Developed by the BC Provincial Nursing Continence Committee in collaboration with NSWOCs/NCAs from:

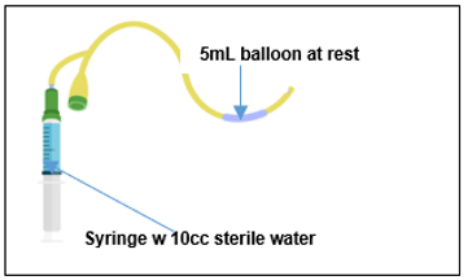
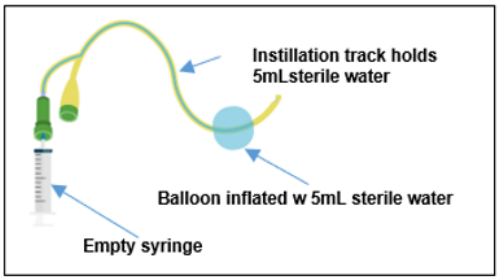
First Nations Health Authority | fraserhealth | Interior Health | island health | northern health | Provincial Health Services Authority | Vancouver Coastal Health / Providence Health Care | Yukon

Urethral Catheter Insertion & Removal (Sterile): Procedure

Endorsement **British Columbia & Yukon**	• Endorsement done: • Endorsement pending: FNHA, FHA, ISLH, IHA, NHA, PHSA, VCH/PCH & Yukon; until endorsement has been granted by your HA, please follow your HA's current document.

DST Indications for Use	• This Decision Support Tool (DST) guides nurses in the insertion and removal of an indwelling or sterile in&out urethral catheter (straight-tipped or curved-tipped, also known as coude) for an adult or pediatric client in all care settings.
	• This DST **does not** provide direction for:
	  ○ Clean intermittent catheterization.
	  ○ Urinary continence diversions, (e.g., neobladders, Kock's pouch) catheterization.

Practice Level
British Colombia as per HA Health Professions Act (HPA) Leads
	British Columbia:
	Nurses may insert and remove a sterile urinary catheter, either indwelling or intermittent 'in&out':
	• When the practice is supported for their designation:
	  ○ By BCCNM's scope of practice and any limits and conditions.
	  ○ By their Health Authority (HA)/agency's organizational policies/standards.
	• Within their individual competency to perform the activity.
	Registered Nurse (RN):
	• Entry-level skill: straight-tipped and curved-tipped catheter.
	Registered Psychiatric Nurse (RPN):
	• Entry-level skill: straight-tipped and curved-tipped catheter.
	Licensed Practical Nurse (LPN):
	• Entry-level skill: straight-tipped catheter.
	• With additional education: curved-tipped catheter.
	Yukon:
	• RNs, PRNs and LPNs refer to organizational policies and practice in accordance with regulatory bodies.

Education & Competency	• See Education Requirements & Competencies (ER&C) – Curved Tipped Catheter Insertion & Removal Learning Plan and Competency Checklist.
Need to Know	• A urethral catheter can be used for either short-term or long-term management (i.e., greater than 28 days) of urinary drainage. • Selection of the size and type of catheter is client-specific (see Catheter Selection QRG (TBD) • Curved tipped catheters, (e.g., Coude, Tiemanns) should be considered for those with a male anatomy (see Appendix A) who have a diagnosed condition of benign prostatic hypertrophy (BPH), prostate cancer, acute prostatitis, bladder neck stenosis. Curved tipped catheters are rarely used for those with a female anatomy (see Appendix B). • Normal saline is not to be used to fill the catheter's balloon as saline weakens the wall of the balloon causing leaking and the balloon to deflate. • The manufacturer's recommended amount of sterile water for instillation considers the size of the balloon (e.g., 5cc) and the amount of water, (e.g., 5mL) for the instillation track, (the length of the catheter from the instillation port to the balloon).  

	• Due to the catheter balloon's permeability, in particular silicone catheters, over time small amounts of sterile water evaporate from the balloon. This leads to less sterile water being removed from the balloon than what was instilled at the time of insertion.
	• For clients with a spinal cord injury of T6 or higher, autonomic dysreflexia may be triggered the removal and/or insertion of the urethral catheter, bladder spasms or partial or fully blocked catheter. If this critical medical event occurs in any setting, follow established HA guideline or client-specific care plan for treatment.
	• Lichen planus, lichen sclerosus, genital psoriasis and genital eczema are genital inflammatory skin conditions that can cause the skin around the urethral opening to be fragile and itchy; gentle cleansing of the area is needed with HA approved no-rinse skin cleanser, tap water or normal saline; avoid the use of antiseptic cleansers.
	• See the Urethral Catheter Care & Management Guideline (TBD) for the following:
	  ○ Determining frequency of catheter change
	  ○ Management of catheter encrustations
	  ○ Management of catheter bypassing
	  ○ Management of catheter blockage
	  ○ Assessment for suspected urinary tract infection

Bookmarks	Equipment & Supplies: Insertion Equipment & Supplies: Removal Procedure: Insertion for Indwelling or In&Out Catheter for Female Anatomy Procedure: Insertion for Indwelling or In&Out Catheter for Male Anatomy Procedure: Removal of Indwelling Catheter Transition/Discharge Planning Client/Family Education & Resources Client Clinical Outcomes Documentation Definitions Bibliography/References Document Creation/Review/Endorsement Date Appendix A: Male Urinary Anatomy Appendix B: Female Genital-Urinary Anatomy Appendix C: Troubleshooting Tips Appendix D: Features for Determining Upright Position of Curved Tip Catheter
Related Documents ER&C = Education Requirements & Competencies	ER&C Learning Plan: Insertion & Removal of a Curved Tipped Urethral Catheter ER&C Competency Checklist: Insertion & Removal of a Curved Tipped Urethral Catheter Guideline: Determining Need for Urinary Catheterization TBD Quick Reference Guide: Selecting the Appropriate Urinary Catheter TBD Guideline: Care & Management of a Urethral Catheter TBD Procedure: Suprapubic Catheter Insertion & Removal Procedure: Clean Intermittent Catheterization TBD Procedure: Urine for Culture & Susceptibility TBD Documentation: Indwelling Urethral or Suprapubic Catheterization Flow Sheet Documentation Guide: Indwelling Urethral or Suprapubic Catheterization Flow Sheet

Equipment and Supplies: Catheter Insertion

- Personal protective equipment (PPE) as per point of care risk assessment i.e., safety glasses, gown/apron and mask.
- Surface cleaning and disinfecting wipes (agency approved).
- No-rinse skin cleanser and cloths/wipes.
- Clean gloves.
- Procedure pad.
- Sterile gloves.
- Sterile 10x10cm gauze package (used to maintain the sterility of non-dominant sterile gloved hand).
- Catheterization supplies: some or all of the following may come in a prepared kit (check the packaging for the list of the kit's contents), the remaining supplies need to be gathered from the supply room shelf:

- Sterile gloves.
- Sterile procedure forceps x 2.
- Sterile graduated collection basin.
- Sterile procedure drape.
- Sterile fenestrated drape.
- Sterile lubricant jelly at least 5mL.
- Sterile C&S container (if C&S ordered).
- Sterile cotton balls/gauze/swabs.
- Sterile plastic cup.
- Cleansing solution as per HA, (e.g., Chlorhexidine, Povidone Iodine or sterile Normal Saline). If using an antiseptic, check for client sensitivity/allergy and genital skin conditions).
- Sterile catheter:
  - Indwelling or in&out; for indwelling catheter, appropriately sized balloon (3mL, 5mL, 30mL).
  - Straight tipped or curved-tipped for male if needed.
- Second sterile catheter, one FR size smaller, to have on hand in case of difficulty inserting first catheter.
- Sterile syringe and sterile water for instillation of manufacturer's recommended amount (see packaging) of sterile water for the size of the balloon, i.e.:
  - 3cc balloon – 5mL syringe and 5mL sterile water.
  - 5cc balloon – 10mL syringe and 10mL sterile water.
  - 30cc balloon – 35mL syringe and 35mL sterile water.
- If doing a catheter change, an appropriately sized syringe to remove the instilled sterile water.
- For indwelling catheter:
  - Urine drainage bag; 2L, 2L with uro-meter, leg bag (500ml, 750mL, 1500mL), 4L, 4L with uro-meter.
  - Catheter stabilization device or hydrocolloid strip or tape.

- Blunt nosed scissors to check for encrustations.
- Procedure light or flashlight.
- Urine collection container if amount anticipated is greater than what the kit's collection basin can hold.
- If required, Lidocaine (Xylocaine) 2% gel (e.g., Uro-Jet 5mL or 10mL sterile prepared syringes); gel must not be decanted. **Refer to HA policy for need for client specific order or Nurse Initiated Action (NIA).**
  - Anesthesia of male anatomy urethra: 5 to 30mL (100 to 600mg), start with 10mL dose and increase based upon client discomfort.
  - Anesthesia of female anatomy urethra: 3 to 5mL (60 to 100mg) usual dose is 5mL.
  - Sterile 2x2 gauze if lidocaine gel is for female application.
  - Cooling the lidocaine gel to 4°Celcius (39°F) may reduce stinging.

Note: In community, clients provide the catheter, drainage bag and stabilization device.

Equipment and Supplies: Catheter Removal

- Personal protective equipment (PPE) as per point of care risk assessment.
- Surface cleaning and disinfecting wipes (agency approved).
- No-rinse cleanser, cloth/wipe.
- Clean gloves.
- Sterile syringe, such as 5mL,10mL or 30mL, depending upon the catheter balloon size.
- Procedure pad.
- Blunt-nose scissors for checking for encrustations.

Other Resources for Insertion/Removal

Determine if a second nurse is needed to assist:

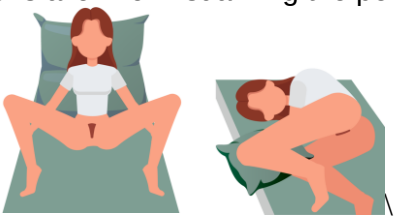
- Client has mental health concerns, cognitive issues, need for skin fold traction, assistance with positioning and/or assistance with visibility of site.
- As per HA policy.

Insertion of Indwelling or In&Out Catheter for the Female Anatomy: Procedure

For Procedure for Male Anatomy, click here
For Procedure for Removal of Catheter, click here

Steps	Rationale/Key Points

1. Review the orders and current care plan re concerns related to previous insertions:
• Check current care plan re for purpose of catheterization and size/type of catheter needed.
• Check chart for client's allergies/sensitivities for latex; if noted, use a silicone-coated catheter.
• Check chart for documentation of genital psoriasis, genital eczema, lichen planus or lichen sclerosus in the genital area; if noted, use normal saline as the skin cleanser (not an antiseptic cleanser).
• If the procedure is to change the catheter:
  ○ Review chart for amount of sterile water instilled into the catheter balloon when inserted.
  ○ Assess for S&S of urinary tract infection to determine if specimen is needed.
	The smallest size of catheter should be use, see Selecting the Appropriate Urinary Catheter: Guide (TBD), unless otherwise ordered, to reduce urethral trauma and blockage of the mucous-containing urethral glands that lubricate the urethral tract.

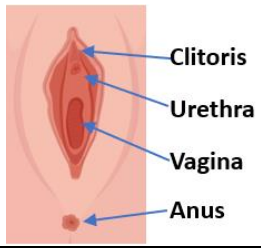
2. Prepare the client: • Explain the procedure to client/family keeping in mind the concepts of Trauma Informed Practice and, where appropriate for the client, Indigenous Cultural Safety, obtain verbal consent (if possible). • Discuss with client re anxiety regarding the procedure and/or overall pain; consult with MRP as needed and provide appropriate medication(s), allow time for medication(s) take effect. • If client has a history of pain associated with urethral catheter insertion, offer Lidocaine 2% gel, ensure client is not allergic/sensitive to the gel or has urethral mucosal damage.	Providing management strategies, (i.e., reassurance, education, diversion (listening to music, watching a video), medication) can assist with mitigating anxiety and/or pain. If client has a history of pain with catheter insertion, the use of Lidocaine Gel 2%, as per HA policy, may minimize the pain. Mucosal damage can allow for systemic absorption of the lidocaine.
3. Set up equipment and workspace: • Gather the equipment. • Clean/disinfect the work surface. • Perform hand hygiene and don clean gloves/PPE.	Plan to have two nurses if needed or as per HA policy.
4. Position the client: • Ensure client privacy. • Position supine with knees bent, feet 60cm apart (approximately) and legs relaxed outward (frog position) **or** side-lying with one leg bent and on a pillow. Ensure client comfort. • Place procedure pad under the buttocks. • Use a towel/blanket to provide privacy to the area. • Set up procedure light if available to illuminate the perineum or have second nurse hold flashlight. • Remove gloves, perform hand hygiene. • Don clean gloves.	Positions allow for visualizing the perineum. 
5. Prepare the peri-area: • Cleanse peri-urethral area with cloth/wipe well-dampened with warm water and no-rinse cleanser. Pat dry. • Note any erosion or trauma to the urethra opening.	Cleansing removes external micro-organisms reducing the risk of CAUTI. If erosion/trauma noted, ensure stabilization of new catheter Is not in an area of concern. If entire urethra opening is damaged, consult MRP.

Steps	Rationale/Key Points
6. Apply Lidocaine Gel, if using (see HA policy): • Assess the urethral opening and immediate surrounding skin for <u>open</u> areas; if noted, do not apply lidocaine gel. • Insert the tip of the syringe into the meatus and instill approximately ¾ of the dose of gel. • Remove the tip from the meatus and apply the remaining gel to the outside of the meatus. • Tuck sterile gauze into the inner labia to hold gel in place. • Wait 5-10 minutes for lidocaine to take effect. • Remove clean gloves and perform hand hygiene. • Don clean gloves.	Lidocaine can be absorbed through open areas of the skin leading to systemic absorption of the lidocaine. Inform the client stinging may occur. Cooling the lidocaine to 4°Celcius (39°F) may reduce stinging. The effect of Lidocaine lasts approximately 30 minutes.

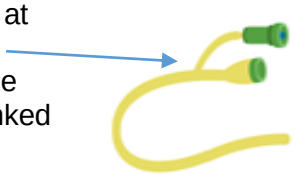
7. Set up the work field:
Sterile field:
• Remove catheter insertion kit's outer packaging and place on bedside table.
• Open the sterile tray and organize contents.
• Place cotton balls/gauze in cup and pour in cleansing solution or open package of prepared swabs.
• Add sterile catheter to the field.
  ○ Check the instillation port for manufacturer's recommended volume of sterile water.
  ○ Note, some insertion trays provide the sterile catheter already connected to a sterile drainage bag which is to be placed on the sterile field.
• Ensure syringe is filled with the appropriate amount of sterile water for the catheter balloon.
• If a urine sample is required, place the specimen container on outer edge of the sterile field,
Non-sterile work field:
• Ensure second catheter (one size smaller FR) is within reach outside of the sterile field. Do not remove the catheter from its sterile wrap unless catheter is needed.
• If using a new drainage bag; remove it from the package, close the spout, leave the sterile connector cap on, and place it beside the sterile field.
• If using drainage bag, place stabilization device or catheter strap (leg bag) and/or tape beside the sterile field.
• Remove clean gloves; perform hand hygiene.
	Maintain sterility of the field when adding sterile catheter.
	
	If the specimen container is supplied separate from the catheter insertion kit, the outside of the container is not sterile.

8. Prepare the sterile catheter: • Don sterile gloves. • Open the catheter's protective wrap and expose the tip of the catheter, leave the remaining length of catheter in the wrap if possible. • Lubricate the upper 1/3 of the catheter with a good amount of lubricant jelly and place on a surface that will not absorb the lubricant, (e.g., graduated collection basin).	Indwelling catheter balloons **are not** to be pre-inflated as a test. The balloon does not collapse to its pre-inflated small size that can cause pain and/or trauma with the insertion. A well-lubricated catheter tip slides into the urethra with less discomfort.

Steps	Rationale/Key Points
9. Drape peri-urethral area: • Place sterile fenestrated drape around peri-urethral area. Place the sterile procedure drape to set up a sterile field near the peri-area, (e.g., between the client's thighs).	If sterility of the gloves is compromised when placing the drapes, change gloves.

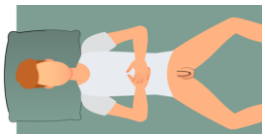
10. Cleanse the urethral meatus:
• Using non-dominant hand with sterile 10x10cm gauze(s) gently separate labia to fully expose the meatus.
• With sterile procedure forceps in dominant hand, pick up a cotton ball/gauze/swab moistened with cleansing solution and cleanse the labia and urinary meatus from:
  ○ Outside to the inside.
  ○ Clitoris (front) down to anus (back).
  ○ Use one moistened cotton ball for each area: the outer labial folds, inner labial folds, and over the centre of urethral meatus.
• Keep the cleansed labia separated with non-dominated hand and sterile 10x10cm gauze.
	Sterile 10x10cm gauze(s) will maintain sterility of the sterile-gloved hand. Once non-dominant hand is in position, do not remove.
	Take care when separating the labia not to cause trauma to the area, in particular with older clients who may have varying degrees of vaginal atrophy.
	 

11. Insert the lubricated catheter: • With the free hand, position graduated collection basin between the thighs or buttock if side-lying. • Hold the catheter 7.5 to 10 cm from the tip, curl remaining length in palm of hand. • With non-dominant hand, apply gently traction upward on the labia to expose the urethral meatus. Ask client to either bear down gently as if to void, or cough. If needed and if second nurse present, use flashlight to visualize the urethral opening. • Slowly insert the catheter 5 - 7.5 cm (2-3 inches) until urine flows out the catheter. • Ask client to stop bearing down and advance catheter an additional 2.5 - 5 cm (1-2 inches) • Release labia; discard used 10 x10cm gauze(s). • Use non-dominant sterile hand to hold catheter in place.	Gently bearing down or doing a cough helps visualize the urinary meatus and promotes relaxation of the external urinary sphincter, aiding initial catheter insertion. Initial urine flow indicates the catheter is resting in the bladder or upper urethra but not necessarily that the catheter's balloon is in the bladder. Advancing the catheter an additional 2.5 - 5cm will ensure the balloon is sitting in the bladder. Holding the catheter prevents accidental expulsion should the bladder go into spasm. If have difficulty with insertion see Troubleshooting Tip – Inserting Catheter
12. Observe for urine output: • Ensure the catheter drains into the graduated collection basin. • Collect C&S if ordered. • Empty the bladder. • Set aside the collection basin for emptying later. For In&Out Catheter: • Slowly remove the catheter. • Go to Step #17.	If no urine output, see Troubleshooting Tip – No Urine Flow Remove slowly to prevent bladder spasms.
13. Inflate catheter balloon (indwelling only): • Attach the pre-filled syringe of sterile water to the balloon port. • Slowly instill the full amount of recommended	Instillation of the full amount of recommended volume of fluid is needed to ensure correct inflation of the catheter balloon.

Steps	Rationale/Key Points
volume of fluid. • Gently pull the catheter out until resistance is felt, then slightly advance the catheter back into the bladder.	Over-inflation or under-inflation of the balloon can lead to distortion in the balloon, which can cause the tip of the catheter to irritate the bladder wall, as well as occlude the eyelets of the catheter. Bladder/urethral outlet damage may also occur. Gently pulling the catheter out, followed by a slight advance back into the bladder, ensures the balloon is sitting properly in the neck of the bladder. If have difficultly. see Troubleshooting Tip - Inflating Balloon
14. Connect the drainage bag: • Ensure the spout on the bag is closed. • Remove the drainage bag tubing cap. • Maintaining sterility, connect drainage bag to catheter. ○ If the leg bag is the primary drainage bag and needs to be positioned on the client's calf then connect the catheter and the leg bag with the leg bag's sterile extension tubing.	The extension tubing provides addition length to the drainage system, allowing the leg bag to be positioned on the calf.
15. Stabilize the catheter: • With the client, determine if the catheter is to be positioned on the left or right **upper** thigh (not lower leg): ○ If erosion/trauma is present on the urethral opening ensure position of catheter is in a non-affected area. • Ensure minimal traction on the catheter but allow some slack in the catheter. ○ If using a stabilization device, apply the device in the chosen position and secure the catheter at its point of bifurcation into the stabilization device. ○ If using hydrocolloid strip or tape, lay the catheter in the chosen position and apply tape just above and below the point of bifurcation.	Stabilization of the catheter is required to minimize the pull on the catheter that can lead to irritation of the balloon on the bladder opening and friction on the urethral meatus that can lead to trauma and/or growth of hyper-granulation tissue. Slack in the catheter is needed to prevent pulling whenever the client's leg position is changed, (e, g., lying to sitting). Securing the catheter at its point of bifurcation limits the chance of the catheter becoming kinked or being accidently removed. 
16. Position drainage bag for proper drainage: • 2L or 2L with uro-meter: ○ Position drainage bag lower than the bladder. ○ Coil tubing, ensure tubing is not kinked. Clip tubing to hold it in place, (e.g., bedsheet). ○ Hang the bag, (e.g., from the bedframe); ensure bottom of bag is not touching the floor. • Leg bag: ○ Secure leg bag to client's limb using the strap. • Ensure tubing is not kinked.	Kinking of the tubing will prevent urine flowing.
17. Provide client hygiene: • Remove drape; pat perineum dry. • Provide clean gown/clothing as needed.	

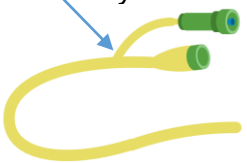
Steps	Rationale/Key Points
18. Clean up workspace: • Empty collection basin, measure and document the amount of urine, if needed. • Discard tray and used supplies as per agency policy. • Remove gloves/PPE; perform hand hygiene. • Document care provided.	See Documentation for charting details.
19. Monitor client for post-procedural: • Discomfort/pain. • Bleeding. • Allergic reaction to either the antiseptic solution, catheter material or lidocaine if used.	Mild discomfort or spasm may be experienced. If lichen condition worsening following catheterization, refer to MRP for a potent corticosteroid. Troubleshooting Tip - Bleeding

Insertion of Indwelling or In&Out Catheter for the Male Anatomy: Procedure **For Procedure for Female Anatomy, click here** **For Procedure for Removal of Catheter, click here**	
Steps	**Rationale/Key Points**
1. Review the orders/current care plan re concerns related to previous insertions: • Check current care plan re for purpose of catheterization and size of catheter needed. • Check chart for client's allergies/sensitivities for latex; if noted, use a silicone-coated catheter. • Check chart for documentation of genital psoriasis, genital eczema, lichen planus or lichen sclerosus in the genital area; if noted, use normal saline as the skin cleanser (not an antiseptic cleanser). • If the procedure is to change the catheter: ○ Review chart for amount of sterile water instilled into the catheter balloon when inserted. ○ Review chart for anti-anxiety or pain medication needed with previous changes. ○ Assess for S&S of urinary tract infection to determine if specimen is needed.	The smallest size of catheter should be use, see Selecting the Appropriate Urinary Catheter: Guide (TBD), unless otherwise ordered, to reduce urethral trauma and blockage of the mucous-containing urethral glands that lubricate the urethral tract.
2. Prepare the client: • Explain the procedure to client/family keeping in mind the concepts of Trauma Informed Practice and, where appropriate for the client, Indigenous Cultural Safety; obtain verbal consent (if possible). • Discuss with client re anxiety regarding the procedure and/or overall pain; consult with MRP as needed and provide appropriate medication(s), allow time for medication(s) take effect. ○ If client has a history of pain associated with urethral catheter insertion, offer Lidocaine 2% gel but ensure client is not allergic/sensitive to the gel or has urethral mucosal damage.	Providing management strategies, (i.e., reassurance, education, diversion (listening to music, watching a video), medication) can assist with mitigating anxiety and/or pain. If client has a history of pain with catheter insertion, the use of Lidocaine Gel 2%, as per HA policy, may minimize the pain. Mucosal damage can allow for systemic absorption of the lidocaine.

Steps	Rationale/Key Points
3. Position the client: • Position in supine position with legs extended and slightly apart, hips slightly abducted. • Place procedure pad under the penis. • Perform hand hygiene, don clean gloves/PPE.	Supine position supports comfort and visualization of the penis. 
4. Prepare the peri-area: • Cleanse peri-urethral area with warm water dampened cloth/wipe and no-rinse cleaner. Pat dry. ○ For an uncircumcised penis, gently pull back the foreskin to cleanse the glans penis. • Note any erosion or trauma on the urethra related to the stabilization of the catheter.	Cleansing removes external microorganisms reducing the risk of CAUTI. If unable to retract the foreskin (phimosis) stop the procedure and advise MRP of the situation. If erosion/trauma noted, ensure stabilization of the new catheter is not in area of concern. If entire urethra opening is damaged, consult MRP.
5. Apply Lidocaine Gel, if needed (see HA policy): • Assess the urethral opening and immediate surrounding skin for open areas; if noted, do not apply lidocaine gel. • Assess urethral opening for mucosal damage; if noted, do not proceed with application. • Holding the shaft of the penis at 90 degrees to the body; insert tip of the syringe into the meatus and instill approximately 10ml of- additional gel; add up to 30mL, as per client's discomfort. • Remove tip of the syringe from the meatus and apply remaining gel to the outside of meatus. • Use cloth/wipe to position penis at 90 degrees. • Wait 5-10 minutes for the lidocaine to take effect. • Remove gloves and perform hand hygiene. • Don new clean gloves.	Do not use if client is allergic to the product. Lidocaine can be absorbed through open skin leading to systemic absorption of lidocaine. Inform the client stinging may occur. Cooling the lidocaine to 4°C / 39°F may reduce stinging. The upright position will ensure the gel will travel down the urethral track. Lidocaine is effective for approximately 30 minutes.
6. Set up the work field: Sterile field: • Remove catheter insertion kit's outer packaging and place on bedside table. • Open the sterile tray and organize contents. • Place cotton balls/gauzes in cup and pour in cleansing solution or open package of prepared swabs. • Add sterile catheter to the field. ○ Check the instillation port for manufacturer's recommended volume of sterile water. ○ Note, some insertion trays provide the sterile catheter already connected to a sterile drainage bag which is to be placed on the sterile field. ○ For a curved tipped catheter, check the catheter for a design feature that ensures the tip is up as it is being inserted. • Ensure syringe is filled with the appropriate amount of sterile water for the catheter balloon. • If a urine sample is required, place the specimen container on outer edge of sterile field.	Maintain sterility of the field when adding sterile catheter. For indwelling catheters, the tip curves towards the balloon instillation port side of the catheter. Some indwelling catheters also have a design feature, such as a bump, on the drainage port to show the direction of the tip. In&out catheters may also have similar design features, see Appendix D. If the specimen container is supplied separate from the catheter insertion kit, the outside of the container is not sterile.

Steps	Rationale/Key Points
Non-sterile work field: • Ensure second catheter (one size smaller FR) is within reach outside of the sterile field. Do not remove the catheter from its sterile wrap unless catheter is needed. • If using a new drainage bag; remove it from the package, close the spout, leave sterile connector cap on and place it beside the sterile field. • If using drainage bag, place stabilization device or catheter strap (leg bag) and/or tape beside the sterile field. • Remove clean gloves; perform hand hygiene.	
7. Prepare the sterile catheter: • Don sterile gloves. • Open the perforated end of the catheter's protective wrap; leave the remaining length of catheter in the wrap. • Lubricate upper 1/3 of the catheter with lubricant jelly and place on a surface that will not absorb the lubricant, (e.g., graduated collection basin).	Indwelling catheter balloons **are not** to be pre-inflated as a test. The balloon does not collapse to its pre-inflated small size that can cause pain and/or trauma with the insertion.
8. Cleanse the urethral meatus: • Place procedure drape over upper thigh/peri-area and the fenestrated drape around penis. • Using non-dominant hand, pick up a sterile 10x10cm gauze(s) and gently grasp the shaft of the penis below the glans (tip)hold the shaft at 90 degrees to the body (tip of the penis pointing towards the ceiling). • Hold the procedure forceps in dominant hand, clean meatus three times with cotton balls using circular strokes beginning at the opening of the meatus and cleansing outward. • Maintain the cleansed penis in upright position.	Sterile 10x10cm gauze(s) will maintain sterility of the sterile-gloved hand. Once the non-dominant hand is holding the shaft of the penis, do not remove. Having the penis at a 90-degree angle provides a straighter route for the catheter insertion (see Appendix A Male Urinary Anatomy).  Sterile 10x10cm gauze(s) will maintain sterility of the sterile-gloved hand. Once non-dominant hand is holding the shaft of the penis, do not remove.
9. Insert the catheter (straight or curved tip): • With the free sterile hand, position the graduated collection basin between the thighs. • Hold the penis at a 90-degrees angle to the body and apply gentle upward traction on the shaft. • Ask client to gently bear down as if to void. • Slowly insert the catheter until there is urine flow then ask the client to stop bearing down. ○ For a curved tipped catheter, the tip is upward throughout the insertion. • Continue to insert the catheter up to the point of bifurcation(17 - 22.5cm) of the catheter. • Return the penis to its relaxed state; discard the used 10x10cm gauze(s). • With sterile gloved hand, hold catheter in place.	Once urine is flowing, continuing to bear down will push against the catheter insertion. The average length of the male urethra is 18-20cm. Urine flow indicates the catheter's tip is in the upper urethra or the bladder, but not necessarily that the catheter's balloon is, therefore, the catheter must be inserted up to its bifurcation point prior to inflating balloon. If having difficulty see Troubleshooting Tips – Inserting Catheter

Steps	Rationale/Key Points
10. Observe for urine output: • Ensure the catheter drains into the graduated collection basin. • Collect C&S if ordered. • Empty the bladder. • Set aside the collection basin for emptying later. • Replace foreskin over glans penis if needed. For In&Out Catheter only: • Slowly remove the catheter. • Go to Step #15.	If no urine output see Troubleshooting Tips – No Urine Flow Remove slowly to prevent bladder spasms. If unable to return the foreskin over the glans, (paraphimosis) advise MRP immediately as this is an urgent medical situation.
11. Inflate catheter balloon (indwelling only): • Attach the pre-filled syringe of sterile water to the balloon port. • Slowly instill the full amount of recommended volume of fluid. • Gently pull the catheter out until resistance is felt, then slightly advance the catheter back into the bladder.	Instillation of the full amount of recommended volume of fluid is needed to ensure correct inflation of the catheter balloon. Over-inflation or under-inflation of the balloon can lead to distortion in the balloon, which can cause the tip of the catheter to irritate the bladder wall, as well as occlude the eyelets of the catheter. Bladder neck/urethral outlet damage may also occur. Gently pulling the catheter out, followed by a slight advance back into the bladder, ensures the balloon is sitting properly in the neck of the bladder. If having difficulty see Troubleshooting Tips - Inflating Balloon
12. Connect the drainage bag: • Ensure the spout of the bag is closed. • Remove the drainage bag tubing cap. • Maintaining sterility, connect bag to catheter: ○ If the leg bag is the primary drainage bag and needs to be positioned on the client's calf then connect the catheter to the leg bag with the leg bag's sterile extension tubing.	The extension tubing provides addition length to the drainage system, allowing the leg bag to be positioned on the calf.

13. Stabilize the catheter:
• With the client, determine if the catheter is to be positioned on the upper thigh or lower abdomen.
  ○ If erosion/trauma is present on the urethral
  ○ opening ensure position of catheter is in a non-affected area.
• As per care plan, stabilize the catheter ensuring minimal traction on the catheter to allow enough slack to accommodate client's limb movement:
  ○ If using a stabilization device, apply device to the chosen position and secure catheter at its point of bifurcation into the stabilization device.
  ○ If using hydrocolloid strip or tape, lay the catheter in the chosen position and apply tape just above and below the point of bifurcation.
	Slack in the catheter is needed to prevent pulling whenever the client's leg position is changed, (e, g., lying to sitting).
	
	Securing the catheter in place at its point of bifurcation limits friction on the stoma opening that can lead to trauma and/or growth of hyper-granulation tissue along track opening. It also minimizes the chance of the catheter becoming kinked or being accidently removed.
	 

Steps	Rationale/Key Points
14. Position drainage bag for proper drainage: • 2L or 2L with uro-meter: ○ Position drainage bag lower than the bladder. ○ Coil tubing, ensure tubing is not kinked. Clip tubing to hold it in place, (e.g., bedsheet). ○ Hang the bag, (e.g., from the bedframe); ensure bottom of bag is not touching the floor. • Leg bag: ○ Secure leg bag to client's limb using the leg bag strap. ○ Ensure tubing is not kinked.	Kinking of the tubing will prevent urine flow.
15. Provide client hygiene: • Remove drape; pat perineum dry. • Provide clean gown/clothing as needed.	
16. Clean up workspace: • Empty collection basin, measure and document the amount of urine, if needed. • Discard tray and used supplies as per agency policy. • Remove gloves, PPE; perform hand hygiene. • Document care provided.	See Documentation for charting details.
17. Monitor client post-procedure for: • Discomfort/pain. • Bleeding. • Allergic reaction to either the antiseptic solution, catheter material or lidocaine if used.	Mild discomfort or spasm may be experienced. Troubleshooting Tips - Bleeding

Removal of Indwelling Catheter: Procedure **For Insertion of Catheter Female Anatomy click here** **For Insertion of Catheter Male Anatomy click here**	
Steps	**Key Points**
1. Review the orders: • Read the order and overall care plan. • Review last catheterization notes for amount of sterile water inserted into the balloon; expect 1-2 mL less on removal.	Check client's chart for documentation of last catheterization. Due to the catheter balloon's permeability, in particular silicone catheters, over time small amounts of sterile water evaporate from the balloon. This leads to less sterile water being removed from the balloon than what was instilled at the time of insertion.
2. Prepare the client: • Discuss catheter removal with client/family keeping the concepts of Trauma Informed Practice and, where appropriate for the client, Indigenous Cultural Safety in mind; obtain verbal consent (if possible). • Assess client's anxiety regarding the procedure and overall pain. • If required provide appropriate medication(s), consult with MRP if needed, and allow time for medication(s) take effect.	Providing management strategies, (i.e., reassurance, education, diversion (listening to music, watching a video), medication) can assist with mitigating anxiety and/or pain.

Steps	Key Points
3. Set up workspace and equipment: • Gather the supplies. • Ensure client comfort and privacy. • Clean/disinfect the work surface. • Perform hand hygiene, don clean gloves/PPE.	
4. Cleanse the urethral area: • Remove securement device, strap or tape. Use adhesive tape remover to clean away any adhesive residue. • Place procedure pad under perineum (female) or penis (male). • Cleanse the peri-urethral area with warm water and no-rinse cleaner. Pat dry.	Cleansing removes external microorganisms and gross contamination reducing risk of CAUTI.
• Deflate the catheter balloon: • Prepare the syringe by sliding the plunger up and down the barrel to loosen it. Reposition the plunger to the top of the barrel leaving approx. 0.5ml of air space. • Connect the syringe to the balloon port. • Allow the sterile water from the balloon to drain passively into the syringe until the plunger to stop moving (may take 30 seconds). Do not pull back on the syringe plunger. • Note the amount of sterile water removed from the balloon.	Loosening the plunger and leaving a small space of air will assist with the passive drainage of the sterile water. Allowing the sterile water to slowly drain without force being exerted by pulling the plunger may help to decrease: • Creases/ridges in the balloon leading to discomfort with removal. • A "**cuffing effect**" (where the deflated balloon "sticks" to bladder wall) which can cause discomfort or difficulty with removal. Silicone catheters are more likely to cuff as the balloon has a thinner wall. There may be less sterile water removed than what was instilled due to evaporation.
5. Remove the catheter: • Ask the client to exhale slowly as the catheter is pulled out slowly and smoothly. • If resistance felt, reattach the syringe and gently pull back on the plunger to ensure all the sterile water is removed from the balloon and try again to remove the catheter.	If still unable to catheter see Troubleshooting Tips – Deflating Balloon.
7. Provide client hygiene: • Remove drape. • Ensure client's perineum/penis is dry. For male if needed, replace foreskin over glans penis.	
8. Assess for catheter encrustations - only needed for indwelling catheters and not needed if catheter is being discontinued: • Check the outside the catheter: the tip, the eyelets of the catheter and along the catheter. • Check the inside of the catheter: using blunt end scissors, start at the tip of the catheter and split the catheter open lengthwise. Note any encrustations and their characteristics, (e.g., colour, hard, soft, moist, etc.).	If encrustations present, see Urethral Catheter Care & Management Guideline (TBD) for management of encrustation. 

Steps	Key Points
9. Clean up workspace: • Dispose catheter, drainage bag and procedure supplies as per agency policy. • Remove gloves, PPE; perform hand hygiene. • Document care provided.	See Documentation for charting details.
10. Monitor client post-procedure for: • Discomfort/pain. • Bleeding.	Discomfort or spasms and/or bleeding may be experienced especially if the balloon was not fully deflated and/or there are encrustations on the outside of the catheter. If lichen condition worsening following catheterization, refer to MRP for treatment. Troubleshooting Tips - Bleeding

Transition/Discharge Planning

Provide receiving unit/site with estimated date of next catheter change and any known procedural concerns, (e.g., muscle spasms, bypassing, encrustation and/or pain with procedure).

Client/Family Education and Resources

1. Educate the client and family on the following:
   a. The rationale, risks, and benefits of utilizing indwelling or in&out catheter.
   b. The process of insertion and removal of the catheter.
   c. The process for what to do if unable to void following the removal of the catheter.
   d. Outcomes and need to learn to re-toilet.
   e. Signs and symptoms of catheter-associated urinary tract infections (CAUTI).

   For client education re care and management of the catheter please see Urethral Catheter Care & Management Guideline (TBD)

Client Clinical Outcomes

Intended
   a. Urinary catheterization (indwelling or in&out) contributes to overall health goals.
   b. There is no development of urinary tract infection.

Unintended
   a. There is development of a urinary tract infection.
   b. There is development of a medical device related pressure injury,

Documentation

Document in accordance with BCCNM and health authority/agency documentation standards. Include information on (see Indwelling Urethral or Suprapubic Catheterization Flow Sheet as an example):

- Reason for catheter change, (e.g., scheduled, blockage, damaged catheter).
- Type and size of catheter and balloon volume.
- Occurrence of bladder spasms.
- Use of local anesthetic.
- Observation of urethra skin integrity, (e.g., intact, excoriation).
- Characteristics of urine, (e.g., colour, odour, clarity, amount, sediment or blood).
- Type of stabilization device used.
- Degree of catheter encrustation and nature of encrustation, (e.g., complete/partial catheter tube or catheter eyelets occlusion, colour, hard, soft, moist).
- If urine specimen was sent to lab.
- Estimated date of next catheter change.
- Client's tolerance of the procedure, (e.g., pain response).
- Client/family/caregiver education provided as needed.

Definitions

Autonomic Dysreflexia (AD): a potentially life-threatening syndrome often experienced by persons with a spinal cord injury (SCI) at the thoracic level T6 or above, but there are some cases noted in persons with SCI as low asT8). In addition to motor and sensory dysfunction, those with SCI experience autonomic nervous system (ANS) dysfunction. Usually, AD develops in the weeks to months after the SCI, but there is evidence it can occur as early as the first week following injury.

- Autonomic dysreflexia (AD) results from various painful or irritating stimuli below the level of the SCI, which trigger sympathetic hyperactivity within the spinal cord.
- Distension of the bladder, (e.g., blocked catheter) and of the bowel,(e.g., constipation) are the most common triggers for AD.
- The main clinical manifestation of AD are significant elevation of both systolic and diastolic blood pressure and bradycardia.

BCCNM: British Columbia College of Nurses & Midwifes (link).

CAUTI: Catheter Acquired Urinary Track Infection.

Client: Generic term used to identify an adult or child recipient of care regardless of care setting; patient in hospital, client in community and primary care; person in care in long-term care.

Encrustations: deposits of urine crystals, mucus and biofilm at the tip of the catheter (inside or outside) which partially or completely blocks the eyelets of the catheter leading to restricted or no urine drainage from the bladder.

Genital Psoriasis – Females and males with a psoriasis, an inflammatory dermatology condition often have psoriasis in the genital area which can involve the vulva, penis, scrotum, anus and reaching out to the area above the pubis, the buttock crease, the groin and inner/upper thigh. There are two types of genital psoriasis, inverse and plaque. Inverse psoriasis is found in skin folds such as the axilla, breast and groin area; the skin looks smooth and tight and either red or discoloured. It is made worse with sweating. Plaque psoriasis occurs on elbows, knees, torso, scalp and genitals. For those with pale skin, the plaques look red with a built-up layer of silvery skin; for those with coloured skin, the plaques may look purple, brown or gray. The plaques can cause cracked skin as well as discomfort/pain and be itchy.

Genital Eczema – Males and females with eczema, an inflammatory dermatology condition, often have eczema in the genital areas which involves vulva, penis, scrotum, anus and the buttock crease. The area affected is dry, red, painful and can be intensely itching leading to skin damage in the area. Its etiology can be eczema, seborrheic dermatitis, allergic contact dermatitis and irritant contact dermatitis.

Lichen Planus: recurrent inflammatory eruption characterized by small, discrete (defined), polygonal, flat-topped, violet-coloured papules that may coalesce into rough scaly plaques; found in the mouth or genital area and involved areas are itchy.

Lichen Sclerosus: an inflammatory condition of unknown cause, possibly autoimmune, that usually affects the anal-genital area. Lesions cause mild to severe itching. Early signs are skin fragility, bruising, and sometimes blistering leading to the tissues becoming atrophic, thinned, hypo- pigmented, fissured and scaly with hyperkeratosis and fibrosis. Severe cases can cause distortion of the normal anal-genital structure; in women, can cause total destruction of the labia minora/ clitoris and in men, phimosis.

MRP: Most Responsible Practitioner

Phimosis – the inability to retract the foreskin of an uncircumcised penis behind the glans penis.

Paraphimosis – the inability to replace the retracted uncircumcised penis' foreskin back into its natural position as it is trapped behind the corona of the glans penis. This is a urological medical emergency as the blood flow to the tip of the penis can be diminished/cut off leading to necrosis/ amputation.

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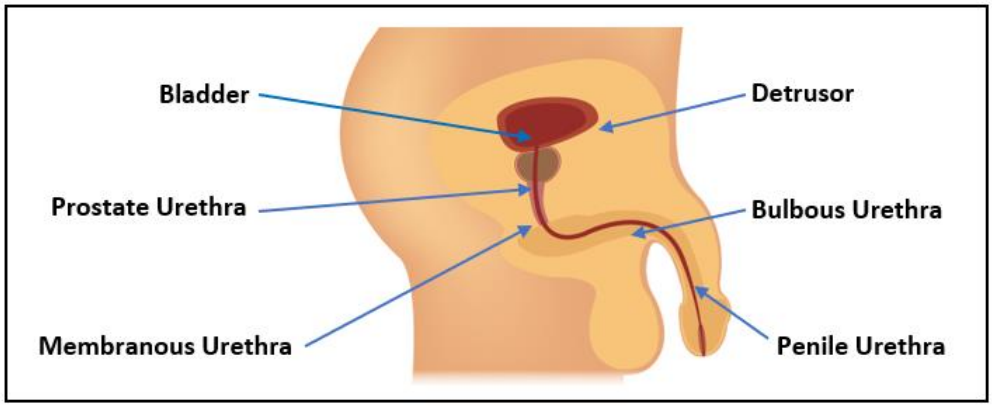
All drawings created by Ram Interactive 2024.

Document Creation/Review/Endorsement Dates

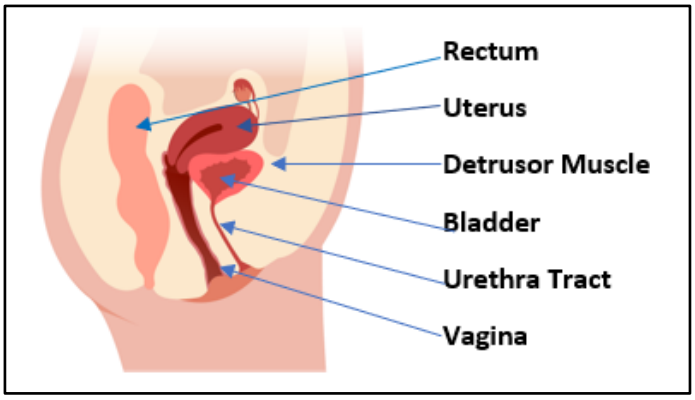
This procedure is based on the best information available at the time of its Provincial Partner Review and relies on evidence, expert consensus and avoids opinion-based statements where possible.

Created By	British Columbia Provincial Nursing Continence Committee in collaboration with NSWOCs/NCAs from across all Health Authorities
Publication Date	2024 September
Revision Date(s)	2025 November
Review Date(s)	
HA Endorsement Dates	

Appendix A: Male Urinary Anatomy



Appendix B: Female Genital-Urinary Anatomy

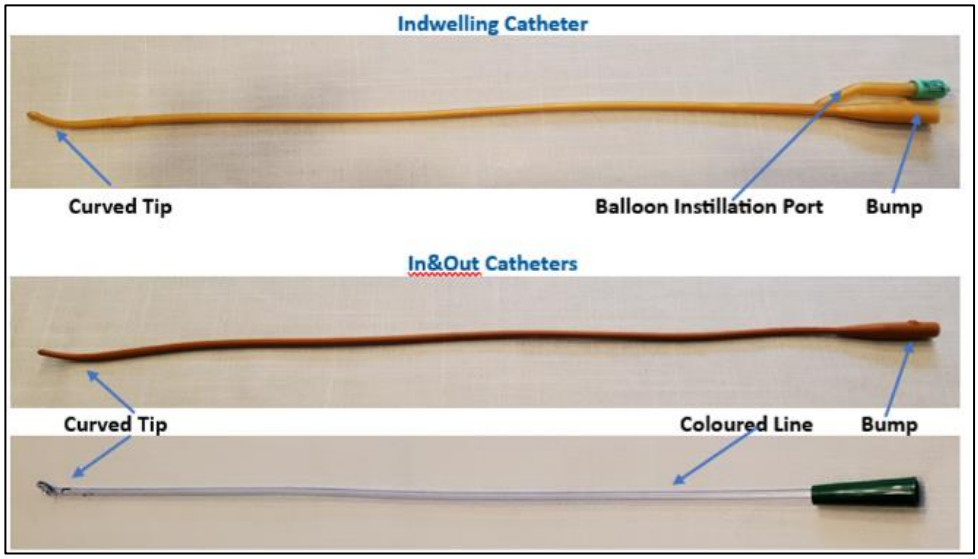


Appendix C: Troubleshooting Tips

Procedure	Issue	Troubleshooting Tips
Insertion	Catheter Insertion - female	If the catheter goes into the vagina, leave this catheter in place to prevent re-insertion in this location. Re-cleanse the meatus and start the procedure again with a second catheter. Once the catheter is in bladder and the balloon is inflated; remove the catheter from vagina.
	Catheter insertion - male	Ensure penis is at 90-degrees with gentle upward traction applied. If still unable to advance, remove catheter and inform MRP. The male urethra can develop a false tract(s) in the upper membranous urethral section just before the prostate (see Appendix A). Signs the catheter has been inserted into a false tract are: ◦ Inability to insert the catheter up to its bifurcation point. ◦ Bleeding and/or discomfort. Urine flow is not an indication the balloon is in the bladder. If the catheter appears to be in a false tract, remove it and reinsert again, ensuring the penis is at 90-degrees and with gentle upward traction applied.
	Unable to retract the foreskin of penis (phimosis)	Apply slight downward pressure on the suprapubic area at the base of the penis shaft to expose the urethral meatus.
	Inflation of balloon	If a client complains of sudden pain or there is resistance when inflating the balloon, the balloon may be sitting in the urethra, not the bladder: ◦ Stop and allow instilled fluid to flow back into the syringe. ◦ Advance catheter further into the urethra/ bladder. ◦ Slowly re-inflate the balloon, watch for client's response. If pain continues, stop, remove catheter and notify MRP.
	No urine flow	May need to instill sterile water or normal saline into the catheter to flush the lubricant from the eyelets of the catheter. In order to produce urine, encourage fluid intake, unless on a fluid restriction, (e.g., 250mL in 1 hour). If on a fluid restriction, offer an amount of fluid the client can have.
Removal	Deflation of balloon	If the syringe does not fill by gravity, then: ▪ Leave syringe in place 15-20mins to see if balloon drains. ▪ Ensure client is not constipated; assess for last bowel movement. ▪ Milk the catheter to remove pressure from any encrustation that may be present. ▪ Instill 1-2ml of sterile water into balloon to ensure port valve is working correctly and to remove any particulates in the balloon track. ▪ Insert a needle just above the port valve and gently pull back on syringe plunger to aspirate the balloon water. If unable to deflate the balloon, notify MRP. **Do not**: ▪ **Do not** try to burst the balloon by over-inflating it, as cystoscopy will be needed to remove balloon fragments. ▪ **Do not** cut the catheter.

Procedure	Issue	Troubleshooting Tips
Insertion and/or Removal	Post-procedure bleeding	Bleeding may be noted in the draining tube following insertion or in the urine following removal, but it should be minimal. If noted, encourage fluids, (e.g., 250mL in 1 hour) unless on fluid restriction. If on fluid restriction, offer an amount of fluid that the client could have. Monitor to ensure bleeding subsides If frank bleeding is noted, notify MRP if in hospital/long term care, or have client go to Emergency.

Appendix D: Features for Determining Upright Position of Curved Tip Catheter



Note the tip curves towards the balloon instillation port side of the indwelling catheter.

Some indwelling catheters also have a design feature, such as a bump, on the drainage port to show the direction of the tip. It is important to use these features to ensure the tip of catheter is up as the catheter is being inserted.

In&out catheters may also have similar design features to help ensure the tip is up during insertion.