

Data-driven selection on a medication management model in hospitalization units

Ariadna Pérez-Ricart¹, Vanessa Correa², Maria Isabel Martínez³, Ramón Borràs¹, Rosa López⁴, Lidia Estrada¹, Eva Terricabras¹, Sílvia Aulet¹, Sónia Fernández⁵, Carles Miret⁶, Carles Quiñones¹

1. Pharmacy Department 3. Projects Unit 4. Direction of Organization and System Unit 5. Nurse Direction
6. Transforming projects; Hospital Universitari Germans Trias i Pujol, Badalona, Barcelona, Espanya
2. Apex Consultans

INTRODUCTION

To select best medication management model (centralized in pharmacy vs. decentralized in hospitalization wards (HW)) based on medication consumption pattern of the different HW, in context of the redesign of medication management system in a high-complexity hospital.

1 ABC-XYZ matrix preparation

- According Pareto principles
- Medication consumption form HW in January 2022 from hospital management system
- Including medications not listed in pharmacotherapeutic guide (PTG)

Drugs data analysis

- Medication
- Guide inclusion situation
- Dispensed quantities
- HW

Data categorization

- Each HW:
- Quantity ABC
 - Variability XYZ

Definitions

- A: highest consumption
Z: maximum variability in consumption

ABC-XYZ matrix creation

Classification

ABC:

- A. $x \leq 80,0\%$ *
- B. $80,0\% < x \leq 95,0\%$
- C. $95,0\% < x \leq 100,0\%$

XYZ:

- X. $CV < 0,3$
- Y. $0,3 \leq CV \leq 0,75$
- Z. $CV > 0,75$

Others

- Coefficient of variability (CV): standard deviation / mean
- Outliers were removed

*(x medications ordered from maximum to lowest consumption)

3 ABC-XYZ groups identified



GROUP 1: AX, AY, BX, CX

High consumption, low variability
Decentralization and replenishment based on standard minimums

GROUP 4: zero consumption



GROUP 2: BY, AZ

Moderate volume and variability
Decentralized with replenishment based on criticality or consumption peaks



GROUP 3: BY, AZ

High variability, regardless of consumption
Centralized in pharmacy or decentralized with systematic monitoring of expiration dates

ABC-XYZ RESULTS

13 units
826 references;
37 not included in PTG

Consumption pattern was similar across HW:

A: 56-75 medications
B: 63-99 medications
C: 105-151 medications

Each HW only consumed 25%-36% of total references used in the hospital.

Distribution of the references:
Group 1: 39-96 [18%-32%]
Group 2: 54-62 [19%-24%]
Group 3: 116-182 [48%-58%]

CONCLUSION

-Optimal medication management model was determined by consumption pattern of each reference in each HW, rather than one-size-fits-all approach for entire hospital.

-Data supports decentralizing medications with monitoring of specific references. ABC-XYZ system helps to define optimal management model and tracking changes over time.



Germans Trias i Pujol
Hospital



Poster 2SPD-016

✉ aperezri.germanstrias@gencat.cat

