



# Scientific Bulletin of the Academy of Medical Sciences

Number 115/ 30 August 2024

## INAPPROPRIATE ANTIBIOTIC PRESCRIPTIONS IN US EMERGENCY DEPARTMENTS HIGHLIGHTED BY STUDY

**A**n analysis of presentations in US emergency departments involving antibiotic prescriptions found that over 25% of patients were prescribed antibiotics inappropriately, with almost half being unnecessary, according to a study published in Antimicrobial Stewardship & Healthcare Epidemiology.

Using data from the **National Ambulatory Medical Care Survey & Hospitalization Register**, which includes patient data, characteristics, diagnostic codes, and prescribed medication, researchers examined emergency visits where antibiotics were prescribed one or two times orally from 2016 to 2021. Diagnostic codes were then grouped based on the necessity of recommending **an antimicrobial agent** as "always," "sometimes," or "never" to evaluate whether antibiotic prescriptions were appropriate, potentially appropriate, or inappropriate.

Out of over 152 million emergency visits, 27.5% had an inappropriate prescription. Of these, 14.9% had inappropriate prescriptions with a

plausible indication like bronchitis, while the remaining 12.6% had diagnostic codes deemed not plausibly associated with antibiotic therapy, such as hypertension, chest pain, or joint pain. Consequently, only 54% of visits with inappropriate prescriptions had a plausible indication.

Emergency visits among adults aged 18 to 64 had the highest prevalence of inappropriate antibiotic prescriptions (29.8%) compared to adults aged 65 and over (24.6%) or children (23.7%). Inappropriate prescriptions with a plausible indication were highest among children (16.7%), followed by working-age adults (15%), and older adults (12.6%).

The authors suggest that visits with **inappropriate prescriptions** and **no plausible coded indication** for antibiotics might represent cases where clinicians prescribed antibiotics correctly but neglected to code the condition, or deliberately avoided coding an inappropriate prescription to evade scrutiny.

Antibiotic stewardship initiatives in emergency departments should focus on reducing inappropriate antibiotic prescriptions for infectious diseases and improving the quality of antibiotic prescription coding.

*Adapted after Chris Dall, 14 May 2024*

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