

# STRATEGIC PLAN FOR IMPROVING PEDIATRIC PRESCRIBING: BASELINE FOR AN IMPROVEMENT INTERVENTION

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## BACKGROUND

- ✓ **Pediatric patients** are particularly vulnerable to **medication errors (MEs)** due to :
  - Weight-based dosing
  - Off-label prescribing
  - Complex preparation processes.
- ✓ **Clinical Decision Support Systems (CDSS)** are key tools to improve medication safety in this population.

## MATERIAL AND METHODS

- ✓ **Scoping review:** impact of hospital CDSS on MEs, adverse drug events (ADEs) and patient outcomes.
- ✓ **Multidisciplinary working group** : risk mapping and prioritization of intervention areas.
- ✓ **Prospective ME collection:** pediatric inpatients (June–September 2025) using a standardized reporting form.

## OBJECTIVE

- ✓ To identify **critical points** in the **prescribing process** and implement **improvement actions** to **reduce MEs**.

## RESULTS

- ✓ **Baseline Medication Errors (n=83)**

### Most frequently involved drugs

- Paracetamol (n= 8)
- Metamizole (n=6)
- Amoxicillin-clavulanate (n= 5)

### Most frequent error types

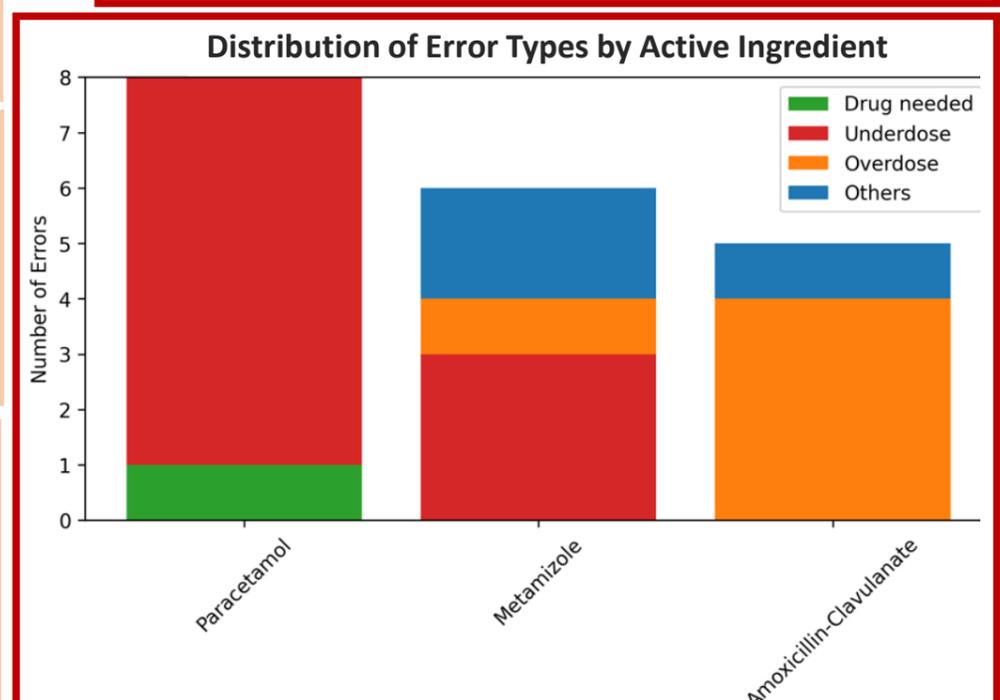
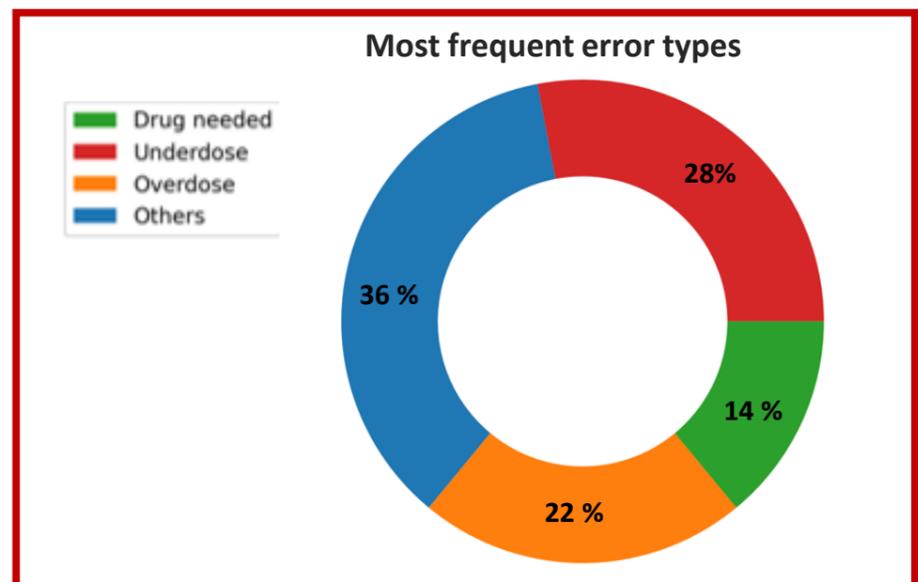
- 28% underdosing
- 22% overdosing
- 14% omitted drug
- 36% other errors

- ✓ **Scoping Review:**

- 5 /43 studies focused on pediatrics
- All based on dose-range checking
- **100%** reported statistically significant ME reduction

- ✓ **Intervention plan:**

- Integration into the electronic prescribing system of:
- **Weight-based pediatric dose calculator**
  - Pediatric-adapted **dose-range checking**
  - Structured dilution and administration **guidance**



## CONCLUSIONS

- ✓ **Pediatric medication safety** requires targeted **safety strategies**.
- ✓ Most **errors** are **dose-related** and **preventable**.
- ✓ **CDSS** implementation is supported by **strong evidence**.
- ✓ **Multidisciplinary collaboration** is essential for sustainable improvement.