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Potentially Inappropriate Prescribing in Domiciliary Hospitalization: Medication Review using GheOP³S tool

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INTRODUCTION

The Portuguese Health Care System (PHCS), although considered efficient, can improve in hospital care provision.[1]

Approximately 70 A&E admissions/100 inhabitants (between 2001 and 2011)[3]

In November 2015 a new model of hospitalization has been created in Portugal, domiciliary hospitalization unit (DHU) by Hospital Garcia de Orta.[2]

Shifting care to the community. Care is provided at the patient's own home by a multidisciplinary team of physicians, nurses and pharmacists.[4]

1- European Observatory of Health Systems (2017); 2 - Brito, A.M, et al. (2017); 3- Berchet, C., (2015);
4 - Chevreul K., et al. (2004); 5 -Christensen, M., et al. (2016); 6 -Krska J, et al. (2001)

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Medication review

Study the patient's medication profile with particular attention to the necessity, effectiveness and safety of therapy and/or to the appropriateness of medication. [5,6]

Improve the quality of medication use

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OBJECTIVES

- To integrate a pharmacist into Domiciliary Hospitalization multidisciplinary team.
- To determine the prevalence of Potentially Inappropriate Prescribing (PIP) in elders referred to the DHU;
- To judge the necessity, effectiveness and safety of therapy of patients referred to the DHU;
- To classify the appropriateness of therapy of patients referred to the DHU.

MATERIALS AND METHODS

Hospital Admission	DHU	Discharge
• Clinical and therapeutic information • Hospital Pharmacy Database	• Pharmacist Intervention – overt observation at the patient's home • Effectiveness and Safety – reinforced through counselling	• Medication Profile • Transfer to primary health care

Medication Review

Study Design: Exposure cohort;

Tool: GheOP3S Screening tool to analyzed potentially inappropriate prescribing;

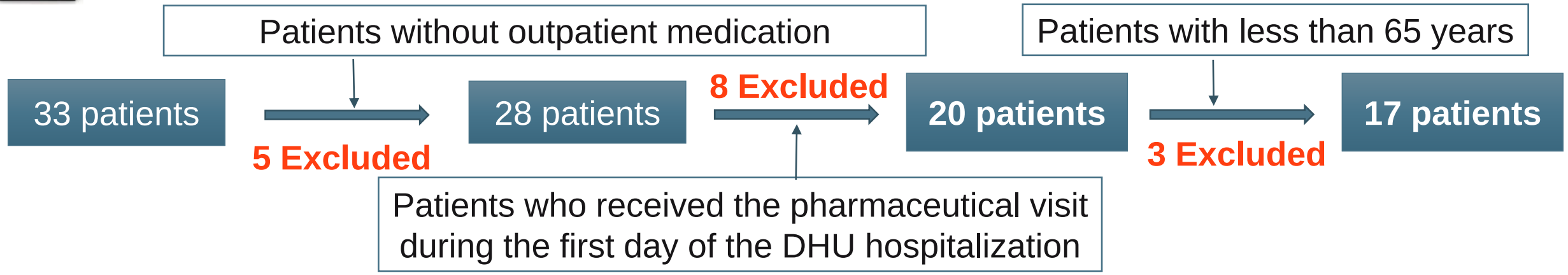
Sample: Patients hospitalized from August to September 2016;

Tommelein, E. et al. (2016)

MATERIALS AND METHODS

Inclusion criteria Patients transferred from conventional hospitalization to DH.

Exclusion criteria



Statistical analysis - Statistical Package for the Social Sciences (SPSS) v.24,0. Descriptive and bivariate analysis have been used (Spearman's correlation coefficient), SPSS v.24.0. The confidence level was set at 5%.

RESULTS

23,5% 76,5% Mean = 77.1 years {65-94; SD=8,8},

11,3 ±7,1 in the DHU 9,9±3,9 drugs Rx/patient

94% Hypertension 53% Diabetes 47% Dyslipidemia

24% Stroke 35% Renal Insufficiency 41% Heart failure

The main reasons for **hospitalization in the DHU** were:

- 44% - urinary tract infections;
- 20% - respiratory diseases;
- 12% - acute kidney injury;
- 12% - cerebrovascular diseases.

RESULTS

167 drugs analysed
55 considered PIP

32.9% of Medication corresponded to Potentially Inappropriate Prescribing

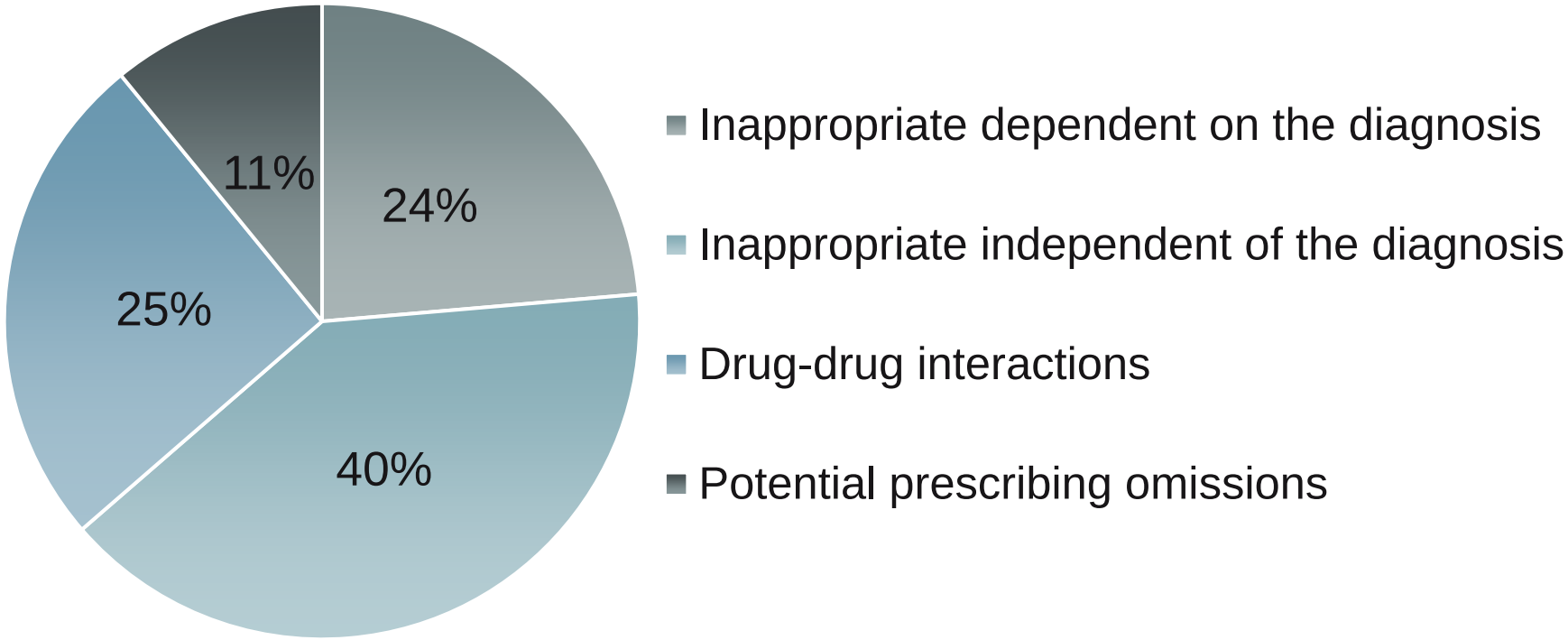
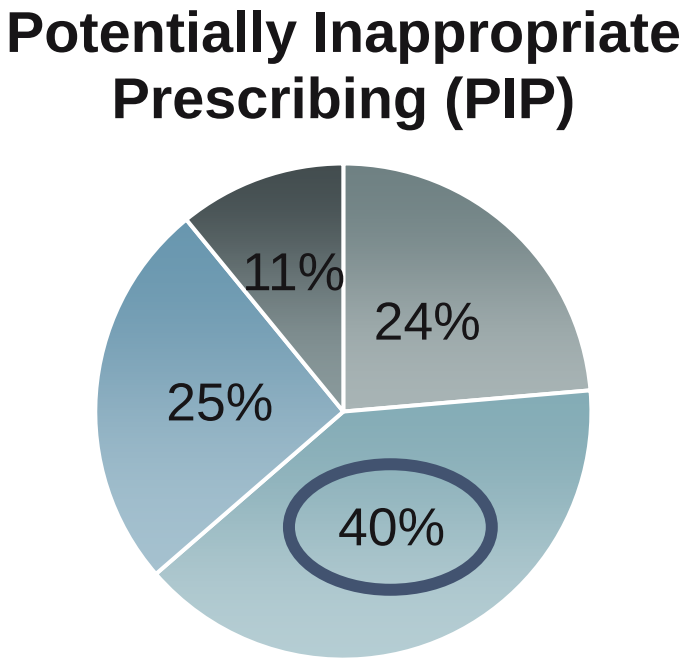


Figure 1: Potentially Inappropriate Prescribing classification using GheOP^{3}S tool

The number of PIP was correlated with the number of prescribed drugs (μ= 0.648, p = 0.005)

RESULTS



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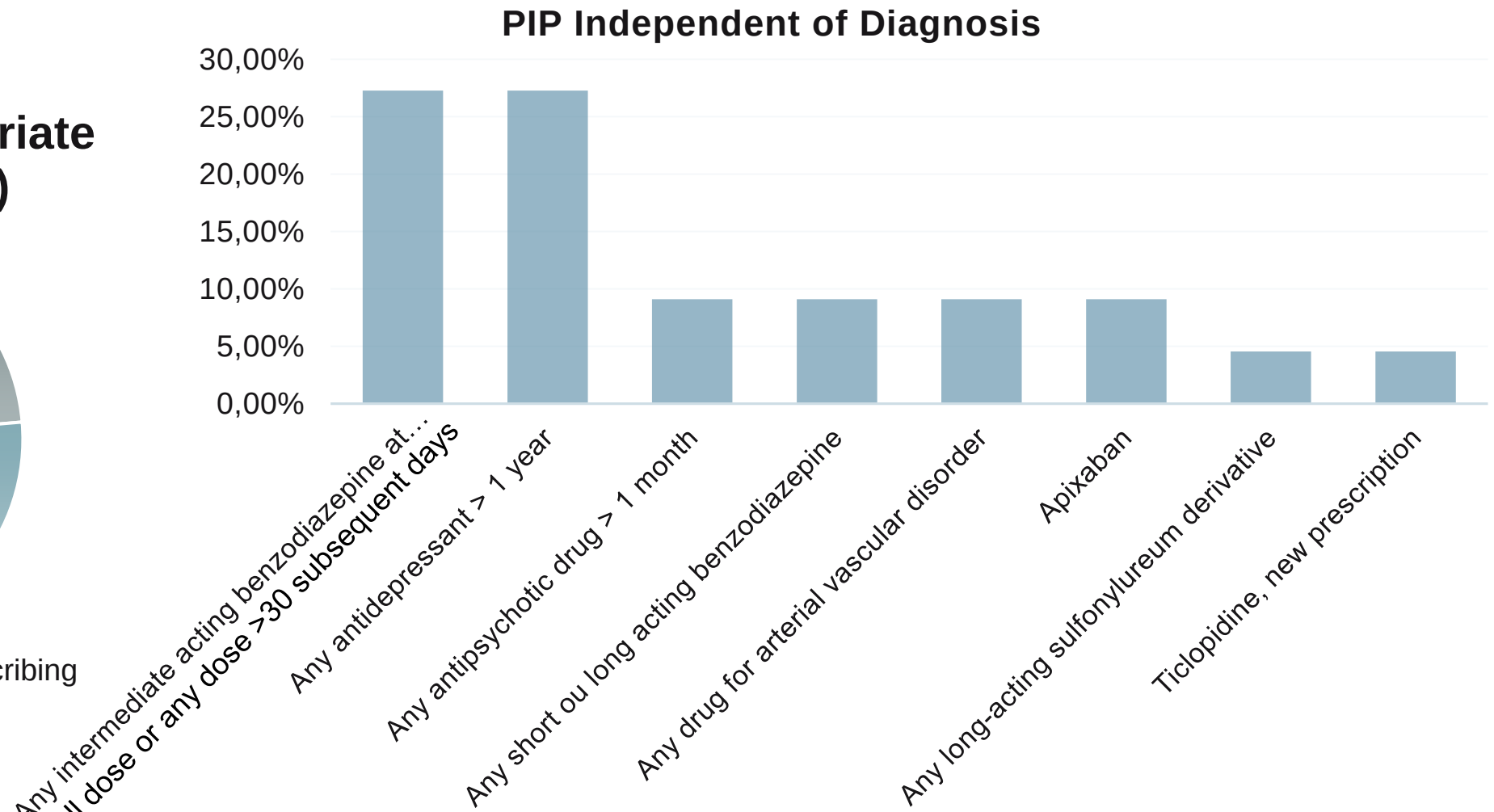
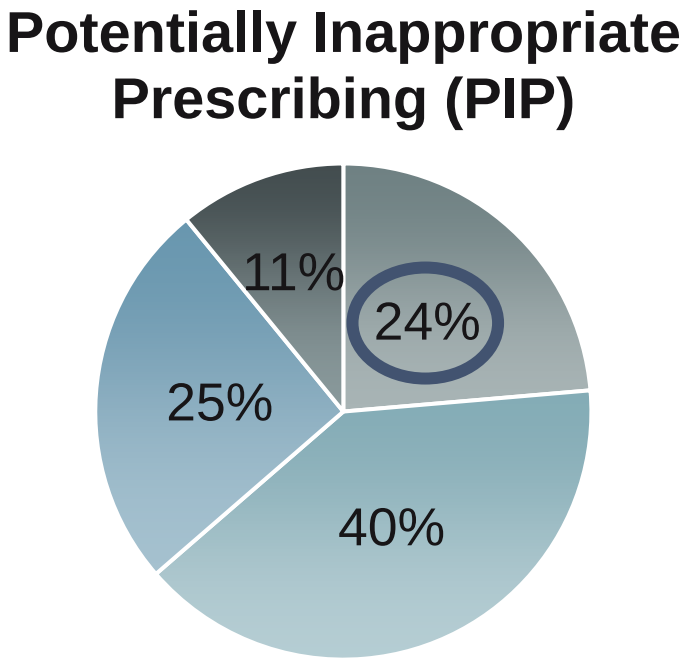


Figure 2: Potentially Inappropriate Prescribing Independent of diagnosis by drug classes and specific molecules using GheOP³S tool

RESULTS



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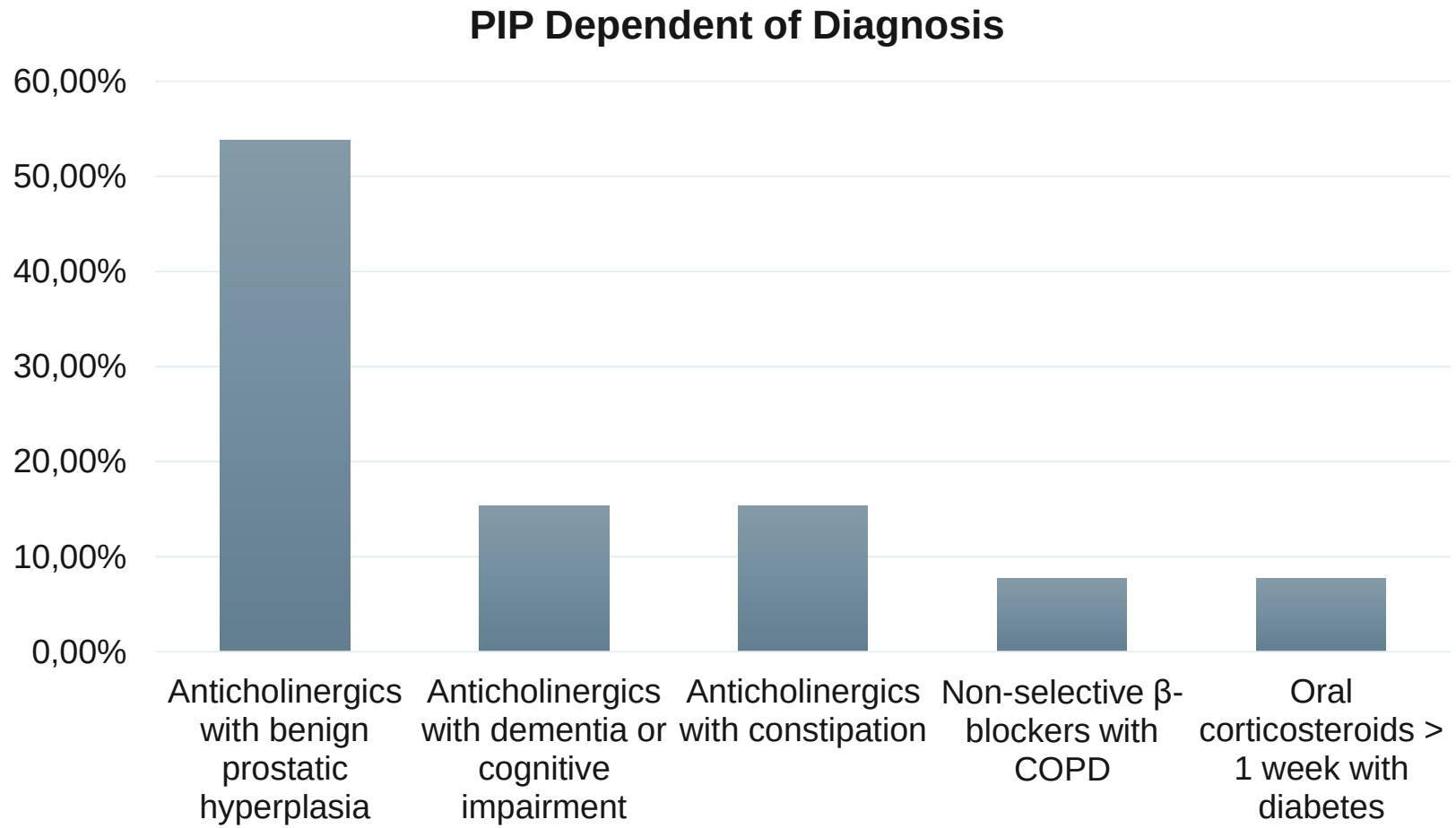
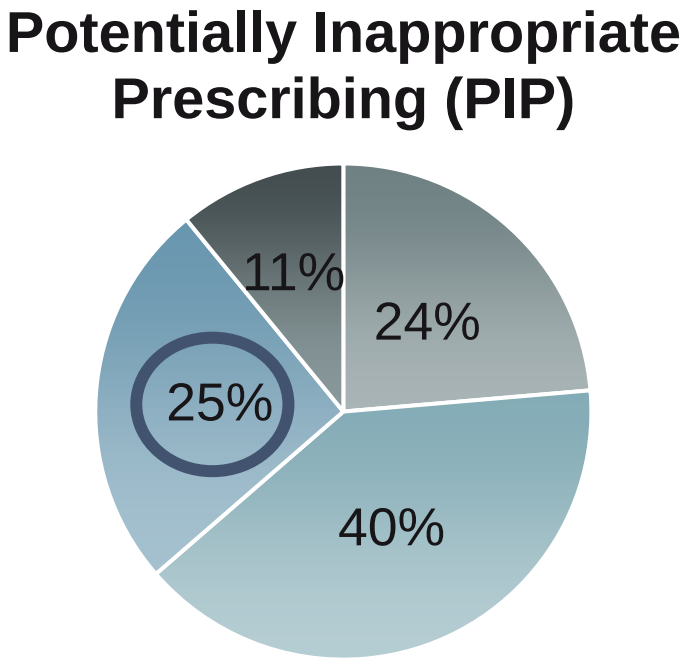


Figure 3: Potentially Inappropriate Prescribing dependent of diagnosis by drug classes using GheOP³S tool

RESULTS



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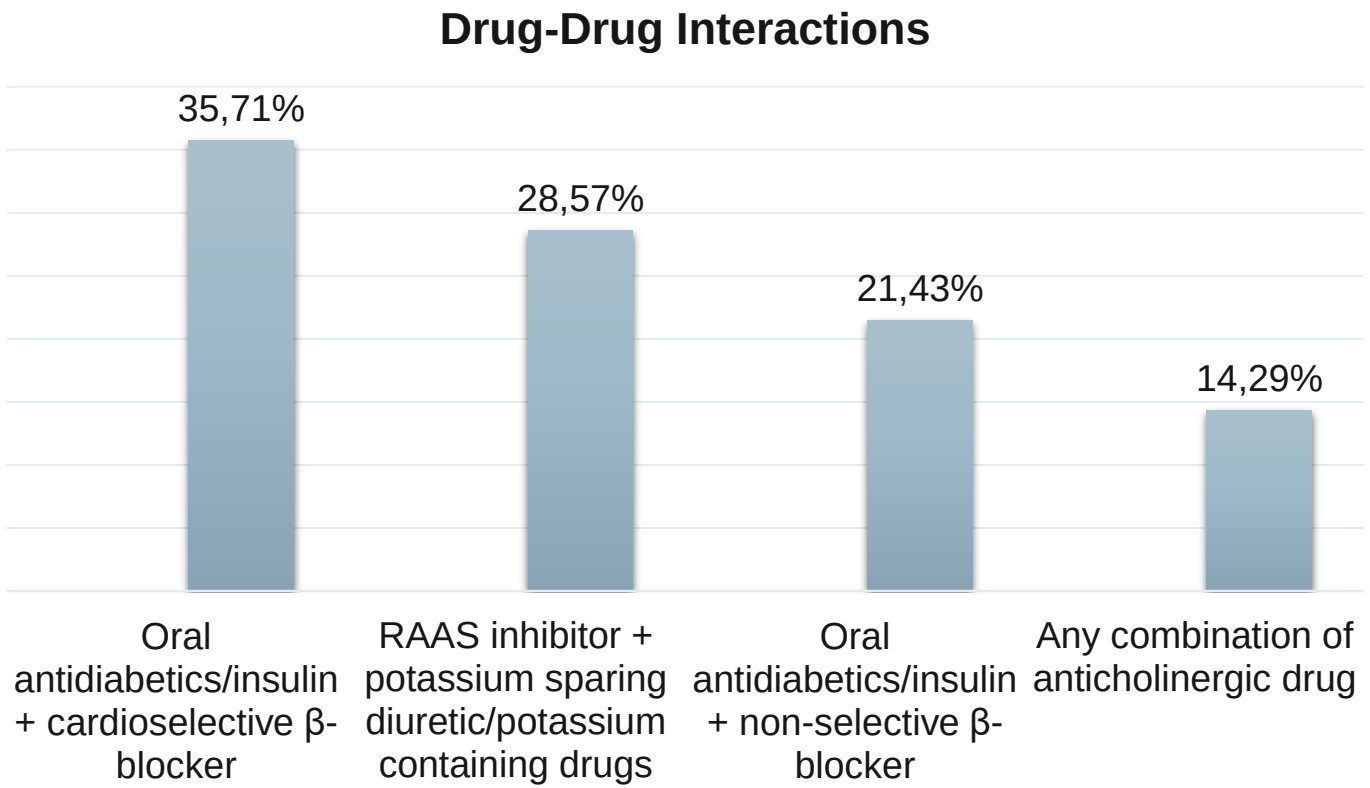

Figure 4: Potentially Inappropriate Prescribing Drug-drug Interactions of specific relevance using GheOP³S tool

DISCUSSION AND CONCLUSIONS

- Many of the patients included in the DHU are polypharmacy, which also contributes to higher probability of drug-related problems;
  - The inclusion of a pharmacist in this unit was determinant to increase patient safety.
- Medication review enabled the detection of various PIPs in patients discharged from DH.
- The impact of this intervention is substantial on patients' health (reduction of adverse effects and increased adherence to therapy) but also on the economy of the PHCS (reduction in drug costs and hospital readmissions);
- This study presents first results of an ongoing project.

Soares, M., et al. (2011)