

Preventing infection related to long-term urinary catheters

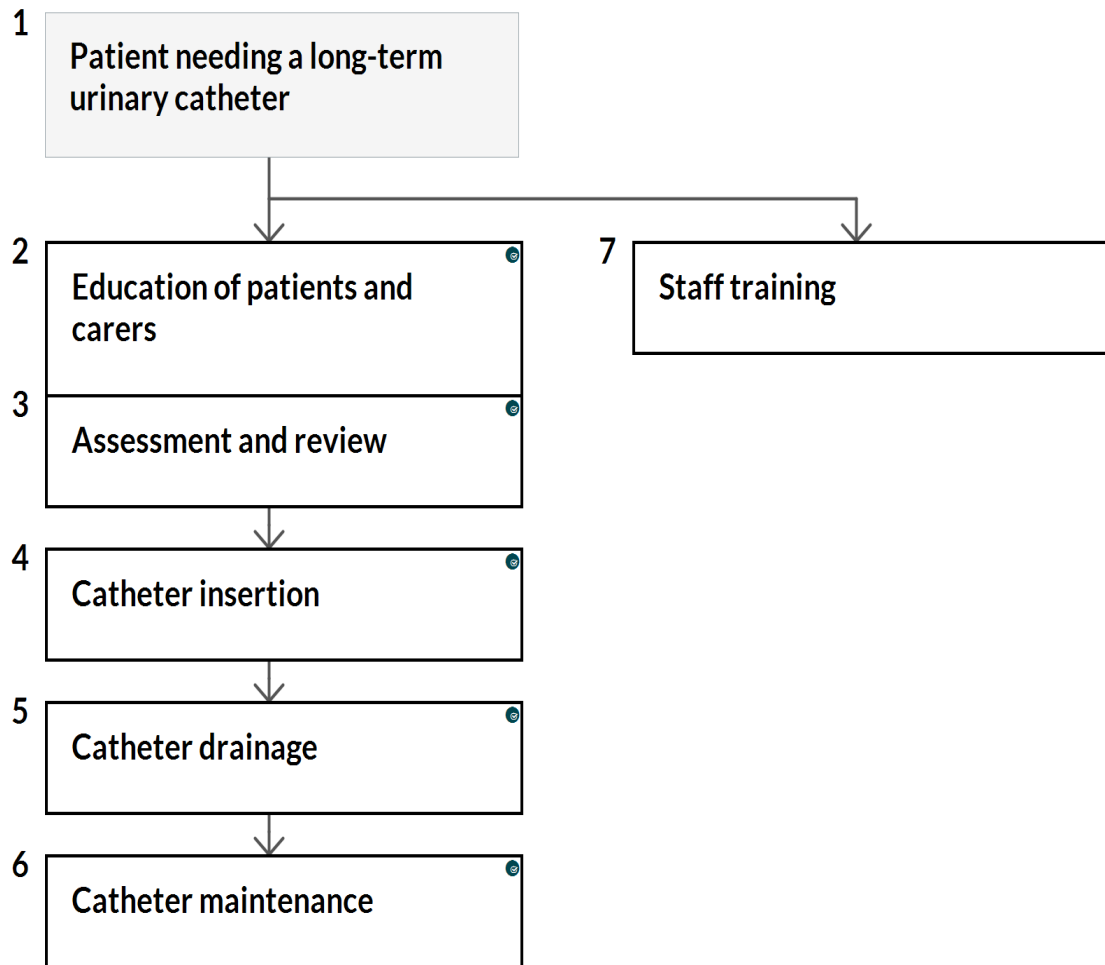
NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

<http://pathways.nice.org.uk/pathways/prevention-and-control-of-healthcare-associated-infections>

NICE Pathway last updated: 14 July 2021

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



1 Patient needing a long-term urinary catheter

No additional information

2 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.

Patients managing their own catheters, and their carers, must be educated about the need for hand decontamination before and after manipulation of the catheter, in accordance with the recommendations on [hand decontamination](#).

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

Infection prevention and control

6. Educating people about infection prevention and control

3 Assessment and review

Indwelling urinary catheters should be used only after alternative methods of management have been considered.

The patient's clinical need for catheterisation should be reviewed regularly and the urinary catheter removed as soon as possible.

Catheter insertion, changes and care should be documented.

Following assessment, select the best approach to catheterisation that takes account of clinical need, anticipated duration of catheterisation, patient preference and risk of infection.

Intermittent catheterisation should be used in preference to an indwelling catheter if it is clinically appropriate and a practical option for the patient.

Select the type and gauge of an indwelling urinary catheter based on an assessment of the patient's individual characteristics, including:

- age
- any allergy or sensitivity to catheter materials
- gender
- history of symptomatic urinary tract infection
- patient preference and comfort
- previous catheter history
- reason for catheterisation.

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

Infection prevention and control

4. Urinary catheters

4 Catheter insertion

All catheterisations carried out by healthcare workers should be aseptic procedures. After training, healthcare workers should be assessed for their competence to carry out these types of procedures.

Intermittent self-catheterisation is a clean procedure. A lubricant for single-patient use is required for non-lubricated catheters.

Offer a choice of either single-use hydrophilic or gel reservoir catheters for intermittent self-catheterisation.

For urethral catheterisation, the meatus should be cleaned before insertion of the catheter, in accordance with local guidelines/policy.

An appropriate lubricant from a single-use container should be used during catheter insertion to minimise urethral trauma and infection.

In general, inflate the catheter balloon with 10 ml of sterile water in adults and 3 to 5 ml in children.

NICE has published medtech innovation briefings on:

- [Urethrotech UCD for difficult or failed catheterisation](#)
- [S-Cath System for suprapubic catheterisation](#).

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

Infection prevention and control

4. Urinary catheters

5 Catheter drainage

In patients for whom it is appropriate, a catheter valve may be used as an alternative to a drainage bag.

Indwelling catheters should be connected to a sterile closed urinary drainage system or catheter valve.

Urinary drainage bags should be positioned below the level of the bladder, and should not be in contact with the floor.

A link system should be used to facilitate overnight drainage, to keep the original system intact.

NICE has published a [medtech innovation briefing on the U-Drain for people needing night drainage of urine or dialysis fluid](#).

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

Infection prevention and control

4. Urinary catheters

6 Catheter maintenance

Healthcare workers should ensure that the connection between the catheter and the urinary drainage system is not broken except for good clinical reasons (for example changing the bag in line with the manufacturer's recommendations).

Healthcare workers must decontaminate their hands and wear a new pair of clean, non-sterile gloves before manipulating a patient's catheter, and must decontaminate their hands after removing gloves.

Urine samples must be obtained from a sampling port using an aseptic technique.

The urinary drainage bag should be emptied frequently enough to maintain urine flow and prevent reflux, and should be changed when clinically indicated.

The meatus should be washed daily with soap and water.

To minimise the risk of blockages, encrustations and catheter-associated infections for patients with a long-term indwelling urinary catheter:

- develop a patient-specific care regimen
- consider approaches such as reviewing the frequency of planned catheter changes and increasing fluid intake
- document catheter blockages.

Bladder instillations or washouts must not be used to prevent catheter-associated infections.

Catheters should be changed only when clinically necessary or according to the manufacturer's current recommendations.

When changing catheters in patients with a long-term indwelling urinary catheter:

- do not offer antibiotic prophylaxis routinely
- consider antibiotic prophylaxis¹ for patients who:
 - have a history of symptomatic urinary tract infection after catheter change **or**
 - experience trauma during catheterisation (trauma is defined as frank haematuria after catheterisation or two or more attempts of catheterisation).

See [the NICE Pathways on antimicrobial stewardship and preventing and treating catheter-associated urinary tract infections in the under 16s and people aged 16 and over](#).

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

Infection prevention and control

4. Urinary catheters

7 Staff training

Community and primary healthcare workers must be trained in catheter insertion, including suprapubic catheter replacement and catheter maintenance.

¹ At the time of publication of the recommendations (March 2012), no antibiotics have a UK marketing authorisation for this indication. Informed consent should be obtained and documented.

Glossary

Aseptic technique

(an aseptic technique ensures that only uncontaminated equipment and fluids come into contact with susceptible body sites, which should be used during any clinical procedure that bypasses the body's natural defences; using the principles of asepsis minimises the spread of organisms from one person to another)

Hand decontamination

(the use of handrub or handwashing to reduce the number of bacteria on the hands; in this guidance, this term is interchangeable with 'hand hygiene')

Healthcare workers

(people employed by the health service, social services, a local authority or an agency to provide care for a sick, disabled or elderly person)

Sources

Healthcare-associated infections: prevention and control in primary and community care (2012 updated 2017) NICE guideline CG139

Your responsibility

Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Medical technologies guidance, diagnostics guidance and interventional procedures guidance

The recommendations in this interactive flowchart represent the view of NICE, arrived at after

careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.