ABC VEN CROSSTAB ANALYSIS: A DECISION MAKING SYSTEM APPLIED FOR ANTICANCER MEDICINES

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Background and importance:
Health systems have limited resources and these should be used responsibly to optimize outcomes for patients. The ABC (Pareto analysis for expenditure) and VEN (Health impact) methodology was developed by the WHO to help hospitals evaluate current spending.

Aim and objectives:
A decision making system has been developed for inventory management of chemotherapy agents and medicines to treat their adverse reactions (CA-MtADR). As these medicines are high cost, we formulated an ABC-VEN matrix as a combination of two analytical tools, to evolve a budgeting optimizing management system.

Methods:
Dispensing data over the first 6 months of 2019 from Hematology, Oncology and Chemotherapy departments were collected. ABC analysis was performed: class A accounted for 72% of total expenditure, class B for 23% and class C for 5%, respectively.

VEN tool was further extended to a score index (summarizing characteristics of medicine’s health impact) grouped into three classes:
- class V for vital,
- class E for essential and
- class N for non essential medicines

Results:
57 CA-MtADR were analyzed. Expenditure of CA-MtADR was 40% of total medicines’ expenditure in the hospital. According to ABC analysis, 7 medicines (12%) were in class A, 12 medicines (21%) in class B, and 38 (67%) in class C.

According to VEN analysis 9 medicines (16%) are characterized as V, 43 (75%) as E and 5 (9%) as N.

According to ABC-VEN crosstab analysis:
Category I (e.g. daratumumab (ATC L01XC24)) included 16 medicines (28%), Category II (e.g. trastuzumab emtansine (ATC L01XC14)) included 36 medicines (63%) and Category III (e.g. pantoprazole (ATC A02BC02)) included 5 medicines (9%).

Conclusion and relevance:
ABC-VEN crosstab analysis revealed three categories of corresponding priority:
CA-MtADR Category I, including expensive and/or vital medicines which need patient-oriented personalized stock management;
CA-MtADR Category II, medicines of which should be overlooked with special consideration to ensure availability (due to essentiality) and CA-MtADR Category III, where stock is freely formed according to demand (due to low price).

ABC, VEN and ABC-VEN analysis assist in developing a robust approach to improve budgetary planning in hospitals.