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

Cantudo Cuenca MR, Arenas Jiménez M, Archilla Amat MI, Montero Vílchez C
Farmacia. Hospital Virgen de las Nieves, Granada

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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 tool[1]

Results

847 antimicrobial PIs (696 patients) → **88 % accepted**

Clinical impact of PIs
Avoids or fatality PIs: **4 %**
Major: **42 %**
Moderate: **38 %**
Minor or null significance: **17 %**

nomic impact of PIs
Decrease in cost: **79 %**
No change in cost: **3 %**
Increase in cost: **18 %**
Total saving: 164.953 €

No adverse events were noted after implementing a PI in any patient

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

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

[1]Vo 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

mariar.cantudo.sspa@juntadeandalucia.es