

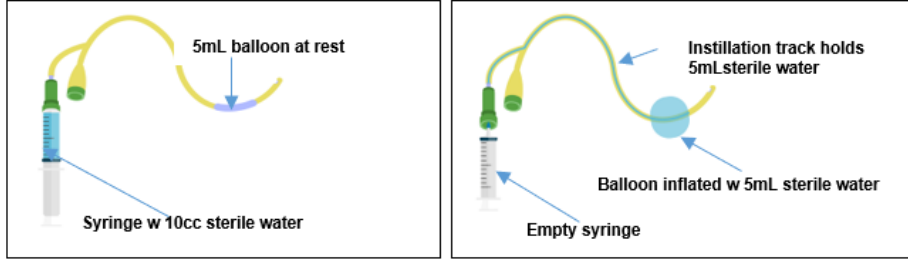
Developed by the British Columbia Provincial Nursing Continence Committee in collaboration with NSWOCs/NCAs from:



Suprapubic Catheter Removal & Insertion: Procedure

<p>Endorsement British Columbia & Yukon</p>	<ul style="list-style-type: none"> • Endorsement done: • Endorsement pending: FNHA, FHA, ISLH, IHA, NHA, PHSA, VCH/PCH & Yukon; until endorsement has been granted by your Health Authority (HA), please follow your HA's current document.
<p>DST Indications for Use</p>	<p>This document is to be used to guide the procedure for the removal and insertion of an established suprapubic catheter for an adult client in all care settings.</p> <p>Pediatric suprapubic catheters are usually in place for a short term, (e.g., 6-8 weeks) with removal and any changes needed done by a physician either under sedation or in the operating room.</p>
<p>Practice Level British Columbia as per HA Health Professional Acts (HPA) Leads</p>	<p>British Columbia: Nurses may remove & insert a urinary catheter for an established suprapubic tract:</p> <ul style="list-style-type: none"> • When the practice is supported for their specific designation: <ul style="list-style-type: none"> ◦ 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. <p>Registered Nurse (RN):</p> <ul style="list-style-type: none"> • Entry level skill. <p>Registered Psychiatric Nurse (RPN):</p> <ul style="list-style-type: none"> • Entry level skill. <p>Licensed Practical Nurse (LPN):</p> <ul style="list-style-type: none"> • With a client-specific order. • With additional education. <p>Yukon:</p> <ul style="list-style-type: none"> • RNs, RPNs and LPNs refer to organizational policies and practice in accordance with regulatory bodies.
<p>Education Requirements</p>	<p>See Education Requirements & Competencies (ER&C) – Suprapubic Catheter Removal & Insertion Learning Plan and Competency Checklist.</p>
<p>Need To Know</p>	<ul style="list-style-type: none"> • A suprapubic catheter involves the surgical insertion of a urinary catheter, under local or general anesthetic, through an opening of the abdominal wall into the bladder. Within 4 weeks of the procedure, a tract and a stoma will develop. • The MRP does: <ul style="list-style-type: none"> ◦ The first change of the suprapubic catheter to ensure the tract and stoma are properly established. ◦ Any changes that are scheduled or that need to be performed, (e.g., a blocked catheter) within the first 4 weeks post-insertion as the tract is not yet established. • A suprapubic catheter can be used for either short-term or long-term management (i.e., greater than 28 days) urinary drainage. • Size of suprapubic catheter: <ul style="list-style-type: none"> ◦ Adults: 16Fr - 20Fr with a 10mL balloon (30mL balloon should not be used routinely). ◦ All catheters should be either hydrogel-coated silicone or silicone. ◦ Curved-tipped catheters <i>are not</i> used for suprapubic catheterization. • 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 needed for the instillation track

(e.g., 5mL); the track is 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 removed from the balloon than what was instilled at the time of insertion.
- Without the catheter in place, the suprapubic tract can close very quickly requiring medical intervention. To avoid this:
 - When doing a catheter change, ensure the new catheter is ready for insertion as soon as the old catheter is removed; a second nurse can assist.
 - In case of accidental dislodgement, a sterile replacement catheter should be kept at the bedside (acute or long-term care) or in the home (community) for the client/family who knows how to do the insertion.

If unable to insert the replacement catheter, in acute care, immediately notify MRP; in community/long term care, send the client to Emergency/Urgent Care.

- For clients with a spinal cord injury (SCI) of T6 or higher, [autonomic dysreflexia](#) may be triggered by the removal and/or insertion of the suprapubic catheter, bladder spasms, or a 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.
- A small amount of post-procedure bleeding may occur for clients on anticoagulation/ antiplatelet therapy or taking certain vitamins/natural supplements that can cause blood-thinning (e.g., Vitamin E). If frank bleeding occurs in acute care, notify physician or NP, if in community/long-term care, have the client go to Emergency/Urgent Care.
- See the Suprapubic Catheter Care & Management Guideline (TBD) for the following:
 - Determining frequency of catheter change.
 - Management of catheter encrustation.
 - Management of catheter bypassing.
 - Management of catheter blockage.
 - Assessment of suspected bladder infection.

Bookmarks

- [Equipment & Supplies](#)
- [Procedure: Removal & Insertion](#)
- [Transition/Discharge](#)
- [Client/Family Education & Resources](#)
- [Client Clinical Outcomes](#)
- [Documentation](#)
- [Bibliography/References](#)
- [Document Creation/Review/Endorsement Date](#)
- [Appendix A: Troubleshooting Tips](#)

Related Documents

ER&C = Education Requirements & Competencies

- ER&C Learning Plan: [Suprapubic Catheter Removal & Insertion](#)
- ER&C Competency Checklist: [Suprapubic Catheter Removal & Insertion](#)
- Guideline: Care & Management of a Suprapubic Catheter TBD
- Guideline: Determining Need for Urinary Catheterization TBD
- Quick Reference Guide: Selecting the Appropriate Urinary Catheter TBD
- Procedure: [Urethral Catheter Insertion & Removal \(Sterile\)](#)
- Procedure: Urine for Culture & Susceptibility TBD
- Client Health Education Resource: Client Reinsertion of Suprapubic Catheter TBD

Equipment and Supplies:

- 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.
- Tape.
- Sterile 10x10cm gauze (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 solution, check for client sensitivity/ allergy and genital skin conditions).
 - Sterile catheter with appropriate FR size; check MRP order and/or management plan.
 - 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., 5cc balloon – 10mL syringe and 10mL sterile water.
 - If doing a catheter change, appropriately sized sterile syringe to remove the instilled sterile water.
 - Drainage bag: 2L, 2L with uro-meter, leg (500mL, 750mL 1500mL,) 4L or 4L with uro-meter.
 - Catheter stabilization device or hydrocolloid strip or tape.
- Second sterile catheter, one FR size smaller, to have on hand in case of difficulty inserting first catheter.
- Blunt nosed scissors to check for encrustation.
- Procedure light or flashlight.
- Urine collection container if amount anticipated is greater than what the kit's collection basin can hold.

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

Other Resources

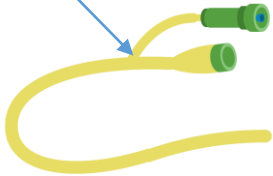
Determine if a **second nurse** is needed to assist:


- Client has mental health concerns, cognitive issues, need for skin fold traction, assistance with positioning and/or assistance with visibility of site.
- if there is a history of the stoma closing quickly when the catheter was changed or the removal has been difficult (needing traction to pull it out).
- As per HA/agency policy.

Suprapubic Catheter Removal & Insertion: Procedure	
Steps	Rationale/Key Points
<p>1. Review the order and the client's chart for any concerns related to previous removal/insertions:</p> <ul style="list-style-type: none"> • If bladder spasms were experienced by the client with previous changes. • If stoma closed quickly during previous change(s) consider having second nurse to assist. • If previous catheter(s) was difficult to remove (e.g., required definite traction to remove catheter). • If pain was an issue during or post previous changes, provide pain medication/local anesthesia and allow time for the pain medication to take effect. • Review current risks for post-procedure bleeding, (e.g., recent INR/PTT bloodwork if client is on anticoagulation/antiplatelet therapy or if client taking certain vitamins/natural supplements, (i.e., Vitamin E, which cause blood thinning). • For those with SCI, any Autonomic Dysreflexia (AD) history with procedures. <p>If the procedure is to change the catheter:</p> <ul style="list-style-type: none"> • Review chart for information re catheter (FR and balloon size) and 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. 	<p>If the catheter was difficult to remove on previous changes, the community or person-in-care client may need to have change done within a hospital setting.</p> <p>Need to be aware of potential for bleeding during the procedure and the potential for AD during the procedure.</p> <p>To reduce trauma to the tract, the smallest size of catheter should be use, see Selecting the Appropriate Urinary Catheter: Guide (TBD), unless otherwise ordered.</p>
<p>2. Prepare the client for the procedure</p> <ul style="list-style-type: none"> • Explain the procedure to client/family keeping in mind the concepts of Trauma Informed Practice and, where appropriate for the client, Indigenous Cultural Safety, and obtain verbal consent (if possible). • Discuss with client re anxiety regarding the procedure, and/or their overall pain; provide appropriate medication(s) and allow time for medication(s) take effect. 	<p>The client undergoing catheter removal/insertion may experience anxiety and/or pain. Provide management strategies, i.e., reassurance, education, diversion (listening to music, watching a video), medication.</p>
<p>3. Set up equipment and workspace:</p> <ul style="list-style-type: none"> • Gather the equipment. • Clean/disinfect the work surface. 	<p>Plan to have two nurses present for the insertion procedure if needed or as per HA policy.</p>
<p>4. Position the client:</p> <ul style="list-style-type: none"> • Ensure client privacy. • Position client lying supine and ensure client's comfort. • Set up procedure light if available to illuminate the suprapubic area or have second nurse hold flashlight. • Perform hand hygiene, don clean gloves/PPE. 	<p>Supine position allows for clear visualization of stoma opening and supports relaxed abdominal muscles and client comfort.</p>

Steps	Rationale/Key Points
<p>5. Prepare the site for catheter removal:</p> <ul style="list-style-type: none"> • Remove catheter from its stabilization device. • Remove device if device shows signs of wear. • Remove tube dressing if present. • If exudate or encrustation present on peri-drain skin or on catheter, cleanse with no-rinse skin cleanser and cloths/wipes. • Assess the site: <ul style="list-style-type: none"> ○ Inspect tract opening for signs of hypergranulation and erosion. ○ Assess surrounding skin for moisture associated skin damage (MASD), (e.g., maceration, denuded/excoriated area and/or signs of skin infection). • Place a small piece of tape around the catheter at the point of exit from skin. 	<p>If S&S of skin infection, (e.g., redness, rash, itchiness), notify MRP.</p> <p>Scant amount of serous drainage is normal for some clients.</p> <p>Cleansing removes any debris that has gathered on the catheter particularly at the insertion site.</p> <p>If hypergranulation or erosion is noted, ensure stabilization of new catheter is not in area of concern. If entire stoma opening is damaged, consult MRP.</p> <p>Marking the catheter with tape assists in gauging depth of insertion into the track for new catheter.</p>
<p>6. Set up supplies and sterile tray:</p> <ul style="list-style-type: none"> • Remove the outer packaging. • Open the sterile tray and using the transfer forceps lay out sterile field. • Add supplies as needed, (e.g., sterile catheter, empty sterile syringe, sterile water, sterile 10x10cm gauze, etc.). • Place the following outside of the sterile field: <ul style="list-style-type: none"> ○ Remove urinary drainage bag (2L or leg) from its package, close the spout but leave sterile connector cap in place. ○ Open stabilization device package. ○ Second catheter one size smaller FR. • Remove gloves, do hand hygiene and don sterile gloves. 	<p>The smaller second catheter, in its sterile package, needs to be readily available in the event the first catheter cannot be inserted.</p>
<p>7. Prepare the sterile work field:</p> <ul style="list-style-type: none"> • Place sterile cotton balls/gauze in cup and pour in sterile cleansing solution. • Fill one syringe with 10mL of sterile water; there may be a pre-filled syringe if using a kit. • Lay out two 10x10cm gauze on sterile field. • Position fenestrated drape around the catheter area. • Prepare the sterile catheter: <ul style="list-style-type: none"> ○ If there is a secondary protective wrap, open the perforated end of the wrap and expose approximately 6cm of the catheter tip; leave the remaining length of catheter in the wrap. ○ Maintaining sterility, apply lubricant to the exposed 5-7.5cm of the catheter. ○ Place catheter in the collection basin. ○ Check the balloon port to re-confirm the amount of sterile water to be added. ○ Place collection basin with the prepared catheter on the drape between client's upper thighs or beside the client's hip. 	<p>The collection basin's surface will not absorb the lubricant.</p>

Steps	Rationale/Key Points
<p>8. Prep the site:</p> <ul style="list-style-type: none"> Using procedure forceps and cotton balls/gauze dampened with the cleanser, cleanse around the insertion site in circular motion, from the insertion site outward. 	
<p>9. Deflate old catheter balloon:</p> <ul style="list-style-type: none"> Prepare the empty syringe by sliding the plunger up and down to loosen it. Reposition the plunger to the top of the barrel leaving approximately 0.5ml of air space. Using one sterile 10x10cm gauze in non-dominant hand, hold the port end of the catheter and with sterile gloved hand to 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. <p>Do not remove the catheter. Do not let the catheter slide out of the tract.</p>	<p>Loosening the plunger and leaving a small space of air will assist with the passive drainage of the sterile water.</p> <p>Using a sterile 10x10cm gauze to handle the old catheter will maintain sterility of the sterile gloved hand.</p> <p>Allowing the sterile water to slowly drain without force being exerted by pulling back on the plunger may help to prevent the “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.</p> <p>There may be 1-2mL less sterile water removed than what was inserted due to the evaporation of the water from the catheter balloon, in particular silicone catheters.</p> <p>Note: Do not cut the catheter prior to removal. Cutting the catheter will cause the cut end of the catheter to slip into the bladder and will require a urologist to surgically remove it.</p>
<p>10. Remove the old catheter:</p> <ul style="list-style-type: none"> With sterile 10x10cm gauze still in non-dominant hand, grasp the catheter just above skin level. Gently rotate the catheter 360 degrees to ensure free movement within the tract. If needed, use second sterile 10x10cm gauze in sterile dominant hand to support the area around the suprapubic tract opening. Still rotating the catheter, remove it using gentle but steady upward traction: <ul style="list-style-type: none"> Some mild resistance with removal may be experienced. If bleeding occurs with removal and the tract is: <ul style="list-style-type: none"> Still visible; then reinsert catheter. If still bleeding, send client to ER/Urgent Care. Not visible; send client to ER/Urgent Care. Observe the tape marking on the old catheter as this will be used as an approximate guide of the depth that the new catheter is to be inserted. Set catheter aside for assessment of encrustation at the end of the procedure. 	<p>Using a sterile 10x10cm gauze in sterile gloved hand will maintain sterility of the sterile glove.</p> <p>Pause if there is too much resistance as the client may be having a muscle spasm or the catheter is cuffed see Troubleshooting Tips – Removal</p> <p>Hypergranulation tissue, ridges along the track, a narrow track, encrustations on the outside of the catheter or a not fully deflated balloon can cause mild bleeding with catheter removal especially if the client is on anticoagulants/antiplatelet therapy.</p>

Steps	Rationale/Key Points
<p>11. Quickly insert the new catheter - second nurse to assist, if required:</p> <ul style="list-style-type: none"> Using the sterile gloved dominate hand, insert the lubricated catheter into the stoma to the same distance judged by the tape mark on the old catheter plus approximately 3cm more. Attach the pre-filled 10mL sterile water syringe to the balloon port and slowly instill the manufacturer's recommended volume (written on catheter port). Pull back gently on the catheter until slight resistance is felt then slightly advance the catheter back into the bladder. Place drain end of catheter into sterile basin. 	<p>The extra 3cm ensures correct placement inside the bladder. Do not insert further as catheter may enter either a ureter or the urethra.</p> <p>Do no use normal saline as it weakens the wall of balloon causing leaking and balloon to slowly deflate over time.</p> <p>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 catheter drainage eye.</p> <p>Gently pulling the catheter out, followed by a slight advance back into the bladder, ensures the balloon is sitting properly in the bladder.</p> <p>If having difficulty with insertion, see Troubleshooting Tips – Inserting the Catheter</p>
<p>12. Observe for urine output:</p> <ul style="list-style-type: none"> Ensure the catheter drains into the graduated collection basin. Collect C&S if required. Empty the bladder. Set aside the collection basin for emptying later. 	<p>It make take several minutes to see urine flow. If no urine flow see, Troubleshooting Tips – No Urine Flow.</p>
<p>13. Connect the drainage bag:</p> <ul style="list-style-type: none"> Ensure the spout of the bag is closed. Remove the drainage bag tubing cap. Maintaining sterility, connect bag to catheter. <p>Note: 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.</p>	<p>The extension tubing provides addition length to the drainage system, allowing the leg bag to be positioned on the calf.</p>
<p>14. Stabilize the catheter:</p> <ul style="list-style-type: none"> Determine if the catheter is to be positioned either to the left or right of the suprapubic opening. <ul style="list-style-type: none"> If hypergranulation tissue, erosion or trauma is present at the tract opening, ensure catheter is positioned on the non-affected area of the tract. As per care plan, stabilize the catheter to the upper thigh or to the left or right of the tract on the lower abdomen: <ul style="list-style-type: none"> If using a stabilization device, apply device in the chosen position and secure catheter at its point of bifurcation into the device. If using hydrocolloid strip or tape, lay the catheter in the chosen position; apply just above and below the point of bifurcation. 	<p>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 accidentally removed.</p> 

Steps	Rationale/Key Points
<p>14. Position the drainage bag:</p> <ul style="list-style-type: none"> • 2L or 4L bag: <ul style="list-style-type: none"> ○ Position drainage bag lower than the bladder. ○ Coil tubing, ensure tubing is not kinked. Clip tubing to hold it in place, (e.g., to bedsheet). ○ Hang the bag ensure bottom of bag does not touch the floor. • Leg bag: <ul style="list-style-type: none"> ○ Secure bag to client's limb using bag strap. ○ Ensure tubing is not kinked. <p>Ensure urine is flowing into the drainage bag.</p>	
<p>15. Treat peri-tube and surrounding skin concerns.:</p> <ul style="list-style-type: none"> • Site should be left open to air if no drainage. • If drainage present, use a skin barrier film or basic skin protectant and cover with tube/drain gauze dressing. • If hypergranulation tissue present, treat issue. • If MASD present, use skin barrier film crusting technique or advanced skin protectant and leave area open to air. 	<p>See Moisture Associated Skin Damage (MASD) QRG for peri-tube skin care treatment, if needed.</p> <p>See Hypergranulation Tissue QRG for treatment of hypergranulation tissue.</p>
<p>16. Assess for catheter encrustations (not needed if there is an order to discontinue the catheter):</p> <ul style="list-style-type: none"> • Check the: <ul style="list-style-type: none"> ○ Outside the catheter, tip, eyelets of the catheter and along the catheter. ○ 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.). 	<p>If encrustations present, see Suprapubic Catheter Care & Management Guideline (TBD) for management of encrustation.</p> 
<p>17. Ensure client comfort & clean up workspace:</p> <ul style="list-style-type: none"> • Position client for comfort. • Empty collection basin, measure and document the amount of urine, if needed. • Discard tray and used supplies. • Remove gloves and perform hand hygiene. • Ensure replacement catheter of same size FR is available. • Document care provided. 	<p>Replacement catheter is to be available at the bedside for acute and long-term care sites and in the home for community client.</p> <p>See Documentation for charting details.</p>
<p>18. Assess client for post-procedural concerns:</p> <ul style="list-style-type: none"> • Urine flow. • Discomfort/pain. • Presence of blood or clots in urine. • Allergic reaction to either antiseptic solution or catheter material. • For clients with SCI, autonomic dysreflexia. 	<p>Mild discomfort or spasm may be experienced.</p> <p>Troubleshooting Tips – Bleeding/Clots</p>

Transition/Discharge Planning

For the client being transitioned or discharged home:

- If within the first 4 weeks post-procedure, provide receiving unit/site with appointment date/time with the MRP for first catheter change.
- If with an established suprapubic tract, provide the receiving unit/site of the date for the next catheter change and any known procedural concerns, (e.g., muscle spasms, quick contraction of the stoma opening, bypassing, encrustation and/or pain with procedure).

Client/Family Education and Resources

Provide education regarding:

- The need to have in the home, a catheter one FR size smaller than the catheter currently inserted in case the catheter is accidentally removed.
- Self-care of the urinary drainage system (CHER TBD)
 - Ensuring the drainage tubing is free from kinks.
 - Cleansing the suprapubic site and applying dressing if needed.
 - Stabilizing the catheter within a stabilization device.
 - Cleansing the secondary (overnight) drainage bag if using a leg bag, see [Client Health Education Resource](#).
- The need to report any abdominal pain, bladder pain (spasms), bloody or cloudy urine, by-passing of the catheter and to whom to report concerns to.

Client Clinical Outcomes

Intended

a. Client does not experience on-going pain, bleeding or bladder spasms following catheter change.

Unintended

a. Client does experience on-going pain, bleeding or bladder spasms following catheter change.

Documentation

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

- Type of catheter, Fr size and balloon volume to be used for the client.
- Type of procedure, (e.g., first insertion, removal/discontinuation, change).
- Reason for catheter change, (e.g., scheduled, by-passing, blockage, urinary tract infection).
- Observation of suprapubic site for skin integrity, (e.g., intact, maceration, denuded/excoriation), drainage type of dressing if used).
- Characteristics of urine, (e.g., colour, odour, clarity, amount, sediment or blood).
- Type of securement device used.
- Degree of catheter encrustation and nature of encrustation, (e.g., complete/partial blockage of catheter tube or catheter eye, characteristics of the encrustation, (e.g., colour, hard, soft, moist).
- If urine specimen was sent to lab.
- Occurrence of bladder spasms and/or stoma closed quicker than previously noted.
- Client's tolerance of the procedure, (e.g., pain response).
- Estimated date of next catheter change.
- Client/family/caregiver education provided as needed.

Definitions

Autonomic Dysreflexia (AD): 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 at T8. In addition to motor and sensory dysfunction, those with SCI experience autonomic

nervous system (ANS) dysfunction. Usually, AD develops weeks to months after the SCI but there is evidence it can occur as early as the first week following injury.

- AD results from 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 & Midwives ([link](#))

CHER: Client Health Education Resource

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 which partially or completely blocks the eyelets of the catheter leading to restricted or no urine drainage from the bladder.

MRP: Most Responsible Provider.

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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.

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Review Date(s)	
HA Endorsement Dates	

Appendix A: Troubleshooting Tips

Procedure	Issue	Troubleshooting Tips
Removal of Catheter	Difficulty with removing the catheter	<p>If resistance is due to cuffing or muscle spasm:</p> <ul style="list-style-type: none"> • Stop and return the catheter back to its original position in the tract. • Wait 5 -10 minutes for spasms to subside and try again using the following tips: <ul style="list-style-type: none"> ○ Ensure client is in a comfortable position, reposition. (e.g., lie down) if needed. ○ Have client take deep slow breaths in order to relax the abdominal muscles. ○ Lubricate the catheter track by applying lubricant to external surface of the inserted catheter and advancing the catheter no more than 3cm into the tract. ○ Rotate catheter 360 degrees to ensure it is not adhering to surrounding tissue. ○ Give a muscle relaxant or analgesic prior to removing the catheter (request order from MRP, as needed). <p>If still unable to remove catheter; return catheter to its original position and refill balloon with recommended amount of sterile water. Notify MRP.</p>
Insertion of Catheter	Stoma contracting	<p>If unable to insert the new catheter due to the stoma contracting, try to insert the smaller size.</p> <p>If still unable to insert the catheter: in Acute Care, notify the MRP immediately; in Long Term Care/Community, send the client to Emergency.</p>
	No urine flow	<p>May need to instill sterile water or normal saline into the catheter to flush the lubricant from the eyelets of the catheter. Please note if using normal saline: normal saline is only for flushing the catheter, not for inflating the balloon.</p> <p>In order to produce urine, encourage fluid intake, unless on a fluid restriction, (e.g., 250mL in 1 hour). If on fluid restriction, offer an amount of fluid the client can have.</p>
Removal and / or Insertion of Catheter	Post procedure bleeding (in the urine or at site)	<p>Some bleeding may be noted after insertion, 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 can have. Monitor to ensure bleeding subsides.</p> <p>If frank bleeding is noted, notify MRP if in long-term care or hospital; have the home client to go Emergency.</p>