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.

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).

DRPs at discharge were substantially reduced after implementation of MR conducted by a pharmacist (p<0.001): in PRE-group, mean 2.9±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).

Conclusions

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.

Table 1. Patient characteristics

<table>
<thead>
<tr>
<th>Patient characteristics</th>
<th>PRE</th>
<th>POST</th>
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</thead>
<tbody>
<tr>
<td>N° patients</td>
<td>34</td>
<td>50</td>
</tr>
<tr>
<td>N° % male (%)</td>
<td>12/34 (35.3%)</td>
<td>23/50 (46%)</td>
</tr>
<tr>
<td>Mean age(years) ± 5</td>
<td>84.5±6.7</td>
<td>83.2±17.5</td>
</tr>
<tr>
<td>Mean N° of drugs per patient on admission</td>
<td>7.4±2.7</td>
<td>8.4±3.2</td>
</tr>
<tr>
<td>Mean N° of drugs per patient at discharge</td>
<td>8.0±2.6</td>
<td>7.7±3.0</td>
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Table 2. Number of rehospitalisations

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<th>PRE</th>
<th>POST</th>
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<tbody>
<tr>
<td>N° of rehospitalisations 3 months after discharge (%)</td>
<td>32/34 (99%)</td>
<td>5/50 (10%)</td>
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In total, 288 PIs were performed with 74% clinician acceptance rate.

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

Contact: Saranobili_93@libero.it