IMPLEMENTATION OF A **PROACTIVE MEDICATION RECONCILIATION**
TO REDUCE DRUG ERRORS AT ADMISSION

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**Background**
Medicines reconciliation (MR) is a critical step for reducing medicines errors (ME) at admission to hospital care

However, because of resource constraints it can be difficult to implement in hospital pharmacists’ everyday practice

The **Lean method** is used to streamline and optimize processes considering all stakeholders and resources

**Purpose**
To redesign the medicines management process at admission to reduce MEs

**Conclusion**
Results demonstrate that:

- Confirm high rate of UMD at the time of admission [1]
- Proactive MR is effective in reducing ME on Admission Orders
- BUT did not affect the proportion of UMDs with a high risk
- Lean is fully adapted to improve the medicines management process

Other studies are warranted to evaluate the impact of Lean on ME reduction.

**Material & Methods**

<table>
<thead>
<tr>
<th>Inclusion criteria</th>
<th>At admission</th>
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<tbody>
<tr>
<td>Patients ≥ 65 years old with ≥ 3 medicines before admission</td>
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≥ 2 sources for Medication History (MH): patient /caregiver interview, medical chart, medication vial, community pharmacy or physician

**Retroactive MR**
1/ Physician’s computerized orders at admission
2/ MH performed by pharmacist after admission
3/ Correction of prescription by pharmacist according to the MH

**Proactive MR**
1/ MH performed by pharmacist at admission
2/ Physician’s computerized orders at admission using MH form

**Results**

**Map of the current process**

**Analysis**

**Design the new process**

<table>
<thead>
<tr>
<th><strong>Step</strong></th>
<th><strong>Retroactive MR</strong></th>
<th><strong>Proactive MR</strong></th>
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<tbody>
<tr>
<td>Number of patients</td>
<td>52</td>
<td>50</td>
</tr>
<tr>
<td>Mean Age</td>
<td>75</td>
<td>70</td>
</tr>
<tr>
<td>Mean medication / patient</td>
<td>7.4</td>
<td>6.9</td>
</tr>
<tr>
<td>Patients with ≥ 1 UMD</td>
<td>46 % *</td>
<td>12 % *</td>
</tr>
<tr>
<td>Mean UMDs / patient</td>
<td>0.75</td>
<td>0.16</td>
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* (p<0.01)

- Same proportions of UMDs with a potential to cause moderate to severe discomfort or clinical deterioration: retroactive: 28.2 % vs proactive: 28.6 %

**Qualitative results:**
- Step 3: “correction of prescription by pharmacist according to the MH” canceled → gain of time for both pharmacist and prescriber
- Proactive MR: **Anticipation** of orders/substitution drugs not on hospital formulary

1.Tam,VC.et al., *Frequency, type and clinical importance of medication history errors at admission to hospital: a systematic review* JAMC,2005.5:pS10-15