

## **Antimicrobial stewardship program in a Malaysian district hospital: first year experience**

### **ABSTRACT**

**Backgrounds & Objective:** Antimicrobial resistance is an alarming public health threat that requires urgent global solution. Implementation of antimicrobial stewardship program (ASP) is an essential practice element for healthcare institutions in gate-keeping judicious antimicrobial use. This study highlighted the development, first year experience, and result of the implementation of ASP utilizing persuasive and restrictive approaches in a Malaysian district hospital.

**Methods:** An observational study was conducted between January 2015 to December 2015 on implementation of ASP among hospitalized inpatients age 12 years old and above.

**Results:** Recommendations were provided for 60% of cases (110 patients) with the average acceptance rate of 83.33%. Majority of the interventions were to stop the antimicrobial therapy (30.3%), and the most common audited antimicrobials was Piperacillin/ Tazobactam (25.5%), followed by Meropenem (11.82%), Amoxicillin/Clavulanate and Vancomycin (8.18%) respectively. The concordance rate towards authorization policy was increased in 2015 (71.59% of cases) as compared before the implementation of ASP in 2014 (60.6% of cases). Restrictive enforcement under ASP had been shown to improve significantly adherence rate towards antimicrobials authorization policy (p-value: 0.004).

**Conclusion:** ASP was successfully implemented in a district hospital. Future studies on its clinical outcomes are important to evaluate its effectiveness as well as focus on the improvement to the pre-existing strategies and measures.

**Keyword:** Antimicrobial stewardship; Anti-Infective agents; Drug resistance; Malaysia; Rural hospital