

Drugs associated with prescribing errors in older patients in two English general practices



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Introduction

Medication errors have the potential to cause patient morbidity and mortality, and increase pressure on healthcare. Studies have indicated that older patients may be more susceptible to significant risks of harm from prescribing errors^{1,2}, though there is a dearth of research in this patient group.

Aim

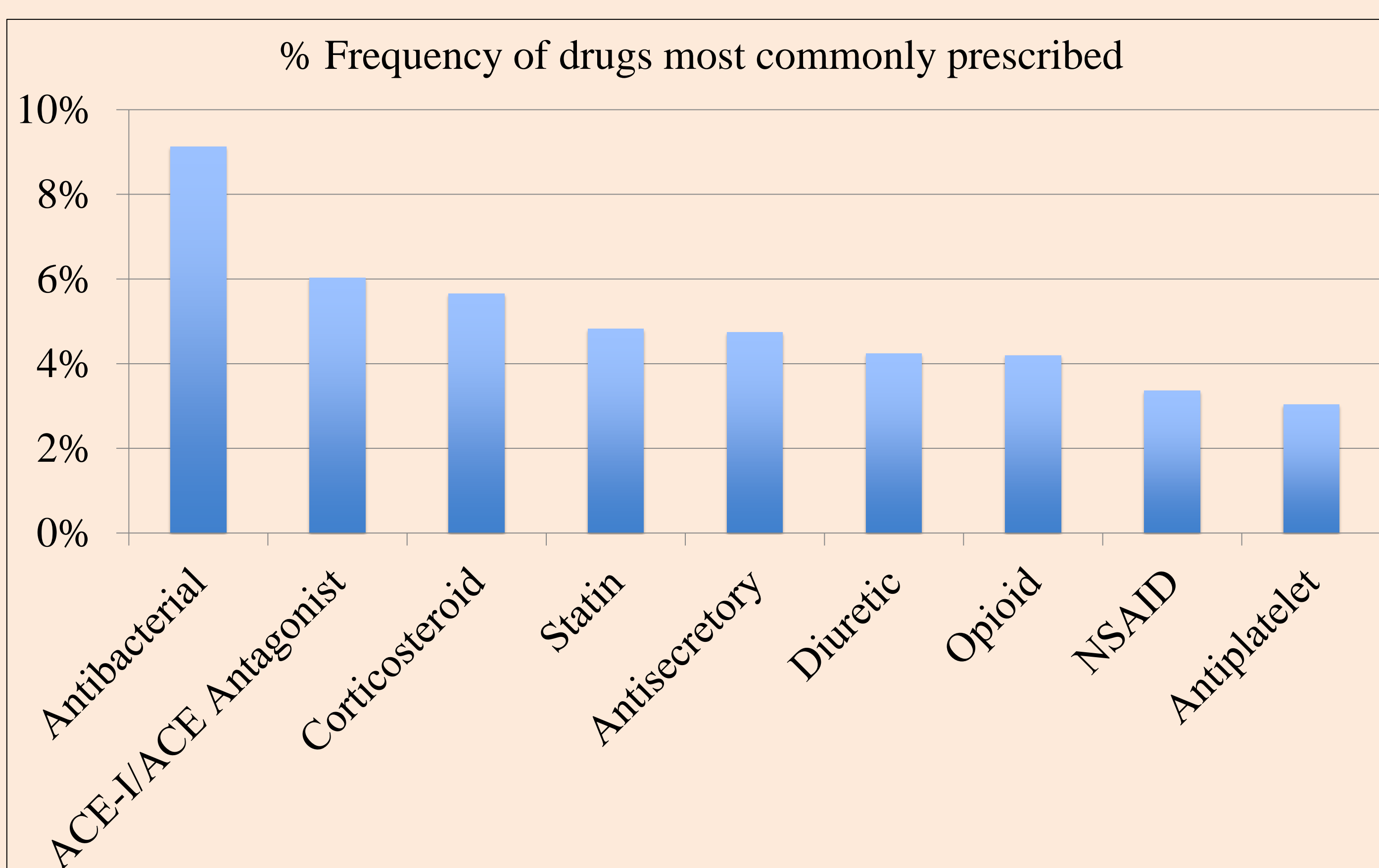
To explore the drugs mostly associated with prescribing and monitoring errors in older patients, 65 years and over. The objectives were to determine the prevalence of prescribing and monitoring errors, describe the types of errors identified, identify the drugs and drug classes associated with errors

Methods

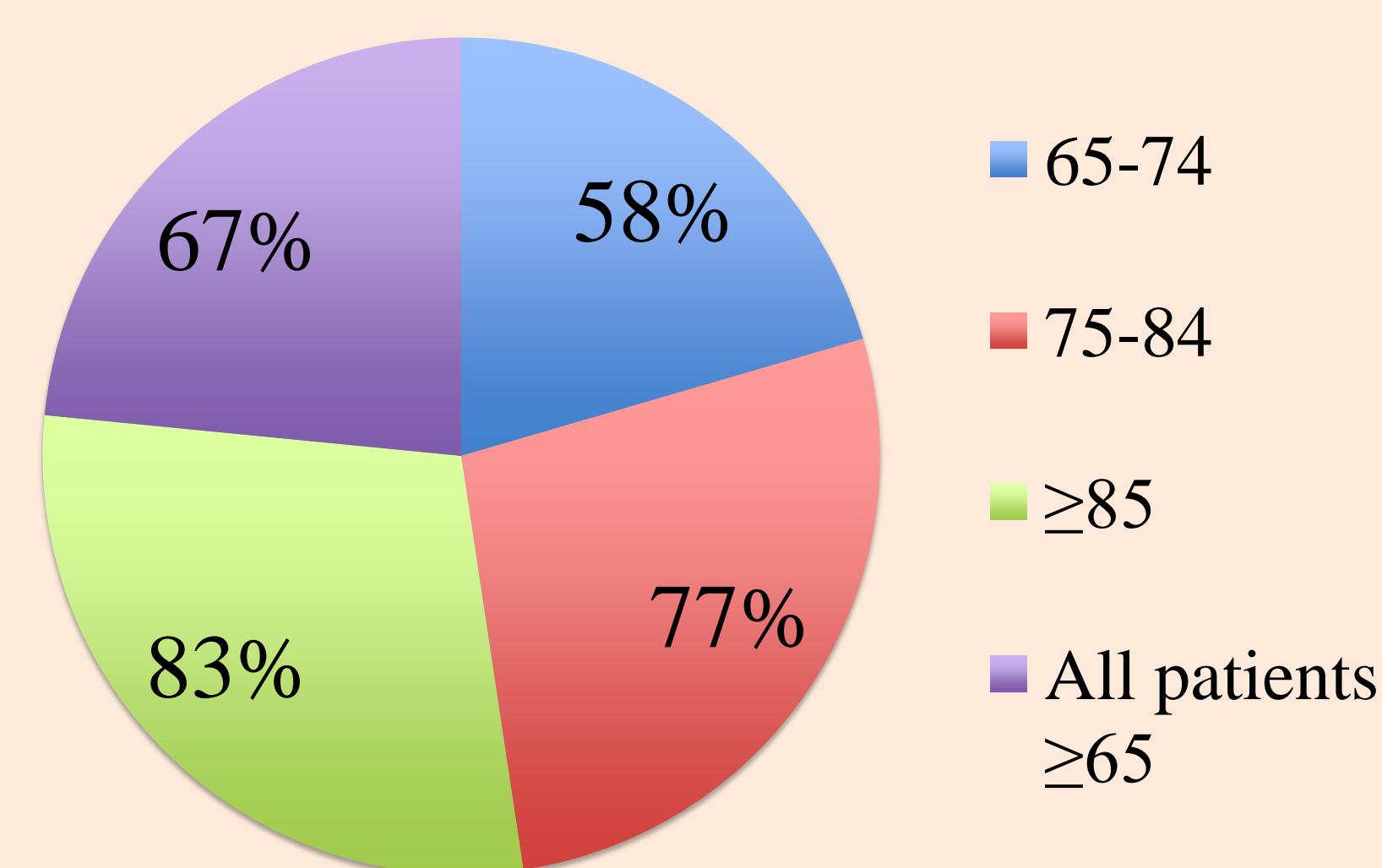
This study was conducted in two general practices in England. In each practice, 10% random sample of registered patients was selected using computer-generated random numbers. A clinical pharmacist then undertook a retrospective review of the electronic medical records of the patients to identify potential errors for each unique prescription item issued in the 12 months to data collection. A judging panel comprising four clinical pharmacists discussed each error and assigned severity of harm potential. Definitions and classifications used were those of Dean et al (2000) and Alldred et al (2008).

Results

2739 (median number of prescriptions, 6; interquartile range, IQR 8.75) unique prescription items for 364 patients were reviewed (mean age 73.68 years, standard deviation, SD = 7.75). 53% were female, and 89% had had at least one prescription in the review period. The most commonly prescribed drugs were those for cardiovascular disease.



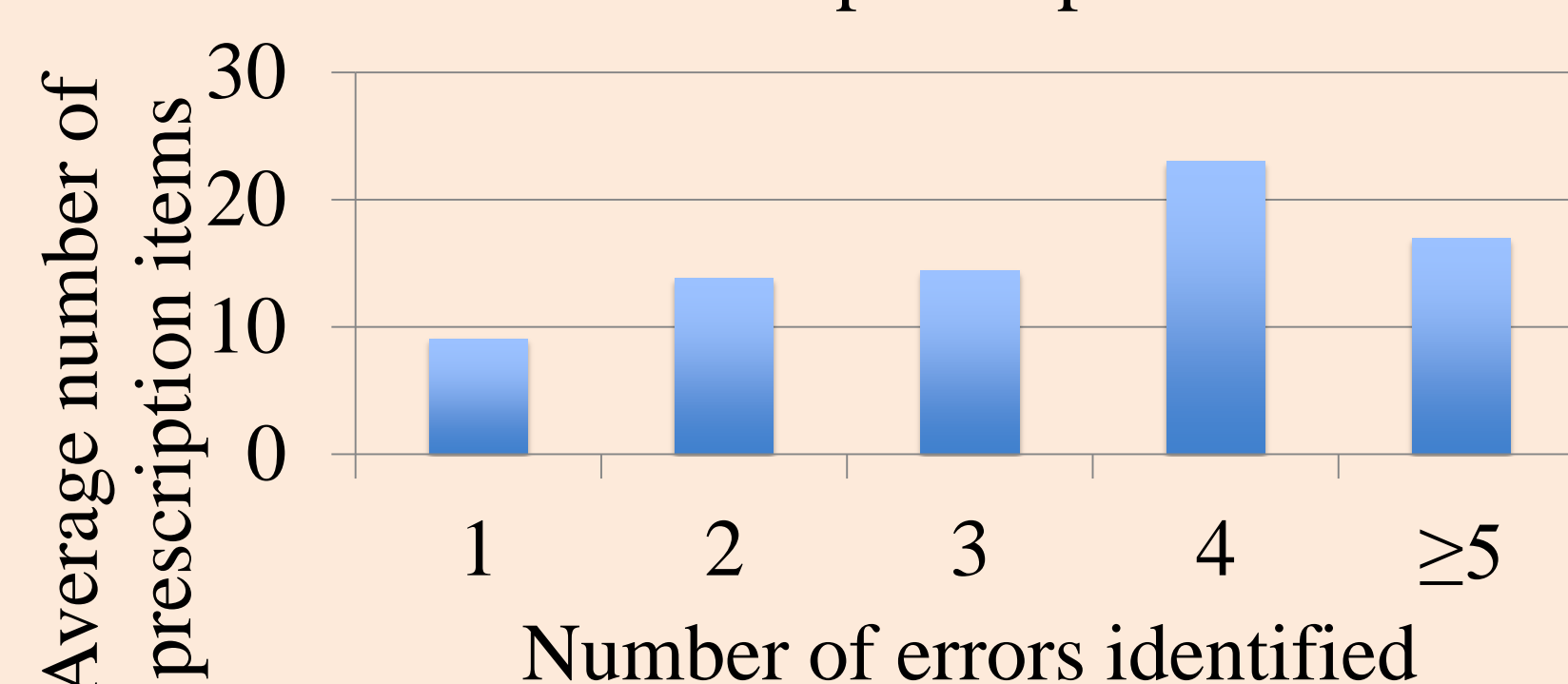
Error rate per patient age group



40.87% (95% CI 35.65-46.31%) of patients who had received at least one prescription item in the review period had at least one error.

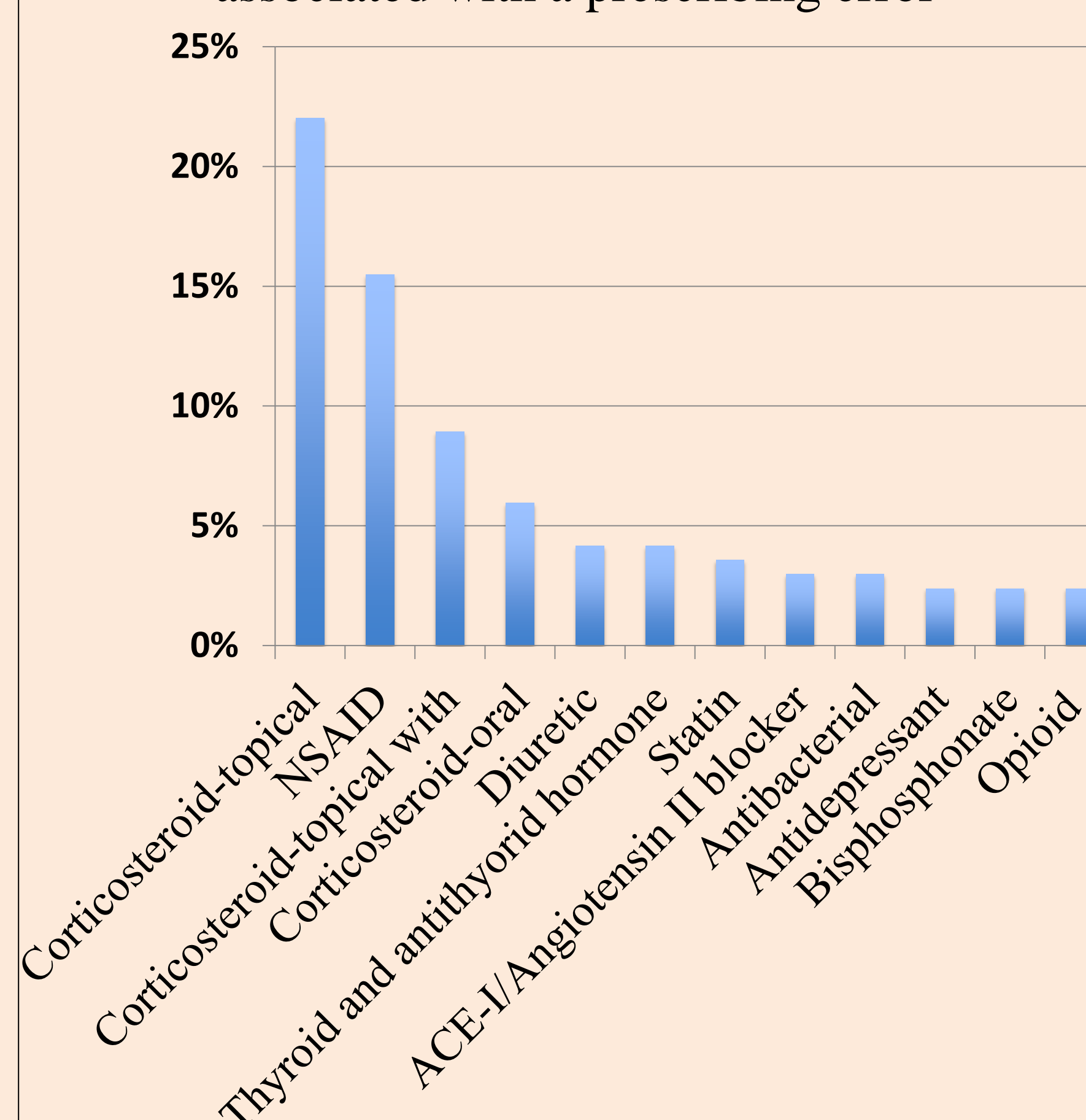
Prevalence of prescriptions with an error was 7.89% per item (95% CI 6.94-8.96). Topical/oral steroids and NSAIDs accounted for over a third of prescribing errors, with incomplete information and omissions being the most common categories. Patients with more medications and increasing age had more frequent errors. Most errors were mild to moderate severity.

Error variation with prescription items

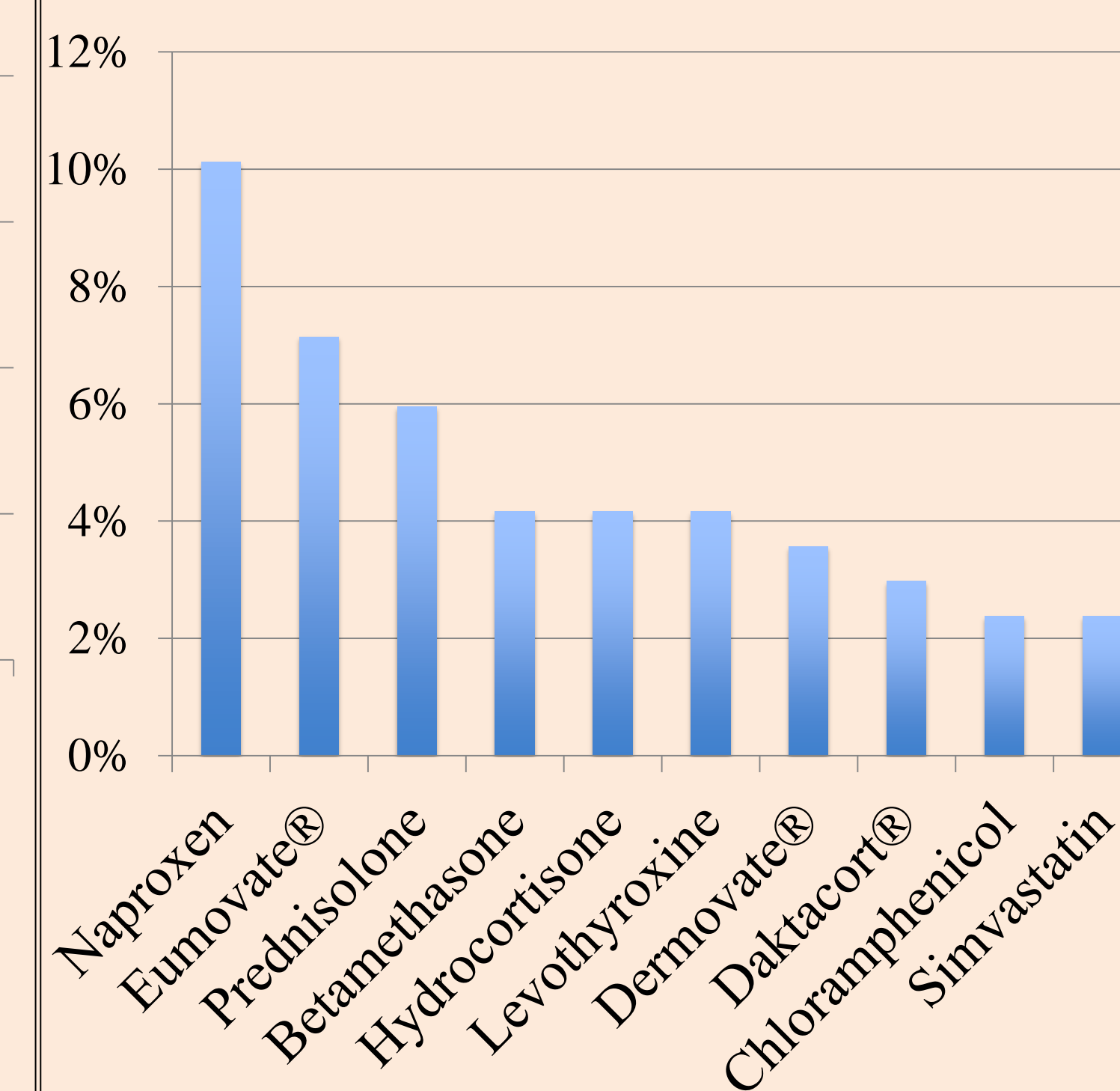


“Monitoring not requested” accounted for 92% of monitoring errors, affecting mostly CVS drugs.

Percentage frequency of drugs classes associated with a prescribing error



Percentage frequency of the top 10 drugs associated a prescribing error



Conclusion

From the retrospective review of electronic medical records in two English general practices, about 1 in 12 prescriptions for 1 in 2 patients were incorrectly written, though most errors were of mild to moderate severity. The drugs most commonly affected were “routinely” used in primary care. Adequate medicines management protocols and regular contact with the same practitioners may have the potential to improve therapeutic health outcomes in older patients with co-morbidities and polypharmacy.

The authors would like to pay tribute and thank the late Dr. Maisoon Ghaleb, a very sad loss to the scientific community. No one could ask for a more supportive and kind-hearted supervisor, colleague and friend.

References

- Avery et al (2013) The prevalence and nature of prescribing and monitoring errors in English general practice *Br J of Gen. Pract.*; 63(613):e543-553
 Alldred et al (2008) Development and validation of criteria to identify medication-monitoring errors in care home residents. *IJPP* 16(5): 317-323