INVENTORY MANAGEMENT AT ZYDUS HOSPITAL, AHMEDABAD.

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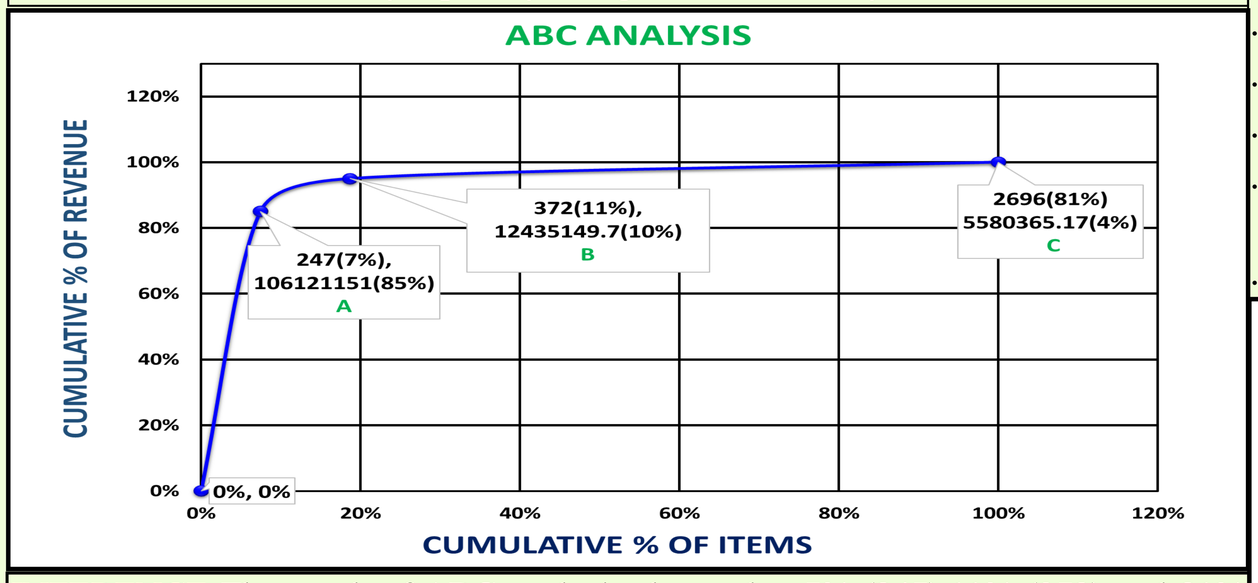
BACKGROUND

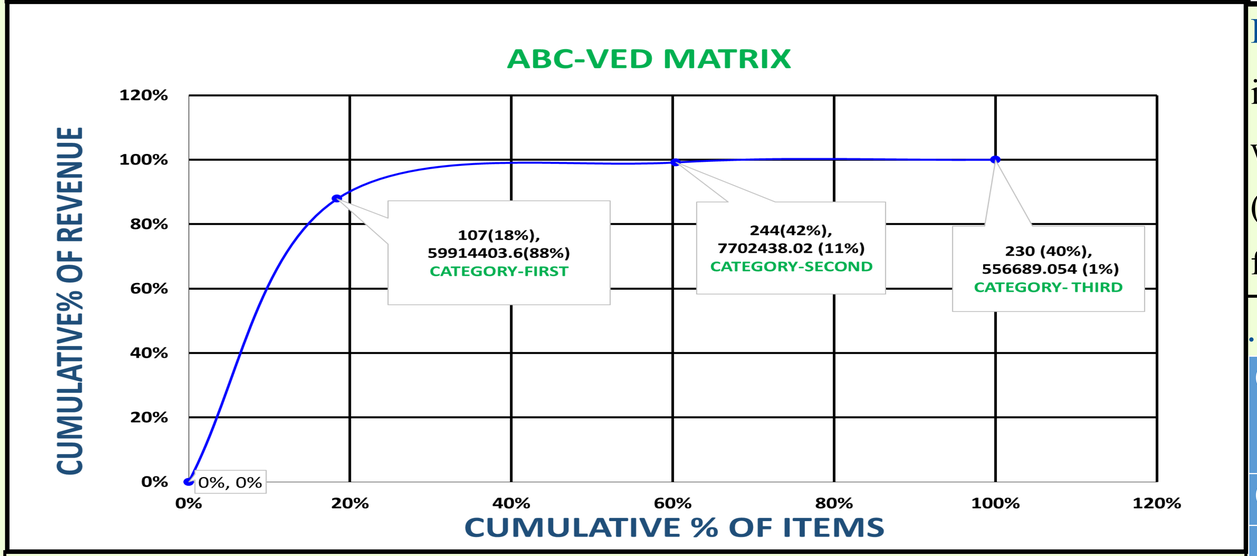
- Literature revealed that approximately one-third of annual hospital budget is spending on purchasing the drugs and some other supplies. So, there is a need to organize and manage the pharmacy store in such a way which gives efficient clinical and administrative services.
- The major aims of hospital inventory management and healthcare supply chains research is to reduce healthcare cost without sacrificing the quality of service to the patient by improving efficiency and productivity of healthcare system.
- We can manage the Hospital inventory by maintaining and utilizing ABC (expenditure) and VED (criticality) analysis.

OBJECTIVES

- To maintain an optimum investment in inventories to maximize the profitability.
- To maintain an optimum size of inventory for efficient and smooth running of Hospital pharmacy and batter space management
- To evaluate the inventory report by doing ABC-VED analysis.



INFERENCE-The graph of ABC analysis shows that 7% (247),11% (372) and 81% (2696) items were found to be in A, B and C categories respectively whose expenditure of three months was found to be 106121151,12435149.7 and 5580365.17 respectively. The cut-offs were not exactly at 70/20/10% and differed marginally, which is permissible.



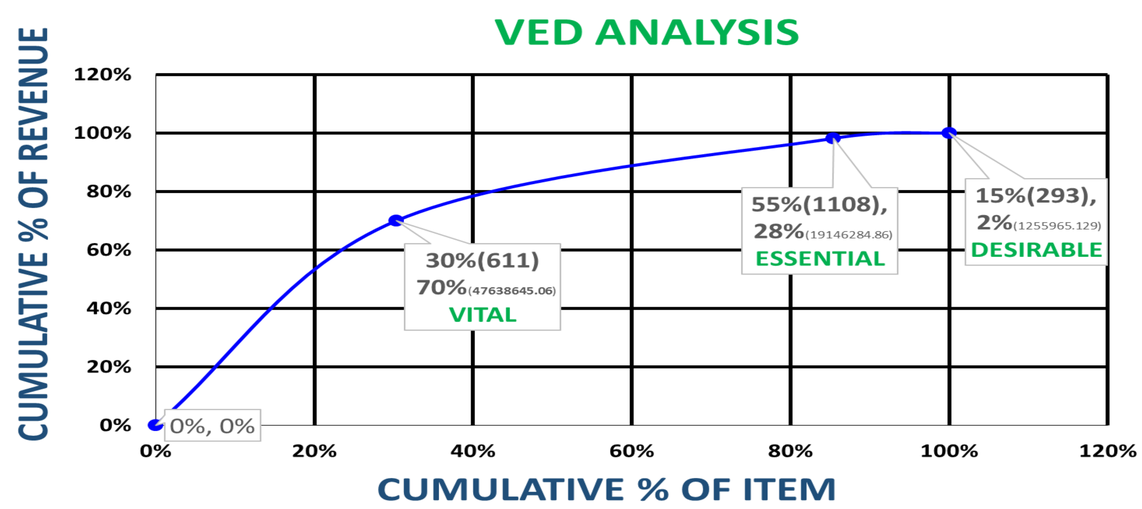
INFERENCE- In a combination of ABC and VED analysis, the resultant matrix makes it possible to focus on 107 (18%) items are belonging to category I for strict managerial control as these items are either expensive or Vital. The quarterly expenditure of these items was 88% of total expenditure. Class 2 is having 244 (42%) items whose quarterly expenditure was 7702438.02 (11%) and class 3 is having 230 (40%) of items whose quarterly expenditure was 556689.054 (1%) of total expenditure.

RECOMMENDATIONS

- **For optimum use of resources**—ABC and VED technique need to be adopted as a routine practice in hospital.
- **For optimum space management**—EOQ(Economic Order Quantity) system should be implemented and maintained which reduces the ordering cost and holding cost of the inventory.
- **For efficient management of supply chain department**—Scientific inventory tools should be implemented as they contribute to improvement in patient care and judiciary use of resources.
- **For reducing errors**—Barcode and serial number system should be adopted , which also make the data entry and the analysis easy because of scanning system.

METHODOLOGY

- **Study type**- Prospective Observational study
- **Sampling technique**- probability convenient sampling of 3 months consumption of ABC and VED inventory items (secondary quantitative data from HINAI software)
- **Sample area-** Central supply store department of hospital pharmacy report
- **Sample size**– 5330 items
- **Study period**– 3 Months
- **Data collection**-The secondary data was obtained from the HINAI WEB CONNECTED CARE SOFTWARE
- **Data analysis**– Data analysis was done by MS Excel and MS Power BI.



INFERENCE- The VED analysis graph shows that 30% (611) items ,55% (1108) items and 15% (293) items were found to be from V, E and D class respectively whose expenditure of three months was found to be 70% (47638645.06),28% (19146284.86) and 2% (1255965.129) respectively. There are 2012 items in drug formulary whose expenditure was 68040895.05.

FINDINGS

CATAGORIES	CLASS	QUANTITY	% QTY	CUMULATIVE % OF ITEMS	REVENUE	% REVENUE	CUMULATIVE % OF REVENUE
CLAS S-1	AV	44	8%	8%	23072155	34%	34%
	BV	23	4%	12%	2937997.1	4%	38%
	CV	6	1%	13%	175456.06	0%	38%
	AE	32	6%	18%	31785153	47%	85%
	AD	2	0%	18%	1943640.6	3%	88%
CLASS-2	BD	1	0%	19%	92149.98	0%	88%
	CE	175	30%	49%	2962520.0	4%	92%
	BE	68	12%	60%	4647767.9	7%	99%
CLASS-3	CD	230	40%	100%	556689.05	1%	100%

CLASS	QUANTITY	% QTY	CUMULATIVE % QUANTITY	REVENUE	% REVENUE	CUMULATIVE % REVENUE
CLASS1	107	18%	18%	59914403.6	88%	88%
CLASS2	244	42%	60%	7702438.02	11%	99%
CLASS3	230	40%	100%	556689.054	1%	100%
TOTAL	581			68173530.6	100%	

REFERENCES

- M Devyani, AK Gupta, and R Nigh "ABC and VED Analysis of the Pharmacy Store of a Tertiary Care Teaching, Research and Referral Healthcare Institute of India" 2010 Apr-Jun; 2(2): 201– 205.
- Gupta R, Gupta KK, Jain BR, Garg RK. ABC and VED analysis in medical stores inventory teaching, research and referral healthcare institute of India. Journal of young pharmacists. 2010;2(2):201-5.