Can the Antibiotic Stewardship PKPD Strategies and New Drugs Win the Power of Antimicrobial Resistance?

Dr Terrence Rohan Chinniah
Department of Laboratory Services, Ministry of Health, Brunei Darussalam

Rising tide of antimicrobial resistance among Gram-positive and Gram-negative pathogens has become a major clinical challenge in the treatment of infectious diseases. Development of new agents is one part of the needed response; yet global drug pipeline is thin due to difficulty of discovery of new safe agents to counter the rapid progression of emerging resistance and due to the difficulty in the economics of antibiotics. Hence proper use of existing antimicrobials is essential. The primary goal of an antimicrobial stewardship program is to improve clinical outcomes while minimizing unintended consequences and collateral damage of antimicrobial use, namely emergence of antimicrobial resistance. Scientific and practical strategies of pharmacokinetics, pharmacodynamics, and dosing of available anti-microbial agents will further optimize clinical outcomes. These along with modification of behavior in prescription and robust infection control practices will help to overcome antimicrobial resistance in both clinical and public health settings.