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## CONFERENCE ABSTRACT

### Healthcare utilisation following pharmacist case management of older people in intermediate care.

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#### ***Introduction***

A novel care model, established to address inappropriate prescribing among older people admitted into intermediate care (IC) in Northern Ireland, has shown significant improvements in prescribing appropriateness [1]. Medications are assessed by a case management pharmacist using the Medication Appropriateness Index (MAI) [2]. A patient-specific pharmaceutical care plan is developed, with case management continuing for 30 days post-discharge. To date, the relationship between improved prescribing appropriateness and unplanned hospital readmission following IC discharge has not been examined.

#### ***Methods***

Data from older people ( $\geq 65$  years, N=532) admitted into IC in two Northern Irish healthcare trusts was examined using SPSS version 25. The number of unplanned hospital admissions within 30 days, 31-90 days and 0-90 days of IC discharge was examined using Poisson regression. Independent variables including MAI score improvement and clinical intervention types were examined in multivariate analyses, controlling for demographics, medical history and hospital admissions in the previous 12 months. Time to readmission was compared between those who experienced MAI score change and those who did not using Kaplan-Meier survival analysis.

#### ***Results***

In total, 115 participants were readmitted following IC discharge. No significant association was observed between MAI score improvement and the number of unplanned readmissions <30 days, 31-90 days and <90 days of IC discharge. Time to readmission was not significantly different for those who experienced a change in total MAI score (Mdn=25) and those who did not (Mdn=28),  $\chi^2(1) = .468$ ,  $p = .494$ . Patient education and medication dosage alteration were significantly associated with fewer readmissions within 30 days and 31-90 days, respectively. The number of unplanned admissions in the 12 months before IC admission was predictive of the number of readmissions in all three periods (<30, 31-90 and <90 days).

### ***Discussion***

Improved MAI scores were not associated with unplanned hospital readmissions within 90 days of IC discharge. Individual intervention types showed some significant associations with fewer admissions. Previous hospital admissions, which may serve as a proxy for clinical need, was a consistent predictor of readmissions in the three months following IC discharge.

### ***Conclusions***

Medicines optimisation in intermediate care has resulted in improved care and drug cost savings [1]. Whilst medicines optimisation was not associated with hospital readmission, elements of the service showed significant associations with fewer admissions.

### ***Lessons learned***

Hospital readmission is multifactorial and may be unavoidable for older people who exhibit greater clinical complexity. Pharmacist involvement within IC may contribute to fewer readmissions for some older people.

### ***Limitations***

No random allocation to a control group limit the inferences from identified results.

### ***Suggestions for future research***

Future research should identify whether improved prescribing for specific medications show any association with hospital readmission.

### ***References***

1. Miller R. Developments in Practice. Medicines optimisation in older people (MOOP); the journey from pilot to permanent service. *Journal of Medicines Optimisation*. 2018 Sep;4(2):27.
2. Hanlon JT, Schmader KE, Samsa GP, Weinberger M, Uttech KM, Lewis IK, et al. A method for assessing drug therapy appropriateness. *Journal of Clinical Epidemiology*. 1992 Oct 1;45(10):1045-51.