Analysis of Drug Logistics Management at Bunut Community Health Center, Pelalawan Regency in 2023

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ABSTRACT

The availability of medicines is currently a demand for health services, so they must be available at all times so that health services can run optimally. Drug control at the Bunut Community Health Center cannot be carried out optimally because the demand for drugs is sometimes not met due to shortages of drugs from the Health Service and inadequate facilities and infrastructure. The research objective is to analyze drug logistics management through input and process components using a qualitative descriptive approach method with in-depth interviews with the Community Health Center. There were 3 informants, namely the pharmacist as the BLUD treasurer, the planning pharmacist and the pharmaceutical installation (logistics) pharmacist assistant who best understands the budget and flow of planning, requesting, storing, distributing, destroying and controlling is the pharmacist in charge of logistics. So, for this residency activity, I chose informants who were competent and capable so that I could understand information related to logistics at the Bunut Community Health Center in its entirety from the Bunut Community Health Center aspect. The data collection method is in-depth interviews and research. Data analysis uses problem solving cycle techniques including situation analysis, problem identification, problem priorities and determining alternative problems using Fishbone analysis and Plan of action. The priority problem in this research is that drug control at the Bunut Community Health Center has not been implemented optimally. There are still drugs received that do not meet needs. It is hoped that the community health center can communicate and coordinate periodically existing problems with all stakeholders, especially the Pelalawan district health office so that drug needs are met and the budget is appropriate and it is hoped that the Health Service will fulfill all drug requests.

Keywords: logistics management, medicine, Bunut community health center

1. INTRODUCTION

The Community Health Center is an organizational entity that has a central function, acts as a facility for the community in terms of promotion (health improvement), preventive (disease prevention), curative (treatment), and rehabilitative (health recovery) (Mangindara & Nurhayani, 2019). One of the main aspects carried out by the puskesmas in the context of health recovery is providing treatment services (Noorhidayah et al., 2022). The provision of treatment is a very vital activity at the community health center, and therefore, drugs become an element that cannot be ignored (Jumriah et al., 2023). Drug planning is carried out to ensure the availability of adequate drugs in a health service facility. One example of a health service that is commonly accessed is the community health center (Pratiwi, 2019).

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Analysis of Drug Logistics Management is an important activity at the community health center (Sujarwad et al., 2023). The important role of the community health center in providing treatment requires drug logistics management in accordance with (Community Health Center Pharmaceutical Service Standards, 2016) regarding pharmaceutical service standards at the community health center conveying that optimization in drug logistics management includes planning, procurement, storage, distribution, use and control of drugs to be managed by the health service (Amir & Agus, 2022). Good drug management is when a drug is needed both in terms of type, quantity and quality is always available and has good quality and is also efficient, so drug management can be used as a process of moving and empowering all owned/potential resources that can be used to realize the availability of drugs needed for effective and efficient operations at all times (Efendi et al., 2022).

Drug needs planning at the community health center is carried out by a pharmacist by observing drug needs based on the previous year and disease patterns contained in the Drug Usage and Request Sheet (LPLPO). Some obstacles in drug logistics management are that the fulfillment of drug supplies is sometimes not met due to drug vacancies from the health office, causing the unavailability of drugs at the community health center so that it can result in less-than-optimal curative services at the community health center (Sulrieni & Rozalina, 2019). The availability of drugs is currently a demand for health services. Logistics Management Analysis is important so that it must be well coordinated in order to function optimally. Based on research conducted by (Khalisah et al., 2021) regarding the analysis of the implementation of drug logistics management in health centers, it was stated that the lack of attention from related parties caused several activities and drug management at the community health center to not be implemented properly, causing the drug management system at the community health center not to run optimally.

Initial observation data at the Bunut Community Health Center for drug ordering logistics management is carried out once a month by listing the drugs needed. If the pharmaceutical installation is unable to plan and implement drug management properly, the installation is unable to reach the point of success. One example is based on initial observations at the Bunut Community Health Center Pharmacy Installation, there are still several obstacles such as delays in drugs from the health office from the specified time period, lack of drug stock from the community health center request then drug mismatches that come with requests so that patient drug refusals often occur which indicates that drug supplies are not complete. In the January 2023 period, there were 24 drug items that often-experienced vacancies until December. The frequent occurrence of drug mismatches that come with requests causes expired drugs to become uncontrolled, based on data obtained there are 246 expired drug and medical device items from 2017-2023. The existence of these expired drugs indicates that drug management is not optimal. Poor drug management can affect the effectiveness of drug inventory management activities which will affect the incidence of stagnant and stockout drugs (Sulrieni & Rozalina, 2019).

From the data above, it is the reason for the importance of proper drug management and research on Drug Logistics Management Analysis at Bunut Community Health Center, Pelalawan Regency in 2023. The aim of this research report is to analyze drug logistics management through input and process components using a qualitative descriptive approach method with in-depth interviews with the Community Health Center.

2. RESEACH METHOD

This research is a descriptive study with a qualitative approach focusing on assessment to obtain more in-depth information about drug management at the Bunut Community Health Center, Pelalawan Regency in 2023 with research variables divided into two aspects, the first is input including budget

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funds, the second is process aspects including planning, demand, storage, distribution, destruction, control. The residency was carried out at the Bunut Community Health Center from 14 November to 27 November 2023. The data sources of this study consisted of key informants Pharmacist 1, Pharmacist 2 and Assistant Pharmacist. The research instruments were in-depth interviews, document review and direct field observations. In-depth interviews were conducted using an interview guide for all informants. Data analysis was divided into 6 stages, namely, data transcription, data coding, analysis process, data presentation in matrix form, data analysis at the time of data collection, and content analysis to analyze data.

3. RESULTS AND DISCUSSION
3.1 Informants

In this residency, the main informants are Pharmacist 1, Pharmacist 2, Assistant Pharmacist, Pharmacy Installation (logistics) who know best about the budget funds for planning, demand, storage, distribution, destruction, control flows, the pharmacist in charge of the logistics. So, for this residency activity, I chose informants who were competent and capable so that I could understand information related to logistics at the Bunut Community Health Center in its entirety from the Bunut Community Health Center aspect.

Table 1. Informant Data in Research

Informant Code	Age (yr)	Latest Education	Position / Occupation	Working Period
A1	31	Bachelor Degree +apt	BLUD treasurer	5 yrs
A2	33	Bachelor Degree +apt	Pharmacist in Charge of Warehouse	7 tahun
AA1	40	Diploma of Pharmacy	Pharmacy Assistant	8 yrs

3.2 Situation Analysis of Problems

Situation analysis uses document tracing and in-depth interviews with A1 as BLUD Treasurer, A2 as person in charge of planning process and pharmacist assistant, so that the results of situation analysis findings from the selected problem topics can be obtained.

3.3 Situation Analysis of Management Functions

In this topic, the results of the assessment at the Pharmacy Installation (logistics) will be presented including budget funds, planning functions, requests, storage, distribution of destruction, control.

3.4 Planning

Based on the results of in-depth interviews with key informants, the drug planning process is in accordance with the SOP at the Puskesmas using LPLPO with the consumption method and in accordance with the Minister of Health Regulation in 2016. This can be seen from the following interview results.

".... we do drug planning every year by calculating drug estimates based on previous usage data, then usually at the beginning of each year we propose an RKO (Drug Needs Plan) to the health office and then continue every month using LPLPO." (A1)

3.5 Demand

Based on the results of in-depth interviews with informants at the Bunut Community Health Center for requests at the Bunut Community Health Center, it is in accordance with the use of LPLPO and in accordance with the Minister of Health Regulation in 2016, however, the request process has not been going well because there are still unmet drugs due to drug vacancies from the health office so that have an impact on services at the community health center. This can be seen from the following interview results

".... requests have been made every month, according to the drugs we need, but sometimes the drugs are empty at the health office" (A2)

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3.6 Acceptance

Based on the results of in-depth interviews at the Bunut Community Health Center, the drug acceptance process at the Bunut Community Health Center is in accordance with the Minister of Health Regulation in 2016 because it is carried out appropriately and double-checks to avoid errors and drug exchanges in drug acceptance. Drug receipt is adjusted to the LPLPO that was previously entered. This drug acceptance activity is also carried out by checking again whether the drugs sent by the health office drug warehouse are in accordance with the drug requests of the community health center in the LLPO format. This can be seen from the following interview results.

"For acceptance, every drug that we get from the office, we always check its suitability, but sometimes it's more inappropriate, it's not according to what we need" (AA1)

3.7 Storage

Based on the results of in-depth interviews, the drug storage process at the Bunut Community Health Center has been going well according to existing SOPs and the Minister of Health Regulation in 2016, because they are stored according to standards by arranging alphabetically, based on their preparations, prioritizing those that are nearing expiration and separating drugs that require special treatment such as storage of vaccines in a standard refrigerator. This can be seen from the following interview results.

".... storage is always adjusted to the SOP, because if it's not suitable, it's difficult for us to find the medicine and also avoid medication errors" (A2)

3.8 Distribution

Based on the results of the interview, the drug distribution process at the Bunut Community Health Center has been carried out in accordance with existing SOPs and in accordance with the Minister of Health Regulation in 2016 where distribution is carried out to meet the needs of preparations at pharmaceutical installations. Distribution to sub-units and distribution to patients is carried out using a prescription. This can be seen from the following interview results.

".... for distribution, we are based on a doctor's prescription, then distributed to patients" (A2)

3.9 Destruction and Recall

Based on the results of in-depth interviews related to destruction and withdrawal, it is in accordance with the SOP standard and the provisions of the 2016 Minister of Health Regulation by reporting damaged and expired drugs to the health office Unfortunately, there is no special schedule for drug destruction due to lack of funds and waiting for the accumulation of drugs to be destroyed from all community health centers to the health office, so that destruction and withdrawal activities are not carried out and they are still stored in the community health center which makes drugs pile up, moreover, the warehouse room has a size not wide causing the full warehouse of the Bunut Community Health Center Pharmacy. This can be seen from the following interview results.

".... as for the destruction, as long as I am here, it has never been done, we have reported it to the health office but the health office said yes, until now there has never been any destruction, so the expired drugs are piling up here" (A1)

3.10 Control

Based on the results of the study, the drug control process has not been going well. According to the Indonesian Ministry of Health (2016), the purpose of control is to prevent excess and vacancies of drugs in basic health service units, but due to the lack of drugs at the Bunut Community Health Center, the drug control process at the Bunut Community Health Center has not been running optimally because there are still shortages of drugs distributed from the health

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office. This can be seen from the following interview results.

".... sometimes the drugs that we ask for at the health office are empty, even if there are sometimes not according to what we asked for, so the drugs that are empty we buy with BLUD funds, while the BLUD funds are limited while our services have to continue, right?" (A1)

3.11 Identification and Priority of Problems

In determining problem solving, the priority of the problem is then determined using the USG Technique with a scale score of 1-5. The higher the level of urgency, seriousness, or growth of the problem, the higher the score for each of these elements. The analysis of problem priorities was carried out with the BLUD treasurer pharmacist, planning pharmacist and assistant pharmacist where the alternative problem solving that had the highest total score was a priority problem. From the results of the weighting carried out based on the USG matrix, it was found that the priority problem at the Bunut Community Health Center was that the drug control process at the Bunut Community Health Center had not been running optimally because there were still frequent drug shortages distributed from the health office.

Table.1 Determination of Problem Priorities

Issue	Analysis			Score	Ranking
	U	S	G		
The drug control process at the Buntu Community Health Center has not been running optimally because there are still frequent drug shortages.	5	5	5	15	I
Lack of BLUD funds	4	4	5	13	II
There are still drugs received that do not meet needs.	4	4	4	12	III

3.12 Alternative Problem Solving

Based on the priority of the problem, it was found that one thing that became the main problem was that the drug control process at the Bunut Community Health Center had not been running optimally because there were still frequent drug shortages distributed from the health office. For a clearer understanding of the root causes of the problem, it can be analyzed using Fishbone. The Fishbone solution basically reverses the process to find potential solutions for each cause of the problem as illustrated in figure 1.
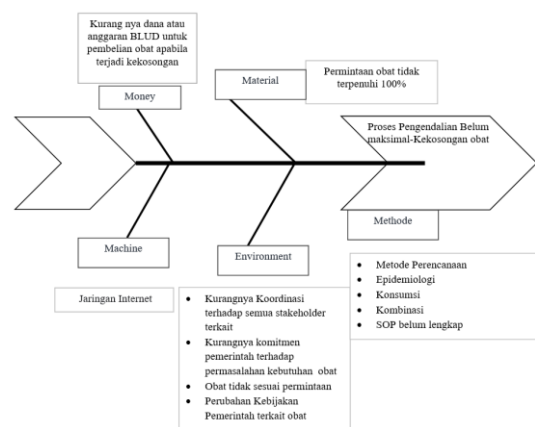

Figure 1. Fishbone Identifying and Analyzing Problems

Table 2. Alternative Problem Solving

Problem	Cause of Problem	Alternative Problem Solving
Method	• Method planning • Epidemiology • Consumption • Combination • Incomplete operational standard procedures	Conduct planning with a combination of epidemiological, consumption methods and complete incomplete operational standard procedures
Machine	Internet network	Communicate to the Pelalawan regent so that he can make effective policies to improve internet access in remote areas. The government can cooperate with the private sector to build an internet network that can cover areas that are economically difficult to reach
Money	Lack of funds or BLUD budget for purchasing drugs if there is a shortage	• Optimize the use of funds, examine and evaluate the use of BLUD funds to ensure that the budget is used efficiently according to priorities, especially related to the purchase of drugs that are urgently needed; • Propose additional funds by communicating with the authorities to consider submitting additional funds, especially if there is an urgent need • Propose cooperation with external parties by partnering or sponsoring who are willing to provide financial support; • Drug stock management ensures that the necessary drugs are always available.
Material	Drug requests are not 100% fulfilled	Effective communication between the community health center and the health office to identify problems and find solutions together
Environment	• Lack of government commitment to drug needs issues • Drugs do not match requests • Changes in government policy related to drugs	• All parties and plan to improve coordination of drug distribution effectively • Carry out coordination of health centers and government • Have discussion on solutions together whether it is necessary to replace drugs or adjust orders • Coordinate with the community health center to ensure a comprehensive understanding of the changes

Based on the process component in the fishbone diagram, the causes of drug control at the Bunut Community Health Center have not been running optimally, namely the lack of coordination with all relevant stakeholders, lack of government commitment to drug needs issues, drugs that do not match requests,

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and internet network constraints. Funds obtained by the community health center come from BLUD but the funds received are very limited and unable to meet drug needs in the event of a drug vacancy. Research (Jayanthi & Dinaseviani, 2022) shows that there are still gaps between provinces in Indonesia, both in terms of access and understanding of the use of digital technology, which is also an obstacle to drug services and management at the community health center.

Based on the results of the study, the source of the budget at the Bunut Community Health Center for drug supply is not suitable. Based on research by Shafa et al (2021) regarding the analysis of drug management at the Donowudu Community Health Center,

Bitung City, it was stated that the lack of attention from related parties caused several activities and drug management at the community health center to not be carried out properly. The fulfilment of drug requests by the community health center to the health office is sometimes not all fulfilled depending on the stock available at the health office. This will have a negative impact on health services and affect treatment efforts. Lack of attention from relevant parties has resulted in some activities and drug management at the community health center not being able to run optimally. This has the potential to have a negative impact on health services and affect treatment efforts (Panjaitan, 2019).

Tabel.3 Planning of Action

Indicator	Program	Goal	Target	Activity	Time	Responsible Party
Methods	Conduct socialization of planning method combination of epidemiological, consumtion, and socialization of an operational standard completeness.	To ensure planning runs well, drug needs are available and according to an operational standard	Pharmacists, Assistant Pharmacists	Socialization	February 2023	IFRS
Machine	Conduct audience with the Pelalawan regent	For regent to make effective policies to improve internet access in remote areas	Pelalawan regent	Coordination meeting	January 2024	IFRS
Money	Advocacy to the government for increasing BLUD funds or budget	For funds to meet drug needs	Health Office, Regional house of Representatives	Meeting	January 2024	IFRS
Material	Coordination with the community health center and health office	To ensure drugs availability	Health Office	Meeting	February 2024	IFRS
Environtmen	Coordinate with OPD	To ensure drug avaibility at Butut	Health Office of Pelalawan Regency	Coordination meeting	Februariy2024	IFRS

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	Community Health Center is met and services can run well

Table 3 outlines the comprehensive intervention plan to address the identified issues in drug logistics management at the Bunut Community Health Center. The plan encompasses several key aspects. Firstly, it emphasizes the importance of conducting socialization of planning methods that combine epidemiology, consumption, and SOP completeness to ensure effective planning and drug availability in accordance with standard operating procedures. Secondly, it proposes engaging with the Pelalawan regent to develop policies aimed at improving internet access in remote areas, facilitating better communication and coordination. Thirdly, the plan advocates for proposing additional funds to the government to mitigate drug shortages and ensure a sufficient budget for procurement. Furthermore, it stresses the need for close coordination between the community health center and the health office to guarantee a reliable drug supply. Lastly, the plan highlights the importance of collaborating with Regional Work Units (OPD) to ensure the availability of drugs at the Bunut Community Health Center, enabling the smooth operation of healthcare services.

The researcher assumes that to ensure optimal health services, coordinated and integrated efforts are needed. This includes socializing epidemiological planning methods and completeness of SOPs to ensure drug needs are available according to standards, as well as conducting an audience with the regent to improve internet access in remote areas. In addition, proposing additional funds to the government to overcome drug vacancies and coordinating with the community health center, health office, and OPD to ensure the availability of drugs at the Bunut Community Health Center, which as a whole aim to ensure quality and affordable health services for the community.

CONCLUSION

Drug control at Bunut Community Health Center has not been running optimally, due to lack of coordination with all relevant stakeholders, lack of government commitment to drug needs issues, drugs that do not match requests, poor internet network access is also an obstacle to drug services and management at the community health center. In addition, the funds obtained by the community health center comes from BLUD but the funds received are very limited and unable to meet drug needs in the event of a drug vacancy. Based on the results of the study, the source of the budget at the Bunut Community Health Center for drug supply is not appropriate.

RECOMMENDATION

It is hoped that the health center can communicate and coordinate existing problems periodically with all stakeholders, especially the Pelalawan district health office, so that drug needs are met and the budget is appropriate and it is hoped that the health office will fulfill all drug requests.

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