BEDSIDE CHECK OF MEDICATION APPROPRIATENESS (BED-CMA) AS A RISK-BASED TOOL FOR BEDSIDE CLINICAL PHARMACY SERVICES: A PROOF OF CONCEPT STUDY AT THE TRAUMA SURGERY WARD

1. AIM
To evaluate the impact of a risk-based clinical pharmacy service (BED-CMA) on potential inappropriate prescriptions (PIPs) at the trauma surgery ward

2. BACKGROUND AND IMPORTANCE
Bedside clinical pharmacy is not possible full-time and hospital-wide in many European countries due to limited resources

- not possible to review pharmacotherapy of every patient
- patients at risk for adverse drug events might be missed

Clinical rules
- use structural information in the electronic health record
- can identify potential risky situations

→ help bedside clinical pharmacists to prioritize and structure their work

3. METHODS
15 clinical rules were implemented in the electronic health record (Table 1)

→ screening for inappropriate prescriptions
→ alerts on structured worklist
→ review by bedside clinical pharmacist
→ recommendations to trauma surgeon

Study design: interrupted time series analysis

- outcome: proportion residual PIPs per day

- pre-intervention: standard of care clinical pharmacy services (0.3 FTE)
- post-intervention: pharmacist + BED-CMA A: basic training + 0.3 FTE
B: advanced training + 1h daily

4. RESULTS

<table>
<thead>
<tr>
<th>Intervention A</th>
<th>Pre-intervention</th>
<th>Post-intervention A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median 67% residual PIPs/day</td>
<td>19% (46/238) of alerts led to recommendation</td>
<td>67% acceptance within 24h</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention B</th>
<th>Pre-intervention</th>
<th>Post-intervention B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median 67% residual PIPs/day</td>
<td>56% (167/299) of alerts led to recommendation</td>
<td>84% acceptance within 24h</td>
</tr>
</tbody>
</table>

5. CONCLUSION AND RELEVANCE
↑ efficiency clinical pharmacist
Effective approach to perform clinical pharmacy services
Advanced training and daily follow-up of alerts are 2 requirements to be considered