

## **Multiprofessional medical review among frail elderly people living in nursing homes: What is the impact on appropriateness and outcomes?**

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**Background:** Polypharmacy and inappropriate prescribing is common in elderly patients and is associated with medication errors, adverse drug reactions and length of hospital stay. Interventions aimed to optimize prescribing appropriateness have been successfully applied in hospital settings. However, there is a paucity of data about the effect of a multiprofessional approach on clinical outcomes in people living in nursing homes.

**Objectives:** The aim of this study was: to evaluate prescribing appropriateness of therapies in elderly patients residing in nursing homes; to evaluate the impact of this intervention on healthcare outcomes such as admission to Emergency Department (ED) and hospitalization; and to investigate critical areas where further intervention would be required

**Methods:** We conducted a prospective observational

study in 351 frail subjects aged >65 years, who lived in 7 nursing homes between April 2014 and September 2016. Clinical pharmacists reviewed each drug regimen and suggested written modifications on drug use to physicians and nurses. Criteria for optimizing therapies were the START-STOP Criteria, the adherence to the drug formulary or to product information. Drug-drug interactions were also evaluated. Patient medical records were accessed through the regional electronic healthcare database to collect clinical outcomes at six-month.

**Preliminary Results:** A significant decrease in the prevalence of inappropriate prescriptions (43.9% to 20.9%,  $p<0.001$ ), drug interactions (13.1 to 7.8%,  $p<0.001$ ) and in the total number of drugs (3009 to 2757,  $p=0.008$ ) was observed. Drug withdrawal rate was 17% of total prescriptions. No statistical reduction in hospitalization or ED admission was shown.

**Conclusions:** A multiprofessional approach to medical review process was successful for decreasing drug inappropriateness, drug interactions and total number of prescribed medications. At least three critical areas in which intervention and training was required were identified: polypharmacy, inadequate severe interactions risk perception and crush drug administration.

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