

Evaluation of BPJS Drug Planning Controls in Regional General IFRS dr. Soehadi Prijonegoro Sragen

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Abstract

Service in the pharmaceutical sector at hospitals is one that must be carried out in a timely and high-quality manner in order to support good service. Controlling drug supplies has a major impact on the quality of service to patients. The aim of this research is to evaluate the BPJS drug inventory control system for the planning and procurement stages with ABC, VEN, ABC-VEN, EOQ. The research design is a type of non-experimental descriptive research with retrospective data collection. The data used for the period January-December 2021. The drugs analyzed are oral drugs and the most needed drugs are included in the ABC, VEN categories so that the BPJS ABC-VEN drug group is obtained. The results of ABC analysis with a total of 464 drugs were classified into groups. Group A 19%, group B 25.4% and group 55.6%. The VEN group analysis was Vital 19.4%, Essential 77.8% and non-Essential 2.8%. Based on the results of EOQ with a total of 113 items.

Keywords: ABC, VEN, EOQ, BPJS.



A. INTRODUCTION

Pharmaceutical management is a system in the health sector that can influence the clinical and financial levels of hospitals so that these procedures are closely related to each other (Osei Mensah, 2015). Inventory management is very necessary to stabilize the supply of medicines so that they remain cost-effective, effective and available. Because health facilities and medicines cover 3.33% of health services in hospitals (Management Sciences for Health, 2013).

Drug management in hospitals is one aspect of hospital management that must be considered, especially at the planning and procurement stages of pharmaceutical supplies. Because at the planning stage it can provide direction, minimize the impact of changes, reduce waste and with planning standards will be set in quality control. Meanwhile, procurement has become an integral part of planning to realize what has been planned in accordance with existing conditions (Sule, 2015). According to National Community Pharmacists Association (2021), Hospital drug management includes initial stock and there must be reserves to ensure that needs are met.

Inefficient drug control can have an adverse impact on hospitals both medically and economically. The negative impact of poor inventory control, for example, is on the level of public trust in health services, especially pharmaceutical services at the hospital. This will affect the level of pharmaceutical services in

hospitals so that patient satisfaction decreases. The inventory of medicines in hospitals must be controlled because it is very important in hospital operational management. Effective and efficient control of medicine supplies can have a big impact on the return on investment so that we can provide the best service to patients (Seto, 2015). According to Droti (2022), Research conducted in Ethiopia and Africa shows that the availability of pharmaceutical ingredients is very necessary for health services and this is a problem that is always evaluated from year to year. In several studies in 8 countries in Africa, 12 essential medicines were used for women, namely 22% to 40% and for children 28% to 57% (Nditunze, 2017).

Inefficient drug control and management of drug supplies that occurs can result in unavailability of essential drugs, waste due to poor storage, poor drug stock management, irrational use, inappropriate prescribing (The Pharmaceutical Fund and Supplies Agency Would, 2015). Drug control management is carried out to increase the availability of drugs and to avoid excess or lack of costs (Duangpun, 2021).

These inventory control methods have the same basis, namely the inventory value. The inventory value is obtained by multiplying the amount of inventory stock by the price of the drug. Excessive inventory value (over stock) causes waste in inventory. Like research conducted by Dompung (2018), the research results show that the application of the method can increase the efficiency of drug supplies as indicated by the inventory value which shows a significant difference in the group before the application of the method of 4,835,087,839, there was a decrease with an inventory value of 2,540,410,122.

ABC or VEN analysis if separated have each other's weaknesses. ABC analysis has financial value and loses the basis of medicine. VEN also has disadvantages, such as drugs that have high prices but are not needed in hospitals and vice versa. So it is important to combine the two to get maximum results according to the matrix (Taddele, 2019).

B. METHODS

The type of research used was non-experimental descriptive research with retrospective data collection. The data used for the period January-December 2021. The drugs analyzed were oral drugs and the most needed drugs were included in the ABC, VEN categories so that groups were obtained. BPJS ABC-VEN drug.

Analyzing data using Microsoft Excel. Researchers use descriptive tools, tables, numerical methods. Researchers use descriptive statistics, including tables, and numerical methods, to provide main characteristics. ABC analysis, total expenditure on each item is calculated and sorted according to order. Next, calculate the percentage of costs and cumulative costs (Abdelmonim Ahmed, 2019). Then the researchers ranked the drugs into ABC categories. VEN analysis is carried out by considering and grouping drugs using existing references (Deressa, 2022).

The materials used in this research are data on BPJS group A drugs (i.e. the group that absorbs funds amounting to 75% of the total drug management budget

calculated from the cost of goods sold) through ABC analysis and BPJS class E drugs obtained from interviews. Calculation of the number of drugs to be ordered using the EOQ method.

C. RESULTS AND DISCUSSION

1. Analysis by Method A B C

The ABC analysis method is a method used to find out which BPJS drugs receive the most budget in IFRSUD dr. Soehadi Prijonegoro. In Appendix 2 you can see what medicines require close supervision (drug group A). Medicines that fall into categories A, B and C change every month, this is because needs change every month and there is still stock from previous months. Determination using the ABC method can reduce vacancies which impact patient satisfaction with hospital services. The results of the analysis using the ABC method based on the number of BPJS drug users obtained the following data:

Table 1. Results of BPJS Drug Grouping by Method A B C Based on Usage Value

Drug Group	Amount of stockpile		Usage	
	Amount	Percentage%	Mark	Usage %
A	88	19	IDR 8,488,200,191.00	81
B	118	25.4	IDR 1,590,610,943.00	15
C	258	55.6	IDR 422,514,696.00	4
Amount	464	100	IDR 10,501,325,830.00	100

Source: IFRS dr. Soehadi Prijonegoro

In table 1, the results can be seen, namely group C drugs are slow drug turnover drugs. The ABC analysis in this study is the same as previous research conducted by Ceylan and Bulkan (2017) where 10.31% of part A, 21.78% of part B and 67.9% of part C were pharmaceutical expenditure.

This research is also in line with research conducted by Nigah et al. (2010) which is 13.78% for item A, 21.85% for item B and 64.37% of items giving 69.97%, 19.95% and 10.08% pharmaceutical ejaculation. The like of this research with previous research may be in summary with the ABC classification analysis following V. Pareto's classification method and the ranges he recommends. In Mousnad's research (2016), research findings conducted in India were that 12.11% of vital goods, 59.38% of essential goods and 28.51% of non-essential goods were consumed, respectively 17.14%, 72.38%, and 10.48%.

These results are fully in accordance with the principles of previous research, namely part B needs a little supervision while part C only requires a little supervision response for ordering and purchasing and this way you can carried out by managers at the middle and lower levels respectively (Bivash M, 2012).

2. Analysis by Method VEN

VEN analysis is an analysis used to determine BPJS drug purchasing priorities and to determine the security level of BPJS drug stock. VEN analysis at RSUD dr. Soehadi Prijonegoro is carried out by pharmacists.

Table 2. Results of BPJS Drug Grouping by Method VEN Based on Usage Value

Drug Group	Amount of stockpile		Usage	
	Amount	Percentage (%)	Mark	Usage (%)
V	90	19.4	IDR 8,543,925,481	81.4
E	362	77.8	IDR 1,646,582,592	15.7
N	13	2.8	IDR 310,817,757	2.9
Amount	465	100	IDR 10,501,325,830.00	100

In table 2, the results can be seen showing that 19.4% of items are Vital, 77.8% of items are Essential and the remaining 2.8% are included in the Non-Essential category. Vital medicines are medicines that are very necessary, because these medicines are lifesaving and are medicines that require quite a lot of money. Essential medicines are medicines which, if they are not available, can be replaced with other medicines that are the same as that medicine. The results of the research grouped these drugs to streamline drug management in hospitals (S. Dudhgaonkar, 2017). Generally, major diseases in all countries can be cured.

If there is insufficient funds for medicines, then these medicines must be provided with alternatives. Almost all drugs in the VEN analysis in this case are essential drugs and essential drugs require moderate inventory control. Some items in this study are not important and running out of stock does not affect the provision of health services at health facilities. So the lowest priority shared with items when procurement medicines. Highlight to drug domination during selection, procurement, stock storage and prioritize emergency medications, then to essential items and reviewing things that are not needed (Deressa, 2022).

3. BPJS Drug Analysis Combination ABC-VEN

This research was conducted to analyze the management of pharmaceutical supplies in health facilities at RSUD dr. Soehadi Prijonegoro using ABC-VEN matrix analysis. According to Migbaru S (2016) analyzing ABC or VEN analysis alone has weaknesses. Therefore, to get good results, both must be carried out to complement each other's ABC-VEN matrix analysis in order to obtain drugs that need close monitoring.

Table 3. ABC-VEN Combination Drug Group at RSUD dr. Soehadi Prijonegoro

	A	B	C
V	178	208	348
Mark	IDR 17,032,125,672.00	IDR 10,134,536,424.00	IDR 8,966,440,177.00
E	449	479	619
Mark	IDR 10,134,782,783.00	Rp. 3,237,193,535.00	Rp. 2,069,097,288.00
N	101	131	271
Mark	IDR 8,799,017,948.00	IDR 1,901,428,700.00	IDR 733,332,453.00

Table 3 complete data from tables 1 and 2. Drug classification based on the ABC-VEN combination in 2021. AV class of good drug items in 2021. According to Al-Najjar et al (2020), should be given high priority by hospital management. Warehouse operational efficiency can be substantially improved by focusing on AE. All hospital staff must pay attention to this, demand calculations must be accurate, safety stock levels, and consumption levels should be monitored continuously for this group of items.

There will be several changes in the AE category in 2021. These changes can be triggered by changes in drug needs that adapt to changes in disease, namely the Covid-19 pandemic which is starting to influence people when visiting hospitals. Up to 24 November 2021, The Indonesian government said 4,254,443 people confirmed positive for COVID-19 and there are 143,766 deaths with CFR: 3.4% related to COVID-19 reported and 4,102,700 patients have recovered from the disease (Ministry of Health, 2021).

Based on the medication the patient is taking through combining ABC and VEN analysis provides benefits for proposing new functions of inventory models. This merger is to overcome the problem of developing drug management and control (Dudhgaonkar, 2017).

4. Calculation Method EOQ

According to Seto (2015), EOQ is the amount in ordering pharmaceutical preparations to minimize the total ordering costs and storage amount. The number of medicines ordered can be determined by calculating the EOQ value of each medicine item. The greater the amount of inventory can lead to the risk of increasing storage costs and the greater the facilities required, so that maintenance costs also become greater, but on the other hand, ordering costs and distribution costs become smaller. If there is an increase in the quantity ordered, then the number of orders each year will decrease but the amount of storage costs will be greater because the amount of inventory that must be handled is greater so stronger efforts need to be made to maximize inventory management in order to achieve a balance between building inventory and costs. distribution and ordering.

Table 3. EOQ Values of the Top 5 in 2021 at RSUD dr. Soehadi Prijonegoro

Medicine name	Preparation	Order Fees	Storage Fees	EQO
Calcii gluconas 10% inj	Injection	146,286	16.50%	227
Calcium polystyrene sulfonate @ 20	Powder	146,286	16.50%	398
Cotrimoxazole forte 960 mg @ 100	Drug	146,286	16.50%	1,922
Ketamine inj 100 mg/ml	Injection	146,286	16.50%	30
Ksr 600 mg tablets 600 mg	Tablet	146,286	16.50%	14,539

Table 3 shows the determination of the optimum quantity ordered using EOQ calculations. The EOQ method aims to calculate the Economic Order Quantity (EOQ) which aims to determine the order quantity at the most economical cost. This can lead to storage costs even though ordering costs can decrease and can also lead to inappropriate allocation of funds and can lead to drug shortages. Using the EOQ

method can reduce storage costs and the risk of drug damage/expiry, although ordering costs can increase, there can be quite large cost efficiencies (Dwi Putra, 2019).

Based on the research results of Gunawan (2022), EOQ calculations can determine several economic quantities each time an order is made and how often the hospital must order in one period. The results of the EOQ calculation can also determine the quantity of each drug purchased by the hospital each time an order is made and the frequency of ordering each unit of drug in one year. Then the hospital will get economical costs so as to minimize costs arising from supplies.

D. CONCLUSION

The results of grouping BPJS drugs using the ABC method based on their usage value are group A, namely 88 drugs with a total use of 81%, group B, namely 118 drugs with a total use of 15% and group C, namely 258 drugs with a total use of 4%. The results of grouping BPJS drugs using the VEN method based on their usage value are group V, namely 90 drugs with a total use of 81.4%, group E, namely 362 drugs with a total use of 15.7% and group N drugs, namely 13 drugs with a total use of 29%. Meanwhile, in the combination of the ABC-VEN method, the group with the highest usage price is the AV drug group, namely IDR 15,977,869,663 with 148 drugs and the lowest is CN, namely IDR 1,263,387,296 with 332 drugs. Based on the EOQ (Economic Order Quantity) method, a picture was obtained for 465 drug items that the optimum order quantity (EOQ) varied, namely the highest optimum order number was 113 drugs.

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