



OPERATIONAL DIRECTIVE

Practice Directive:

Urinary Catheter Management

Approval Date:

New May, 2024

Page:

1 of 8

Supersedes:

Urinary Catheter Change Frequency, Acute Care 2010

Evidence Review and Recommendations for LTC; Urinary Catheter Change Frequency, LTC 2014

PURPOSE AND INTENT

- To provide guidelines to assist with catheter placement and management

1.0 PRACTICE OUTCOME

- 1.1. To decrease the incidence of catheter-associated urinary tract infections within acute care, long term care and the community.

2.0 PREAMBLE:

- 2.1. There is an increased need to address long-term urinary catheterization with an emphasis on prevention initiatives
- 2.2. For those who require urinary catheters, routine changing of the indwelling catheters can increase the incidence of urinary tract infections.

3.0 DEFINITIONS

- 3.1. **Catheter-associated Urinary Tract Infection (CAUTI):** A UTI is defined when an indwelling urinary catheter (IUC) is in place for more than 2 consecutive days in an inpatient location on the **date of event**, with day of device placement being Day 1*, **AND** an IUC was in place on the date of event or the day before.

If an IUC 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. (NHSN^{5,6})

- * If the IUC was in place prior to the person’s admission, the catheter day count that determines device-association begins with the admission date to the first inpatient location

- 3.2. **Date of Event:** The date the first element used to meet the infection criterion occurs within the seven-day infection window.

3.2.1. Present on admissions:

An infection is considered present on admission if the date of event of the infection criterion occurs during the Present on Admission (POA) time period (defines as 2 days before the admission, the day of admission, and the calendar day after admission)

3.2.2. Healthcare-associated infection:

An infection is considered a healthcare-associated infection (HAI) if the date of event of the infection criterion occurs on or after the 3rd calendar day of admission to an inpatient location. (NHSN^{5,6})

3.3. **Indwelling urinary catheter:** A drainage tube that is inserted into the urinary bladder through the urethra, is left in place, and is connected to a drainage bag (including leg bags); also called a foley catheter. Indwelling urinary catheters (IUC) used in intermittent or continuous irrigation are also included in CAUTI surveillance. Condom or straight in-and-out catheters are not included nor are nephrostomy tubes, ileoconduits, or suprapubic catheters unless an IUC is also present (NHSN^{5,6})

3.4. **Urinary Tract Infections (UTI):** Are defined using symptomatic urinary tract infection criteria (see Appendix B). Note: A UTI is never considered secondary to another site of infection. (NHSN^{5,6})

4.0 DIRECTIVES

4.1. Urinary Catheter Use

4.1.1. Catheter insertions should only be for appropriate indications, and left in place only as long as required (see Tables 1 & 2):

- Minimize urinary catheter use and duration of use, especially for those at high risk for CAUTI or mortality from catheterization (i.e. women, elderly, immunocompromised)
- Avoid use of urinary catheters for the management of incontinence in patients and residents
- Use urinary catheters in surgical clients only as necessary, and not routinely
- Surgical clients requiring indwelling catheters should have them removed postoperatively as soon as possible, preferably within 24 hours, unless there are appropriate indications for continued use.

Examples of Appropriate Use of Indwelling Urinary Catheters
<ul style="list-style-type: none"> • For acute urinary retention or bladder outlet obstruction • For accurate measurements of urinary output in critically ill persons • Perioperative use for selected surgical procedures: <ul style="list-style-type: none"> ○ Undergoing urologic surgery or other surgery on contiguous structures of the genitourinary tract ○ Anticipated prolonged duration of surgery (catheters inserted for this reason should be removed in Post Anesthesia Care Unit) ○ Anticipation of receiving large-volume infusions or diuretics during surgery ○ Need for intraoperative monitoring of urinary outputs. • To assist in healing of open sacral or perineal wounds in persons with incontinence • Person requires prolonged immobilization (e.g. potentially unstable thoracic or lumbar spine, multiple traumatic injuries such as pelvic fractures) • To improve comfort for end of life care if needed

Table 1. (5.1 5.4)

Examples of Inappropriate Uses of Indwelling Urinary Catheters
<ul style="list-style-type: none"> • As a substitute for care of the person with incontinence • As a means of obtaining urine for culture or other diagnostic tests when the person can voluntarily void • For prolonged postoperative duration without appropriate indications (e.g. structural repair for urethral or contiguous structures, prolonged effect of epidurals anesthesia, etc.)

Table 2. (5.1 5.4)

4.1.2. Consider using alternatives to indwelling urinary catheterization in certain persons when appropriate:

- Consider using external catheters as an alternative to indwelling urethral catheters in cooperative male individuals without urinary retention (i.e. condom catheters)
- Consider alternatives to chronic indwelling catheters, such as intermittent catheterization, in individuals with spinal cord injury
- Intermittent catheterization is preferable to indwelling urethral or suprapubic catheters in individuals with bladder emptying dysfunction
- Consider intermittent catheterization in children with myelomeningocele and neurogenic bladder to reduce the risk of urinary tract deterioration

4.2. Proper Techniques for Urinary Catheter Insertion

4.2.1. Catheter insertion shall be documented on the person's integrated progress note or electronic record and should include the reason for insertion ^(5.8)

4.2.2. Perform hand hygiene immediately before and after insertion or any manipulation of the catheter device or site

4.2.3. Ensure that only properly trained persons (e.g. healthcare worker, family members, or patients/residents/clients themselves) who know the correct technique of aseptic catheter insertion and maintenance are given this responsibility.

4.2.4. In the healthcare setting, insert urinary catheters using aseptic technique and sterile equipment:

- Use sterile gloves, drape, sponges, an appropriate antiseptic or sterile solution for periurethral cleaning, and a single-use packet of lubricant jelly for insertion

4.2.5. In non-acute setting, clean (i.e. non-sterile) technique for intermittent catheterization is an acceptable and more practical alternative to sterile technique for persons requiring chronic intermittent catheterization ^(5.1)

4.2.6. After insertion, secure indwelling catheters to prevent movement and urethral traction (i.e. hydrocolloid leg straps, adhesive or non-adhesive stabilizers and tape). ^(5.8)

4.2.7. Unless clinically indicated, use the smallest bore catheter, consistent with good drainage, to minimize bladder neck and urethral trauma.

4.2.8. Consider using portable ultrasound device (bladder scanner) to assess urine volume in person undergoing intermittent catheterization and reduce unnecessary catheter insertions.

4.3. Proper Techniques for Urinary Catheter Maintenance

4.3.1. Changing indwelling catheters or drainage bags at routine, fixed intervals is NOT recommended. Catheters and drainage bags are suggested to be changed based on clinical indications such as infection, obstruction, or when the closed system is compromised ^(5.2)

4.3.2. Following aseptic insertion of the urinary catheter, maintain a closed drainage system:

- If any breaks in aseptic technique, disconnection, or leakage occurs, replace the catheter and collecting system using aseptic technique and sterile equipment
- Consider using urinary catheter systems with preconnected, sealed catheter-tubing junctions

4.3.3. Maintain unobstructed urine flow:

- Keep the catheter and drainage tubing free from kinking
- Keep the collection bag below the level of the bladder at all times. Do NOT rest the bag on the floor
- Empty the collection bag regularly using a separate, clean collection container dedicated to each person; avoid splashing, and prevent contact of the drainage spigot with the nonsterile collection contained

4.3.4. Use Routine Practices, including use of gloves and gown as appropriate, during any manipulation of the catheter collection system

4.3.5. Complex urinary drainage systems (utilizing mechanisms for reducing bacterial entry such as antiseptic-release cartridges in the drain port) are not necessary for routine use.

4.3.6. Routine systemic antimicrobials to prevent CAUTIs for either short or long-term catheterization should only be done if clinically indicated

4.3.7. Routine genital cleansing during a shower is preferred. Avoid having a bath until after the catheter is removed. Do not clean the periurethral area with antiseptics to prevent CAUTI while the catheter is in place.

4.3.8. Bladder irrigation is not recommended unless obstruction is anticipated (e.g. as might occur with bleeding after prostatic or bladder surgery):

- If obstruction is anticipated, closed continuous irrigation is suggested to prevent obstruction

4.3.9. Routine irrigation of the bladder with antimicrobials is not recommended

4.3.10. Routine instillation of antiseptic or antimicrobial solutions into urinary bag is NOT recommended ^(5,6)

4.3.11. Clamping indwelling catheters prior to removal is not necessary

4.4. Specimen Collection

4.4.1. Obtain urine samples aseptically:

Small volume (e.g. urinalysis or culture)

- Do not send urine collection from a drainage bag
- Clean sampling port with alcohol
- Aspirate urine from the needleless sample port with a sterile syringe/cannula adapter

Large volume (e.g. urine for special analysis, not culture)

- Collect aseptically from the drainage bag

4.4.2. If an indwelling catheter has been in place for more than 2 weeks at the onset of suspected infection:

- The catheter should be replaced to hasten resolution of symptoms
- Urine should be collected from the freshly placed catheter
- If the catheter can be discontinued; a culture of a voided midstream specimen can be obtained

4.5. Assess need for continued catheterization

4.5.1. Assess persons with indwelling catheters for continued need using Appendix A Urinary Catheter Reminder ^{(5,2) (5,8)}

4.5.2. Document continued need for indwelling catheter patient/resident/client's integrated progress note (IPN) or Electronic Patient Record.

4.6. **Routinely screen persons with catheters for signs and symptoms of infection**

4.6.1. Assess persons with catheters for clinic presentation of infection using criteria applicable to your area of care.

4.7. **Surveillance & Reporting**

4.7.1. Personal Care Homes to report CAUTI to Infection Prevention & Control

4.8. **Dignity Covers**

4.8.1. Dignity Covers used to conceal urinary catheter collection bags should be cleaned routinely (e.g. laundered weekly, monthly)

4.8.2. Dignity covers should be laundered when soiled ^(5.9)

5.0 **REFERENCES:**

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5.3 NHSN Healthcare-associated Infection Surveillance Protocol for Urinary Tract Infections (UTI) Events in Long-term Care Facilities January 2023. Available at: [HAI Surveillance Protocol for UTI Events for LTCF \(cdc.gov\)](#)

5.4 CDC Urinary Tract Infection and Non-Catheter Associated Urinary Tract Infection and Other Urinary System Infection Events January 2019. Available at:
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5.5 Surveillance Definitions of Infections in Canadian Long-Term Care Facilities Fall 2017. Available at:
<https://www.patientsafetyinstitute.ca/en/About/PatientSafetyForwardWith4/Documents/Canadian%20LTC%20Surveillance%20Definitions.pdf>

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<https://www.cdc.gov/nhsn/pdfs/pscmanual/7pscauticurrent.pdf>

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5.8 Alberta Health Services. Urinary Catheter Management 2019. Available at:
<https://extranet.ahsnet.ca/teams/policydocuments/1/klink/et-klink-ckv-indwelling-urinary-catheters-indications-and-insertion.pdf>

5.9 Agency for Healthcare Research and Quality (AHRQ). CAUTI Prevention in Long-Term Care: Frequently Asked Questions. Available at: <https://www.ahrq.gov/hai/quality/tools/cauti-ltc/modules/resources/tools/prevent/clinical-faqs.html>

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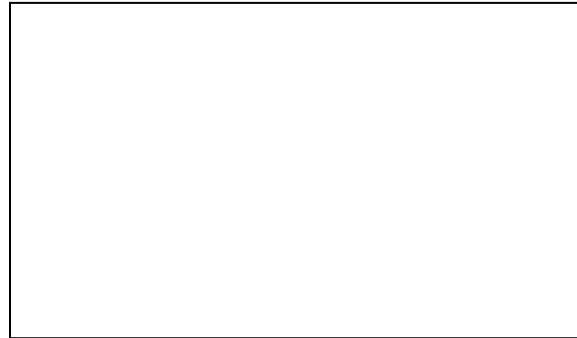
6.0 PRIMARY AUTHOR (S):

Natalie Gibson, RNBN, ICP

APPENDIX A

Urinary Catheter Reminder

Date: ___/___/___



This patient/resident has had an indwelling urethral catheter since ___/___/___

Please indicate below **EITHER** (1) that the catheter should be removed **OR** (2) that the catheter should be retained. If the catheter should be retained, please state **ALL** of the reasons that apply.

- Please **discontinue** indwelling urethral catheter, **OR**
- Please **continue** indwelling urethral catheter because patient/resident/clients (PRC) requires indwelling catheter for the following reasons (please check **ALL** that apply):
 - Urinary retention
 - Very close monitoring of urine output and PRC unable to use urinal or bedpan
 - Open wound in sacral or perineal area and PRC has urinary incontinence
 - PRC too ill or fatigued to use any other type or urinary collection strategy
 - PRC had recent surgery
 - Management of urinary incontinence on PRC's request
 - Other- please specify

Adapted from SHEA/ISSA Practice Recommendation (SHEA/IDSA^{5,2})

APPENDIX B

Criteria for Catheter-associated Urinary Tract Infection

Acute Care	Long Term Care
<p>Patient must <u>meet 1, 2 and 3 below</u>:</p> <ol style="list-style-type: none"> 1. Patient had an indwelling urinary catheter that had been in place for more than 2 consecutive days in an inpatient location on the date of event AND was either: <ul style="list-style-type: none"> • Present for any portion of the calendar day on the date of event OR • Removed the day before the date of event. <ol style="list-style-type: none"> 2. Patient has at least one of the following signs or symptoms: <ul style="list-style-type: none"> • Fever (>38.0°C) • Suprapubic tenderness • Costovertebral angle pain or tenderness • Urinary urgency • Urinary frequency • Dysuria 3. Patient has a urine culture with no more than two species of organisms identified, at least one of which is a bacterium of $\geq 10^5$ CFU/ml. <p>Note: Fever is a non-specific symptom of infection and cannot be excluded from UTI determination because it is clinically deemed to another recognizable cause.</p> 	<p>For residents with an indwelling catheter, or in a midstream voided urine specimen from a resident whose catheter has been removed within the previous 48 hours, <u>both criteria, 1 and 2, must be present</u>:</p> <ol style="list-style-type: none"> 1. At least one of the following sub-criteria: <ol style="list-style-type: none"> a. Fever, rigors, or new-onset hypotension (systolic blood pressure of ≤ 90 mmHg in an individual with a previously normal systolic blood pressure), with no alternate site of infection b. Acute change in mental status, with no alternate diagnosis, and leukocytosis (see Table 1) c. New-onset suprapubic pain or costovertebral angle pain or tenderness d. Purulent discharge from around the catheter e. Acute pain, swelling, or tenderness of the testes, epididymis, or prostate 2. $\geq 10^8$ CFU/L of no more than two species of bacteria from urinary catheter specimen <p>Note: an indwelling catheter refers to any type of urinary catheter in situ for at least 48 hours, including suprapubic catheters.</p> <p>Symptoms used to meet criteria:</p> <ol style="list-style-type: none"> 1. Must be present with the three days before and the three days after the day of the microbiological test used to meet criteria; 2. Take care to exclude symptoms with non-infectious causes.