



## Service Priorities and Programmes Electronic Presentations

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### **Enhanced Antibiotic Stewardship Program**

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### **Introduction**

The multidisciplinary team of Antibiotic-Stewardship-Program(ASP), which includes microbiologists, infectious disease(ID) physicians and pharmacists, reviews and monitors the appropriateness of antimicrobial use at PMH. The usage of antibiotics was well-controlled as reflected by the low usage density figure (measured by Acute Defined-Daily-Dose per 1000 Acute Bed-Day-Occupied) amongst HA major acute hospitals. In November 2015, the ASP team noticed a rising trend in the usage density of big gun(BG) antibiotics from 58.48 (Sep2012-Aug2013) to 84.89 (Sep2014-Aug2015), a 45% increase within 2 years. Although an increasing trend was noted across HA hospitals, the rate of increase was greater for PMH. Prolonged BG antibiotics treatment was found to be a cause for the rising trend of usage density of BG antibiotics, hence, ASP team devised interventions to encourage prescribers to timely review antibiotics treatment.

### **Objectives**

The project aims to improve the review of antibiotics treatment and to enhance monitoring of antibiotics treatment duration.

### **Methodology**

The IPMOE review function was activated in December 2015 for Meropenem and Tienam in PMH and further rolled out to Cefepime, Ceftazidime, Piperacillin/Tazobactam, Cefoperazone/Sulbactam and Vancomycin in March 2016. The "Review Alert" would prompt to remind doctors to review and assess patients for the need to continue BG antibiotics treatment >7 days. In June 2016, pharmacy started to fax reminder notes to the Department of Medicine&Geriatrics(M&G) for doctors to review cases on >7 days of Meropenem and Piperacillin/Tazobactam, and discontinue treatment if no longer required. In July 2016, microbiologist and ID physician educated physicians on rational use of antibiotics and the importance of ASP.

### **Result**

The activation of the IPMOE review function was insufficient to control the antibiotic

duration and the antibiotics usage density continued to rise to higher than the HA average. Further enhancement to provide reminder notes to M&G doctors was implemented in June 2016. The percentage of Meropenem and Piperacillin-tazobactam treatment >8days dropped by 4% and 6% respectively in 2017-Q1 as compared with 2016-Q1. The antibiotics usage density was reduced from 101.4 (Sep2015-Aug2016) to 99.95 (Sep2016-Aug2017), which was lower than HA average.

Timely monitoring, reminder notes and education help to alert doctors to review the antibiotics treatment, and to reduce the unnecessary prolonged antibiotic duration for hospitalized patients. Our practice to monitor antibiotics treatment duration was shared at the Working Group ASP meeting and would be adopted HA-wide.