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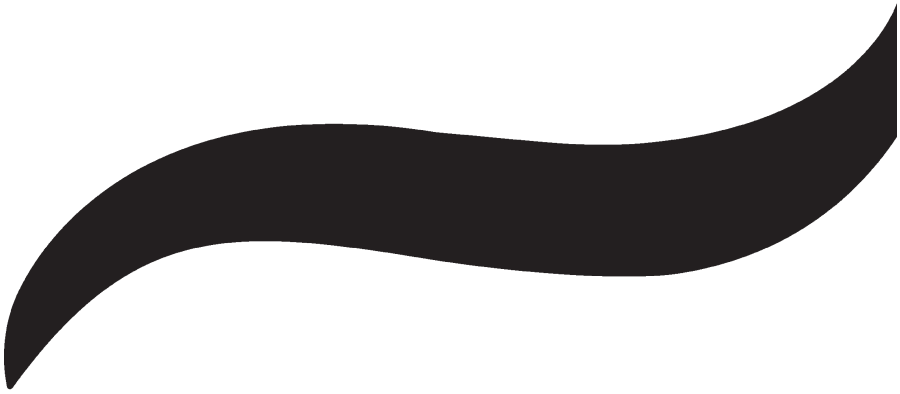
Guidelines for Best Practice for Clean Intermittent Catheterisation

in Children and Young People



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Objectives

The aim of this document is to offer guidance on best practice to all carers and professionals especially those in the community who provide Clean Intermittent Catheterisation (CIC).

It provides guidance from the Best Practice Statement – Urinary Catheterisation and Catheter Care (NHS Quality Improvement Scotland, June 2004) and incorporates advice from current local practice.

Rationale

CIC is a normal part of daily living activity for some young people with bladder problems.

This procedure has a considerable positive impact on the young person's wellbeing and personal dignity and maintains a healthy urinary tract.

Introduction

This document has been developed using evidence based practice and references are sited at the end. This is for the use of the individual young person, parents, carers, nurses and support staff, to ensure appropriate use and teaching of Clean Intermittent Catheterisation (CIC).

Many people need the support of continence products – like catheters – to help them manage their continence and maintain a healthy bladder. CIC allows many individuals to gain control of their bladder and give them the opportunity to become self caring. CIC may be a short or long term intervention.

The procedure involves the introduction of a catheter into the bladder to remove urine, once the bladder is empty the catheter is removed. CIC is performed as often as required to prevent prolonged retention of urine and to assist continence. CIC can be performed using natural or artificially created channels. CIC has a lower infection rate than an indwelling catheter and should always be used if it is clinically appropriate and a practical option for the individual.

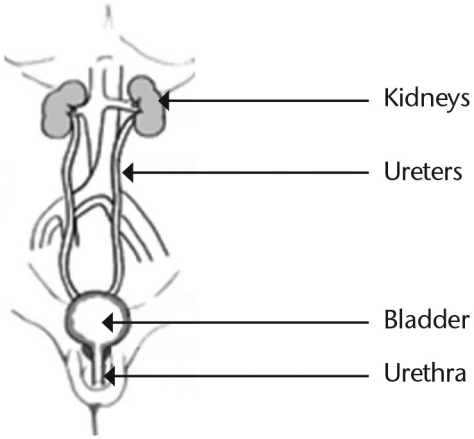
CIC requires to be carried out at regular intervals as recommended by health care professional. Health and education support workers may therefore be required to provide assistance or carry out this procedure while the young person is at school.

It has been demonstrated that the skills required to complete this task are well within the scope of all carers for the young person including parents, health care and education support workers working in the home or the community.

Urine Production

- Urine is a liquid produced by the kidneys containing water soluble waste.
- Urine produced passes from the kidneys through the ureters into the bladder.
- The bladder's walls relax and expand to store urine, and contract and flatten to empty urine through the urethra.
- The urine is then passed from the bladder via the urethra and out of the body.
- For a healthy urinary tract, the bladder should empty completely.

Components of the Urinary System



Indications for clean intermittent Catheterisation

(list is not inclusive)

- To ensure the bladder is emptied completely
- To irrigate the bladder
- To administer medication within the bladder.

Impaired Bladder Function – Causes

There are two types of bladder emptying problems for which CIC is indicated:

- Inability to empty bladder due to poor bladder action
- Inability to empty bladder due to obstruction

  A mixture of these two can occur in the same young person. Below are some of the conditions for which CIC is recommended - this list is not inclusive.

- Neurogenic bladder conditions - caused by damage to the nerves supplying the bladder.
- Congenital malformations.
- Hypotonic bladder conditions – caused by decreased muscle tone in the bladder.
- Bladder outflow obstruction – this happens when base of bladder is partially or completely blocked and reduces or prevents flow of urine into the urethra due to anatomy or stricture.

Associated Bladder Problems

- Bladder Over Activity - the bladder muscle contracts spontaneously leading to leakage of urine and in some cases backflow into the kidneys.
- Incomplete Bladder Emptying - if the bladder cannot be emptied fully, the urine that is left in the bladder is known as residual urine. Bacteria can grow quickly in this residual urine, causing a urinary tract infection.
- Urinary Tract Infections - it can be completely normal for anyone to have some bacteria in their urine. Those who perform CIC may have an even higher bacteria count in their urine. If the young person experiences symptoms such as temperature, vomiting and pain, this may be a urinary tract infection and a course of antibiotics will be prescribed. Serious recurrent and untreated urinary tract infections may cause damage to the kidneys.
- Urinary Reflux – backflow of urine from the bladder to the kidneys. Young people with reflux problems are at greater risk of urinary tract infections and kidney damage.
- Impaired Kidney Function - repeated upper urinary tract infections and prolonged urinary reflux may damage the kidneys over time. There is a risk that this may reduce the function of the kidneys long term.

Methods of Clean Intermittent Catheterisation

- Urethral - urethral catheterisation is a routine procedure performed with a sterile catheter inserted via the urethra into the bladder for the purpose of urine drainage, administering medications or irrigation of the urinary tract.
- Mitrofanoff - this is a surgical procedure to produce a stoma, an artificial channel into the bladder through the skin. A sterile catheter can be inserted through this to empty the bladder. The stoma which looks like an extra tummy button is created under general anaesthetic. In some cases, this is combined with an operation to enlarge the young person's bladder (bladder augmentation).

Types of Catheters

(Catheters come in many types, materials and sizes)

- Flexible silicon or plastic tube.
- Lubricated with gel or require the lubrication to be activated by water.
- Catheters range from size CH06 to CH30. Normal drainage is usually CH08 to CH12.
- Correct size is the smallest possible for providing adequate drainage.
- Larger catheters can cause more leakage and damage and should only be used in special circumstances.

Infection Control – General

- A clean environment should be maintained at all times.
- Catheter equipment should be stored
  - in a dry, cool, dark place, out of direct sunlight.
  - unopened in manufacturer's protective boxes/wrapping to prevent damage and ensure the integrity/sterility of the product.
- Hand hygiene is appropriate for care, as hand transfer is a major factor in the current risk of infection to patients.
- Effective hand drying is carried out before catheter procedures, as friction created while drying further assists the removal of bacteria. Failure to dry hands can lead to cracked skin and breeding grounds for bacteria.
- Personal protective equipment (PPE) such as aprons and gloves should be used for all activities that have been assessed as carrying a risk of exposure to blood and body fluids.
- Single use gloves should be kept in manufacturer's box and only removed as required.
- All equipment used for these procedures should be single use wherever possible.
- All waste should be disposed of according to local policies and guidelines.

Infection Control – Hand Hygiene

- Follow principles of good hand hygiene before, during and after procedure.
- Cover all cuts and abrasions with water-proof dressings.
- Keep nails short and clean; do not wear nail varnish, artificial nails or extensions.
- Wrist-watches, stoned jewellery, bracelets or rings (other than 1 plain band) in the clinical environment. Hand jewellery will impede the performance of effective hand hygiene thus increasing the risk of infection.
- Sleeves should be worn above the elbow.

How to Handwash?

WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HANDRUB

Duration of the entire procedure: 40-60 seconds

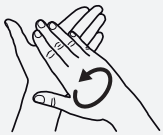
0

Wet hands with water;

1

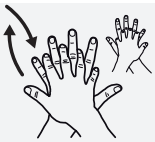
Apply enough soap to cover all hand surfaces;

2



Rub hands palm to palm;

3



Right palm over left dorsum with interlaced fingers and vice versa;

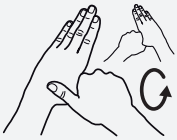
4

Palm to palm with fingers interlaced;

5

Backs of fingers to opposing palms with fingers interlocked;

6

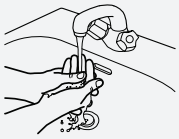


Rotational rubbing of left thumb clasped in right palm and vice versa;

7

Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;

8

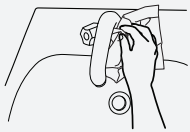


Rinse hands with water;

9

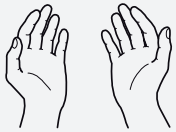
Dry hands thoroughly with a single use towel;

10



Use towel to turn off faucet;

11



Your hands are now safe.

World Health Organization

Patient Safety
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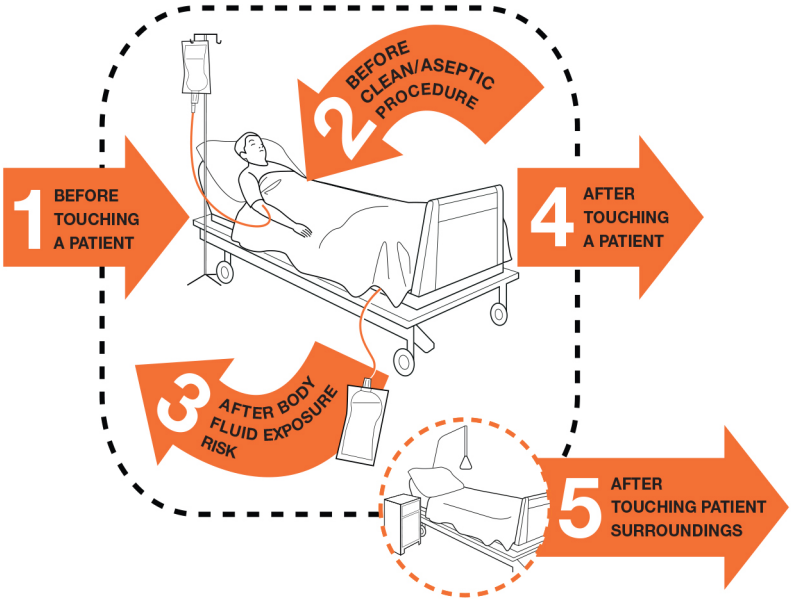
SAVE LIVES
Clean **Your** Hands

WHO acknowledges the Hôpitaux Universitaires de Genève (HUG), in particular the members of the Infection Control Programme, for their active participation in developing this material.

May 2009

Your 5 Moments for Hand Hygiene



1	BEFORE TOUCHING A PATIENT	WHEN?	Clean your hands before touching a patient when approaching him/her.
		WHY?	To protect the patient against harmful germs carried on your hands.
2	BEFORE CLEAN/ ASEPTIC PROCEDURE	WHEN?	Clean your hands immediately before performing a clean/aseptic procedure.
		WHY?	To protect the patient against harmful germs, including the patient's own, from entering his/her body.
3	AFTER BODY FLUID EXPOSURE RISK	WHEN?	Clean your hands immediately after an exposure risk to body fluids (and after glove removal).
		WHY?	To protect yourself and the health-care environment from harmful patient germs.
4	AFTER TOUCHING A PATIENT	WHEN?	Clean your hands after touching a patient and her/his immediate surroundings, when leaving the patient's side.
		WHY?	To protect yourself and the health-care environment from harmful patient germs.
5	AFTER TOUCHING PATIENT SURROUNDINGS	WHEN?	Clean your hands after touching any object or furniture in the patient's immediate surroundings, when leaving – even if the patient has not been touched.
		WHY?	To protect yourself and the health-care environment from harmful patient germs.

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May 2009

Procedural Guideline – General

Before, during and after procedure ensure the young person's dignity is maintained at all times, considering legal, moral, cultural and religious beliefs.

- Select dedicated location which is appropriate for performing the procedure.
- Young person has consented and is comfortable and happy for procedure to take place.
- Appropriate equipment including apron, gloves, goggles, catheter and drainage container is available.
- Ensure procedure is fully explained using appropriate language.
- Ensure the young person is in a suitable position for the procedure to be performed.
- Remove and loosen clothing where appropriate.
- Wash hands thoroughly.
- Prepare catheter, check expiry date and lubricate if necessary.
- Put on protective personal equipment eg: gloves, apron as required.
- Ensure genital area is cleaned using unfragranced soap or wipes, in downwards strokes, before insertion of catheter.

Procedure – Male Urethral Catheterisation

- ❖ Hold penis on sides, perpendicular (at 90-degree angle) to the body, straightening the urethra.
- ❖ Retract the foreskin gently where appropriate.
- ❖ Side lubricated catheter into the opening of urethra, at tip of penis.
- ❖ Gently insert the catheter and advance it slowly towards the bladder.
- ❖ There may be resistance, do not pull catheter in and out, encourage young person to relax and breathe deeply until muscle relaxes.
- ❖ Advance catheter until urine starts to flow into drainage container.
- ❖ Advance catheter for further 1-2 cms. Hold in position until urine stops flowing.
- ❖ Remove catheter gently in small steps to ensure bladder is empty.
- ❖ If, as the catheter is being removed, urine starts to flow again, stop withdrawal until urine flow stops.
- ❖ Replace foreskin over glans of penis. Wash and dry penis, replace clothing as appropriate.
- ❖ Record time of catheterisation and amount of urine obtained if appropriate.
- ❖ Discard all waste following local policies and guidelines for clinical waste.

Procedure - Female Urethral Catheterisation

- Locate the urethra, which is below the clitoris and above the vagina.
- Using fingers separate the labia and pull gently upwards to visualise the urethral meatus.
- Slide lubricated catheter gently into the opening of urethra.
- Advance it slowly towards the bladder, guiding it upwards as if towards tummy button.
- There may be some resistance as the catheter tip reaches the bladder neck, continue to advance the catheter gently but firmly until the sphincter relaxes.
- Advance catheter until urine starts to flow into drainage container.
- Continue to advance catheter for further 1-2 cms.
- Hold in position until urine stops flowing and bladder is empty.
- Slowly remove the catheter, rotating it as you remove.
- If, as the catheter is being removed, urine starts to flow again, stop withdrawal until urine flow stops.
- Wash and dry genital area, replace clothing as appropriate.
- Record time of catheterisation and amount of urine obtained if appropriate.
- Discard all waste following local policies and guidelines for clinical waste.

Procedure - Mitrofanoff Catheterisation

- Insert the catheter gently into the mitrofanoff until you meet resistance and then give it a firm push to guide it further into the bladder.
- Allow urine to drain freely.
- Move the catheter about within the bladder to drain all urine – it can help if the young person coughs while doing this as this tenses the bladder allowing more urine to drain.
- When urine stops flowing, remove catheter.
- Dry stoma site if required and insert ACE Stopper (if used) and replace clothing.
- Record time of catheterisation and amount of urine obtained if appropriate.
- Discard all waste following local policies and guidelines for clinical waste.

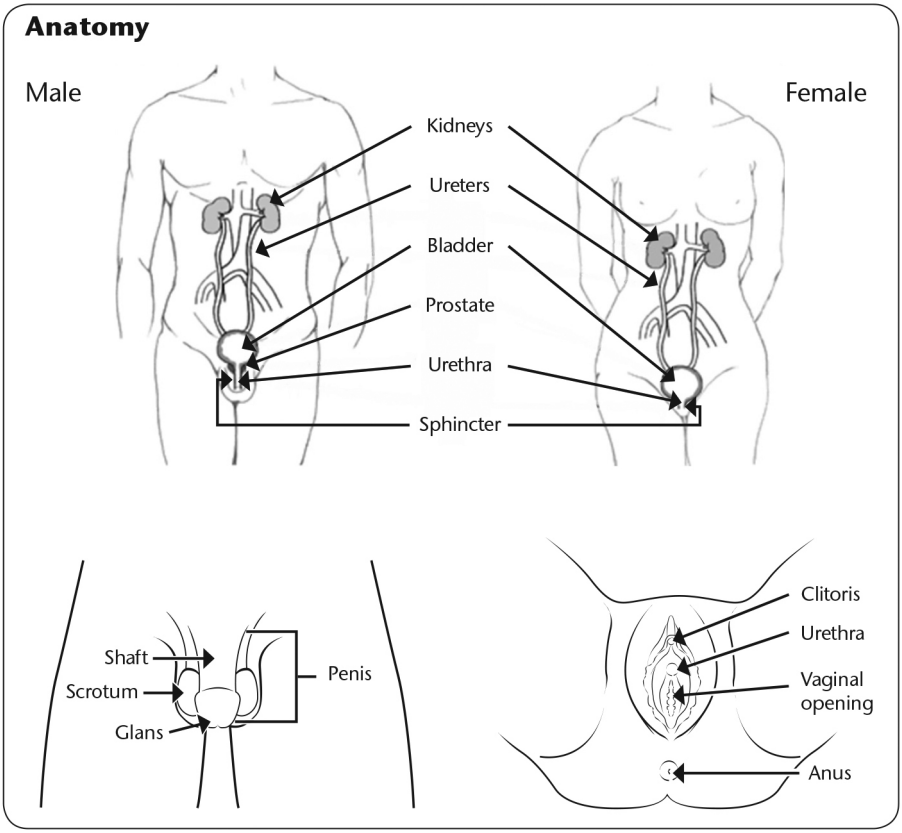
Problem solving – Female urethral catheterisation

Problem	Solution
Genital area red or inflamed, or discharge present	◆ Catheterise gently and with care ◆ Contact named Health Care Professional (if available) and contact parent/carer who should seek advice from GP
Unable to pass catheter due to resistance	◆ Attempt to repass new catheter ensuring that there is plenty of lubricant on catheter ◆ If still unable to catheterise contact named Health Care Professional (if available) and parent/carer
Unable to obtain urine on insertion of catheter into urethra	◆ Ensure catheter in correct position ◆ If first attempt fails, try once more ◆ If still unable to catheterise contact named Health Care Professional (if available) or parent/carer ◆ Arrange medical review
Bleeding evident on catheter insertion	◆ A small amount of blood can be normal ◆ If amount of blood increases or continues contact named Health Care Professional (if available) and parent/carer who should seek information from GP
Unable to pass catheter due to spasm	◆ Wait a few minutes to allow spasm to pass DO NOT FORCE CATHETER ◆ If resistance continues contact named Health Care Professional (if available) and parent/carer

Problem	Solution
Unable to withdraw	◆ Wait a few minutes to allow spasm to pass DO NOT PULL CATHETER ◆ Wait until spasm has passed then ask child to cough and remove catheter ◆ If resistance continues contact named Health Care Professional (if available) and parent/carer catheter
Stoma site red, inflamed or bleeding	◆ Passing the catheter into the mitrofanoff can sometime cause this, but it usually stops when catheter is removed ◆ If this continues contact named Health Care Professional (if available) and contact parent/carer who should seek advice from Nurse Specialist/ discharging ward at RHSC
Site leaking and sore	◆ If mucus evident, clean site and apply dry dressing to protect clothing ◆ If infection suspected contact named Health Care Professional (if available) and parent/carer to arrange for bacteriology swab to be obtained, and seek advice from GP
Unable to insert catheter Urine leaking from stoma between catheterisations	◆ Contact named Health Care Professional (if available) and parent/carer who should seek advice from Nurse Specialist/ discharging ward at RHSC
Blood evident in urine or catheter	◆ A small amount of blood can be normal ◆ If amount of blood increases or continues contact named Health Care Professional (if available) and parent /carer who should seek information from Nurse Specialist/discharging ward at RHSC

PROBLEM SOLVING – URINE

Problem	Solution
Pale, straw coloured urine. No foul smell. No pain or discomfort.	◆ No action
Concentrated. Dark urine, strong smelling. No pain or discomfort.	◆ Increase oral fluids ◆ Contact named Health Care Professional (if available) and Professional (if available) and parent/carer
Blood visible in urine. Foul smell. Pain and discomfort.	◆ Contact named Health Care Professional (if available) or parent /carer who should seek advice from GP



Holidays and travelling abroad

Essentials for Holiday

- Order supplies for length of holiday and include extra to allow for delays.
- Arrange standby course of antibiotics from GP.
- Obtain travel letter from GP or Specialist Nurse.
- Ensure appropriate travel insurance is in place.

Essentials for Travelling Abroad

- If booking flights, ensure adequate baggage allowance for supplies.
- Consider the hygiene needs of the country you are visiting.
- Appreciate the need to carry medication and catheters in hand luggage.

Glossary

ACE stopper	Small soft plug used to seal Mitrofanoff stoma
Backflow	Flow of urine in opposite direction to normal flow
Bacteria	Small organism which can cause infection
Bladder	Muscular sack where urine is stored
Bladder augmentation	Surgery to increase bladder size
Body fluids	Liquids from inside the body eg: urine, blood
Catheter	Flexible tube that can be passed into the body
Clitoris	Sexual organ situated above the opening to urethra and bladder.
Congenital	Condition present at birth
Continence	Ability to store and release urine and faeces
Foreskin	Folds of skin that cover the tip of penis
Genital	Visible sex organs eg: penis, vagina
Glans	Sensitive area at top of penis
Hypotonic	Decreased muscle tone
Intermittent	Action which stops and starts
Irrigation	Flushing
Kidneys	The organs that remove water soluble waste products from the body by producing urine
Labia	Folds of skin around vaginal opening
Mitrofanoff	Surgical procedure to make channel through skin and into the bladder
Neurodisability	Disability affecting the nervous system
Neurogenic	A problem originating from the nervous system
Penis	Male genital organ containing the urethra
Perpendicular	At right angles
Prostate	The gland situated near the penis
Retention	Urine that is unable to be released
Retract	To draw or pull back
Sphincter	Ring like muscle
Stoma	A natural or surgically created channel
Stricture	Narrow section of urethra
Ureters	The two tubes that drain urine from kidneys to the bladder
Urethra	The tube through which urine passes out of the body
Urethral meatus	The urethral opening
Urinary tract	Produces, stores and eliminates urine
Vagina	The channel leading from genital area to womb

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Contact Information

If you have any questions in relation to this training pack, please do not hesitate to contact the Integrated. Community Children's Nursing Team in NHS Lanarkshire.

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