

Study on Optimizing Inventory in Laboratory by Finding
Inventory Consumption and Application of ABC-VED
Analysis at The Mission Neighbourhood- Advanced
Diagnostic & Patient Care, Asansol.

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Introduction

- Inventory management and control is one of the most important aspects of an organization to work effectively and efficiently.
- The main goal of inventory management is to avoid overstocking and out of stock of inventories.
- The purpose of this study is to facilitate optimum inventory in Laboratory of The Mission Neighborhood using ABC-VED analysis.
- ABC analysis is a proven method to categorize inventories into three different categories based on their consumption.



Problem Statement and Objectives

PROBLEM STATEMENT

Hospital or any other organization dealing with inventory are concerned with the cost associated with it. A large percentage of total money are invested in stock/inventory and effective management of inventory can save a lot of money for The Mission Neighborhood.

OBJECTIVES

1. To analyze the stock movements in stores.
2. To analyze the consumption trend of inventory and to rank them based on their consumption.
3. Classify inventories based on their importance.

Research Questions, Aim and Data Analysis Plan

Research Questions

1. What should be the sufficient inventory level?
2. How to maintain sufficient inventory level ?

Aim

To make inventory management cost effective and minimize stock out.

Data Analysis Plan

Descriptive analysis is used as per objectives



Materials and Methods

Study Design: This is an observational descriptive study. The location of study is The Mission Neighborhood, Asansol, West Bengal. The Study is done between 1st April'2021 to 30th May'2021 and covered all the consumables consumed during the study period.

Data Collection:-

- **Primary Data:** Primary data was collected for this study. Interaction with personnel of the hospital supply chain department was carried out.
- **Secondary Data:** Inventory data statements obtained from HIS.

ABC Analysis (Always better control)

- In the supply chain, ABC analysis is an inventory classification method that divides items into three categories, A, B, and C
- A is the most valuable item and C is the least valuable item. This method aims to focus on the key few (A-items) rather than the trivial majority (C-items).
- **ABC Analysis** is also known as selective inventory control.

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VED- analysis

- The VED analysis of inventories was done by classifying the inventories into vital(V), essential (E) and desirable (D) categories based on their criticality.
- Vital (V) are the items which are critically needed for the survival of the patients and these inventories must be available all the times at the centre.
- Using VED analysis we priorities inventory in which inventories are classified according to their importance.

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ABC-VED matrix

CLASSIFICATION	A	B	C
V	AV	BV	CV
E	AE	BE	CE
D	AD	BD	CD

Results

- **Category-A** : It includes 32 inventories which need strict control. These are the inventories having highest percentage of consumption.
- **Category-B** : It includes 27 inventories and needs moderate type of control. It is having second highest percentage of consumption.
- **Category-C** : It includes the remaining 150 inventories which needs least/loose control. These inventories also have the least percentage of consumption.

Category	Number of Items	Percentage Consumption	Type of Control Required
A	32	79.31	Strict
B	27	15.82	Moderate
C	150	4.87	Loose
TOTAL	209	100	

ABC-VED analysis

DRUG ANALYSIS	NUMBER OF INVENTORIES	PERCENTAGE OF INVENTORIES
V	39	18.66
E	114	54.55
D	56	26.79

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ABC-VED			
Classes	Combined Category	Number of Inventories	Percentage of Inventories
Class I	AV+AE+AD+BV+CV	58	27.75
Class II	BE+CE+BD	103	49.28
Class III	CD	48	22.97
Total		209	100

Conclusion

For Group- A : Order should be placed frequently, and lead time should be as less as possible to prevent damage by overstocking and not utilizing items.

For Group- B: There should be sufficient stock which should be maintained, and orders should be placed less frequently.

For Group- C: Orders can be placed very less frequently.

The ABC-VED matrix shows that management of class I (58 items) should be given utmost attention.

For class II (103 items) are also essential for daily operations in The Mission Neighborhood.

For class III (48 items) are desirable and thus requires less attention as compared to other two classes.

Here's to a sweet ending and to
a new beginning!

Thank You!