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Urinary Catheterization of the Neonate or Child				
Signing Authority:	<i>Chief Nursing Executive</i>			
Approval Date:	24-04-2017	Effective Date:	09-08-2017	

SCOPE:

This policy and procedure applies to all regulated health care professionals who shall be inserting, caring for or removing a straight or indwelling catheter for neonates or children at the Royal Victoria Regional Health Centre (RVH).

POLICY STATEMENT:

Urinary catheterization of the neonate or child may be necessary for both diagnostic and therapeutic purposes.

1. A Most Responsible Provider (MRP) order is required to insert a straight or indwelling catheter for diagnostic or therapeutic purposes.
2. A MRP order is required to remove an indwelling catheter.
3. Insertion of a urinary catheter is limited to two attempts by the health care provider. Contact the MRP after two unsuccessful attempts.
4. Only urinary catheters shall be used for urinary catheterization. A feeding tube is not to be used as a substitute for a urinary catheter.
5. The urine culture shall be obtained prior to the initiation of antimicrobial treatment, if ordered by MRP.
6. Patients with an indwelling catheter shall receive catheter care at least once every eight hours.

It is expected that all staff shall adhere to the principles outlined in this policy.

DEFINITIONS:

Straight Intermittent catheter: A single-use, single lumen catheter used to measure post void residual, obtain a sterile specimen or to empty a bladder.

Indwelling catheter: A double lumen catheter with an inflatable balloon which keeps the catheter in place and utilizes a closed drainage system

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PROCEDURE:

Insertion of a Straight or Indwelling Urinary Catheter

Equipment

1. Cleansing equipment (mild soap, washcloth, towel and basin with warm water)
 2. Disposable catheter kit containing the following sterile items:
 - a. Sterile gloves
 - b. Three waterproof drapes (one with opening in center of drape)
 - c. Lubricant
 - d. Antiseptic cleaning agent
 - e. Cotton balls or sterile antiseptic swabs
 - f. Forceps
 - g. Prefilled syringe with sterile water (only needed if using foley catheter for indwelling purposes)
 - h. Sterile container
 3. Appropriate sized urinary catheter with drainage tubing and collection bag (see Appendix I)
 4. Multipurpose Velcro™ tube holder or non-allergenic tape
 5. Procedural gloves
 6. Pad for under baby/child
 7. Personal Protective Equipment (PPE) as per risk assessment
 8. Portable light
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1. Close curtain or door to provide privacy.
 2. Introduce yourself and the procedure to the patient and family using AIDET.
 3. Verify patient identity by utilizing two unique identifiers.
 4. Explain the anatomy and indications for the procedure to the parent/care provider to avoid parental anxiety about the manipulation of the child's genitalia.
 5. Raise bed to appropriate working height.
 6. Perform hand hygiene.
 7. Don appropriate PPE as per risk assessment.
 8. If soiling is evident, cleanse genital area with soap and warm water. .
 9. Place patient in supine position. For neonates and children, a second nurse may be needed to ensure legs do not touch the sterile set-up.
 10. The younger child may be taught to blow a pinwheel or bubbles and to press the hips against the bed or procedure table during catheterization to relax the pelvic and periurethral muscles.
 11. The older child may be distracted by reading a book, singing a song or playing with small toys in order to decrease their anxiety.

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12. Open outer wrapping of catheter kit and place inner wrapped box on easily accessible clean bedside table or easily accessible space. Place empty outer plastic wrap near end of bed for waste disposal.
13. Open sterile wrap covering box containing catheter supplies using sterile technique.
14. Drop catheter onto tray, maintaining sterility.
15. Perform hand hygiene again.
16. Don sterile gloves.
17. Open the sterile lubricant package and squeeze a small amount onto sterile wrap.
18. Place opening of sterile drape over the meatus.
19. Apply sterile lubricant jelly to the end of the catheter, and place the other end in the empty section of tray.
20. The urethral meatus shall be cleansed thoroughly with the antiseptic solution.
21. If a sterile specimen is being collected, the first drops of urine shall be discarded prior to collecting specimen in order to prevent contamination of the urine with urethral organisms or cells.

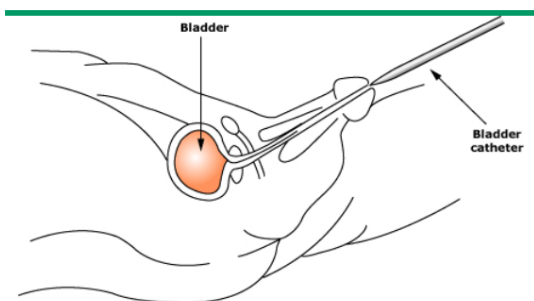
Males

1. With the non-dominant hand, lift the penis and retract the foreskin. If uncircumcised the foreskin should not be forced back, especially in infants.
2. Using the dominant hand, clean the meatus with swabs held in forceps. Use a circular motion from the meatus to the base of the penis.
3. Allow one minute for drying.
4. Hold the penis with slight upward tension and perpendicular to the child's body.
5. Insert the catheter into the urethral meatus using your fingers or forceps.
6. When the first sphincter is reached (at level of pelvic floor muscles) lower the penis 90 degrees (facing child's toes) and apply constant gentle pressure.
7. If resistance is met during insertion consider the following strategies:
 - a. Use a fresh catheter
 - b. Use more lubricant
 - c. Increase traction on penis and apply gentle pressure on the catheter
 - d. Ask the child to take a deep breath (if age appropriate)
 - e. Ask the child to cough and bear down trying to pass urine (if age appropriate)
 - f. Gently rotate the catheter
 - g. Do not force the catheter to avoid causing damage to the urethra
8. Advance the catheter and gently insert it into the urethra until urine flows.
9. If a catheter is to remain insitu and the catheter is equipped with a balloon, the balloon shall NOT be pretested by injecting fluid from the prefilled sterile water into the balloon as this may distort and stretch the balloon and lead to damage, causing increased trauma on insertion. DO NOT INFLATE the catheter balloon if unsure about the catheter's location. Assess the child for pain during inflation of the balloon.

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10. Pull the catheter back slightly until resistance is felt and attach to drainage bag.
11. Secure the catheter to the thigh.
12. For uncircumcised males, ensure the foreskin is returned to its normal position.
13. Doff PPE and perform hand hygiene.
14. Ensure the child is left dry and comfortable.
15. Document the procedure in the patient's health record.

Proper position for penis in transurethral bladder catheterization in males



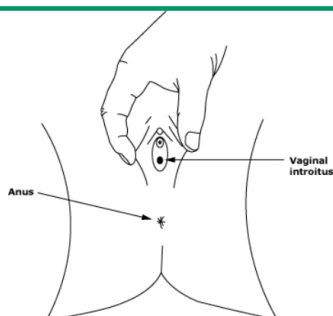
The urethra is straightened by using the nondominant hand to hold the penis perpendicular to the lower abdomen. Gentle traction is applied. The catheter is inserted with the dominant hand until urine returns.

Females

1. Place the child in supine position with knees bent and hips flexed.
2. With the non-dominant hand, fully expose the urethral meatus by spreading the labia laterally and toward the child's head.
3. The urethra may be difficult to visualize in girls. An assistant may be required.
4. If the assistant is assisting with urethral exposure, ensure that they perform hand hygiene and don sterile gloves.
5. Cleanse the perineal area from front to back from clitoris towards anus. Use a new cotton ball for each area cleansed starting from outside labia inward to centre of urethral meatus. Allow the antiseptic solution to pool in the meatus, for easier identification.
6. Allow one minute for drying.
7. Insert the catheter into the urethral meatus until urine flows.
8. If the catheter is inadvertently inserted into the vagina, leave it in place as a landmark to assist with subsequent attempts.
9. Remove catheter inserted into vagina once catheter is successfully inserted into the urethra.
10. Refer to steps 7-11 [excluding 7(c)], 13-15 for boys for remainder of steps.

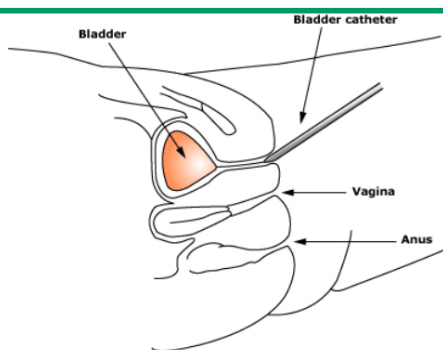
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Gentle traction of the labia majora in females to visualize the urethra



Gentle traction of the labia majora in girls facilitates the visualization of the urethra for transurethral bladder catheterization.

Catheter insertion into the bladder in females



The catheter is inserted into the urethral meatus until urine returns. Catheters that are inadvertently placed in the vagina may be left in place to serve as a landmark for subsequent attempts.

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CROSS REFERENCES:

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Appendix 1: Urinary Catheterization of the Neonate or Child
CATHETER SIZE

SIZE IN KILOGRAMS (kg)	CATHETER SIZE
All infants less than 3 kg (including preterm)	3.5–5 French
Small infant 3-5 kg	5 French
Small infant 6-7 kg	8 French
Infant 8-9 kg	8 French
Toddler 10-11 kg	8-10 French
Small child 12-14 kg	10 French
Child 15-18 kg	10-12 French
Child 19-23 kg	10- 12 French
Large child 24-29 kg	12 French
Adult 30-36 kg	12 French

Adapted from: Pediatric Resuscitation Supplies Color-Coded Length Based Resuscitation Broselow Tape. PALS Provider Manual, American Heart Association, 2016.