Guideline for the Management of Catheter-Associated Urinary Tract Infection (CA-UTI) and Bacteriuria in Non-Pregnant Adults

Key Points to Optimize Antibiotic Use for CA-UTI
- Do not obtain urinalysis or culture unless signs and symptoms compatible with CA-UTI are present
- Do not treat pyuria (>5 WBC/hpf) and/or bacteriuria in the absence of signs or symptoms of infection
- Use the narrowest spectrum antibiotic possible based on culture results as below
- Treat for the shortest recommended duration of therapy as below

Initial Screen: Signs/symptoms compatible with CA-UTI with no other identified source

- Send urinalysis alone
- Leukocyte esterase OR >5 WBC/hpf present?

- ≥10,000 CFU/mL bacteria
  - CA-UTI POSSIBLE
  - Send urinalysis alone
  - Leukocyte esterase OR >5 WBC/hpf present?
  - No growth or ≤10,000 CFU/mL of bacteria or Candida
  - CA-UTI UNLIKELY
    - Note: antibiotic therapy prior to culture can cause false-negative result
    - Start empiric therapy with antibiotic selection based on local antimicrobial resistance patterns
    - Remove indwelling catheter when possible OR change catheter if placed >1 week ago and still indicated

- ≥10,000 CFU/mL Candida
  - CA-UTI UNLIKELY
  - Change catheter, repeat culture, treat accordingly if symptoms persist

STEP 2: When infecting pathogen identified, change therapy to narrowest-spectrum agent possible (prioritize tier 1→2→3) based on susceptibility results. Note: antibiotics listed below are not inclusive of all potential choices.

1st Tier: Narrow-Spectrum Agents
- Cefazolin (IV)
- Ampicillin (IV)
- Trimethoprim-sulfamethoxazole (PO)
- Amoxicillin (PO)
- Cephalexin (PO)

2nd Tier: Broad-spectrum agents, no activity against P. aeruginosa
- Ceftriaxone (IV)
- Amoxicillin-sulbactam (IV)
- Cefpodoxime (PO)
- Amoxicillin-clavulanate (PO)

3rd Tier: Broad-spectrum agents, with activity against P. aeruginosa
- Levofloxacin, ciprofloxacin (IV or PO)
- Cefepime (IV)
- Imipenem, meropenem, doripenem (IV)
- Piperacillin–tazobactam (IV)
- Gentamicin, amikacin, tobramycin (IV)

STEP 3: Select shortest recommended duration of therapy. All criteria must be met for each given duration.

- Women ≤65 years old
- No upper tract symptoms
- Indwelling catheter removed
- Non-severe illness
- Levofoxacin used
- Clinical improvement within 72 hours
- Not meeting criteria for 3 or 5 days
- Delayed clinical improvement

Recommended Duration
- 3 DAYS AFTER REMOVAL
- 5 DAYS
- 7 DAYS
- 10-14 DAYS

Disclaimer: This is intended only as a guide for evidence-based decision-making; it is not intended to replace clinical judgment. Assess for antibiotic allergies and renally dose agents as appropriate.