CORA Cork Open Research Archive
Cartlann Taighde Oscailte Chorcaí

Title	The potential contribution of medicines to falls in older persons and the acceptance of pharmacist intervention
Authors	Richardson, M.;O'Dwyer, C.;Gaskin, J.;Conyard, E.;Murphy, Kevin D.
Publication date	2020-03-01
Original Citation	Richardson, M., O'Dwyer, C., Gaskin, J., Conyard, E. and Murphy, K. D. (2020) 'The potential contribution of medicines to falls in older persons and the acceptance of pharmacist intervention', Health Services Research and Pharmacy Practice Conference, Cardiff, Wales, 16-17 April, in International Journal of Pharmacy Practice, 28 (S1), pp. 57-58. doi: 10.1111/ijpp.12607
Type of publication	Conference item
Link to publisher's version	https://onlinelibrary.wiley.com/doi/full/10.1111/ijpp.12607 - 10.1111/ijpp.12607
Rights	©The Authors. IJPP © 2020 Royal Pharmaceutical Society
Download date	2026-11-15 18:02:23
Item downloaded from	https://hdl.handle.net/10468/9837



UCC
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

The Potential Contribution of Medicines to Falls in Older Persons and the Acceptance of Pharmacist Intervention

Richardson M[1], O'Dwyer C[1], Gaskin J[1], Conyard E[1], Murphy K[2]
Pharmacy Department Our Lady of Lourdes Hospital Drogheda[1],
School of Pharmacy, University College Cork, Ireland[2]

INTRODUCTION

- Falls account for 10-15% of acute hospital presentations in patients ≥60 years and cause >50% of injury-related hospitalisations.
- The cost of falls treatment in Ireland will double in next 10 years from €0.9 - 1.1 billion in 2020 to €1.6 - 2.0 billion by 2030 (1). Reduced quality of life, fear of future falls and decreased physical activity can persist long after discharge.
- Polypharmacy & medicine choice are modifiable fall risks in older patients; medicines known to increase fall risk are Fall Risk Increasing Drugs (FRIDs) (1-5) e.g. benzodiazepines and antihypertensives.
- Clinical Pharmacists (CPs) can reduce the risk of falls by managing polypharmacy and FRID prescribing as part of multidisciplinary management of older patients (6-9).

AIM

1. Examine FRID use in older persons presenting with falls at Our Lady of Lourdes Hospital Drogheda (OLOL) in the Republic of Ireland,
2. Investigate acceptance of CP intervention in reducing FRIDs.

METHODS

Acute admissions records in the Emergency Department (ED) & Acute Medical Assessment Unit (AMAU) of OLOL were searched daily for eligible patients (Table 1) between June 1st and July 13th 2018.

Table 1: Inclusion and Exclusion Criteria

Inclusion Criteria	**≥65 years , acute fall presentation**
Exclusion Criteria	**≤65 years , non-acute fall presentation, fall as an inpatient, not on any regular prescribed medicine**

Informed consent was sought from the patient or next of kin. The CP provided routine care service to included participants: (i) medication reconciliation, (ii) review of observations, (iii) review of renal and hepatic function, and (iv) review of prescribed medicines for polypharmacy, duplication of therapy, interactions & patient-specific medicine appropriateness.

CP recommendations focused on the top five classes of FRIDs based on a meta-analysis by Woolcott *et al* (10).

Medical records were reviewed between July 16th and 20th 2018 to determine the extent of recommendation implementation. Data was analysed using Microsoft Excel.

RESULTS

Polypharmacy:

➢77% of those recruited were on ≥5 medicines on admission
➢32 % of those recruited were on ≥10 medicines on admission.
➢100% of patients prescribed benzodiazepines, sedatives and antipsychotic medicines were on ≥5 medicines on admission .
➢94% of those on antidepressants were on ≥5 medicines on admission.
➢76% of those prescribed antihypertensives were on ≥5 medicines on admission.

On review 83% of patients were on ≥5 medicines. The increase in the number of medicines was predominantly due to analgesics and laxatives. 47.2 % had in increase in the number of medicines prescribed, 20.8% of patients had a reduction in the number of medicines prescribed, while 32.1% were unchanged. It would have been desirable to review patients at a later point when analgesia and laxatives and acute medicines had ceased.

Classes of Medicines:

Table 2: Medicine Classes per Patient on Admission

	Male	Female	Total	%
Antihypertensives	**22**	**20**	**42**	**79.2%**
Antidepressants	**5**	**11**	**16**	**30.2%**
Benzodiazepines	**3**	**4**	**7**	**13.2%**
Antipsychotics	**0**	**1**	**1**	**1.9%**
Neuroleptics	**0**	**0**	**0**	**0**
Sedatives	**4**	**2**	**6**	**11.3%**

➢94.3% of patients on ≥ 1 FRID on admission
➢Total of 83 antihypertensive agents prescribed to 42 patients on admission
➢ On review, there was a reduction of 15 antihypertensive agents prescribed with 10 diuretics ceased.
➢One sedative was stopped and two benzodiazepines were stopped while a further three patients had their benzodiazepine dose reduced with a view to cessation, however the process had not been completed at the time of review. Cessation of sedatives and benzodiazepines has to be completed slowly in a stepwise manner to minimise patient distress.
There was no reduction in the prescribing of antipsychotics and an increase of two patients prescribed antidepressants.

Role of the Clinical Pharmacist:

Clinical Pharmacists made recommendations for changes to patients medicines aimed at reducing the risk of future falls. The recommendations were reviewed by the patients medical team and discussed with the Clinical Pharmacist if necessary.

- 41.7% of recommendations were fully actioned.
- FROR was reduced for benzodiazepines, diuretics, ACE inhibitors and Angiotensin Receptor Blockers.
- FROR was increased for antidepressants and unchanged for other classes of medicines.
- The reduction in the FROR was not statistically significant (p=0.22).

CONCLUSIONS AND FUTURE RESEARCH

Clinical Pharmacists have a key role to play in identifying and managing polypharmacy and FRIDs in older patients. CPs can contribute to the multidisciplinary team in medicines management and reducing the risk of future falls in older patients. Reducing falls incidence ensures better quality of life, reduced acute hospital admissions in a stretched healthcare system. There is scope for significant future research in this area including: longer follow-up period for patients after CP review and review after discharge from hospital to determine if suggested changed to medicines have been implemented and sustained. CPs can have input in development of education programmes for prescribers to highlight FRIDs and polypharmacy in older patients at risk of falls. There is CP involvement in development of a Falls Prevention Policy in the North-Eastern HSE area and in HSE Falls Collaborative research as a result of this research.

Acknowledgments: The authors would like to thank the Pharmacy Department OLOL Drogheda for all their assistance in data collection
References available on request; contact Marie Richardson, Pharmacy Department, OLOL Drogheda mariee.richardson@hse.ie