Which hospital patients should pharmacists prioritise?

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Introduction

- Medicines optimisation is a key role for hospital clinical pharmacists, but with ever increasing demands on services there is a need to increase efficiency whilst maintaining patient safety
- Clinical prioritisation has been proposed as a way to permit pharmacy services to focus on where the need is greatest and where it has the greatest impact[1]
- The aim of this study was to obtain expert opinion on the potential prognostic factors (PFs) that cause medication related problems (MRPs) during hospitalisation
- This will inform the development of a prognostic model, (the Medicines Optimisation Assessment Tool; MOAT), to identify patients at highest risk of MRPs

Method

- Potential PFs were identified from published literature, and an internet survey developed to identify: (1) the perceived importance / clinical relevance of these PFs; (2) other potential PFs
- The survey was administered during April-June 2016
- The target subjects comprised healthcare professionals and patient/public representatives
- Respondents rated each PF using a 5-point Likert scale (from 'very important' to 'not important')
- The median and interquartile range (IQR) were calculated for each PF to establish central tendency and variability

This study received NHS Research Ethics Committee approval (16/WA/0016).

Results

- 247 responses were received
- Table 1 shows the median response score for each proposed PF
- 59 additional PFs were suggested, including dementia (34 participants); adherence/compliance (17); physical/sensory impairment (14); compliance aid (11); and frailty (10)

Discussion

- The majority of PFs (23/27) were considered 'important' or 'very important', with a significant number of additional PFs suggested, demonstrating the multidimensional causality of MRPs
- The results of this study will enable expert opinion to guide development of the Medicines Optimisation Assessment Tool (MOAT), thereby increasing its clinical credibility[2]
- Limitations include the use of convenience sampling, use of an "infinite" target population, precluding calculation of the response rate, and the potential impact of volunteer bias

References

1. NHS England, Transformation of seven day clinical pharmacy services in acute hospitals, September 2016
2. Bouwmeester et al. Reporting and methods in clinical prediction research: a systematic review, *PLoS Med.* 2012;9(5):e1001221

Table 1 **Categorisation of the perceived importance of the proposed prognostic factors:**

Prognostic factor	Median response score*	Interquartile range (IQR)
Renal function	1	0
Liver function	1	1
Age	1	1
Co-morbidities	1	1
Allergies	1	1
Swallowing problems	1	1
No. of medicines prescribed	1	1
No. of PIMs prescribed	1	1
Type of medicine prescribed	1.5	1
Serum sodium level	2	1
Serum potassium level	2	1
Platelet count	2	1
Serum albumin level	2	1
White blood cell count	2	2
Diagnosis/reason for admission	2	1
Type of hospital speciality	2	1
Readmission within 30 days	2	1
No. of admissions in 6 months	2	1
Elective vs. planned admission	2	1
Route of medicine administration	2	1
Dosing frequency of medication	2	1
Social deprivation	2	1
Dependent living situation	2	1
Ethnicity	3	2
Hyperlipidaemia	3	2
No. of outpatient visits in 6 months	3	1
Gender	4	1

*Likert responses allocated ordinal numbers, 1=very important, 2=important, 3=50:50, 4=less important, 5=not important

PIMs: potentially inappropriate medicines

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