

Investigating the Use of Patient Frailty to Guide Pharmacist-led Medication Review

E Kennedy¹, D Lynch¹, A Kerr²

¹Pharmacy Department, Cork University Hospital, ²School of Pharmacy, University College Cork

4CPS-270

BACKGROUND

Chronologically 'old' patients are becoming a diverse group with different healthcare needs. Frailty is a health state associated with reduced physiological reserve and increased vulnerability to external stressors¹. Frailty has been suggested as an alternative to chronological age for identifying patients at risk of poorer health outcomes. It is proposed that patient frailty could help to prioritise patients who can benefit most from pharmacist-led medication review.

AIMS / OBJECTIVES

To examine a relationship between patient frailty and:

1. Specific high-risk medication use criteria
2. Potentially inappropriate prescribing using the Medication Appropriateness Index (MAI).

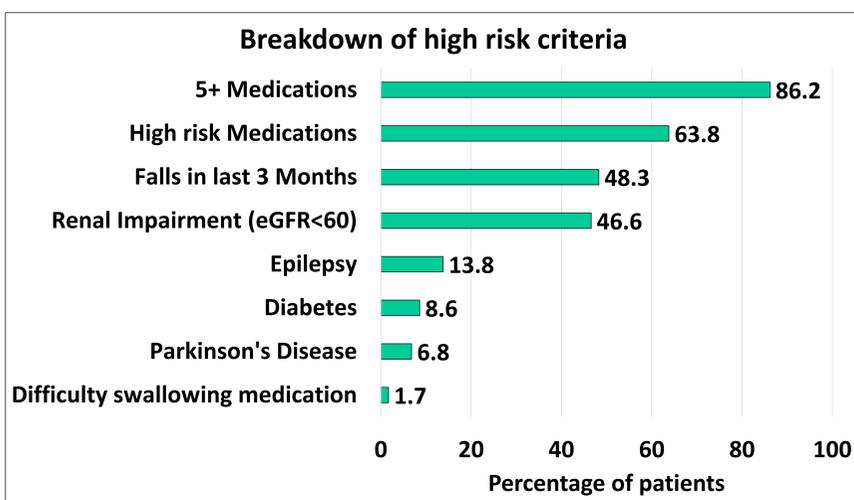
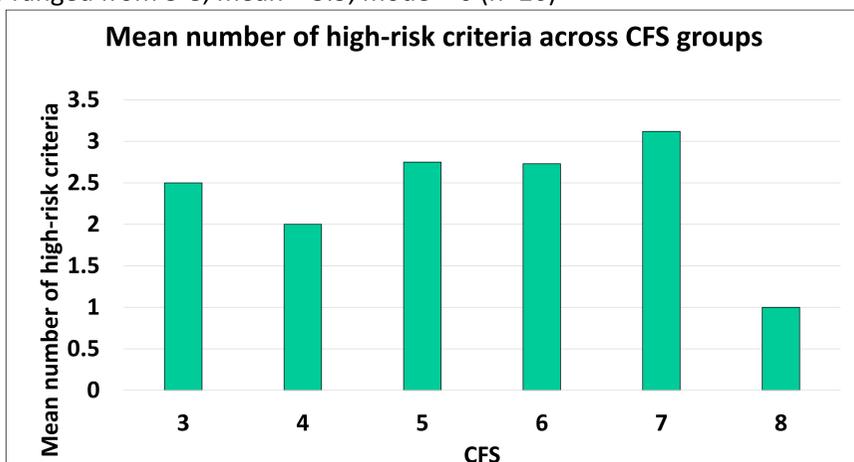
METHODS

- A convenience sample was recruited from patients seen by the Geriatric Emergency Multidisciplinary Service (GEMS) in the Emergency Department of Cork University Hospital
- Patient data collected included:
 - Age
 - Sex
 - Score on the Clinical Frailty Scale (CFS)²
 - Medication history
 - Medical history
- 58 patients were examined for a link between their CFS and high-risk medication use criteria.
- 40 patients had the MAI³ tool applied to their medication, and a link was examined between their CFS and MAI.
- Both relationships were tested for correlation using Excel[®] (Microsoft 2019).
- Ethical approval was granted by the Clinical Research and Ethics Committee of the Cork Teaching Hospitals and UCC.

RESULTS

Data were collected on 58 patients seen by GEMS

- 58% were female
- Age ranged from 71-95, mean age = 84.1 years
- CFS ranged from 3-8, mean = 5.5, mode = 6 (n=26)



Medication Appropriateness Index:

- In the subgroup of 40 patients who had the MAI applied, all patients scored ≥ 1 .
- Patients' individual scores ranged from 1-29.
- 31% (103/331) of drugs examined were deemed inappropriate by meeting one or more of the criteria outlined in the MAI tool.

MAI criteria (Those not listed =0)	Frequency of inappropriate response
Is there an indication for the drug?	51
Is the dosage correct?	9
Are there clinically significant drug-drug interactions?	16
Are there clinically significant drug-disease/condition interactions?	38
Is the duration of therapy acceptable?	10

Most common drugs without indication:

- Proton Pump inhibitors= 13
- Diuretics = 6
- Aspirin = 6
- Antipsychotic = 4
- Antiepileptic = 2

Most common drug-disease interaction:

- SSRI + falls = 8
- Night-time Sedative + falls = 7
- Antiepileptic + falls = 3
- Antipsychotic + falls = 3

Correlation between CFS and high-risk medication criteria and MAI:

Relationship	Correlation Coefficient
CFS and high risk medication use criteria	0.13
CFS and MAI	0.4

CONCLUSIONS

- The study failed to identify a specific level of frailty at which pharmacist intervention may be of most benefit.
- 96% of patients reviewed met at least one high-risk medication use criteria, and all patients who had the MAI applied had at least one inappropriate medication according to the criteria outlined in the tool.
- Patients identified as being frail may benefit from pharmacist intervention to help reduce the risk of adverse drug reactions.

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Acknowledgments: Thank you to the Pharmacy Department and GEMS team, CUH

Contact: eimeare.kennedy@hse.ie