Quantifying the rate of prescribing of high risk medicines for frail patients in primary care: a retrospective study

Nicola Barnes, Bronagh Walsh, Dinesh Samuel, Matthew Johnson, Helena Herrera

Introduction:

Frailty can be defined as a state of vulnerability to physical or environmental challenge (Figure 1).

High risk medicines are frequently associated with adverse reactions implicated in hospital admissions[1].

In the case of a frail patient a hospital admission can have wide ranging and long lasting consequences, including functional decline, loss of independence and increased reliance on primary care services.

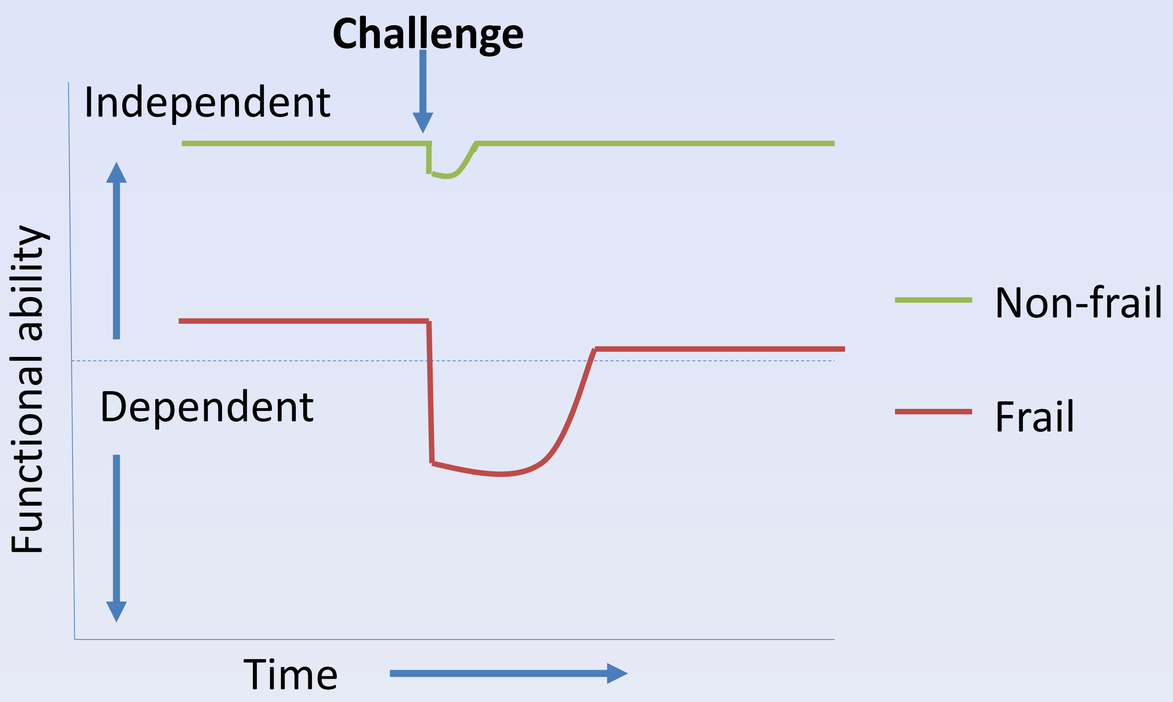

Figure 1. Frail patients 'vulnerability to challenge

Aim:

To quantify the prescribing of high risk medicines in a cohort of frail patients in primary care.

Research Methodology:

A retrospective review of 101 anonymised records from the Hampshire Health Record Analytical Database (HHRA; May-August 2012), from patients aged 55 years and over receiving case management services in primary care, was carried out.

A frailty index (FI) using 19 indicators was calculated[2] to identify frail patients to include in this review (FI score ≥0.25).

High risk medicines prescribed, were identified and categorised according to medicine groups previously reported as being implicated in hospital admissions [1].

Results and Findings:

81 of 101 patients (80%) were identified as frail, of which 40 (49%) were prescribed at least one high risk medicine group (Figure 2).

25 (31%) of frail patients were prescribed medicines from multiple high risk medicine groups.

In addition high levels of general polypharmacy were observed, enhancing the potential for an adverse drug reaction; 51 (63%) of the frail patients were prescribed 5 or more regular medicines, of these 37 (73%) included a prescription for a high risk medicine.

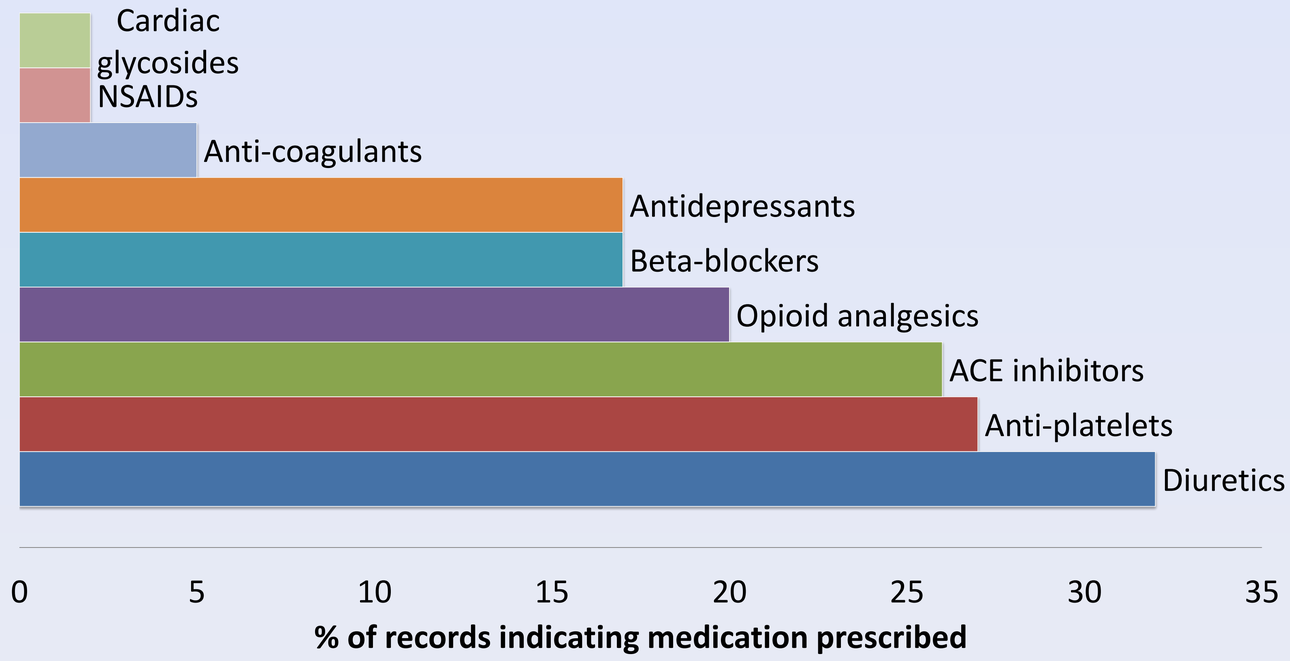

Figure 2. High risk drugs prescribed

Conclusion:

The cautious use of high risk medicines in frail patients is advised. The level of prescribing observed in this study suggests that this frail patient group is particularly at risk of associated adverse events including hospital admissions.

Pharmacists can have an impactful role, supporting general practitioners and patients in reducing inappropriate prescribing and aiding the safe use of high risk medicines, through activities such as Medicines Use Reviews.

Accessibility of medication reviews and support for frail patients, who, despite being community dwelling, may not be able to access their community pharmacist readily, is essential.

Acknowledgements:

We thank NHS South, Central and West Commissioning Support Unit and the Hampshire Health Record Information Governance Group for their support, and for the provision of access to HHRA data.

References:

1. Pirmohamed M, James S *et al.* Adverse drug reaction as cause of admission to hospital; prospective analysis of 18,820 patients. *BMJ* 2004; 329:15-19
2. Drubbel I, de Wit N J *et al.* Prediction of adverse health outcomes in older people using a frailty index based on routine primary care data. *J Gerontol A Biol Sci Med Sci* 2013; 68(3): 301-308

Contact details:
Nicola Barnes
School of Pharmacy and Biomedical Sciences,
White Swan Road, Portsmouth, PO1 2DT
Email: nicola.barnes@port.ac.uk www.port.ac.uk