

# Decreased use of PIMs in elderly hospitalised patients: is it possible?

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## Objectives

Certain drugs are classified as potentially inappropriate medications (PIM) for the elderly because they carry an increased risk of adverse drug events among these patients. In the past decades, several assessment tools /lists have been developed identifying this problem both in US and Europe.

- Beers' list
- EU7 PIM list

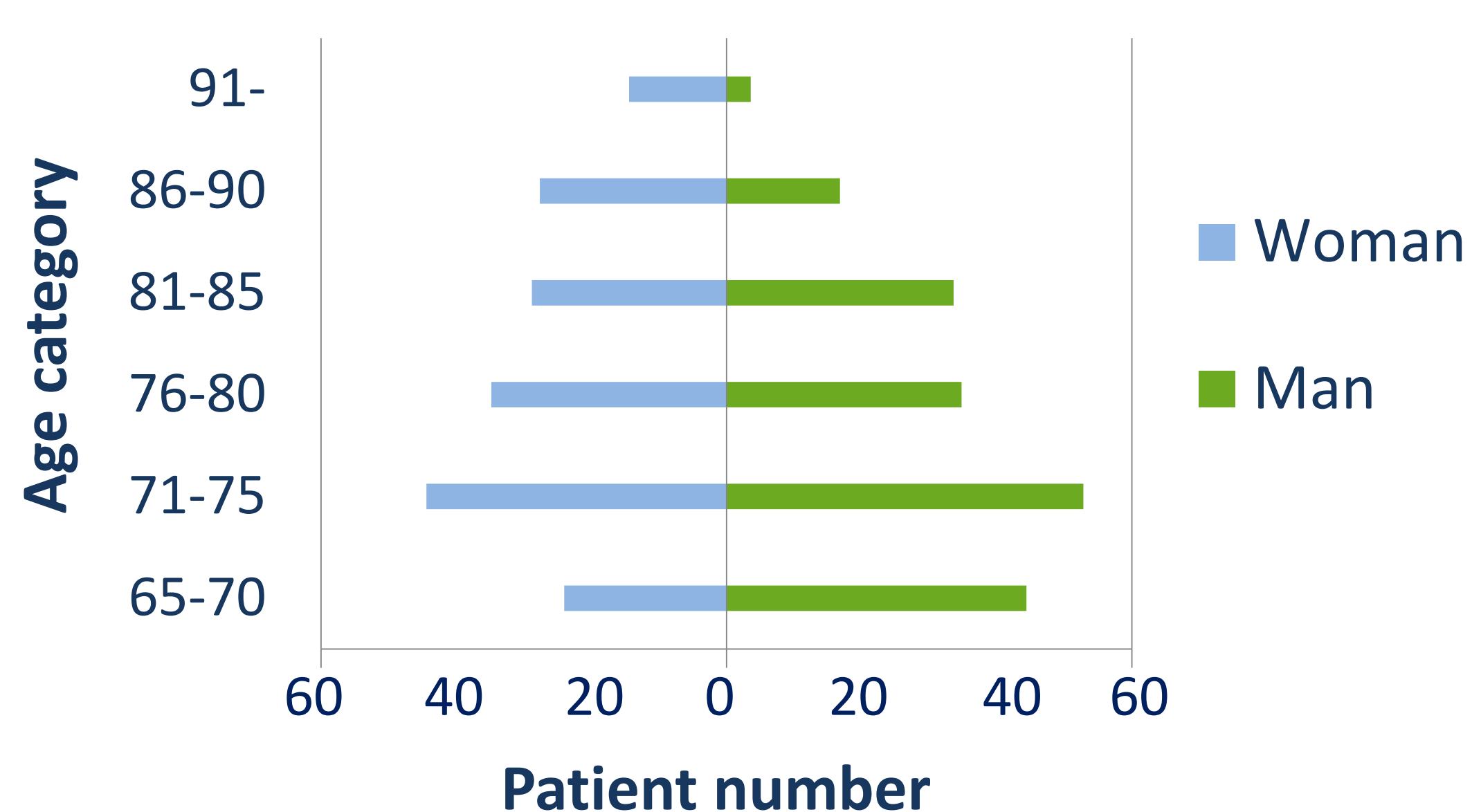
## Purpose

The aim of this study was to investigate the prevalence of PIM according to EU(7)-PIM and to a national PIM adaptation list explicit criteria among the hospitalized patients in the internal medicine ward above 65 years with polypharmacy (taking more than 5 medications).

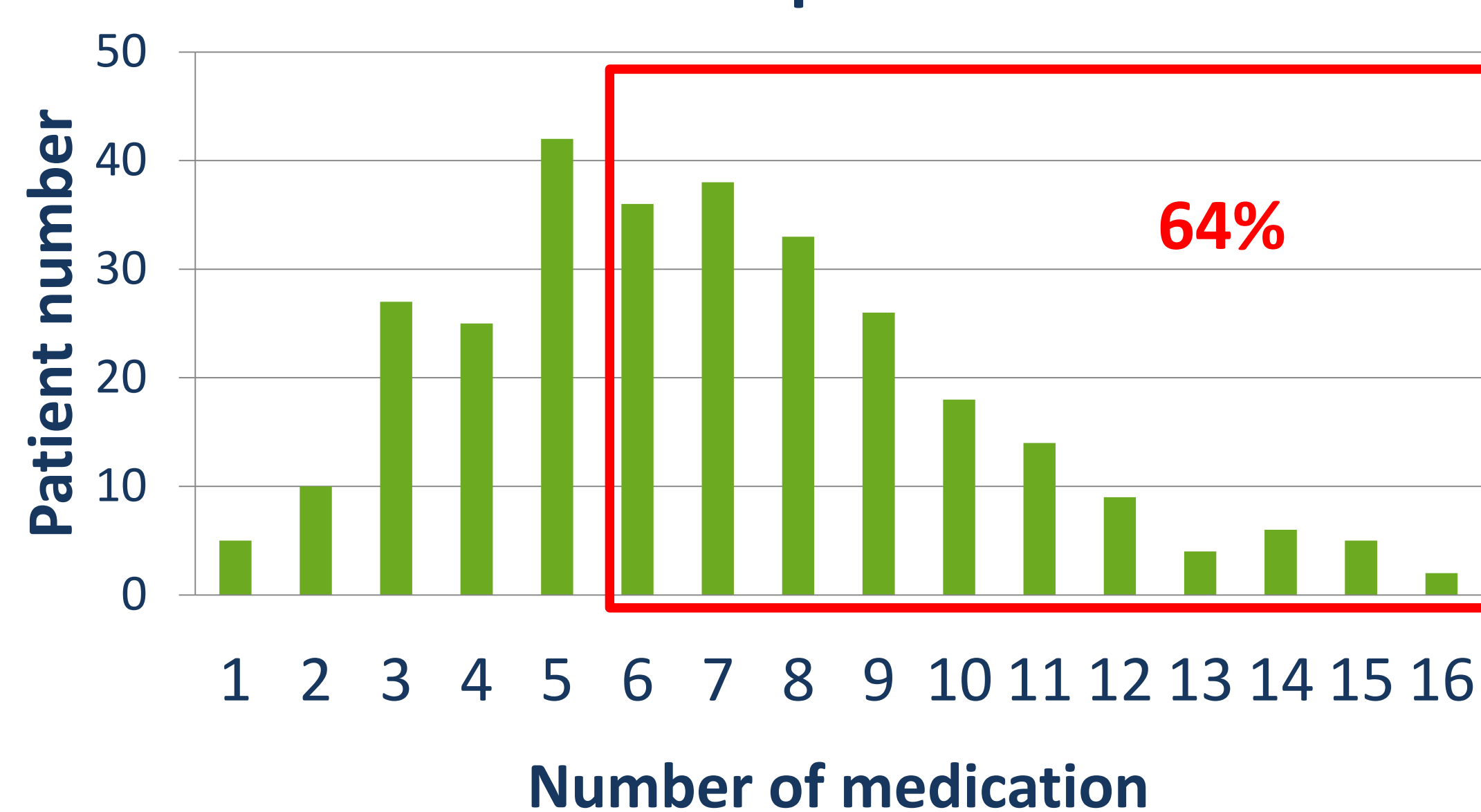
## Material and methods

This study was cross-sectional, and based on the patients' medical record taken from 2017 February to June. The medication was analysed according to the following indicators: active ingredient, strength, dosage, administration route of the preparation, original prescriber (general practitioner or physicians of hospital). Descriptive statistics were used for data evaluation.

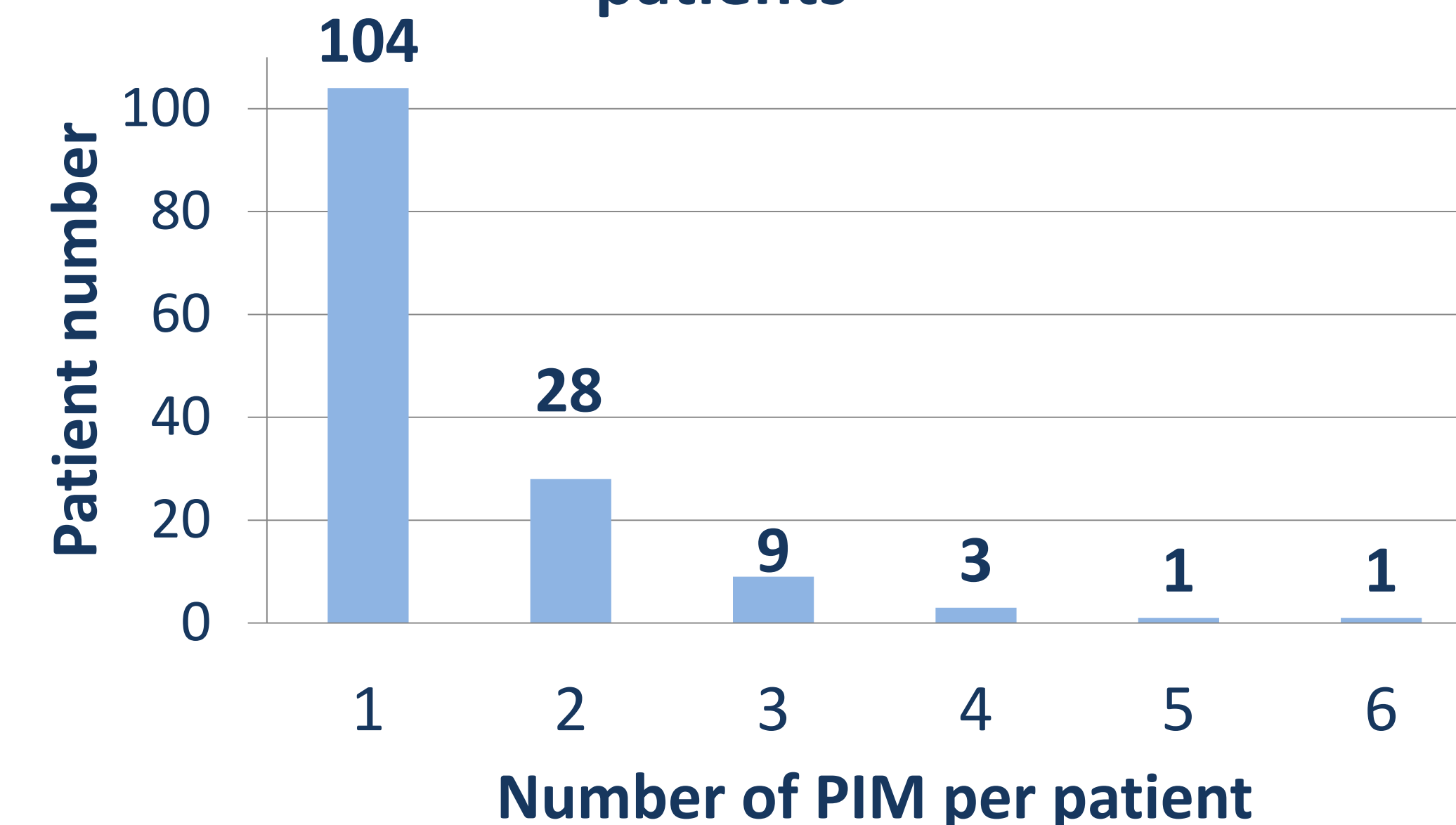
Age and gender distribution of examined patients



Presence of polypharmacy among examined patients



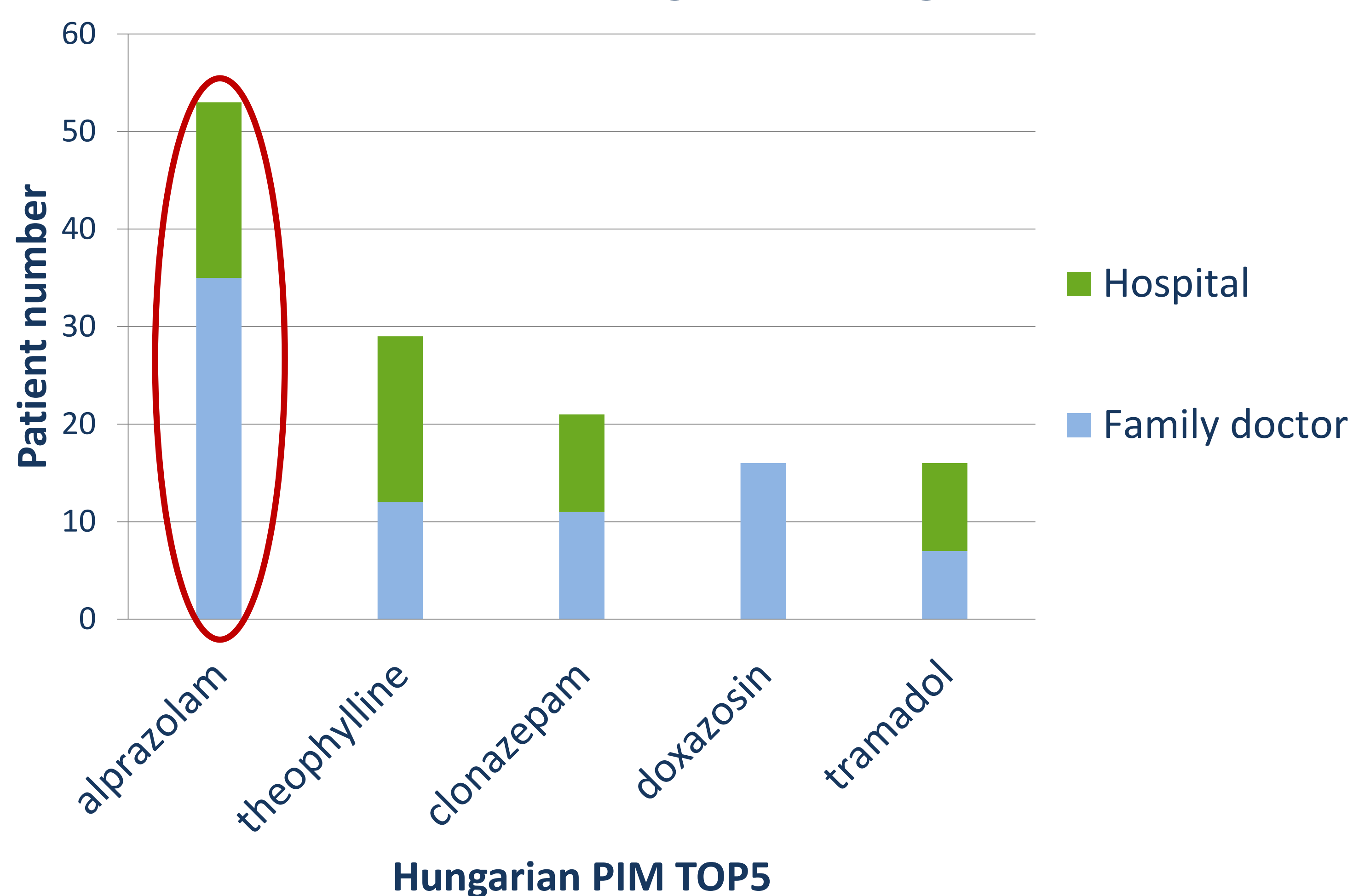
Number of PIMs taken parallel by patients



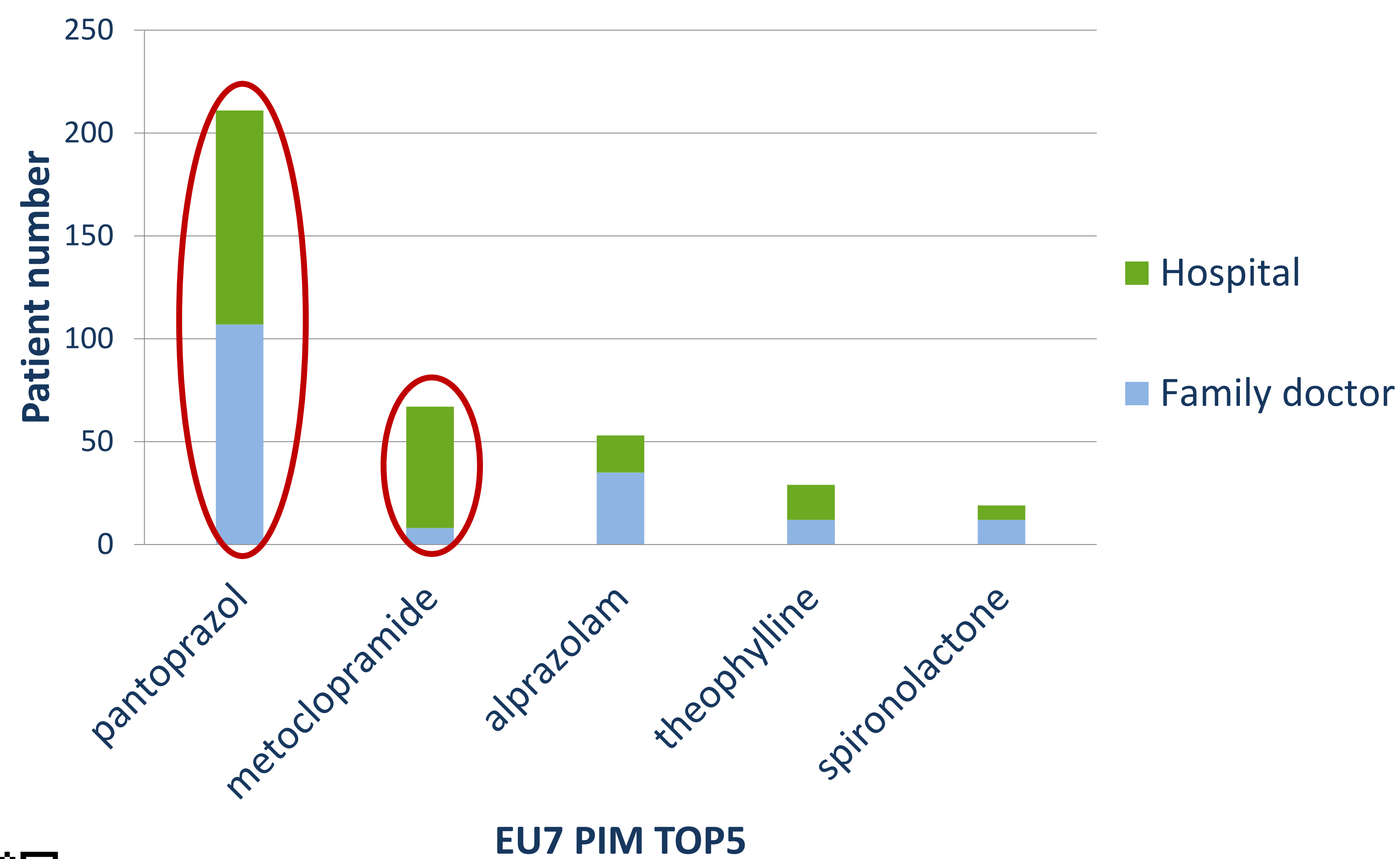
## Results

298 patients were enrolled into the study. This patient group represents the 60% of the whole patients above 65 years, who were admitted in the ward during the monitored period. The average age of this group was 77,6 years, the men ratio was 52%. They took 6,92 medications on the average. The presence of polypharmacy was 64%. The 48% of the patients had one or more PIM prescribed. The most frequently prescribed potentially inappropriate medications by national PIM list were alprazolam, theophylline, clonazepam, doxazosin and tramadol. 64% of PIMs were prescribed by family doctors. However the frequent prescribing of PPI and metoclopramide in the hospital (65%) is important to mention as well. These two medicines, as PIMs are listed only by EU(7) PIM list.

Incidence of PIM according to the Hungarian PIM list



Incidence of PIM according to the EU7 PIM list



## Conclusion

The study showed high prevalence of polypharmacy and potentially inappropriate medication usage amongst our elderly patients. Based on this fact, clinical pharmacists are suggested to offer a reconciliation service that also includes screening PIM (since patients are admitted to the hospital with these medications). Clinical pharmacists are also obliged to review PIMs for hospital doctors, and to prevent prescribing of PIM, especially PPI and metoclopramide (deprescribing). The information leaflet was put together according to these results, containing the method of stopping or changing PIMs. The leaflets are available with QR code. A control study is planned after six month in order to evaluate the efficiency of the suggested pharmacist intervention.