IMPACT OF ANTIMICROBIAL STEWARDSHIP PROGRAMME ON CARBAPENEMS RESISTANCE AND CONSUMPTION IN A TERTIARY HOSPITAL: A BEFORE-AND-AFTER INTERVENTIONAL STUDY

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Objective
To assess the impact of Antimicrobial Stewardship Programme (ASP) on carbapenems resistance and consumption in a tertiary university hospital.

Methods
Quasi-experimental study

Pre-intervention period
March 2014

Intervention period
February 2014 - February 2016
ASP Intervention

Data recorded
- Impact of ASP on carbapenems consumption
- Impact of ASP on development of resistant strains

Study Results

TARGET STRAINS
Pseudomonas aeruginosa
Klebsiella pneumoniae
other Enterobacteria
Acinetobacter baumannii

Consumption (DDD/1000 Stays)

Meropenem
Pre-intervention: 90.53
Intervention: 24.96
p < 0.001

Imipenem
Pre-intervention: 24.56
Intervention: 2.34
p < 0.001

% of resistance

Klebsiella pneumoniae
Pre-intervention: 9.0
Intervention: 3.8
p = 0.009

Acinetobacter baumannii
Pre-intervention: 6.8
Intervention: 3.2
p < 0.001

Enterobacteriaceae
Pre-intervention: 18.4
Intervention: 13.0
p < 0.001

Pseudomonas aeruginosa
Pre-intervention: 38.8
Intervention: 15.3
p = 0.422

Statistically significant decrease

Conclusion
- Antimicrobial stewardship programme, aimed at optimising the prescription of antimicrobial drugs, has proven to be an effective and durable tool to combat increasing bacterial resistance
- At the same time, it has helped reduce the consumption of antimicrobials.

Acknowledgements