



Top 10 Ways for Emergency Physicians to Avoid Prescribing Unnecessary Antibiotics

1. Beware urinary tract infection (UTI) myths

Forty percent of antibiotics given in hospital settings are avoidable. Odor, bacteriuria, nitrates, leukocyte esterase and pyuria cannot diagnose UTI without clinical signs/symptoms.

2. Use the modified Centor Score for pharyngitis

One point is assigned for each of the following criteria:

- fever,
- absence of cough,
- tonsillar exudates and
- swollen and or tender anterior cervical nodes

Current guidelines recommend no rapid testing and withholding antibiotics for scores of one or less and treating only positive rapid test results for scores of two or greater.

3. Treat sinusitis as viral unless strict criteria are met

Criteria Includes:

- Sinusitis symptoms must be present for 10 days or more without any evidence of clinical improvement *OR*
- Patient has *severe* symptoms or signs of high fever ($\geq 39^{\circ}\text{C}$ [102°F]) and purulent nasal discharge or facial pain lasting for at least three-to-four consecutive days *OR*
- Worsening symptoms or signs characterized by the new onset of fever, headache or increase in nasal discharge following a typical viral upper respiratory infection.

If criteria is met, first-line therapy should be a 10-day course of amoxicillin.

4. Avoid screening for asymptomatic bacteriuria

Asymptomatic bacteriuria is common. It is present in up to five percent healthy premenopausal women, twenty-two percent community dwelling elder women, as well as fifty percent and thirty-five percent of institutionalized women and men respectively. Urinalysis for infection should **only** be sent in patients with urinary symptoms.

5. Think twice about “UTIs” in patients with altered mental status

Implement a “wait and see” approach to non-specific symptoms of weakness, falls, fatigue and/or delirium in elders, long term care residents and patients with cognitive impairment before starting antibiotic for UTI.

6. Consider not prescribing antibiotics for uncomplicated abscesses

Several studies conducted in the Emergency Department (ED) support withholding antibiotics after incision and drainage of uncomplicated abscesses, even in cases of suspected Methicillin-Resistant *Staphylococcus aureus* (MRSA). One large Randomized Controlled Trial (RCT) supports Trimethoprim/sulfamethoxazole (TMP/SMX) use in abscesses.

7. Avoid double coverage for community-acquired cellulitis

TMP/SMX retains nearly 100 percent effectiveness for community-acquired MRSA (CA-MRSA). Wisconsin clindamycin resistance rates are approaching 30 percent. No need to double cover uncomplicated cellulitis - Single agent cephalexin is sufficient.

8. Consider watch and wait prescriptions with acute otitis media

Most otitis media is viral and delaying treatment is usually associated with resolution of clinical signs and symptoms. Only 40 percent of watch and wait prescriptions are filled.

9. Use procalcitonin to help guide decisions in Chronic obstructive pulmonary disease (COPD)

The Food and Drug Administration (FDA) approved procalcitonin in 2017 to guide antibiotic initiation in lower respiratory tract infection (LRTI).

10. Avoid antibiotics for routine dentalgia

Reversible pulpitis, periodontitis and mechanical endodontic conditions present as tooth pain, but do not require antibiotics. Nonsteroidal anti-inflammatory drugs (NSAIDs) and nerve blocks are recommended therapy. Antibiotics are appropriate if there is an adjacent space infection, trismus or odynophagia.

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