Cystitis

Changes in urine color, odor or cloudiness are not independently associated with infection and should not be the sole prompt for urine testing

Diagnostic Microbiology

- ☐ Urinalyses **should not** be used as the sole diagnostic marker of infection
- ☐ Up to 90% of patients with asymptomatic bacteriuria will have some degree of pyuria
- ☐ A **negative urinalysis** typically indicates that a urinary tract infection is not present

Non-catheterized

Uncomplicated
Acute dysuria
Suprapubic pain/tenderness
Urinary frequency
CVA/flank tenderness

Complicated
Fever (T > 38°C), hypotension or tachycardia

***AND** any of the following*:

Acute dysuria
Suprapubic pain/tenderness
Urinary frequency
CVA/flank tenderness

Catheterized (indwelling)

Fever (T > 38°C)
Rigors/chills
Hypotension
Tachycardia
Suprapubic pain/tenderness
CVA/flank tenderness
New onset delirium

Uncomplicated (non-catheterized)

PO	Nitrofurantoin 100 mg BID x 5d Amox-clav 875/125 mg BID x 5-7d Cephalexin 500 mg QID x 5-7d

If known colonization/suspected infection with ESBL pathogens:

PO	Fosfomycin 3 g q48h x 2 doses

Complicated (non-catheterized)/Catheterized

PO	Amox-clav 875/125 mg BID x 7d Cephalexin 500 mg QID x 7d
IV	Ceftriaxone 1 g q24h x 7d

If known colonization/suspected infection with ESBL pathogens:

IV	Ertapenem 1 g q24h x 7d

Older Adults

Patients unable to provide verbal history of urinary symptoms still have physical signs of infection. Assess for fever, hemodynamic instability, or suprapubic pain on palpation.

Alterations in mental status/LOC, lethargy, weakness, falls or delirium in isolation should not be used to infer a urinary tract infection.

Assess non-infectious causes
(e.g. dehydration, medications, etc.)

Watch & Wait Approach

In the absence of localizing urinary tract symptoms or systemic signs of infection (i.e. fever, hypotension) **alternative causes for cognitive changes should be evaluated**.

Careful observation & reassessment is recommended **rather than antimicrobial therapy.**

Unique Populations

Patients with multiple sclerosis or those with spinal cord injury may not present with classic urinary symptoms.

Pyelonephritis

Acute Pyelonephritis

- ☐ Fever (T > 38°C)
- ☐ Hemodynamic instability
- ☐ Flank pain
- ☐ +/- lower urinary tract symptoms

Bacteremia is a common finding in pyelonephritis and is not considered a complicating factor that merits extension of antibiotic therapy

Empiric Antibiotics

IV	Ceftriaxone 1 g q24h x 7d

If known colonization/suspected infection with ESBL pathogens:

IV	Ertapenem 1 g q24h x 7d

Alternative therapy
If known allergic anaphylaxis to beta-lactams

IV	Ciprofloxacin 400mg q12h x 7d Ertapenem 1 g q24h x 7d

*If E.faecalis suspected, consider **adding** **Ampicillin 2g IV q6h** to the above options*

Complicated Pyelonephritis

Patients with obstructive uropathy, foreign objects (e.g. nephrostomy tubes) or renal abscesses require prolonged antimicrobial therapy (10-14+ days) depending on clinical context.

Consider an ID or Urology consult to guide duration