

# **Appropriate Discharge Antibiotic Selection, Dosing, and Duration for Urinary Tract Infections in the Emergency Department and Implications for Pharmacist Intervention**

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## **Abstract**

**Objective:** The study objective is to assess the rate of appropriate prescribing practices for urinary tract infections (UTIs) from the emergency department (ED) to identify where pharmacists could intervene to improve antimicrobial stewardship and patient care.

**Methods:** This retrospective chart review study included patients discharged home from the ED with an uncomplicated or complicated cystitis or pyelonephritis diagnosis at a 280-bed community hospital. Patient records were reviewed via the electronic medical record (EMR) to assess whether prescriptions were appropriate for the diagnosis given. Prescription appropriateness was based on the 2010 Infectious Disease Society of America (IDSA) UTI guidelines and dosing recommendations on Lexicomp for the applicable diagnosis.

**Results:** A total of 85 patients and 87 prescriptions were studied. Of those patients, 72% (61) had cystitis and 28% (24) had pyelonephritis. The rate of inappropriate prescriptions was 53% (46) with some having more than one reason it was inappropriate. Within the 46 inappropriate prescriptions there were 55 instances of inappropriate prescribing practices. Of those, 16.4% (9) were due to incorrect drug, 5.5% (3) were due to incorrect dose, 23.6% (13) were due to incorrect frequency, and 54.5% (30) were due to incorrect duration.

**Conclusions:** Overall, the rate of inappropriate prescribing practices is high. Pharmacists could intervene and help lower this rate by reviewing previous cultures if available to ensure historically resistant antibiotics are avoided and reviewing duration of therapy to ensure appropriateness. Additionally, they can provide education to providers concerning these findings and promote ways to improve prescribing practices to better align with antimicrobial stewardship standards.