EVALUATION OF THE CLINICAL IMPACT OF MEDICATION RECONCILIATION ON ADMISSION USING THE CLEO TOOL

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Background and Importance

Medication reconciliation is a clinical pharmacy process to prevent medication errors at transitions of care. We integrated a year ago this activity into the management of elderly in our hospital. CLEO is a comprehensive tool assessing especially clinical impact of pharmacists’ interventions (PIs) developed by experts of the French Society of Clinical Pharmacy (SFPC). We used it to evaluate the potential clinical impact of medication reconciliation on the patient.

Aim and Objectives

The aim of this study was to assess unintentional medication discrepancies (UD) in admission orders with potential for patient harm (moderate or major clinical impact) with the CLEO tool.

Material and Methods

✓ We conducted a prospective observational single-center study
✓ From September 2020 to August 2021 (1 year)
✓ On internal medicine patients over 65 years old
✓ Medication reconciliation upon admission was performed
✓ We used the CLEO tool to rank the clinical impact (Negative/Null/Minor/Moderate/Major/Avoids Fatality) of UD
✓ UD were scored by 2 experienced clinicians

Results

❖ Population studied:

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Patients (n = 318)</th>
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<tbody>
<tr>
<td>Sex ratio</td>
<td>127M/191F</td>
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<td>Mean age</td>
<td>82.3 ± 8.0 y.o.</td>
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<tr>
<td>Mean number of prescribed drugs</td>
<td>8.0 ± 4.0</td>
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<tr>
<td>Mean Length of stay</td>
<td>8.2 ± 6.7 d</td>
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</tbody>
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❖ Medication reconciliation:

- 176 patients had at least 1 UD (55%)
- We found 2.1 UD per patient, essentially omissions of medications

❖ Clinical impact:

63% of UD were associated with a « moderate » clinical impact
« The PI can prevent harm that requires further monitoring/treatment, but does not lead to or does not extend a hospital stay »

2% of UD (6/375) were associated with a « major » impact
« The PI can prevent harm which causes or lengthens a hospital stay OR causes permanent disability or handicap »
- 2 omissions of insulin therapy
- 1 omission of DVT prophylaxis
- 1 omission of neuroleptic drug
- 2 inadequate benzodiazepine dosing

Conclusion and Relevance

The identification of UD with moderate and major clinical impact underline the significance of the sustainability of medication reconciliation in routine clinical practice. Furthermore, according to the Multi-center Medication Reconciliation Quality Improvement Studies (MARQUIS), the cost of harmful medication error to hospital in the USA is about 4655$. If we expanded to 241 UD with a moderate or major clinical impact, we could easily calculate significant annual savings to hospital as a result of avoided harmful medication errors, providing useful input to convince hospital boards about medication reconciliation return on investment, in addition to the benefit expected for patients.