Impact of new strategies for Antimicrobial Stewardship Program (ASP)

Department of Pathology, Department of Medicine, Department of Pharmacy, Tseung Kwan O Hospital
Tseung Kwan O Hospital

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Introduction
Antimicrobial Stewardship Program (ASP) has been implemented in Tseung Kwan O Hospital (TKOH) to reduce the emergence of antimicrobial resistant organisms. Despite being the lowest rate of use of all antibiotics among acute Medical units in HA in 2014, an increasing trend of antimicrobial use especially carbapenem group was observed over the past years. Therefore, strategy is implemented to promote the appropriate use of antimicrobial agents.

Objectives
To promote appropriate use of intravenous (IV) antibiotics by documentation of dose, indication and duration at prescribing in In-Patient Medication Order Entry (IPMOE) to facilitate review and timely switch from board to narrow spectrum and intravenous to oral form antibiotic when appropriate or stop the antibiotics.

Methodology
Following new ASP strategies was started on 8th Dec 2014 as pilot in Medical wards. • Dose, duration and indication are mandatory for all IV antibiotic orders and specimens to be sent for microbiology cultures as soon as possible • Pharmacy supplies 2 days medications initially. Doctors review the patient in 48 hours and send completed ASP review form when antibiotic is required to Pharmacy for continuing medication supply. • Dispensing data was extracted for analysis, as auto-medication refill would be stopped upon medication order discontinuation.

Result
No. of cases requiring “Big Gun” and “IV-PO switch” antibiotics in November 2014 is
comparable to that in December 2014 and January 2015 (151 vs 160 vs 153 and 19 vs 20 vs 22 respectively). For “Big Gun” antibiotic orders in January 2015, there was increase in no. of patients with antibiotics stopped by 3 days (33% vs 47%) when comparing to November 2014. In December, 99 cases prescribed with “Big Gun” and “IV-PO switch” antibiotics and required continuing treatment. Of which, 97 cases (98%) have completed the ASP review form. During 8th-18th Dec 2014, 58.3% of IV antibiotic orders had included both indication and duration at prescribing. With reminding notes, 100% had included the information required in January 2015. The consumption of Meropenem reduced from 37 cases in November 2014 to 14 cases in January 2015. The total DDD used decreased from 290 to 112. Conclusion The strategy would facilitate medical staff and also on call medical staff to review and decision making in antibiotic usage.