



How hospital pharmacists prioritise high-risk patients: A focus group and national survey study



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Background

- Up to one third of hospitalised patients experience medication harm¹
- As experts in safe and effective medication use, hospital pharmacists can mitigate this harm
- However, in busy hospitals it can be challenging to deliver the same level of clinical service to all inpatients in a timely manner
- Pharmacy bodies advocate targeting high-risk patients using lists of risk factors, but these are often extensive and challenging to apply²

Aim

To determine the key criteria used by pharmacists to prioritise patients in Australian hospitals

Method

Method 1: focus groups with hospital pharmacists were used to determine criteria and perspectives on prioritisation

- De-identified transcripts were analysed using inductive thematic analysis
- A sample of transcripts were reliability tested by three independent pharmacists

Method 2: prospective cross sectional national survey of hospital pharmacists

- Focus group criteria relating to themes of clinical and patient factors were used to design the survey
- A literature review of risk factors and predictive risk scores for inpatient medication harm was used to ensure inclusion of key predictors
- Checkbox® was used to administer the survey
- The survey consisted of eight demographic and 19 questions related to prioritisation
- Pharmacists were recruited via an expression of interest email, circulated via the SHPA e-Newsletter and the NTRC
- The survey was available online from March to May 2018

Results

Focus groups:

- A total of 20 pharmacists participated in four, 1- hour focus groups
- Using inductive thematic analysis of the focus group transcripts, 26 codes were identified within three themes:
 - 1) prioritisation criteria (Figure 1)
 - 2) barriers to prioritisation
 - 3) facilitators of prioritisation
- Reliability testing of codes resulted in > 90% consensus
- Lack of relevant information was a common barrier:

“...one of the biggest hurdles in terms of prioritisation is not having adequate information available at the time.”
- Strategies to facilitate better patient prioritisation included use of electronic tools that identify and track high-risk patients:

“Would be beneficial if there was a flag that people have been started on new medications...high-risk stuff...”

Table 1: Key prioritisation criteria

Criteria (n= 231)	N (%)	Sub-criteria (> 50%)	N (%)
1. Therapeutic drug monitoring	222 (96)	Vancomycin	210 (91)
		Gentamicin	163 (71)
		Clozapine	115 (50)
2. Renal impairment	214 (93)	eGFR > 30% change	186 (81)
		eGFR < 30 ml/min	125 (54)
3. High-risk medications	211 (91)	Anticoagulants	191 (83)
		Anti-infectives	125 (54)
4. Non-therapeutic INR/aPTT	206 (89)	Supra-therapeutic INR	198 (86)
		Sub-therapeutic INR	126 (55)
5. High-risk transfer	192 (83)		
6. Types of comorbidities	190 (82)	Acute kidney injury	128 (55)
		Drug-related admission	122 (53)

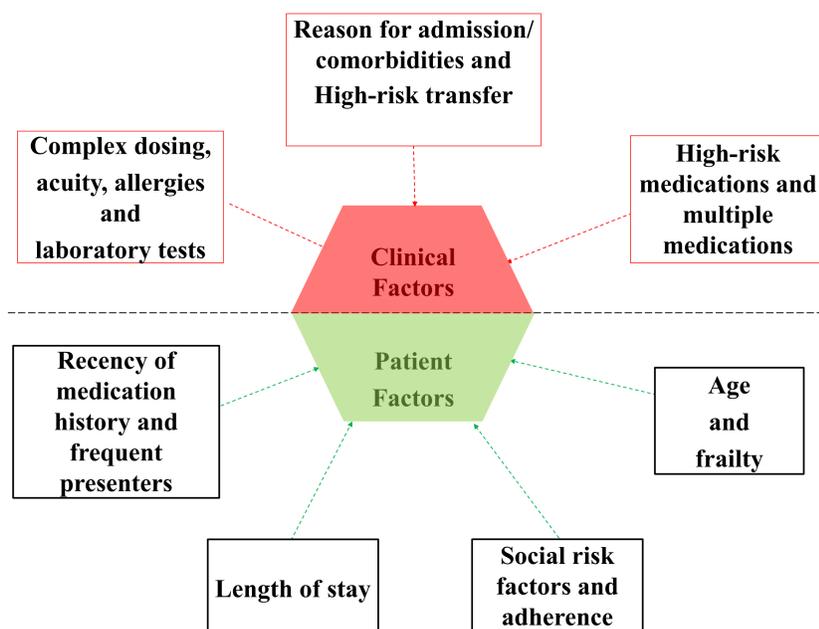


Figure 1: Focus group themes of prioritisation

Survey:

- A total of 231 pharmacists completed the survey
- Table 1 summarises the top six criteria prioritised by >80% of respondents
- The top three criteria, prioritised by >90% of respondents, included therapeutic drug monitoring (TDM), renal impairment and use of high-risk medications

Conclusion: Pharmacists described prioritisation as a multifactorial process with a focus on TDM, high-risk medications and renal impairment. Pharmacists also frequently reported using reason for admission and comorbidities to identify high-risk patients for clinical review. These findings will inform the development of a predictive risk score to help clinicians with early identification of high-risk patients.