PREVENTION OF CATHETER-ASSOCIATED URINARY TRACT INFECTIONS (CAUTI)

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OUR MISSION:
To promote, protect, and improve the health and safety of all Hoosiers.

OUR VISION:
Every Hoosier reaches optimal health regardless of where they live, learn, work, or play.
What is a CAUTI?

According to the CDC, a catheter-associated urinary tract infection (CAUTI) can occur when germs and/or bacteria enter the urinary tract, involving any of the organs or structures of the urinary tract, through the urinary catheter and cause an infection. (Including the kidneys, ureters, bladder, and/or urethra).
Why are CAUTI’s bad?

There is strong correlation with CAUTI’s and an increased risk of morbidity, mortality, healthcare costs, and increased hospitalization.

- According to the National Healthcare Safety Network (NHSN), UTIs are the most common type of healthcare-associated infection (HAI) reported - approximately 75% are associated with a urinary catheter.

- **CAUTI is a potentially life-threatening HAI for LTC residents:**
  - 1.6 million to 3.8 million infections annually
  - 388,000 deaths annually

- **HAI’s in LTC facilities can be costly:**
  - $38 million to $137 million annually for antimicrobial therapy
  - $673 million to $2 billion due to hospitalizations annually
Best practices for indwelling catheters

• Place only when necessary and remove as quickly as possible
• Catheters should only be inserted by a trained person using aseptic technique
• Clean skin around meatus prior to insertion and routinely
• 18 Fr or larger can increase erosion of bladder neck, so choose the smallest size appropriate for resident
• 30 ml balloons are NOT recommended
• Consider other methods to drain urine: external catheters, intermittent urethral catheterization, suprapubic catheters
• Changing indwelling catheters or drainage bags at routine, fixed intervals is no longer recommended
• Change catheters and drainage bags based on clinical indications such as infection, obstruction, or when the closed system is compromised
Appropriate indications for indwelling catheter in LTC

- Acute urinary retention or bladder outlet obstruction
- Protection of surgical sites or Stage 3 or 4 sacral or perineal wounds in incontinent patients
- To improve comfort for end-of-life care, if needed

Inappropriate catheter uses:
- Substitute for nursing care of the resident with incontinence
- Immobile or obese resident
- Resident or family request
Proper urinary catheter insertion

- Review the order and verify catheter is clinically indicated
- Gather your insertion kit and other supplies
- Use the buddy system - get a second pair of hands to help

- Perform hand hygiene
- Perform peri-care
- Re-perform hand hygiene
- Maintain strict aseptic technique
- Insert catheter to appropriate length and check urine flow before balloon inflation
- Inflate balloon correctly (5-10 cc)
- Secure catheter tubing to leg with securement device
- Re-perform hand hygiene upon completion
Urinary catheter maintenance

- Maintain unobstructed urine flow: no kinks, twists, or loops in the tubing
- Keep the collection bag below the level of the bladder at all times without ever resting bag on the floor
- Maintain a closed drainage system at all times
- Empty bag regularly and keep bag under ¾ full at all times
- Use individual, labeled collection container for each resident
  - Do not let drainage spigot touch the container (or floor)
Urinary catheter maintenance

- Attach catheter tubing to leg with securement device
- Perform hand hygiene prior to and after catheter contact
- Perform daily perineal care with soap and water and when soiled
- Review necessity of catheter regularly and remove promptly when resident does not meet approved indications
Long-term care facilities

Review and update facility policies and procedures and ensure they include:

• That routine changing of indwelling catheter is no longer supported in Long-term care
  • Only change catheter prior to collection of Urinalysis and Culture and prior to initiating antimicrobial therapy

• Use aseptic technique when disconnecting/reconnecting a catheter bag to a leg bag.
  • Cleanse connection tubing with an alcohol swab.
  • Use a sterile cap to maintain sterility of the system being disconnected.

• Avoid reflux (refer to bundles)
Symptoms of a Urinary Tract Infection

A CAUTI has similar symptoms to a typical urinary tract infection (UTI) which include:

- cloudy urine
- blood in the urine
- strong urine odor
- urine leakage around your catheter
- pressure, pain, or discomfort in your lower back or stomach
- chills
- fever
- unexplained fatigue
- vomiting
If you suspect a CAUTI

Discuss with provider if a urinalysis and culture and sensitivity is appropriate.

• If so, then attain urine specimen prior to antibiotic therapy.

Remember: Do not send a urinalysis or culture in asymptomatic residents.

• How to perform a urine culture: Specimen Collection: Urine from a Foley Catheter – YouTube

**Follow up on culture results for proper antibiotic use.**
Antibiotic stewardship

- Be involved
- Advocate for your residents
- Ensure accountability

**IDOH LTC Antibiotic Stewardship Program:**

**AHRQ educational bundles:**
Part I: PowerPoint slide set ([PowerPoint](#))
Part II: PowerPoint slide set ([PowerPoint](#))
Additional resources:

AHRQ educational videos and PowerPoints:

Catheter insertion and maintenance
Reducing CAUTI in Long-Term Care Facilities:
• https://www.youtube.com/watch?v=Ex7QLaa3XF4

Equipment and Environment - Reducing CAUTI and other HAIs in Long-Term Care Facilities:
• Equipment and Environment--Reducing CAUTI and Other HAIs in Long-Term Care Facilities - YouTube

Urine culturing and antibiotic stewardship
Know when to order a urine culture:
Checklists

**Insertion checklist:**

Appendix G. Indwelling Urinary Catheter Insertion Checklist | Agency for Healthcare Research and Quality (ahrq.gov)

**Maintenance checklist:**

Appendix H. Indwelling Urinary Catheter Maintenance Checklist | Agency for Healthcare Research and Quality (ahrq.gov)
Remember C.A.U.T.I. to prevent CAUTI

Infections are a leading cause of illness and death in long-term care facilities.

These infections include catheter-associated urinary tract infections (CAUTIs).

References:


Questions?

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