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LOCAL ASSESSMENT OF THE IMPACT OF PHARMACIST-LED MEDICATION RECONCILIATION ON HOSPITALISED ELDERLY PATIENTS

S.Nobili[1], S.E.Campbell Davies[1], E.Galfrascoli[1], C.Tinelli[3], M.Picca[2], P.Marino[2], G.Muserra[1], M.Medaglia[1]
(1) Hospital Pharmacy, (2) Medicine Ward
FATEBENEFRATELLI E OFTALMICO and MACEDONIO MELLONI HOSPITAL, MILAN, ITALY
(3) Epidemiology Department
S.MATTEO HOSPITAL, PAVIA, ITALY.

Background

Medication Reconciliation (MR) through pharmacists' interventions (PIs) is a standardised practice in many Countries to reduce drug related problems (DRPs), such as drug-drug interactions, no therapeutic indication and inappropriate duplications. DRPs, which are relatively common in poly-treated elderly hospitalised patients, can increase morbidity and healthcare costs. In Italy, MR has still not been systematically introduced, therefore, local assessments are crucial to evaluate feasibility

Purpose

To evaluate the impact of pharmacist-led MR.

Figure 1-2. Medication Reconciliation

Material & methods

A pre-post intervention study was performed including hospitalised poly-medicated patients >65 years:

Pre-intervention group (PRE-group)
May 2017-September 2017
MR WAS NOT CONDUCTED

→

Post-intervention group (POST-group)
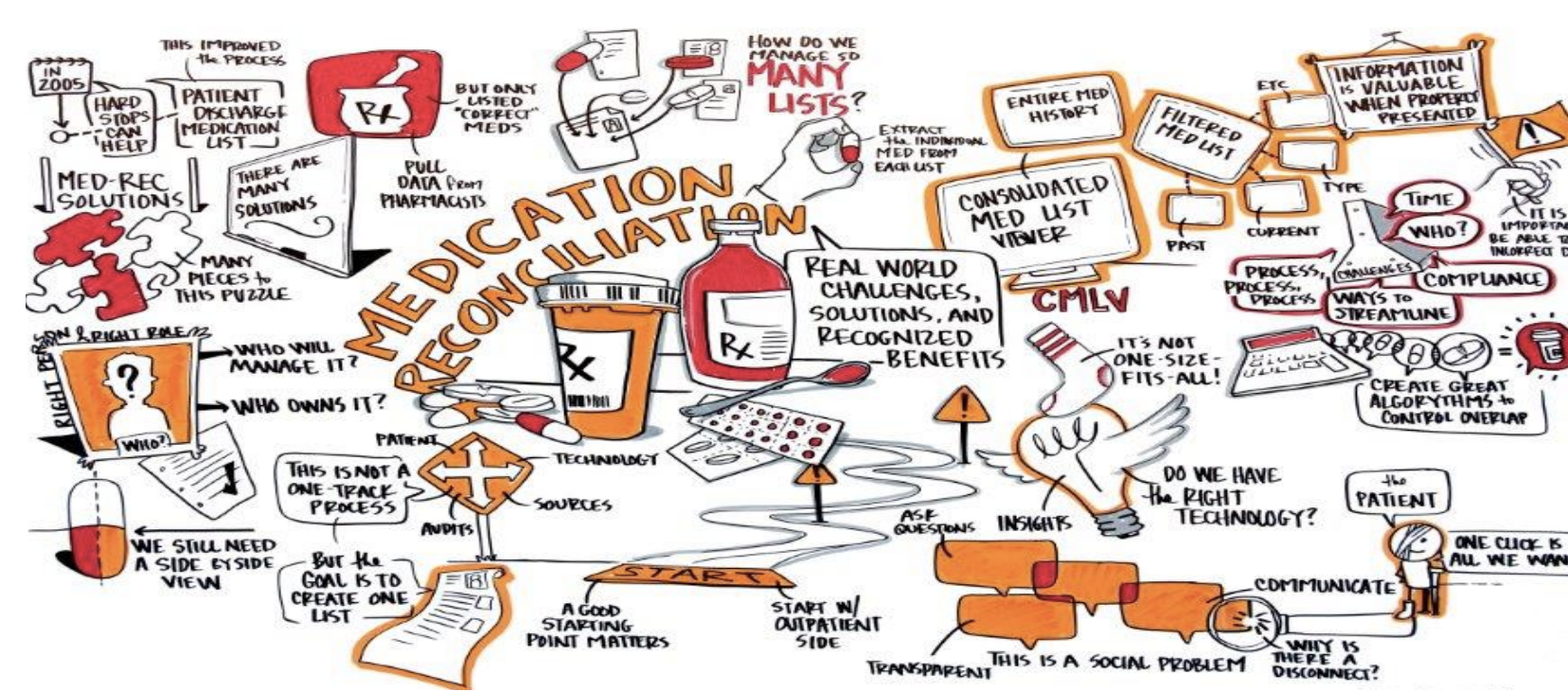November 2017-March 2018
MR WAS PERFORMED

Data, collected with a specifically designed MR form from medical records and the hospital database, were registered in an Excel database including: -patient demographics;
-number of prescriptions and DRPs at admission and at discharge;
-number of PIs and clinician acceptance rate in the POST-group;
-rehospitalisation rate 3 months after discharge in both groups;

Statistical analysis was performed using STATA 15®. Student t-test for independent data was used to compare quantitative variables between two groups, while chi-square test was used for qualitative variables.

Results

A total of 84 patients were included: 34 in PRE-group (35.3% male, mean age 84.5±6.7, mean number of prescriptions per patient on admission 7.4±2.7, at discharge 8.0±2.6) and 50 in POST-group (46% male, mean age 83.2±17.5, mean number of prescriptions per patient on admission 8.4±3.2, at discharge 7.7±3.0).

Patient characteristics	PRE	POST
N° patients	34	50
N° male (%)	12/34 (35.3%)	23/50 (46%)
Mean age(years) ± SD	84.5±6.7	83.2±17.5
Mean N° of drugs per patient on admission	7.4±2.7	8.4±3.2
Mean N° of drugs per patient at discharge	8.0±2.6	7.7±3.0

Table 1. Patient characteristics

DRPs at discharge were substantially reduced after implementation of MR conducted by a pharmacist (p<0.001): in PRE-group, mean 2.90±2.83 DRPs per patient were identified on admission and 3.79±2.99 at discharge, in POST-group 4.80±2.97 DRPs per patient on admission and 2.64±1.75 at discharge leading to a significant difference in terms of reduction of DRPs at discharge between the 2 groups (p<0.05).
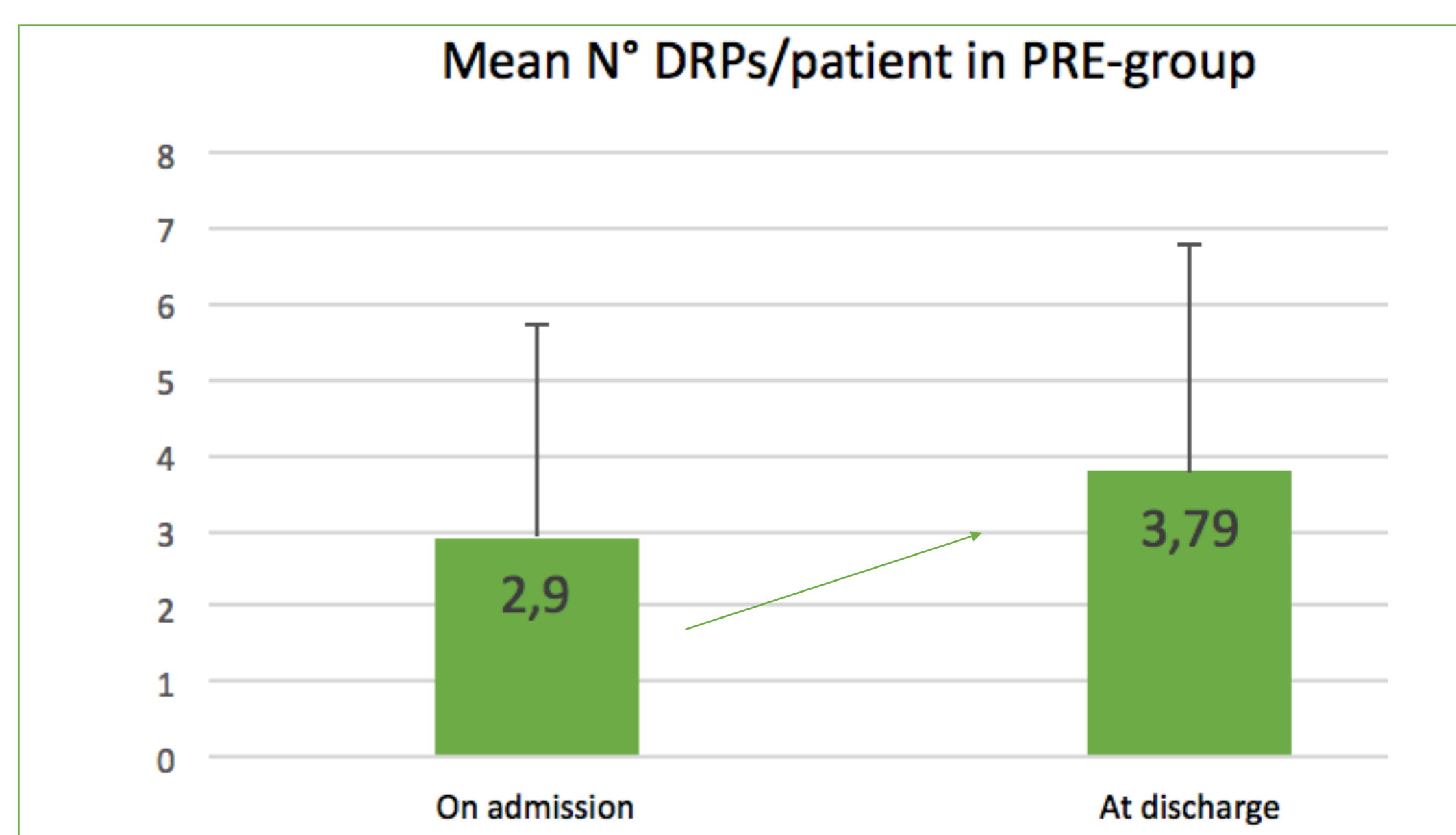

Figure 3. Mean number of DRPs per patient on admission and at discharge in PRE-group
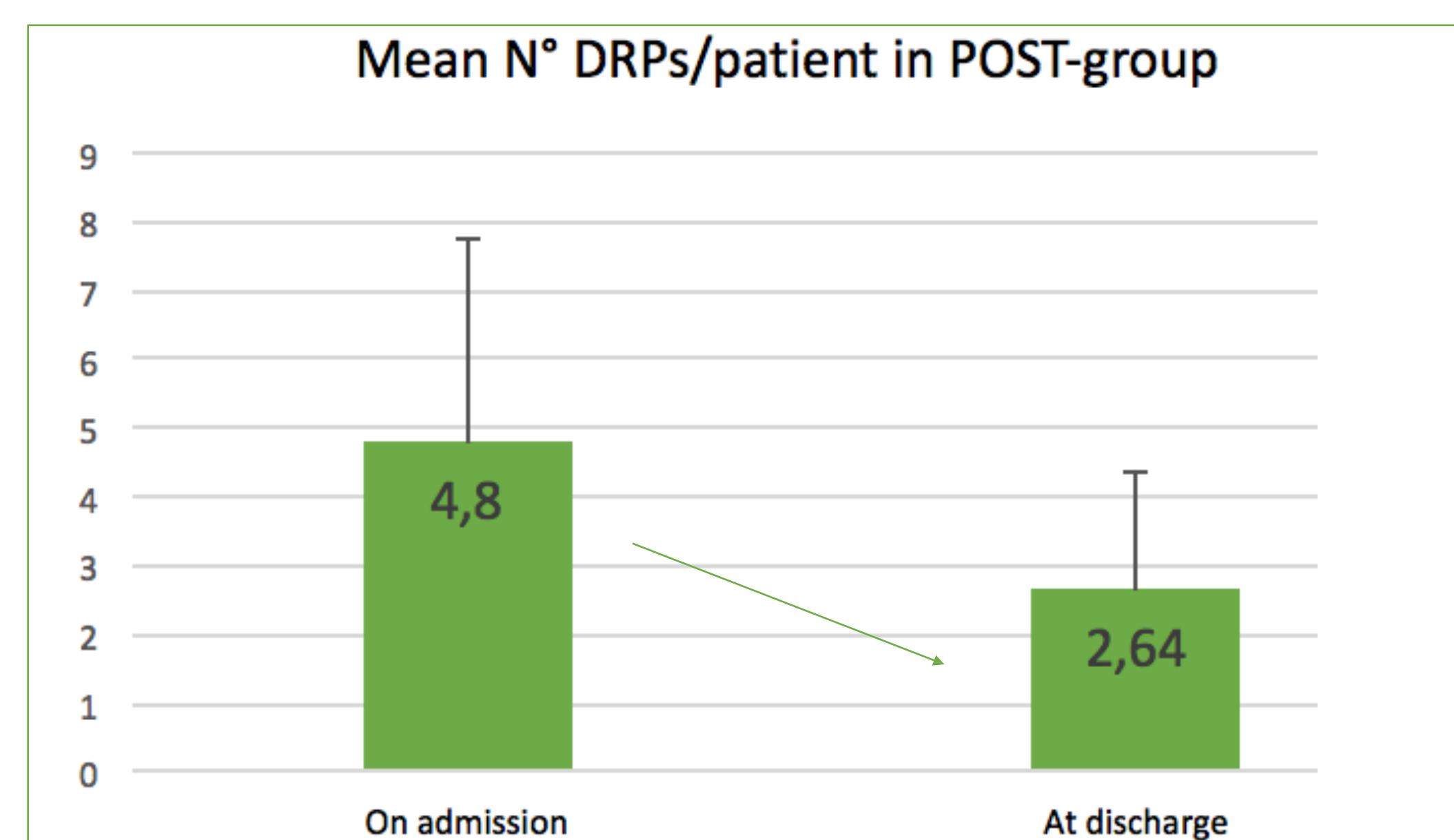
AFTER MR

Figure 4. Mean number of DRPs per patient on admission and at discharge in POST-group

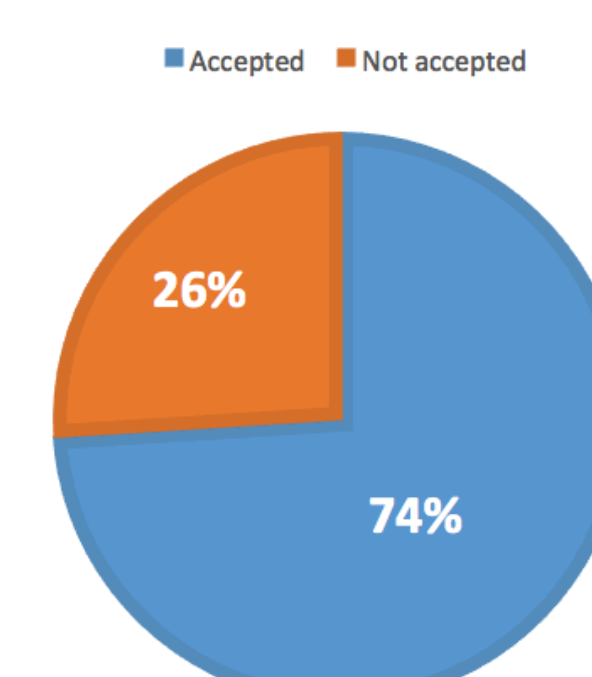In total, 288 PIs were performed with 74% clinician acceptance rate.

Figure 5. Acceptance rate of PIs by clinicians

Rehospitalisation rate reduced significantly in POST-group (35% vs 10%, p<0.05)

	PRE	POST
N° of rehospitalisations 3 months after discharge (%)	12/34 (35%)	5/50 (10%)

Table 2. Number of rehospitalisations

Conclusion

Results showed pharmacist-led MR to be an effective procedure in the local setting reducing DRPs and rehospitalisations in elderly patients; therefore, MR programs should be introduced into Italian standard practice to reduce healthcare costs.

Contact: Saranobili_93@libero.it