

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

Intervention period

March 2014

February 2014
ASP Intervention

February 2016

Data recorded

- Impact of ASP on carbapenems **consumption**



Defined daily dose (DDD)/1000 hospital stays

- Impact of ASP on development of **resistant strains**



Percentage of resistance
($n_{\text{resistant}} / N_{\text{isolates}} \times 100$)

TARGET STRAINS

Pseudomonas aeruginosa
Klebsiella pneumoniae
 other Enterobacteria
Acinetobacter baumannii

Patients Identified daily

FarmaTools® Software

SPSS®

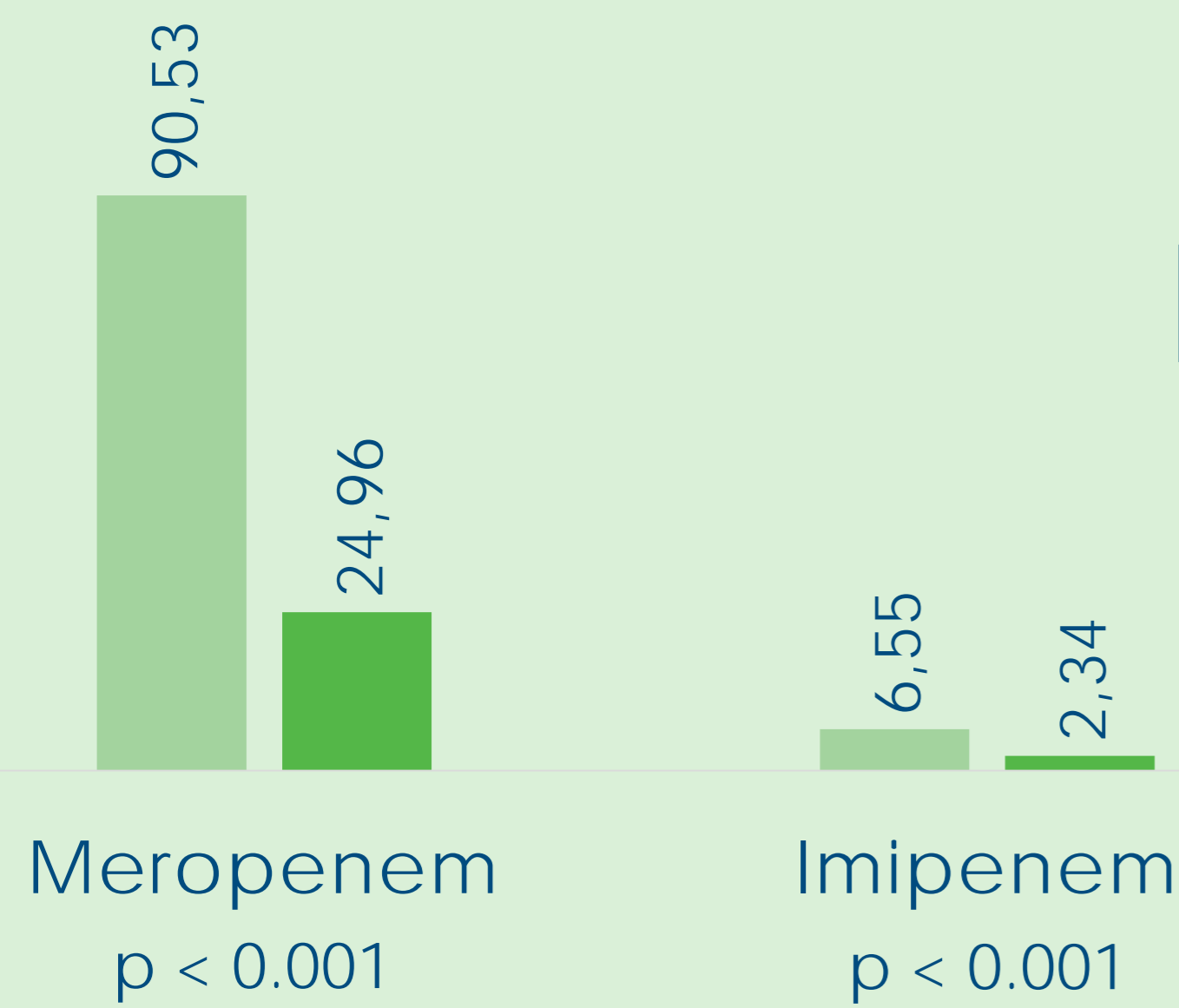
5% Significance level

Study Results

Results

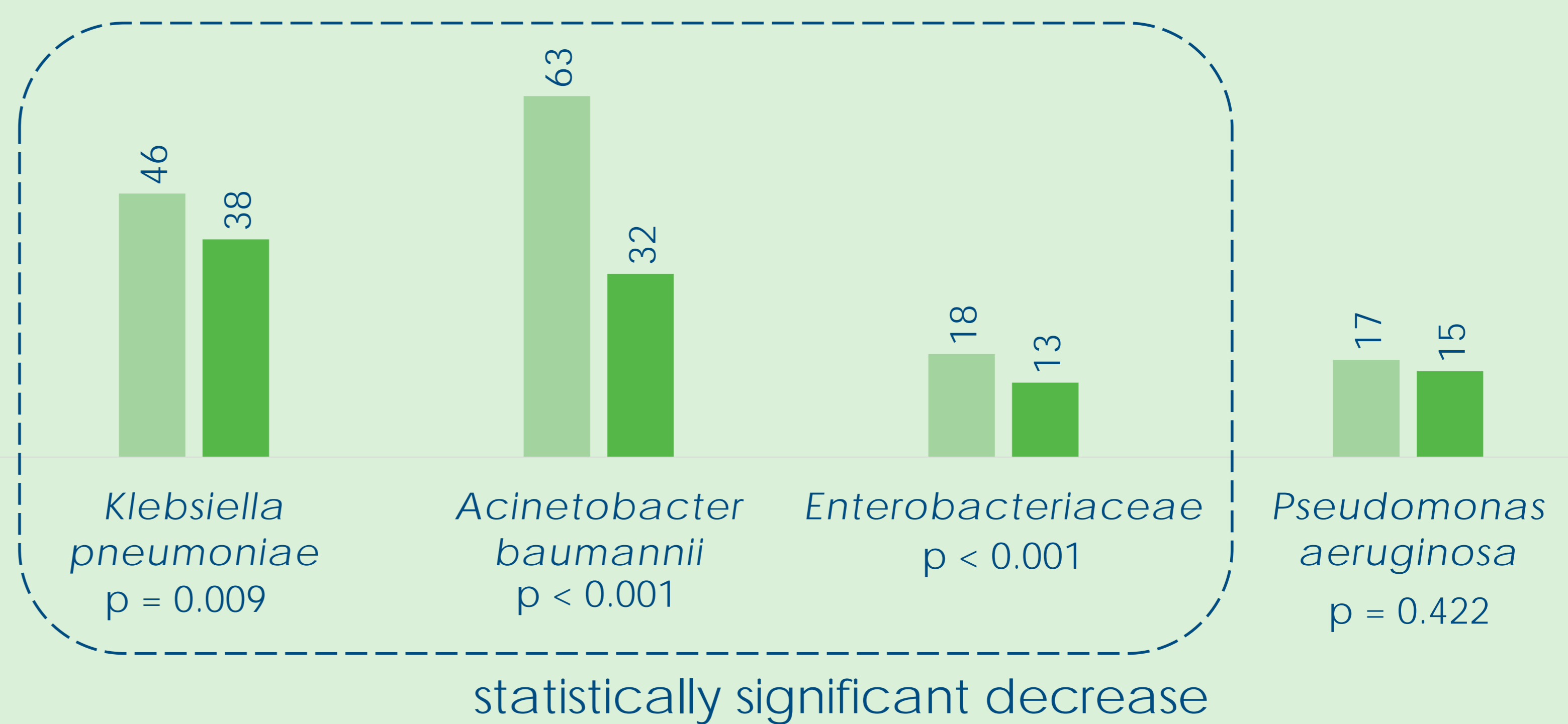
Consumption (DDD/1000 Stays)

■ Pre intervention ■ Intervention



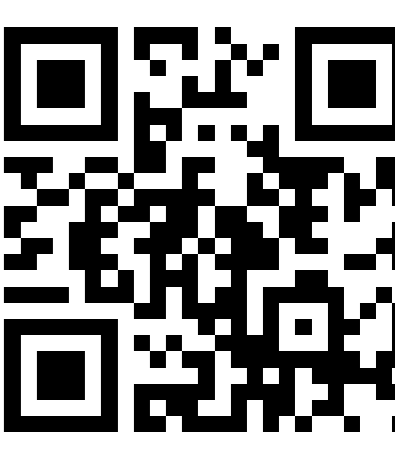
% of resistance

■ Pre-intervention ■ Intervention



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

del Arco A, Tortajada B et al. The impact of an antimicrobial stewardship programme on the use of antimicrobials and the evolution of drug resistance. *Eur J Clin Microbiol Infect Dis* 2015;34:247–51.