RA – Pediatric Clean Intermittent Urinary Catheterization

INTENT

The purpose of this procedure is to provide staff with information to make clinical decisions regarding when and how to effectively and safely perform clean intermittent urinary catheterization (CIC) in the community setting.

SITE APPLICABILITY

This procedure applies to all Resource Ability and Nursing Solutions staff working in the community setting, provided that this skill is within their professional scope of practice and that appropriate supplementary training/education has been completed where necessary. In some cases, a Delegation of Task may be required for non-nurse care providers.

DEFINITIONS

Community - Client's home, school or other "non-institutional" care area.
Catheter – A clean or sterile tube which is designed to be inserted into the bladder via the urethra or urinary diversion to drain the bladder. (Sizing should be appropriate for the age/size of the child. Fig 1.)

PRACTICE LEVEL COMPETENCIES

For clients requiring intermittent urinary catheterization, it is recommended that the client have a routine schedule, and/or a client specific urinary retention Decision Support Tool (DST). Having a schedule and/or DST supports the provision of consistent, high-quality care. The primary goals are minimizing the risks of urinary retention, namely discomfort, infection, and urinary tract damage.

RN – Urinary catheterization is a foundational skill for Registered Nurses, however specific knowledge of pediatric anatomy, physiology and associated practice adaptations should be developed through education, preceptorship, and clinical practice as needed.
LPN – LPN's may insert urinary catheters after completing additional education and training as per their BCCNM Scope of Practice (Standards, Limits, and Conditions Restricted Activities with Orders #12).
Non-Nurse Provider – limited scope, only able to perform skill with extensive training and a delegation of task in place.

Intermittent urinary catheterization requires a Physician/NP order

Staff are responsible for ensuring that their competence in a foundational or advanced skill is maintained.

CONTRAINDICATIONS

(These generally require medical assessment as catheterization could exacerbate an existing problem)

- Gross hematuria (Blood in the urine)
- Blood or tissue trauma at the meatus or drainage site
- Evidence of infection (Pain, swelling, redness, fever)
- Urethral or drainage site pain or discomfort
- Ambiguous or Abnormal Genitalia unless determined safe by a physician.

EQUIPMENT

1) Clean work area and access to a sink for handwashing (Ideally a washroom)
2) If a washroom is not available, you will also require a receptacle for urine collection
3) Clean non-sterile gloves (A client who is independently performing the procedure only requires good handwashing)
4) Peri care supplies: Cloth, soap, water, towel, or pre-packaged Peri-wipes
5) Sterile water-based lubricant
6) Clean or Sterile catheter depending on the Childs care-plan and equipment supply.

Fig 1.

AGE	Male Catheter Size	Female Catheter Size	Maximum Urine volume expected
Newborn	5fr	5-6fr	<50mls
Infant	5-6fr	6-8fr	50mls
Toddler/Pre-School Age	8-10fr	8-10fr	75-100mls
School Age	8-10fr	8-10fr	100-200mls
Adolescent	12fr	12-14fr	300-400mls

Note 1: The smallest appropriate catheter should be used to minimize potential tissue trauma while ensuring the effectiveness of the procedure.
Note 2: If a catheter smaller than 6.5fr is required, an umbilical vessel catheter should be used and not a feeding tube. Feeding tubes have been documented to coil and knot in the bladder.

PROCEDURE

Step	Rationale
1. Assess the need for bladder drainage and/or follow established schedule. **Indications may include:** - No or little urine output in 'X'-hours based on client's care plan. - Abdominal/Pelvic/low back discomfort - Complaint of spasm like pain - Dribbling or urine leakage in a client who requires regular CIC. - Irritability/restlessness - Palpable bladder on assessment	- Assessing the need for bladder drainage in a client with inability to adequately drain their bladder is essential to prevent infection and permanent damage to the urinary tract. - Following an established bladder drainage schedule is important for the same reasons. - If you anticipate activities that will interfere with the schedule, you are better to drain the bladder earlier than later and adjust the schedule accordingly.
2. Explain the procedure to the client as appropriate so they are aware and able to participate to the best of their ability.	- Ensure that the client is prepared for the procedure. Maintain dignity and privacy, especially when in environments such as school.
3. Gather supplies. -Catheter (Always have a spare catheter available) -Lubricant -Soaker Pad/Blue Pad -Peri-care supplies (Soap/cleanser, cloths/wipes, towel) -Gloves -Collection receptacle	- Have spare supplies available, especially a catheter in case of defect or damage. You should always have a back-up.

4. Perform Hand Hygiene #1 and don non-sterile gloves. *Have the client perform hand hygiene if they are assisting with the procedure.	- CIC is a clean procedure, and although not sterile, taking care to reduce the potential for infection is very important.
5. Position the client comfortably. Have the client do, or assist with peri-care, as appropriate. - Female clients typically require a hip abducted; knee bent position (frog legged) to access the urethra more easily. Male clients can be supine or seated as long as you have access to the meatus. - With uncircumcised males under the age of 6y, only retract the foreskin enough to visualize the urethra.	- Cleaning the area around the urethra (Meatus for males, and vulva for females) further reduces the risk of infection. - Optimal positioning increases the likelihood of successful catheterization. - Fully retracting the foreskin in uncircumcised male clients can lead to balanitis if unable to return the foreskin over the glans. The foreskin is usually fully retractable between the ages 2-6y.
6. Perform Hand Hygiene #2	- To reduce the risk of infection after performing peri-care.
7. Prepare catheter. - Open the catheter package (Leaving it in the clear portion of the wrapper - Open the lubricant and liberally apply to the first 2 inches of the catheter.	- Keeping the catheter clean until use reduces the risk of infection - Using the correct amount of lubricant allows easier insertion with reduced risk of injury or discomfort.
8. Don new non-sterile gloves.	
9. Insert the catheter into the urethra or drainage site. There should be minimal resistance until you reach the urinary sphincter. - Once you feel resistance at the urinary sphincter, pause, ask the client to take a deep breath if able, and then advance the catheter past the sphincter with gentle pressure. - Allow bladder to fully drain into the toilet or receptacle. Be sure to hold the catheter the entire time, to prevent dislodgement.	- Often the urinary sphincter will constrict briefly. By pausing for 1-2seconds, and having the client take a deep breath, you allow it to relax, thereby making it easier to pass the catheter. <u>*NEVER force the catheter if significant resistance is met</u>. *Only insert catheter deep enough to evacuate urine +1cm. Advancing further increases the risk of trauma to the bladder and coiling the catheter.
10. - Instruct client that you are going to remove the catheter and do so in one gentle motion. - Male clients, ensure the foreskin is returned to its resting position over the meatus - Provide peri-care/clean up as required	- Good communication reduces stress and anxiety and can also reduce discomfort as the client knows what to expect and when.
11. Dispose of supplies in regular garbage	- Reusable catheters should be washed with warm soapy water <u>after each use</u> and stored in a zip-lok bag.

	*Additionally, catheters should be washed and allowed to air dry once per day.
12. Perform hand hygiene and assist the client to do so.	Assisting the client to participate in any aspect of self-care is beneficial for their development and independence, even if it's just the routine of washing hands after using the washroom.

References:

https://www.sciencedirect.com/topics/medicine-and-dentistry/intermittent-catheterisation?msclkid=b7cae322a6f011eca525987d15dc9b7a

https://www.saskatoonhealthregion.ca/about/NursingManual/1024.pdf?msclkid=b7cc0e6fa6f011ecbdb1af5d67764cc2

https://ipac-canada.org/photos/custom/Members/pdf/VirtualNSWOC-IC-BPR-2020-Slides.pdf?msclkid=c78adc3ea70211ec8a1cc841fd603970

https://www.nhs.uk/conditions/phimosis/?msclkid=0df7f0a3a70d11ec9542c1e8689870e0