Application Of Consumption Method With Eoq, Mmsl Forecasting And Abc-Ven Analysis In Pharmaceutical Briefing Management In Hospitals General Royal Prima Marelan

Ajeng Afni Kartika [1], Ermi Girsang [2]*, Wienaldi [3] ,Chrismis Novalinda Ginting [4]

[1,2,3,4] Master of Public Health Study Program, Faculty of Medicine, Dentistry and Health Sciences, Prima Indonesia University, Indonesia
* Corresponding Author:
Email: ermigirsang@unprimdn.ac.id

Abstract.

Hospitals should plan for drug needs using accountable methods to avoid empty drugs. Good drug planning can improve pharmaceutical stock control in hospitals. The purpose of this study was to find out about the application of consumption methods with EOQ, MMSL and ABC-VEN forecasting in the management of pharmaceutical supplies in hospitals. This study used retrospective mix-method data, quantitative data and qualitative primary data. The research was conducted at RSU Royal Prima Marelan. The results showed that drug supply control using the EOQ method of getting drugs reordered: cefixime 200MG ordered at 447, ondacetron 4MG 740, gabapentin 300MG 706, ranitidine 25MG 1467, novorapid flexpen / 5" 42. In the SS method, the number of drugs available at delivery, cefixime 200MG should be 627 drugs at the time of shipment, ondacetron 4MG should be 522, gabapentin 300MG should be 470, ranitidine 25MG should be 940, and novorapid flexpen/5" should be 26. In the ROP method the drug was reordered at cefixime 200MG it was reordered when the stock was 447 and the quantity ordered was 12027, ondacetron 4MG 740 and 10000, gabapentin 300MG 706 and 9020, ranitidine 25MG 1467 and 18040, novorapid flexpen 42 and 502. In the ABC method, group A as many as 59 types 70.59% with a total investment of 70.59% drug use and an investment value of IDR 606,511,106, group B 64 drug investment 20.33% investment 20.33% drug use investment 174,722,327, group C 146 types (9.08%) investment 9.08% drug use and investment 78,028,263.

Keywords: *ABC-VEN; EOQ Forecasting Method; Medicine; MMSL and Pharmacy.*

I. INTRODUCTION

Pharmacy is a profession related to health and health sciences as well as chemistry. Pharmacy is also a profession in the health sector in activities in the field of development, compounding, processing, production and distribution of drugs. Science and pharmacy have 4 fields, namely science, industrial pharmacy, traditional medicine and clinics. Pharmaceutical services carried out in hospitals are activities to support quality health services. In the Ministry of Health Number 1333 / Menkes / SK / XII / 1999 concerning Hospital Service Standards, it is stated that pharmaceutical services in hospitals are an inseparable part of the hospital health service system that is oriented towards patient service, the provision of quality medicines, including clinical pharmacy services, and affordable for the community.[12]The hospital must have a drug requirement plan using methods that can avoid emptying the drug. A good drug plan can increase and control the stock of pharmaceutical preparations in hospitals. Plans can be based on the RS formulary that has already been drawn up. If any drug is out of stock due to late delivery, lack of national stock or there are other causes that cannot be anticipated, then the pharmacist notifies the pharmacy staff that the drug is empty and the suggestion of substitution or comes from an outside party who has entered into the cooperation agreement. Planning is carried out with the internal parts of hospital pharmacy installations and work units in hospitals.

[3]In many hospitals in Indonesia have not held pharmaceutical service activities as expected, because there are obstacles, namely limited knowledge of hospital management in pharmaceutical functions, the ability of pharmaceutical personnel, hospital management policies, limited knowledge of related parties about hospital pharmaceutical services.Therefore, hospital pharmacy services are still conventional which is only product-oriented, which is limited to distribution and provision. Pharmaceutical Services in the Hospital include 2 activities, namely managerial activities such as the management of Pharmaceutical Preparations, Medical Consumables, Medical Devices, and clinical pharmaceutical service activities. These activities must be supported by human resources, facilities, and equipment.[45]There are a large number of medicinal items

that affect the application of visual methods that become difficult, the ABC method of analysis is required. ABC analysis can be combined with VEN (vital, essential, and non-essential), if combined it will be more effective because not only money but critical levels also play a role. The combination of ABC VEN analysis has benefits and objectives in efficiency and budget adjustment. Group A drugs should be E and partially V. There is also a need for perpetual system inventory control methods or [67]*Economic Order Quantity* (EOQ). The EOQ method is used to determine the quantity of inventory orders minimizing order costs and storage costs.[8]This research was previously conducted by Veronica M.Dampung (2018) and the results found that there is a plan system that has been calculated with previous calculations and inventory control has been carried out more efficiently in managing pharmaceutical supplies in public pharmacies Pelamonia Hospital

Pharmacy Installation Menu shows a decrease in stock value, the TOR figure is getting higher and the ratio of inventory stock to used inventory is getting smaller.[9]Another study has also been conducted at the XXX Hospital Pharmacy Installation in Mojokerto City obtained the average results of inventory value in 2016-2018 with the most efficient inventory value with the largest difference when compared to real inventory value. on the EOQ method with an inventory value of IDR 15,262,175,782.00. While the ITOR calculation obtained a value of 28.26 times. This shows that inventory control at the XXX Hospital Pharmacy Installation is efficient.[10]This research has also been conducted by Abdul Rofiq, et al (2020) and obtained research results that show drug control analysis of BPJS Health patients with ABC and VEN methods that can improve effective and efficient drug management, especially AE category drugs. Data on planning, procurement and use of BPJS Kesehatan patient drugs in 2018 were analyzed using the EOQ method then compared with the value of the ineachuse parameter can reduce the Stock Out value, but the effectiveness and efficiency of drug control were not achieved.[8]Based on the initial survey that had previously been conducted at Royal Prima Marelan General Hospital, no calculations had been made using the application of consumption methods with EOQ, MMSL and ABC-VEN forecasting.

II. METHODS

Type Presearch

The method in this study mixed *methods* is a type of research that combines qualitative and quantitative research in one field of research. Researchers use quantitative as the main data and qualitative as supporting data. So this study is called explanatory research design. And by using Non-Probability sampling techniques, namely snowball sampling and purposive sampling.[11]

Research Time

This study was conducted since researchers conducted a preliminary survey in September to November 2022.

Research Location

This research was conducted at Royal Prima Marelan General Hospital which is located at Jl. Marelan Raya Ps. II Pasar III No. 187, Rengas Pulau, Medan Marelan District, Medan City, North Sumatra 20255.

Research Population

Qualitative research does not use the term population, but Spradley calls the "*social situation*" consists of 3 elements: places, actors and activities that interact synergistically. The researchers will examine the drug management process at the Royal Prima Marelan General Hospital Pharmacy Installation, including drug planning, inventory control (activities) carried out by pharmacy personnel and doctors related to drug management and hospital directors (actors) at the Royal Prima Marelan General Hospital Pharmacy Installation (Place). [12]

Research sample

The research sample is in the form of data that records the use and management of drugs, while for the sample 4 people taken as samples are people who know and are competent who certainly understand the information needed in taking data for this study, namely, officers at pharmaceutical installations and specialists who write prescriptions together with hospital directors.

Table 1. Research Informants

Number	Report	Age	Education
1.	Director of RSU Royal Prima Marelan	31 Years	S3 UNPRI
2.	Internal Medicine Specialist	34 Years	Internal Medicine Specialist Study Program
3.	Assistant Pharmacist	25 Years	Pharmacist Profession
4.	Head Pharmacyer	32 Years	Pharmacist Profession

Source: RSU Royal Prima 2022

Sesearch Data Sources

Data is taken by documentation method, which is a method of collecting data obtained from document sources and interview methods.Data analysis techniques use prior analysis in the field, data analysis in the field (Miles and Huberman Model) and data analysis in the field (Spradley Model) using taxonomic and componential analysis approaches. This study calculates the EOQ value, maximum-minimum stock value (MMSL), safety stock and ReOrder Point of each drug item, as an effort to prevent stagnant and stock out of pharmaceutical supplies that occurred during 2021-2022.[13]

III. RESULTS AND DISCUSSION

Results of Interview Answers to Informants

The following are the results of interviews conducted by researchers to informants in this study to find out the management of pharmaceutical briefing at Royal Prima Marelan Hospital with the question, do you think the number of human resources for this pharmaceutical installation is enough? Informants 1&2 stated: "Enough".Informants 3&4 stated: "For now with such a large number of patients, human resources are still lacking".From the informant's answer about the number of human resources, it can be concluded that the human resources in pharmacies are not enough if the number of patients visiting Royal Prima Marelan Hospital is large.In the pharmacy department, of course, there is a team that must be formed to be able to maximize performance as best as possible, this can be seen from the informant's answers regarding the formation of drug inventory control teams and those involved in the drug inventory control process.Informants 1&2 stated: "Combined pharmaceutical and financial, cost and quality control teams".Informants 3&4 stated: "It has already formed. There is a person in the Warehouse section consisting of the person in charge of the Warehouse and the person in charge of distribution, the Pharmacist Team consists of the head of the pharmacy installation and assistants, the pharmacy staff consists of 4 people and the Doctor".From the interviews, it is known that a drug inventory control team has been formed consisting of several parts that enter the drug control process.Then in its application there must be training provided by the hospital to officers to maximize the performance of officers in the field of drug control, this we can know from the informant's answer below.Informants 1,2,3&4 state:

"There are, only those performed by Pharmacy Installation Pharmacists".The results of the informant's answer can be concluded that the training carried out is only limited to independent training from the pharmacist section only. Every operational activity in the hospital must certainly have a budget in its implementation where it is also contained in drug supervision in the hospital. RSU Royal Prima Marelan has provided a budget for drug inventory control which is corroborated by answers from research informants who state the following.Informants 1,2,3&4Stated: "There is a budget from RSU Royal Prima Marelan".Furthermore, in its implementation, there are instruments or tools in conducting drug supervision at the Royal Prima Medan General Hospital, along with the tools used according to informants.Informants 1,2,3&4 state: "Computers, Office Stationery".For the time of self-control at RSU Royal Prima Marelan carry it out from 1 month to every 3 months where the results of answers are based on answers from informants such as this answer.Informants 1,2,3 &4 Countries: "Per 1-3 months"The selection of drugs for the needs of patients has been carried out according to the hospital formulary such as interview answers to informants in this study.Informant 1 stated: "The planning there is a pharmacy committee there is a pharmacist in charge at the meeting and it is compiled and taken from the data based on the previous 3 months of use from the data planned to be purchased, and it is in accordance with the formulary, the type of medicine is also contained in the formulary of Royal Prima Marelan General Hospital, If there is a doctor's

request outside the formulary then there is a special procedure, that is, to report in advance to the responsible doctor proposed at the meeting".Informant 2 stated:"The method of drug selection in patients is adjusted to the complaints and diagnoses in patients. This is in accordance with the formulation of the DPR".Informants 3 &4 State: "according to the diagnosis and prescription of the prescribing physician. It deserves it".

From the results of the informant's answers, it can be ascertained that the application of the drug is in accordance with the hospital formulary.Next,the researcher wants to ask about how do you determine the amount of the drug? What are the methods used in controlling drug supplies and how are they calculated? The following are the answers from research informants.Informants 1&2 stated: "From previous usage data, and patient numbers, there are only supply variables and estimated patient increase variables".Informants 3&4 stated: "Using RKO (Drug Requirement Plan) in a tight manner".The results showed that the determination of the amount of drug was carried out using a drug requirement plan. Furthermore, for the time of ordering the next drug, it can be seen from the drug supply as the following informant's answer.Informants 1,2&3 stated: "drug supplies, flo cases, before the current month, per month".Informant 4 stated: "Using RKO (Drug Requirement Plan) in a tight manner".In determining the safety of drug supply, pharmacy officers at Royal Prima Marelan Hospital always look at RKO records, where answers are obtained from all informants in this study who answer the same thing.Informants 1,2,3 &4 Countries: "Looking from RKO records".The stages in controlling drug inventory are used safety stock which is justified by all research informants.Informants 1,2,3&4 state: "Safety Stock".Next, here are the informant's answers regarding what data is needed in controlling drug supplies.Informants 1&2 stated: "Data from every frequent case".Informants 3&4 stated: "Data on what drugs were frequently used in the previous 1 month".From the informant's answer, it can be concluded that the data needed in controlling drug supplies at Royal Prima Marelan Hospital are, data from dominant diseases that often occur and drug data that are often used for the last 1 month.

Quantitative Research Results

1. ABC Analysis

The following are the results of the analysis using ABC which will be explained in the following table:

Table 1. Grouping of drugs using the ABC method based on the number of drug items, percentage and use value at the pharmaceutical installation of RSU Royal Prima Marelan

Group	Number of Medicinal Items	Percentage (%)	Usage Value (Rp)	Percentage (%)
A	59	21,93%	606.511.106	70,59%
B	64	23,79%	174.722.327	20,33%
C	146	54,28%	78.028.263	9,08%
Entire	269	100,00%	859.261.696	100,00%

Source : Primary Data Processed 2023

Table 4.2 explains that there are 59 types of drugs included in drug group A which means that 59 types of drugs are high investment because they absorb funds around 70%. Class B drugs amounted to 64 types of drugs, group B included moderate investment because it absorbed funds around 20% and group C amounted to 146 types of drugs, group C included low investment because it absorbed funds around 10%.

2. ABC-VEN Combination Analysis

The following results are described in the following table.

Table 2. Results of VEN Analysis of Drug Items at Royal Prima Marelan Hospital Pharmacy Installation

Group	Medicinal Items	
	Sum	Percentage (%)
Vital	11	18,64
Penting	41	69,50
Tidak Penting	7	11,86
Entire	**59**	**100**

Source : Primary Data Processed 2023

From table 4.3 it can be seen that the classification of drugs based on VEN in this study is, drugs with vital classes as many as 11 drugs with a percentage of 18.68%, drugs with an Essential classification as many as 41 drugs with a percentage of 69.50% and non-essential class drugs as many as 7 drugs with a percentage of 11.86%.

3. Economic Order Quantity (EOQ)

Here are the overnight results based on EOQ.

Table 3. Economic Order Quantity (EOQ) Calculation

Drug Name	Usage (Unit)	Purchase price (Rp)	Booking Fee (Rp)	Storage Fee 17% (Rp)	EOQ (Unit)
CEFIXIME 200 MG/30"	5.700	16.766	50.000	2.850,22	447
ONDACETRON 4 MG INJ/5"	4.750	5.100	50.000	807,5	740
GABAPENTIN 300 MG/30"	4.275	5.050	50.000	858,5	706
RANITIDIN 25 MG/2 ML INJ/10"	8.550	2.337	50.000	1.453,5	1467
NOVORAPID FLEXPEN/5" (BPJS)	238	79.191	50.000	13.462,47	42

Source : Primary Data Processed 2023

Table 4.4 explains the results of *the calculation of economic order quantity* (EOQ), from the results of the study it can be seen that cefixime 200 MG / 30" will be reordered if the total stock of drugs is 447, ondacetron 4 MG INJ / 5" will be reordered if the total stock of drugs is 740, gabapentin 300 MG / 30 "will be reordered when the total stock of drugs is 706, ranitidine 25 MG / 2 ML will be reordered when the total stock of drugs is 1467, And NovoRapid Flexpen / 5 "will be reordered when the stock quantity of the drug is 42.

4. MMSL

Table 4. MMSL Calculation

DRUG NAME	UNIT (PER UNIT)	Lead Time (Hari)	Usage/Day (Unit)	Safety Stock (Unit)	Smin (Unit)	PP (Day)	Smax (Unit)
		x	and	XY	2xy	Xi	2xy+(xi*y)
CEFIXIME 200 MG/30"	CAPSULE	2	16	31	62	90	1468
ONDACETRON 4 MG INJ/5"	BLISTER	2	13	26	52	90	1223
GABAPENTIN 300 MG/30"	CAPSULE	2	12	23	47	90	1101
RANITIDIN 25 MG/2 ML INJ/10"	BLISTER	2	23	47	94	90	2202
NOVORAPID FLEXPEN/5" (BPJS)	CARTRI	2	1	2	4	90	94

Source : Primary Data Processed 2023

Table 4.5 explains the results of mmsl hitting, from the results of the study can be seen for cefixime drugs minimum stock of 200 MG / 30" as much as 62 and maximum stock 1468, ondacetron 4 MG INJ / 5" minimum stock as much as 52 and maximum stock as much as 1223, gabapentin 300 MG / 30" minimum stock as much as 47 and maximum stock as much as 1101 , ranitidine 25 MG / 2 ML INJ / 10" Stock The minimum is 94 and the maximum stock is 2202, the Novorapid Flexpen / 5" has a minimum stock of 4 and the maximum stock is 94.

5. Reorder Point Analysis (ROP)

The following are the results *of the Reorder Point Analysis (*ROP):

Table 5. Calculation of EOQ and ROP Method 5 Drugs with AE Classification at Royal Prima Marelan Hospital Pharmaceutical Installation

Drug Name	Usage (Unit)	Selling Price (Rp)	EOQ (Unit)	LT	ROBBERY
Cefixime 200 Mg/30"	5.700	16.766	447	2	12027
Ondacetron 4 Mg	4.750	5.100	740	2	10000

Inj/5"					
Gabapentin 300 Mg/30"	4.275	5.050	706	2	9020
Ranitidin 25 Mg/2 Ml Inj/10"	8.550	2.337	1467	2	18040
Novorapid Flexpen/5" (Bpjs)	238	79.191	42	2	502

Source : Primary Data Processed 2023

Table 4.6 explains the calculation results with ROP, from the results of the study can be seen for cefixime 200 MG / 30" will be reordered when the stock is 447 units and the quantity ordered is 12027 units, ondacetron 4 MG INJ / 5 will be ordered again when the stock is 740 units and the quantity ordered is 10000 units, gabapentin 300 MG / 30 "will be reordered when the stock is 706 units and the quantity ordered is 9020 units, ranitidine 25 MG/2 ML will be reordered when stock is 1467 units and quantity ordered is 18040 units, Novorapid Flexpen/5" will be reordered when stock is 42 units and quantity ordered is 502 units.

6. *Safety Stock* (SS)

Provide an explanation of the results of safety *stock* (SS) research.

Table 5. Safety stock (SS), at Royal Prima Marelan Hospital Pharmacy Installation

Drug Name	Usage (Unit)	Selling Price (Rp)	EOQ (Unit)	LT	ROBBERY	SS
Cefixime 200 Mg/30"	5.700	16.766	447	2	12027	627
Ondacetron 4 Mg Inj/5"	4.750	5.100	740	2	10000	522
Gabapentin 300 Mg/30"	4.275	5.050	706	2	9020	470
Ranitidin 25 Mg/2 Ml Inj/10"	8.550	2.337	1467	2	18040	940
Novorapid Flexpen/5" (Bpjs)	238	79.191	42	2	502	26

Source : Primary Data Processed 2023

Table 4.7 describes the results of *drug safety stock* (SS), at the pharmaceutical installation of RSU Royal Prima Marelan. From the results of the study, it was found that it is known how many units of drugs must be present during the delivery period of drugs derived from the procedure, such as cefixime 200 MG / 30" must be available 627 units of drugs during the delivery period, ondacetron 4 MG INJ / 5" must be available 522 units of drugs during the delivery period of goods, gabapentin 300 MG / 30" must be available 470 units of drugs during labor, ranitidine 25 MG/2 ML should be available 940 units of the drug during labor, and novorapid flexpen/5" should be available 26 units of the drug during labor.

Discussion

1. Calculation of drug inventory using the EOQ method

From the results of the study, it can be seen that cefixime 200 MG / 30" will be ordered again if the total stock of drugs is 447, ondacetron 4 MG INJ / 5" will be ordered again when the total stock of drugs is 740, gabapentin 300 MG / 30" will be ordered again when the total stock of drugs is 706, ranitidine 25 MG / 2 ML will be ordered again when the total stock of drugs is 1467, and NovoRapid FlexPen / 5 "will be reordered when the total stock of the drug is 42.The advantage of using the EOQ system is that for example there is a sudden increase in demand, it is possible to make a quick response. This EOQ system requires accurate inventory records, always updated inventory records, good communication, and service with distributors or suppliers and is assisted by using a management information system[14.15].

2. Calculation of the maximum and minimum values of drug stocks using the MMSL method

From the results of the study, it can be seen that for cefixime drugs 200 MG / 30" minimum stock 62 and maximum stock 1468, ondacetron 4 MG INJ / 5" minimum stock 52 and maximum stock 1223, gabapentin 300 MG / 30" minimum stock 47 and maximum stock 1101 , ranitidine 25 MG / 2 ML INJ / 10" minimum stock is 94 and maximum stock is 2202 , NovoRapid Flexpen / 5" has a minimum stock of 4 and a maximum stock of 94.[9]

3. *Stock Safety Value*

From the results of the study, it was found that it is known how many units of drugs must be present during the delivery period of drugs derived from the procedure, such as cefixime 200 MG / 30" must be

available 627 units of drugs during the delivery period, ondacetron 4 MG INJ / 5" must be available 522 units of drugs during the delivery period of goods, gabapentin 300 MG / 30" must be available 470 units of drugs during labor, ranitidine 25 MG/2 ML should be available 940 units of the drug during labor, and novorapid flexpen/5" should be available 26 units of the drug during labor.The consequences that can be caused if excessive stock triggers the value of inventory to increase, management and storage costs also increase and the funds spent by hospitals become greater for the drug procurement process. In addition to this, there are also risks that can arise due to large supplies are drug damage and the appearance of expired drugs. Conversely, if the inventory value is low, it can cause prescription services to be disrupted and stock *out* occurs.[16]

4. Inventory Control with ROP Method in Preventing Stagnation and Drug Stockout

From the results of the study, it can be seen that cefixime 200 MG / 30" will be reordered when the stock is 447 units and the quantity ordered is 12027 units, ondacetron 4 MG INJ / 5 will be ordered again when the stock is 740 units and the quantity ordered is 10000 units, gabapentin 300 MG / 30" will be reordered when the stock is 706 units and the quantity ordered is 9020 units, ranitidine 25 MG/2 ML will be reordered when stock is 1467 units and quantity ordered is 18040 units, Novorapid Flexpen/5" will be reordered when stock is 42 units and quantity ordered is 502 units.ROP and EOI have an important meaning in inventory control to ensure the availability of drugs until the right time for the drug ordering process can be carried out, which is when the drug stock is not empty and not excessive. Determination of ROP will ensure the availability of the patient's medication, even if there is an increase in use, or delay in the delivery of the patient's drug. Supervision of inventory must be carried out effectively so that if it is known that many drug items will be ordered, reordering when made on these items, and what drug items need to be monitored can be said to be effective[17].[18]

5. ABC-VEN Comparison

The results showed that there are 59 types of drugs included in drug group A, which means 59 types of drugs are high investment because they absorb funds around 70%. Class B drugs amounted to 64 types of drugs, group B included moderate investment because it absorbed funds around 20% and group C amounted to 146 types of drugs, group C included low investment because it absorbed funds around 10%.Management techniques can be useful for the improvement, efficiency and effectiveness of inventory so as to use ABC analysis. This ABC analysis emphasizes inventory that has a relatively high use value or is expensive. The division of 3 categories is class A drugs absorb funds around 70%, class B drugs absorb funds around 20%, class C drugs absorb funds around 10%.[19]For the results of drug classification based on VEN in this study are, drugs with vital classes as many as 11 drugs with a percentage of 18.68%, drugs with an Essential classification as many as 41 drugs with a percentage of 69.50% and drugs with non-essential classes as many as 7 drugs with a percentage of 11.86%.The analysis of the combination of ABC and VEN aims to provide efficiency and benefits in adjusting the drug procurement budget in hospitals. The basis for classifying drugs into VEN (Vital, Essential and Non-essential) is determined by macro factors (including government regulations, regional epidemiological data) and micro factors (in the form of the type of health services available at the hospital where the study was conducted).[20]

IV. CONCLUSION

From the results of research with qualitative data based on interviews conducted by HR at hospital pharmacy installations is not enough because it depends on the number of patients who come for treatment and the drug control team included in the HR pharmacy installation training is also only provided by pharmacists, the budget used in pharmacies is sourced from Royal Prima Marelan Hospital, the tools used by pharmacies are computers and office stationery. The control time is carried out per 1 to 3 months with the selection of drugs based on what has been prescribed by the doctor who is already in the hospital formulary. With calculations using RKO and inventory control, *safety stock* is used.Based on the analysis of drug inventory control by the EOQ method, it was found that the drug was reordered when the amount of drug stock varied cefixime 200 MG/30" was ordered when 447, ondacetron 4 MG INJ/5" 740, gabapentin 300 MG/30" 706, ranitidine 25 MG/2 ML INJ/10" 1467, novorapid flexpen/5" 42. For cefixime 200 MG/30"

minimum stock is 62 and maximum stock is 1468, ondacetron 4 MG INJ/5" minimum stock is 52 and maximum stock is 1223, gabapentin 300 MG/30" minimum stock is 47 and maximum stock is 1101, ranitidine 25 MG/2 ML INJ/10" minimum stock is 94 and maximum stock is 2202 NovoRapid Flexpen/5" has a minimum stock of 4 and a maximum stock of 94. Based on the analysis of drug inventory control by the SS method, it was found that the number of drug units that must be available during labor varies on cefixime 200 MG/30" drugs must be available 627 units of drugs during labor, ondacetron 4 MG INJ/5" must be available 522 units of drugs during labor, gabapentin 300 MG/30" must be available 470 units of drugs during labor, ranitidine 25 MG/2 ML should be available 940 units of the drug during labor, and novorapid flexpen/5" should be available 26 units of the drug during labor.

Based on the analysis of drug inventory control by the ROP method, it was found that the drug will be reordered with varying order quantities at the time when cefixime 200 MG/30" will be reordered when the stock is 447 units and the quantity ordered is 12027 units, ondacetron 4 MG INJ/5 will be ordered again when the stock is 740 units and the quantity ordered is 10000 units, gabapentin 300 MG/30" will be reordered when stock is 706 units and quantity ordered is 9020 units, ranitidine 25 MG/2 ML will be reordered when stock is 1467 units and quantity ordered is 18040 units, Novorapid Flexpen / 5" will be reordered when stock is 42 units and quantity ordered is 502 units. Based on the calculation analysis using the ABC (Always Better Control) method, 59 types of drugs included in group A (70.5.9%) with an investment of 70.59 percent of the total drug use and an investment value of Rp . 6,06,511,106, group B (*Better)* as many as 64 types of drugs (20.3 3%) with an investment of 20.33% of the total drug use and an investment value of Rp. 1,74,722,327, and group C (*Control)* as many as 146 types (9.08%) with an investment value of 9.08% of the total drug use and an investment value of Rp. 78,028,263. The classification of drugs based on VEN in this study is, drugs with vital classes as many as 11 drugs with a percentage of 18.68%, drugs with essential classes as many as 41 drugs with a percentage of 69.50% and non-essential drugs as many as 7 drugs with a percentage of 11.865%.

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