From Hospital to Domiciliary Hospitalization: a Pharmacist Intervention

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Background

In November 2015 a new model of hospitalization has been created in Portugal, domiciliary hospitalization unit (DHU). DHU is an alternative to the conventional hospitalization which provides hospital care to the acute patient, already existing in some other countries.[1] Care is provided at the patient's own home by a multidisciplinary team of physicians, nurses and pharmacists.
This model emerges as a possible solution to the A&E excessive resource witch there is in Portugal.

Objectives

- To evaluate the existence of pharmacotherapeutic errors during patient transition across the health care system;
- To integrate a pharmacist into this multidisciplinary team to detect and solve those errors can through medication reconciliation;

Methods

Study design

Observational retrospective design	Intervention prospective design
Explore medication discrepancies prior to DHU	To readily act upon discrepancies found during DHU

Sample - The data here presented are from patients hospitalized between August and September of 2016.

Patients without outpatient medication

33 patients → **5 Excluded** → 28 patients → **8 Excluded** → **20 patients included**

Patients who received the pharmaceutical visit during the first day of DHU hospitalization

Data sources and Pharmacist Intervention

Hospital Admission - Before Admission in DHU

Hospital Pharmacy Database | Medical and Therapeutic History

↓ **Medication review and reconciliation**

During DHU

Overt observation at the patient's home	Effectiveness: Medication profile and laboratory results	Counselling: Medication storage and Adherence	Safety: Drug expiry date

↓ **Medication review**

Discharge

Medication Profile | Transfer to primary health care

Statistical analysis - Statistical Package for the Social Sciences (SPSS) v.24,0. Descriptive and bivariate analysis have been used (Spearman correlation coefficient to explore associations between days of hospitalization and number of medication discrepancies). The confidence level was set at 5%.

Results

30% Females | 70% Males | 85% ≥ 85 years old

11,15 Average days hospitalized in DHU (SD=6,56)

95% Arterial Hypertension | 55% Diabetes

20% Stroke | 30% Renal Insufficiency

55% Dyslipidemia | 35% Heart failure

The main reasons for **hospitalization in DHU** were urinary tract infections (44%), respiratory diseases (20%), acute kidney injury (12%) and cerebrovascular diseases (12%).

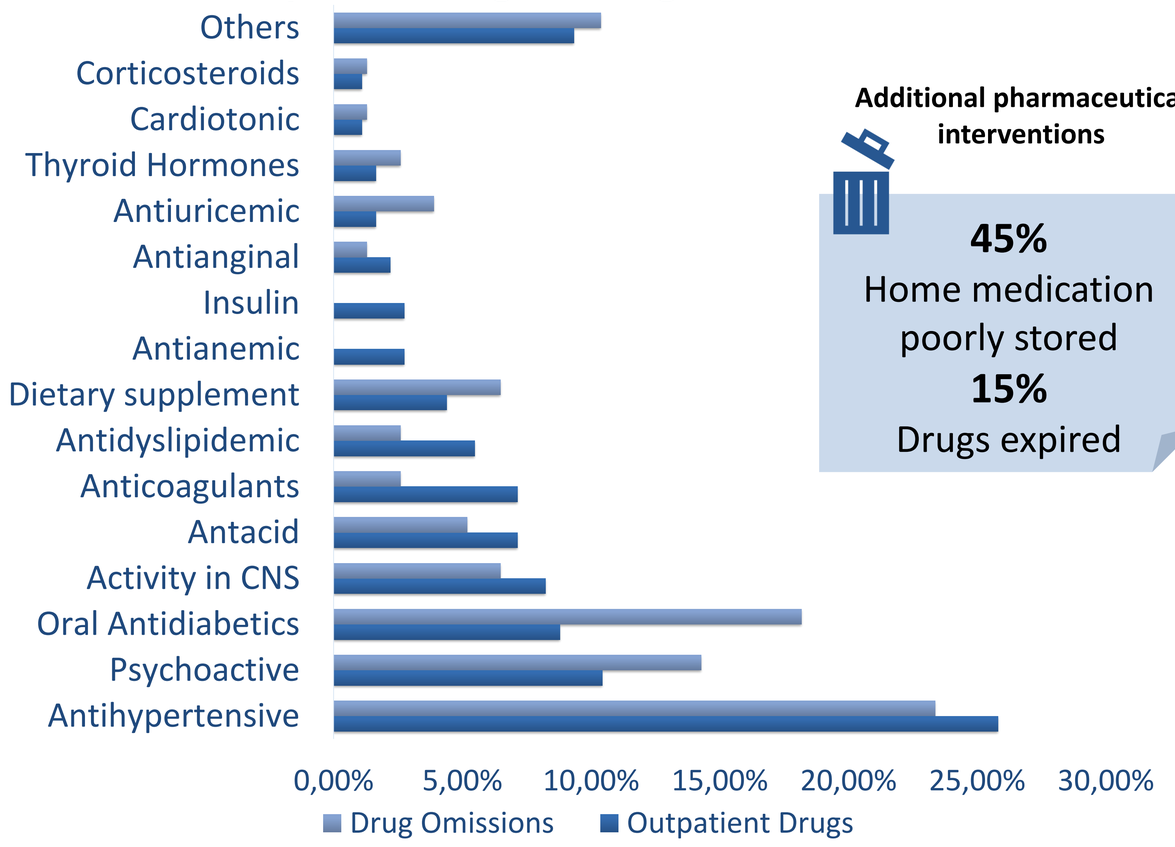
Therapeutic reconciliation was performed between the outpatient medications and the previous services, which were: A&E (50%), conventional hospitalization(45%) and DHU (16%).

9,2 ±3,9 Outpatient medication per patient

3,8 ±1,97 Medication omissions per patient

1,05 ±1,27 Wrong taking indications per patient

Outpatient drugs vs Drug Omissions



Additional pharmaceutical interventions

45% Home medication poorly stored

15% Drugs expired

Figure 1: Comparasion between outpatient drugs and drug omissions (between outpatient medication and the hospital prescription in the mentioned above services).

The number of omissions was unrelated with the days of hospitalization (Spearman's r = -0,134; p = 0,572)

Medication Prescribed in DHU

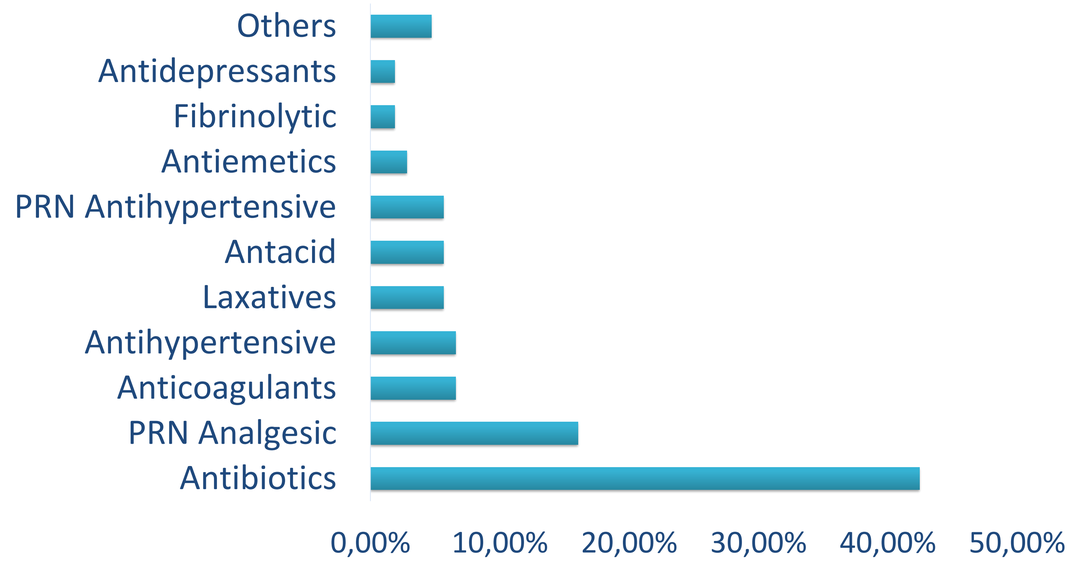


Figure 2: Medication prescribed during hospitalization in DHU in addition to outpatient medication.

Discussion and Conclusion

Drug omissions discovered by therapeutic reconciliation were reintegrated into the DHU prescription, after medication review. Patient's safety was the main focus of the pharmaceutical intervention, though which all medications omissions and incorrect dose detected were corrected. Pharmaceutical interventions also emphasized storage of medication, identification and collection of expired drugs, and further enhanced adherence to prescribed treatment. This poster presents first results of an ongoing project.

References

1. Chevreul K., Com-Ruelle L., Midy F., Paris V. The development of hospital care at home: an investigation of Australian, British and Canadian experiences. IRDES 2004; 91