

# Antibiotic Prescribing Patterns for Childhood infections in Ambulatory Settings

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## Abstract

**Background:** Antibiotics' rational prescribing is a major goal of the World Health Organization's (WHO) global action-plan to tackle antimicrobial resistance. Evaluation of antibiotic prescribing patterns is necessary to guide simple, globally applicable stewardship interventions. The impact of antimicrobial resistance is devastating, especially in low-income countries. We aimed to introduce ambulatory data on patterns of pediatric antibiotic prescribing in Jordan, which could be used to guide local stewardship interventions. **Methods:** A cross-sectional retrospective study was conducted by selecting a random sample of pediatric patients, who attended ambulatory settings in 2018. Records of outpatients (age  $\geq 18$  years) receiving at least one antibiotic were included. The WHO's model of drug utilization was applied, and all prescribing indicators were included. Multiple linear regression was performed to examine factors influencing the ratio of prescribed antibiotics to overall medications per encounter. **Results:** A total of 20,494 prescriptions, containing 45,241 prescribed drugs, were obtained. Average number of prescribed drugs per prescription was (2.21  $\pm$  0.98). 77.5% of overall ambulatory prescriptions accounted for antimicrobials. Only 0.6% of total prescriptions were for injectables. All antimicrobials (100%) were prescribed by generic-names and from essential drug list. Antibiotics were most commonly prescribed for respiratory tract infections. Age, gender, season, and facility type were significant predictors of prescribed antibiotics to overall medications ratio. **Conclusions:** This is the first study of antibiotic prescribing patterns among outpatient pediatrics that covers wide regions in Jordan. Results indicate high rates of antibiotics use among outpatient pediatrics. Such findings necessitate more focused efforts and regulations that support rational utilization of drugs.

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