

Insertion of an Indwelling Urethral Catheter in the Adult Female

Introduction

This procedure details the insertion process of an indwelling urethral (transurethral) catheter (IUC or Foley catheter) in an adult female. Female urethral catheter placement is generally simple, straightforward, and uncomplicated because the urethral length is quite short, usually only 2 inches (5.1 cm), allowing ease of catheterization (Figure 1). The most challenging aspect of female urethral catheterization is localization of the urinary meatus, more difficult in an obese woman with a large girth or in women with anatomical differences (e.g., intravaginal urinary meatus).

This procedure uses an aseptic technique that is maintained throughout the insertion and is based on professional guidelines. Only health care professionals trained in the technique of aseptic catheterization should insert an IUC. The professional should be familiar with the facility or practice policy and standard precautions for urethral catheterization.

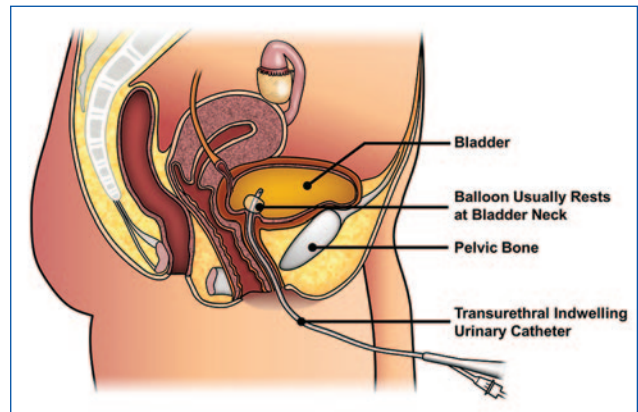
Prior to insertion or replacement of an existing IUC, an order from a health care provider should be verified. The patient and the patient's family, if present, should be informed of the reason for catheterization and what to expect in terms of discomfort. If the patient is unable to give consent, and there is no family member or guardian to provide consent, there must be a clear rationale for using a catheter.

Indwelling urinary catheter (IUC) indications and contraindications in adult females are found in Box 1.

Risk Assessment

- Determine any potential allergies (e.g., latex, betadine). Note any pertinent past medical and urologic history, including difficult catheterizations, urethral strictures (rare), pelvic organ prolapse and prior bladder, urethral or pelvic surgery, or radiation.
- Consider obtaining assistance (e.g., two-person insertion, mechanical aids [Figure 2]) to facilitate appropriate visualization/insertion technique for high-risk populations (e.g., patients who are obese or comorbid, have dementia/behavioral issues).
 - Challenging aspect of female urethral catheterization is localization of the urinary meatus.
- Assess the patient's ability to cooperate with procedure (e.g., need to keep knees separated

Figure 1.
Female Indwelling Urethral Catheter



Source: Courtesy of Diane K. Newman, DNP.

during procedure), history of recent and/or difficult catheterization, and presence of current order for insertion.

- According to the National Institute for Health and Care Excellence (NICE) (n.d.), routine prescribing of antibiotics is not recommended when inserting an IUC or changing a catheter in patients with a long-term IUC, and antibiotic prophylaxis is only recommended in those

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Peer Review

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Figure 2.
Mechanical Lifts

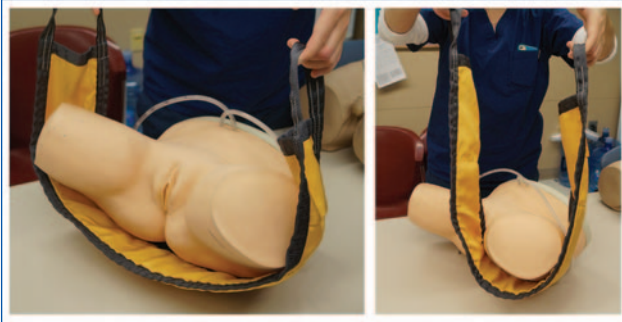


Photo: Courtesy of Diane K. Newman, DNP.

Figure 3.
Closed Indwelling Urethral Catheter Tray System with Perineal Cleansing Supplies (SureStep® Foley Tray Peri-Care Kit by Bard Medical)



Photo: Courtesy of Diane K. Newman, DNP.

Box 1.

Indications and Contraindications for Use of an Indwelling Urinary Catheter (IUC) in Adult Women

Indications

- Postoperative urinary retention (per facility catheter-removal policy).
- Bladder outlet obstruction (i.e., gross hematuria, pelvic organ prolapse, urethral strictures).
- Acute urinary retention, which requires immediate attention.
- Need for accurate measurements of urinary output in critically ill patients for which urine cannot be measured in another way.
- Patients who require prolonged immobilization (e.g., potentially unstable thoracic, or lumbar spine, multiple traumatic injuries, such as pelvic fractures).
- Continuous bladder irrigation (CBI) for clot retention or intravesical drug infusion.
- Administration of drugs directly into the bladder (e.g., chemotherapeutic medication to treat bladder cancer).
- To improve comfort for end-of-life care, if needed.
- Perioperative use in selected surgical procedures:
 - Urologic/gynecologic/perineal procedure and other surgeries on contiguous structures of GU tract.
 - Anticipated prolonged duration of surgery (should be removed in PACU once patient is awake).
 - Patients anticipated to receive large-volume infusions or diuretics during surgery.
 - Operative patients with urinary incontinence.
 - Need for intra-operative hemodynamic monitoring of fluids.

Contraindications

- For perceived comfort in patients with urinary or fecal incontinence.
- As a means for obtaining urine for tests when patient can voluntarily void.
- Prolonged postoperative use without appropriate indications.

patients who have a history of symptomatic urinary tract infections (UTIs) after catheter change or experience trauma during catheterization.

Equipment

Assemble all equipment before beginning procedure.

- Lighting as needed. Consider use of a flashlight.
- Perineal care items: Disposable clean gloves, mild soap, chlorhexidine gluconate (CHG) soap, water, and/or cleansing foam.
 - Castile soap is the recommended alternative for cleansing for patients with betadine allergy.
 - Closed catheter systems contain supplies (e.g., gloves, cleanser) for periurethral cleansing (Figure 3).
- Waterproof pad.
- Indwelling catheter insertion tray (e.g., all-in-one catheterization kit, with a “closed or pre-connected, sealed catheter-tubing junction system” preferred) includes sterile gloves, single-use water-based lubricant (tray may include a pre-filled syringe), indwelling balloon-retention catheter (use smallest size [gauge] possible that allows free flow of urine unless otherwise prescribed, standard is 14 Fr), Luer-Lok syringe pre-filled with sterile water (standard balloon size is 10 ccs; always inflated with 10 ccs of sterile water to ensure a symmetrical shape), anchoring device for securing catheter and pre-connected urinary drainage bag (Figure 4).
 - The balloon port has a cover that notes the size of the catheter and balloon size (Figure 5).
 - Sealed or closed sterile systems have a pre-connected, tamper-resistant tape or seal that keeps the catheter and drainage system connected (Figure 6). It is designed to prevent

Figure 4.
All-in-One Sterile Catheterization Tray (SureStep® Foley Tray by Bard Medical)



Photo: Courtesy of Diane K. Newman, DNP.



Photo: Courtesy of Diane K. Newman, DNP.

inadvertent opening of the closed drainage system and may prevent catheter-associated urinary tract infections (CAUTIs) by acting as a physical barrier to the migration of microbes into the lumen of the catheter and drainage tube. There are potential disadvantages of these systems because only the prepackaged catheter can be inserted.

- Consider having a second insertion tray kit easily available in case the vagina is mistakenly catheterized or other contamination occurs.
- If all-inclusive insertion tray is not available, alternative sterile equipment can be used, but all parts must be sterile (e.g., gloves, single-use sterile water-based lubricant packet, catheter, syringe filled with 10 cc sterile water, drainage bag/valve, securement device).
- Only sterile water should be used to inflate the balloon because saline may crystallize the balloon port, obstructing it, preventing balloon deflation at time of IUC removal.
- If the patient has been identified as having an allergy to latex, use a 100% silicone catheter.
- Consider use of a flashlight to assist in visualization of meatus.
- The use of an anesthetic gel (lidocaine gel 2%) inserted in the urethra prior to catheter insertion is rarely used in women because the main benefit may be from the lubrication as opposed to the anesthetic effect (Averch et al., 2014). However, it is an option if severe atrophic tissue or pelvic organ prolapse is present because it distends the urethra and reduces discomfort if a difficult insertion is anticipated.
 - Use with caution in patients with sepsis and/or traumatized mucosa because there is potential for rapid systemic absorption.

Figure 5.
Balloon Port Noting Catheter Size (16 Fr) and Balloon Size (10 cc)



Photo: Courtesy of Diane K. Newman, DNP.

- An order/prescription is usually required to administer lidocaine 2% gel via the urethra prior to inserting a urinary catheter.
- Do not use if the patient has an allergy to lidocaine 2% gel.

Procedure

Provide as much privacy for the patient as possible.

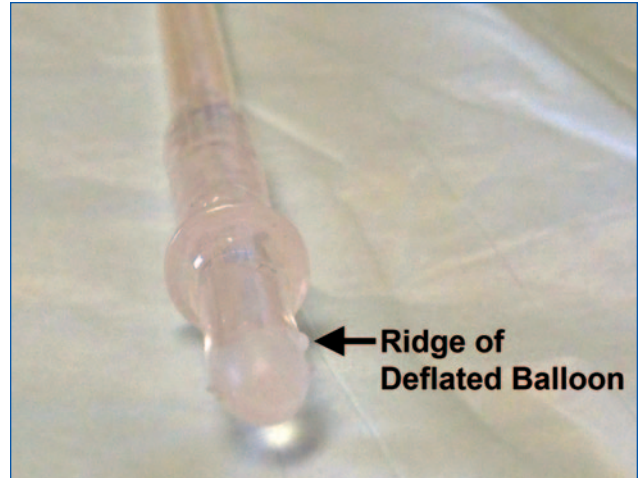
- Identify the patient using two identifiers (name, date of birth) according to facility/practice policy.
- Perform hand hygiene and put on clean medical gloves.
- Raise bed as necessary to provide adequate visualization of perineum.

Figure 6.
Pre-Connected Tamper-Resistant Tape
(SureStep® Foley Tray by Bard Medical)



Photo: Courtesy of Diane K. Newman, DNP.

Figure 7.
Deflated Silicone Catheter with Ridge at the
Location of the Deflated Balloon



Source: Courtesy of Eric Rovner, MD.

- Place the patient in a dorsal recumbent position with knees drawn up and separated in a frog position or with feet flat on bed.
 - Sim's (upper leg drawn up flexed at knee and hip [supported with pillows, if necessary], knee to chest) or lateral position can be an alternate position if the patient cannot lie supine. For some women, the supine lithotomy position can be very uncomfortable or even dangerous (e.g., patients in the last trimester of pregnancy may faint with decreased blood supply to the fetus in this position, those with arthritis of the knees and hips).
- Expose patient's genitalia, ensure positioning is appropriate and lighting is adequate.
 - Determine if a second person or a mechanical aid is needed to ensure sterile insertion technique.
- Place a waterproof pad under the woman's buttocks.
- Remove and discard existing catheter if present by first deflating the balloon by attaching an empty syringe and allowing fluid to passively flow into the syringe from the balloon. Some advocate not to actively pull the fluid with the syringe if at all possible because the balloon may collapse on itself or the port may lock up. Check that the volume of fluid in the syringe is equal to the volume inserted to ensure the balloon is completely deflated (may be less with a silicone catheter balloon that loses some fluid). Discard removed catheter and bag.
 - If pain or discomfort or difficulty occurs, the catheter balloon may have ridges or a cuff (Figure 7) that remains around the catheter, hampering catheter withdrawal. This problem may be seen more commonly with silicone catheters.
- Perform peri-care with recommended perineal cleansing solution. Visualize the urinary meatus, found in the midline just below the clitoris and above the hymenal ring.
- If separate from tray, attach anchoring (securement) device to upper thigh.
- Remove gloves, re-perform hand hygiene, and apply disposable gloves.
- Open catheterization kit.
- Ask the patient to raise buttocks and place square-shaped drape (if present), touching ends only, slightly under the buttocks and perineum (shiny side down).
- If anchoring device is in the tray and under drape, attach to upper thigh.
- Remove gloves, re-perform hand hygiene.
- Set up sterile tray for IUC insertion and maintain a sterile field throughout the actual IUC procedure.
 - If inserting lidocaine 2% gel, use aseptic technique by opening the packaging containing the gel and dropping the syringe onto the sterile tray (Box 2).
- If there is a break in sterile technique during preparation or the actual procedure, restart process with new insertion tray.
 - Open glove package in the tray and put on sterile gloves.

- Remove top tray and set to side on sterile field.
- Place drape (fenestrated drape) over the urethra and surrounding area.
- Squirt lubricant in tray, remove plastic cover from catheter, and coat 1 to 2 inches of the catheter with lubricant; female urethra is a flattened convoluted tube shape with epithelial folds that lie flat and ribbon-like making it prone to trauma during insertion.
- Attach sterile water syringe to balloon inflation port but do not inflate balloon.
 - Do not pre-inflate the balloon to test it; this is not recommended.
- Saturate cotton balls with betadine or open betadine swab sticks.
- Cleanse the patient by:
 - Spreading the labia with non-dominant hand (hand is no longer sterile) and keep labia separated until catheter is inserted so as to prevent labial contamination of the catheter during insertion. This position should be maintained throughout the procedure.
 - Visualize the meatus.
 - Gentle retraction of the labia majora cephalad (towards the head) and laterally, will expose the urethral meatus even in the most obese patient.
 - In an obese patient, an assistant may be needed to hold the labia folds open during the entire catheterization.
 - With the dominant hand, use forceps to pick up betadine-soaked cotton balls or pick up betadine swab sticks. Using the forceps or betadine swab will preserve the sterile field. Stroking directly downward from clitoris to vagina, cleanse each side of labia (outer labia then inner labia) from “front to back.” Use a

new cotton ball or betadine swab stick with each stroke to minimize contamination of meatus with bowel flora. Dispose of soiled cotton balls or betadine swab sticks away from sterile field after each downward stroke.

- Before inserting the catheter, educate the patient on diaphragmatic breathing techniques to relax the pelvic floor and prevent urethra contraction, promoting easier insertion of the catheter and minimizing discomfort.
- Pick up lubricated catheter as you would grasp a pencil or a dart, 3 to 4 inches from the tip and slowly insert catheter through the urethral orifice, angled slightly upward as you advance it, aiming in the direction of the umbilicus. Make sure the catheter does not touch the unprepped area of the perineum.
 - Using forceps (if available in the tray) to insert the catheter reduces the risk of introduction of bacteria into the bladder and is an infection prevention practice.
- Continue to pass catheter with a smooth constant motion for 2 to 3 inches (5.0 to 7.6 cm) until urine begins to drain, or to proximal “Y” shaped ports (bifurcation point), whichever comes first. If urine is not draining, ask the patient to cough gently or perform Valsalva maneuver, which may promote drainage of urine if the catheter’s eyes are blocked with lubricant.
 - If the catheter is inadvertently inserted in the vagina, leave it as a landmark until a new catheter is successfully inserted in the bladder. Obtain a new IUC tray and re-attempt catheterization.
 - If there is any doubt the catheter is in the bladder or concern about it kinking in the urethra, stop the insertion procedure. Signs include patient complaint of severe pain during insertion, inability to pass the catheter due to resistance and/or no urine drainage.
- Inflate the balloon with non-dominant hand (hand that is holding labia open). Instill the correct and full amount of sterile water because under-inflation can increase the risk the catheter may become dislodged.
 - If there is any question as to the location of the catheter, as evidenced by no return of urine or patient complains of pain, do not inflate the balloon.
 - Underinflated balloons often fail to expand evenly, causing balloon distortion and the catheter to be angled to one side.
- If the catheter is not attached to a pre-connected drainage bag, then connect the drainage port at the “Y” junction of the IUC to the appropriate drainage system.
- Secure or anchor the catheter to the inner thigh without tension or traction using a catheter stabi-

Box 2.
Instillation of Lidocaine 2% Gel

Place nozzle of gel near the urethral orifice and apply some gel. Gently place nozzle at the meatus and slowly squeeze at least 5 mL of gel into the urethra. Allow the gel to dwell for approximately 3 to 5 minutes before starting catheter insertion. A sterile gauze pad may be placed over the meatus to help prevent spillage of anesthetic gel. Maintain sterility of procedure during this process. Additional lubrication with a water-based lubricant may not be needed.

Lidocaine Syringe



Source: Courtesy of Sagent. Used with permission.

Figure 8.
Catheter Secured with Adhesive Anchor
(StatLock® by Bard Medical)

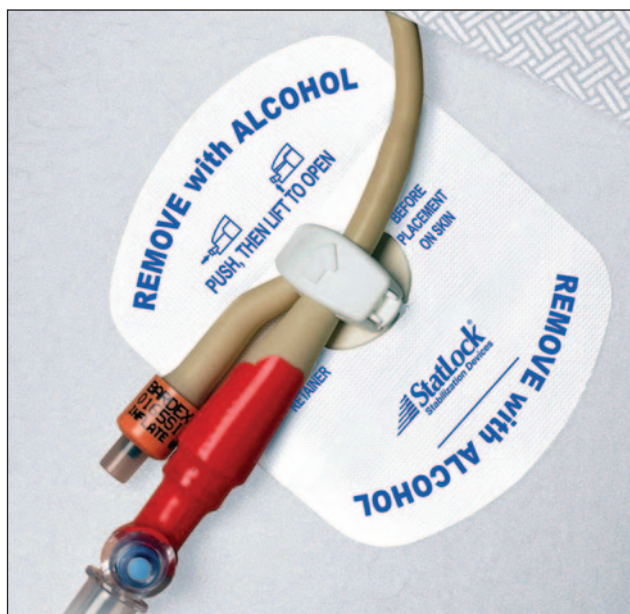


Photo: Diane K. Newman, DNP.

lization device (e.g., elasticized straps, hydrocolloid adhesive devices) (Figure 8).

- Properly secured catheters reduce the risk of bladder neck and urethral trauma, urethral erosion, CAUTI, accidental removal, and bladder spasms.
- Securement should minimize tugging or stretching of the catheter.
- Drainage bags should be placed below the level of the bladder, preferably near the patient's lower leg (but not resting on the floor), to allow for free flow of urine and decreasing the risk of CAUTI.
 - Use a urimeter bag for patients requiring hourly urine measurements.
 - Leg bags are useful for patients who are mobile or undergoing rehabilitation.
 - The emptying port should be readily accessible and easily opened and closed, especially for those with limited hand function. Some bags have caps secured onto the end to prevent dripping of urine if the valve becomes partially open.
 - All components of a bag, including the tubing, should be non-latex to avoid hypersensitivity responses.
- Check IUC system for closed connections and obstructions/kinks.
- Discard used equipment, remove gloves, perform hand hygiene.

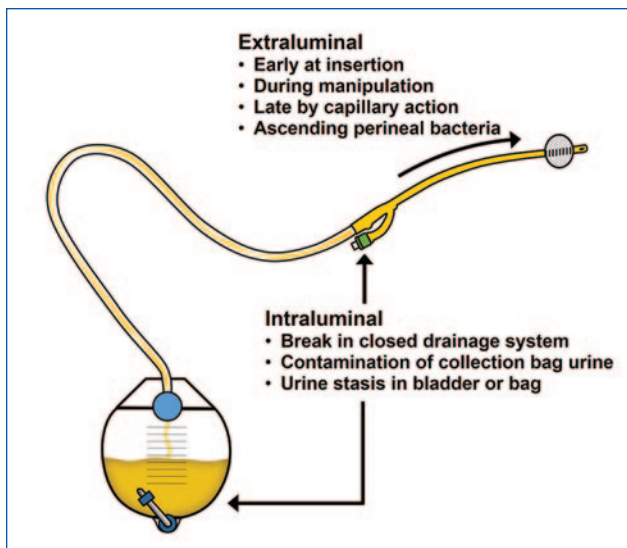
Documentation

Documentation should include the reason for catheterization, date and time, catheter type (length and size), volume of water used to inflate the balloon, use of lidocaine, any problems encountered during procedure (i.e., resistance to insertion, bleeding, pain), condition of meatus (e.g., periurethral tissues, erosion, inflammation), amount and characteristics of urine drained, and the patient's response to the procedure. Document education completed. Write on the drainage bag the date of catheter insertion.

Possible Adverse Events

1. **Bleeding:** Insertion of the IUC may cause minimal bleeding from irritation to the urethral linings. Ensuring an adequate amount of lubrication will reduce the risk of urethral trauma and friction on catheter insertion.
2. **Difficult urethral catheterization:** Defined as failure to insert a catheter after multiple attempts, and in many cases, requires urologic consultation. Some female patients may be difficult to catheterize due to various circumstances, including previous surgeries, childbirth, anatomical differences, and pelvic organ prolapse, which may cause variations in the appearance of the urethra. The urethra can become kinked due to prolapse. In this situation, place one finger inside the vagina and apply gentle pressure upward to support and straighten the urethra. If the prolapse is large and protruding from the vagina, it may be necessary to reduce the prolapse by gently applying pressure until the prolapse is placed back into the vagina. Lubricate the prolapse with water-soluble lubricant and apply equal alternating pressure anterior and posterior, and slowly, gently guide the prolapse inside the vagina. An extra person may be necessary to assist with reducing prolapse and to keep prolapse in place. Another option would be the use of a Sim speculum to keep prolapse in place.
3. **Inability to visualize urinary meatal opening:** This can occur when the urethra is deep inside the vagina. Placing a finger in the vagina and applying gentle pressure upward will straighten the urethra. Then slide the catheter over the top of the finger using the finger as a guide. This will frequently open the meatus, creating better visualization. Cleansing the area with betadine may also review a "wink" or crevice (meatal opening).
4. **Pain:** Catheter insertion in women is usually not painful. Removal of an existing catheter may be painful if there is ridge formation on the catheter balloon. Women may complain of a stinging sensation and discomfort.

Figure 9.
Intraluminal and Extraluminal Pathways



Source: Courtesy of Diane K. Newman, DNP.

5. Catheter-associated urinary tract infections:

Urinary tract infection (UTI) accounts for approximately 32% of infections reported by acute care hospitals in the United States and approximately 18% to 25% of all nosocomial bacteremias. The majority of hospital-associated UTIs are caused by instrumentation of the urinary tract, mainly from an IUC. Older women with an IUC are at greater risk. CAUTIs can result in increased morbidity, mortality, hospital cost, and length of stay. Bacteria can establish colonization of a patient's bladder by one of two routes: introduction into the urinary tract via the internal or intraluminal (34%) or external or extraluminal (66%) surface of urinary catheters (Figure 9). Intraluminal bacteria are transmitted through the entire length of the drainage tube and catheter. Intraluminal entry can occur from several causes: urinary stasis because of drainage failure, break in the closed system, from contamination of the urine collection bag, or from urinary stasis in the bag with subsequent ascending infection. Extraluminally, bacteria contaminate externally by being introduced and ascending into the urethra and bladder during catheter insertion or manipulation, which may indicate a lack of asepsis during initial insertion or occur by microorganisms ascending from the perineum along the outer surface of the catheter. This latter route is presumed to be causative most often in women. In addition, fecal strains, primarily in female patients, contaminate the perineum and urethral meatus, are harbored in

Box 3.

Obtaining a Urine Specimen from an Indwelling Urinary Catheter (IUC)

- Urine samples shall be obtained from a sampling port or directly from a catheter valve using an aseptic technique.
- A sampling port (Figure 14) is needleless and designed to be accessed directly using a syringe without a needle.
- Do not collect a urine sample from the drainage bag because it may be contaminated and lead to inaccurate results and inappropriate treatment.

Obtaining Specimen from Catheter Port

- Perform hand hygiene and put on clean medical gloves.
- Check for urine in the catheter drainage tubing. If no urine, clamp the tube below the sampling port.
 - Allows urine to collect above the clamp, and sample can be obtained.
- A sample should be obtained using aseptic technique so as to reduce cross-infection or contamination of the specimen.
- With gloved hands, clean the sampling port with an alcohol swab.
- Depending on the type of catheter sampling port, one the following two methods should be used: 1) insert a syringe (non-Luer-Lok) at an angle of 45° into the sampling port or 2) insert a Luer-Lok syringe into a needleless access port. Aspirate the required amount (at least 10 mL) of urine.
 - Using the port reduces infection risk, as disconnecting the catheter from the bag to obtain a urine specimen breaches the closed system, increasing the risk of a CAUTI.
- Put the urine sample into sterile urine collection container ensuring the syringe does not touch the container and close.
- Release clamp (if used) and observe if urine is flowing freely.

Obtaining Specimen from Catheter Valve

- Perform hand hygiene and put on clean medical gloves.
- Clean the valve port with an alcohol swab and allow to dry.
- Open the valve and drain a small amount of urine to flush the valve.
- Open valve again and drain urine into a sterile specimen container, ensuring the valve does not touch the container and secure the container.
- Close valve

the labia and vaginal vestibule, and then ascend to the bladder along the external surface of the catheter to cause bacteriuria. So any break in sterile technique during insertion can lead to introduction of bacteria resulting in a CAUTI or urosepsis. Bacteria causing a CAUTI attach to the surface in the inner lumen of the catheter, pro-

continued on page 85

Table 1.
Urinary Drainage Bags

Type of Bag	Description	Considerations	Sample
Large bedside/overnight	<ul style="list-style-type: none"> Used for non-ambulatory and overnight drainage. 2-liter capacity most commonly used. Anti-reflux valve. Length of tubing can lead to “dependent loops.” 4-liter bags are available and used short term post-urological surgery and for continuous bladder irrigation. 	<ul style="list-style-type: none"> Cannot be attached to the leg. Difficult to conceal. Needs to be supported on a stand or support hanger. Contact with the floor should be avoided as this would increase the risk of contamination and a CAUTI. 	See Figure 10 on next page.
Leg	<ul style="list-style-type: none"> Available in several sizes (350 mL, 500 mL [most common], 750 mL). Have three lengths of tubing: directly attached to catheter, short or long tube. Shape may be rectangle or oval. Can be placed horizontally or vertically. May have separate inflow chambers which can reduce sloshing effect in bag. Tubing length should be easily adjustable to promote patient comfort and choice of clothing (e.g., short pants versus long pants). 	<ul style="list-style-type: none"> Promotes independence. Can be concealed. Can be attached to thigh or lower leg, but the calf is usually the easiest place for attachment. Women who wear skirts may use a thigh bag or waist belt. Secured with elastic, mesh, or Velcro straps, or with a knitted bag, or a cloth undergarment. Any securement should maintain catheter tubing securely and avoid excess tension and pressure on the soft tissue of the meatus. May have a woven fabric backing that comes into contact with skin, which may decrease sweating and irritation. 	See Figures 11 and 12 on next page.
Abdomen bags (belly bag)	<ul style="list-style-type: none"> 1-liter capacity. Anti-reflux valve behind the catheter port. Soft, non-woven backing. Secured to mid-abdomen with a soft expandable belt. 	<ul style="list-style-type: none"> Discrete. Promotes independence. Helpful when it is necessary to monitor urine output on hourly basis in certain clinical scenarios (e.g., congestive heart failure, extensive burns, hemodynamic instability). 	See Figure 13 on next page.
Urimeter (collection meter)	<ul style="list-style-type: none"> Distinct collection meter with easy-to-read markings on the bag to allow for urine output measurement. Designs include the ability to empty urine into the larger collection bag or emptying it directly from the urimeter. 	<ul style="list-style-type: none"> Adds additional weight to the large bag. 	See Figure 14 on next page.

Figure 10.
Overnight Bag



Source: Courtesy of Hollister.

Figure 12.
Leg Bag with Extension Tubing and Straps



Source: Courtesy of Hollister.

Figure 11.
Horizontal Non-Woven Leg Bag



Source: Courtesy of Coloplast.

Figure 13.
Abdominal Bag



Photo: Courtesy of Diane K. Newman, DNP.

Figure 14.
Components of a Large Drainage Bag with Collection Meter (Urimeter)

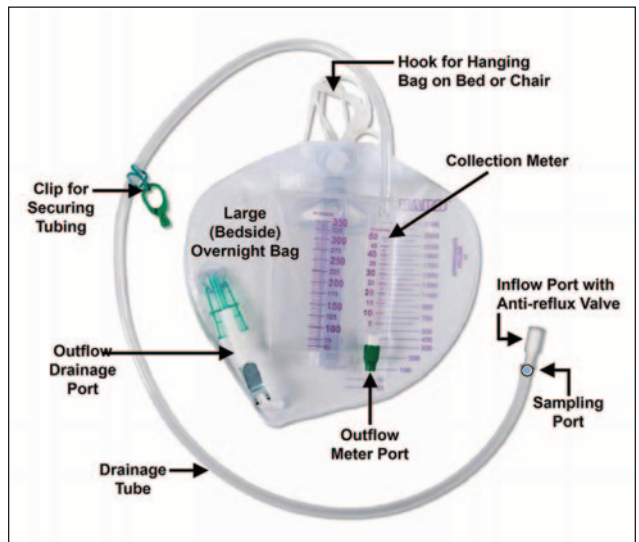


Photo: Courtesy of Diane K. Newman, DNP.

ducing a biofilm, a densely adherent polysaccharide structure. The biofilm protects the bacteria from the body's natural defense, allowing bacteria to multiply. Use of a sterile catheter tray with a closed system and pre-connected drainage bag minimizes the risk of contamination during insertion, but the use of other supplies not included in the tray (addition of a lidocaine syringe) and practices that necessitate opening the system (e.g., switching drainage bags) can increase the risk of contaminating a sterile field. Practicing good hand hygiene is the best defense against prevention of infection. Keeping the drainage bag below the level of the bladder allows free urine drainage and prevents reflux of urine into the bladder, which increases the risk of infection. Box 3 lists the steps for obtaining a urine specimen from an IUC catheter.

Other adverse effects of an IUC, such as urine bypassing, urinary stones, accidental catheter dislodgement, urethral stricture (rare), blockage, and encrustations, are seen in IUCs that remain in-situ long term (> 30 days).

Other Considerations

Changing time: The optimal interval for changing IUCs is not well defined. According to the Centers for Disease Control and Prevention (CDC)'s *Guideline for Prevention of Catheter-Associated Urinary Tract Infections* (Gould et al., 2010), changing an IUC should be based on clinical indications, such as infection, obstruction, or when the closed system is compromised. However, clinical practice has been to change/replace chronic IUCs every four weeks to minimize stone formation and biofilm development, and examine the urethra for trauma or tearing.

Drainage bag: There are a number of catheter drainage bags, and they are described in Table 1. Material is latex, silicone, or vinyl. These are one-way anti-reflux valve disposable bags, and changing the bag monthly is usual practice. Large-capacity (bedside, overnight) bags are usually used in hospitals whereas small-capacity (leg) bags are used by patients at home. There are several concerns with legs bags, including the bag sliding up and down the leg, over-tightening of the straps, the plastic backing against the skin can lead to sweating and skin breakdown. The patient and/or caregiver should be involved in selection because the bag can have an effect on lifestyle, particularly independence. Drainage tubes are available in differing lengths and some can be adjusted to individual requirements.

There are a variety of drainage bag tap options for emptying these bags (lever-type valve [easiest to use], T-bar valve, slide valve, push-pull valve, twist valve, or clamp valve), and manual dexterity is needed to operate opening and closing them. The

use of a catheter valve as an alternative to continuous drainage is an option. Drainage bags are always positioned below the level of bladder and should not be allowed to fill beyond three-quarters filled. ■

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