



# FAQs on Urinalysis, Urine Culture, and Urinary Catheter Management

*This reference provides guidance from Duke Infection Prevention and Hospital Epidemiology for appropriate indications and best practices for ordering and obtaining urine for urinalysis (UA) and urine culture samples, and urinary catheter management.*

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## FAQs on Urinalysis, Urine Culture and Urinary Catheter Management

**Q: What are appropriate indications\* for a urine culture? (\*May not always apply to neonates)**

**A:** The following are appropriate indications:

- Signs/symptoms of UTI
  - Unexplained suprapubic or flank pain
  - Painful or burning urination
  - Urinary frequency or urgency
- As part of an evaluation for fever in the absence of signs/symptoms of UTI, **ONLY** when one or more of the following criteria are present:
  - Solid organ transplant recipient
  - Known urinary tract obstruction or new retention
  - Pregnancy
  - Neutropenia
  - Recent urologic procedure
- Evaluation for sepsis/shock without clear source
- Spinal cord injury (SCI) patients with new or worsening spasticity, autonomic dysreflexia, malaise, or lethargy
- At admission of chronically catheterized patient **WITH** new fever or unexplained mental status changes
- **Asymptomatic patients ONLY if:**
  - Prior to urologic procedures when bleeding or interruption of the mucous membrane is anticipated
  - Pregnant women

***Maestro Care change:** The urine culture order now includes urine culture indications for easy reference at the time of ordering.*

**Q: What are NOT appropriate indications for a urine culture?**

**A:** The following are not appropriate indications:

- Do NOT order solely based on concerns regarding urine quality, such as change in the character of the urine (color, smell, sediments, turbidity).
- Do NOT have standing orders for urine culture in the absence of an appropriate indication (e.g., as part of standard fever work up in ED).
- Do NOT repeat a urine culture to document clearance of bacteriuria in the presence of symptomatic improvement.
- DO NOT order a urine culture in asymptomatic patient with positive urinalysis findings (WBCs, nitrite, LE, bacteria). Note that these findings do not indicate UTI in the absence of symptoms.
- In the absence of symptoms, screening urine cultures should NOT be ordered for:
  - Non-pregnant women
  - Patients with diabetes
  - Elderly patients or patients with stable delirium/dementia
  - Patients with spinal cord injury
  - Patients with an indwelling urinary catheter or who require chronic intermittent catheterization
  - Renal transplant recipients
  - Prior to surgical procedures, except urologic procedures when breach in mucosa is anticipated

**Q: What is best practice for ordering a urinalysis?**

**A:** The following are best practices:

- A urinalysis should always be ordered prior to or in conjunction with a urine culture to aid in the interpretation of a positive urine culture.
- Note that urinalysis should be used for its negative predictive value ONLY. For example, absence of pyuria (WBCs in urine) rules out UTI, but presence of pyuria or nitrite or bacteria does not diagnose UTI.
- In the inpatient setting, when an indication for urine culture exists (see above), it is typically appropriate to *first* order a urinalysis. A urine culture may then be added on if the urinalysis is abnormal (e.g., > 10 WBC/HPF in a non-neutropenic patient).

*Maestro Care change: The urine culture order has been changed to an order panel, and UA will be preselected if no UA order has been completed or is in process in the preceding 24 hours.*

**Q: What is best practice for removing/replacing a Foley prior to a culture?**

**A:** Only replace a Foley prior to culture if there is a provider order.

Per evidence and expert opinion, providers should consider removing (and replacing, if still indicated) a Foley prior to culture, **if the Foley has been in greater than 7 days (except in cases of urologic patients or patients with difficult or traumatic Foley catheter placement).**

- **Why?** Foleys become colonized at 3%-7% per day; removing and/or changing the Foley after 7 days will help decrease the risk of falsely contaminated specimens that make it difficult to interpret results.
- Replacing Foleys that have been in place less than 7 days may cause excess urethra trauma and/or introduce bacteria if improper insertion techniques are used.

*Maestro Care change: A nursing order to remove/replace urinary catheter will appear as an option on the urine culture panel IF the patient's urinary catheter has been in place greater than 7 days.*

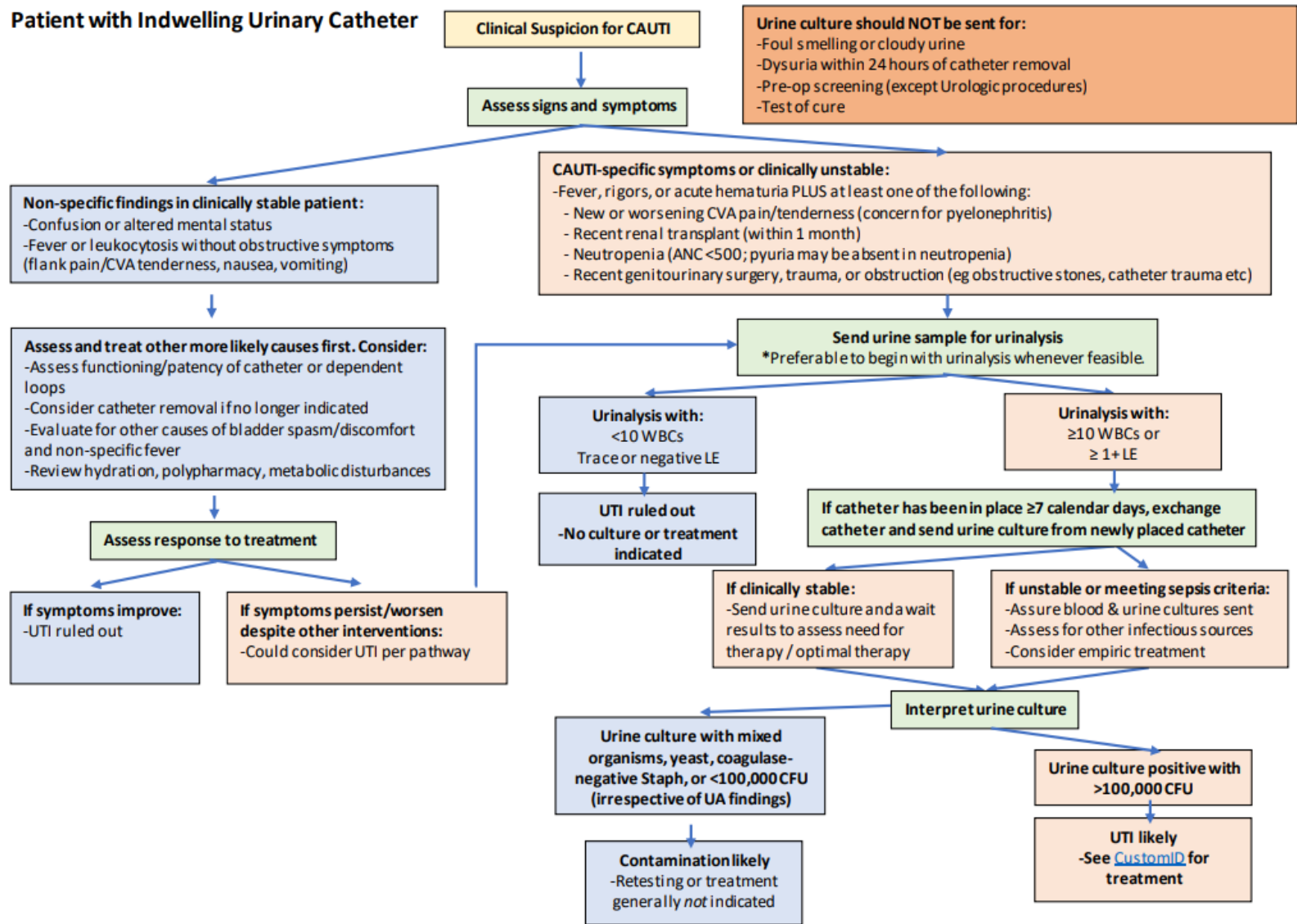
**Q: What is best practice for antibiotic treatment of patients with positive urine cultures?**

**A:** Patients with positive urine cultures should only be treated with antibiotics if the following are true:

- The patient has signs/symptoms of UTI or another recognized indication for urine culture (see above)
- AND**
- The urinalysis has >10 WBC/HPF (**\*Note: Exception is patient with neutropenic fever in which treatment is recommended, even in the presence of a normal urinalysis).**

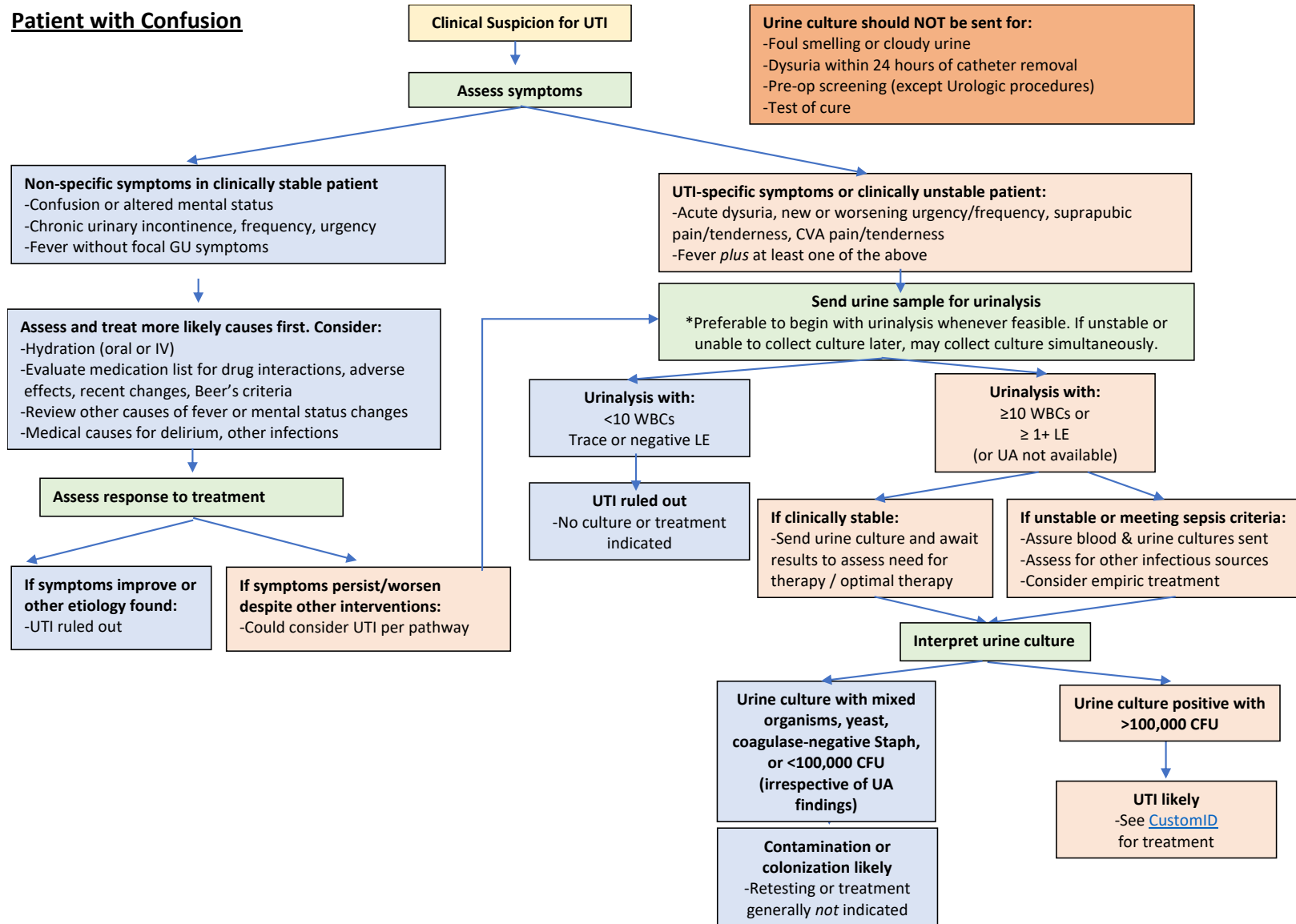
**Q: What is the appropriate process for urine specimen collection in patients with an indwelling urinary catheter?**

**A:** This flowchart illustrates the process for urine specimen collection in patients with an indwelling urinary catheter who are suspected for UTI.



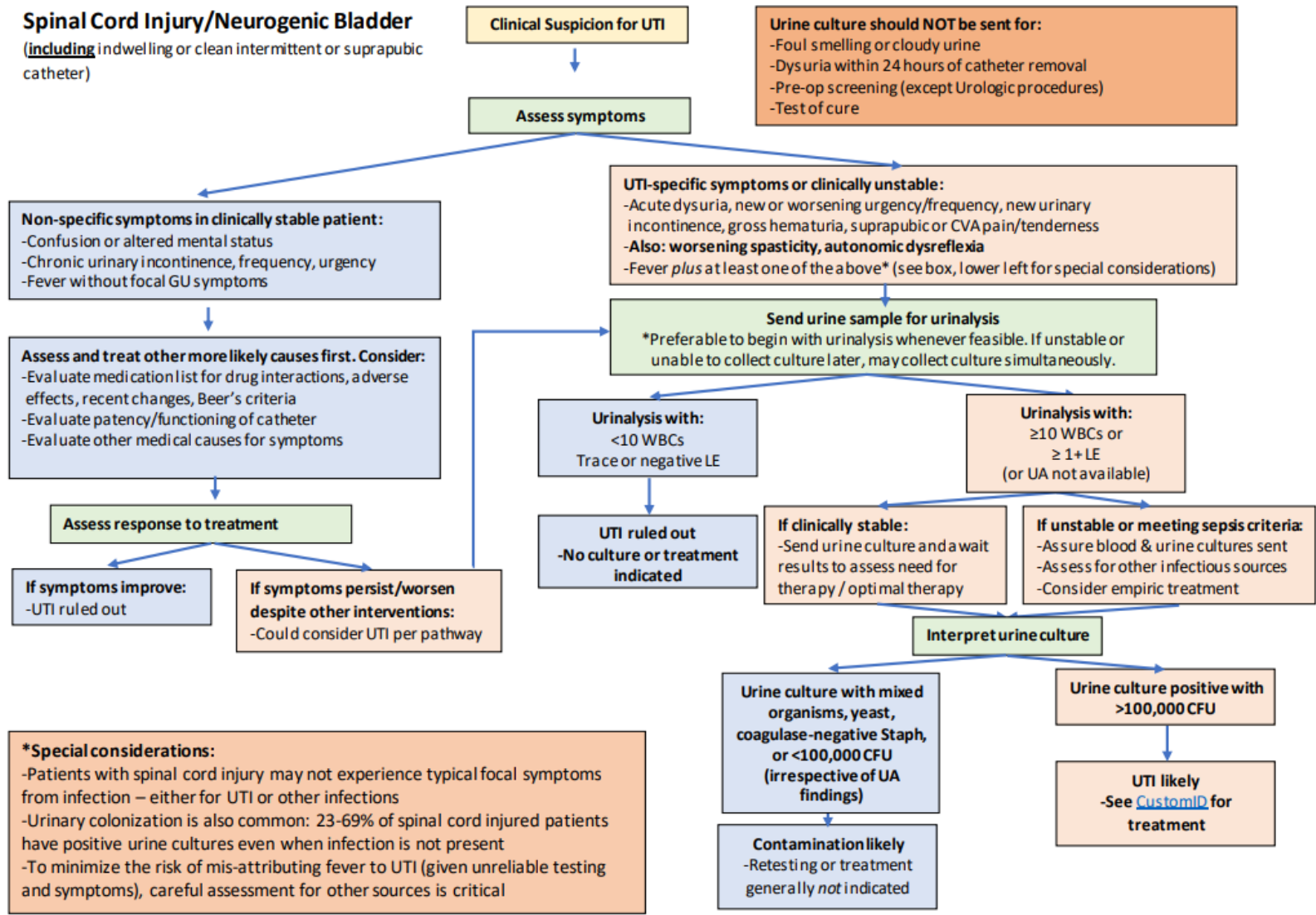
**Q: What is the appropriate process for urine specimen collection in patients with confusion?**

**A:** This flowchart illustrates the process for urine specimen collection in patients with confusion who are suspected for UTI.



**Q: What is the appropriate process for urine specimen collection in patients with a spinal cord injury or neurogenic bladder?**



**A:** This flowchart illustrates the process for urine specimen collection in patients with a spinal cord injury or neurogenic bladder who are suspected for UTI.





**Q: How should urine be collected for urinalysis and urine culture?**

**A:** First, **verify the provider order** for a urinalysis or urine culture.

- Collect the urine specimens as directed by the provider’s order (e.g., from Foley, clean catch, straight cath, etc.).
- Then, collect urine using **both** the **GREY** and **YELLOW** tubes from the BD Urine Collection kits.
- See below for source-appropriate urine culture collection techniques for the different sources of urine.

Source of Urine	Source-Appropriate Urine Culture Collection Technique
<p><b>Foley</b></p> <p>From Lippincott Procedures: <a href="#">Urine specimen from a Foley</a></p>	<p>For patients with a Foley, use the AeroMed Urine Collection kit with vacutainer (SAP 352593)</p>  <ol style="list-style-type: none"><li>1. Collect urine using <b>both</b> the <b>GREY</b> and <b>YELLOW</b> tubes.</li><li>2. Perform hand hygiene and don gloves.</li><li>3. Clamp the Foley drainage tubing below the sampling port for a few minutes to allow urine to collect.</li><li>4. Clean the aspiration port with alcohol. Scrub for at least 15 seconds and allow to dry.</li><li>5. Attach the luer lock BD vacutainer to the aspiration port of the catheter tubing.</li><li>6. Place both the <b>GREY</b> and <b>YELLOW</b> tubes on the vacutainer to aspirate urine.</li></ol>  <ol style="list-style-type: none"><li>7. Remove the vacutainer and unclamp the drainage tube.</li><li>8. Invert both tubes 6-7 times to mix.</li><li>9. Remove and discard your gloves; perform hand hygiene.</li><li>10. Label the specimens and send to the lab.</li></ol> <p><b>*Note: DO NOT draw a urine specimen from the Foley drainage bag.</b></p>

<p><b>Clean catch</b></p> <p>From Lippincott Procedures:</p> <ul style="list-style-type: none"> <li>• <a href="#">Male</a></li> <li>• <a href="#">Female</a></li> </ul>	<p>Use the BD Urine Complete Cup Collection kit (SAP 11944)</p>  <ol style="list-style-type: none"> <li>1. Collect urine using <b>both</b> the GREY and <b>YELLOW</b> tubes.</li> <li>2. Perform hand hygiene and don gloves.</li> <li>3. <b>For males</b>, clean the end of the penis with a towelette, beginning with the urethra opening and working away from it. Repeat using a second clean towelette.</li> <li>4. <b>For females</b>, clean the urinary opening and surrounding area from front to back using a towelette and discard it in a waste receptacle. Repeat with a second towelette.</li> <li>5. Instruct the patient to begin voiding into the bedside commode or toilet, as the first urine washes microorganisms and cellular debris from the urethra.</li> <li>6. Without stopping the urine stream, move the collection container into the stream, collecting 30-50mL at the midstream portion of the voiding.</li> </ol> <p><b>*Note: Urine from a hat or bedpan should never be used for a urine specimen collection.</b></p> <ol style="list-style-type: none"> <li>7. After the specimen has been collected, move the container out of the stream and allow the patient to finish voiding.</li> <li>8. Take the sterile container from the patient and cap it securely. If the outside of the container is soiled, clean it and wipe it dry.</li> <li>9. Place both the GREY and <b>YELLOW</b> tubes on the collection cup to aspirate urine.</li> <li>10. Invert both tubes 6-7 times to mix.</li> </ol>  <ol style="list-style-type: none"> <li>11. Remove and discard your gloves; perform hand hygiene and instruct the patient to wash their hands.</li> <li>12. Label the specimens and send to the lab.</li> </ol>
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## Straight catheter

From Lippincott  
Procedures:  
[Urine specimen  
via straight cath](#)




Use the BD Urine Complete Cup Collection kit (SAP 11944)



1. Collect urine using **both** the **GREY** and **YELLOW** tubes.
2. Perform hand hygiene and don gloves.
3. Wash the periurethral area using non-medicated pre-packaged cloths.
4. Remove and discard your gloves. Perform hand hygiene.
5. Open the prepackaged sterile catheter insertion kit using sterile technique.
6. Place the drape over the patient, exposing their perineum.
7. Put on sterile gloves.
8. Using sterile no-touch technique, place the sterile towel under the patient's perineal area.
9. **Females:**
  - a. Spread the labia apart with the thumb and middle finger of your non-dominant hand to expose the urethra.
  - b. With your dominant hand, clean the area around the urethral meatus with povidone-iodine swabs or other antiseptic swabs using downward strokes.
  - c. Use a separate swab for each downward stroke and discard each swab after using it. **\*Note: DO NOT allow the labia to close during the procedure as closure contaminates the sterile field.**
  - d. Lubricate the tip of the sterile catheter. Gently insert the catheter into the urethral meatus until you note urine flow.
10. **Males:**
  - a. Clean the area around the urethral meatus with povidone-iodine swabs or other antiseptic swabs.
  - b. Clean the penis from the meatus to the base of the glans in an outward circular motion. Use a new swab for each circle.
  - c. Lubricate about 6" of the tip of the catheter. Insert the catheter until you note urine flow.
10. Allow 10-20mL of urine to drain into a sterile specimen container. Gently remove the catheter.
11. Take the sterile container and cap it securely.
12. Place both the **GREY** and **YELLOW** tubes on the collection cup to aspirate urine.
13. Invert both tubes 6-7 times to mix.



14. Clean the patient's perineal area with non-medicated pre-packaged cloths.
15. Remove and discard your gloves; perform hand hygiene.
16. Label the specimens and send to the lab.

<p><b>Nephrostomy</b></p>	<p>Use the BD Urine Complete Cup Collection kit (SAP 11944)</p>  <p><b>From stopcock</b></p> <ol style="list-style-type: none"> <li>1. Collect urine using <b>both</b> the GREY and <b>YELLOW</b> tubes.</li> <li>2. Perform hand hygiene and don gloves.</li> <li>3. Use a stopcock to close off the nephrostomy tube for approximately 15 minutes to collect urine.</li> <li>4. Clean the stopcock port with alcohol. Scrub for at least 15 seconds and allow to dry.</li> <li>5. Open the stopcock and allow urine to drain into the sterile container cup.</li> </ol> <p><b>*Note: DO NOT aspirate urine from the nephrostomy tube; allow it to drain naturally.</b></p> <ol style="list-style-type: none"> <li>6. Take the sterile container and cap it securely.</li> <li>7. Place both the GREY and <b>YELLOW</b> tubes on the collection cup to aspirate urine.</li> <li>8. Invert both tubes 6-7 times to mix.</li> </ol>  <ol style="list-style-type: none"> <li>9. Remove and discard your gloves; perform hand hygiene.</li> <li>10. Label the specimens and send to the lab.</li> </ol> <p><b>From new nephrostomy collection bag</b></p> <ol style="list-style-type: none"> <li>1. Change the drainage bag per standards/guidelines.</li> <li>2. Perform hand hygiene and don gloves.</li> <li>3. Facilitate gravity flow of urine collection into the bag by ensuring the bag is held below the level of kidneys.</li> </ol> <p><b>*Note: DO NOT aspirate urine from the nephrostomy tube; allow it to drain naturally.</b></p> <ol style="list-style-type: none"> <li>4. When sufficient volume of urine has collected, open drainage bag valve and drain urine into sterile container cup without allowing tip of bag to touch inside of cup.</li> <li>5. Close drainage bag valve.</li> <li>6. Take the sterile container and cap it securely.</li> <li>7. Place both the GREY and <b>YELLOW</b> tubes on the collection cup to aspirate urine.</li> <li>8. Invert both tubes 6-7 times to mix.</li> </ol> 
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**Urostomy or ileal conduit**

From Lippincott Procedures:  
[Urine specimen via urostomy](#)

Use the BD Urine Complete Cup Collection kit (SAP 11944)



1. Collect urine using **both** the GREY and **YELLOW** tubes.
2. Perform hand hygiene and don gloves.
3. Drape a towel or an absorbent pad under the stoma.
4. If the patient is using a one-piece pouch system, remove the pouch system. If the patient is using a two-piece pouch system, remove the pouch from the skin barrier flange or completely remove the pouch system.
5. Remove and discard your gloves. Perform hand hygiene and don sterile gloves.
6. Clean the stoma with cleaning solution using a circular motion from the stoma opening outward. Blot the stoma using a sterile gauze pad.

**SITUATION 1: Collecting urine using a catheter**

7. Lubricate the catheter with water-soluble lubricant.
8. Gently insert the catheter tip into the stoma no more than 3". If you meet resistance, rotate the catheter until it slides into place; don't force it.
9. Maintaining the sterility of the catheter, place the open end of the catheter into the specimen container.
10. Hold the catheter in place until urine begins to flow; collect 5-10 mL of urine in the collection cup. Remove the catheter.

**SITUATION 2: Collecting urine using the clean-catch method**

7. Allow a few drops of urine to flow from the stoma onto a sterile gauze pad.
8. Maintaining the sterility of the specimen container, hold the container under the stoma and collect 5 to 10 mL of urine.

**SITUATION 3: Collecting urine if stents are present in a urostomy stoma**

7. Clean the outside ends of the stents with cleaning solution. Blot the stents with sterile gauze.
8. Allow a few drops of urine to flow from the stents onto a sterile gauze pad.
9. Maintaining the sterility of the specimen container, hold the container under the stents and collect 5 to 10 mL of urine.

**Completing the procedure**

10. Place the lid on the urine specimen collection container.
11. Place both the GREY and **YELLOW** tubes on the collection cup to aspirate urine.
12. Invert both tubes 6-7 times to mix.



13. Clean the stoma and peristomal skin. Replace the pouching system as appropriate.
14. Remove and discard your gloves; perform hand hygiene.
15. Label the specimens and send to the lab.

### Suprapubic catheter

If able, take the urine sample from a newly placed catheter using steps similar to an intermittent straight cath.

**For patients with a suprapubic catheter WITH a luer lock aspiration port, use the AeroMed Urine Collection kit with vacutainer (SAP 352593)**




1. Collect urine using **both** the GREY and YELLOW tubes.
2. Perform hand hygiene and don gloves.
3. Clamp the drainage tubing below the sampling port for a few minutes to allow urine to collect.
4. Clean the aspiration port with alcohol. Scrub for at least 15 seconds and allow to dry.
5. Attach the luer lock BD vacutainer to the aspiration port of the catheter tubing.
6. Place both the GREY and YELLOW tubes on the vacutainer to aspirate urine.



7. Remove the vacutainer and unclamp the drainage tube.
8. Invert both tubes 6-7 times to mix
9. Remove and discard your gloves; perform hand hygiene.
10. Label the specimens and send to the lab

**\*Note: DO NOT draw a urine specimen an existing drainage bag.**

	<p><b>For patients with a suprapubic catheter <u>WITHOUT</u> a luer lock aspiration port, use the BD Urine Complete Cup Collection kit (SAP 11944)</b></p>  <ol style="list-style-type: none"> <li>1. Collect urine using <b>both</b> the <b>GREY</b> and <b>YELLOW</b> tubes.</li> <li>2. Perform hand hygiene and don gloves.</li> <li>1. Use a catheter plug to allow urine to collect in the bladder for approximately 15-20 minutes.</li> <li>2. Unplug the catheter into the BD Urine Complete Cup (SAP 11944).</li> <li>3. Take the sterile container and cap it securely.</li> <li>4. Place both the <b>GREY</b> and <b>YELLOW</b> tubes on the collection cup to aspirate urine.</li> <li>5. Invert both tubes 6-7 times to mix.</li> <li>6. Remove and discard your gloves; perform hand hygiene.</li> <li>7. Label the specimens and send to the lab.</li> </ol>
<p><b>External urinary management systems</b> (e.g., PureWick™, Primafit™, condom catheters, etc.)</p>	<p><b>DO NOT collect urine samples from external urinary management systems (either from the tubing or suction canisters), as they are not sterile systems.</b></p> <p>Consider straight catheterization or, if patient is able, a clean catch. Refer to the providers' order for the specific source.</p>

**Q: How should urine specimens be transported?**

**A:** After collection, transport/tube urine specimens as soon as possible (less than 30 minutes) to lab.

- If specimens cannot be transported or analyzed less than 30 minutes after collection (e.g., in an outpatient clinic setting), urine specimens should be refrigerated at 2°C to 8°C in a designated specimen refrigerator for up to 24 hours.
- **Why?** Decomposition of urine and bacteria growth begins within 30 minutes; therefore, urine should be examined within this timeframe.

**Q: What are appropriate indications for a Foley?**

**A:** The following scenarios are appropriate indications for a Foley:

1. Patient is critically ill and strict monitoring of urinary output is required (e.g., hemodynamic instability, hourly titration of fluids, vasopressors/inotropes, or life-supportive therapy)
2. Urinary retention as documented by bladder scanning <b>(See protocol for urinary retention)</b>
3. Requires prolonged immobility with skeletal instability (Potentially unstable fracture of thoracic or lumbar spine, pelvic or hip fractures)
4. Assist with healing of severe open perineal or sacral wounds (Stage 3, Stage 4, or unstageable) in incontinent patients or perineal burns
5. Perioperative use for surgical procedures as indicated (e.g., urological, abdominal, neurologic, gynecologic surgery); Anticipated prolonged procedures; Patients anticipated to receive a large volume of fluids or diuretics in surgery; Need for intraoperative monitoring of urinary output; or Patient is within 48 hours post-op
6. Epidural catheter in place
7. Bladder irrigation and/or instillation of medications is required (e.g., for chemotherapy, blood clots, significant hematuria)
8. Neurogenic bladder patients not performing self-catheterization at home
9. Clinical condition for which intermittent straight catheter or external catheter would be appropriate but placement by nurse or physician was difficult
10. By patient/family request to improve comfort during end-of-life care
11. Catheter placed/ordered by urology

**Q: What are the best practice steps for inserting a Foley catheter?**

**A:** Refer to the Bard® instructions located inside the Foley catheter kit (also available on page 13). Refer to the [DUHS Urinary Management Policy \(#4630\)](#) for specific steps.

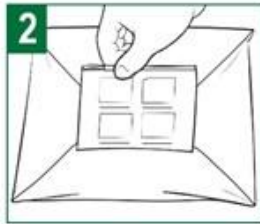
**Q: What is the process for when a Foley is no longer indicated?**

**A:** If the Foley is no longer indicated, remove per RN-Driven Foley Removal Protocol or provider order. Refer to the **RN-Driven Foley Removal Protocol and Urinary Retention Algorithm on page 14.**

**Directions for inserting a Foley catheter:**



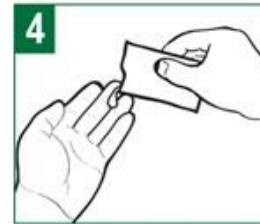
Wash hands and don clean gloves



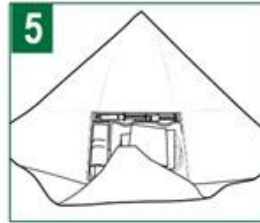
Explain procedure to patient and open Peri-Care Kit



Use the provided packet of wipes to cleanse patient's periurethral area



Remove gloves and perform hand hygiene with provided alcohol hand sanitizer gel



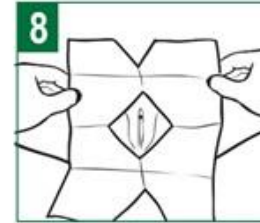
Using proper aseptic technique open CSR wrap



Don sterile gloves



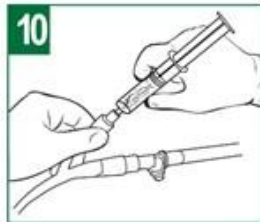
Place underpad beneath patient, plastic/"shiny" side down



Position fenestrated drape on patient



Saturate 3 foam swab sticks in Povidone Iodine



Attach the water filled syringe to the inflation port  
**NOTE: IT IS NOT NECESSARY TO PRE-TEST THE FOLEY CATHETER BALLOON**



Remove Foley catheter from wrap and lubricate catheter



Prepare patient with 3 foam swab sticks saturated in Povidone Iodine. Use the nondominant hand for the genitalia and dominant hand for the swabs.



Proceed with catheterization in usual manner using the dominant hand.

- a. When catheter tip has entered bladder, urine will be visible in the drainage tube
- b. Insert catheter two more inches and inflate catheter balloon



Inflate catheter balloon using entire 10cc of sterile water provided in the prefilled syringe

**NOTE: USE OF LESS THAN 10cc CAN RESULT IN ASYMMETRICALLY INFLATED BALLOON**

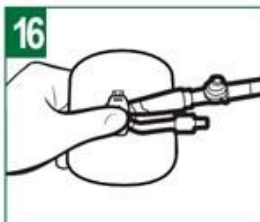


Once inflated, gently pull catheter until the inflated balloon is snug against the bladder neck

**NOTE: Use each swab stick for one swipe only**

**Female Patient:** with a downward stroke cleanse the right labia minora and discard the swab. Do the same for the left labia minora. With the last swabstick cleanse the middle area between the labia minora

**Male Patient:** Cleanse the penis in a circular motion starting at the urethral meatus and working outward

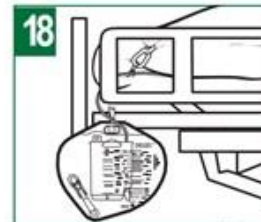


Secure the Foley catheter to the patient. Use the STATLock® Foley Stabilization Device if provided (see STATLock® Foley Stabilization Device IFU)



Position hanger on bed rail at the foot of the bed

**NOTE: EXERCISE CARE TO KEEP BAG OFF THE FLOOR**



Use green sheeting clip to secure drainage tube to the sheet. Make sure tube is not kinked



Indicate time and date of catheter insertion on provided labels. Place designated labels on patient chart and drainage system

Document procedure according to hospital protocol

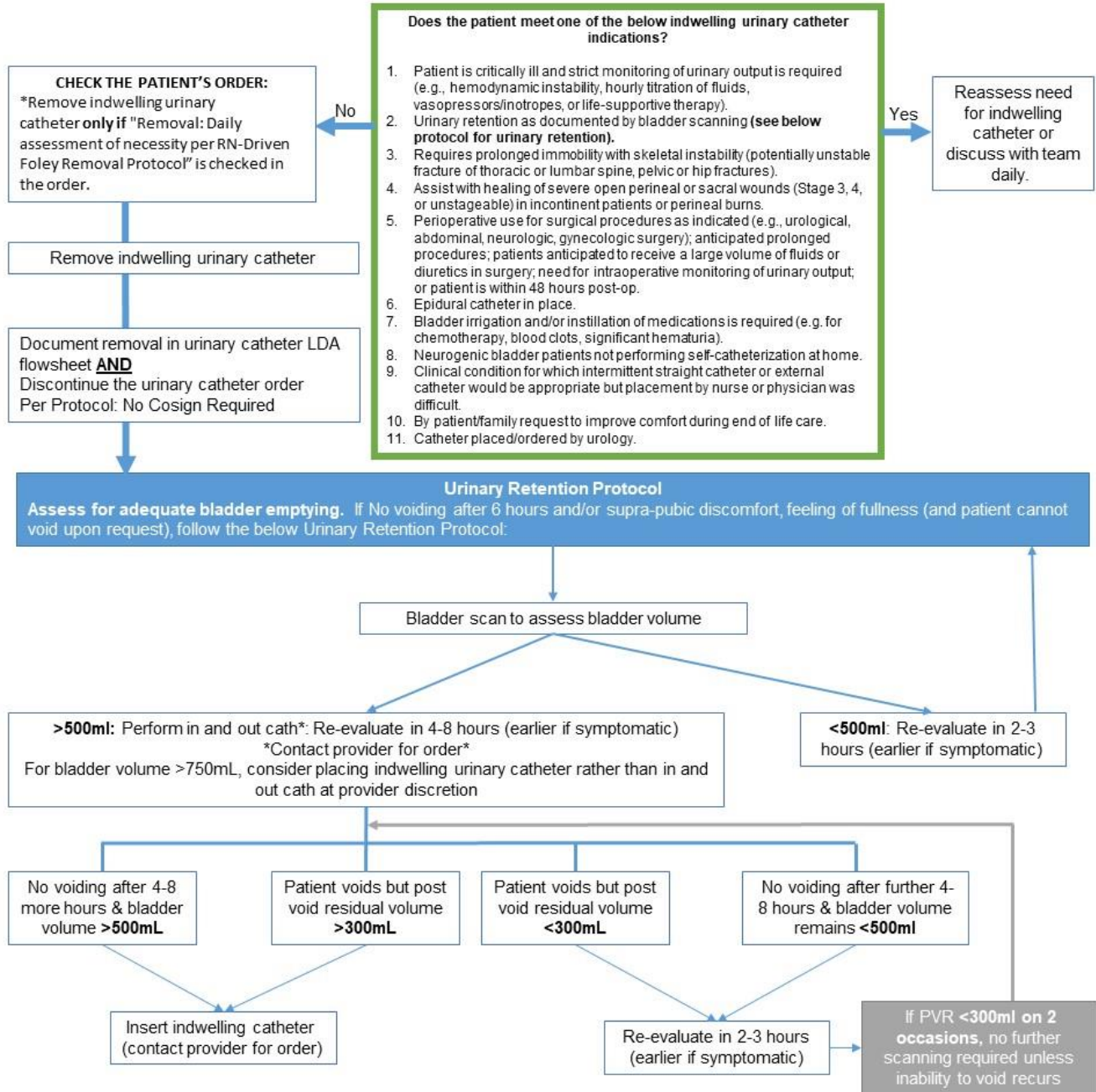
**Attachment 1: DUHS Indwelling Urinary Catheter Nurse-Driven Removal Protocol and Urinary Retention Algorithm – ADULT  
Approved by the DUHS Clinical Practice Council on 8/13/2020**

**Purpose:** To guide clinicians in assessing and managing patients with indwelling urinary catheters. This guideline seeks alternatives to indwelling urinary catheters, particularly when seeking accurate urinary output measurements. **Alternatives will be attempted prior to insertion of any indwelling catheter unless the patient meets the CDC's criteria.**

Alternatives to indwelling catheters include:

1. Mobilizing to bathroom and commode and using a hat
2. Utilization of male and female urinals
3. Utilization of male and female external catheters
4. Use of incontinence pads and absorbent pads

If a patient has an indwelling urinary catheter that no longer meets criteria, this protocol provides guidance for nurses to remove the catheter and manage urinary retention if this occurs after the catheter is removed.





**Q: How often should pericare and Foley care be provided?**

**A:** For patients with a Foley, pericare AND Foley care should be provided and documented every shift.

**Q. What is the process for pericare and Foley care?**

**A. Pericare and Foley Care Process**

1. Perform hand hygiene. Don clean gloves.
2. During daily bathing or evidence of soiling, clean urethral meatus and catheter using pre-packaged bath cloths.
3. With non-dominant hand:
  - Female patients
    - Gently retract labia to fully expose urethral meatus and catheter insertion site. Maintain position of hand throughout procedure.
  - Male patients
    - Retract foreskin, if not circumcised, and hold penis at shaft just below the glans, maintaining position throughout procedure.
4. Nurses should assess urethral meatus and surrounding tissues for inflammation, swelling, discharge, and ask patient whether burning or discomfort is present.
5. To perform pericare, cleanse the urethra meatus using gentle downward strokes. For females, clean from the front to the back of the perineum. For each stroke, use a clean section of cloth or a new cloth as needed.
6. To perform indwelling urinary catheter care:
  - Stabilize the catheter with the non-dominant hand
  - With the dominant hand, cleanse from where the catheter enters the meatus and down toward the drainage tubing. Cleanse the catheter tubing along its length for about 6 inches.
  - For male patients, reduce or reposition the foreskin after care.
7. Replace the hospital approved stabilization device every 7 days (or per manufacturer's instructions) or if visibly soiled. The stabilization device can be cleaned with saline or peroxide. Do not use alcohol as this could lead to early lifting of the stabilization device. Avoid placing tension on the catheter when re-anchoring catheter.
8. Document catheter care and assessment of urethral meatus and surrounding skin integrity

**Q: What are best practice insertion and maintenance bundles for catheter-associated urinary tract infection (CAUTI) prevention?**

**A: Insertion bundle:**

- Alternatives considered before insertion
- Indication is appropriate and documented
- Hand hygiene performed immediately before insertion
- Insertion performed only by trained personnel
- Aseptic technique used during insertion
- Secured immediately after insertion

#### Maintenance bundle:

- Hand hygiene performed before touching catheter or drainage system
- Flow is unobstructed with no dependent loops
- Emptied regularly and before  $\frac{3}{4}$  full
- Catheter care/hygiene performed every shift and as needed
- Drainage system remains closed, sterile, off the floor, and below the bladder at all times
- Secured with hospital approved device/method at all times
- Need for catheter evaluated and documented every shift
- Removed as soon as no longer indicated

#### References

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