

CLINICAL IMPACT OF A PHARMACIST-LED DISCHARGE MEDICATION REVIEW SERVICE: AN ANALYSIS OF PREVALENCE AND ACCEPTANCE OF INTERVENTIONS.

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BACKGROUND

Hospital discharge is linked to an increase in the risk of drug-related problems (DRPs). If these are not recognised and solved, they could be carried over to primary care, with the risk of insufficient follow-up resulting in potential harm to the patient.

AIM AND OBJECTIVES

- To evaluate a pharmacist-led discharge medication review service by
- analysing identified DRPs and the acceptance rate of suggested pharmacists' interventions (PIs)
 - assessing the clinical significance of these findings

METHODS

A two-phased mixed method study:

(1) Retrospective descriptive analyses of the number and type of identified DRPs and recommended interventions based on a validated classification system [1];

(2) Quantitative assessment of the potential clinical impact of a cross section of PIs by an independent expert panel (2 physicians, 1 clinical pharmacist, 1 registered nurse) using the validated rating system CLEOde [2]. The overall agreement was determined by the Kendall coefficient of concordance and inter-rater agreement by the Weighted Kappa.

RESULTS

- 291 identified DRPs in 205 patients were analysed
- Most frequently identified DRPs: «drug interaction» (34%; n = 99), «error in medication process» (8.2%; n = 24) and «duplication» (8.2%; n = 24) (Table 1)
- Most frequently suggested PIs: «optimisation of administration/route» (19.6%; n = 57), «therapy stopped» (16.2%; n = 47) and «dose adjustment» (15.8%; n = 46) (Figure 1)
- Physicians accepted 69% (n = 74) of the interventions
- 64% (n = 38) of the PIs presented to the panel, were considered to have a clinical impact (Figure 2)
- Overall agreement: substantial (Kendall- W 0.734; p < 0.001).
- Inter-rater agreement: fair to moderate (Weighted linear κ = 0.293 - 0.505; p < 0.001 for all values).

LIMITATIONS OF THE STUDY

- Retrospective and mono-centric study design
- Pharmacists' clinical skills, amount of experience, limited access to medical records
- Adapted version of PharmDISC classification system applied

CONCLUSION

The expert panels independent assessment showed that the pharmacist-led discharge service is clinically beneficial for patients. The prevalence of analysed DRPs and the physicians' high acceptance rate highlight the valuable role of pharmacists to improve patient safety at the time of discharge. Supplementary comprehensive medicine reconciliation activities should be considered at the study site.

References

- [1] MAES, K.A. et al., 2017. Int J Clin Pract, 23(6), pp. 1425-1432
 [2] STÄMPFLI, D. et al., 2019. Int J Clin Pharm, 41(1), pp. 56-64

Type of DRP (cause of the intervention)	n	%
Interaction	99	34.0%
Duplication	24	8.2%
Error in medication process	24	8.2%
Inappropriate dosage form	23	7.9%
Untreated indication	22	7.6%
Incomplete/unclear prescription	19	6.5%
Inappropriate timing or frequency of administration	17	5.8%
Overdose	15	5.2%
Dose not adjusted to organ function	14	4.8%
Drug not indicated	11	3.8%
Underdose	6	2.1%
Adverse effect	5	1.7%
No concordance with guidelines	5	1.7%
Contraindication	4	1.4%
Financial burden (patient/public health)	3	1.0%
Total	291	100%

Table 1: Number and type of analysed drug-related problems (n = 291)

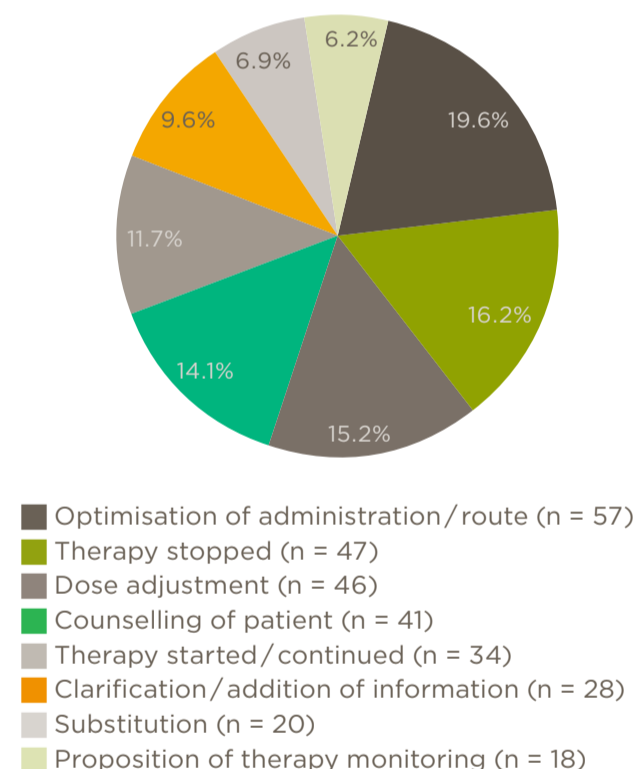


Figure 1: Number and type of interventions (n = 291)

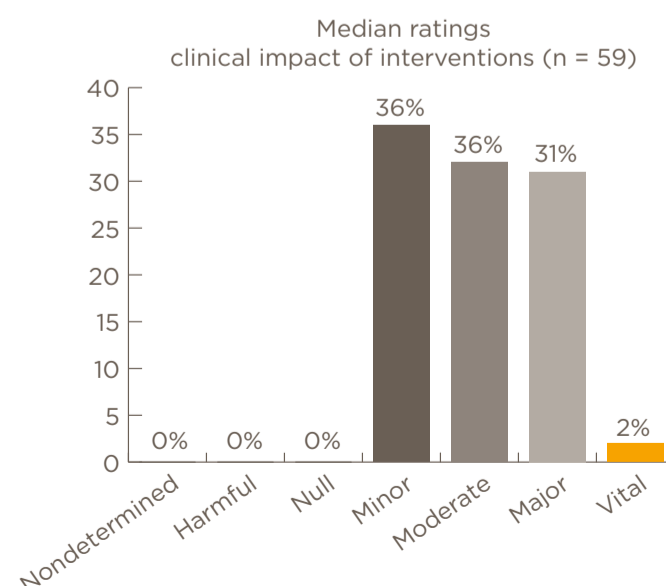


Figure 2: Percentage of median ratings per clinical impact level of interventions (n = 59) assigned by the expert panel