

# Analysis Of Medication Use By Frail Elderly Patients With Frequent Hospital Admissions

## Background

Unplanned readmission to hospital following discharge is a major problem in the elderly<sup>1</sup>. Medication attributes to 5-8% of unplanned hospital admissions<sup>2</sup> and 29-35% of hospital readmissions<sup>3</sup>. Hospital readmission has a negative impact on the health and well-being of an older person<sup>4</sup>. However, there is a lack of evidence of the association of medicines-related risk factors with frequent readmission. Inclusion of known risk factors could improve readmission risk predictive models.

## Aim and objectives

The aim of this study is:

- To explore the medicines-related characteristics of frail elderly patients with frequent hospital admissions into a large NHS teaching hospital Trust in England.

Objectives are:

- To determine the patterns of frequent hospital admissions amongst frail elderly patients.
- To describe the number and type of medicines prescribed for frail elderly patients with frequent readmissions.

## Methods

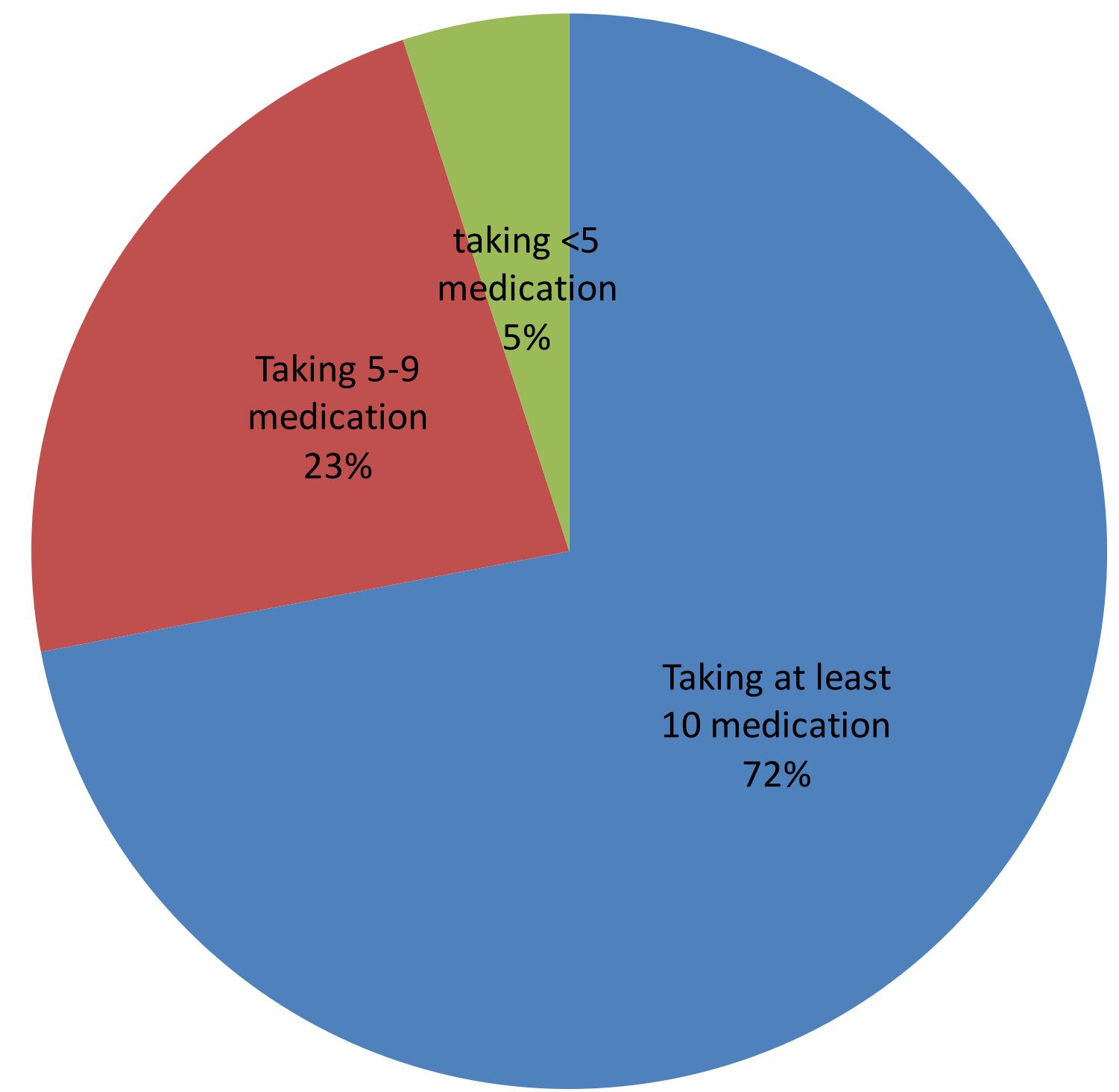
This retrospective cohort analysis examined discharge summaries of 100 patients aged 75 and over, with 3 or more episodes of unplanned medical admissions into the study site in 2015.

Patients were randomly selected from a larger sample and data was collected for the following:

- Number of medicines prescribed;
- Whether medication changes were made;
- Whether they were prescribed a high risk drug<sup>5</sup>;
- Whether they were on a potentially inappropriate medicine (PIM) as defined by the Beers Criteria<sup>6</sup>.

## Results

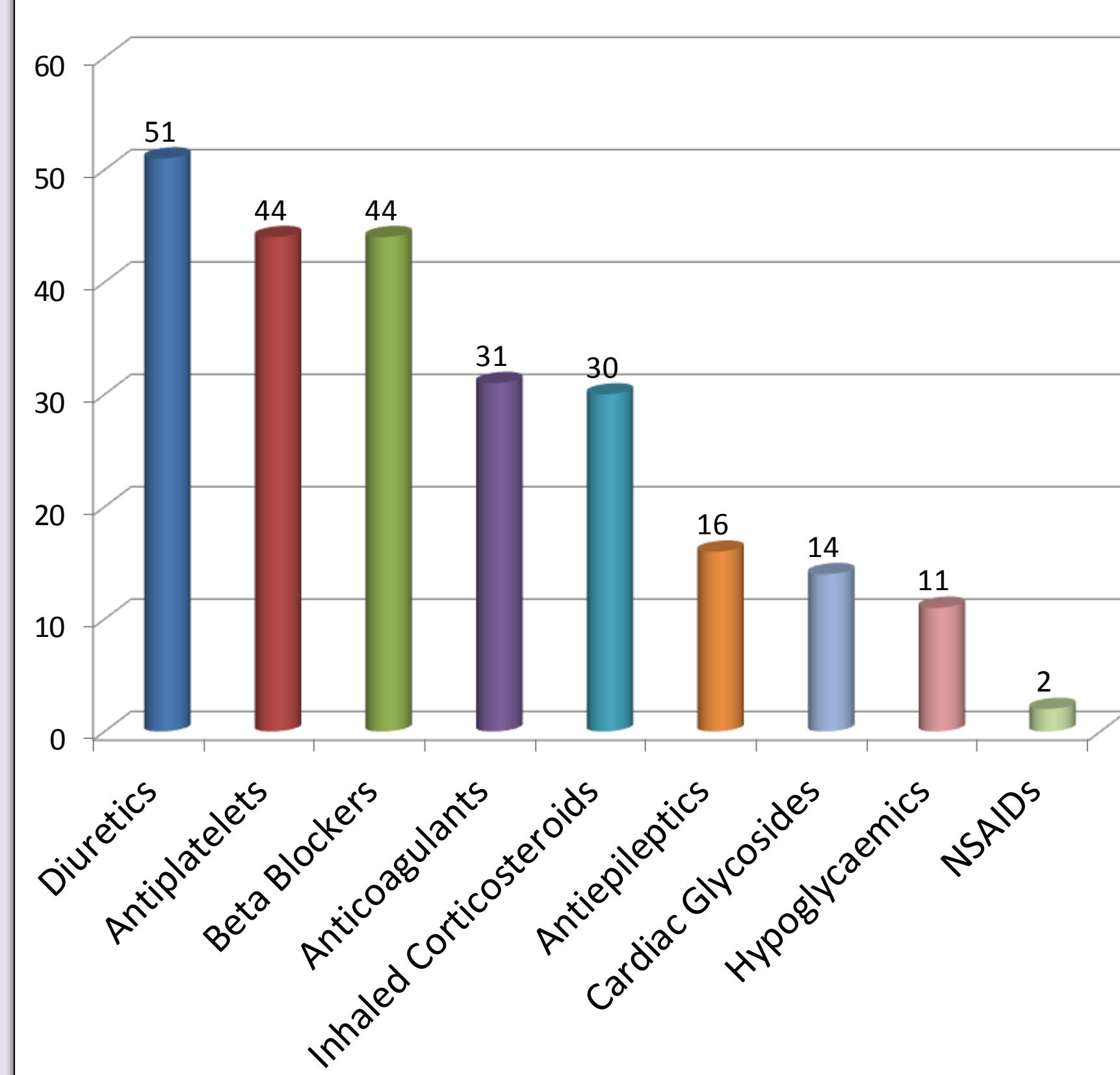
Distribution of frequently admitted frail elderly patients amongst categories of polypharmacy (n=100)



The median number of admissions per patient was 4/ year (IQR range= 1).

- 89% (n=100) of patients were prescribed at least one high risk medicine.
- 78% (n=100) of patients had their medicines changed during their second admission episode.
- 48% (n=100) of patients were found to be taking at least one PIM. These include alpha-blocker, hypnotics, anti-psychotics, tricyclic anti-depressants, anti-muscarinics, high-dose spironolactone (>25mg/day), high dose digoxin (>125mcg/day), and flecainide.

Number of patients prescribed individual high risk medicine groups



## Discussion and Conclusion

- A large proportion of patients had severe polypharmacy ( $\geq 10$  medicines), with complex medication regimes consisting of high risk medicine(s) and PIM(s).
- The full range of Beers Criteria was not used in this study, as clinical judgement could not be made from examining discharge summaries. The proportion of PIM(s) use may be an underestimation.
- We are currently carrying out comparison statistics of this data against those of less frequently admitted frail elderly patients, which will provide an indication of the significance of these findings.
- Targeted deprescribing, close monitoring of high risk medicines and improved discharge planning will facilitate safe medicines use in this patient population .

## References

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