

5PSQ-127 **MEDICATION-RELATED FALLS IN A NURSING HOME: IDENTIFICATION AND HOSPITAL PHARMACY INTERVENTIONS**

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Background and Importance Medication use is a modifiable risk factor and has a high prevalence in older people, where polypharmacy is common. For this reason, medication review is one of the key components of multifactorial fall prevention interventions.

Aim and Objectives The objective of this study is to determine if falls in a nursing home are related to pharmacological treatment as well as to evaluate if a pharmacist can improve treatment through pharmacological recommendations.

Material and Methods Study design: non-comparative intervention study. Inclusion criteria: patients in whom falls were recorded in a nursing home with 201 residents between 22/05/2023–03/09/2023. A record of incidents, falls and injuries was prepared and coordinated from the Nursing Unit in which the following data were collected: demographic data of the resident, type of fall, description of the fall, condition of the resident after the fall, comorbidities and usual medication. The treatment of all patients in whom falls were recorded was reviewed by the pharmacist, assessing whether they were caused by drugs with a high risk of causing falls. Pharmacological recommendations were made by the hospital pharmacist aimed at preventing falls.

Results During the study period 40 falls were recorded, corresponding to 25 patients, 48% were men with a median age of 84 years (72.5–95.5). A total of 67.5% were identified as related to drug treatment. The hospital pharmacist carried out 27 pharmacological interventions that included: gradually reducing the dose of sedative hypnotics until discontinuation (33.3%), optimisation of anti-hypertensive treatment (25.9%), prescribing capillary glycaemia controls, assessing the adjustment of basal insulin units (7.4%) and reducing the anticholinergic burden of treatment (7.4%).

Conclusion and Relevance Falls related to drug treatment are common in institutionalised patients and can be identified by the hospital pharmacist. Hospital pharmacists can also contribute to optimising patient treatment through pharmacological interventions, which were well accepted in our case.

The improvement measures that we intend to develop are the implementation of a fall notification protocol to the Pharmacy Service to identify those caused by pharmacological treatment and recommend changes in the medical team of the geriatric centres assigned to our Pharmacy Service (1,000 residents).

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest.

5PSQ-128 **COST-EFFECTIVENESS OF PHARMACEUTICAL PREOPERATIVE CONSULTATIONS: A FIVE-YEAR ANALYSIS**

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Background and Importance 2.5% of operations are cancelled because of preoperative medication errors. Pharmaceutical preoperative consultations are an effective tool in detection and prevention of these errors, but cost-effectiveness of their implementation has not been evaluated.

Aim and Objectives To determine the cost-effectiveness of the implementation of a pharmaceutical preoperative consultation to review the correct medication management of patients undergoing surgery.

Material and Methods A retrospective, single-center study was conducted to analyze all medication errors prevented by a pharmacist during a preoperative care consultation since their implementation in 2016 until 12/2020. The pharmacist reconciled medication and reviewed their appropriate preoperative management. Recommendations were made based on an institutional protocol.

To assess the economic impact of prevented medication errors, a team of pharmacists and anesthesiologists assigned each error a probability of resulting in a patient-impacting adverse event (p). Following Nebit et al methodology, values of 0, 0.01, 0.1, 0.4, or 0.6 were assigned to each error, with 0.6 being the maximum probability as a conservative measure.

A cost of €6,924 per adverse event was established based on data from the Spanish Ministry of Health in 2005 and adjusted for the consumer price index in 2020. The cost of each prevented error was calculated as €6,924 x p. The annual cost of a hospital pharmacy specialist in Spain was €45,494 in 2020.

A sensitivity analysis was conducted, recalculating the results if the average cost of an adverse event was 20% higher (€8,309) or lower (€5,539).

Results The consultation was attended by 3,105 patients (mean age 67.0 years) and 1,179 medication errors were prevented. Six were classified as p=0, 224 as p=0.01, 346 as p=0.1, 497 as p=0.4, and 106 as p=0.6, corresponding to 299.2 prevented adverse events.

In monetary terms, the savings associated with these prevented adverse events were €2,076,785 over 5 years, while the cost of employing a pharmacist was €227,470. The net savings were €1,849,315, and the euro saved/invested ratio was 9.1/1. Applying the sensitivity analysis, this ratio would range from 7.3/1 to 10.9/1.

Conclusion and Relevance The implementation of a Pharmaceutical Preoperative Care consultation was cost-effective for the healthcare system, with a cost savings ranging from 7.3 and 10.9 euros per euro invested.

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