

**PROCEDURE****TITLE:****Urinary Catheter Management- Acute Care 0-18 years.****DOCUMENT NUMBER:** 15.1**DATE DEVELOPED:** January 2012**DATES REVISED:** September 2013**DATE APPROVED:** November 2013**REVIEW DATE:** November 2017**DISTRIBUTION:**

All Clinical Areas J1, J2, H1 excluding NICU.

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Kaleidoscope Quality & Safety Committee**Keywords:** Urinary, Indwelling Catheter, Intermittent Catheter, Acute care,**Disclaimer:**

It should be noted that this document reflects what is currently regarded as a safe and appropriate approach to care. However, as in any clinical situation there may be factors that cannot be covered by a single set of guidelines, this document should be used as a guide, rather than as a complete authoritative statement of procedures to be followed in respect of each individual presentation. It does not replace the need for the application of clinical judgment to each individual presentation.

RISK STATEMENT

This local procedure has been developed to provide instruction to the healthcare worker and to ensure that the risks of harm to the patient associated with Urinary Catheters are identified and managed.

Any unplanned event resulting in, or with the potential for, injury, damage or other loss to the patient as a result of this clinical procedure must be reported through the Incident Information Management System. This would include unintended patient injury or complication from treatment that results in disability, death or prolonged hospital stay and is caused by health care management.

Open Disclosure procedures must be commenced to ensure the concerns of the patient are identified and managed in accordance with Ministry of Health Policy Directives. The Policy Directives and Guidelines for managing complaints and concerns about clinicians should be used in conjunction with other relevant NSW Health Policy Directives that govern the behaviour and actions of all staff.

INTRODUCTION

Paediatric specific catheter care was assembled to practically assist staff maintain patent, sterile, urinary drainage systems in the acute care setting.

AIM: Summary/Key Points

Indications for catheter insertion include:

1. Urinary retention
2. Incontinence
3. Monitoring of urine output
4. Trauma

The document contains management information regarding catheter:

- Insertion
- Removal

Ongoing care- including the collection of urine samples/specimens for

- Indwelling catheters
- Intermittent catheters

Note:

- Only to be performed by Accredited RN/EN only to perform after Education and Competency See appendix 1.
- Latex allergy or sensitivity may have developed in Patients after long term catheter use- use only latex free Silastic/silicone or Teflon catheter equipment
- It is advisable to change 'long term' indwelling catheters every 4 weeks. Long term urethral catheters can lead to strictures in males and incontinence in females. After 4 weeks, it is recommended that indwelling catheters should be changed. This may vary on an individual basis or according to treating Urologist recommendations.
- In the event of catheterising an aboriginal male patient- The Aboriginal Liaison officer needs to be contacted.(via JHH Switchboard, Ext: 99

ASSESSMENT – Prior to attending any of the procedures outlined below, the clinician should:

- Position the client in the bed within easy reach.
- Set up clinical equipment on a table / trolley / chair within easy reach of the procedure.
- Position equipment at a work height to avoid reaching and twisting.
- Ensure adequate lighting is available and correct PPE is worn.
- Explain in age appropriate language procedure to the child together with parent/ carer

Catheterisation

- Catheter (tubes) provide a conduit for the drainage of urine from the bladder
- Intermittent and indwelling catheters may be inserted into the urethra of both male and female patient .This procedure is attended by registered nurses and Enrolled Nurses. Staffs are required to attend a formal catheterisation Education and maintain competency in the task of catheterisation. Staff who require review of their skills or who are performing the procedure for first time should seek supervision, supplemented by a learning program.
- Irrigation of a catheter is only to be conducted by Nurses experienced in the procedure and under direct instruction from a Paediatric Urologist in accordance with the attached CPG. It is then to be documented in the patient's case notes.

Definitions:

- An indwelling catheter provides continuous drainage of urine from the bladder for the purpose of ongoing volume & content monitoring, prevention or relief of urinary retention, ongoing volume measurement in the critically ill child or to divert urine away from a surgical wound. It may also be used for short term management of a neurogenic bladder.
- Intermittent catheterisation involves inserting a catheter into the urethra at regular times. It is performed to prevent bladder distention and relieve urinary retention. It is also considered as long term management of a neurogenic bladder, which is usually due to spinal cord injury or chronic disease. Intermittent catheterisation may also be carried to collect a sterile urine specimen, or to measure any residual urine left in the bladder.
- An appendico-vesicostomy is a surgically created channel utilising the appendix or small bowel. This conduit allows access to the bladder from outside the child's body. A stoma is formed from the bowel mucosa and is this structure allows bladder access for catheterisation.
- Mitroffanoff – is a continent catheterisable stoma
- Hysteresis- ridging of a deflated balloon on a catheter. Can create urethral trauma on removal of catheter and can increase diameter of catheter size.
- Spinal Cord Injury- (SCI) damage to spinal cord or column due to injury or disease.

PROCEDURE

- Adhere to Standard precautions and principles of Asepsis
- Clean trolley with Diluted D1 detergent or alcohol wipes
- Wash hands- refer to Hand Hygiene by Healthcare Staff PD2007_036:PCP 1
- Open catheter tray onto trolley ensuring plastic drape provides a sterile field.

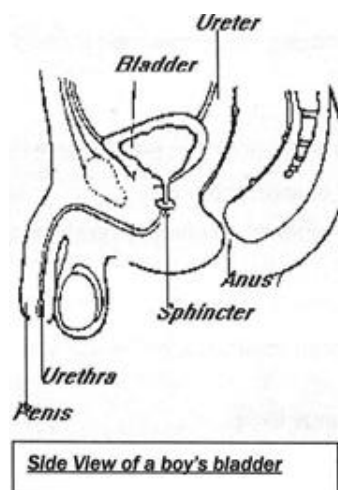


- Open catheter onto sterile field. Place lubricant into the sterile tray.
- Pour sodium chloride 0.9% over the genital area
- (Female) soak extra gauze in lignocaine 2% gel
- (Male) open lignocaine 2% pre-filled syringe or prepare 5 ml syringe with 4ml lignocaine gel
- Place blue waterproof pad under buttocks
- Don all PPE, apron and goggles
- Wash hands for 3 minutes- refer to Hand Hygiene by Healthcare Staff PD2007_036:PCP 1
- Don sterile gloves
- Draw up appropriate water volume into syringe to inflate the catheter balloon and check patency. Do not use a catheter in which the balloon does not inflate symmetrically. Allow balloon to deflate by releasing positive pressure. This reduces risk of hysteresis.
- Lubricate the catheter tip
- Place child in the supine with legs in the appropriate position.
- Examination light if necessary
- Position drape appropriately around genitalia

For Males

- Using gauze square, take hold of penis with non- dominant hand. Gently retract foreskin to reveal urethral opening. DO NOT force back the foreskin. It is not usual for the foreskin to be fully retractile in young boys.
- CONTACT RMO if the foreskin cannot be retracted.
- Swab urethral opening with a circular motion from the tip of penis radiating outwards.
- For children over 1 year of age hold the penis at a 90 degree angle to the abdomen and if an older child, refer to diagram, insert 2-4 mL of lignocaine 2% into the urethra or use gauze on the glans and leave for 3 minutes.
- Lubricate catheter prior to insertion.

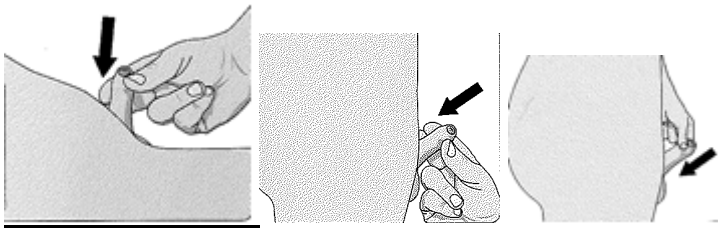
- Insert catheter through the urethral orifice 10-15cm until urine flows from the catheter. DO NOT continue if resistance occurs. Wait for the sphincter to relax (a few seconds) and again attempt to catheterise. If unable to insert the catheter, notify the RMO. (In some instances urine may not flow, due to dehydration, or the catheter tip may not be fully inserted into the bladder. Lubricant can block the eye of the catheter). Contact the RMO before continuing
- Insert catheter a further 1-2 cm to ensure non inflated balloon is clear of the urethra
- Do not use normal saline (sodium chloride 0.9%) to inflate balloon as it may crystallize and erode balloon.
- Inflate balloon with water and dispel air according to manufacturer's instructions. NOTE: Balloon volume varies with catheter size. Do not overinflate balloon. It may distort and cause pressure and pain on tissue- potentially occasioning urethral damage -particularly on removal.
- Gently withdraw catheter until resistance is met. This places the balloon just inside the bladder at the Bladder/urethral junction.
- Connect urinary drainage bag. If a urine sample/specimen is required collect at this stage before connecting bag.
- Tape catheter securely to leg or abdomen with HNELHD recommended catheterisation securing device, found in the catheter pack, to allow the penis to point upwards in the natural resting position. Securing the catheter downwards may risk urethral trauma. This position also involves less movement of the catheter when the thigh moves. Ensure there is no tension on the catheter and is free from twists and kinks, and that the catheter is loose enough to allow for spontaneous erections to occur.
- Measure urine, document in patient's case notes as well as entering data on the child's fluid balance chart
- Leave child clean and comfortable
- Dispose of equipment appropriately
- NB: Record catheter size, volume of water in the balloon, insertion date and time in the child's clinical record.



0-2 yrs

2-4yrs

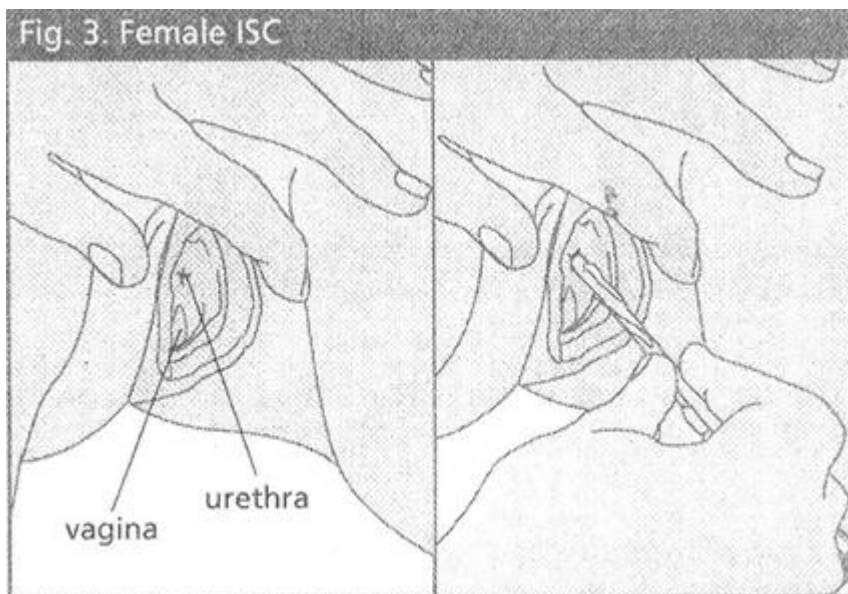
4-8yrs



LOFRIC A parents guide to Intermittent catheterisation pg 50-51

For Females

- Using non dominant gloved hand open labia to expose urethral orifice. Maintain hand in this position until the catheter has been inserted.
- Wash vulva with 30mls of sodium chloride 0.9% (normal saline)
- (If required) Place lignocaine 2% gel-soaked gauze onto urethral meatus and leave for 3 minutes.
- Lubricate catheter
- With dominant hand insert catheter 2-6 cm, age dependent, until there is flow of urine.



Nursing Standard Volume 16 Number 29

- If resistance occurs DO NOT continue. Wait for muscles to relax (a few seconds) and then retry. Contact RMO if problems persist.
- If urine is absent, patient maybe dehydrated or the catheter tip may not have passed into the bladder. If the catheter has been inserted into the vagina, leave this catheter insitu until a new catheter is successfully inserted into the urethra.
- Do not use normal saline (sodium chloride 0.9%) to inflate balloon as it may crystallize and erode balloon.

- Inflate balloon with water as per manufacturer's instructions. NOTE: Balloon volume varies with catheter size. **DO NOT over inflate** the balloon as it may distort and cause pain or tissue damage to the urethra on removal.
- Connect urinary drainage bag. If a sample/specimen is required collect at this stage before connecting bag/Valve.
- Tape catheter securely to inner thigh with HNELHD recommended catheterisation securing device . Ensure there is no tension on the catheter and it is free from twists and kinks.
- Document and enter on fluid balance chart
- Leave child clean and comfortable
- Dispose of equipment appropriately

NB: Record catheter size, volume of water in the balloon, insertion date and time in the child's clinical record.

Intermittent Catheterisation

NOTE: In the Acute setting-

- Attempt to keep to the same catheterisation times for the child, as carried out at home
- Parental guidelines utilised at home for catheterisation management, differ from the guidelines for catheterisation followed whilst the child is in the acute setting [Teaching a parent/child urinary Intermittent catheterisation for Homecare and community](#)

Equipment

- Appropriate male or female catheter

Size selection Guideline

- Babies/small children: FG6-8
- 5-10 years FG-8
- 10-12 years: FG10
- >12 years: FG12
- Sterile gloves
- Catheter pack
- Personal Protective Equipment

Procedure

- Refer to General catheterisation technique
- Insert catheter
- Reposition the child by assisting into a sitting position to aid the flow of urine
- When urine flow ceases, slowly withdraw the catheter if further until drainage occurs, pause until complete.
- Leave child clean and comfortable
- Measure urine and record urine output.

Clean intermittent catheterisation via appendico-vesicostomy

This is a procedure that has been developed to enhance the quality of life for children who, for a variety of reasons are unable to perform self-clean intermittent catheterisation through the natural urethra.

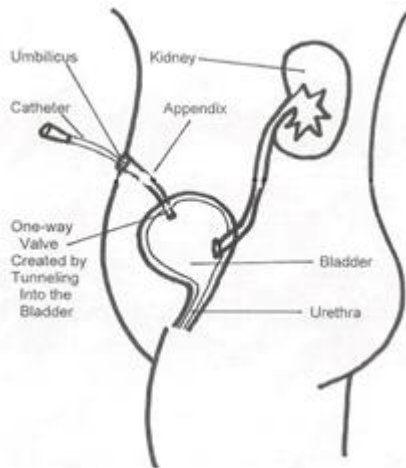
In 1980, Mitroffanoff, a French physician, described his technique for creating a continent urinary channel that can be catheterised. The technique consisted of creating a channel, using the appendix, to gain access to the bladder from outside of the body. This is done by isolating the appendix with its blood supply intact and creating an entire fluxing tunnel submucosally into the bladder wall. The colonic end is then brought to the skin and used as a stoma for catheterisation. The stoma is often located in the umbilicus. If small bowel is used, the stoma maybe situated on the abdomen.

The recommended method for catheterising the Mitroffanoff channel or appendico-vesicostomy is the clean technique used for urethral intermittent catheterisation. This procedure is usually performed by the person with the stoma, (4-5 times a day or as required), but some assistance may be required to lubricate the catheter or hold the urine collection container.

- Equipment Nelaton male length catheter of appropriate size
- Water based gel to lubricate the catheter
- Dressing pack
- Kidney dish to collect urine
- Aqueous chlorhexidine
- Sterile gloves

Procedure

- Wash hands as per - Hand Hygiene by Healthcare Staff PD2007_036:PCP 1
- Access stoma and clean with chlorhexidine
- Lubricate catheter
- Change position to ensure bladder completely drained
- Remove catheter
- Discard urine
- Wash hands



Kurtz, M et al 1996

SPECIAL CONSIDERATIONS

AUTONOMIC DYSRELEXIA PROTOCOL

INDICATIONS:

- Persons with a Spinal Cord Injury at or above the sixth thoracic (T6) level.
- Clients may present with all or some of the following signs and symptoms (Ref: NSW Health - Safety Notice 012/08):
- Pounding headache, which gets worse as the BP rises,
- Flushing or blotching of the skin / profuse sweating above SCI lesion level,
- Skin pallor and pilo-erection (goose bumps) below SCI lesion level,
- Blurred vision, nasal congestion (stiffness),
- Chills without fever,
- Shortness of breath, sense of apprehension or anxiety,
- Hypertension – BP is significantly elevated (at least 20-40mmHg above normal resting systolic level),

Causes:

- Obstructed / blocked catheter- (most common cause)
- Urinary retention/ bladder distention
- Kinked catheter bag
- Overfilled collection bag
- Catheter insertion or irrigation
- Urinary Tract Infection (UTI)

Treatment:

- Recognise the onset of the condition.
- Ask the client / carer if they suspect a cause.
- Elevate the client's head and lower their legs.
- Locate and remove or control the stimulus, if possible.

This is a Medical emergency and the patient should be monitored for pulse, respiration and BP, 4 hours post event. Check the following:

Is the urinary drainage bag full?	Yes Empty the bag.
Is the bag higher than the level of the bladder?	Lower the bag below the level of the bladder.
Is the catheter / drainage bag tubing kinked?	Remove any kinks.
Remove or change the blocked catheter using Lignocaine gel	
Empty the bladder	
Attend intermittent catheterisation.	

DISCHARGE SUPPLIES

The discharging ward/unit should supply catheterisation equipment if it is for short term (1 month only) use only.

Long term use and for patients with a permanent urological condition, are eligible for products, an application can be made to 'Enable'/CAP. Referral can be made by a Continence advisor. If the patient's condition is not permanent, the supplies can be purchased and clients should be referred to <http://www.continence.org.au/>.

Parents experiencing financial difficulty should be referred to social work, prior to the child's discharge from hospital.

LINKS

<http://www.continence.org.au/>

AREA POLICIES: A Practical Guide to: Intermittent and Indwelling Urinary Catheterisation and Closed Systems of Drainage

HNELHD CG 11_26

REFERENCES

Continence Foundation of Australia (CFA) Ltd

<http://www.continence.org.au/>

Website of the Australian peak body for people with incontinence. Services the National Continence Helpline
ph:1800 33 00 66

Bardsley A (2000) *The Neurogenic Bladder*. Nursing standard. 14, 22, 39-41

Robinson J (2009) Urinary catheterisation: assessing the Best options for patients. Nursing Standard. 23,29, 40-45

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Pomphret I (1999) *catheter care*. Primary Health Care. 9,5, 29-37

Rogers J (2000) promoting continence: the child with Special Needs. Paediatric Nursing 12,4,37-4

D'Cruz, R., Soundappan, S. S., Cass, D. T., & Smith, G. (2009). *Catheter balloon-related urethral trauma in children*. Journal of Paediatrics and Child Health, 45, 564–566.

M.Edwards, Borzyskowski, M., A.Cox, & J.Badcock. (2004). *Neuropathic bladder and intermittent catheterization: social and psychological impact on children and adolescents*. Developmental Medicine and Child Neurology, 46(3), 168-177.

Autonomic Dysreflexia Learning Package. NSW Department of Health.

<http://www.aci.health.nsw.gov.au/resources/clinician-resources>

Go to:

Spinal Cord Injury

Bladder irrigation Guidelines

<http://www.aci.health.nsw.gov.au/resources/clinician-resources>

Go to:

Urology

ACKNOWLEDGEMENTS

Children's Hospital at Westmead- Urinary Management Doc

APPENDIXES

1. Skills Assessment Checklists

SKILLS ASSESSMENT checklist : MALE URINARY CATHETERISATION

	Did the Nurse, Medical Officer, Student	Yes	No	N/A
1	Investigate alternatives to catheterisation prior to the procedure			
2	Wash hands (social wash)			
3	Explain the procedure to the patient and ensure privacy			
4	Position the disposable drawsheet under the buttocks and ensure that the patient was comfortable			
5	Wear protective eyewear			
6	Put on a plastic apron and unsterile gloves			
7	Remove catheter and dispose of it and the glove in general garbage			
8	Wash hands (social wash)			
9	Set up for the procedure using aseptic techniques			
10	Render hands surgically clean and don sterile gloves correctly			
11	Add the equipment in the manner described in the procedure. Check the balloon patency			
12	Wrap a sterile gauze swab around penis without contaminating the gloves, hold the penis in the non-dominant hand, irrigate the penis with normal saline and discard the saline pack.			
13	Drape the area with a fenestrated drape, using and aseptic technique			
14	Gently inject the entire contents of the anaesthetic lubricant into the urethra whilst raising and extending the penis			
15	Compress the urethra with the non dominant hand and wait two minutes prior to proceeding			
16	Position the tray containing the catheter between the patient's thighs			
17	Raise, extend and maintain a firm grip of the penis			
18	Insert the catheter gently, did not use force			
19	Explain strategies that may be used to overcome resistance			
20	Advance the catheter another 2-3cm, after the urine flowed			
21	Inflate the balloon AFTER the urine flowed			
22	Inflate the balloon with the correct amount of sterile water			
23	Withdraw the catheter until resistance was felt			
24	Attach an approved closed system of drainage			
25	Secure the catheter to the thigh with a thigh strap			
26	Reposition the foreskin if applicable and ensure the patient is dry and comfortable			
27	Place the disposable equipment and gloves in a plastic bag, seal the bag and dispose of the bag in the general garbage			

SKILLS ASSESSMENT: FEMALE URINARY CATHETERISATION

	Did the nurse, medical officer, student?	Yes	No	N/A
1	Investigate the alternatives to catheterisation;			
2	Wash hands (social wash);			
3	Explain the procedure to the patient and ensure patient privacy;			
4	Position the disposable draw sheet under the buttocks and ensure the patient is in a comfortable position;			
5	Put on the protective eyewear;			
6	Put on the plastic apron and unsterile gloves;			
7	Remove the catheter. Dispose of it & the gloves in general garbage;			
8	Wash hands (social wash);			
9	Set up for the procedure using aseptic technique and the method described to avoid dust or bacterial contamination of the sterile field;			
10	Render the hands surgically clean;			
11	Put on the sterile gloves correctly;			
12	Check the balloon patency;			
13	Lubricate the catheter;			
14	Cleanse the meatus correctly by separating the labia minora so the urethral meatus is seen;			
15	Drape the area with a fenestrated drape, using aseptic technique;			
16	Separate the labia, locate the urethral orifice and gently introduce the catheter, <i>did not use force</i> ;			
17	Advance the catheter another 2–3 cm, after urine flows;			
18	Inflate the balloon with the correct amount of sterile water AFTER the urine flowed;			
19	KEEP THE 'DIRTY HAND UNDER THE STERILE DRAPE UNTIL THE PROCEDURE WAS COMPLETED			
20	Withdraw the catheter until resistance was felt;			
21	Attach an approved closed- system of drainage;			
22	Secure the catheter to the thigh with the catheter strap;			
23	Place the disposable equipment and gloves in a plastic bag, seal the bag and dispose of the bag in general garbage;			
24	Ensure the patient is dry and comfortable;			
25	Record the procedure.			

Assessor Signature Assessee Signature

Date:

REVIEWED BY : Dr John Cassey, Dr Caroline Hodge, Michelle Paul- Continence Practitioner, NUMS J1 J2 H1

APPROVED BY:

CPGAG – 18th November 2013.

Kaleidoscope Quality & Safety Committee – 26th November 2013