

## Study of Antibiotic Prescribing Pattern among Hospitalized Patients with Systemic Bacterial Infection an A Tertiary Care Hospital of Central India

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### Abstract

**Aim:** The aim of the present study was to perform a systematic and comprehensive assessment of antibiotic use practice in hospitalized patients with systemic bacterial infections to identify institutional targets for better antibiotic and health care resource stewardship. **Material and Methods:** It was institution based prospective observational study conducted from October 2018 to April 2019. Patients with suspected systemic bacterial infections during this period were strictly followed and data was abstracted using data abstraction format. **Results:** Nearly 40% (278/695) of patients had suspected bacterial infection during admission. Pneumonia (48%, 133/278) was the most common. Among 503 antibiotics prescribed; Cephalosporins (38.4%, 140/364) was most commonly used in wards and Piperacillin+Tazobactam (17.9%, 25/139), Cefoperazone+Sulbactam (14.3%, 20/139) were most widely prescribed fixed dose combination (FDC) in ICU. Overall rationality of antibiotics administered was 56.8% and 59.3% antibiotics were found appropriate with indication, 59.3% with duration, 59.07% with dose and 56.31% with frequency. Empiric antibiotic therapy was initiated in 94.6% (229/242) ward and all (36/36) ICU patients while culture sensitivity was conducted for only 23% (64). Appropriate escalation was found in 27% and de-escalation in 8.3% to culture sensitivity reports. Antibiotics were not changed in large proportion of cases i.e. in 52% cases. No discontinuation of empiric therapy was performed for negative culture reports considered inappropriate. **Conclusion:** Judicious antimicrobial use through educational and antimicrobial stewardship programs remains critical to control the spread of antibiotic resistance.