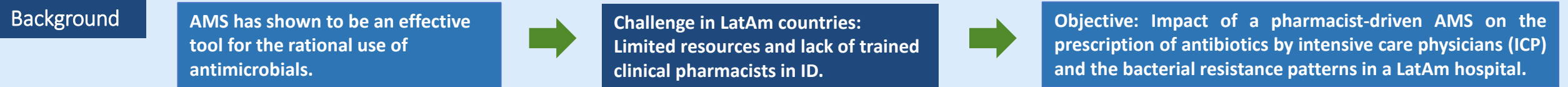


Impact of a Pharmacist-driven Antimicrobial Stewardship Program (AMS) on Prescribing Practices by Intensive Care Physicians in a Latin American Hospital



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Methods and Results

Hospital Clínica Bíblica (HCB)

333 patients
52% pre-AMS
48% post-AMS

Retrospective observational study

Comparison of optimal selection and consumption of antibiotics (DOTs/1000 ICP patient days) by ICU physicians and bacterial resistance patterns.

Pre-AMS (January to December 2014)
Post-AMS (January 2020 to March 2021)

Optimal antibiotic selection (empirical treatment + surgical prophylaxis)

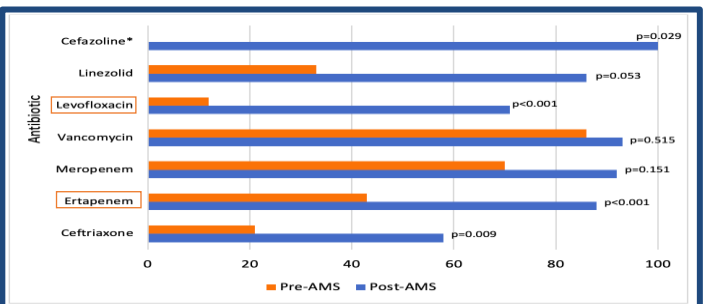
Period: 5 years

43,1% pre-AMS

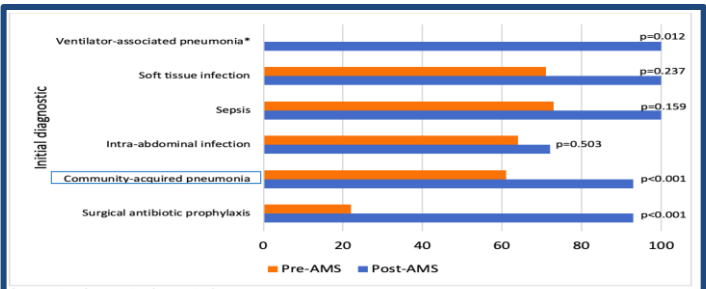
86,8% post-AMS

43,7% Absolute improvement in selection

Empiric treatment selection



*: 0 optimal cases in the period Pre-AMS
Figure 1. Comparison of the optimal prescription of empirical treatment and surgical prophylaxis according to the selected agent between the Pre-AMS and Post-AMS periods.



*: 0 optimal cases in the period Pre-AMS
Figure 2. Comparison of the optimal prescription of empirical treatment and surgical prophylaxis according to the initial diagnosis between the Pre-AMS and Post-AMS periods.

Antibiotic consumption

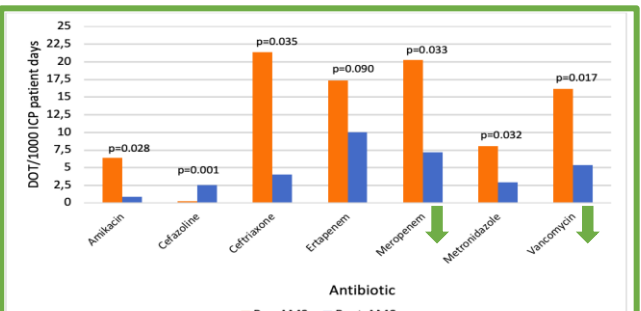


Figure 3. Comparison of the average consumption of antibiotics prescribed by intensive care physicians according to DOT/1000 ICP patient days at the Clínica Bíblica Hospital between the Pre-AMS and Post-AMS periods.

Reduction in the consumption of antimicrobials including meropenem and vancomycin

Resistance patterns

P. aeruginosa resistant to meropenem
p = 0,048
↓ 11%

ESBL in *E. coli*
p = 0,007
↓ 11%



AMS-HCB Tools

- Creation of clinical guidelines
- Group educational sessions
- Daily monitoring of prescriptions
- Auditing with individual feedback

Observer effect

Conclusion

The pharmacist-driven AMS showed a positive impact on antibiotic selection and consumption in ICU patients. In addition, strategies implemented through the AMS could have had a beneficial impact on antibiotic resistance.

