

Addressing non-adherence in an interprofessional medication management service in Germany (ARMIN-Project)

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BACKGROUND

From July 2016 to June 2022, a medication management conducted by physicians and community pharmacists was offered within ARMIN [1]. The intervention consisted of an initial medication review followed by a continuous medication management. The overall aim was to improve the effectiveness and safety of pharmacotherapy.

AIM

Identifying drug-related problems (DRPs) and classifying the resulting pharmaceutical interventions (PIs) with a focus on medication non-adherence.

METHODS

We aimed to recruit a convenience sample of n=60 patients. The medication management was conducted by pharmacists and physicians in a defined process (Fig. 1).

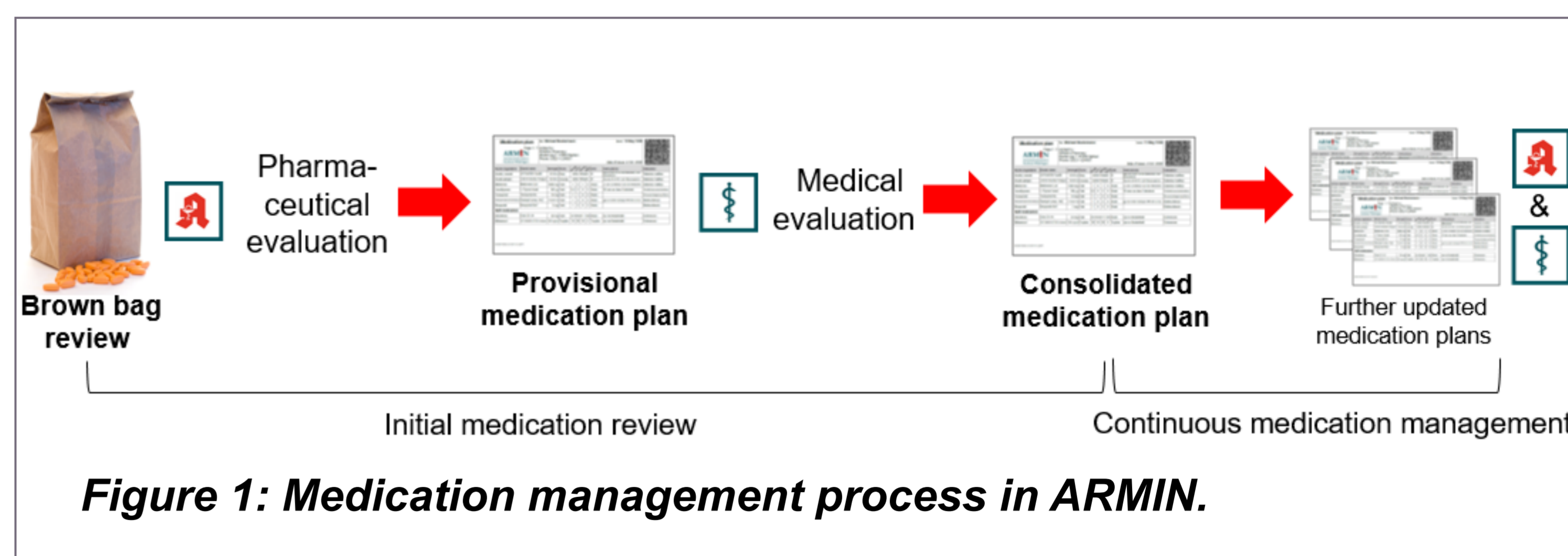


Figure 1: Medication management process in ARMIN.

Pharmacists documented DRPs and PIs for a period of 6 months per patient. PIs were retrospectively assessed by two independent raters by using:

- PharmDISC system (**P**harmacists' **D**ocumentation of **I**nterventions in **S**eamless **C**are, [2]) to classify PIs in the following 6 categories: problem, type of problem, cause for PIs, PIs, communication, result of PIs.
- CLEO tool [3] to assess the potential impact of the PIs in 3 categories: **C**linical, **E**conomic and **O**rganisational impacts of the PIs.

RESULTS

- 79 patients (54% female) were recruited by 17 community pharmacies.
- Mean number of drugs on the consolidated medication plans was 10.2 (median: 9; range 5–27); 81% prescribed drugs and 19% non-prescription drugs.
- 470 DRPs in 73 patients (92.4%) resulting in 538 PIs.

Item	All DRPs Median (range) or n (%)	Non-Adherence Median (range) or n (%)
DRPs in total	470 (100.0)	40 (100.0)
DRPs during the initial medication review	420 (89.4)	32 (80.0)
DRPs during the continuous medication management	50 (10.6)	8 (20.0)
DRPs per patient	6 (0–19)	1 (1–5)

Non-adherence was documented in 24 patients (30%); accounting for 40 DRPs (8.5% of all DRPs) resulting in 56 PIs (10.4% of all PIs, Fig. 2). In 37 PIs (66%), the physician was contacted by the pharmacist.

Results of the PIs in non-adherence were:

- Successfully implemented (n=21; 38%)
- Accepted but not implemented (n=6; 11%)
- Not accepted (n=1, 2%)
- Result not known (n=22; 39%)
- Acceptance not needed (n=6; 11%)

Non-Adherence

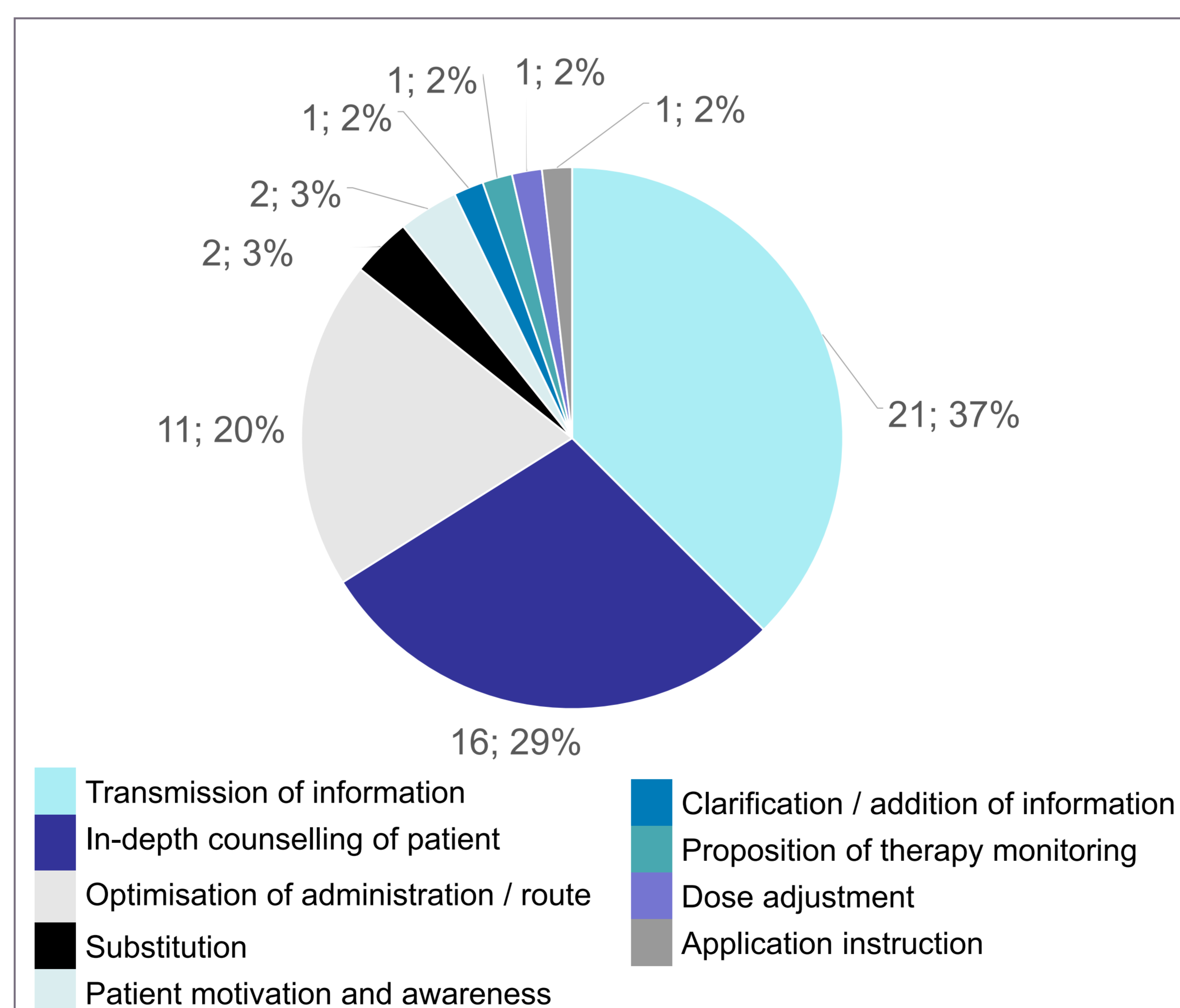


Figure 2: PIs resulting from non-adherence (n=24 patients).

Potential impact was assessed with CLEO tool for 27 (48%) of all PIs:

- Clinical impact: all PIs (n=27, 100%) were clinically relevant
- Economic impact:
 - Cost saving: n=5 (19%)
 - Cost increase: n=1 (4%)
 - No change: n=21 (78%)

Non-adherence was most often observed for lipid-modifying agents (9 out of 40 DRPs; 23%) followed by beta blockers (n=5, 13%), and diabetes medications (n=4; 10%).

Main reason for non-adherence in lipid-modifying therapy was forgetting the evening dose (n=4), one patient reported a fear of statin-related myopathy.

DISCUSSION AND CONCLUSIONS

In the interprofessional medication management ARMIN a large number of DRPs was detected (n=470), among these non-adherence was one frequent problem. Non-adherence can not only be identified by pharmacists but can also be solved with PIs, often in cooperation with the physician.

This indicates that pharmacists can contribute to optimize patients' medication adherence. PIs were classified as clinically relevant and can therefore potentially improve pharmacotherapy and patient safety.

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CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.