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Background and importance

The introduction of the Unit Dose (DU) as a drug dispensing system produces a multiplicity of advantages ranging from prescribing to administering therapies.

Aim and objectives

The purpose of this study is to evaluate, through the computerized prescription, the prescriptive appropriateness of antibiotic therapy and the economic impact of a targeted therapy after an antibiogram compared to an empirical therapy.

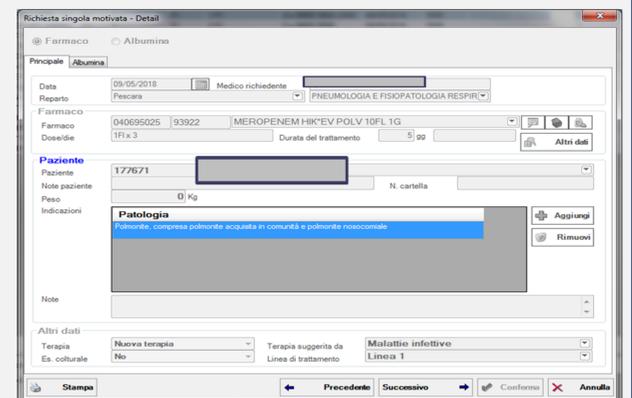
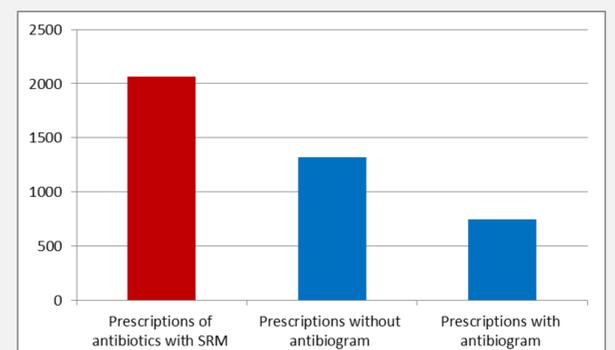


Material and methods

The analysis was carried out by extrapolating, from the prescription software and administration in use, the antibiotic prescriptions subjected to a single request motivated (SRM) from 01 January 2019 to 31 December 2019. Through the Modulab software, a clinical information management system, prescriptions with antibiograms have been verified and divided into appropriate and inappropriate.

Prescriptions initiated as empirical therapies are defined as appropriate both if the results of the antibiogram confirmed the therapy already started both if the prescriptions changed following the antibiogram. The therapies were considered inappropriate if antibiogram results were different from antibiotics used as empirical therapy (Resistant / Intermediate) or not tested them.

Prescriptions were grouped for empirically prescribed antibiotic and for sensitive antibiotic (as a result of the antibiogram), considering a median duration of therapy. The maximum daily dosage from the technical data sheet was considered for the calculation of the cost of the therapy. Only inappropriate prescriptions were considered in the pharmacoeconomic evaluation.

Results

In the observed period, total prescriptions of antibiotics with SRM were 2067 of which 1322 (64%) without antibiogram and 745 (36%) with antibiogram. The latter were divided into appropriate (63%) and inappropriate (37%). The pharmacoeconomic analysis shows a cost of non-appropriate therapy of 53.950 €, with a possible saving of around 49.274 €, if the same had been transferred to the sensitive antibiotic resulting from the antibiogram.

Conclusion and relevance

We hope, in the future, to directly consult the antibiogram from the computerized prescription, in order to highlight extemporaneously the limitations of long-term empirical therapies both for prescriptive appropriateness and for money saving.

