

Automated Dispensing cabinets in a cardiac intensive care unit : impact for the nursing team and the pharmacy?

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University Hospital Rennes, FRANCE - 2022

What was done ?

Drug distribution has been switch from manual dispensing to automated dispensing cabinet in a cardiac intensive care unit. The study investigates the impacts on time resources, drug storage and emergency orders.

Why was it done ?

- Managing medicines in hospitals is both a health and an economic issue.
- Hospital pharmacists are working to improve : supply, traceability, safety and stock management.
- Healthcare staff must be able to administer the medicines prescribed to patients in complete safety, with the products available at the time of prescription.
- The management of medicines within the wards represents a significant amount of time that could be reduced.

How was it done ?

On-site study in the cardiac intensive care unit (18 beds) at Rennes University Hospital in 2022. The study analyzed the following metrics before and after the implementation of automated dispensing cabinets:

- time allocated for dispensing in the ICU and in the pharmacy
- medication stock value in the ICU
- volume of emergency orders

Change of management, at the beginning of the project, was the biggest challenge.

What was achieved ?

Nurses picking time

-7%
for non-narcotic drugs pill-boxes

+27%
for flash picking of non-narcotic drugs

-53%
for narcotics

Overall gain in picking time

10,6 days/year

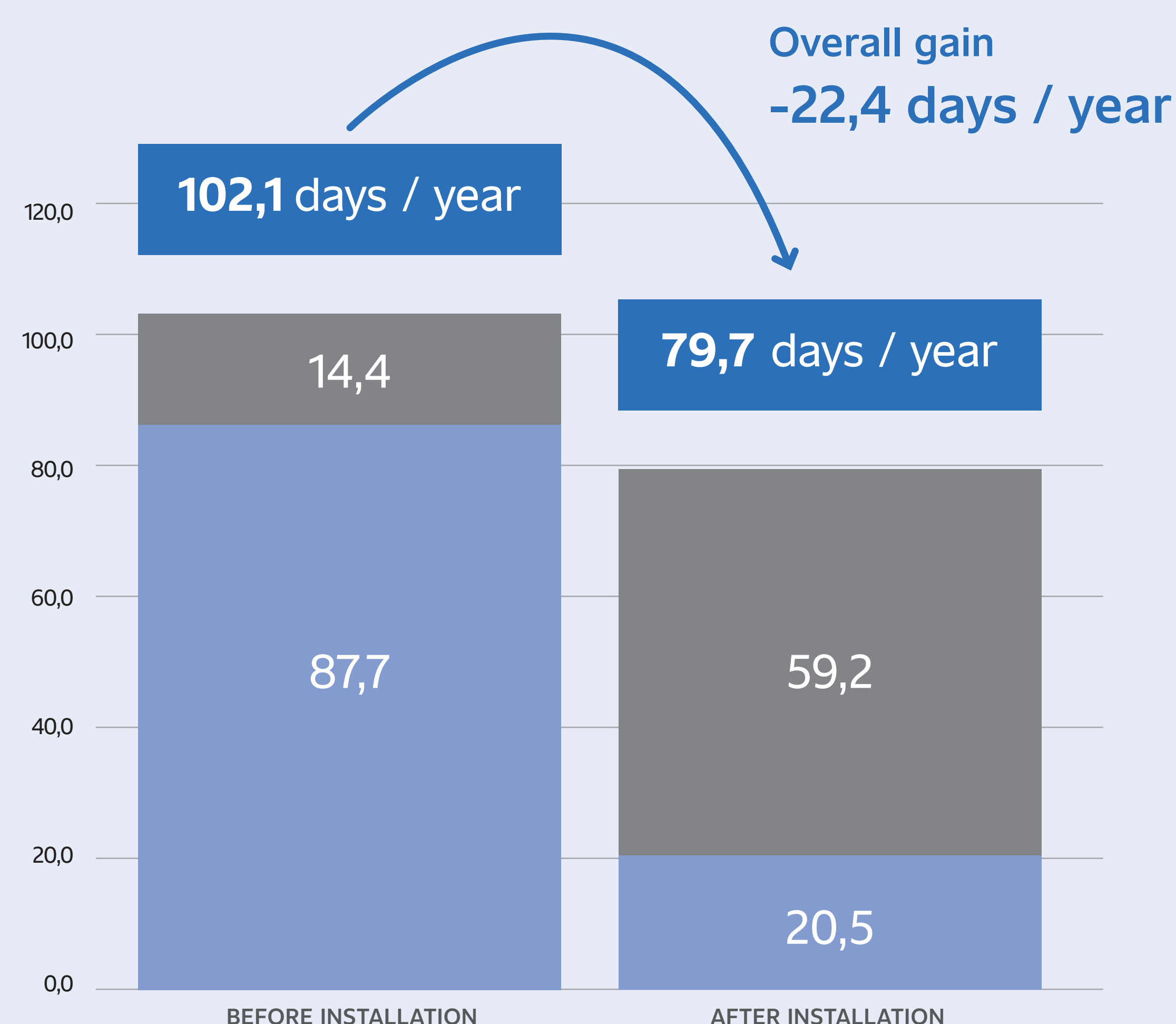
Orders

of urgent order requests
-51%

Stock

Stock value in the cabinet (€)
-26%

Orders and storage time in the ICU



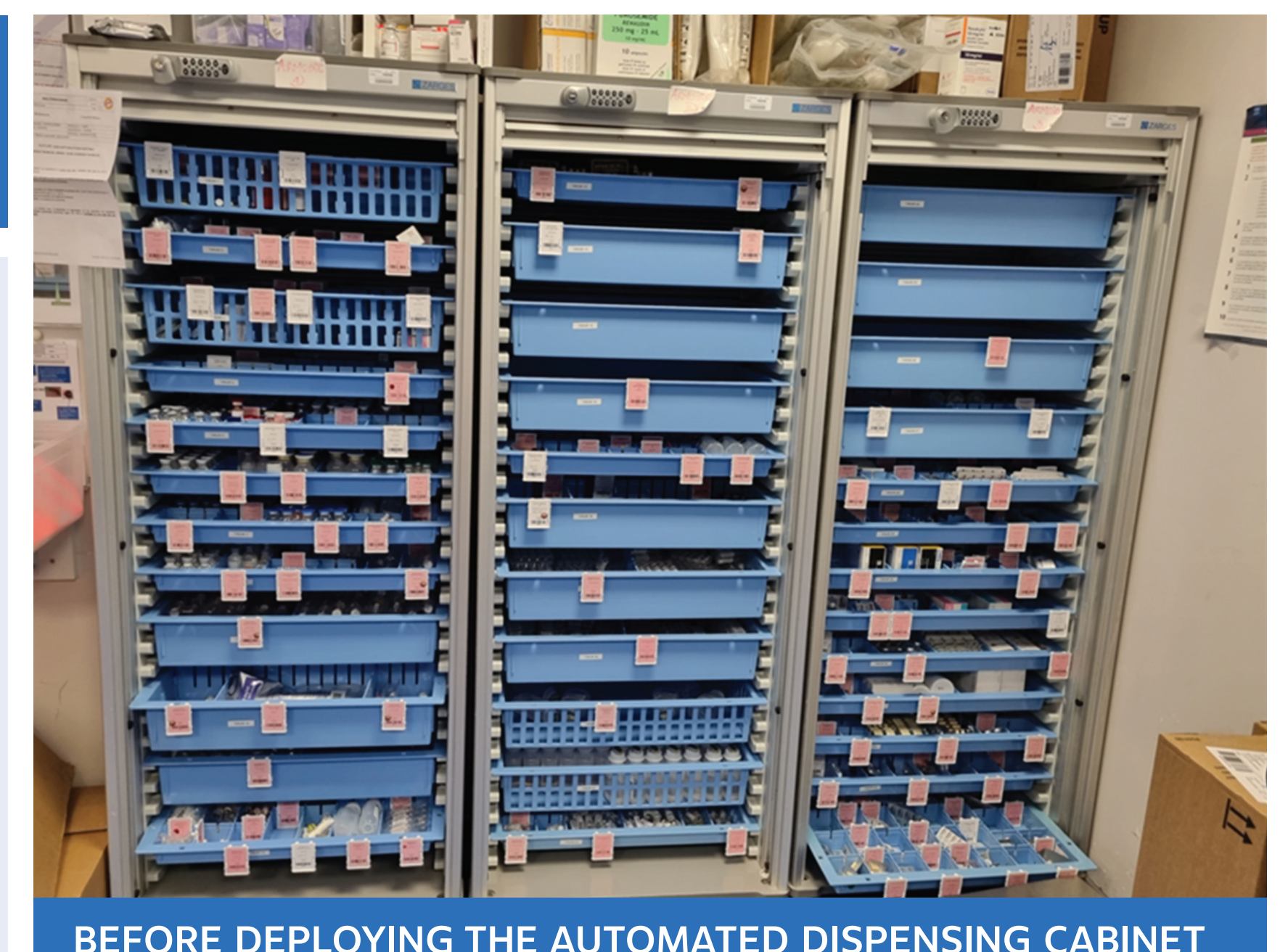
Total days / year are including :

Orders & storage 3 times per week

Urgent orders every day

Management of expired medications 1 time per month

■ NURSES
■ PHARMACISTS



BEFORE DEPLOYING THE AUTOMATED DISPENSING CABINET



AFTER DEPLOYING THE AUTOMATED DISPENSING CABINET

What is next ?

Time spent by nurses in managing and picking medicines was significantly reduced with the implementation of automated dispensing cabinets. Some of this time is transferred to the central pharmacy towards restocking the medications into the automated dispensing cabinet.

The deployment of automated dispensing cabinets improves overall efficiencies and allows more time for nurses to provide direct patient care.

