

CLINICAL AND ECONOMIC IMPACT OF PHARMACIST ANTIMICROBIAL INTERVENTIONS IN A SMALL HOSPITAL

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Background and Importance

Several studies have indicated that pharmacists can play a key role in promoting the optimal use of antimicrobials and monitoring the prescriptions

Aim and **Objectives**

To asess the potential clinical and economic impact of pharmacist interventions (PIs) to improve antibiotic prescribing practices for hospital inpatients

Material and Methods Prospective study: 1 January 2019 – 31 December 2020

< 200 Beds Public Hospital

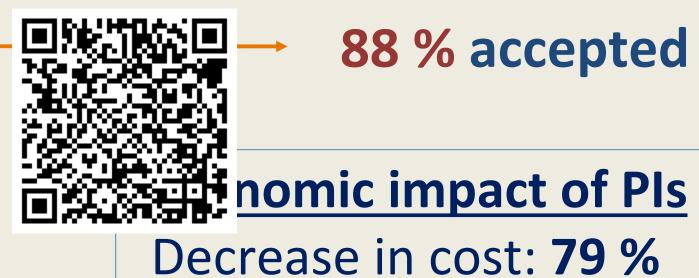
All inpatients who received at least 24 hours of antimicrobial therapy were included Any discharged patient who was readmitted was considered as a new patient

The pharmacist performed and recorded PIs in the electronic prescribing, focused on highly restricted drugs and prescriptions for >10 days When necessary, the pharmacist interacted directly with the prescriber in person or by phone

To assess the potential impact of PIs, we utilised the CLEO tool¹



Clinical impact of PIs Avoids or fatality PIs: 4 %



No adverse events were

Major: **42 %** Moderate: 38 % Minor or null significance: **17**% No change in cost: **3**% Increase in cost: 18 % **Total saving: 164.953 €**

noted after implementing a PI in any patient

Table 1. Pharmacist interventions by intervention type and physician acceptance rate

Results

| Pharmacist interventions (n = 847) | n (%) | Acceptance (%) |
|--|----------|----------------|
| Discontinuation due to excessive duration | 198 (24) | 172 (87) |
| Therapy de-escalation | 130 (15) | 105 (81) |
| Dose adjustment or interval modification | 128 (15) | 128 (100) |
| Deleting an antibiotic of the complete treatment due to use of redundant antimicrobial therapy | 103 (12) | 97 (94) |
| Switching from intravenous to oral administration | 93 (11) | 75 (81) |
| Changing the empirical therapy because of inappropriateness | 85 (10) | 72 (85) |

| | Therapeutic escalation | 58 (7) | 55 (95) | |
|---------------------------|--|--------|---------|--|
| | Discontinuation due to a lack of indication to proceed | 44 (5) | 37 (84) | |
| | Others | 8 (1) | 7 (88) | |
| | | | | |
| Conclusions and relevance | PIs carried out to improve the use of antimicrobials positively impact on clinical and economic outcomes, with a high acceptance by physicians | | | |

¹Vo HT, et al.; Working Group "Valorization of Pharmacist Interventions" of the French Society of Clinical Pharmacy. CLEO: a multidimensional tool to assess clinical, economic and organisational impacts of pharmacists' interventions. Eur J Hosp Pharm. 2021;28(4):193-200

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