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A study to review drug inventory and pharmacy management with reference to I.V. & injectables at a tertiary municipal care hospital with 1800 bedded hospital

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Abstract
Pharmacy plays the key role in curing the disease .Availability of essential medicines have been found to have limited access. A retrospective cohort study was conducted in tertiary care, municipal hospital, Mumbai, had analyzed control measures using ABC, VED and FSN analysis taking into account of the controlled drug list. The study was conducted to look for the drug procurement and tendering system in context with injectables including I.V. in order to manage inventories. A comprehensive inventory facilitates not only controlling the cost, but also ensure timely availability leads to a patients' delight. Annual drug sale data of a pharmacy was analyzed to identify the categories of drug needing strict management control, three important methods regarding inventory management practices were studied. The study was expected to provide practical insight for quality pharmacy management to strengthen the system for delivering quality medical care to the patients.

Keywords: Drug inventory management, procurement of drugs, ABC, VED & ABC-VED matrix

Introduction
Drugs have always played a crucial element in preventive as well as curative health care. About 40 to 60% of entire public sector health budget of any country goes into buying medicines. The only way to improve access to medicines for the majority of the population within the given budget provisions is to build a competent procurement system [1]. According to one estimate up to 70% of resources are wasted in any country due to poor drug management systems and is major reason that one-third of world population lacks access to essential medicine [2]. According to a World Health Organization (WHO) report, almost 68% of the people in India have limited access to essential medicines. Up to 90% of the population purchase medicines on an out-of-pocket basis has pushed up household out-of-pocket (OOP) expenditure, making them the largest household expenditure item after food in a developing country like India these numbers are higher notably 83% in rural areas and 77% in urban area. [3]. Quality of care in tertiary care hospitals, especially pharmacy involves the prompt availability of drugs where a large amount of money is spent on buying items from the total hospital budget [4, 5].

Drug procurement
Procurement is defined as the process of purchasing supplies directly from national or multinational private or public suppliers; purchasing through global agencies and procurement mechanisms or regional procurement systems. These sources may be used individually or in combination to meet the entire range of pharmaceutical needs. WHO has listed out nine indicators of efficient hospital drug procurement that ensure quality products, and proper budgeting and financing which includes
- ✓ Transparency
- ✓ Cost Containment
- ✓ Technical Capability
- ✓ Operational Efficiency
- ✓ Purchasing For Safety
- ✓ Ensuring Appropriate Selection

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✓ Timely
✓ Accurate And Accessible Information

There are numerous mechanisms by which governments, nongovernmental organizations and other organizations manage their in-house procurement of pharmaceuticals, such as: open tender; restricted tender; competitive negotiation, including international or local shopping; and direct procurement, can be used with any of the standard reorder frequency models—annual, scheduled, or perpetual review— given the right sort of procurement contract. The aim of procurement is to foster the best cost-effective product to the patient on a timely basis [6, 7, 8].

Drug inventory
Inventory management is the heart of the pharmaceutical supply system. It is defined as the continuing "process of planning, organizing and controlling inventory" that aims at minimizing the investment in inventory while maintaining a sound balance between holding costs, on the one arm, and purchasing and shortage costs, on the other and also stresses on cost containment, better efficacy, demand and supply. There is no denying that stocking hospital pharmaceuticals and supplies can be expensive and tie up a lot of capital, and bringing efficiencies to such important cost drivers - often 30-40% of a hospital's budget - can present meaningful savings. Thus, a hospital materials manager to keep an eye on each and every drug used in hospitals, must establish efficient inventory system policies for normal operating conditions that also ensure the hospital's ability to meet emergency demand conditions and the relevant costs need to be identified, quantified and then examined for how they interrelate. However, inventory mismanagement causes unnecessary rise in procurement and carrying cost and an imbalance in the supply and demands equation. In the beginning of the process, it is important to identify the costliest drug items, and then to design a strategy for further study and identify their use pattern. The study of use pattern will help in designing suitable remedial actions [8, 9, 10, 11, 12].
Of all available inventory control, the ABC (always, better, control) and VED (vital, essential, desirable), matrix are important and most preferred tool.

ABC analysis
This analysis categorizes items based on their annual consumption value; sometimes Inventory Managers can use Pareto's Principle for classification. Pareto's Principle classifies the important items in a certain group that usually constitute a small portion of the total items in the group. The majority of the items, as a whole, will seem to be of minor significance. Here is how ABC Analysis looks like:
- **CLASS A**: 10% of total inventories contributing towards 70% of total consumption value.
- **CLASS B**: 20% of total inventories, which account for about 20% of total consumption value.
- **CLASS C:** 70% of total inventories, which account for only 10% of total consumption value.

FSN analysis
This analysis classifies inventory based on quantity, rate of consumption and frequency of issues and uses. Here is the basic depiction of FSN Analysis:
F stands for Fast moving, S for Slow moving and N for Non-moving items.

- Fast Moving (F) = Items that are frequently issued/used
- Slow Moving (S) = Items that are issued/used less for certain period of time
- Non-Moving (N) = Items that are not issued/used for more than certain duration

VED analysis
This is an analysis whose classification is dependent on the user's experience and perception. This analysis classifies inventory according to the relative importance of certain items to other items, like in spare parts.
In VED Analysis, the items are classified into three categories which are:
- Vital – inventory that consistently needs to be kept in stock.
- Essential – keeping a minimum stock of this inventory is enough.
- Desirable – operations can run with or without this, optional.

To provide effective system and reducing constraints, some surveillance vigilant mechanism is necessary in order to study such aspects of management. Therefore the proposed study was conducted in reference to department of pharmacy for inventory and pharmacy management so that more number of patients can be served within the available budget by adopting the improved drug management procedure and rational drug use. The study was expected to provide practical insight for quality pharmacy management to strengthen the system for delivering quality medical care to the patients. Conducting an assessment of drug availability, stock out, procurement will assist health facility to understand current scenario and plan for future to strengthen the overall of procurement, indenting system and supply chain management.

Methodology
The study was an observational, retrospective type of study.

Selection criteria: **Inclusion criteria**: Only schedule 1 i.e. I.V. and Injectable were selected which were provided to public sector.

Exclusion criteria
Oral drugs, surgical items, disposable, ophthalmic lotions, topical was excluded.

Study site
Department of Pharmacy, Medical Store and Department of Preventive & Social Medicine, at Tertiary Care Municipal Hospital, Mumbai.

Study procedure: The observational study was carried out at Department of Pharmacy, Tertiary Care Municipal Hospital, Mumbai which had more than 1800 beds for a period of 6 months.

Process of procurement and inventory management
The workflow of procurement procedures and techniques for management of drugs were studied first. For this purpose pharmacist from department of pharmacy, administrative officer from medical store and store clerk were involved for information about basic workflow at basement pharmacy which involved:
- Tendering process

- Procurement office and process
- Medicine selection and quantity estimation.
- Product quality assurance
- Tracking performance
- Structure of pharmacy
- Flow of inventory
- Inventory parameters such as safety stock, reorder level, lead time.
- Information about which reports and techniques were used for drug inventory managements was collected.
- Standardisation, codification and maintenance of drug inventories.

ABC analysis
The data for drug used in hospital during 2016-2017 was obtained from the office of the Superintendent of the hospital. The annual consumption of each drug and the expenditure incurred were worked out. All the drugs in the inventory were subjected to ABC cost analysis. For ABC analysis, the annual expenditure of each item was calculated after multiplying the annual consumption by its unit cost. The Annual Drug Expenditure (ADE) of all items thus obtained was arranged in descending order of rupee value and then cumulative cost was calculated. The percentage spent on each drug was calculated taking cumulative total as 100%. Then this list was grouped into A, B and C category based on cumulative cost consumed approximately at 70%, 20% and 10% of ADE value. However, the cut-offs value for categorization of drugs may vary marginally.

VED analysis
- With informal discussion with pharmacist from department of pharmacy and administrative officer from medical store, we came to know that the ABC analysis was alone taken into account for managing inventory; while VED and ABC-VED matrix analysis were done at departmental level but not at indenting level. Hence along with ABC analysis we also performed VED for efficient control of inventory.
- Further the I.V. and Injectables from the Department of Emergency Medical Service (EMS) and Emergency Surgical Services (ESS) were subjected to Vital, Essential and Desirable analysis based on the criticality of need of a drug. This analysis classified the drug inventory into vital (V), essential (E), and desirable (D) categories. The drugs that must be available round the clock for saving the life of patients and they were classified under vital (V) category. The second group (E) includes drugs with a relatively lower criticality need, which are essential for treatment of patients but the absence of which may be tolerated for short period of time. The remaining drugs were included in the desirable group (D), the availability of which will not affect the patient care significantly. The final list of drugs arranged on the basis of criticality by medical experts was analyzed for concurrence of opinion regarding classification.

ABC-VED matrix analysis
- We also conducted ABC VED matrix analysis to identify the categories of item needing stringent management control.
- Then a matrix was formulated by combining the ABC and VED analysis of listed drugs to evolve a management system, which can be used for prioritization. Finally the drugs were classified in three classes namely I, II and III from the resultant ABC- VED combination matrix. Category I was the high priority group, requiring greater attention, comprising the AV, AE, AD, BV, and BE groups of drugs; category II drug was of relatively lower priority management and comprises of BD, CV, CE and CD groups of drugs. The first alphabet denotes its place in the ABC analysis the second one stands for its place in the Vital, Essential & Desirable analysis. Rest of the drugs was of low priority from management point of view and placed under class III.

FSN analysis
- For FSN analysis, the consumption rates for all the items involved in the analysis were calculated. The drugs which were 70-100% utilised were considered as fast moving drugs. And the drugs which accounted >5 to 70% and less than 5% were categorized as slow moving and non-moving respectively.

Statistical analysis
- The data collected i.e., the annual consumption, expenditure of all the drugs was recorded from SAP in master charts and then final analysis was done using ABC, VED, ABC- VED matrix and FSN calculations.
- All recorded interviews were transcribed and compiled into the results.
- The data was represented on graphs and qualitative analysis was done.

Observation and Findings
Process of approval of Inventory Purchase Record in following ways:
1. Preparation of New Drug Inventory Purchase
2. Committee for checking specification of drug inventory
3. Addition and Deletion of drug inventories as per hospital need and done by pharmacist after recommendations by HOD
4. Quantity fixation of drug inventory
5. Pre-Bid meeting
6. Online floating of tendor in open tendor
7. Scrutiny Committee for preparation of final schedule list (Post-Bid Meeting)
8. Approval from AMC, DMC, CA-finance and standing committee
9. Quality Control checking of received products with purchasing document by the concerned pharmacist.
10. Product storage and record on computerized SAP system.

Workflow of inventory within the hospital
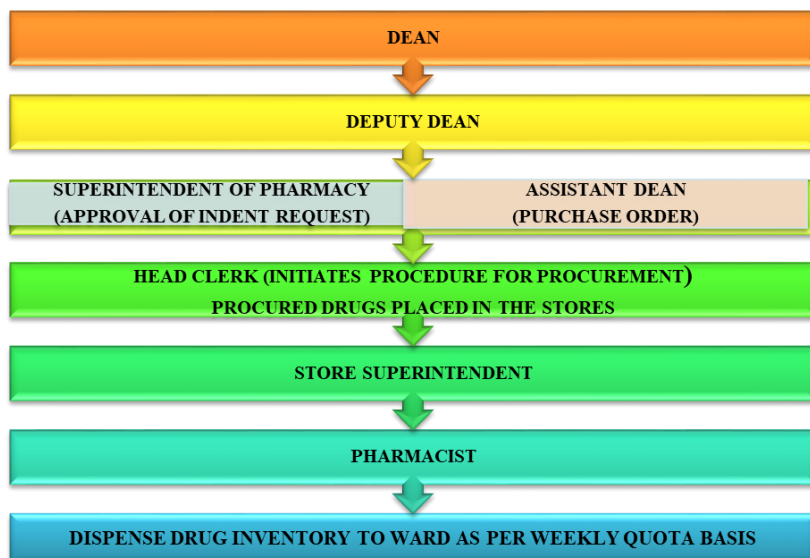
Result

All the I.V. and injectable drugs which were present at the tertiary care municipal hospital were subjected to ABC, VED, ABC-VED matrix and FSN analysis. The total numbers of I.V. and injectable drugs included in analyses were N=143. The overall ADE for hospital was found to be 167,315,000.00. The present study was done in the department of pharmacy store. Being a tertiary health care municipal hospital, serving a huge crowd, all the essential and basic medicines is provided at this centre.

Table 1: Understanding drug procurement.

Geography	South Mumbai
Drug procurement budget (INR)	167315000.00
Total budget (INR)	292851000.00
Essential drug list	
Customized EDL	Yes (In the form of schedule)
Composition of EDL committee	Multi stake holder committee
Frequency of EDL revision	2 years
Time for EDL preparation/revision	Approx 6 months
EDL categorization	Yes (user requirement)
Third party review of EDL	Yes
Demand estimation and forecast	
Demand estimation process	Aggregation of previous year facility indents
Frequency of demand estimation	2 years
Methodology for estimation	15-20% over previous years indent
Procurement process	
Procurement mechanism	Centralised
Financing of drug procurement	MCGM budget allocation
Emergency drug budget allocation	Yes (additional fund released)
Prequalification criteria	
Minimum turnover criteria	6 crore for last three financial year
GMP/WHO-GMP/US-FDA	WHO-GMP required
ISI/BIS/ISO/CE	Required
Mfg. license no. with product list and validity	Required
FDA product permission date	Required

Quality control	
External quality testing of every consignment	Empanelled private labs
Testing before distribution	Mandatory
Lead time for quality testing	Immediately
Storage	
Cold storage	Yes (vaccine, sera, test kits)
Protection from humidity and sunlight	Yes (dehumidifier installed)
Use of racks	Yes (stainless steel racks used)
Security	
Security Personnel	Yes (24*7 basis along with CCTV)
Others	Restricted entry with entry registers, Stamping of medicine with MCGM.
Penalty	
Penalty for quality failure and supply schedule default	Applicable
Penalty criteria	Supplier blacklisted with forfeiture of security deposit
IT enablement process	
Demand estimation and process	Yes
Tendering process	Yes
Quality control	Yes
Inventory management	Yes

ABC Analysis

ABC analysis of all the I.V. and injectables used in our hospital was done. Table no. 2 shows that out of the 143 drugs listed around 15.38% of the drugs were found to account for 70.61%(59911858.2) of the ADE at the hospital (22 drugs) and were classified as A category. Another 20.09% of the drugs (30 drugs) consumed 20.21% (17154207.9) of the budget classified as B category, while remaining 63.63% of the drugs (91 drugs) accounted for only 9.16(7779788.82) of the ADE classified as C category. (Figure 2). The results are also being graphically displayed in fig 2 for better appreciation.

Table 2: Spectrum of drugs in ABC analysis (N= 143)

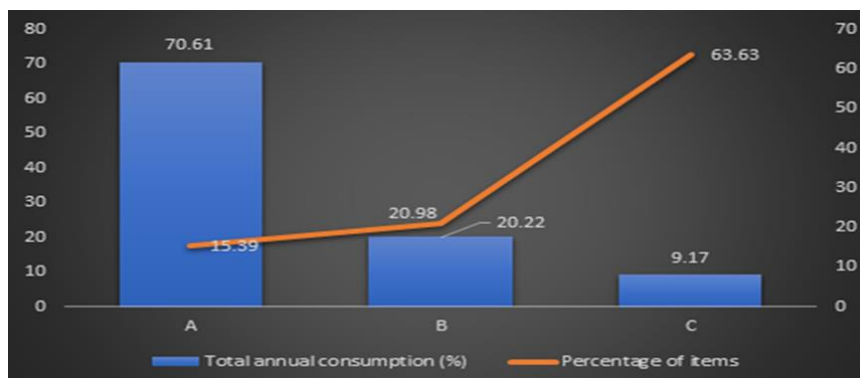| Sr. No	Drug Analysis	Category			Total
		A	**B**	**C**	
1	Total Annual Consumption (%)	70.61	20.22	9.17	100
2	Value Of Annual Consumption(Rs)	59911858.2	17154207.9	7779788.82	84845854.9
3	No. Of Items	22	30	91	143
4	Percentage Of Items	15.39	20.98	63.63	100

Fig 1: Spectrum of drugs in ABC analysis (N= 143)

In the above graph it was found that drugs with 70.61% of annual expenditure were considered to be high consumption value and those with 9.17% of annual expenditure to be low consumption value.

VED analysis

While doing VED analysis of drug we came across the fact that vitality, essentiality and desirability of all the drugs were totally dependent upon department and patient of particular disease. We considered two different departments for doing VED analysis, for that medicine department hold 38,46,59 as

vital ,essential and desirable drug. From surgery department 43,42,58 as vital, essential and desirable drug. The compiled findings from both the VED analysis of the present study are shown in figure .About 46 drugs (32.17%) were classified as vital drugs. Around 51 drugs (35.66%) of drugs were considered as essential, while46 drugs (32.17%) were classified as desirable drugs. Vital drugs accounted for only 32.08% of the annual drug expenditure of the hospital. Essential drugs accounted for 33.03% of the drug expenditure, whereas desirable drugs were found to consume 34.88% of the annual expenditure. (Figure 3).

Table 3: Final value of VED analysis

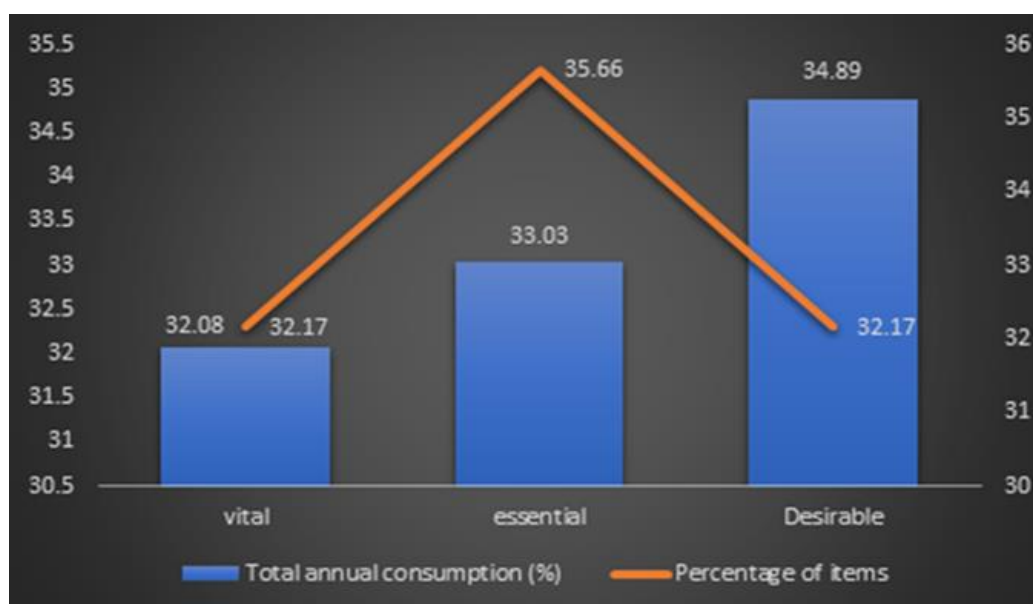| Sr. No	Drug analysis	Category			Total
		vital	**essential**	**Desirable**	
1	Total annual consumption (%)	32.08	33.03	34.89	100
2	Value of annual consumption(Rs)	27221852.39	28028744.91	29595257.59	84845854.9
3	No. of items	46	51	46	143
4	Percentage of items	32.17	35.66	32.17	100

Fig 2: Final value of VED analysis

The above graph represents the vital and essential items had high consumption value which was 32.08% and 33.03% of ADE respectively.

ABC VED Matrix
ABC VED Matrix analysis is depicted in Table 4. This matrix yields nine different subcategories (AV, AE, AD, BV, BE, BD, CV, CE and CD) and further these subcategories were coupled into three main categories, categories I, II and III.

AV+BV+CV+AE+AD = CATEGORY I
BE+CE = CATEGORY II
CD = CATEGORY III

There were 61 (42.65%) drug in category I, 54 (37.76%) drugs in category II and 28 (19.58%) drugs in category III, amounting for 82.34% (Rs. 69864400.3), 14.95% (Rs. 12690239.7) and 2.70% (Rs. 2291214.89) of ADE of the pharmacy respectively. (Table no: 4 Figure 5)

Table 4: Results of category I, II and III

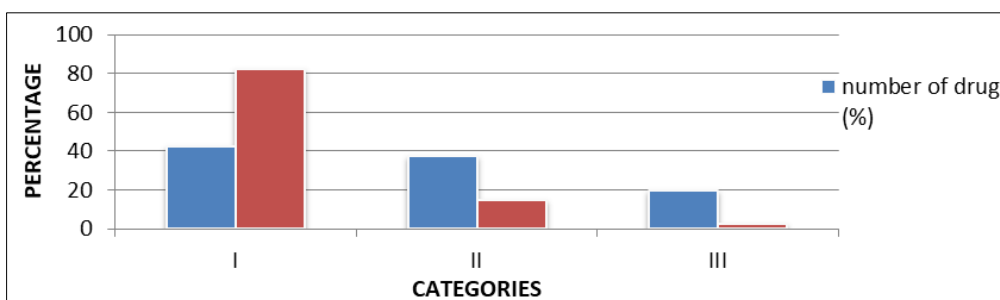| CLASS	Combined Category	Total No Of Drug	% Of Drug	Cost	% Of Cost
I	AV+BV+CV+AD+AE	7+13+26+7+8=61	42.65	69864400.3	82.34
II	BE+CE+BD	7+37+10=54	37.76	12690239.7	14.95
III	CD	28	19.58	2291214.89	2.70
Total		143	99.99	84845854.89	99.99

Fig 3: Results of categories I, II, and III

The above graph depicted that the category I had high consumption value which was 82.34% of ADE while category III had lowest consumption value 2.07% of ADE

FSN analysis
From the FSN analysis of the drugs we found that 114 drugs i.e. 79.72% of the total drugs were classified as fast moving items. About 23 drugs i.e. 16.08% of the total drugs were classified as slow moving items and about 6 drugs comprises 4.19% were non-moving drugs of the total drug items. (Table 7, Figure.

Table 5: Movement of drugs (N=143)

Sr. No.	Drug Movement	Total No. of Drugs	Percentage (%)
1	Fast Moving	114	79.72
2	Slow Moving	23	16.08
3	Non Moving	6	4.19

Fig 4: Movement of drugs (N=143)

The pie diagram showed that 114 drugs were of highest consumption value and considered to be fast moving drugs; while 6 drugs were of lowest consumption which were non moving drugs.

Table no 8 below shows final values of ABC, VED, and ABC -VED matrix analysis. (Figure 5).

Table 6: Final values of ABC, VED & FSN analysis (N= 143)

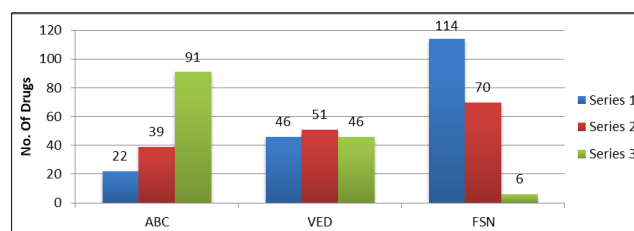| Sr. No.	Criteria		
	ABC	VED	FSN
1	22	46	114
2	30	51	23
3	91	46	6

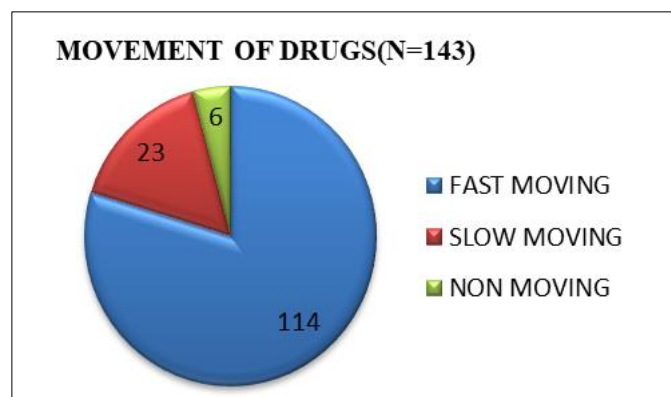**Fig 5:** Final values of ABC, VED & FSN analysis (N= 143)

Closing stock
While doing analysis we found some portion 85 drugs were remained in the stock at the end of the period 2016-2017 that had consumed 1, 38, 46,174.04 rupees of ADE. The findings are shown in table.

Table 7: Analysis of closing stock

Total number of drugs	85
Consumption in rupees	13846174.04
Percentage of consumption	16.32

Discussion

Our study confirmed that hospital devised a drug formulary considering Essential Medicine List for drug procurement by an informal group of employees, mainly doctors or health professionals working in hospital. The drug forecasting is done for next 2 years on the basis of this list and annual consumption data which was predicted from previous intending. The committee comprising of all the head of medical departments finalizes the schedules inflating it by 20%. The demand thus generated by all the departments were collected and compelled by the Department of Pharmacy under the guidance of pharmacy superintendent. Based on the biannual requirement of medicines, Central Purchase Department (CPD) does the tender process.

➢ **Procurement office**

The procurement office i.e., CPD which runs under Municipal Corporation of Greater Mumbai (MCGM), collates information on medicine needs through the pharmacy store of our hospital, evaluate a proposed procurement list based on the hospital requirements, manages the tendering process, arrange supply contracts, monitor performance of suppliers and of hospital. It is solely governed by the representative from administrative sections or stakeholders including hospital facilities. This separation of power helps ensure broad ownership of system and avoid conflict of interest.

➢ **Tender board**

In much hospital setting tendering and contracting are done according to law by a government tender board. In our hospital setting, CPD finalises the list prepared as per the hospital requirements and the tender board monitor the tender process. The primary task of the tender board is to make award decisions; in some cases this was an absolute decision while in some cases they ask for recommendations from health officials. The tender office invites the bidders through the advertisement in the newspapers or on the official website of MCGM. Interested suppliers then prepare a tender; the documents that outline the offer that they are making and that include pricing, schedules as well as their eligibility for the project of procurement. They outline their advantage over competitors; provide information on qualification, competence and experience and also how their bid offers the best value for drugs. The submitted tenders are then evaluated with regard to defined criteria, the department ensured the tendering process was equitable, non-discriminatory and was free from bias or favour. The offer that best meets all the requirements outlined in the request and provides value for money and quality win the contract. Once the evaluation process is completed and a tender submission was selected, the successful tenderer gets notified of the outcome and awarded a contract. Terms and conditions of the contract were usually outlined in the invitation but in certain circumstances, some final negotiations may occur before the contract is signed and finalized.

Product quality assurance

The medicine purchased and distributed are of the specified quality, specified standards for an effective procurement program. Our organization had two levels, the first is prequalification and second is external quality testing protocols to ensure that only quality drug enters the system. An important aspect of the prequalification criteria was the Good Manufacturing Practices (GMP) certificate, it ensures that the facility follows the stipulated guidelines according to the industrial benchmark and thus can guarantee a certain level of quality and keeping eye on low prices. If the drugs supplied were found to be of inferior quality or not as per the specifications, the contractor had to replace the drugs within the time and was also liable to pay the fine imposed by the Municipal Corporation or for penalty action including black-listing. In-case the contractors at any time during the continuance of their phase failed to supply satisfactorily within the prescribed time, the corporation had the full liberty to procure the same at the Risk & Cost of the contractor.

➢ **Tracking performance**

Our study findings states that the hospital store section works on System Application Product System, used to track all orders placed, the number and status of receipt, stocks-outs, number of order placed, quantities actually purchased and consumption of the drugs. Basement pharmacy (Stock list) receives request for indent from dispensaries, laboratory, operation theatre, departments through stock transfer request module. For every order requisition is required from the respective departments, Purchase Order (PO) is send to the vendors and the order sent to the department once validation is given by the main pharmacy, accounts and billing section only after Goods Receipt Note is prepared, afterwards the stocks will be available to supply within the hospital.

ABC analysis

For ABC analysis of tertiary care hospital, only 143 drugs were considered for the study. The present study results showed that if we consider the ABC analysis alone for inventory management, it would help to effectively control 22drugs (15.38%) items in the A category, which represent almost 70.61% of annual drug expenditure of the medical store, but our aim of focusing on these items we would compromise on the availability of items of vital nature from B and C categories i.e. 20.09% of the drugs (30 drugs) consumed 20.21% of the budget classified as B category, while remaining 63.63% of the drugs (91 drugs) accounted for only 9.16 of the ADE classified as C category. Almost 71% of the drug expenditure has to be incurred on just 22 drugs (15.38%), hence these A category drugs need tight and efficient financial monitoring. In contrast C category drug require least control as they are cheap and larger quantities of these drugs can be stocked without blocking significant amount of money (i.e. at lowest opportunity and carrying cost).

VED analysis

The results of the present study revealed that if we consider VED analysis alone then we can effectively control the vital and/or essential items, accounting for 65.11% of annual drug expenditure of the medical store. Review of literature suggests that various other studies on the various drug inventories in our country show diverse results in the percentages of vital, essential and desirable items. The reason of these varied results could be due to the different status of the hospitals agencies in terms of the specialties and super-specialties they cater to.

ABC-VED matrix analysis

This matrix yields nine different subcategories (AV, AE, AD, BV, BE, BD, CV, CE and CD) and further these subcategories were coupled into three main categories,

categories I, II and III. In a combination of ABC and VED analysis, the resultant matrix makes it possible to focus 61(42.65%) IV and inject tables drugs belonging to category I for strict managerial control as these items are either expensive or vital it consumed of the 82.34% of ADE. AV, AE and BV subgroups of category I consist of drugs 27 (18.88%) that are expensive (53.86% of ADE), and their being out of stock is unacceptable as they are either vital or essential. To prevent locking up of capital due to these items, low buffer stock needs to be maintained while keeping a strict vigil on the consumption level and the stock in hand. CV items (26, 18.18%) are drugs of low cost but high criticality and take up 3.1% of ADE of the pharmacy. Because this amount is negligible, these items can be procured once a year and stocked as their carrying cost is low.

AD items (8, 5.59%) consume 25.36% of the ADE. These items should be monitored for economic order quality, and their order placement must be made after careful study of the need. Rational use of items in this subgroup, including their removal from the list if possible, can bring about substantial savings without affecting patient care.

Category II items (54, 37.76%) consumes 14.95% of the ADE. These items can be ordered once or twice a year. Category III items (28, 19.58%) consume 2.70% of the ADE. These items can also be ordered once or twice a year, thereby saving on ordering cost at a moderate carrying cost and without blocking substantial capital.

FSN movement of the different drugs show that only 4.19% of drugs from main pharmacy are non-moving. The drug like propofol was found to be substandard at the time of quality analysis therefore the stock was non-moving. While 16.08% of drugs were found to be slow moving, suggest that monitoring on the demand of these drugs will ultimately lead to good inventory management.

Closing stock gave us information relating to the value of the drugs that were remained in the stock at the end of financial year 2016-2017. About 16% of drug 1,38,46,174.04 rupees were not used in the previous year and were forwarded to the next year. This conclude that inventory management was not practiced properly. Therefore strict managerial control is required.

Conclusion

Sound inventory control method is of utmost importance in efficient management in the healthcare setting, would facilitate the management in controlling the cost and also ensure the timely availability of vital and essential items in achieving patient satisfaction. This study analyzed the inventory control method with the help of the controlled drug list of tertiary care, considering the fact that the major part of ADE was used to purchase vital and essential drug items. As compared to the other published studies, budget was quite high, for that strict management and vigilance is necessary. ABC analysis allows inventory manager to segregate and manage the overall inventory and suppliers. Close eye has to be kept on purchase of expensive, vital and essential drugs. ABC-VED analysis helps us to know about the medicines which require more stringent monitoring and management. Also, it prevents wastage of extra money to be spent on purchase of medicines which are less needed. Ultimately, it helps to better use of available resources and budget and also to avoid out of stock situation at the drug store without compromising patient health care. In all to conclude, inventory control technique need to be followed routinely in

this institution which will improve patient care with optimal and judicious use.

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