



EVOLUTION OF THE ANTIMICROBIAL STEWARDSHIP PROGRAMME QUALITY INDICATORS IN A THIRD-LEVEL HOSPITAL

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Background

Our antimicrobial stewardship programme was introduced in 2016 in the quality certification system of our Hospital and different indicators were designed to evaluate the quality of the process, establishing a limit of acceptability (LA) for each of them.

Purpose

The objective of this study is to determine the indicators from January 2016 to June 2017 and to analyze if they are within the established limit.

Material and methods

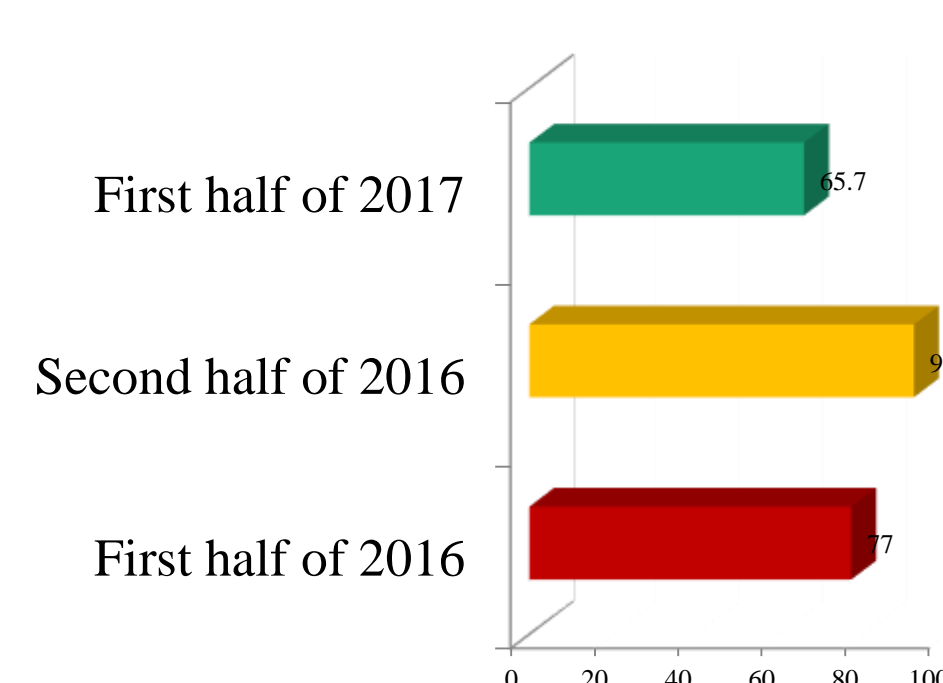
Indicators have been analysed semiannually except antimicrobial resistance that has been determined annually. Indicators and LA for each case are:

- Antimicrobial consumption: DDD/1000 stays (LA=100%).
- Toxicity: carbapenem neurotoxicity (LA=2%) and Clostridium difficile isolates (LA=5%).
- Clinical results: mortality in patients with bacteraemia, both global (LA=20%) and attributable to bacteraemia (LA=10%).
- Resistance to antimicrobials: variation from the previous year (LA=5%).

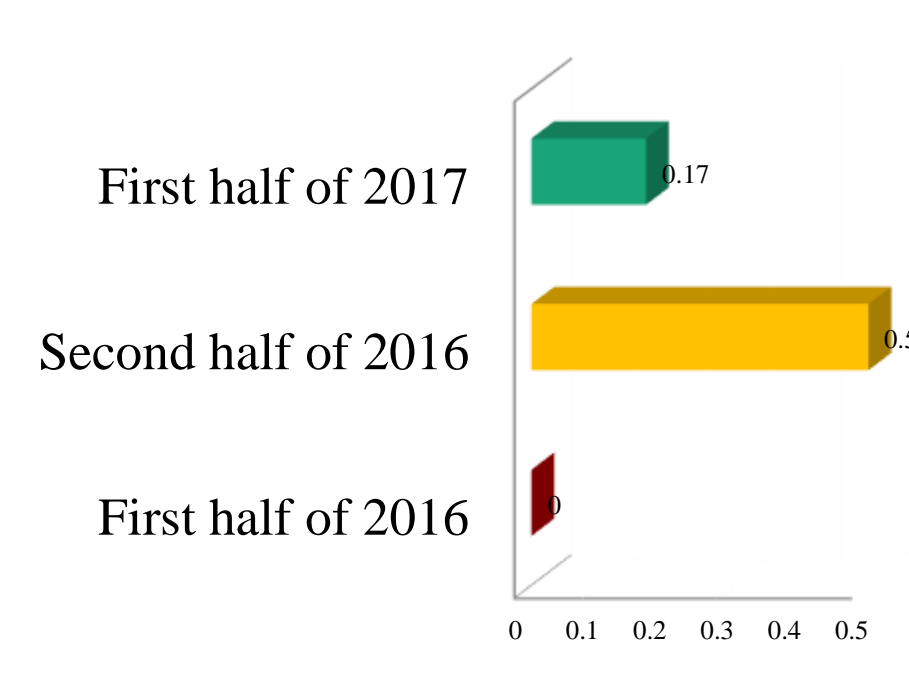
Results

Results obtained for each of the indicators in the first and second half of 2016 and the first half of 2017 were:

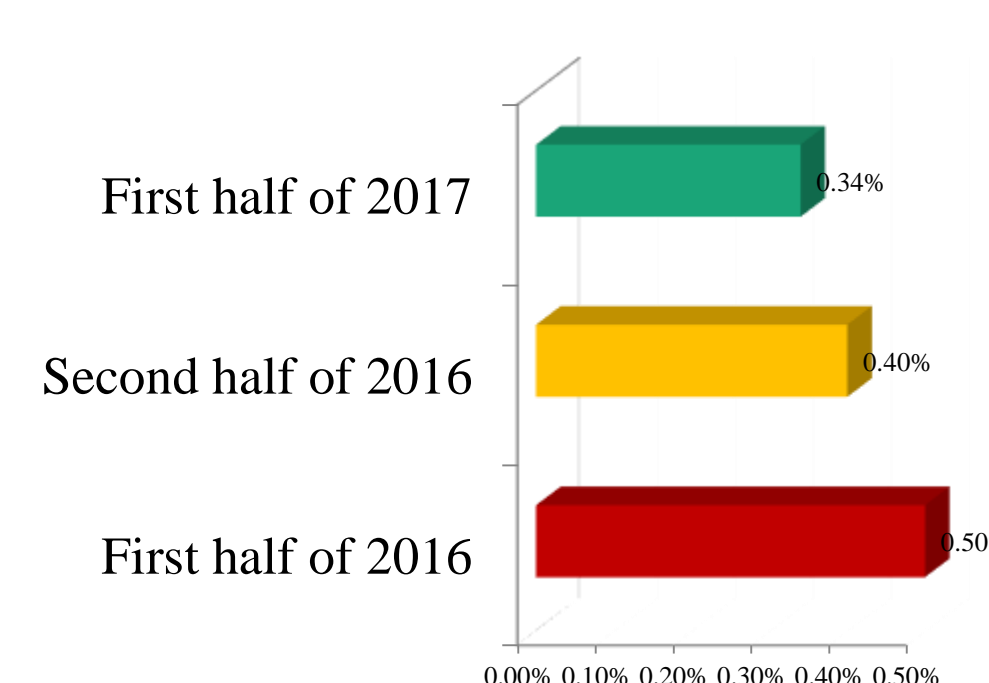
DDD/1000 stays



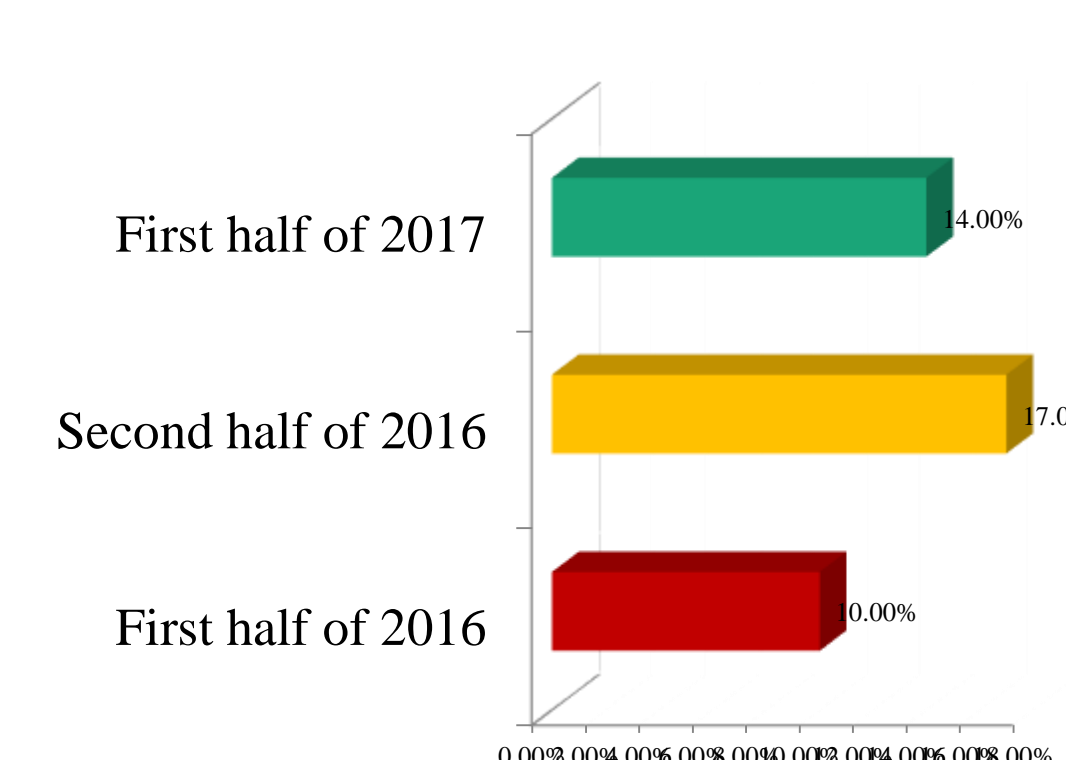
Neurotoxicity



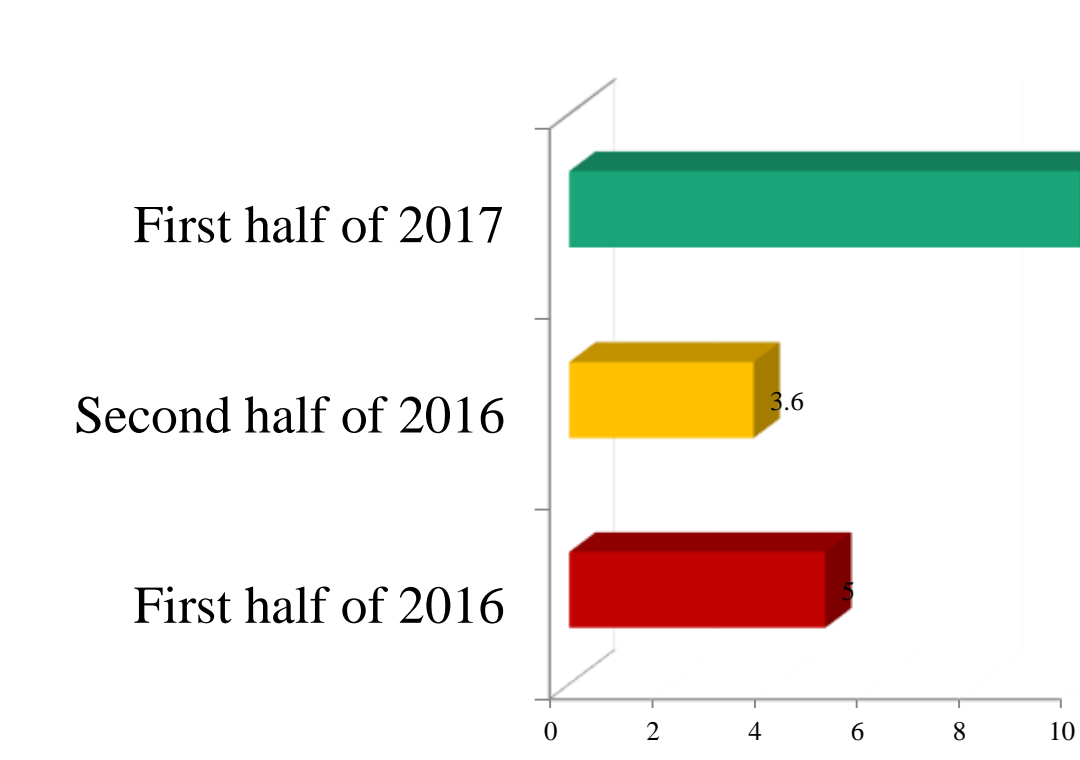
Clostridium difficile



Global mortality in patients with bacteremia



Mortality attributable to bacteremia



Resistances: a slight improvement in enterobacteria susceptibility is observed, while in *P.aeruginosa* there is an upward tendency of resistance, especially to carbapenems and ciprofloxacin. For Gram + bacteria, the sensitivity in *S.aureus* and *E.faecalis* increases, but also the resistance to ampicillin in *E.faecium*. The cumulative nosocomial incidence of *ESBL-E.coli* and *P.aeruginosa* resistant to carbapenemics has remained stable and has increased in *ESBL-K.pneumoniae*, carbapenemase producing enterobacteria and extremely resistant enterobacteria. The acceptability limits have been fulfilled in all cases except for *K.pneumoniae* and *P.aeruginosa* resistances.

Conclusion

It is essential to establish indicators to evaluate the quality of the processes to analyse their evolution in detecting problems and design improvement strategies. Our revision shows that all parameters analysed are within the limit of acceptability except some resistance data for Gram - bacteria, mainly due to the appearance in our hospital of an outbreak of extremely resistant *K.pneumoniae* and the appearance of carbapenemases. The impact on the resistances is expected to be obtained later.