4CPS-197

ANALYSIS OF PHARMACEUTICAL INTERVENTIONS WITH POTENTIAL TO AVOID DRUG ADVERSE EVENTS IN HOSPITALISED PATIENTS, AND CALCULATION OF AVOIDED COST

A. Gomez Sanchez, C. López Gómez, I. Muñoz Gomez-Millan, M. Moreno Santamaria.
Hospital Costa del Sol, Pharmacy, Marbella, Spain

BACKGROUND

To demonstrate the added value that pharmacists bring, it is essential that all activities undertaken to improve therapy in the hospital are recorded and quantified.

PURPOSE

To analyse the pharmaceutical **interventions** with **potential to avoid adverse drug events** (ADE) in hospitalised patients and to calculate the cost avoided with them.

MATERIAL AND METHODS

➢ **Retrospective** study of **pharmaceutical interventions** carried out over 3 months.

➢ **Avoided cost** was calculated from multiplying 1.7 days (average stay increase due to an **ADE** according to the bibliography), cost of the stay and probability of ADE occurrence if it had not been intervened.

REGISTRATION OF PHARMACEUTICAL INTERVENTIONS

- In the pharmacy software.
- Then, they were exported to Excel, where variables were registered.

ANALYSIS OF PHARMACEUTICAL INTERVENTIONS

COUNTING OF POTENCIAL AVOIDED COST (PAC)

PAC= 1,7 days x cost of the stay x probability of ADE

RESULTS

➢ Over a period of 3 months, **10 pharmacists** performed **1238 interventions**, in **958 hospitalised patients** in charge of **15 clinical departments** (See *Chart 1)*. **Reasons** for intervention are described in *Table 1.*

Table 1. REASONS FOR INTERVENTION

Treatment reconciliation	41.4%
Therapeutic exchange	16.5%
Narrow therapeutic window/high-risk drug	9.6%
Moderate adverse reaction	6.9%
Renal impairment adjustment	4%
Relevant interaction	3.5%
2 to 4 times upper/lower dosage	2.7%
Other dosage adjustments	2.7%
Therapeutic doubling	2.2%
Other optimisations	1.5%
Severe adverse reaction	1.5%
Clarification/completing medical order	1.3%
Adequacy of antibiotic treatment	1.3 %
Providing relevant information	1.2%
Low-risk drug lacking/remaining	1.1%
Pharmaceutical form/administration route with toxicity risk or therapeutic failure	0.8%
Allergy	0.6%
Sequential therapy	0.6%
4 to 10 times upper/lower dose	0.2%
Mild adverse reaction	0.2%
Asking for blood test	0.2%

Chart 1. INTERVENTIONS IN DEPARTMENTS

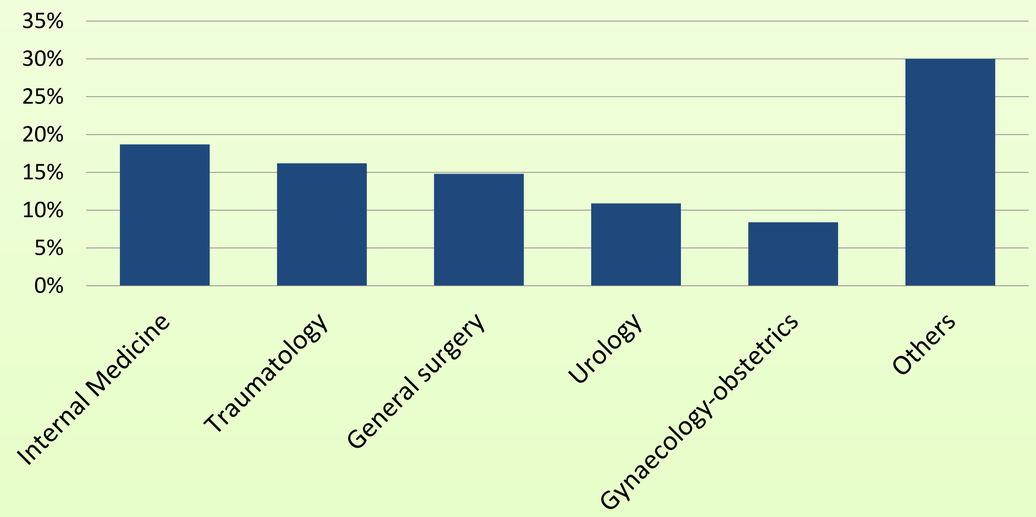
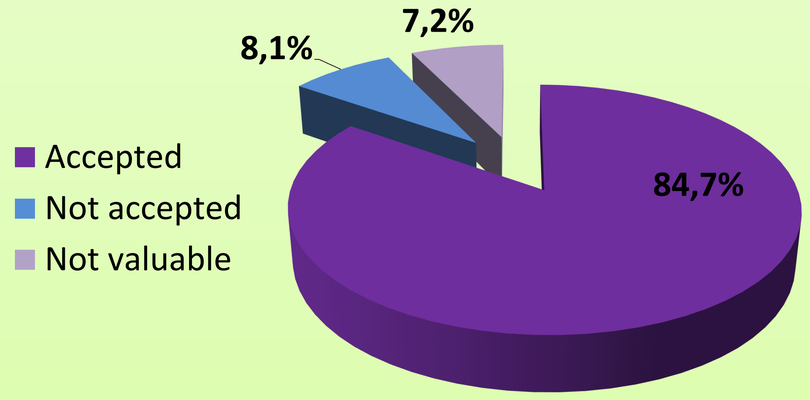


Chart 2. ACCEPTANCE OF INTERVENTIONS



➢ Accepted pharmaceutical interventions were estimated to have **avoided a cost of € 169.816**, by preventing prolongation of the hospital stay due to ADE.

CONCLUSION

✓ Registration of pharmaceutical interventions is **essential for analysing and quantifying the role of the pharmacist** as part of the care team.

✓ The pharmacist is involved in **optimising the pharmacotherapy of hospitalised patients** in all clinical departments, contributing to the **prevention of ADE**, which means an increase in patient safety, as well as **cost savings for the sanitary system**.