Evaluating Prescriptive Appropriateness and Pharmacological Interaction in Elderly Patients Undergoing Polytherapy in Nursing Homes.

*Asl3Genovese-P.O. Villa Scassi

Background
The health system faces economic sustainability challenges due to the aging of the population. In fact, the elderly need more health care as a result of increasing chronic degenerative diseases. This calls for polytherapy, resulting in an inappropriate use of drugs and an increased risk of adverse reactions.

An important step toward improving the elderly patients' quality of life and reducing the costs of the National Health Service is to implement strategies for an appropriate use of drugs.

Purpose
The objective was to evaluate prescriptive appropriateness and the possible pharmacological interaction in elderly patients undergoing a polytherapy regime, with the aim of improving the patient's quality of life.

Material and Methods
During the first phase, the pharmacist visited the nursing homes to collect the updated therapies and diagnoses of patients. The term polytherapy can be used when a patient takes more than 5 drugs daily. Later each individual therapy was analyzed using the following criteria: The Micromedex Database to evaluate possible drug interactions; the Beers Criteria and the Stopp Criteria to evaluate the appropriateness of the prescription. Each nursing home received a report of the processed data, and doctors provided feedback in the light of the results obtained.

Results
274 patients were analyzed, 81% females and 19% males. The average age was 84. Patients were undergoing polytherapy in 83% of the cases. Using the Micromedex Database three main types of drug-drug interactions became evident: an increased risk of bleeding (37%), an increased risk of QT prolongation (22%), an increased risk of serotonin syndrome (10%). The main pharmaceutical categories that were being misused were: Antipsychotics (55%) and Benzodiazepines (19%) from the total number of drugs detected using the Beers criteria; Proton pump inhibitors (48%) and Antipsychotics (29%) from the total number of drugs detected using the Stopp criteria.

Conclusion
A high percentage of inappropriate prescriptions and potential pharmacological interactions emerged from the therapies analyzed. This shows how important the active participation of the Pharmacist is to ensure a safer use of medicines; this necessitates the specific skills of the one prescribing and the one dispensing; a multidisciplinary approach enables an integration of these skills resulting in an improvement in the patients' quality of life.