

# DRUG DOSAGE ERRORS IN THE TREATMENT OF ALZHEIMER'S DISEASE

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## BACKGROUND

Drug dosage errors may be found during pharmaceutical validation in the treatment of Alzheimer's disease.

An appropriate maintenance dosage must be determined to optimize drug therapy.

## PURPOSE

1. To determine the **incidence of drug dosage errors** in the treatment of **Alzheimer's disease** in patients admitted to a tertiary hospital.
2. To analyze **causes for drug dosage errors** and to evaluate the rate of acceptance by the physician of the **pharmaceutical intervention (PI)** recommending a correct dosage.

## Materials and Methods



A three-month prospective, interventional, analytic study (July to September) was performed.

**Inclusion criteria:** All inpatients taking any of the drugs for the treatment of Alzheimer's disease were included.



Patients were selected using the computer prescription order entry (CPOE). The pharmacist, advised by a geriatrician, reviewed the dosage of these drugs on a daily basis.

In order to verify the correct dosage and to identify the possible cause of the error, the pharmacist reviewed the clinical history for every selected patient.



Whenever a drug dosage error was identified, a PI took place, with the pharmacist sending a dosage recommendation to the physician through the CPOE.



Anthropometric data (age, gender) as well as prescribed drugs and drug dosage, were collected. The incorrect doses, the causes for the dosage error and the degree of acceptance of the PI were counted.

## RESULTS

### Pharmaceutical Intervention (PI)

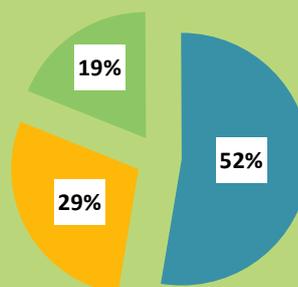
PI was performed in 85.7% of prescriptions with dosage errors.

16.6% of PIs were accepted.

All of the accepted PIs were concerned with reconciliation errors.

- **64 patients** were included. Average age: 83.4 years old, 64% women.
- We reviewed **74 prescriptions** with the following drugs: **rivastigmine 37.9%(28), donepezil 25.6%(19), galantamine 9.5%(7) and memantine 27%(20)**.
- There was a **dosage error in 28.4% of prescriptions**, all of them due to lower doses than recommended.

### The causes of errors were:



- wrong dosage prior to admission
- incorrect reconciliation of home treatment
- incorrect record in the CPOE by the physician.

## CONCLUSIONS

More than one quarter of the reviewed prescriptions were wrong. The low acceptance of PI may be due to the physician's belief that a long-term treatment does not affect the clinical course of the acute process that caused the admission to the hospital.