URINARY CATHETER: INDWELLING (FOLEY) CATHETER REMOVAL

SUMMARY
This skill describes the steps necessary to remove an indwelling (Foley) urinary catheter

ALERT
Minimize the duration and frequency of urinary catheter use, especially in patients at higher risk of a catheter-associated urinary tract infection (CAUTI), including women, older adults, and patients with impaired immunity.

OVERVIEW
Removal of an indwelling catheter requires the use of clean technique. The retention balloon should be deflated completely before removal. If the balloon remains even partially inflated, its removal can result in trauma and subsequent swelling of the urethral meatus. The risk of bacteriuria development is estimated to be 3% to 10% per catheter day, with approximately 10% to 25% of patients developing urinary tract infections (UTI) symptoms. CAUTIs have been associated with increased morbidity, mortality, cost, and length of stay.

EQUIPMENT
Ensure that all necessary supplies and durable medical equipment are available before the home visit

- Gloves
- Waterproof pad
- Blanket
- Sheet
- Alcohol or other disinfectant swab (to remove adhesive attachment device, if applicable)
- Empty syringe without needle (for balloon deflation)
- Correctly labeled sterile specimen container
- Washcloth and warm water to perform perineal care after catheter removal
- Graduated cylinder
- Urinal for male patients; bedside commode or urine output commode pan for female patients (for urine collection after catheter is removed)

PROCEDURE

1. Perform hand hygiene
2. Introduce yourself to the patient
3. Verify the correct patient using two identifiers
4. Explain the procedure to the patient and ensure that he or she agrees to treatment
5. Verify the practitioner's order and assess the patient for pain
6. Assess the patient's history for complications related to catheter removal, such as bleeding or prolonged urine retention
7. Determine the balloon inflation volume (marked on the balloon inflation valve)
8. Arrange for caregivers to assist, as needed
9. Prepare an area in a clean, convenient location, and assemble the necessary supplies
10. Provide privacy for the patient, if ne
11. If the patient has a hospital bed or electric bed, raise it to an appropriate working height. Facing the patient, stand on the left side of the bed right-handed and on the right side if

left-handed. If side rails are being used, lower the side rail on the working side of the bed and raise the side rail on the opposite side.
Rationale: adjustment of the bed height promotes proper ergonomics. Use of side rails in this manner promotes patient safety.

12. Perform hand hygiene and don gloves
13. Place a waterproof pad under the patient
    Rationale: there will be a few seconds of leakage from both the urethra and the tip of the removed catheter after it clears the meatus
14. Position the patient. Support him or her with a pillow, if needed, to maintain the correct position
    Rationale: correct positioning is comfortable for the patient and aids in visibility of the catheter
    a) Assist a male to a supine or sitting position with thighs slightly abducted
    b) Assist a female to the dorsal recumbent position
15. Cover the patient's upper torso with a sheet or blanket and his or her lower extremities with a sheet, exposing only the perineal area.
    Rationale: covering the patient's upper torso and lower extremities reduces embarrassment while ensuring easy access to the perineum
16. Assess for discharge or redness around the urethral meatus
17. Remove the catheter-anchoring device per organization's practice before discontinuing the urinary catheter
    Rationale: removing the tube holder permits positioning of the catheter for removal
18. Insert the hub of a syringe into the catheter's inflation valve (balloon port)
19. Allow sterile water from the balloon to return to the syringe by gravity until the plunger stops moving and the amount originally instilled is removed. Set the syringe aside to discard later
    Rationale: many manufacturers recommend that the fluid be allowed to return to the syringe by gravity. Manual aspiration causes the development of creases or ridges in the balloon, leading to increased patient discomfort when the catheter is removed. A balloon that is not completely deflated may cause discomfort and trauma to the urethral wall with resultant bleeding as the catheter is removed.
20. Pull out the catheter slowly and gently while wrapping the now-contaminated catheter in a waterproof pad. The catheter should slide out very easily.
    Rationale: slow, gentle removal prevents tissue trauma caused by deformation form the deflated balloon and accumulated encrustation
    Do not use force. If any resistance is met, stop pulling the catheter and use the syringe again to remove any remaining fluid in the inflation port.
    Notify the practitioner if unable to remove the catheter.
21. Reposition the patient as necessary
22. Cleanse the perineum
23. Inspect the condition of the urethra and surrounding tissue and ask the patient if he or she is uncomfortable
24. If using a hospital bed or electric bed, lower the level of the bed and position the side rails accordingly
25. Unhook the collection bag and drainage tubing from the bed
26. Empty, measure, and record the urine present in the drainage bag

Rationale: inspecting the urethra and surrounding tissue determines whether the area is cleansed properly and whether the patient has any irritation.

27. Discard supplies, remove gloves, and perform hand hygiene
28. If a urine specimen was collected, transport the specimen to the laboratory immediately after leaving the patient's home
    Rationale: sending the specimen immediately to the laboratory helps ensure accurate results
29. Document the procedure in the patient's record

PATIENT AND FAMILY TEACHING

- Explain the procedure and the steps involved in catheter removal to the patient and caregiver before removing the catheter
- Explain to the patient that a slight burning sensation, mild urethral pressure, and the impression of urinating during catheter removal are normal
- Instruct the patient and caregiver to pay attention to changes in output related to input and to notify the practitioner if"
    - Urine becomes cloudy or foul-smelling or dramatically changes color
    - The patient is unable to urinate
    - Urination becomes painful
    - Blood or pus is seen in the urine
- Follow guidelines on when to contact the practitioner if the patient has not voided after catheter removal
- Encourage questions and answer them as they arise

REFERENCES

Burns, J. (2016)
Joint Commission, The (2018)
Ramanathan, R., Duane, T.M. (2014)

ADDITIONAL READINGS

Association for Professionals in Infection Control and Epidemiology (APIC) (2014)
Mangnall, J. (2014)