Management of Uncomplicated Urinary Tract Infections (UTI) and Asymptomatic Bacteriuria (ASB)

Urine is not a sterile body fluid. Many patients may have bacteria in the urine that is not pathogenic. ASB can occur in patients of all ages but prevalence of ASB increases with age:

<table>
<thead>
<tr>
<th>Population</th>
<th>Prevalence of ASB</th>
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</thead>
<tbody>
<tr>
<td>Healthy, premenopausal women</td>
<td>1-5%</td>
</tr>
<tr>
<td>Post-menopausal women 50-70 y/o</td>
<td>1.9-9.5%</td>
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<tr>
<td>Diabetic women</td>
<td>10.8-16%</td>
</tr>
<tr>
<td>Women ≥70 y/o living in the community</td>
<td>10.8-16%</td>
</tr>
<tr>
<td>Men ≥70 y/o living in the community</td>
<td>3.6-16%</td>
</tr>
<tr>
<td>Women ≥70 y/o living in LTCF</td>
<td>25-50%</td>
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<tr>
<td>Men ≥ 70 y/o living in LTCF</td>
<td>14-40%</td>
</tr>
<tr>
<td>Spinal cord injuries</td>
<td>23-69%</td>
</tr>
<tr>
<td>Long-term indwelling catheters</td>
<td>100%</td>
</tr>
<tr>
<td>Short-term indwelling catheters</td>
<td>3-5% per catheter day</td>
</tr>
</tbody>
</table>

According to the IDSA only patients with symptoms require treatment for asymptomatic bacteriuria.

Symptoms include:
- Dysuria
- Frequency
- Urgency
- Suprapubic pain
- Flank pain

Patients who may require treatment for ASB:
- Pregnant
- Undergoing a urologic procedure
- Kidney transplant (≤1 month post transplant)
- Immunocompromised

Bacteriuria is a common finding in elderly patients. Although antibiotics may eradicate organisms from the bladder, no evidence has shown that treatment of ASB improves outcomes in these patients and bacteriuria often recurs. Altered mental status can be a sign of a urinary tract infection but it is important to assess and treat other possible causes.

Elderly patients are more sensitive to the side effects of antibiotics and they should be avoided whenever possible.

Guidelines Do Not recommend screening or treatment for ASB in:
- Premenopausal, non-pregnant women
- Diabetic women
- Elderly persons living in the community or institutionalized
- Spinal cord injury
- Catheterized patients

Fluoroquinolones:

Not recommended as first line therapy due to serious adverse effects:
- Tendonitis/tendon ruptures
- Aortic aneurysm/dissection
- CNS effects
- *C. difficile* infections
- Antimicrobial resistance

For most infections, the risks associated with fluoroquinolone use outweigh the benefits.

The FDA recommends limiting fluoroquinolone use in uncomplicated UTI’s, bacterial sinusitis, and bacterial bronchitis. (See https://asp.nm.org “Safety Update Fluoroquinolones” for more information.)

Fluoroquinolone use for empiric treatment of UTIs is not recommended. Fluoroquinolones may be used for directed treatment of complicated UTI’s and pyelonephritis.
Distinguishing Urinary Tract Infections from Asymptomatic Bacteriuria (ASB)

Is the patient symptomatic?

Altered mental status present: Consider alternative diagnosis in the absence of systemic signs/symptoms of infection. See evaluating AMS in elderly patient.

Frequency, urgency, dysuria, suprapubic pain, flank pain

Change catheter if present
Order U/A
Treat empirically for UTI
Refer to NM Northwest Region empiric antibiotic treatment guidelines.

Pyuria present (WBC≥10)

No pyuria (WBC<10)

Consider alternative diagnosis

Complete course for UTI
Narrow treatment based on culture results

Evaluating Altered Mental Status or Falls In Elderly Patients

Is patient significantly altered from baseline?

Unsure: Does patient have fever, hemodynamic instability, or leukocytosis

Yes: is there another possible cause of AMS or fall

Evaluating: new medications recently initiated, electrolyte abnormalities, dehydration, toxic screen abnormalities, organ dysfunction, recent trauma, cardiovascular event

No alternative diagnosis: check U/A

Pyuria present (WBC≥10)

No pyuria (WBC<10)

Re-evaluate symptoms

Symptoms improved: Do not treat for UTI consider alternative diagnosis. Careful observation.

Symptoms unchanged: Consider antibiotics for treatment of UTI. Narrow treatment based on culture result.

NO: antibiotic treatment is not recommended in the absence of symptoms (frequency, urgency, dysuria, suprapubic pain, flank pain)

Pyuria alone does not indicate the presence of UTI