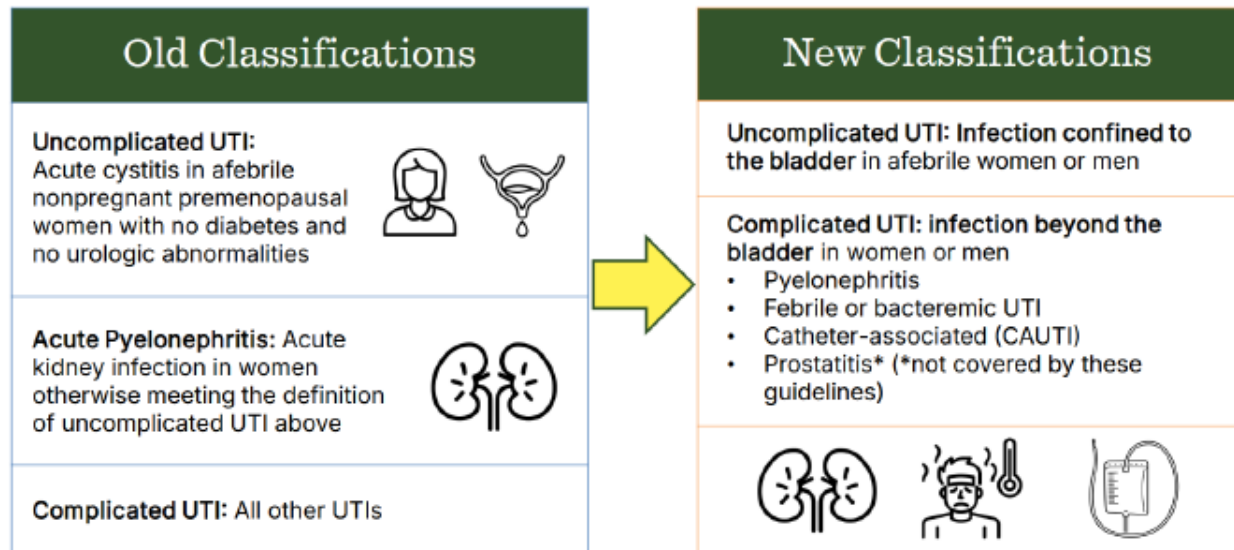


URINARY TRACT INFECTIONS IN ADULTS

Table of Contents

Asymptomatic Bacteriuria	Uncomplicated Cystitis	Complicated UTI: Infection beyond the bladder
Prostatitis	Epididymitis	References

New classifications of uUTI and cUTI



2025 IDSA Complicated UTI guideline updates

HMS-Preferred treatment for uUTI includes:

Nitrofurantoin, Trimethoprim-sulfamethoxazole, or IV beta-lactam transitioned to an oral agent

De-emphasizes fluoroquinolones

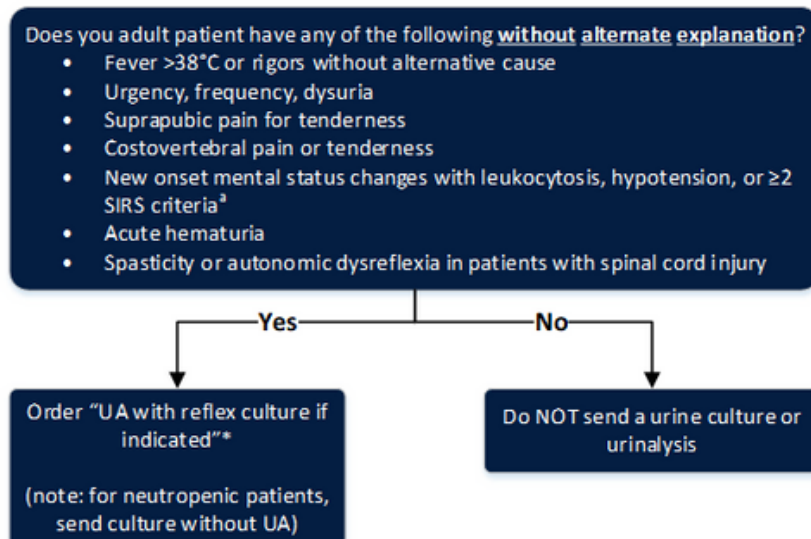
Classification	Drug/duration	Comments
Uncomplicated UTI (bladder only) • Most outpatients • Some hospitalized	Short durations: Nitrofurantoin x5 days TMP-SMX x3 days Beta-lactams x 5-7 days	Beta-lactams • Generally considered inferior • Appropriate for: ◦ Allergies, significant CKD, or resistance profiles • Require longer durations (5-7 days)
Complicated UTI (beyond the bladder) • Antibiotics required to have good tissue penetration	Standard duration: TMP-SMX x7 days Fluoroquinolones x5-7 days Beta-lactams x7 days See cUTI table below for patients where longer durations may be appropriate.	FQ • Do not treat for < 7 days in bacteremia, severe sepsis/septic shock on presentation Beta-lactams • Generally considered inferior • Appropriate for: ◦ Allergies, significant CKD, or resistance profiles

Discourages testing and treatment of ASB



When to Order a Urine Culture: Asymptomatic bacteriuria is often treated unnecessarily, and accounts for a substantial burden of unnecessary antimicrobial use. National guidelines recommend against testing for asymptomatic bacteriuria, except in select circumstances. Therefore urine cultures should only be obtained on adult inpatients for appropriate reasons. Urinary tract infections are over-diagnosed. Patient histories of symptoms that have elicited antibiotic treatment in the past for a “UTI” may or may not have been indicative of a true infection. As such, the following approach is recommended in all patients.

In the absence of signs or symptoms (see below) attributable to a urinary tract infection, patients with a positive urine culture and/or pyuria should not be treated with antibiotics irrespective of high bacterial colony count, or a multi-drug resistant organism. The following is an effective strategy for how and when to order a urinalysis and/or urine culture. NOTE: this does not apply to patients being screened for asymptomatic bacteriuria (see subsequent page for recommendations in such patients). In addition, depending on the clinical scenario, you should rule out the possibility of a sexually transmitted infection or vaginitis.



Identifies UTI symptoms

*: With this order, a urine culture will only be performed if a urinalysis result demonstrates pyuria or bacteriuria. In the absence of clinical suspicion for urinary tract infection based on the criteria listed above, pyuria and/or bacteriuria should not be treated. The presence of pyuria or bacteriuria is **expected** in patients with catheterization or suprapubic catheters and should not alter clinical decision making on whether a urinary tract infection is present. This is a strategy to decrease unnecessary antibiotic treatment in samples indicative of colonization and not infection⁶

^a SIRS Criteria: Heart rate greater than 90 bpm, respiratory rate greater than 20 breaths per minute, temperature less than 36°C, white blood count less than 4,000 cells/mm³, temperature greater than 38°C, white blood count greater than 12,000 cells/mm³.

HMS-Preferred treatment

Beta-lactam IV to PO switch 3-5 days



Clinical Setting	Therapy (Should take into account recent previous cultures)	Duration	Comments
Uncomplicated Cystitis Infection limited to the bladder in male or female patients not meeting criteria for complicated UTI or CA-UTI (see below)	Preferred Nitrofurantoin 100 mg PO BID (contraindicated if CrCl <30 mL/min). 1st Alternative TMP-SMX* 1 DS tab PO BID 2nd Alternative Fosfomycin 3 g PO once OR Cephalexin* 1000 mg PO BID 3rd Alternative Ciprofloxacin* 500 mg PO BID OR Levofloxacin* 500 mg PO daily 4th Alternative: Gentamicin* 5 mg/kg IV x1 OR Tobramycin* 5 mg/kg IV x1 OR Amikacin* 15 mg/kg IV x1 (use Ideal body weight)	Nitrofurantoin: 5 days TMP-SMX: 3 days Ciprofloxacin / levofloxacin: 3 days Fosfomycin: 1 dose Oral Beta-lactams: 5-7 days IV → PO (PO beta-lactam, TMP-SMX, nitrofurantoin, or fluoroquinolone) 3-5 days For patients with recurrent or relapsed UTIs, or slow/delayed response to treatment, use clinician judgement for duration, as longer durations may be appropriate. In pregnancy, treatment durations should be 5-7 days.	- Fosfomycin should only be used to treat <i>E. coli</i> or <i>E. faecalis</i>. Fosfomycin is less effective than nitrofurantoin and should only be used if a contraindication to nitrofurantoin exists. - Fluoroquinolones are not recommended as 1st-line agents due to high rates of <i>E. coli</i> resistance and propensity for collateral damage (resistance, <i>C. difficile</i> infection). Use should be reserved when 1st and 2nd line options are not feasible 3 days of IV beta-lactam may be sufficient to treat uncomplicated UTI, so if a patient is started on an IV beta-lactam and then transitioned to an oral beta-lactam (or other oral agent), shorter durations of 3-5 days are appropriate. - Oral beta-lactams are not recommended first line as they have a higher risk of treatment failure. - Single dose aminoglycoside may be a good option for patients with antibiotic-resistant cystitis with symptoms limited to the bladder in Emergency Department patients who do not otherwise have an indication for admission. Please discuss with stewardship pager (30780) with any questions or concerns. Use in caution in patients with acute kidney injury. Pregnancy: - Urine culture should be sent and treatment adjusted based on susceptibilities. Follow-up urine cultures should be obtained for test of cure. <u>Relatively contraindicated throughout pregnancy:</u> - Fluoroquinolones and doxycycline <u>Avoid in first 8 weeks of pregnancy:</u> - TMP-SMX

Alternative treatment:

Additional alternatives: