Sharp Healthcare Treatment Guidelines for Urinary Tract Infections

NEW Definitions:

Uncomplicated UTI:

- Infection confined to the bladder in afebrile men and women without signs and symptoms of systemic involvement
- Includes all patients beyond previous definition of healthy premenopausal females (e.g. elderly, males, diabetic, immunosuppressed, patients with urologic abnormalities, or history of recurrent UTI)

Complicated UTI:

- Infection beyond the bladder in any patient including healthy premenopausal females
- Includes pyelonephritis, CAUTI, febrile UTI, or patients with bacteremia*

* See separate Gram Negative Bacteremia PO Stepdown Guide for de-escalation, dosing and duration recommendations. Summary Table 2 from the guide is included below for reference.

Table 1. SHC Treatment Guidelines for Urinary Tract Infection

Indication	Inpatient Therapy	Total Duration
Asymptomatic bacteriuria	**NO antibiotics for asymptomatic bacteriuria** **EXCEPTIONS that require treatment:** GU instrumentation/surgery, kidney transplant in last 3 months, severe neutropenia, or pregnant with urine culture containing single organism ≥ 100,000 cfu/mL	N/A
Cystitis in pregnancy	Cephalexin 500mg PO QID 2nd line: Nitrofurantoin 100mg PO BID **OR** Cefuroxime 500mg PO BID 3rd line: Bactrim DS 1 tab PO BID (caution 1st/3rd trimester and only if susceptible)	5 days
Pyelonephritis in pregnancy	Ceftriaxone 2gm IV q24h until afebrile for 48h 2nd line: Tobramycin per pharmacy + Ampicillin 2g IV q6h until afebrile for 48h	10 days
Uncomplicated UTI	*For admitted patients can consider Ceftriaxone 2gm IV q24h x1-2 doses before oral therapy*	
	Nitrofurantoin 100mg PO BID if CrCL >30 **OR** Cephalexin 500mg PO TID-QID	5 days
	2nd line: Augmentin 875/125mg PO BID **OR** Fosfomycin 3gm PO x1 (only for ESBL E. coli or enterococcus) 3rd line: Levofloxacin 500mg PO daily/Cipro 500mg PO BID **OR** Bactrim DS 1 tab PO BID	5 days 3 days
Complicated UTI	Ceftriaxone 2gm IV q24h *History of ESBL in past 6 months: Ertapenem 1gm IV q24h* *For ICU with shock or albumin <2.5 AND history of ESBL in past 6 months: Meropenem 500 mg IV q6h*	7 days
	2nd line: Levofloxacin 750 mg IV q24h/Ciprofloxacin 400mg IV q12h	5-7 days

Table 2. Recommended Agents for IV to PO Stepdown in Bacteremic Patients from Urinary Source

NOTE: An IV beta-lactam x3-5 day lead-in is recommended prior to narrowing to a PO beta-lactam

Preferred Agents for de-escalation if susceptible	Duration of Therapy
Amoxicillin[a] 1g PO TID Amoxicillin-clavulanate 875/125mg PO TID Cephalexin[b] 1g PO QID Ciprofloxacin[c] 750mg PO BID Levofloxacin[c] 750mg daily SMX/TMP[c] 1-2 DS tabs PO BID - <80 kg: 1DS PO BID - >= 80kg: 2 DS PO BID	**7 days total** (Day 1 counted from 1st day active therapy) (Stone-related urinary obstruction: Day 1 counted from urinary decompression)
Alternative beta-lactams (lower bioavailability)	
Cefuroxime 500mg PO w/ food BID Cefpodoxime 400mg PO w/ food BID	

a. Infer susceptibility from ampicillin

b. Infer from cefazolin susceptibility in blood cultures

c. IDSA endorses quinolones or SMX/TMP as options for treatment of ampC producing organisms or ESBL infections from a urinary source

The above recommendations are based on available literature and national guidelines. They are not intended to replace physician clinical judgment based on patient-specific factors. Last updated 10/2025

Frequently Asked Questions (FAQs):

1. What is the best way to collect urine?

Urine should be collected as a mid-stream, clean-catch urine. Do not collect urine from urine hats or from the initial part of the urine stream.

2. In suspected CAUTIs, should the old foley catheter be removed and/or replaced? How should urine be collected for CAUTI?

If the catheter is no longer needed, remove the catheter and collect a midstream urine collection. If the catheter is still needed, replace it with a new catheter and collect the urine sample using the new catheter. Failure to change the catheter increases risk for treatment failure and/or recurrent UTIs.

3. Is urine sediment and foul-smelling urine a sign of UTI?

No. These signs do not correlate with an infection. Please evaluate only for typical signs such as dysuria, urinary frequency, bladder/flank pain, new gross hematuria, or fever.

4. What do I do about a positive urine culture in a patient who cannot say if they have UTI symptoms, including elderly patients presenting with a fall or change in mental status?

If the patient is clinically stable, watch off antibiotics and reassess for symptoms as the patient improves. Exception for GU instrumentation/surgery, kidney transplant in last 3 months, severe neutropenia, or pregnant with urine culture containing single organism > 100,000 cfu/mL.

5. How long do I treat recurrent UTIs?

Treatment duration for recurrent episodes is the same as an initial episode. Extending treatment duration does not reduce recurrence or relapse. Most patients do not need prophylactic suppressive therapy.

6. How long do I treat patients with stones or stents and when does duration of therapy start?

If the patient had stone removal or stent exchange, count 7 days from the date of the procedure. If the patient still has potentially remaining infected material, duration may be extended to 10-14 days.

References:

- Complicated Urinary Tract Infections (Cuti): Clinical Guidelines for Treatment and Management. Idsociety.org, 2025, www.idsociety.org/practice-guideline/complicated-urinary-tract-infections/.Hooton TM, Bradley SF, Cardenas DD, et al.
- Diagnosis, prevention, and treatment of catheter-associated urinary tract infection in adults: 2009 International Clinical Practice Guidelines from the Infectious Diseases Society of America. Clin Infect Dis 2010; 50:625.
- Lopez C, Trautner BW, Kulkarni PA. Managing External Urinary Catheters. Infect Dis Clin North Am 2024; 38:343.
- Westgeest AC, van Uhm JIM, Pattacini L, et al. "Catheter replacement in catheter-associated urinary tract infection: current state of evidence ". Eur J Clin Microbiol Infect Dis 2024; 43:1631.
- Nelson, Z et al. Guidelines for the Prevention, Diagnosis, and Management of Urinary Tract Infections in Pediatrics and Adults, A WikiGuidelines Group Consensus Statement. JAMA Netw Open: 2024;7;(11):e2444495