IMPACT OF STOCK DISCREPANCIES IN AUTOMATED DISPENSING CABINETS

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BACKGROUND

Automated Dispensing Cabinets (ADC) allow medications to be stored and dispensed near the point of care, imporving efficiency in drug distrigution. Nevertheless, new technologies are not exempt from errors.

OBJETIVES

To analyse if there are **stock discrepancies (SD)** in drugs included in **ADC**.

MATERIAL AND METHODS

A descriptive observational prospective study was conducted during October-2014. Medicines contained in three **ADC** were inventoried. **ADC** were placed in Internal Medicine/Haematology department, Digestive/Oncology/Cardiology department and Urgency service.

It was evalauted:

- Global rate of **SD**.
- Global rate of **SD** by drawer type.
- Rate of **SD** per **ADC**.
- Rate of **SD** by drawer type per **ADC**.

Three drawer types were defined: Multiple drug access drawers (MDAD), single drug access drawers (SDAD) and single dose dispensing pockets (SDDP).

RESULTS

A total of 1082 drugs were inventoried. 395 of them presented **SD** (36,5%): 279 (25,8%) in MDAD, 115 (10,6%) in SDAD and only 1 (0,1%) in SDDP. **SD** distribution by **ADC** is shown in the next date table:

	TOTAL NUMBER OF DRUGS BY ADC	TOTAL STOCK DISCREPANCIES BY ADC (%)	MULTIPLE DRUG ACCESS DRAWERS SD (%)	SINGLE DRUG ACCESS DRAWERS SD (%)	SINGLE DOSE DISPENSING POCKETS SD (%)
INTERNAL MEDICINE/ HAEMATOLOGY DEPARTMENT	393	146 (37,2%)	115 (29,3%) (261 drugs)	31 (7,9%) (116 drugs)	0 (0%) (16 drugs)
DIGESTIVE/ ONCOLGY/ CARDIOLOGY DEPARTMENT	416	169 (40,6%)	103 (24,7%) (209 drugs)	66 (15,9%) (166 drugs)	0 (0%) (41 drugs)
URGENCY SERVICE	273	80 (29,3%)	61 (22,3%) (178 drugs)	18 (6,6%) (78 drugs)	1 (0,4%) (17 drugs)

CONCLUSION

The more drug storage is in an **ADC**, the more **SD** are found. Discrepancies are more common in MDAD because users could remove more doses and different drugs than requested. Therefore, although new technologies are designed to improve both safety and efficiency in medicines management in hospitals, the use of **ADC** should include an evaluation of possible error opportunities, to implement strategies focused on preventing or minimizing these errors taking more care in those drawers where you can access to the whole medication. An **ADC** handling appropiated is crucial to guarantee fast and safe access to medications in clinical units.