Implementing antimicrobial stewardship programs in South Korea

D.R. Chung

Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea, Republic of

Antimicrobial resistance rates in major human pathogens including *Streptococcus pneumoniae*, *Staphylococcus aureus*, and *Enterobacteriaceae* have been rapidly increasing in South Korea, and antibiotic overuse and misuse had contributed to it. To cope with increasing antimicrobial resistance, multidisciplinary efforts have been made. In South Korea, pharmaceutical policy reform was implemented for separation of prescription and dispensation of drugs in outpatient care in July 2000. After then, antibiotic usage in the community decreased, and further reduction of antibiotic overuse and misuse has been promoted through quality assessment of antibiotic usage for individual hospital by Health Insurance Review & Assessment Service. Antibiotic prescription rates for upper respiratory infections in the outpatient setting and adequate antimicrobial agents were reviewed by specialists. Discussion and feedback information technology. All cases that needed these antimicrobial agents were reviewed by specialists. Discussion and feedback about the appropriate use of restricted antimicrobial agents was carried out with the prescribers as necessary. The antimicrobial susceptibility patterns of isolates and mortality of patients infected or colonized with these 6 pathogens were monitored; namely *P. aeruginosa*, *A. baumannii*, ESBL-producing *K. pneumoniae*, *E. coli*, MRSA, and enterococci. The program resulted in 20-30% significant reduction in unnecessary antimicrobial prescription within the first year, without change in mortality rates.

The challenges to antimicrobial stewardship in particular hospital are different. Chiang Mai University Hospital is a 1500 bed, teaching hospital in Northern Thailand. Given the responsibility for teaching, service, and research, it is very difficult to find physicians who are willing to commit the time for stewardship program. Collaboration with physicians outside the appointed stewardship team is further challenging. Although we try to recruit team members from various departments, resistance among clinicians is unavoidable. Medical residents as the primary prescribers lack of confidence in directly implement suggested stewardship interventions without consulting attending physicians, even though education and feedback program is still ongoing. Lack of personnel to monitor the program in particular process measurement is another obstacle to define the problem of the program. Lastly, a challenge for initially successful programs is to maintain that success in subsequent years. In conclusion, effective and successful antimicrobial stewardship program is reachable, but needs truly support from hospital administrators and good collaboration with multidisciplinary staff members.