Implementation of a Geriatric Stewardship reduced post-discharge patient-reported adverse drug events by half

G.H.M. Ponjee[1], H.W.P.C. van de Meerendonk[2], M.J.A. Janssen[1], F. Karapinar-Çarkit[1].

[1]Department of Hospital Pharmacy, OLVG, Amsterdam, the Netherlands, [2]Department of Internal Medicine/Geriatrics, OLVG, Amsterdam, the Netherlands.

Contact: f.karapinar@olvg.nl

Background

A major obstacle in inpatient medication reviews is the lack of insight into patient needs and outpatient medical history. The importance of patient interviews in an inpatient setting has been studied before by Viktil et al (2006). No previous study considered consultation of primary care providers.

Aim

To establish whether post-discharge drug-related problems (DRPs) can be reduced via Geriatric Stewardship, which entails inpatient medication reviews based on patient interviews and consultations with primary care providers.

Methods

Design

An implementation study (pre-post design) was conducted at the hospital OLVG (Amsterdam) from August 2017 to August 2018.

Study population

Hospitalized elderly with polypharmacy and a risk factor for frailty who were admitted to an orthopedic or surgical ward.

Intervention

The pre-cohort received usual care. The after-cohort received an extended medication review based on 1) a review of the clinical records to draft a recommendation, 2) a consultation with the general practitioner and with the community pharmacist to discuss the hospital based recommendations, 3) a patient interview to assess patient needs and medication problems, and 4) a multidisciplinary evaluation of all the recommendations of step 1 to 3 by a hospital pharmacist and a geriatrician.

Data collection and classification

Two weeks post-discharge, patient-reported DRPs were assessed by telephone using a validated questionnaire.[2] DRPs were classified into 1) patient-reported adverse drug events (pADEs) (e.g. coughing), 2) practical problems (e.g. dysphagia), and 3) questions about medication (e.g. duration of treatment).

Outcomes

Primary: the number of DRPs per patient in each group. Secondary: the number of recommendations that were altered after patient interviews and consultations with primary care providers in the intervention group.

Statistics

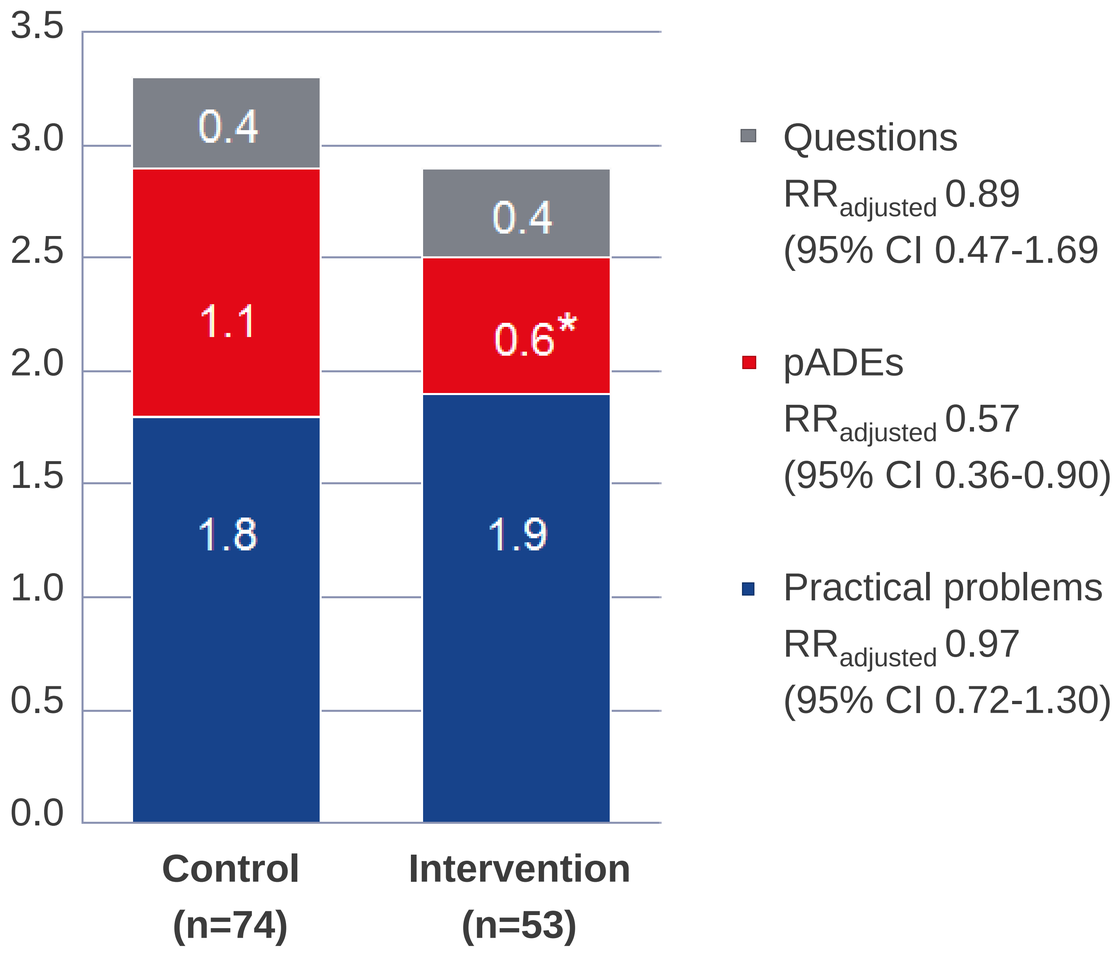
A Poisson regression, adjusted for potential confounders between the groups.

Results

Patient-reported DRPs

In total, 127 patients were included. Intervention patients reported fewer DRPs after discharge than patients that received usual care, 2.8 vs. 3.3 per patient (RR 0.83, 95%CI 0.66-1.05). The difference was mainly due to a halving in pADEs ($p<0.05$).

Figure 2 Patient-reported drug related problems (DRPs) two weeks after discharge.

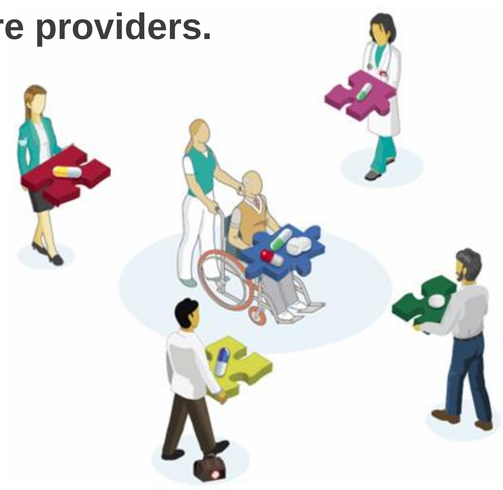


Recommendations based on medication review

In the intervention group, nearly 30% of the medication review recommendations based on the clinical records were altered after consulting with the patient and primary care providers.

Discussion and conclusions

- **The implementation of a Geriatric Stewardship did not significantly reduce the total number of DRPs post-discharge, probably due to sample size, but it did significantly halve pADE post-discharge.**
- **More follow-up of patients post-discharge might be needed to reduce practical problems and questions about medication.**
- **One in three medication review-based recommendations were altered after patient interviews and consultations with primary care providers.**



References
1. Viktil KK, Blix HS, et al. Pharmacoepidemiol Drug Saf 2006;15:667-74.
2. Willeboordse F, Grundeken LH, et al. Int J Clin Pharm. 2016;38:380-387.

Acknowledgement: the authors are grateful to all colleagues who assisted with technical and/or information support.
Funding: not applicable.
Ethics approval: the study was approved by the scientific board of OLVG.
Conflict of interest: none.

http://www.eahp.eu/24-5PSQ-155