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**Title**

*Antibiotics not associated with shorter duration or reduced severity of acute lower respiratory tract infection, (EAST-PC)*

**Priority 1 (Research Category)**

Prescribing and pharmacotherapeutics

**Presenters**

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**Abstract**

Context: Antibiotic use remains common for the treatment of lower respiratory tract infections. Objective: To evaluate the impact of antibiotic use on the duration and severity of acute lower respiratory tract infection (LRTI). Study Design: The Enhancing Antibiotic Stewardship in Primary Care (EAST-PC) was a prospective observational study of adults in the outpatient setting presenting with acute cough. Setting & Population Studied: Adult patients presenting to US primary or urgent care sites with a chief complaint of cough and symptoms consistent with LRTI. Instruments & Outcome Measures: Collected data included demographics, comorbidities, symptoms, and 48 viral and bacterial respiratory pathogens by PCR. Severity of signs/symptoms was reported for up to 28 days using diaries and text messages. Results: Of 718 patients with baseline data, 29% had an antibiotic prescribed at baseline. The most common antibiotics were amoxicillin-clavulanate, azithromycin, doxycycline and amoxicillin in 85% of patients. Provision of an antibiotic had no effect on the duration or overall severity of cough, including in patients with viral, bacterial and mixed infections. Receipt of an antibiotic did reduce the likelihood of a follow-up visit (14.1% vs 8.2%, aOR 0.47, 95% CI 0.26-0.84), perhaps by removing the motivation of getting an antibiotic at a follow-up visit. However, they were also more likely to receive a systemic corticosteroid (31.9% vs 4.5%,  $p < 0.001$ ) and were also more likely to receive an albuterol inhaler (22.7% vs 7.6%,  $p < 0.001$ ). Patients believed that receiving an antibiotic would reduce the duration of their illness by nearly 4 days. Conclusions: In this large prospective study in the US primary and urgent care setting, antibiotics had no measurable impact on the severity or duration of cough due to acute LRTI. Patients had unrealistic expectations regarding the duration of LRTI and the effect of antibiotics which should be the target of antibiotic stewardship efforts.

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