



ABC AND VED ANALYSIS OF THE PHARMACY IN A MULTI SPECIALITY HOSPITAL

Management

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ABSTRACT

An inventory is effective only when it is comprehensive and accurate. In order to achieve this, the inventory is updated whenever there is any change or addition of information, and during annual audits and reviews. This project aims to analyze a hospital's pharmacy inventory management with special attention on ABC and VED analysis as an optimization tool. An inventory can be identified as those goods, which are procured, stored and used for the daily requirement of the organization. They are sort of lubrication for the supply production- distribution system that protects it from excessive friction. Inventories isolate one part of the system from the next to permit each to work independently, absorb the stock of forecast errors and permit the effective utilization of resources when demand fluctuations are experienced. Thus inventory management is the process of deciding what and how much of various items are to be kept in stock at optimum overall costs to the health care system. In this project the inventory management is explained in which ABC, VEN and VED Analyses are explained.

KEYWORDS

ABC analysis, ABC-VED matrix, inventory management, pharmacy, VED analysis

INTRODUCTION

In healthcare service sector, inventory management and distribution has important role in determining its success. Besides medicines, most of hospital inventories are medical devices and consumable goods such as syringe, bandage, ointments, tablets, and etc. A hospital supply system should ensure adequate stock of required items to maintain an uninterrupted supply of all essential items to provide optimal care. The advent of advanced medical technology has resulted in a disproportionate increase in the expenditure on health care. Therefore, a hospital spends about one- third of its budget on purchasing various materials and supplies. Various scientific approaches to inventory management include ABC (Always, Better, Control), VED (Vital, Essential, Desirable), FSN (Fast-Moving, Slow-moving, Non-moving, SDE (Scarce, Difficult, Easy), HML (High, Medium, Low) and SOS (Season-Off-Season). ABC and VED are the most commonly used inventory control techniques. But as ABC analysis considers only cost while VED considers criticality, the coupling matrix is most suitable for inventory analysis in the hospital. ABC analysis, popularly known as "Always Better Control" is based on Pareto's principle of "Vital few and trivial many". Materials are categorized as A, B or C depending upon the annual consumption of the item. Group A includes 10% items which consume about 70% of budget. Group B includes the next 20% which consume 20% of financial resources and Group C includes the remaining 70% items which account for just 10%. "V" is for vital items without which a hospital cannot function, "E" for essential items without which a hospital can function but may affect the quality of the services and "D" stands for desirable items, unavailability of which will not interfere with functioning.

AIM

This project aims to analyze a hospital's pharmacy inventory management with special attention on ABC and VED analysis as an optimization tool.

MATERIALS AND METHODS

ABC analysis : The annual expenditure of individual items was arranged in descending order. The cumulative cost of all the items was calculated. The cumulative percentage of expenditure and the cumulative percentage of number of items were calculated. This list was then subdivided into three categories: A, B and C, based on the cumulative cost percentage of 70%, 20% and 10%, respectively.

VED analysis: The VED criticality analysis of all the listed items was performed by classifying the items into vital (V), essential (E) and desirable (D) categories. The items critically needed for the survival of the patients and those that must be available at all times were included in the V category. The items with a lower criticality need and those that may be available in the hospital were included in the E group. The remaining items with lowest criticality, the shortage of which would not be detrimental to the health of the patients, were included in the D group.

ABC-VED matrix analysis: The ABC-VED matrix was formulated by cross-tabulating the ABC and VED analysis. From the resultant combination, three categories were classified (I, II and III). Category I was constituted by items belonging to AV, AE, AD, BV and CV subcategories. The BE, CE and BD subcategories constituted category II, and the remaining items in the CD subcategory constituted category III. In these subcategories, the first alphabet denotes its place in the ABC analysis, while the second alphabet stands for its place in the VED analysis.

RESULTS

Provision of care in tertiary care hospitals is sensitive to the timely availability of facilities, including drugs. In case of drugs, besides the criticality factor, the cost factor must also be taken into consideration, as can be seen from our study, where about 10% of the drugs consumed about 70% of ADE of the pharmacy. Categorization of drugs by the ABC-VED matrix model helps to narrow down on fewer drugs requiring stringent control.

Table 1 ABC and VED analysis of the pharmacy

Category	No. of items	% of items	% of ADE of the pharmacy
A	58%	13.78%	69.97%
B	92%	21.85%	19.95%
C	271%	64.37%	10.08%
V	51%	12.11%	17.14%
E	250%	59.38%	72.38%
D	120%	28.51%	10.48%

Table 2 ABC-VED matrix analysis of the pharmacy

	V				E				D			
	No.	%	Annual expenditure (Rs.)	%	No.	%	Annual expenditure (Rs.)	%	No.	%	Annual expenditure (Rs.)	%
A	16	3.8%	5,162,722	12.9%	36	8.55%	21,495,547	53.72%	6	1.43%	1,338,595	3.34%
B	16	3.8%	1,398,518	3.5%	60	14.25%	5,155,508	12.88%	16	3.8%	1,427,260	3.57%
C	19	4.51%	296,574	0.74%	154	36.58%	2,312,392	5.78%	98	23.28%	1,425,495	3.57%
Total	51	12.11%	6,857,814	17.14%	250	59.38%	28,963,447	72.38%	120	28.51%	4,191,351	10.48%

CONCLUSION

The necessitates application of scientific inventory management tools for effective and efficient management of the pharmacy stores, efficient priority setting, decision making in purchase and distribution of specific items and close supervision on items belonging to important categories. ABC and VED analysis identifies the drugs requiring stringent control for optimal use of funds and elimination of out-of-stock situations in the pharmacy.

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