheter is expected to be in place (Pratt et al 2007).

The catheter packaging should be checked that the CE mark is present and that the Catheter is licensed for either urethral or supra-pubic use and check expiry date, Charriere (CH) size and length.

5.5 Size of Catheter

For the urethral route, always choose the smallest Charriere (Ch) to provide adequate drainage (Dreckhaus & Garibaldi 1998, cited in DoH 2001).

5.6 As a guide:

- Female 12 – 14 Ch
- Male 12 – 16 Ch

Small charriere sizes allow the mucus produced by paraurethral glands in the urethra to drain away. By choosing a larger size these glands may become blocked and result in inflammation. Avoid inserting 16ch directly after a 12ch, which could cause trauma following the sudden dilatation of the urethra. Therefore larger sizes should be introduced gradually and may only be required where there

is haematuria with large blood clots.

For suprapubic use, 16ch is commonly used and is recommended to allow for maintenance of a good tract between the abdominal wall and bladder.

5.7 Length of Catheter

For urethral route, women should always be offered a female length catheter, unless they are obese or chair bound, in which case the standard length may be more suitable. Standard length should only be used in male patients. It is dangerous and potentially harmful to insert a female length into a male urethra. (NPSA 2009)

- Female – 26cms*
- Male (standard) – 43cms*

*Lengths are approximate, as manufacturers vary

For suprapubic route, a standard length is the most usual, but patient preference may decide the most suitable length. Female length is acceptable providing that there is sufficient length to connect a valve or bag. Consideration needs to be given to obesity, mobility and clothing.

Balloon size

- a) 10ml balloons should always be used for both urethral and suprapubic routes.
- b) 30ml balloons are reserved for use in specific situations, mainly for post-prostatic surgery. They can cause bladder spasm and trigone irritation (Pomfret 1996).
- c) Balloons should always be filled with sterile water, never air (will float above the urine, preventing drainage), or tap water (contains soluble salts that can cause osmosis), or saline (crystals of salt may prevent deflation of balloon).
- d) Balloons should never be under or over filled, as misshaping of the balloon will interfere with drainage. Always follow the manufacturer's instructions.

5.8 Infection Prevention and Control

'Catheter associated urinary tract infection (CAUTI) is the most common nosocomial infection in hospitals' (Pratt et al 2007). Bacteriuria develops with every patient who has an indwelling catheter within 30 days, which is usually asymptomatic (Mulhall et al 1991; Warren 1992).

The risks of this can be minimised by:

- Limiting the use of catheters
- Maintaining a closed system of drainage and using a link drainage system
- Good hand washing techniques before and after catheterisation and before and after manipulating the catheter
- Personal Protective Equipment (PPE).

- Sterile gloves must be used during insertion of the urinary catheter
Clean gloves may be worn when manipulating the catheter (Appendix C)
- Disposable apron
- Eye goggles' need to be worn when emptying urinary catheter bags

5.9 The recording of baseline observations at initial catheterisation (pulse, temperature, respirations urinalysis and blood pressure) is a local recommendation of good practice and will facilitate easier recognition of symptomatic urinary tract infection. Review of the baseline observations should be recorded each time the catheter is replaced or as clinically indicated.

5.10 Catheter Insertion

Urinary catheters must be inserted using sterile equipment and an aseptic technique (Pratt et al 2007). Minimising trauma, discomfort and CAUTI requires the Health Care Practitioners to be competent in the procedure and care of catheterisation. Single-use lubricant or anaesthetic gel is recommended to minimise urethral trauma and infection (Pratt et al 2007), which should be used by the health care practitioners or support worker who are deemed competent, for both male and female patients. There is no evidence that antiseptic solutions for the cleaning of the urethral meatus is useful, therefore sterile normal saline is suitable.

In the presence of known MRSA colonisation, in routine changes, meatal cleansing with Chlorhexidine must start 24 hours prior to re-catheterisation to ensure load reduction MRSA is maximised.

5.11 Changing the Catheter

The principles of asepsis should apply to the procedure of urinary catheterisation, both urethral and suprapubic (Appendix C).

For re-catheterisation procedures, the existing catheter should be removed, examined for encrustations and discarded at the start of the procedure. Extreme care should be taken with supra-pubic catheters changes for those patients who are receiving anticoagulant therapy or who have blood clotting disorders.

The first change for both routes of entry into the bladder can be done in the community, either in the patient's home or community clinic, by a competent health care practitioner. Unless there is a need for re-catheterisation in a controlled environment, there is no rationale for it to be done in a hospital setting. Long term urethral and supra-pubic catheters are licensed for 12 weeks. Short term catheters are licensed for 28 days. Re-catheterisations may need to be carried out sooner depending on individual/clinical needs.

5.12 Patient Education

Patients (and carers) need to be encouraged to be involved in their care, which includes being aware of the dangers of catheterisation and correct information on general catheter care. It is important that patients (and carers) know how to identify a potential problem (Appendix 4) and whom to contact for help. A programme of learning should include appropriate catheter passport, i.e. leaflets

which can be obtained from the catheter manufacturers. It is essential that health care practitioners document that this has been done. Advice on care options regarding sexual activity and catheters should be offered. These options may include teaching the patient how to remove and reinsert the catheter before and after intercourse.

5.13 Urine Sampling

Routine collection of urine specimens for culture is not useful and is unnecessary unless the patient is symptomatic (Nicolle 2001). When a specimen collection is justified, an aseptic technique should be used, with disinfection of the needle-free sample port with an isopropyl alcohol 70% impregnated swab and allowed to dry thoroughly (Dept of Clinical Microbiology May 2003).

5.14 Care of the Suprapubic Site

If dressings are clinically required, they must be sterile and applied using an aseptic technique. In most cases, a dressing will not be required and patients should be encouraged to clean the site twice daily with cooled boiled water. If problems with the site contact the Continence specialist service for advice.

5.15 Trauma

Catheter tubing and the drainage bag should be secured to the leg so that it avoids kinks in the tubing, traction on the bladder neck, occlusion of the catheter lumen or causing excessive constriction to the limb. There are different choices of fixation method, such as straps or sleeves, which needs to be based on individual need. Tape should not be used as catheter material could be damaged due to solvents.

5.16 Bag position

Drainage bags need to be positioned below the level of the bladder to avoid hydrostatic suction, which can cause damage to the bladder mucosa (Dreckhaus & Garibaldi 1998, cited in DH(2001). Higher rates of bacteraemia have been linked to incorrect positioning (Mulhall et al 1991). Drainage bags should be hung on a stand that prevents contact with the floor (Kunin 1997) or on the bed when in hospital. To avoid skin irritation and damage, alternating the leg on which the drainage bag is secured will minimise this risk.

5.17 Bag emptying

For patients in their own home, they should be encouraged to empty their own drainage bag into the toilet. If this is not possible patients should have their own containers which should be rinsed and left to air dry. When health care practitioners are emptying urinary catheter they should;

- Wear non sterile gloves
- Disposable apron
- Goggles

For patients in hospital, a single-use pulp product should be used to empty urine into and then macerated.

Additionally, it is important to avoid contamination of the tap or the environment by spillage (Wilson & Coates 1996). When drainage bags are one third full, they should be emptied to avoid traction on the bladder. However, the closed system should not be broken more than is necessary. Additionally, it is important to avoid contamination of the tap or the environment by spillage (Wilson & Coates 1996). When drainage bags are one third full, they should be emptied to avoid traction on the bladder and prevent reflux. Once emptied, wipe the drainage tap with 70% Isopropyl alcohol impregnated swab.

5.18 Valves

These can be used as an alternative to a conventional drainage bag. As well as being discreet, they may help to retain bladder tone and allows the bladder to fill and empty in a 'normal way'. The use of a valve during the day and continuous drainage at night has been found to be an ideal solution for many catheterised patients (German et al 1997). Before prescribing catheter valves it is recommended that the continence advisory service is contacted.

5.19 Bathing

The patient may either take a bath or shower. The build up of secretions at the urethral meatus should be minimised by twice daily routine personal hygiene (Burke et al 1981; Pratt et al 2007). Perineal care should also be included to facilitate reduction in extraluminal contamination (Maki et al 2001; Tambyah et al 1999).

5.20 Drainage bag change

The manufacturer's recommendations should be followed; for example, 5 – 7 days or earlier if the bag is damaged, which could then become contaminated with bacteria that ascend the system.

5.21 Fluids

Unless restricted for medical reasons, a fluid intake of 1-1½ litres per 24 hours, as this maintains a flow of urine through the bladder and helps prevent constipation (Burr & Nuseibeh 1995). There is no evidence of long-term benefit or appropriate dosage of cranberry juice (Eichhorst et al 1997). Furthermore, caution should be exercised for those patients taking warfarin (Suvarna et al 2003). However, citrate-based drinks are recommended. These have been found to positively affect the pH of the urine and maintain the acidity (Khan et al 2007).

5.22 Link drainage system

The drainage bag should not be disconnected from the catheter, but rather the night bag is connected to the drainage tap. All patients must have a new single-use night drainage bag every night with disposal of the used bag.

5.23 Storage of catheters

Excess quantities of stored catheters can increase the risk of damage to them or passing the expiry date. For example, latex catheters harden when they are old and if inserted after the expiry date, the risk of perforating the bladder is increased

(Lowthian 1998).

It is important that equipment is available within the patient's home, which will ensure that the correct catheter is used for individual needs. It is recommended that practitioners document that new stock has been ordered to replace what has been used.

5.24 Catheter-life

There are two distinct groups of patients to describe a catheter-life, that is, those who wear a catheter that blocks (blockers) and those that don't (non-blocking). The main cause of a blocked catheter is encrustation. Non-blocking catheters are those which maintain the patency of the catheter for the duration of the catheter-life expectancy, such as 12 weeks for a long-term catheter.

Encrustations usually form on the tip of the catheter, the balloon area that is bathed in urine and the lumen of the catheter. They are not usually found on the side of the balloon that is against the bladder mucosa or the surface that is in contact with the urethra (Kunin 1997).

The duration of time that the catheter can be left in place before it becomes blocked, leaks or is pulled out by the patient is referred to as the catheter-life. Monitoring and documenting this information will help effective planning to reduce the risk of blockage as opposed to crisis intervention.

Persistent blockage and other complications such as recurrent systematic infection or haematocryal may require investigation and referral for x-ray or cystoscopy should be considered to rule out the presence of bladder stones. There is no evidence that sending catheter tips to Clinical Microbiology is of any use.

5.25 Catheter Maintenance Solutions

For catheters that block because of encrustation and the frequency of catheter change is unacceptable to the patient, and then a prescribed regime of an acidic catheter maintenance solution may be justified. The principle aim is to irrigate the catheter, not the bladder. The term 'bladder washout' has been superseded by the more appropriate term of 'catheter maintenance solution'. The effectiveness of acidic catheter maintenance solutions in dissolving encrustations has been demonstrated in laboratory-based studies (Getliffe 2002). However, the instillation of solutions for either encrustation or debris via an indwelling urinary catheter is not recommended as a routine measure as their efficacy has not been proven in large clinical trials.

If prescribed however, they should only be used for a short period of time, using the smallest volume (50mls x 2 bottles) and discontinued if not effective. Frequency of instillation will need to be determined on an individual patient basis. The use of solutions can cause damage to the mucosa, causing irritation and spasm if they enter the bladder. Please consult the Continence Advisory Service if further advice is needed.

5.26 Use of Antibiotics

NICE (2003) states that antibiotics when changing a catheter are used when there

is a history of catheter-associated urinary tract infection following a catheter change. Or for patients who have a heart lesion, septal defect, patent ductus or prosthetic valve. However, this recommendation has now been superseded by recommendation 1.1.3 in the NICE clinical guideline on prophylaxis for infective endocarditis published in March 2008 (NICE 2008).

For those with symptomatic catheter associated urinary tract infection, the catheter should be changed following 2 days of antibiotic therapy if possible. (Raz et al 1998).

5.27 Decision to Remove Catheter

Catheter Hotline Reduction in Catheter Associated Urinary Tract Infections (CAUTI) and Catheter Hotline.

Alongside other healthcare organisations in the Southwest, taking part in the South West Quality and Patient Safety Improvement Programme, LSW aim to reduce Catheter associated Urinary Tract infections by 50% by July 2013.

To monitor catheter usage in the LSW area the Continence Service have introduced a 'Catheter Hotline' which will enable the service to identify inappropriate catheter usage and to monitor the number of catheterised patients in our area. This project aims to enhance the safety of our patients.

In order to register any catheterised patients please telephone the CAUTI Hotline on 01752 435535 using the following form or Fax the completed form to 01752 272501.

Catheters should be removed wherever clinically possible, following individual clinical assessment, which takes into account the patient's condition and in collaboration with the healthcare team. Removal of the catheter should be considered at each review, unless the patient's condition fits into one of the following categories:

- Severe / advanced illness
- Stage III to IV pressure ulcers of the trunk
- Urinary retention unresolved by other interventions

Following removal, the patient's condition should be monitored. A bladder scan (portable) should be performed in the first few days to measure for residual urine, if urine retention is suspected the continence advisory service must be contacted or patient must be re-catheterised to prevent distress.

5.28 Adverse Events

Consideration should be given to user sensitisation to latex products, especially in those patients with spina bifida as they are at high risk due to repeated exposure (www.asbah.org/library).

Autonomic dysreflexia is one of the most serious life threatening conditions that affect people with spinal cord injury at or above the level of the 6th thoracic

vertebrae. The syndrome occurs as a result of uncontrolled reflex sympathetic activity resulting in significant rise in blood pressure and is a response to the stimulus which should be identified. It is essential that prompt action is taken to reduce the blood pressure and to remove the cause.

Autonomic Dysreflexia is an emergency situation and in order to avoid serious and life-threatening complications must be treated immediately.

Symptoms

- Pounding headache
- Feeling of doom, anxiety & apprehension
- Profuse sweating
- Tightness in chest.

Signs

- Flushing and/or blotching above level of cord lesion
- Hypertension and bradycardia
- Pupillary dilatation
- Cardiac dysrhythmia.

Above lesion:

- Pallor initially
- Flushing head and neck
- Sweating in area above and around the lesion.

Below lesion:

- Cold peripheries
- Pilo erection
- Contraction of bladder and bowel
- Penile erection & seminal fluid emission.

5.29 Danger: Can result in Intracranial Haemorrhage.

Bladder and bowel problems are one of the most common causes of this condition, for treatment of this condition see (Appendix f).

5.30 Continence Advisory Service

The Continence Advisory Service for Plymouth provides a specialist service, which offers professional advice, guidance and information on the promotion and management of continence; and facilitates best practice in continence care for faecal and urinary incontinence, including enuresis, and related bladder and bowel problems for adults.

6 Monitoring Compliance and Effectiveness

6.1 Training and Support

Through self-regulation, the Registered Nurses who are learning this skill will remain accountable for his or her competency in urinary catheterisation, as in the spirit of the code of professional conduct (NMC 2008). Acquisition of competency should be backed up by the 'Urinary Catheterisation' study day, which is held at least four times a year should inform their manager if they feel they are not competent and identify their training needs relating to this area of practice.

Before undertaking catheterisation in patients, all practitioners should possess an understanding of the male and female anatomy and physiology of micturition and reproduction (RCN 1997).

Workforce competences can be viewed at <http://www.skillsforhealth.org.uk/>

'Insert & secure urethral catheters' (CC02)

HWB7: Interventions and treatments.

Level 4: Plan, deliver and evaluate interventions and/or treatments when there are complex issues and/or serious illness.

'Care for individuals with urethral catheters' (CC03)

'Manage supra-pubic catheters' (CC04)

HWB5: Provision of care to meet health and wellbeing needs.

Level 2: Undertake care activities to meet health and wellbeing needs of individuals with a greater degree of dependency.

'Review catheter care' (CC0)

HWB2: Assessment and care planning to meet people's health and wellbeing needs.

Level 3: Assess health and wellbeing needs and develop, monitor and review care plans to meet specific needs.

6.2 Process for Monitoring Effective Implementation

Compliance with this policy will be monitored by the IPCT in their audit cycle which has been agreed by the Infection Control Sub Committee for LSW.

- The infection prevention and control team produce an annual audit plan for the provider services at LSW.
- It is the responsibility of the Specialist Nurse to ensure audits are carried out professionally and any deficits highlighted to the ward manager or the designated manager at the time of the audit. All Ward Managers, Matrons and D/N managers will be sent a report within 48 hours and have a two week period to respond.
- The IPCT and the continence advisory team will use an adapted community and essential steps audit tool to monitor clinical practice.
- The frequency of audit for the urinary catheter policy will be annually unless an area fails to meet the standard and requires additional support.
- If the standard fails to be met then the manager will be required to produce an action plan, a subsequent audit will be carried out both by the Infection

Prevention and Control team and the manager of the unit within 3 months.

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All policies are required to be electronically signed by the Lead Director. Proof of the electronic signature is stored in the policies database.

The Lead Director approves this document and any attached appendices. For operational policies this will be the Locality Manager.

The Executive signature is subject to the understanding that the policy owner has followed the organisation process for policy Ratification.

Signed: Director of Operations

Date: 1st March 2016

Appendix A:

Catheter type	Duration	Material and comments
Short term	Up to 1 week	<ul style="list-style-type: none">• Plastic – post-op or intermittent catheterisation• Latex – uncoated latex rarely used as high surface friction can cause discomfort and tissue trauma
Medium term	Up to 4 weeks	<ul style="list-style-type: none">• Poly-tetra-flouride-ethylene (PTFE) bonded latex - smoother outer surface
Long term	Up to 12 weeks	<ul style="list-style-type: none">• Silicone bonded with an elastomer – not pure silicone• 100% silicone – thin walled, better drainage capacity• Hydrogel bonded – highest compatibility with human tissue, less risk of trauma and less biofilm/encrustation formation

Appendix B:

Suprapubic	Urethral
Specific Considerations	
Long-term (including incontinence) Sexually active Post-specific surgery Urethral trauma Some wheelchair-bound people Difficulties with urethral catheter Annual bladder ultrasound	Short-term Intermittent Post-specific surgery Difficulties with suprapubic
Specific Care	
Strict asepsis on insertion Strict asepsis on redressing the fistula site	Strict asepsis on insertion
Specific Advantages	
Reduced risk of infection Enables sexual activity	Nurse able to carry out procedure at first insertion (where risk assessed), therefore care will be client-directed from the point of insertion
Specific Disadvantages	
Altered body image Potential urine leakage from around the site Limited nursing research on subject Requires a registered medical practitioner to perform initial insertion Urethral leakage	Altered body image Impedes sexual intercourse Higher risk of infection

**Appendix C: Procedure for Urinary Catheterisation (Male, Female and Suprapubic)
(see Skills for Health competency documents HWB5 (DOH 2011))**

Equipment:

- a) Sterile catheter/dressing pack/ bard Foley Tray
- b) Gloves x 2 pairs (1 sterile) (1 non-sterile)
- c) Sterile catheter that has been previously selected
- d) Sterile anaesthetic/ lubricating gel (6mls for female; 11mls for male and suprapubic)
- e) Universal specimen container – if CSU required
- f) Tap water for meatal cleansing
- g) Clinical waste bag.
- h) Sterile water, and syringe if catheter not pre-filled (+ sterile syringe for deflating balloon)
- i) Disposable plastic apron
- j) Catheter retaining strap/sleeve
- k) Drainage bag/valve.
- l) Patients' clinical records.

Procedure		Rationale
1	Explain procedure and obtain consent from the patient and record this in the Patient Records	To ensure the patient knows what to expect
2	Ask patient if they have a history of latex allergy prior to catheterisation. If present, a latex free catheter and gloves should be used	To avoid allergic reaction
3	Assist the patient into the supine position with the legs extended, ensuring privacy and dignity is maintained	
4	Assemble equipment	Efficient preparation will assist in the procedure being less stressful for the patient and clinician
5	Put on disposable plastic apron, wash hands and don non-sterile gloves	To reduce cross-infection
6	If not socially clean, the genital area should be washed with soap and water	
7	If urethral or suprapubic catheter already in situ, remove catheter and set aside for inspection Specific for suprapubic: Observe how much of the catheter was within the abdominal wall on removal or use a piece of tape to verify the length. Withdraw the catheter from the tract, noting the angle at which it comes out. It may need to be twisted a little and there maybe a gush of urine as it is withdrawn.	
8	Wash hands as per LSW Hand washing Policy.	
9	Using an aseptic technique, open the sterile packs on to the work surface (either a prepared trolley or appropriate surface)	

10	Using gloves, clean the meatus using sterile saline or water. There is no evidence that the use of antiseptics is beneficial (Ward et al 1997 cited in DoH 2001; Kunin 1997; Huth 1992). If necessary retract the male foreskin and clean the glans penis	
11	Instill anaesthetic/lubricating gel directly into the urethra (male and female). Apply anaesthetic /lubricating gel to the suprapubic site	To allow smooth passage of catheter and to reduce trauma and stricture formation
12	Leave the gel for the required amount of time (as per manufacturer's instructions). Wash hands and put on sterile gloves.	Catheterisation can be painful
13	For females urethrally: Gently insert catheter into the meatus without force in an upward and backward direction for 4 – 5cms. When urine starts to drain, advance the catheter another 2cms. If resistance is prolonged or there is pain, stop the procedure and seek advice. For males urethrally: Holding the penis upright and extended, gently insert catheter into the meatus without force about 20cms. Some resistance might be felt in the prostatic urethra. Ask patient to relax or to cough. Ease catheter forward. When urine starts to flow, proceed another 2cms. If resistance is prolonged or there is pain, stop the procedure and seek advice. For suprapubic: Insert the new catheter of the same size within 10 minutes for the first change and 30 mins thereafter. Advance it into the tract a little further than the one removed. When urine starts to flow, proceed another 2cms. If resistance is prolonged or there is pain, stop the procedure and seek advice.	To ensure that it is correctly positioned in the bladder
14	Collect a specimen of urine if required	
15	If catheter is pre-filled, remove clip from bulb to release water into the balloon channel. If not pre-filled, fill the balloon with the required amount of sterile water using a syringe. Always fill balloon according to manufacturer's instruction. If pain is experienced, the balloon is probably in the wrong position, therefore deflate it and advance catheter further and reinflate.	For retention of catheter in bladder
16	Connect the drainage bag if not pre-connected and observe for drainage; secure to patient's leg using a catheter retaining strap, ensuring that there is sufficient room for free movement (in men particularly,	To reduce trauma to the bladder neck and promote good drainage. In men, this smoothes out the

	this allows for movement should spontaneous erection occur)	urethral curve and reduces pressure on the penoscrotal junction which can lead to the formation of a fistula
17	Always reposition the male foreskin	To reduce incidence of paraphimosis (retraction and constriction of the foreskin behind the glans penis)
18	Attend to patient comfort and clear away equipment, disposing of waste in the yellow clinical waste bag and seal bag before moving it away	To prevent environmental contamination
19	Record the following details in the nursing documentation: <ul style="list-style-type: none"> • Reasons for catheterisation • Date and time of catheterisation • Make, length, size, amount of water added to balloon, batch number, expiry date and manufacturer • Batch number and expiry date of gel • Any problems negotiated during the procedure • Review date/date of catheter change 	To establish a permanent record of care and to protect the clinician (Buckley 1999)
20	The patient / carer will be informed of who to contact for help	To enable prompt response by clinicians should the patient/carer experience problems
21	For patients living at home, they will have prescribed equipment in the home to enable recatheterisation if necessary, which must be stored in a cool, dry area away from direct sunlight or heat	To avoid unnecessary waiting for the patient if recatheterisation required

Appendix D: Problem Solving

Problem	Possible reasons and action to take
Urine does not drain	<p>Check for mechanical obstruction – kinked tubing; occlusion by leg straps; bag higher than level of bladder.</p> <p>Check for constipation.</p> <p>Occlusion of catheter eyes by anaesthetic gel or bladder mucosa – gently instil sterile water/saline to clear eyes; check that leg bag is not too low down on the leg.</p> <p>Consider changing the catheter and inspect for encrustation – if it is patent – consider bladder spasm as a cause.</p> <p>Consider that the patient maybe dehydrated or in renal failure</p> <p>If new catheter doesn't drain – check that it's in the urethra; that the catheter is correct length and that eyes are in the bladder.</p>
Encrustation	<p>Main cause is struvite formation (calcium phosphate and magnesium ammonium phosphate salts); struvite forms as a result of precipitation of these salts from the urine when it becomes alkaline because of urease forming bacteria (Morris & Stickler 1998).</p> <p>Check pH of urine [critical pH for encrustation to develop is reportedly 6.8 (Hedelin et al 1991)]</p> <p>Encourage fluid intake.</p> <p>Assess 'catheter life' by observing at least three catheters; implement planned catheter changes to avoid blockage. A prescribed regime of acidic catheter maintenance solutions maybe justified.</p>
Haematuria	<p>May be caused by trauma, infection, renal/bladder pathology; if severe, seek medical help urgently. Treat for shock and monitor for clots and blockages.</p> <p>If occult, refer to GP to consider investigation, e.g. cystoscopy.</p>
Urine bypassing	<p>Check for tube kinking and/or constipation</p> <p>If due to bladder spasm or irritation: consider anticholinergic medication; consider a smaller catheter size; check balloon size; consider catheter material (latex allergy)</p> <p>If due to encrustation: change and inspect catheter</p>
Cramping pain	<p>This should subside after 24 hours of initial insertion; if it persists, it may be bladder spasm and anticholinergic therapy should be considered.</p>
Urethral discomfort	<p>May be due to distention of urethra by too large a catheter or by occlusion of the paraurethral glands – change to a smaller catheter.</p>
Urethral discharge	<p>During normal micturition a mucus substance is produced by the paraurethral glands (which line the urethra) to protect against ascending infection and is usually flushed away. However, in the catheterised patient, the mucus drains away through peristaltic action and gravity rather than being flushed away and can result in presence of mucus outside the urethra and on the catheter surface (Robinson 2001).</p>
Blocking due to	<p>Sludgy mucus type debris can block the catheter. Expert opinion suggests using a valve in this situation to encourage natural</p>

debris in urine	flushing of the catheter lumen.
Non-deflating balloon	Check that syringe is not faulty; leave syringe for a few minutes to allow water to drain spontaneously - not forcibly as a vacuum may result in the inflation channel. If this fails, it has been reported that using a sterile needle and syringe, which is inserted into the arm above the inflation valve is another method to deflate the balloon (Rew & Woodward 2001). If unsuccessful, discuss with doctor regarding a urological opinion.
Catheter rejection	If a patient pulls their catheter out with the balloon inflated due to a confused state, consider alternative methods to manage the bladder problem. On occasions, catheters may be expelled due to a combination of weak pelvic floor muscles, urethral dilatation and detrusor instability (Rew & Woodward 2001). Other means of continence care should be sought.
Difficulty in removing catheter	Expert opinion suggests that inflating and deflating balloon about four times and then leaving for five minutes before catheter removal can assist in easier extraction of catheter. If the catheter cannot be removed, stop and refer to the urological team in collaboration with the doctor.

Appendix E

Supply and/or Administration of Catheter Patency Solutions Patient Group Direction

[Catheter Patency Solutions PGD v3](#)

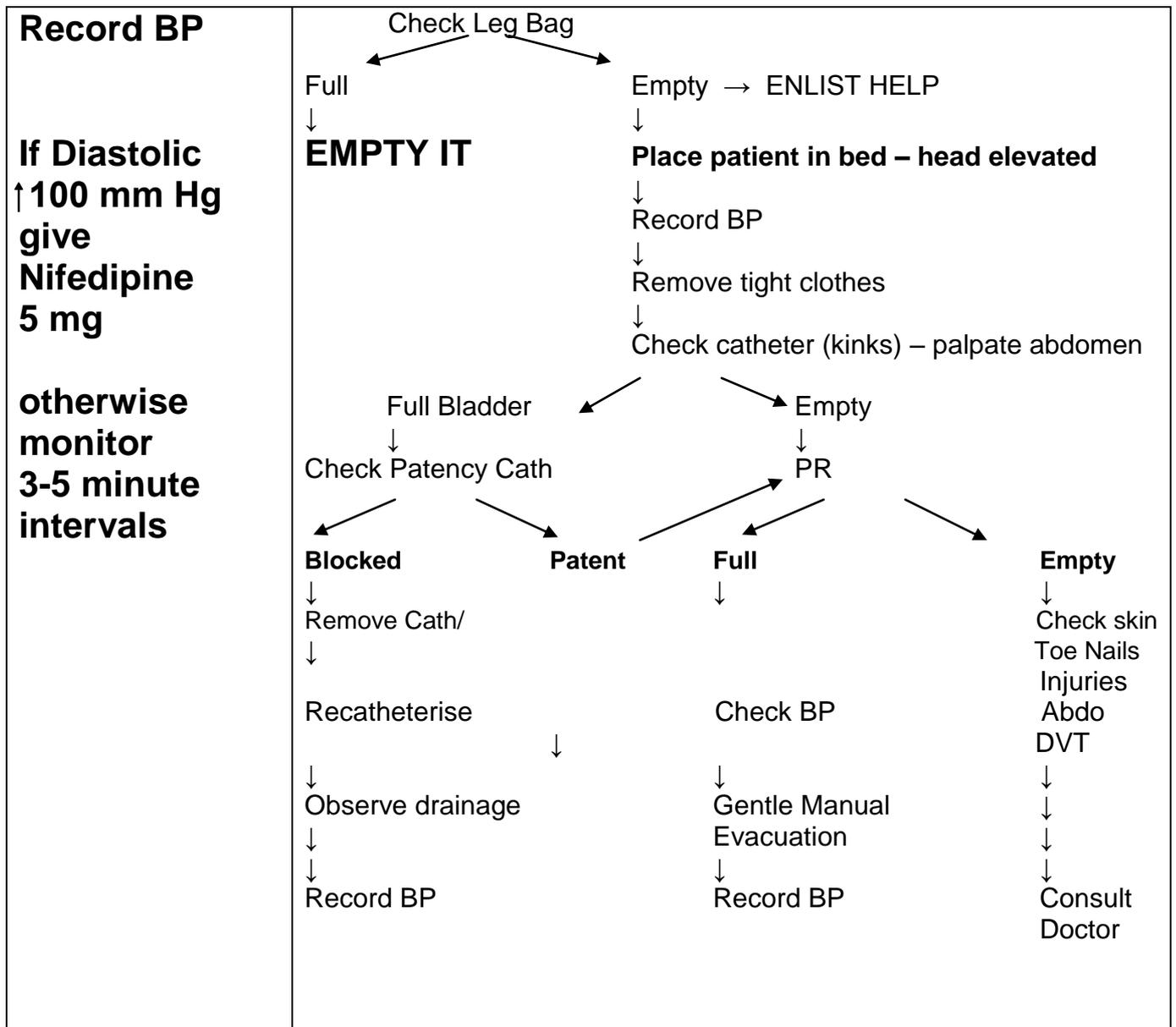
Appendix F

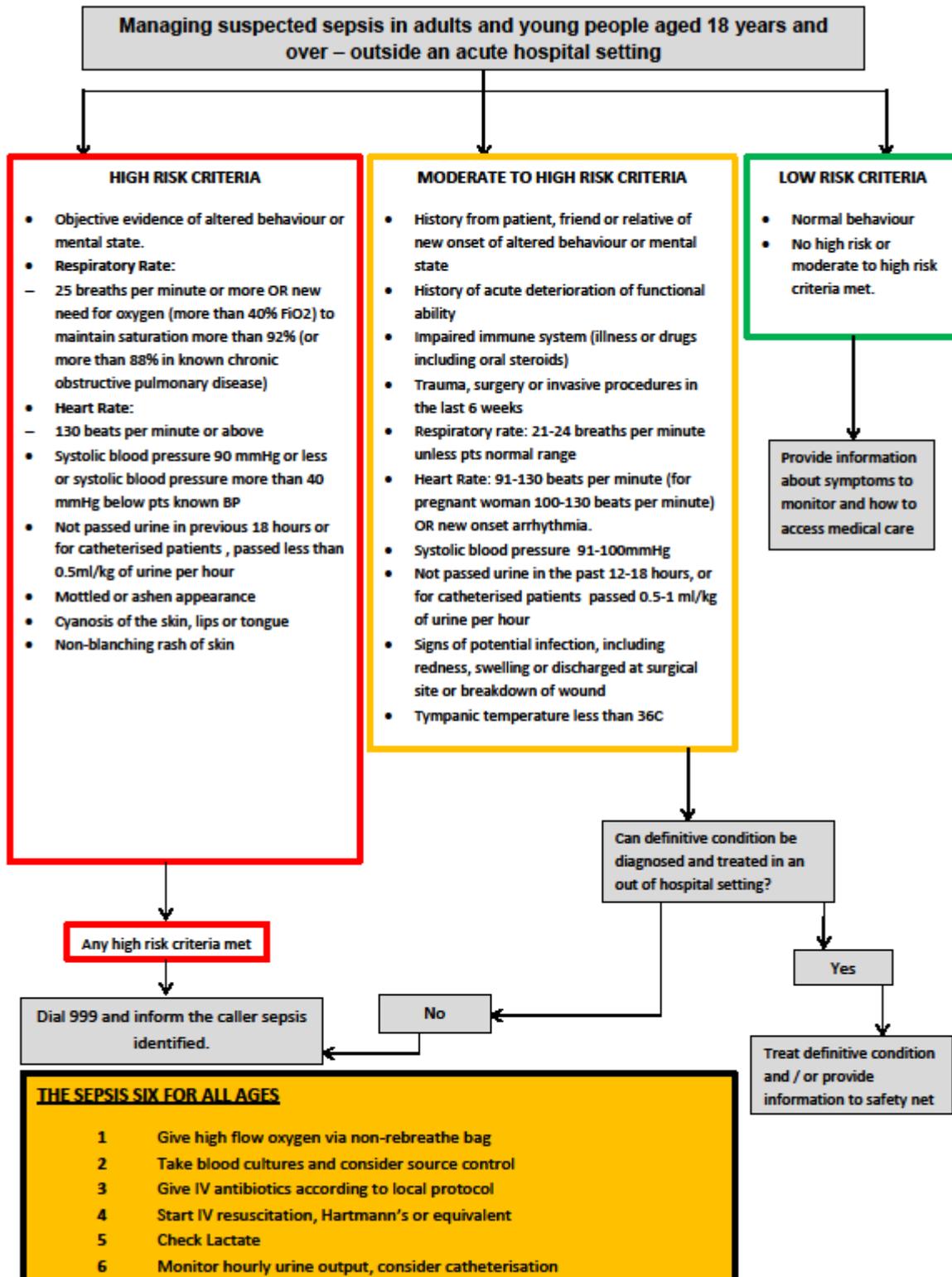
MANAGEMENT OF AUTONOMIC DYSREFLEXIA

HEADACHE, FLUSHED, SWEATING, GENERALLY UNWELL?

!! THINK !!

Autonomic Dysreflexia





Patient name NHS Number
 Date of Birth Ward



Managing suspected sepsis in adults and young people aged 18 and over – in an inpatient hospital setting

Date/time screening commenced: Commenced by (name/grade)

- HIGH RISK CRITERIA**
- Objective evidence of altered behaviour or mental state.
 - **Respiratory Rate:** 25 breaths per minute or more OR new need for oxygen (more than 40% FiO2) to maintain saturation more than 92% (or more than 88% in known chronic obstructive pulmonary disease)
 - **Heart Rate:** 130 beats per minute or above
 - **Systolic blood pressure** 90 mmHg or less or systolic blood pressure more than 40 mmHg below pts known normal BP
 - **Not passed urine** in previous 18 hours or for catheterised patients, passed less than 0.5ml/kg of urine per hour
 - Mottled or ashen appearance
 - Cyanosis of the skin, lips or tongue
 - Non-blanching rash of skin

- MODERATE TO HIGH RISK CRITERIA**
- History from patient, friend or relative of new onset of altered behaviour or mental state
 - History of acute deterioration of functional ability
 - Impaired immune system (illness or drugs including oral steroids)
 - Trauma, surgery or invasive procedures in the last 6 weeks
 - Respiratory rate: 21-24 breaths per minute unless this is the pts normal range
 - Heart Rate: 91-130 beats per minute (for pregnant woman 100-130 beats per minute) OR new onset arrhythmia.
 - Systolic blood pressure 91-100mmHg
 - Not passed urine in the past 12-18 hours, or for catheterised patients passed 0.5-1 ml/kg of urine per hour
 - Signs of potential infection, including redness, swelling or discharge at surgical site or breakdown of wound

- LOW RISK CRITERIA**
- Normal behaviour
 - No high risk or moderate to high risk criteria met.

Any high risk criteria met

Suspected sepsis and no high risk criteria met

Clinical assessment and manage according to clinical judgement

Arrange immediate review by senior clinical decision maker (person authorised to prescribe antibiotics)
 Carry out venous blood test for the following

- Blood gas including lactate measurement
- Blood culture
- Full blood count
- C-reactive protein
- Urea and electrolytes
- Creatinine
- Clotting screen

Give intravenous antibiotics without delay, and at least within one hour of identification of high risk criteria.
 Use an intravenous antimicrobial from agreed local formulary and in line with local or national guidelines
 Discuss with consultant

2 or more moderate to high risk criteria
 Or
 SBP: 91-100mmHg

Only 1 moderate to high risk criterion, clinician to review within 1 hour and perform blood tests if indicated

Review Condition & venous lactate results within 1 hour
 Carry out venous blood test for the following

- Blood gas including lactate measurement
- Blood culture
- Full blood count
- C-reactive protein
- Urea and electrolytes
- Creatinine

Lactate <2mmol/L and no Acute Kidney Injury* Manage definitive condition / infection if diagnosed

If no definitive condition identified Please Follow Amber Care Pathway

Please Follow Red Care Pathway

Lactate >2 mmol/L OR assessed as having an acute Kidney Injury*
 Escalate to High risk

*See Acute Kidney Injury (NICE Guideline CG169)