CLINICAL GUIDELINE

Appropriate Use of Short-Course Antibiotics in Common Infections: Best Practice Advice From the American College of Physicians

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Description: Antimicrobial overuse is a major health care issue that contributes to antibiotic resistance. Such overuse includes unnecessarily long durations of antibiotic therapy in patients with common bacterial infections, such as acute bronchitis with chronic obstructive pulmonary disease (COPD) exacerbation, community-acquired pneumonia (CAP), urinary tract infections (UTIs), and cellulitis. This article describes best practices for prescribing appropriate and short-duration antibiotic therapy for patients presenting with these infections.

Methods: The authors conducted a narrative literature review of published clinical guidelines, systematic reviews, and individual studies that addressed bronchitis with COPD exacerbations, CAP, UTIs, and cellulitis. This article is based on the best available evidence but was not a formal systematic review. Guidance was prioritized to the highest available level of synthesized evidence.

Best Practice Advice 1: *Clinicians should limit antibiotic treatment duration to 5 days when managing patients with COPD exacerbations and acute uncomplicated bronchitis who have clinical signs of a bacterial infection (presence of increased sputum purulence in addition to increased dyspnea, and/or increased sputum volume).*

Best Practice Advice 2: *Clinicians should prescribe antibiotics for community-acquired pneumonia for a minimum of 5 days. Extension of therapy after 5 days of antibiotics should be guided by validated measures of clinical stability, which include resolution of vital sign abnormalities, ability to eat, and normal mentation.*

Best Practice Advice 3: *In women with uncomplicated bacterial cystitis, clinicians should prescribe short-course antibiotics with either nitrofurantoin for 5 days, trimethoprim–sulfamethoxazole (TMP–SMZ) for 3 days, or fosfomycin as a single dose. In men and women with uncomplicated pyelonephritis, clinicians should prescribe short-course therapy either with fluoroquinolones (5 to 7 days) or TMP–SMZ (14 days) based on antibiotic susceptibility.*

Best Practice Advice 4: *In patients with nonpurulent cellulitis, clinicians should use a 5- to 6-day course of antibiotics active against streptococci, particularly for patients able to self-monitor and who have close follow-up with primary care.*

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Primary care physicians prescribe antibiotics in 10% of all outpatient visits (1, 2). In 2014, outpatients received more than 250 million courses of antibiotics in the United States, and at least 30% were considered unnecessary and often continued for too long, particularly for bronchitis and sinusitis (3–5). Antimicrobial overuse, particularly with broad-spectrum antibiotics, drives resistance and causes adverse events in up to 20% of patients, ranging from allergic reactions to *Clostridioides difficile* infections (2, 6). The American College of Physicians (ACP) and the Centers for Disease Control and Prevention have recognized antibiotic-resistant infections as a national threat, with an estimate of more than 2.6 million illnesses and 35 900 deaths annually and with incidence of resistant infections of 6.1 per 10 000 person-days after receipt of antibiotics (7–9).

See also:

Summary for Patients I-22

Clinicians, especially general internists, play a key role in antimicrobial stewardship, and quality improvement strategies can improve antimicrobial prescribing (10, 11). We define appropriate antibiotic use as prescribing the right antibiotic at the right dose for the right duration for a specific condition (5). When clinically safe and supported by evidence, shortening the duration of antibiotic therapy decreases overall antibiotic exposure, reducing the selection pressure for resistant organisms as well as a patient's risk for adverse effects from antibiotics. For several types of infections, studies and meta-analyses have shown that compared with longer courses of antibiotics, shorter courses show similar clinical outcomes with fewer drug-related adverse events (12–15). Despite evidence and guidelines supporting shorter durations of antibiotic use, many physicians do not

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