



# IS IT POSSIBLE TO RATIONALISE THE ANTIBIOTIC USE AMONG HOSPITALISED PATIENTS BY CLINICAL PHARMACISTS' ACTIVITY?



ATC code: J01 - Antibacterials for systemic use

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## BACKGROUND AND IMPORTANCE

Many hospitalised patients require antibiotic therapy as a result of either community acquired or nosocomial infections. The consequences of inappropriate antibiotic use carries the risk of undesirable side effects and facilitates the selection of resistant bacteria. Therefore, it is important to prioritise targeted therapy and to encourage switch therapy.

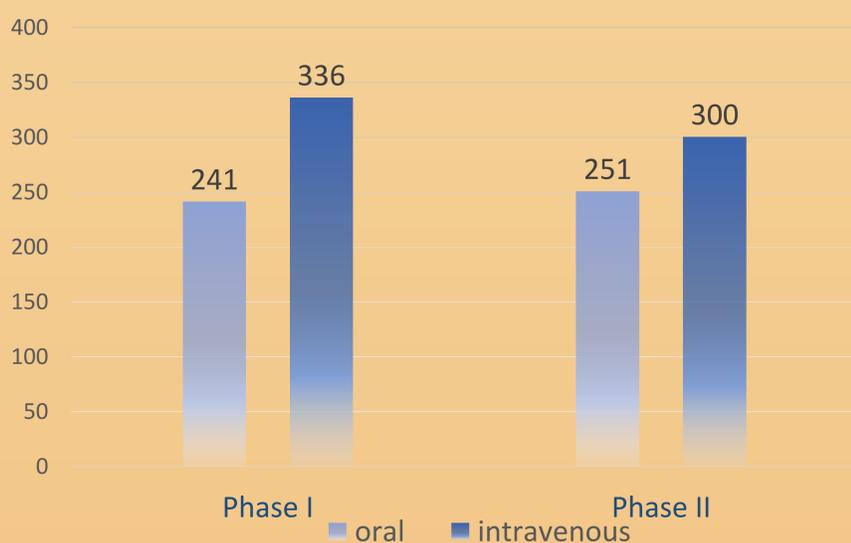
## MATERIAL AND METHODS

Our prospective study took place in two 3 month period in 2018–2019, based on patient medical records. The medications of 50–50 randomised patients, of all patients receiving antibiotic therapy were analysed. In the first phase of the study, the use of antibiotics was analysed without counselling of a pharmacist. In the second phase, all observations regarding therapy were reported to the responsible physician. We compared the periods based on specific indicators, such as therapy choice (empirical or aimed), duration of antibiotic therapy and costs.

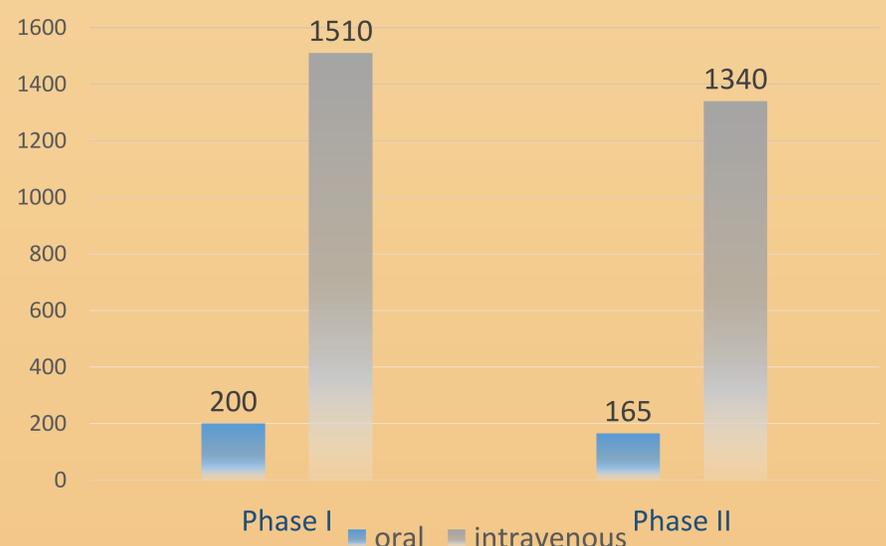
## RESULTS

Empirical therapy was the dominant therapy in both phases (71% vs 74%). The most frequently prescribed antibiotics were ceftriaxone, piperacillin/tazobactam, metronidazole and clarithromycin. Duration of intravenous treatment was reduced by 11% in the second phase, while oral therapy showed a small increase as a result of the promotion of switch therapy. There was also a decrease in the total number of treatment days, and consequently antibiotic treatment costs were reduced by 12%. In the second phase, we had suggestions for 38% of patients regarding modification of therapy. This represented 24 interventions of which 19 were fully or partially accepted. The rejections were explained by special instructions from the infectologist.

TREATMENT DAYS



COST OF TREATMENT (€)



	Phase I	Phase II
Patient number (after randomisation)	50	50
Therapy duration (iv)	336	300
Therapy duration (oral)	241	251
Therapy duration (total)	577	551
Therapy costs (iv)	1510	1340
Therapy costs (oral)	200	165
Therapy costs (total)	1710	1505

4,5 %  
decrease in  
total duration

12 %  
decrease in  
total costs

INTERVENTIONS	24
Accepted	10
Partially Accepted	9
Rejected	5

## CONCLUSION AND RELEVANCE

As a result of monitoring, the appropriateness of antibiotic use increased. This study also confirms that the presence and counselling of a ward pharmacist could be helpful regarding the rationalisation of drug therapy.

REFERENCES AND/OR ACKNOWLEDGEMENTS No conflict of interest.

