

INAPPROPRIATE PRESCRIBING: WHAT STRATEGY SHOULD BE USED TO PRIORITISE PATIENTS?

Utilisation of ISAR score as a predictive tool

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STUDY OBJECTIVES

Although medicines are generally safe to use, adverse drug events can cause up to 20% of unplanned hospital admissions [1]. Furthermore, approximately 50% of these adverse events are preventable [2]. Potentially inappropriate prescribing (PIP), which includes inappropriate medication and prescribing omission, is an important cause of preventable adverse drug events [3]. However, the systematic identification of PIPs is time consuming. It would therefore be useful to have a strategy to easily identify patients at risk of having PIP. If necessary, inappropriate medications could also be deprescribed.

In this study, we wanted to determine if the Identification of Seniors At Risk (ISAR), a tool widely used in hospitals, could be a good predictor of PIP.

METHOD

A 12-month retrospective study was conducted in a cardio-neurological service of a hospital. The study was based on the medical records of patients aged 75 years and older. PIPs were determined using the STOPP/START tool, based on the patient's medication at the time of admission. The hospital ethics committee approved the study protocol.

RESULTS

A total of 266 records were included. Table 1 shows the characteristics of the study population. The STOPP/START analysis revealed 630 PIPs. Their distribution is detailed in Figures 2 and 3. Multivariate linear regression analysis showed that the ISAR score, and the number of medications were independently associated with the number of PIPs (Table 4).

4) Multivariate linear regression results

Factors	PIP		STOPP criteria		START criteria	
	B ¹	p-value	B ¹	p-value	B ¹	p-value
Gender	-0.191	0.701	-0.133	0.302	-0.058	0.591
Age	0.012	0.420	0.011	0.348	0.001	0.914
Family status	0.077	0.388	-0.046	0.515	0.123	0.036
ISAR score	0.118	0.041	0.054	0.235	0.065	0.087
Medication number	0.211	< 0.001	0.192	< 0.001	0.020	0.225

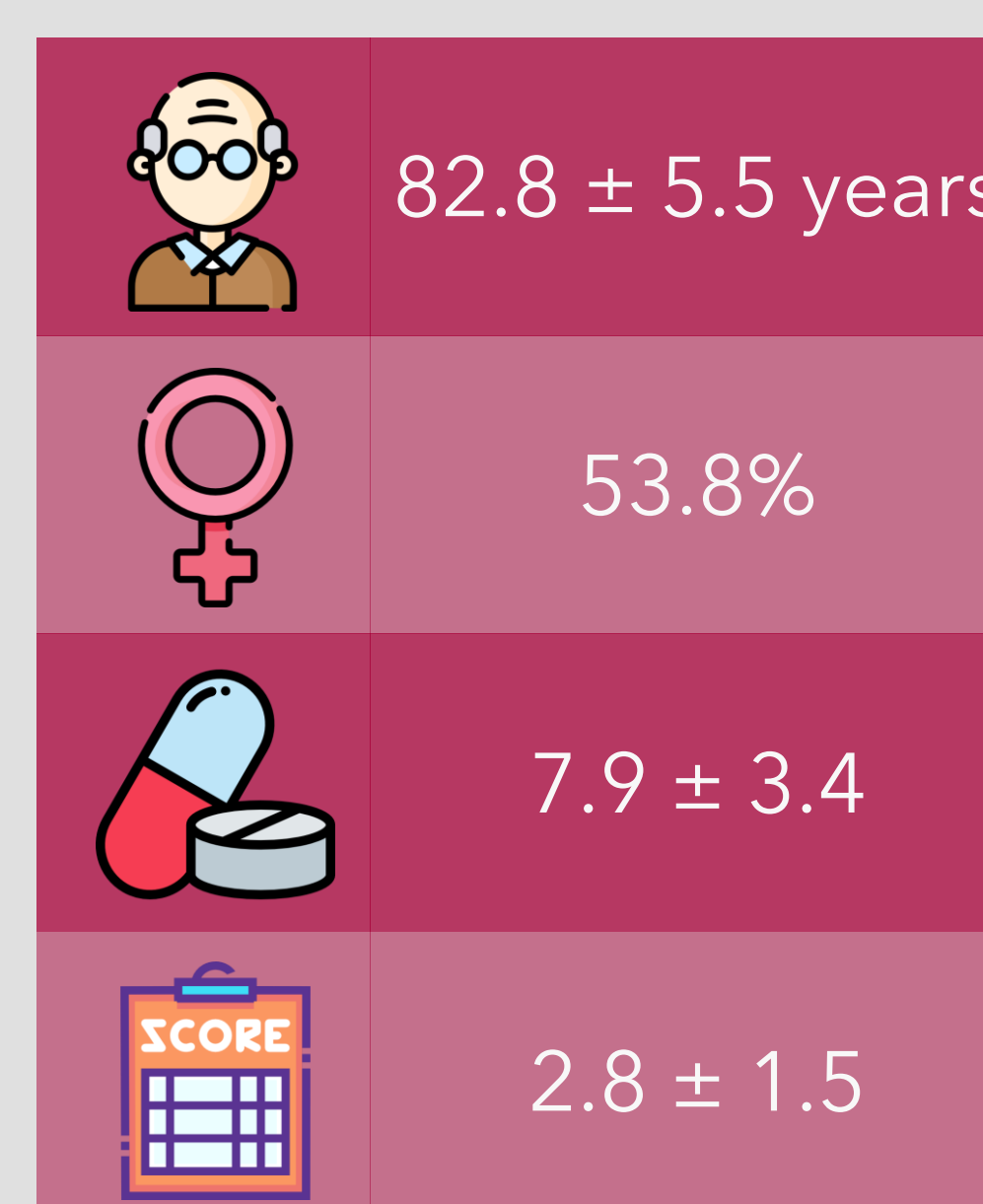
¹B: non-standardised coefficient

CONCLUSION

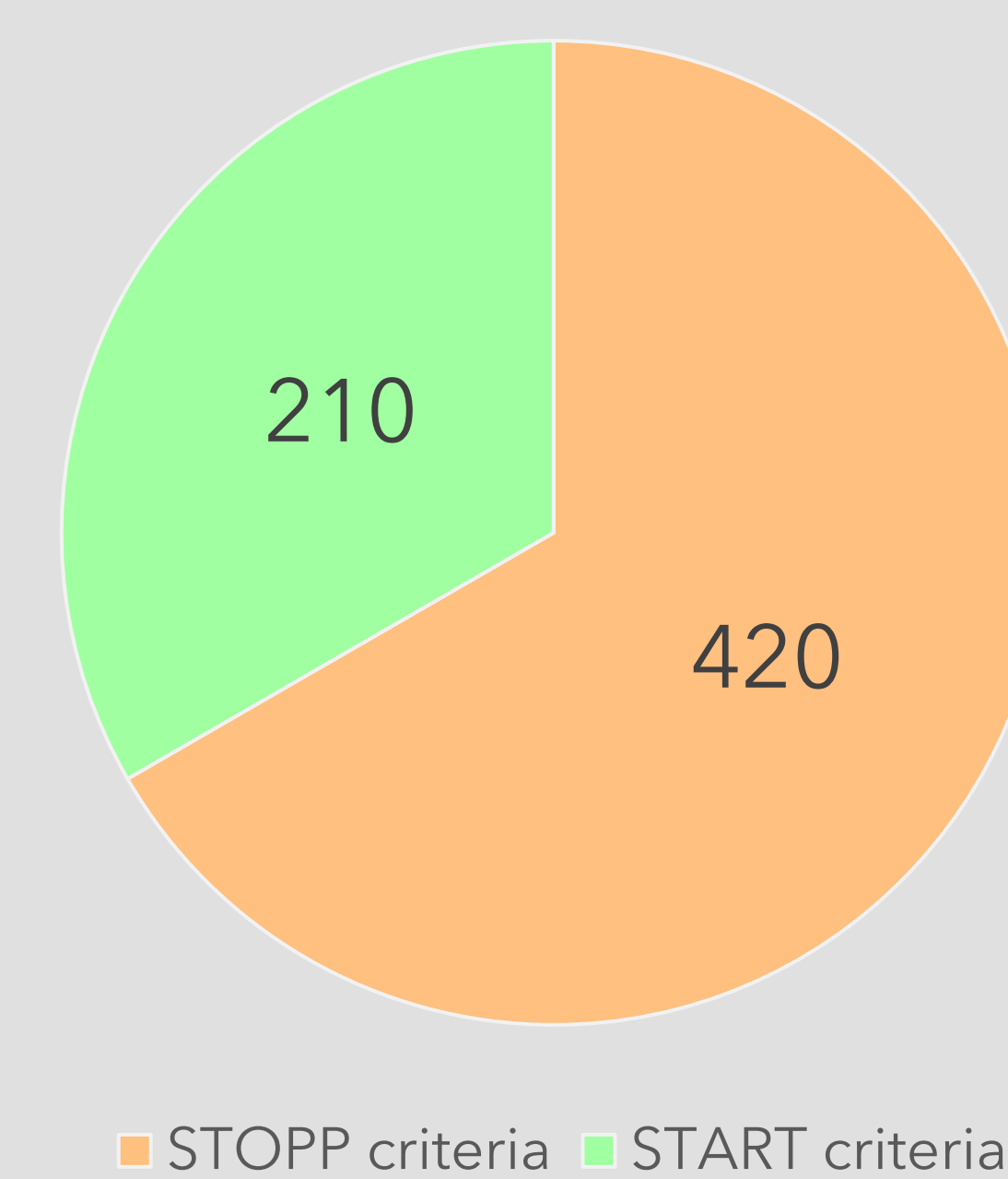
The study showed that the ISAR score, and the number of medications were independently associated with the number of PIPs. The utilisation of the ISAR score, and the number of medications may be beneficial strategies for the prioritisation of patients for whom the appropriateness of their prescriptions should be assessed using explicit criteria.

Efforts should also be made to deprescribe benzodiazepines, aspirin and proton pump inhibitors, which are often inappropriate.

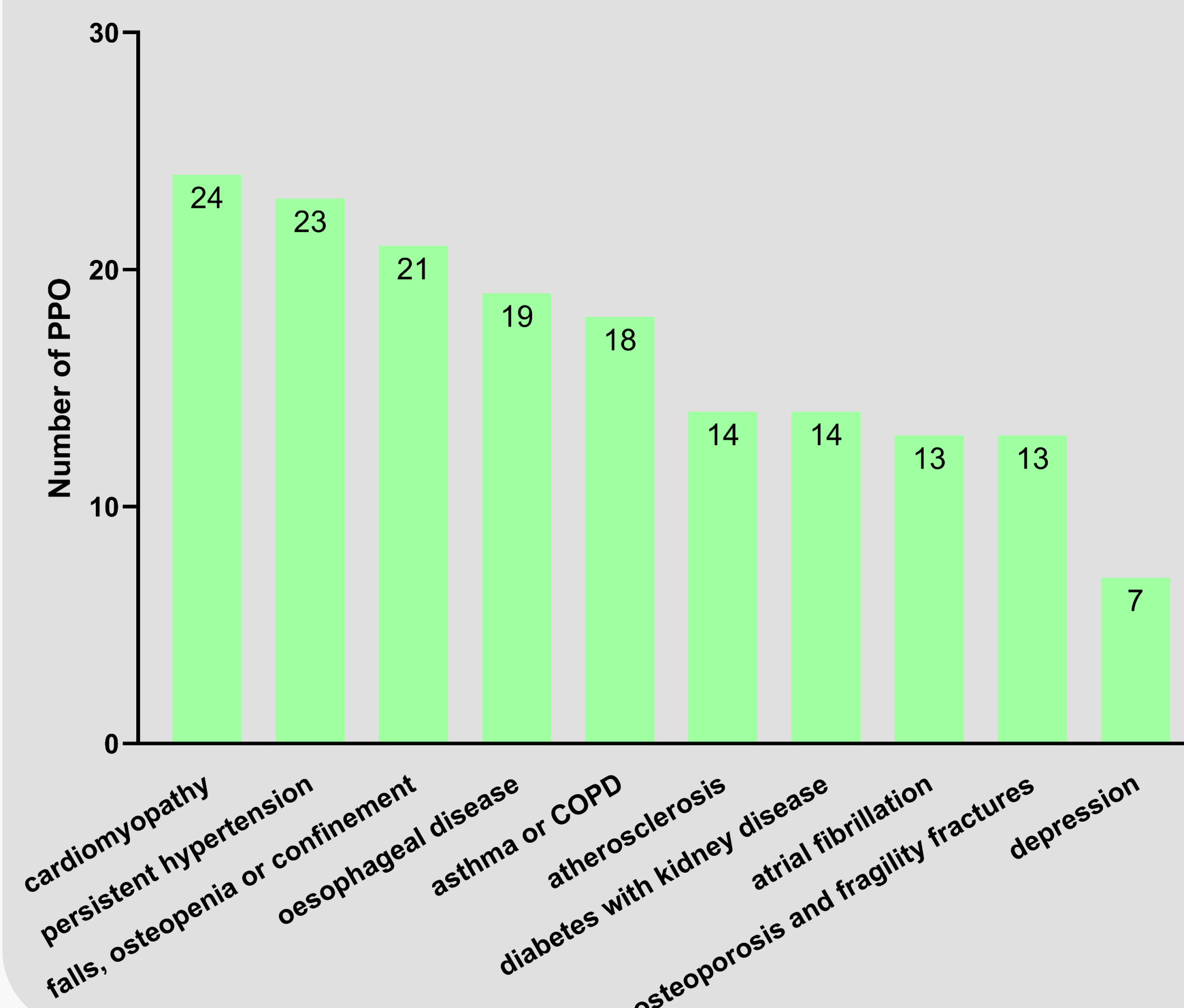
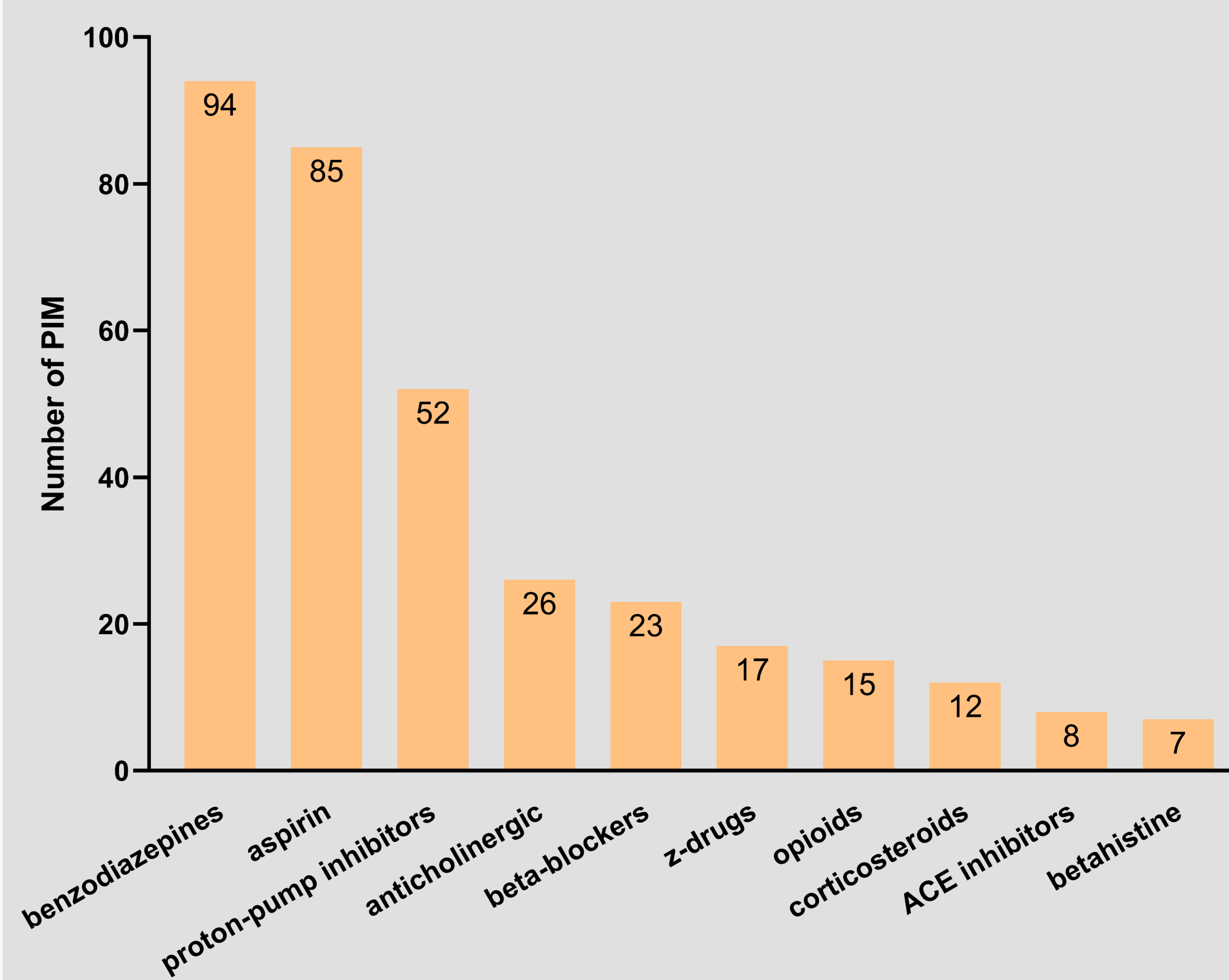
1) Study population characteristics



2) PIP numbers



3) Number of STOPP criteria according to drug class and START criteria according to comorbidity



[1] Oscanoa TJ, Lizaraso F, Carvajal A. Hospital admissions due to adverse drug reactions in the elderly. A meta-analysis. Eur J Clin Pharmacol 2017;73:759-70. <https://doi.org/10.1007/s00228-017-2225-3>

[2] Ankri J. Le risque iatrogène médicamenteux chez le sujet âgé: Gérontologie et société 2002;25 / n° 103:93-106. <https://doi.org/10.3917/gs.103.0093>

[3] O'Connor MN, Gallagher P, O'Mahony D. Inappropriate Prescribing: Criteria, Detection and Prevention. Drugs Aging 2012;29:437-52. <https://doi.org/10.2165/11632610-000000000-00000>