

# UK study shows most patients with suspected UTI and treated with antibiotics actually lack evidence of this infection

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New research presented at this week's European Congress of Clinical Microbiology & Infectious Diseases (ECCMID) in Amsterdam, Netherlands (13-16 April) shows that only one third of patients that enter the emergency department with suspected urinary tract infection (UTI) actually have evidence of this infection, yet almost all are treated with antibiotics, unnecessarily driving the emergence of antimicrobial resistance. The study is by Dr. Laura Shallcross, University College London, UK and colleagues.

Concern over delaying antibiotic treatment for severe infection means that clinicians have a low threshold for initiating antibiotics in the [emergency department](#) (ED) for [patients](#) with suspected [urinary tract infection](#) (UTI) syndromes. Although a non-infectious cause is established for many of these cases, antibiotics are often continued unnecessarily, which drives the emergence of antimicrobial resistance (AMR). In this study, the authors estimated the frequency of over-diagnosis of UTI syndromes in the ED, in order to estimate the potential to reduce antibiotic prescribing by stopping antibiotics early for patients with no evidence of bacterial [infection](#).

The authors undertook a cohort study in a large teaching hospital (the Queen Elizabeth Hospital, Birmingham, UK), using [electronic health records](#) (EHRs) from patients with suspected UTI syndromes who attended the ED. Individuals who had a sample submitted for

microbiological culture of urine in the ED were eligible for inclusion. The research team randomly selected a subset of 1000 patients (700 admitted to hospital) and described the clinical and demographic characteristics of this population. They then compared diagnoses made by the ED physician to [clinical diagnosis](#) based on urinary symptoms and microbiological outcomes and international classification of disease (ICD-10) diagnostic codes. Finally, they estimated how often antibiotics were stopped at or shortly after (

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