

COMPARATIVE ANALYSIS OF EXPIRY MANAGEMENT OF MEDICATIONS AFTER THE IMPLEMENTATION OF AUTOMATED DRUG DISPENSING SYSTEMS



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BACKGROUND AND IMPORTANCE

The Pharmacy Department (PD) has the responsibility to manage the distribution and control of medicine cabinets in clinical units. All this process is laborious to perform manually, resulting in oversized stocks and an economic loss due to expired medications.

AIM AND OBJECTIVES

To evaluate the new expiry management (EM) of medications after the implementation of automated drug dispensing systems (ADDS) compared to the previous one.

MATERIALS AND METHODS

- Descriptive retrospective study of the EM of medications stored at the Emergency Department (ED).
- ADDS implemented in February/2023.
- Periods defined:

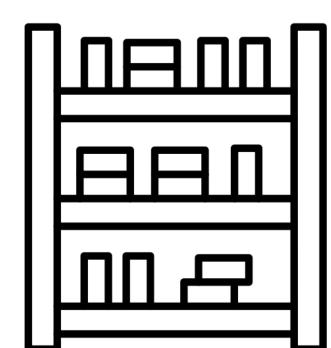
- 1. Review of all ED stocks every 6 months (hiring an extra technician).
- 2. Medication stored following the FIFO (First In, First Out) system.
- 3. All medications which expire ≤6 months were returned to the PD.



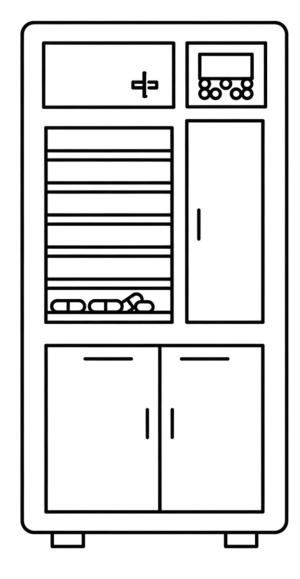
- 1. Daily EM during replenishment of ADDS.
- 2. Monthly lists generated to physically check them.
- 3. Expired drugs are taken from the ADDS at the end of the month.

RESULTS

Manual EM



- 3 traditional medicine cabinets
- 500 references in total
- References expired: 173 (34.6%)
- Units expired: 1855



Assisted EM

- 7 ADDS
- 605 references in total
- References expired: 84 (13.9%)
- Units expired: 818

Reduction of 1037 units expired with the assisted EM



Implementing the new EM avoided hiring a reinforcement → saving of €535.85/year in personnel costs.

CONCLUSION AND RELEVANCE

- There was an increase in the number of references stored with the ADDS, improving quick access to medication.
- The new EM managed to reduce wastage, becoming a system more sustainable and safer.
- The technician responsible of the EM is also in charge of ADDS daily replenishment, achieving a greater specialization of the personnel and better management of stocks.

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