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**Antibiotic Prescribing Pattern for Upper Respiratory Tract Infection  
among Outpatients in Sana'a – Yemen**

Thesis Submitted in Partial Fulfillment for the Bachelor Degree in Pharmacy

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## ABSTRACT

**Background:** inappropriate prescribing of antibiotics is frequently encountered in upper respiratory tract infections, it considers the leading cause of misuse of antibiotics, which leads to unnecessary adverse effects and antibiotic resistance. Data about antibiotics prescription in developing countries are lacking. This study assessed antibiotic prescription in Sana'a city in the treatment of upper respiratory tract infections. **Objective:** This study aimed to describe the current pattern of antibiotic use for the treatment of URTI in outpatient settings in Sana'a – Yemen by evaluating the adequacy and appropriateness of antibiotic prescribing corresponding to treatment guidelines. **Methods:** A prospective, descriptive, cross-sectional study was conducted on patients diagnosed with upper respiratory tract infections at outpatient settings of different private and public hospitals in Sana'a–Yemen in September 2019 using a validated questionnaire. The diagnosis was classified as appropriate or inappropriate based on the most likely pathogen that may warrant antibiotic use. The Chi-square test and logistic regression were the analytical methods used in this study. **Results:** A total of 485 patients were included in this study. Of these, 462 (95.3%) were prescribed antibiotics. The majority of them (78.35%, N= 362) received antibiotics appropriately. However, (21.64%, N= 100) received antibiotics for inappropriate indications. High prescribing rates were observed in patients with pharyngotonsillitis ( 44.12%, N= 214 ) followed by acute otitis media ( 14.23%, N=69) and bronchitis (11.55%, N=56 ). The most common antibiotics classes prescribed were penicillin including amoxicillin-clavulanic acid (47.6% of patients, 19.09% inappropriate ), follow by macrolide ( 27.9% of patients, 29.46% inappropriate), cephalosporin (14.5% of patients, 3% inappropriate) and fluoroquinolone (9.3% of patients, 34.88% inappropriate ).**Conclusion:** Antibiotic prescribing for upper respiratory tract infections in some health care centers in Sana'a – Yemen was very high with a considerable proportion of inappropriate antibiotics prescriptions. patient's characteristics have an impact on physicians' prescribing patterns of antibiotics. we recommend further studies on this important issue to find out the reasons physicians overuse antibiotics in this illness.

**Keywords:** adequacy, appropriateness, upper respiratory tract infections, antibiotics prescribed, Sana'a – Yemen.