

# Validation of an algorithm for prioritizing medication reconciliation at admission using an artificial intelligence method

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- Medication reconciliation at admission (MRA) is a clinical pharmacy practice that contributes to tackling the burden of medication discrepancies and subsequent patient harm at care transitions
- Aim of the study: prioritize MRA by **targeting patients most at risk for unintentional discrepancies (UD) with an algorithm using an artificial intelligence method**

## What was done?

**Comparison** before and after the implementation of the algorithm of:

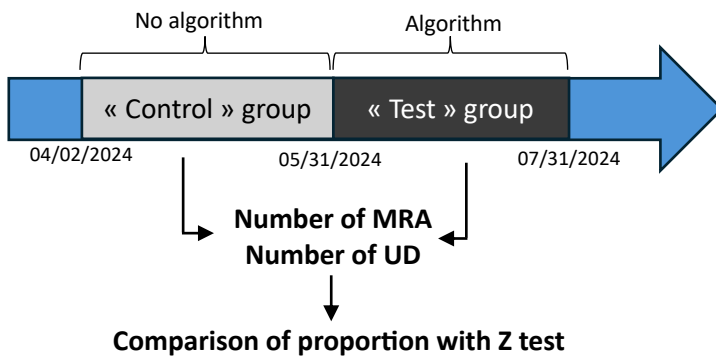
- **Number of UD** identified
- Proportion of patients with a **UD that has a significant clinical impact** (score >1C according to the CLEO scale<sup>1</sup>, developed by the "Société Française de Pharmacie Clinique")

## Why was it done?

**To evaluate the algorithm's performance** before considering its routine use



## How was it done?



Scoring of the clinical impact of UD according to the CLEO scale<sup>1</sup>:

Score	Clinical impact
-1C	Negative
0C	Null
1C	Minor
2C	Moderate
3C	Major
4C	Avoids fatality
UND	Undetermined

## What has been achieved?

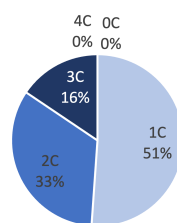
	« Control » group	« Test » group
MRA	255	395
UD	45	143
<b>UD per MRA</b>	<b>0,18</b>	<b>0,39</b>

→ **Twice as many UD identified**  
 $Z = 5.46 ; p < 0.001$

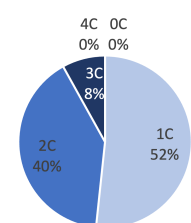
CLEO score clinical impact:

- 0C
  - 1C
  - 2C
  - 3C
  - 4C
- Significant clinical impact (2C, 3C, 4C)

« Control » group



« Test » group



→ **UD identified have the same clinical impact**  
 $Z = 0.07 ; p = 0,947$

## What next?

- ⇒ Identify variables that allow for targeting patients with clinically significant UD
- ⇒ Test the algorithm on a larger scale

