

Implementation of Antimicrobial Stewardship makes a difference

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ABSTRACT

Introduction: Antimicrobial stewardship is a coordinated program that promotes the appropriate use of antimicrobials (including antibiotics), improves patient outcomes, reduces microbial resistance, and decreases the spread of infections caused by multidrug-resistant organisms.

Discussion: Clinical Microbiologists play a key role in the Antimicrobial Stewardship program. Provide the cumulative antimicrobial susceptibility reports, enhanced culture and susceptibility reports, guidance in the preanalytic phase, rapid diagnostic test availability, provider education, and alert and surveillance systems. Indications should be evidence based. Narrowest spectrum required with appropriate doses to the site and type of infection with minimal duration of infection. Ensure monotherapy in most cases.

Avoid use of meropenem for empiric treatment of suspected late onset sepsis if rates of multi-drug resistant gram-negative bacilli are low. Avoid therapy with overlapping activity. Avoid simultaneous use of metronidazole and meropenem to treat necrotizing enterocolitis. Target vancomycin trough to 15–20 mg/L to treat pneumonia caused by MRSA. De-escalation of Antibiotic Treatments a concern and important. Stop therapy promptly if indicated by culture results. Discontinue antibiotics after 48 hours if blood cultures are negative and ongoing infection is not suspected. Restrict the Use of higher generation antibiotics with restricted antibiotic policy. Computer surveillance and decision support should be there. Automated alerts for redundant antibiotic combinations. Monitoring Success of Antimicrobial Stewardship by successful implementation and safety. Then can be monitored by cost reduction, DOT and DDD.

Conclusion: The emergence of antibiotic resistant organisms (AROs) has been linked to the inappropriate use and overuse of antibiotics. Antimicrobial stewardship is recognized as a critical patient safety and quality imperative to combat the emergence of antimicrobial resistance (AMR) and preserve the activity of existing agents. The primary goal of antimicrobial stewardship is to optimize clinical outcomes while minimizing unintended consequences of antimicrobial use, including toxicity and the emergence of resistance

INTRODUCTION

Poonam is an MD in medical microbiology with extensive academic experience as an Assistant Professor in Lady Hardinge Medical College. Her academic research was primarily focussed on mycology, hospital infection control (HIC), serology, antibiotic resistance, antibiotic stewardship and accreditation of laboratories according to ISO standards. She managed multiple projects and students during her tenure as an Assistant Professor. Her interest and enthusiasm in management made her manage MBBS batches and also lead the effort in establishing the new laboratory facility.

In her present role, she published multiple papers (in the areas

of HIV, mycology, hospital infection control, serology and bio-medical waste management) and delivered expert talks in multiple national and state level conferences.

Publication of speakers:

Lall, H. & Jais, M. & Gupta, Poonam. (2016). Sero-Prevalence of Dengue in Tertiary Care Hospital in Delhi. *International Journal of Current Microbiology and Applied Sciences*. 5. 439-445. 10.20546/ijcmas.2016.506.051.

Citation: Dr Poonam Gupta ; Implementation of Antimicrobial Stewardship makes a difference; *Clinical Microbiology* 2021; London, UK

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