

Indications for an Indwelling (Foley) Urinary Catheter

2021



Adapted from Carolyn V. Gould, MD, MSCR, Craig A. Umscheid, MD, MSCE, Rajender K. Agarwal, MD, MPH, Gretchen Kuntz, MSW, MSLIS, David A. Pegues, MD, and the Healthcare Infection Control Practices Advisory Committee (HICPAC)
Copyright 2013 HICPAC

Written by Diane K. Newman
© 2021 Diane K. Newman and UroToday, Inc.

Indications for an Indwelling (Foley) Urinary Catheter (IUC)

- Short-term for acute urinary retention
- Sudden and complete inability to void
- Need for immediate and rapid bladder decompression
- Temporary relief of bladder outlet obstruction secondary to:
 - Enlarged prostate gland
 - Urethral stricture
 - Obstructing pelvic organ prolapse
 - Urologic or prolonged surgical procedure
- Chronic urethral obstruction or urinary retention, surgical interventions, and/or the use of intermittent catheterization has failed or is not feasible
- Irreversible medical conditions are present (e.g., metastatic terminal disease, coma, end stages, or other conditions)
- Presence of stage III or IV pressure ulcers that are not healing because of continual urine leakage
- Instances where a caregiver is not present (usually in the home-care setting) to provide incontinence care

Signs and Symptoms of UTIs in Patients IUCs

CDC Catheter-Associated Urinary Tract Infection Criteria

1. Indwelling urinary catheter was in place for more than two days on the date of event, with day of device placement being day one, and an indwelling UC was in place on the date of event or the day before. If an indwelling urinary catheter was in place for more than 2 consecutive days in an inpatient location and then removed, the date of event for the UTI must be the day of device discontinuation or the next day for the UTI to be catheter-associated.
2. Must have at least one of the following signs or symptoms
 - Fever with temperature $>38^{\circ}\text{C}$ (if > 65 years of age, the IUC needs to be in place for more than 2 consecutive days in an inpatient location on date of event)
 - Suprapubic tenderness
 - Costovertebral angle pain or tenderness
3. Patient has a urine culture with no more than two species of organisms identified, at least one of which is a bacterium of more than 10^5CFU/ml .

Adapted from CDC, Retrieved from
<https://www.cdc.gov/nhsn/pdfs/training/2019/cauti-508.pdf>

Signs and Symptoms of UTIs in Patients IUCs











CDC Catheter-Associated Urinary Tract Infection Criteria

- Signs not directly associated with a CAUTI:
 - Pyuria—not a good indicator as it is common in catheterized individuals
 - Odor—the persistent bacteria in the urine of catheterized patients will produce odor
- Possible signs in an elderly patient:
 - Increased restlessness or altered mental status
 - Change in health status not attributable to any other cause (pneumonia, medication side effects)
- Treatment of CAUTI once diagnosis is established:
 - If possible, remove the catheter and follow bladder management at least until the antibiotic course is completed.
 - If not possible to leave the catheter out, change the catheter prior to starting antibiotics so that there is the least amount of biofilm present.
 - Start antibiotics—typical course of antibiotics is 7 to 14 days, usually a fluoroquinolone.
 - Chart symptom improvement.

Adapted from CDC, Retrieved from
<https://www.cdc.gov/nhsn/pdfs/training/2019/cauti-508.pdf>.

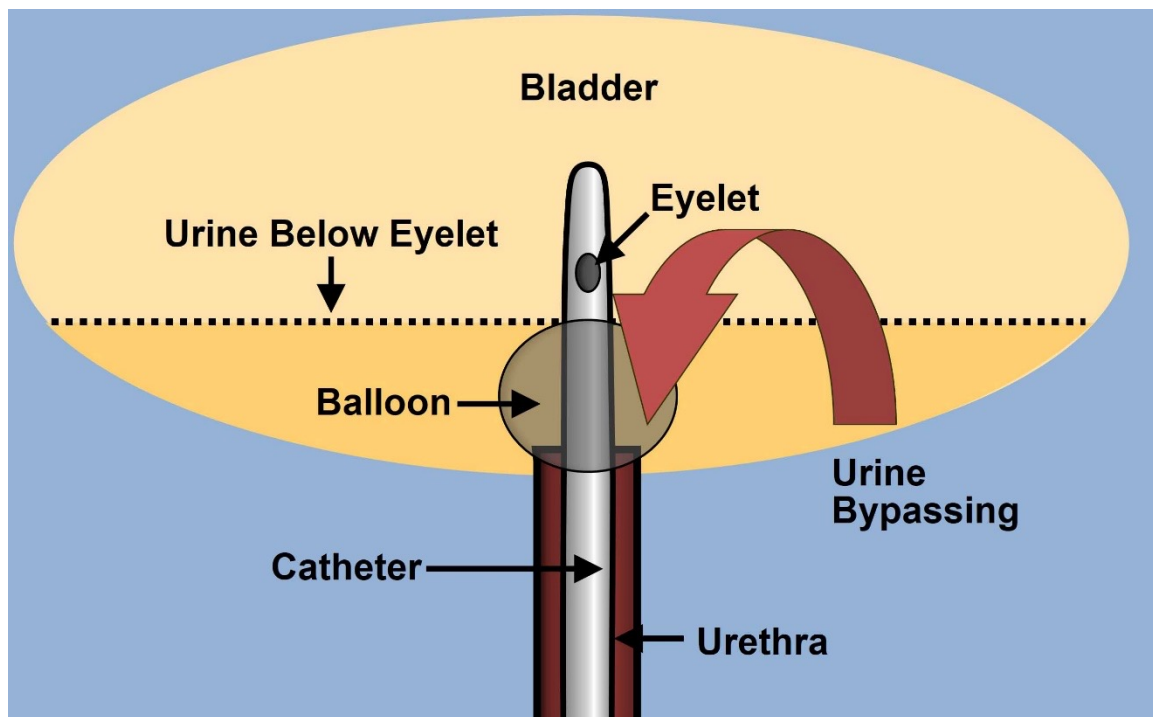
Care Practices for Preventing IUC-Related Complications

- Use catheter sizes of 14 Fr or 16 Fr, as larger diameter catheters can result in a UTI, result in greater leakage (urine bypassing the catheter), and are more likely to obstruct periurethral glands and normal urethral secretions.

Color		Size French	Size Millimeter
	Green	6	2.0
	Blue	8	2.7
	Black	10	3.3
	White	12	4.0
	Green	14	4.7
	Orange	16	5.3
	Red	18	6.0
	Yellow	20	6.7
	Purple	22	7.3
	Blue	24	8.0
	Black	26	8.7

Care Practices for Preventing IUC-Related Complications

- Use a 10 cc balloon (instilled with 10 cc sterile water), as a larger balloon (30 cc) will increase the volume of urine that pools below the level of the catheter drainage eyes, thus increasing the risk of infection.



Care Practices for Preventing IUC-Related Complications (*cont*)

- Use generous amounts of sterile lubricant during catheter insertion to minimize urethral trauma.



Care Practices for Preventing IUC-Related Complications (*cont*)

- Maintain an aseptic, closed-catheter system as opening the system doubles the risk of introducing a new bacterial strain.

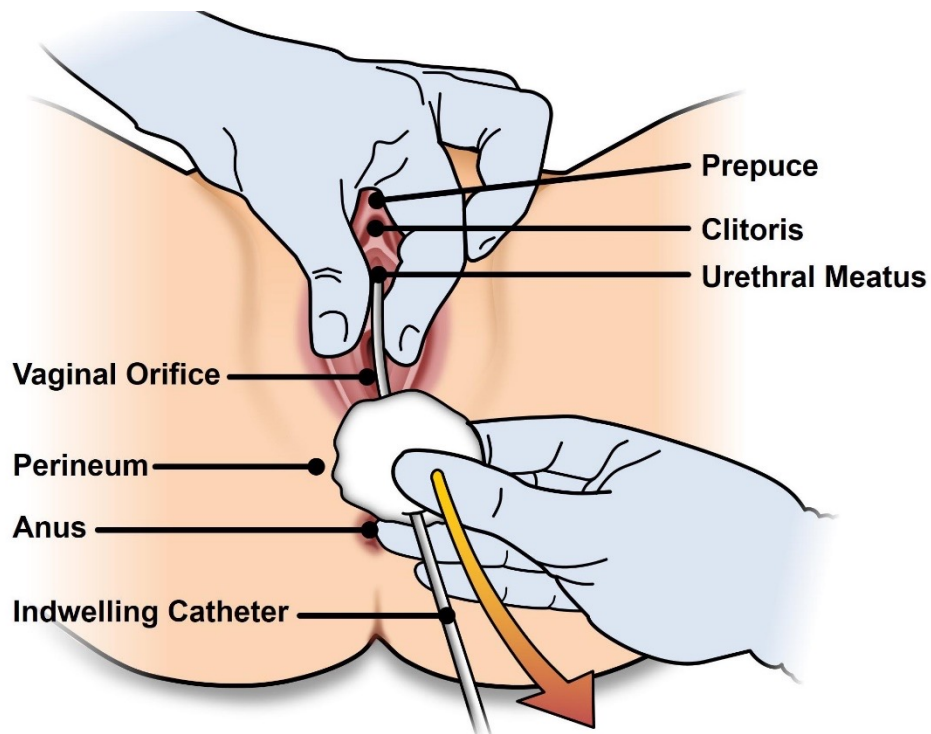
Remember to:

- Disinfect catheter/collecting tube junction when disconnecting or reconnecting.
- Disinfect the sampling port before and after sampling urine.



Care Practices for Preventing IUC-Related Complications (*cont*)

- Perineal hygiene with emphasis on correct techniques for meatal cleansing. Always cleanse women from front (meatal area) to back (anus) to avoid spreading bacteria from the rectum to the vagina and urethra.
- Avoid use of bactericidal solution or gel to the meatus as this practice does not reduce the risk for CAUTI.



Care Practices for Preventing IUC-Related Complications (*cont*)

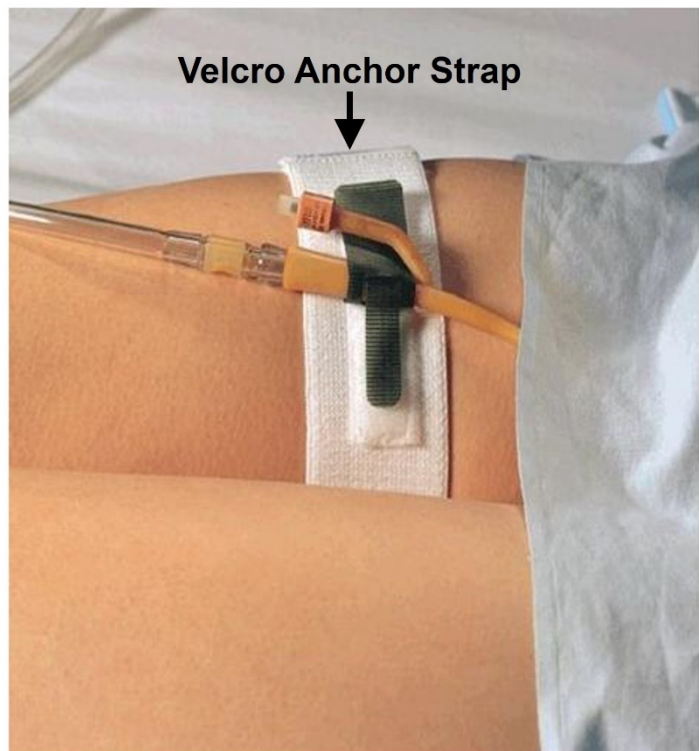
- Always wear disposable gloves followed by hand washing before and after handling catheters as up to 15% of UTIs occur in clusters as a result of cross-infection.
- Hand sanitizers are recommended.

Care Practices for Preventing IUC-Related Complications (*cont*)

- Ensure that the drainage bag is below level of the bladder and/or in a dependent position.
- Regular emptying of the collecting bag, at least every 8 hours (or with volumes > 400 mL) to avoid stasis and migration of bacteria.
- Replace entire catheter system if obstruction or leakage occurs.
- Do not clamp during transport of patients and empty drainage bag prior to transport

Care Practices for Preventing IUC-Related Complications (*cont*)

- Minimize urethral trauma by stabilizing or anchoring the catheter, and prevent tension on the urethra from catheter.
- Anchor catheter to the inner thigh in women and upper thigh or lower abdomen for men.

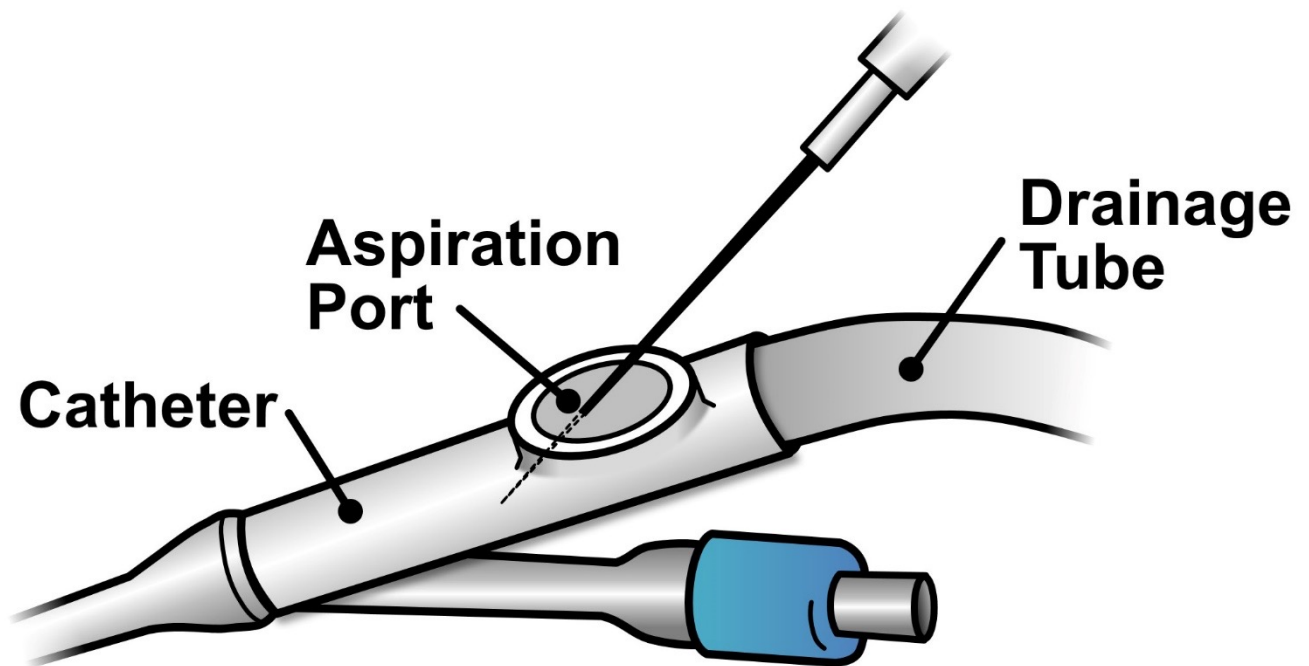


Care Practices for Preventing IUC-Related Complications (*cont*)

- Maintain adequate hydration to continuously flush the system (30 mL/kg body weight/day).
- Separate and label (patient name, type of excrement) graduated containers for each patient and each patient drain as bacteria may be transmitted by sequentially touching emptying spouts in the same contaminated collection container.
 - The spigot or spout on the drainage bag should not be allowed to touch the sides of the graduated container when emptying the bag.
 - With multiple drainage devices for one patient, keep drainage devices on opposite sides of the bed. Keep drainage devices in semi-private rooms on opposite sides of the room.
- If possible, catheterized patients should not share the same room to avoid transmission.

Care Practices for Preventing IUC-Related Complications (*cont*)

- Do not take urine cultures from old catheter system. If there is a strong suspicion of infection, obtain sample from a newly inserted catheter via the aspiration port.



Care Practices for Preventing IUC-Related Complications (*cont*)

- Irrigation should be reserved only for urology and genitourinary trauma patients (who are likely to have tissue/blood clots obstructing drainage) and are done by specific orders.
- Standard practice of catheter irrigation to “washout” the bacteria has been shown that the use of such irrigation to prevent or eradicate bacteria in indwelling catheters is ineffective, as more organisms will gain entry to the irrigated catheters through disconnection of the system.

Care Practices for Preventing IUC-Related Complications (*cont*)

- Urine acidification (ingestion of cranberry juice, Hiprex 1GM BID in combination with ascorbic acid 1GM BID) is often recommended in clinical practice.
 - Urine acidification has been proposed to prevent or slow catheter encrustation and diminish bacteriuria.
- Clean drainage bags daily with 1:10 bleach solution. Alternatively, a vinegar solution can be used.
- Remove the catheter as soon as medically feasible to reduce and prevent complications.

References

- Newman DK. (2021). Indwelling and intermittent urinary catheterization. In: Ermer-Seltun, J., Engberg, S, (Eds.) *Core Curriculum Continence Management*. (2nd ed. pp 405-432). Philadelphia, PA: Wolters Kluwer
- Newman DK. (2021) Chair, SUNA Clinical Practice Procedures Task Force, Urinary Catheterization of the Adult Female, Clinical Practice Procedure. *Urologic Nursing*. March-April 41(2): 65-69.
- Newman DK. (2021) Chair, SUNA Clinical Practice Procedures Task Force, Urinary Catheterization of the Adult Male, Clinical Practice Procedure. *Urologic Nursing*. March-April 41(2): 70-75.
- Newman, D.K. (2021) Chair, SUNA Clinical Practice Procedures Task Force, Insertion of an Indwelling Urinary Catheter in the Adult Female, Clinical Practice Procedure. *Urologic Nursing*. March-April 41(2): 76-85, 109.
- Newman, D.K. (2021) Chair, SUNA Clinical Practice Procedures Task Force, Insertion of an Indwelling Catheter in the Adult Male, Clinical Practice Procedure. *Urologic Nursing*. March-April 41(2): 86-96. 109.
- Newman DK, Cumbee RP, Rovner ES. (2018). Indwelling (transurethral and suprapubic) catheters. In: Newman DK, Rovner ES, Wein AJ, editors. *Clinical Application of Urologic Catheters and Products*. Switzerland: Springer International Publishing; 1-45.