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Abstract

Uncontrolled drug inventory is a significant challenge in health services, especially in remote areas, resulting in high rates of expired drugs and budget waste. The mismatch between drug stock and needs can disrupt the quality of health services provided to the community. This study aims to analyze drug inventory control using the ABC-VEN combination method, which groups drugs based on consumption value and level of medical importance. The methods applied include observation, interviews, documentation, and analysis of drug use data from July to December 2024. The ABC analysis categorizes drugs into three groups based on investment value: A (70%), B (21%), and C (9%). Meanwhile, the VEN analysis classifies drugs as Vital (13%), Essential (59%), and Non-Essential (27%). The results of the ABC-VEN combination show that 17% of drug items are included in the priority group, 46% in the main group, and 38% in the additional group. These findings provide a strong basis for determining priorities in drug procurement and supervision. The conclusion of this study confirms that the ABC-VEN method has proven effective in increasing the efficiency of inventory management, reducing the risk of expired drugs, and supporting more rational decision-making in drug procurement.

Keywords: Drug Inventory, ABC-VEN Method, Drug Procurement

INTRODUCTION

Health care is an organization that aims to maintain and improve health, prevent and treat disease, and restore the health of individuals, families, groups, and communities. In the context of health care, the main role is to provide the best service to patients. Health services that fall under the category of public health services are usually organized collectively in one entity. The main objective is to maintain and improve health, especially in disease prevention efforts, with a focus on groups and communities (Fachrurrozi *et al.*, 2023).

The Pharmacy Installation is part of the Health Service Unit which is tasked with organizing, coordinating, managing and supervising all pharmaceutical service activities and carrying out pharmaceutical technical guidance (Menteri Kesehatan Republik Indonesia, 2021). The Pharmaceutical Installation implements pharmaceutical service standards as a reference for pharmaceutical personnel in carrying out their pharmaceutical activities. This standard explains that pharmaceutical services are services provided directly and responsibly to patients who need pharmaceutical preparations, with the aim of achieving clear results in improving the patient's quality of life (Priatna et al., 2021) The aim of pharmaceutical services is to find, avoid, and solve problems related to drugs (Agus *et al.*, 2023) The overall management function of the Health Service Unit includes the management of health supplies and pharmaceutical preparations, because inefficiency will have a negative impact both economically and medically (Fahamsya *et al.*, 2024). The purpose of managing pharmaceutical supplies and health supplies is to ensure that the necessary drugs are available in sufficient quantities, with guaranteed quality, and at affordable prices to support quality services (Widyapratiwi *et al.*, 2024).

To ensure drug availability in the community, an important part of the drug management system is drug planning and procurement. Uncontrolled inventory management and control can lead to problems such as unavailability of necessary drugs and high costs, which can lead to financial losses due to stock build-up conditions (Agus *et al.*, 2024).

On February 15, 2025, an observation was conducted at one of the Health Service Units in Karawang. Conditions at the Health Service Unit with visitor data from July - December 2024 are as follows:



Month	Medicine Stock	<i>Expired</i> Medicine
July	570	50
August	555	60
September	575	75
October	567	37
November	540	40
December	514	55
Total	3.321	317

Table	1.	Med	licine	Stock	Data	July-	Decem	ber	2024	1
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Source: (Health Service Unit Drug Stock Data, 2024)

Based on the data that has been presented in the previous table, the following is displayed in graph form:





Source: (Data processed by the author, 2025)

According to chart 1, the drug stock data from July to December showed a total inventory of 3,321 units. The amount of medicine varied each month during the period. In September, 575 units of medicine were available, while in December the number decreased to 514 units. In addition, during the same period, there were 317 units of drugs that could not be used because they had passed their expiration date. The highest number of expired medicines occurred in September with 75 units, while the lowest number was recorded in October with 37 units.

This condition indicates inefficiency in the drug supply management system, which has the potential to cause financial losses and hamper the smooth running of health services at the facility. Based on the drug usage data from July-December 2024, it is as follows:

Month	Usage
July	520
August	495
September	500
October	530
November	500
December	459
Total	3.004

Fable 2. Medication Utilization Data July-December 202

Source: (Health Service Unit Drug Utilization Data, 2024)

Based on Table 2, drug utilization data from July to December showed a total usage of 3,004 units, with an average monthly usage of around 500 units. The highest usage was recorded in October, with 530 units, while the lowest usage occurred in December with 459 units. Although the need for drugs shows a fairly stable pattern every month, the number of unused drugs that expire is still relatively high.

The availability and accessibility of efficient and effective drug services can prevent inaccurate calculation of drug requirements, so that drugs can be obtained easily at the right location and time. Therefore, internal control is



needed to achieve this goal. Control is carried out with the aim of ensuring that the plans that have been prepared can be implemented properly, so that the desired targets and objectives can be achieved (Baybo *et al.*, 2022).

Data analysis of drug stock and usage from July to December showed a total stock of 3,321 units, with usage reaching 3,004 units. A total of 317 units of medicine could not be used due to expiration. This reflects a mismatch between stocks and needs in the field, potentially causing financial losses to the Health Service Unit due to waste and inefficient budget expenditure.

Based on the results of the problem analysis, it can be concluded that the Health Service Unit has not carried out a systematic evaluation of drug planning and procurement activities. Therefore, a system is needed that is able to control the availability of drug stocks according to patient needs. In this study, the ABC-VEN method was chosen as an approach that aims to assist in coordinating and monitoring the process of planning and managing drug supplies more effectively and efficiently.

ABC analysis classifies materials into A, B, and C categories based on their frequency of use and economic value, allowing for more effective control. Efficient drug supply management ensures the availability of safe and effective drugs through proper selection, procurement, distribution, and usage processes. The VEN method categorizes drugs based on their level of importance, for example, drugs that save lives and must always be available in pharmacies are included in the vital category (Widyapratiwi *et al.*, 2024)

Efficient drug inventory management can result in savings in drug procurement costs. Expenditure on drugs should be tailored to the drug requirements for the disease at hand, while considering the available budget. To assess the accuracy, two types of evaluation tools are used: ABC analysis to identify the drugs that cost the most (economic evaluation) and VEN criteria to assess medical or therapeutic aspects.

The ABC-VEN combination method is one of the most effective methods for evaluating drug supply plans. It integrates ABC analysis, which aims to identify and improve drugs that have a major impact on total costs, with VEN analysis, which focuses on classifying drugs based on their importance in healthcare.

Analysis of the use of the ABC-VEN method in drug inventory management to organize and supervise the resolution of drug-related problems and ensure the availability of quality and cheap drugs. This study aims to find discrepancies between the amount of available and used drugs through analysis of drug usage and stock data for the past six months. This mismatch can lead to wastage, a condition where drugs are not used until their expiry date. As a result, this study is expected to provide suggestions on how to improve the drug inventory management system so that drug availability can better match patient needs and health service units do not experience financial losses.

METHOD

The research framework in this study is based on the existing challenges in drug inventory management at Health Service Units in Karawang, where discrepancies between drug stock and usage data, along with the absence of a proper monitoring system, have led to shortages, oversupply, and the wastage of expired drugs. To address this, the study employs the ABC-VEN method by first collecting accurate data on drug stock and usage, then classifying drugs based on consumption value (ABC method) and medical importance (VEN method). The combination of these classifications results in more organized drug groupings; priority, main, and supplementary, which help determine procurement and supervision priorities. This approach aims to support more efficient and effective inventory control, reduce the risk of drug expiration, ensure appropriate drug availability, and ultimately enhance the quality of health services provided.



Figure 2. Research Framework

Source: (Author, 2025)



In addition, a research flow chart was developed to outline the planned steps from the beginning to the end of the study. The following is the research flow chart used in the Health Service Unit.



Figure 3. Research Flow Chart

Figure 3 presents the systematic stages of the research conducted at a Health Care Unit. The process began with setting clear objectives, followed by literature and field studies to understand both theoretical and practical conditions. After identifying and formulating the problem, drug data from July to December were collected and processed using the ABC method, the VEN method, and their combination (ABC-VEN). This classification helped determine drug priorities based on consumption value and medical importance. The data were then analyzed to generate accurate findings, and the research concluded with recommendations aimed at improving drug inventory management in health facilities.

Furthermore, observation is used to identify phenomena by monitoring activities directly or indirectly. According to Sukmadinata (2005) in (Hardani *et al.*, 2020) observation is a data collection technique by watching ongoing activities. This study focused on observing the drug supply planning section in the Health Service Unit to gather objective data on drug planning, recording, and storage. Stock availability, demand patterns, and management were directly observed.

Subsequently, interviews were conducted to complement the data obtained from observations. According to Sugiyono (2018) in (Novanta, 2023), an interview is a meeting between two people to exchange information and ideas through questions and answers, which helps define a particular topic. In this study, interviews involved pharmacists, drug procurement personnel, and other stakeholders responsible for drug supply management at the Health Service Unit. These interviews provided detailed insights into the classification of drugs into Vital, Essential, and Non-Essential (VEN) categories.

Following the interviews, documentation was carried out to gather secondary data essential for the study. These documents include company history data as well as information related to costs, inventory quantities, and sales relevant to the study. This method was applied in this study to collect secondary data regarding drug inventory management at the Health Service Unit. Documents collected include drug inventory quantities, selling prices, and drug utilization data. Then, in data processing, the following steps were carried out:

- 1. Writing the price for each unit of medicine. Entered the collected data into Microsoft Excel.
- 2. Calculating the total drug usage obtained based on drug usage data from July December 2024.
- 3. Drug usage can be calculated using the following rules:
 - a. Multiplying the drug price per unit by the drug usage value.
 - b. Sort the drug usage values from the highest to the lowest amount of usage.
- 4. Calculating the cumulative value.
 - a. The use of the most drugs was determined as the first cumulative value.



- b. The second cumulative value is obtained by combining the second drug utilization value and the first cumulative value.
- 5. Calculate the percentage by dividing the cumulative value by the number of drugs used.
- 6. According to (Darmawan *et al.*, 2021), Pareto classifies items in ABC inventory analysis with the following general criteria:
 - a. Group A are drugs with a 70% budget and no more than 20%. The drugs in this group are drugs, which must be paid attention to because they are very important.
 - b. Group B requires a budget of 20% with the amount of medicine between 10-80%. These groups do not require close supervision. Keeping records of medicine usage and leftovers is still necessary.
 - c. Group C drugs have a budget of 10%, with the number of drugs between 10-15%. Because they are cheap and have little usage, they have more items. Therefore, supervision and control of this group is freer.

ABC classification formula:

 $ABC Analysis = \frac{Total \ product \ sales \times Unit \ price}{Total \ cost \ of \ sales} \times 100$

- 7. After obtaining the ABC calculation results, conduct a VEN analysis by categorizing all DOEN (National Essential Drug List) drugs and based on disease patterns.
- 8. VEN analysis to describe drug types based on their importance in healthcare.
- 9. Drugs are categorized based on the ABC-VEN analysis matrix
 - a. Priority drugs (P) are drugs in the VA, VB, and VC categories and are also termed as P1, P2, and P3.
 - b. The main drugs (U) are drugs in the EA, EB and EC categories and are also termed as P4, P5 and P6.
- c. Additional drugs (T) are drugs in the NA, NB and NC categories and are also termed as P7, P8 and P9. 10.Data analysis.

RESULTS AND DISCUSSION

ABC Analysis

The ABC approach is a popular technique for placing inventory items into groups based on their classification criteria, such as the value of funds used or the monetary value per unit multiplied by the usage rate for each category of goods (Rahmisi *et al.*, 2024). ABC analysis, also known as Always Better Control, places drugs in categories based on the cost of drug investment (Nadhifa *et al.*, 2022) The main principle of ABC analysis is to determine which drugs have the highest investment value. The groupings are A or *always*, B or *better*, and C or control (Yunisah and Rusmana, 2022). Grouping with the ABC method follows several policies, as shown below (Masdani, 2022):

- 1. Grade A items have a high investment value, so the rule is to buy more grade A items than grade B and C items.
- 2. Class A items require stricter management, including better supervision and more frequently updated inventory records.
- 3. Forecasting of class A products should be given more attention.

The purpose of ABC analysis is to determine inventory management priorities to improve effectiveness and efficiency in ensuring supplies and services to (Widyapratiwi *et al.*, 2024).

Group	Total Investment	Cost Percentage %	Item	Percentage Number of Items %
А	IDR 49.924.820	70%	20	16%
В	IDR 15.202.220	21%	29	23%
С	IDR 6.560.047	9%	76	61%
Total	IDR 71.687.087	100%	125	100%

Table 3. The analysis of drug subbry in Ratawalle freath betylet office
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The data in table 3. shows the management of data related to the use of drugs in the pharmacy department of the Health Service Unit in Karawang in the period July to December 2024. Group A is the drug group with the highest investment value of 70% with 20 drug items (16%) with an investment value of IDR 49,924,820. As a drug with a significant investment, this type of drug should not be exhausted due to the potential profit for the health service unit, so strict supervision of this group of drugs is necessary. (Asthariq *et al.*, 2022)



Frequently used and expensive drugs are grouped into category B. The results of the analysis at the Karawang Health Service Unit show that group B covers 21% of the total drug items, namely 29 items, and contributes 23% of the total cost. Meanwhile, group C had the highest number of items, 76 items (61%), but only contributed 9% of the total investment value, thus falling into the low investment category. This value indicates that group C is in the medium investment category. The results of this analysis are in line with research conducted by Haryani *et al.* (2022) regarding ABC analysis of pharmaceutical supplies at Fatmawati General Hospital from January to December 2020. In the study, it was found that group A consisted of 103 drug items (9.12%) which absorbed a budget of 69.99%. Group B consisted of 140 drug items (12.40%) which contributed 20.03% of the budget. Meanwhile, group C consisted of 886 drug items (78.48%) that only required a budget of 9.98%.

The drug control system can use this ABC analysis to determine order duration and prioritize orders based on drug value or price (Abdurrahman *et al.*, 2023). ABC analysis plays a key role in rational drug management, covering selection, procurement, and distribution. In the selection stage, it identifies high-use category A drugs with cheaper alternatives, promoting cost-efficiency without compromising care. It also serves as a control to detect inappropriate purchases. In procurement, ABC analysis supports supplier selection and ensures alignment with health priorities, while also assessing how ordering frequency affects supply continuity and efficiency. (Widyapratiwi *et al.*, 2024).

VEN Analysis

VEN analysis classifies drugs based on input from medical staff and hospitals, reflecting patient needs and usage patterns. Their role is crucial in selecting drugs for procurement and distribution, considering clinical factors like effectiveness and availability (Mohammed and Workneh, 2020). VEN analysis is a well-known method for managing drug supply and procurement by classifying drugs into Vital, Essential, and Non-Essential categories based on their health impact. It helps identify and categorize drugs according to their properties and benefits. According to (Holloway and Green, 2003), it is used to help prioritize the procurement and use of medicines in health care facilities, especially in resource-limited settings. This classification separates medicines into 3 main categories based on their level of importance:

- 1. Vital (v): Potentially life-saving or important in providing health services.
- 2. Essential (E): Efficient against less severe and less significant diseases, but not absolutely essential in the provision of health services.
- 3. Non-Essential (N): used to treat minor or self-limiting illnesses, these drugs may or may not be listed as efficacious, but are the least essential drugs available.

An interview with the drug management officer at the Health Service Unit in Karawang provided VEN data, which was then used in the ABC-VEN analysis. The VEN analysis results are shown in Table 4.

Group	Total Usage	Usage Percentage %	Amount of Medicine	Percentage Number of drugs %
V	IDR 9.658.065	13%	21	17%
Е	IDR 42.486.110	59%	57	46%
N	IDR 19.542.912	27%	47	38%
Total	IDR 71.687.087	100%	125	100%

Table 4. VEN Method Drug Analysis

In Table 4, there are 21 types of drugs (17%) with a total usage of Rp 9,658,065 (13%) that fall into the vital (V) category. These vital medicines are life-saving drugs that are essential for life. Stock-outs of these medicines can disrupt the provision of health services, thus requiring continuous inventory control. Therefore, they must always be available and supplied regularly (Priatna *et al.*, 2021) In the event of a budget shortfall to purchase all necessary drugs, these vital drugs should be prioritized for purchase (Deressa *et al.*, 2022). The list of life-saving drugs in Karawang Health Service Unit is determined by doctors, pharmacists, pharmacy staff, and the person in charge of drug management, based on clinical categories, namely critical drugs and drugs contained in the emergency *trolley* (Haryani *et al.*, 2022).

Essential (E) category drugs consist of 57 types or about 46% of the total drug items, with a total usage value of Rp42,486,110 or 59% of the overall cost of drug use. Essential drugs are the most needed drugs in health services because they are proven to be effective and safe in treating diseases that commonly occur in the community. The determination of the essential drug category in this study refers to the 2021 National Essential Drug List (DOEN). The types of drugs included in this category include antibiotics, analgesics, antihypertensives, antiangina, drugs for



heart disease, non-steroidal anti-inflammatory drugs (NSAIDs), drugs for gastrointestinal disorders, and all drugs listed in DOEN (Menteri Kesehatan Republik Indonesia, 2021).

Non-Essential (N) category drugs consist of 47 types of drugs or about 38% of the total drug items, with a total usage value of IDR 19,542,912 or 27% of the overall cost of drug use. Medicines in this category are generally used to treat diseases with mild symptoms and do not yet have strong evidence of effectiveness. Non-essential drugs function as supporting drugs used to relieve various minor complaints and increase patient comfort in the healing process (Widyapratiwi *et al.*, 2024).

This study is different from the one conducted at Fatmawati General Hospital in 2022. The study found data regarding 303 drug items (26.84%) from the Vital (V) group, approximately 757 drug items (67.05%) from the Essential (E) group, and 69 drug items (6.11%) from the Non-Essential (N) group. This finding indicates a difference in the number of drug items included in the V, E, and N groups. This difference is due to variations in the guidelines used to define the VEN category, epidemiology in the region, and diversity in health services (Haryani *et al.*, 2022).

Although the VEN classification was introduced by WHO in 2003. This approach is still widely used today in drug inventory control systems, especially in basic health care facilities, due to its practicality and applicability. The determination of VEN criteria is carried out by a team consisting of doctors and pharmacists, or by the Drug and Therapeutics Committee team (Widyapratiwi *et al.*, 2024).

ABC-VEN Combination Analysis

The results of the ABC-VEN analysis aim to set priorities for drug procurement if the existing budget does not meet the needs. This will help adjust the drug procurement budget in the Health Service Unit with benefits and efficiency (Haryani *et al.*, 2022). PUT analysis (Priority, Main, and Additional) is used to perform ABC-VEN combination analysis (Abdurrahman *et al.*, 2023).

Combinatio n Group	To	tal Usage	Cost Percentage %	Amount of Medicine	Percentage Number of drugs %
VA	IDR	7.206.600	10%	4	3%
VB	IDR	905.000	1%	2	2%
VC	IDR	1.546.465	2%	15	12%
Total	IDR	9.658.065	13%	21	17%
EA	IDR	30.712.000	43%	9	7%
EB	IDR	9.025.000	13%	17	14%
EC	IDR	2.749.110	4%	31	25%
Total	IDR	42.486.110	59%	57	46%
NA	IDR	12.006.220	17%	7	6%
NB	IDR	5.272.220	7%	10	8%
NC	IDR	2.264.472	3%	30	24%
Total	IDR	19.542.912	27%	47	38%

 Table 5. Drug Groups with ABC-VEN Comorbidity Analysis

Data table 5 shows the results of the ABC-VEN method combination analysis of the drug groups used. Based on the data, the vital drug group (V) has the least number of items, namely 21 items (17%) with a total usage cost of Rp 9,658,065 (13%). Within this group, category A vital drugs (VA) consisted of only 4 items (3%) but absorbed a cost of IDR 7,206,600 (10%). This shows that although item count is low, spending is high, requiring strict supervision and careful stock planning, such as maintaining a 20% buffer. Essential (E) drug data is the group with the highest usage value and number of items. Total usage reached Rp 42,486,110 (59%) with 57 items (46%).

The EA category contributes the largest cost of IDR 30,712,000 (43%) from 9 items (7%). Interestingly, the EC category had the highest number of items in this group, 31 items (25%), but its cost contribution was only 4% (IDR 2,749,110). This shows that most EC drugs are widely used but with low economic value. The Non-Essential (N) group consisted of 47 items (38%) with a total cost of Rp 19,542,912 (27%). The NC category accounts for the most items at 30 items (24%), but only contributes 3% of the cost (IDR 2,264,472). In contrast, the NA category contributed the most cost in this group, namely Rp 12,006,220 (17%) for only 7 items (6%). This finding is in line with the results of research (Widyapratiwi et al., 2024), which also showed that the Essential category drug group was the most widely used drug group (702 items or 76.92%), followed by Non-Essential (253 items or 18.36%), and Vital (65 items or 4.72%).



Category C (Non-Essential C) requires evaluation and possible deletion due to its high number of items in VC, EC, and NC, despite having the lowest investment value (Rp 6,560,047 or 9%). Priority is given to removing NC drugs, which are non-essential, less important, and offer uncertain benefits. These drugs aim to improve comfort or address minor complaints, and their absence can be tolerated for over 48 hours (Fatimah *et al.*, 2022).

Item Name	Cost Percentage %	ABC-VEN Combination Group	Indications
Ceftriaxone 500 mg	4,49034845	VA	Antibiotics for bacterial infections (e.g. respiratory tract infections).
Dexamethasone	2,34770315	VA	Anti-inflammatory, allergies, autoimmune disorders.
Fasidol Forte	0,634702872	VB	Fever, headache (combination of paracetamol + caffeine)
Opistan	0,627728115	VB	Moderate to severe pain (contains tramado)
Salbutamol	0,384169606	VC	Asthma, bronchospasm, COPD
Metronidazole	0,348737842	VC	Anaerobic bacterial infections, amebiasis, giardiasis
Cefixime 100	18,41335804	EA	Respiratory, urinary, ear infections
Methylprednisolone 4mg (MPS)	6,854791017	EA	Severe inflammation, allergic reaction
Nadic	1,506547476	EB	Urinary tract infection (contains nadixic acid)
Chlorpheniramine (CTM)	1,325203799	EB	Allergies (rhinitis, urticaria, itching)
As. Mefenamat	0,380821723	EC	Mild to moderate pain, menstrual pain
Spasminal	0,301309495	EC	Abdominal pain due to smooth muscle spasms (such as colic)
Inpepsa 100ml	3,705688306	NA	Gastric disorders, peptic ulcers (antacids and mucosal protectants)
Psidii 500 Mg 50 kapsul	3,310219594	NA	Antibiotics for bacterial infections
Lambucid sups 60 ml	1,107033405	NB	Ulcer and stomach disorder medication
Molagit	1,004364984	NB	Anticidal for heartburn and stomach ulcers
Pehacain	0,26504076	NC	Local anesthesia for minor procedures
pacetik	0,263645808	NC	Medicine for indigestion

Table 6. Distribution of Top 2 Types of Drugs Based on ABC-VEN Analysis in Health Service Units in Karawang



Table 6 shows that the Vital A (VA) group includes Ceftriaxone 500 mg, an antibiotic given intravenously or intramuscularly for bacterial infections. Dexamethasone, a corticosteroid, reduces inflammation and treats conditions like asthma, autoimmune disorders, brain edema, and cancer. The VA, VB, and VC groups are dominated by drugs for chronic diseases such as diabetes and heart disease, as well as anesthetics that require high budgets (Widyapratiwi et al., 2024).

The main category is drugs in the Essential EA, EB, and EC groups, the number of drugs in the main category is 57 items (46%). Essential A (EA) group drugs include Cefixime 100 and Methylprednisolone 4mg (MPS), Cefixime 100 occupies the highest percentage of 18.41%, indicating a high need in the treatment of respiratory and urinary tract infections. Nadic and Chlorpheniramine (CTM) belong to the EB group, used for urinary tract infections and allergies. The EC category, part of the Essential group, includes mild pain relievers like Mefenamic Acid and Spasminal, with low cost percentages of 0.38% and 0.30%. Despite frequent use, these drugs incur relatively small costs.

The additional category is the NA, NB, NC group, with 47 drug items (38%). The additional category of drugs are drugs whose procurement allocations are made after the priority and main drugs are fulfilled. Drugs in the Non-Essential (N) group, such as inpepsa 100ml, psidii 500mg capsules, lambucid sups 60ml, molagit, pehacain, and pacetik, are categorized as additional drugs that are used if more budget is available or as an alternative therapy. Inpepsa and psidii have a significant cost contribution of 3.70% and 3.31% respectively, indicating that although classified as non-essential, these drugs are still frequently used, especially in the treatment of gastric disorders and infections. The Non-Essential group poses no risk if supplies run out and is often excluded from the budget, as these drugs treat minor cases that heal naturally with little benefit. Therefore, this group's drugs can be reduced or removed from the procurement plan based on the health service unit's budget (Widyapratiwi et al., 2024). Drugs in the NA category are the first priority for reduction or removal from the needs plan. If funds remain insufficient, NB category drugs are next, followed by NC category drugs. If funding is still lacking after these steps, the focus shifts to the essential group category (Abdurrahman et al., 2023).

CONCLUSION

The results of the ABC analysis showed that group A drugs obtained 20 drug items (16%), 29 drug items (23%) in group B, and group C obtained 76 drug items (61%). Based on VEN analysis, 21 (17%) were vital category drugs, 57 (46%) were *essential* category drugs, and 47 (38%) were *non-essential* category drugs. The priority category (combination of VA, VB, VC), consists of 21 (17%) drug items with a total investment of IDR 9,658,065 (13%), the main category (combination of EA, EB, EC) consists of 57 (46%) drug items with a total investment of IDR 42,486,110 (59%), while the additional category (combination of NA, NB, NC) consists of 47 (38%) drug items with a total investment of IDR 19,542,912 (27%). Thus, the Health Service Unit can prioritize drug procurement and monitoring to prevent stock imbalances, minimize expired drugs, and improve budget efficiency.

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