



# AUTOMATION: TRACKING THE ALARMS OF THE ROBOT AS A TRACER OF THE EFFICIENCY OF THE PROCESS

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## Background



Automation is an element that fits into the process for improving the safety and efficiency of the drug supply chain.

Indeed, the dispensation is an important step which must be perfectly controlled to prevent medication errors.



In 2011, an automated dispensing system (two robots with two picking heads) was implemented at the hospital's pharmacy.

## Objectives

The aim of the study was to evaluate the performance of the dispensing process after installing the robots.

## Method

To measure the efficiency of the system and staff training, we analysed number and types of alarms of the robot.

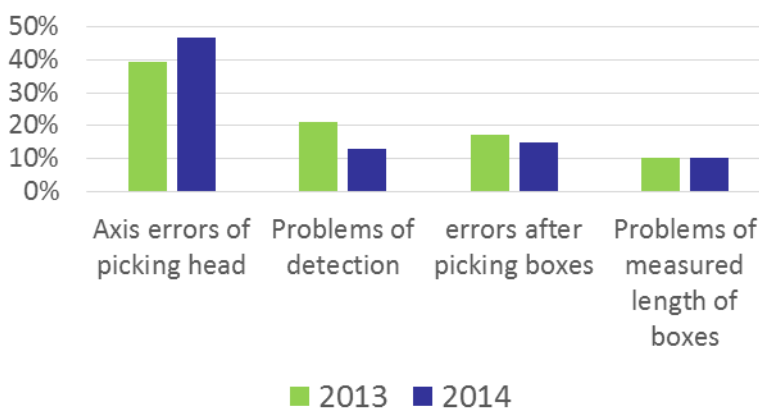
We extracted the number of alarms in 2013 and 2014 using the automated system software.

A systematic analysis was performed when the number of alarms was higher than 10 per day

## Results

	2013	2014
Number of alarms recorded	6983 in 49 weeks	2873 in 28 weeks
% of the number of pickings	1,2 %	0,5 %

### Main errors



The analysis of alarms allowed us to classify them into 3 types:

- **alarms related to the system,**
- **mechanical alarms,**
- **the most frequent alarms related to improper use by staff.**

This observation led us to empower staff at different levels

## Conclusion

- These results showed an improvement in the system's performance in 2014.
- These results also showed that the **setting and regular monitoring of errors** of the robot are critical elements to ensure good efficiency of system.

The criteria 'number of alarms' was not written into the user requirement specifications but it could be.

- **Staff training** is also an important element to ensure correct use.

**Continuous training of staff is a key element to consider when installing an automated dispensing system.**