

DISCREPANCIES BETWEEN PRESCRIPTION AND DISPENSING OF MEDICATION IN AUTOMATIC DISPENSING CABINET

E. PRADO-MEL¹, H. RODRÍGUEZ-RAMALLO¹, C. GONZALEZ-FLORENCIO¹

¹Virgen del Rocío Teaching Hospital, Pharmacy Department, Seville. Spain. .



Background and importance

Automatic dispensing cabinets (ADCs) allow us to perform a traceability of medications dispensed by patient. This detects areas of improvement in the quality of care.

Aim and objectives

Analyze discrepancies between prescription and dispensing of medications, investigate influencing factors and design areas for improvement.

Material and methods

Cross-sectional, descriptive and observational retrospective study of prescription and dispensation through ADCs. 60 treatments of patients admitted on July 8, 2019 were randomized. Those who had surgery for that day or were discharged were excluded. The following variables were collected: number of prescribed medications, number of parenteral and number of oral medications prescribed. Medications with conditional posology and multidose presentations were excluded from the analysis. The prescriptions and dispensations of each patient were reviewed. Discrepancy was defined when the number of units dispensed by medication were different from the number of units prescribed in 24 hours. Three variables were defined: total discrepancies, by default and by excess. A treatment complexity index (TCI) was calculated:

Treatment complexity index (TCI)								
Medications prescribed	Nº	Score	Posology* (Summated for each prescribed medication)	Posology	Score	Administration route	Route	Score
	0-4	1		c/24h	1		Oral	1
	≥5-9	2		c/12h	2		Parenteral	2
	≥10-14	3		c/8h	3		Oral and parenteral	3
	≥ 15	4		c/6h	4			

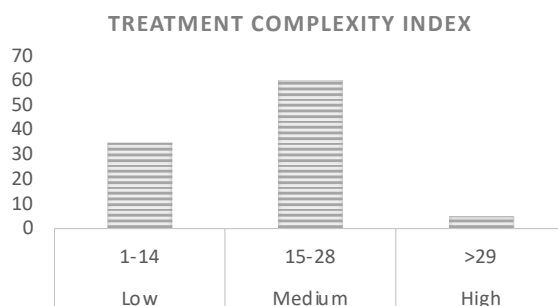
*TCI is the sum of the 3 sections

The TCI was related to the discrepancies detected by Pearson's correlation. The data was extracted from the ATHOS® prescription program and the ADCs Dosys® Software. Data were analyzed with ssp.v.20.

Results

Treatment reviewed= 40	
Treatment without discrepancies	30%
Treatment with 1-2 discrepancies	45%
Treatment with 3-4 discrepancies	20%
Treatment with ≥5 discrepancies	5%

Discrepancies	
Total discrepancies	68
Discrepancies by default	59
Discrepancies by excess	15



Correlation between TCI and total discrepancies was statistically significant ($r=0.614$, $p<0.01\%$).

Conclusion and relevance

The discrepancy rate is high. The traceability of ADCs allows us to identify areas for improvement. TCI can help us identify those with the highest risk of discrepancies and establish measures to correct them.