

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

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4CPS-194

## Background and Importance

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 <sup>[1]</sup>;
- 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 CLEO<sub>de</sub> <sup>[2]</sup>. The overall agreement was determined by the Kendall coefficient of concordance.

## 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)

## Conclusion and Relevance

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.

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

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%
<b>Total</b>	<b>291</b>	<b>100%</b>

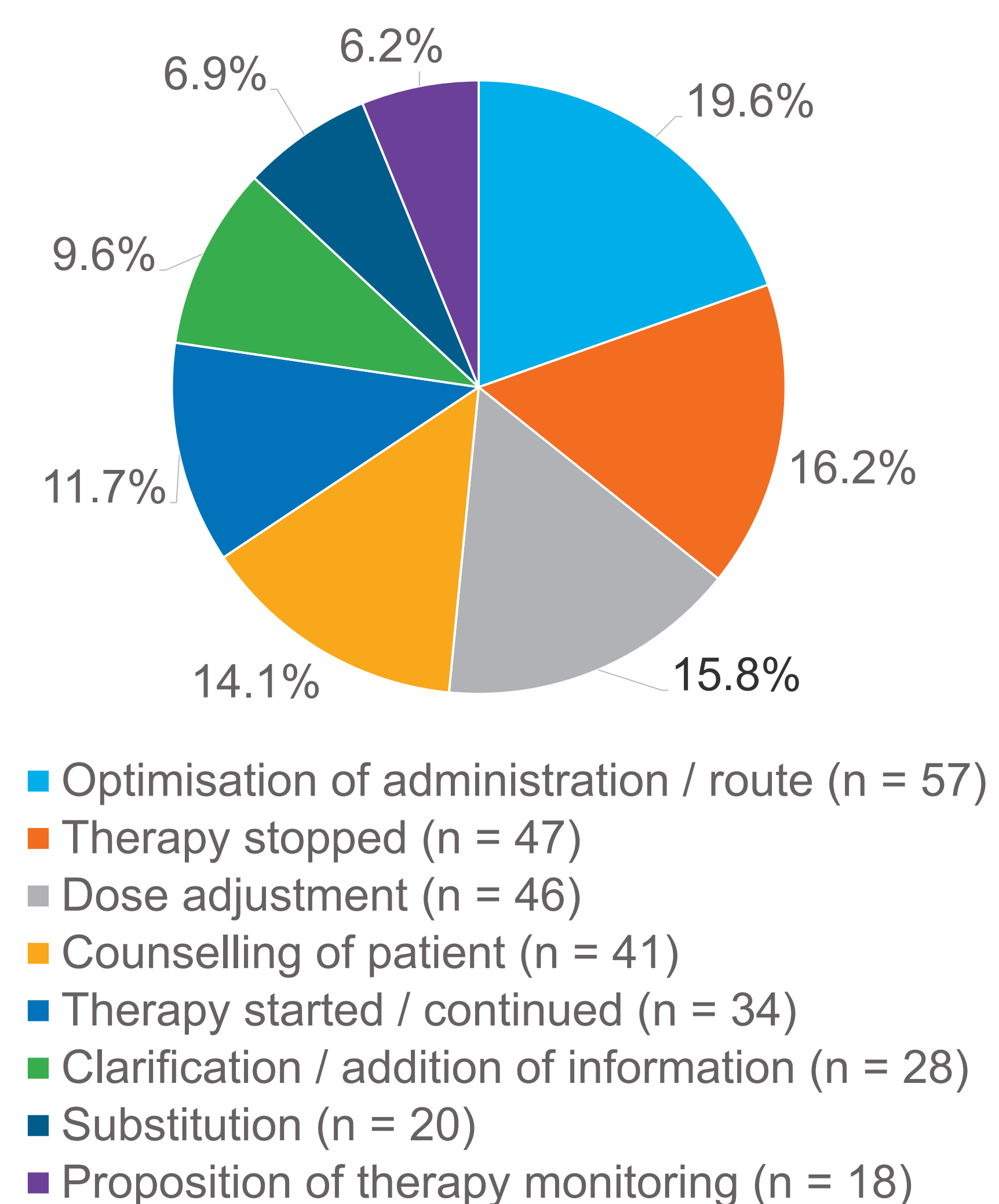


Figure 1: Number and type of interventions (n = 291)

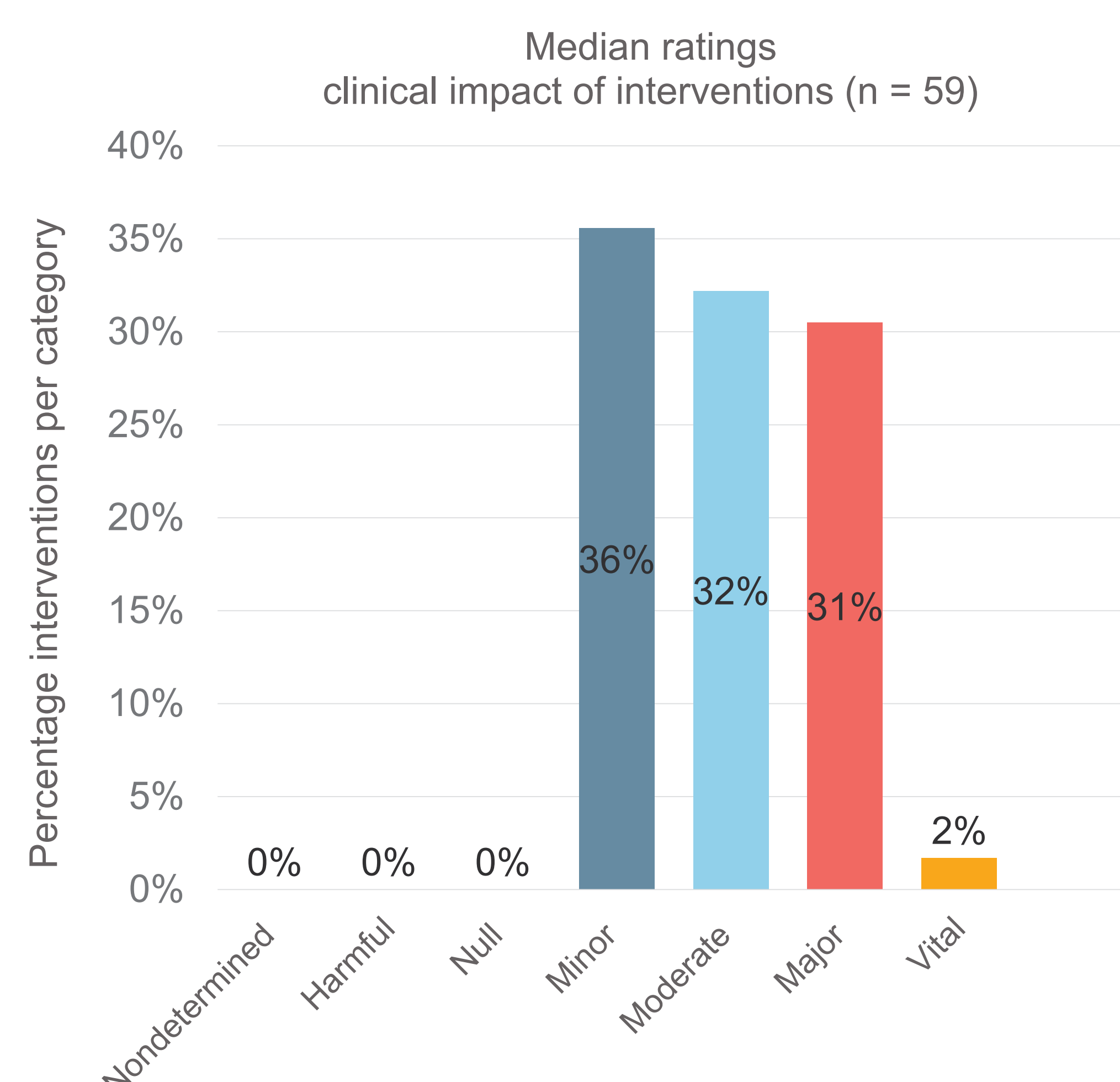


Figure 2: Percentage of median ratings per clinical impact level of interventions (n = 59) assigned by the expert panel

## References

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