

# IMPLEMENTATION OF ANTIBIOTIC TREATMENT PROTOCOLS IN THE ICU: RESULTS AFTER A YEAR

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## BACKGROUND

In 2012, treatment protocols of the most common infections (pneumonia, urinary tract, catheter bacteremia and intraabdominal) were agreed and approved by the relevant hospital committees and implemented in the intensive care unit (ICU).

## OBJETIVE

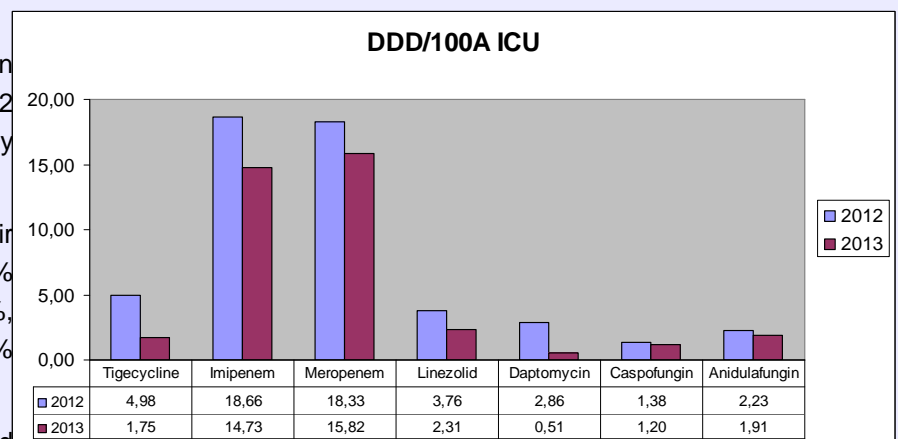
This study aims to assess the impact on mortality, economic and profile of antimicrobial prescribing in the ICU before and after implementing the protocols.

## METHOD

- Retrospective observational study compared 2012 with 2013.
- Average cost of drugs was used for the economic assessment; we did not include indirect costs associated, nor the possible variation between the number of stays.
- The number of defined daily dose per 100 admissions (DDD/100A) was used to assess the prescription profile. Total DDD/100A were calculated, including all antimicrobials of the J01, J02 and J03 groups, and antimicrobials considered particularly relevant: carbapenems (imipenem and meropenem), linezolid, daptomycin, tigecycline and echinocandins (caspofungin and anidulafungin).

## RESULTS

- The overall antimicrobial consumption was reduced by 17.3% (221.5 vs 183.2 DDD / 100A) and costs decreased by 23.9% (257.476€ vs 195.891€).
- All studied antimicrobials reduced their consumption in 2013: 17.4% carbapenems, linezolid 38.6%, daptomycin 82.2%, tigecycline 64.9% and echinocandins 13.8%
- ICU mortality was 12,8% in 2012 and 10,9% in 2013.



## CONCLUSIONS

- ✓ Antibiotic treatment protocols in the ICU has resulted in a significant antibiotics savings, not only in economic terms but also in number of doses, without increasing mortality. This effect may be relevant for the need to optimize their use in order to longer their shelf life and reduce the selection of resistant organisms. In turn, protocols might be useful to reduce the variability of prescriptions.