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ANALYSIS OF DRUG LOGISTICS MANAGEMENT AT THE BLUD UPTD MOKOAU HEALTH CENTER, KENDARI CITY IN 2025

***Thesalonika Diandra Bara, Jumakil, Siti Nurfadilah H.**

Department of Public Health, Faculty of Public Health, Halu Oleo University, Indonesia

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***Corresponding Author: Thesalonika Diandra Bara**

Department of Public Health, Faculty of Public Health, Halu Oleo University, Indonesia.

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ABSTRACT

Background: *Drug logistics management is a series of activities aimed at ensuring the availability of safe, quality drugs that meet the needs of health services. Problems such as drug shortages, discrepancies in the number of drugs received, and limited storage facilities are still found at the BLUD UPTD Mokoau Health Center, Kendari City, which has the potential to affect the continuity of health services. This study aims to analyze the implementation of drug logistics management at the BLUD UPTD Mokoau Health Center, Kendari City in 2025.* ***Methods:*** *This study uses a qualitative method with a descriptive approach. Data were collected through in-depth interviews, observations, and document reviews with two key informants and three supporting informants. Data analysis was carried out through data reduction, data presentation, and conclusion drawing.* ***Results:*** *The implementation of drug logistics management in general has been in accordance with the 2019 Technical Guidelines for Pharmaceutical Service Standards at Community Health Centers. Drug planning is carried out based on DOEN and FORNAS by utilizing stock opname data, LPLPO, consumption methods, morbidity methods, and buffer stock. Drug procurement is carried out through routine requests, special requests, and independent procurement when stock is empty. Drug storage applies the FIFO and FEFO principles as well as special management for high alert drugs, LASA, narcotics, and psychotropics. Drug distribution, recording, and reporting have been carried out according to procedures. Obstacles found include drug stock shortages, excess stock due to dropping program drugs, limited storage space, and the lack of a special cabinet for narcotics and psychotropics.* ***Conclusion:*** *Drug logistics management at the BLUD UPTD Mokoau Health Center has been running quite well and mostly meets standards, but improvements are still needed in the*

procurement and storage aspects to support drug availability and the quality of health services.

KEYWORDS: *Drug logistics management, community health centers, drug availability.*

INTRODUCTION

According to the Regulation of the Minister of Health of the Republic of Indonesia Number 19 of 2024, the Community Health Center, hereinafter referred to as the Community Health Center, is a first-level health service facility that organizes and coordinates promotive, preventive, curative, rehabilitative, and/or palliative health services in its working area (1) . The Community Health Center as a health service unit that is the spearhead in the field of basic health services, is expected to provide quality health services and in accordance with market or community needs, it is necessary to improve services in order to be able to compete, be able to develop and be able to grow (2) .

Community Health Centers (Puskesmas) have an important role in drug management, especially in the aspects of planning, procurement, distribution, and reporting. The purpose of managing drug availability is to ensure the availability of drugs for patients (3) . Drug availability is a minimum requirement for health services at Puskesmas, where the type and quantity of drugs available must be aligned with the actual treatment needs of the community in the Puskesmas work area. The level of drug availability is the level of drug supply, both the type and quantity of drugs required by treatment services in a certain time period, measured by calculating the average supply and usage per month (4) .

Logistics management is the process of planning, implementing, and controlling inventory and material flow from the point of origin to consumption in order to meet consumer/user needs effectively and efficiently. The goal of drug logistics management is to ensure the continued availability and affordability of efficient, effective, and rational drug services. The impact of poor management is lost, damaged, and expired drugs, which can affect public trust in institutions, staff morale and frustration, and decreased utilization of health facilities (5) .

Analysis of drug logistics management includes the planning, procurement, storage, distribution, disposal, evaluation, and monitoring stages, which are interrelated and must be well-coordinated to function optimally. One factor that significantly influences drug inventory at a community health center is stock control. Too little stock can result in unmet demand, leading to decreased patient satisfaction. Likewise, too much stock can result in high

storage costs and space requirements, leading to potential damage or expiration of the drug (6) .

World Health Organization(WHO) notes that the availability of essential medicines in health care facilities is a key indicator used to assess the quality of services provided to the public. Globally, WHO notes that more than 50% of countries face essential medicine supply issues, which directly impacts suboptimal patient care. For developing countries like Indonesia, this challenge is exacerbated by fundamental problems in logistics, procurement, and distribution of medicines, which are major barriers to effective health care delivery (7) .

According to the Indonesian Ministry of Health Report, it shows that there are still provinces with the percentage of districts/cities with health centers that have the availability of drugs according to standards below the national target. (8) . Data from the performance report of the Directorate General of Pharmacy and Medical Devices Semester I of 2025 shows that there are 15 (fifteen) provinces with the percentage of health centers with the availability of essential drugs below the national target (96%), one of which is Southeast Sulawesi (95.20%) (9) .

Based on data from the Southeast Sulawesi Provincial Health Office (2024), there are 308 Community Health Centers (Puskesmas) in Southeast Sulawesi Province, and 296 Community Health Centers reported the availability of essential drugs and vaccines. Of these, 261 Community Health Centers (88.18%) have met the minimum essential drug availability standard of 80%, but there are still 35 Community Health Centers (11.82%) that do not have or are still below 80% of their essential drug availability due to generally limited drug storage space in terms of stability (temperature, light, humidity), as well as the Community Health Centers not having 24-hour electricity service, the Community Health Centers not having pharmacists.

According to the Kendari City Health Office (2024), the Ministry of Health has established strategic target indicators in the Ministry of Health's 2020-2024 Strategic Plan as one of the benchmarks for the success of achieving these efforts. The strategic target indicator is the percentage of Community Health Centers with essential drug availability. In 2024, the realization of the indicator for the percentage of Kendari City pharmacy installations with essential drug availability was 25%. This situation is due to several reasons, namely *cut-offs* during the procurement process, goods not being available in the e-catalog at the time of procurement, and drug shortages from provincial-level pharmacy installations. Therefore, it can be said that drug shortages do not occur annually, but rather on a scheduled monthly basis.

Based on initial observations conducted by researchers at the Mokoau Community Health Center's Public Health Service (BLUD UPTD), various recurring problems in drug management and availability were still found. These problems include drug shortages due to limited stock at the Regency/City Pharmacy Installation (IFK), as well as a discrepancy between the quantity of drugs received and the number of requests . Furthermore, limited storage space also impacts the storage and stock control process. These conditions indicate that drug logistics management at the Mokoau Community Health Center is not yet optimal and has the potential to disrupt the continuity of health services.

Based on the above background,Researchers are interested in conducting research on "Analysis of Drug Logistics Management at BLUD UPTD Mokoau Health Center, Kendari City in 2025". This study aims to analyze the implementation of drug logistics management at BLUD UPTD Mokoau Health Center, Kendari City based on the stages of pharmaceutical supply management in accordance with the Technical Instructions for Health Center Pharmaceutical Service Standards issued by the Ministry of Health in 2019 (10) in supporting the availability of drugs and health services.

METHOD

This research uses descriptive qualitative research. Data in this study were collected through observation, in-depth interviews, and the collection of relevant documents to obtain detailed and in-depth information regarding the phenomenon being studied. Informants in this study consisted of 2 key informants and 3 regular informants. Key informants were the head of the BLUD UPTD Mokoau Health Center and the pharmacist in charge. While regular informants were pharmacy staff, drug warehouse staff at the BLUD UPTD Mokoau Health Center Pharmacy Service, and the Head of the Regency/City Pharmacy Installation.

RESULTS

The results of this study describe the implementation of drug logistics management at the BLUD UPTD Mokoau Health Center, Kendari City in 2025, which includes five main stages: drug planning, drug procurement, drug storage, drug distribution, and drug recording and reporting.

1. Medication Planning

Drug planning at the BLUD UPTD Mokoau Health Center includes four stages: drug selection, data collection, calculation of needs, and estimation of drug needs.

a. Drug Selection

The drug selection process at the Mokoau Community Health Center's Public Health Unit (BLUD UPTD) is carried out as a team through meetings involving the pharmacist in charge, doctors, and warehouse coordinators. All pharmacy staff participate in stocktaking activities as the basis for developing planning data, while the health center leadership plays a supervisory role.

"If we have a team, the team will have a responsible pharmacist, a doctor, and, if possible, a warehouse coordinator. So, we'll hold a meeting and then decide on the medicines we'll stock." ***(Key Informant, PPA, 35 years old)***

"Everyone is involved in the planning, because if we want to know the planning, we have to do a stocktake first, and that is done by all pharmacy staff." ***(Supporting Informant, TNK, 42 years old)***

Drug selection refers to the National Essential Drug List (DOEN) and the National Formulary (FORNAS) as the main guidelines, with the community health center formulary being reviewed routinely every year.

"Drug planning always refers to the Essential Drug List and the National Formulary because those are our benchmarks for planning. We have a community health center formulary, and we do it routinely. Usually, if we want to create a drug plan (RKO), we have to follow the National Formulary. That's our reference for preparing the RKO for the year." ***(Key Informant, PPA, 35 years old)***

b. Data collection

Data collection is conducted through stocktaking activities at each service unit/depot. The data collected includes remaining stock, buffer stock, and drug usage data, as well as proposed drug needs, which are outlined in the Drug Usage Report and Drug Request Sheet (LPLPO).

"Of course, with stocktaking data, we know how much stock is left. Then there's also inventory data (buffer), which means we know how much is available at the health center and how much stock is left. From there, we can determine how much we need to procure, usually in the form of a LPLPO." ***(Key Informant, PPA, 35 years old)***

"For drug planning, we consult the LPLPO. That data shows drug usage and the prevalence of common illnesses, so that's the basis for our drug planning." ***(Supporting Informant, 45-year-old ASW)***

c. Calculation of Drug Needs

Drug needs are calculated using two methods: the consumption method and the morbidity method. The consumption method is applied by referring to actual drug usage data from the previous period, while the morbidity method is applied by considering the number of disease cases that predominantly occur in the community health center's work area.

"We adapt the calculation method to the planning method, namely the consumption method and the morbidity method." ***(Key Informant, PPA 35 years old)***

d. Estimated Drug Needs

Drug needs are estimated based on the planning method used, which uses the consumption method as the basis for future needs, plus a *buffer stock* as safety stock. *Buffer stock determination* at the Mokoau Community Health Center takes into account disease patterns and the number of patient visits.

"We adjust the estimate according to the planning method, which uses the consumption method and adds a buffer stock (supply), which is determined by observing disease patterns and the number of visits." ***(Key Informant, PPA)***

2. Drug Procurement

Drug procurement at the BLUD UPTD Mokoau Health Center includes three stages: request, independent procurement, and receipt.

a. Request

The drug request process is carried out through two mechanisms: routine requests, which involve the preparation of a monthly LPLPO (Large-Scale Drug Order) and a quarterly large distribution, and special requests in the event of a drug shortage. Submissions are made through the SIFARMA application to the Kendari City Health Office.

"The drug request process is based on consumption and morbidity rates. From there, we immediately conduct a stocktake to obtain LPLPO data. We then collect the LPLPO data from each depot and compile it all. After that, we send it via the SIFARMA application, which will then send it to the Kendari City Health Office." ***(Supporting Informant, TNK, 42 years old)***

"Some health centers distribute drugs monthly by depositing what's called a quarterly LPLPO, so they distribute them every three months. However, if a health center experiences a drug shortage within that three-month period, they can request additional supplies from the pharmacy." ***(Supporting Informant, E, 43 years old)***

b. Independent Procurement

Independent procurement is carried out when there is a stock shortage at the City Pharmacy Installation (IFK), especially for essential and fast-moving drugs, using JKN funds with recommendations from the Health Office.

"There are two types of procurement: direct procurement from the warehouse and direct procurement from the PBF. Direct procurement from the PBF occurs when the warehouse is empty and the drug is vital, meaning it is needed, so it cannot be empty." ***(Key Informant, PPA, 35 years old)***

"The problem is that the pharmacy warehouse is usually empty of stock. This is a serious problem because we usually give medication to patients, for example, like amlodipine. Patients are not allowed to stop taking their medication. When the warehouse is empty, patients inevitably cannot get the medication." ***(Key Informant, PPA, 35 years old)***

"...the community health center has flexibility in how it uses its budget... but only on the condition that there is a letter of approval or some kind of recommendation from the health department that the community health center can make independent purchases, but even then only for one month's needs." ***(Supporting Informant, E, 43 years old)***

c. Drug Receipt

Medication receipt is carried out by matching incoming drugs with the Outgoing Goods Proof (SBBK) from the City Pharmacy Installation. Challenges encountered include excess stock due to program drug drop-offs and the risk of expired drugs due to their short shelf life.

"Once approved, the pharmacy warehouse will create or issue a SBBK according to our request. After that, the noodles are delivered to the community health center, where we match the existing SBBK with the incoming goods. Once they match, we sign a report confirming receipt and compliance." ***(Key Informant, PPA, 35 years old)***

"If the medication is damaged or expired, it's definitely there. Stock piles up, most likely because there's another drop directly from the warehouse that we didn't request... Overstocking can lead to ED medication or the medication being damaged." ***(Supporting Informant, ASW, 45 years old)***

*"The first obstacle in the procurement process is the usual long waiting time. Secondly, the current medication intake has a very short expiration date, less than two years. Currently, the expiration date for medication is only two years. Furthermore, the journey here also takes months, so by the time the medication arrives here, it's already been less than two years. So, the potential for expired medication is much greater."****(Supporting Informant, E 43 years old)***

3. Drug Storage

Drug storage at the BLUD UPTD Mokoau Health Center includes two aspects: general aspects and specific aspects.

a. General Aspects

Medication storage is carried out in two locations: the second-floor drug warehouse and the pharmacy. The storage system applies the FIFO and FEFO principles, with grouping based on temperature, dosage form, and alphabetical order. The storage room is equipped with air conditioning, thermometers, and refrigerators. SOPs for handling power outages and a three-color marking system for drugs approaching expiration are in place. However, the warehouse remains cramped, with inadequate lighting and suboptimal ventilation.

"Storage is done in the upper warehouse, so we have that warehouse on the 2nd floor... in a pharmacy, the first storage is alphabetical, the second is FEFO/FIFO... Storage of medicines should not be in direct contact with the floor, there must be pallets... The storage room is equipped with air conditioning, a room temperature thermometer and a refrigerator." ***(Key Informant, PPA 35 years old)***

"We use special markings for expired medications: green, yellow, and red. Green is for expiration dates under one year, yellow is for expiration dates under six months, and red is for expiration dates under three months." ***(Supporting Informant, ASW, 45 years old)***

"The condition of the warehouse above is not well-lit, too cramped, and the ventilation is poor, that's all." ***(Supporting Informant, ASW, 45 years old)***

"The space is still very limited, even though we have a lot of goods, so a lot of our medicines are still outside the warehouse. That also poses a risk of theft." ***(Key Informant, PPA, 35 years old)***

b. Special Aspects

High-alert medications are specifically labeled and stored separately. LASA medications are managed by inserting other medications between similarly named medications. Narcotics and psychotropic medications are stored under double locks, but a dedicated cabinet is not yet available and is currently being used as a desk cabinet.

"We give high-alert medications a special label so that staff know they need to be used with extreme caution. We also store them separately from other medications and don't mix them, as administering them incorrectly to patients can be very dangerous." ***(Supporting Informant, 45-year-old ASW)***

"LASA means that drugs that have the same sound or spelling but are different are separated, for example, amlodipine 5 and amlodipine 10, we put the drug in the middle, for example

Ambroxol, so that when taking the drug there is no mistake." ***(Key Informant, PPA 35 years old)***

"We are temporarily storing narcotics and psychotropics here (in a table cupboard) at this Community Health Center because a special cupboard is not yet available... we are still arranging the storage according to the applicable regulations, the place is made of strong material, is not easily moved and has two different keys held by different people (double lock), and is not visible to patients." ***(Key Informant, PPA 35 years old)***

4. Drug Distribution

Distribution of drugs at BLUD UPTD Mokoau Health Center includes: determining the type and quantity of drugsand implementation of handover to sub-units and community health center networks.

a. Determination of Type and Amount of Drugs

The type and quantity of medication distributed is determined based on the actual needs of each service unit each month. Considerations include average monthly medication usage, remaining stock, disease patterns in the community health center's work area, and the number of patient visits to each unit. This ensures that each unit receives medication proportionally to its service needs.

"If we want to distribute medicine to units, we first assess their needs. From that, we can see everything: the average monthly usage, the remaining stock, and the disease patterns and number of visits. From there, we decide how much to distribute to each unit." ***(Supporting Informant, ASW, 45 years old)***

"...the adjustment process is based on the need for medication every month. We already know, for example, how much medication each depot needs, so we distribute it according to the needs." ***(Key Informant, PPA, 35 years old)***

"Of course, we'll see how much he uses. If we know how much he uses per month, we can determine how much he needs." ***(Supporting Informant, TNK, 42 years old)***

b. Implementation of Drug Delivery to Sub-units and Community Health Center Networks

Drug distribution is carried out from the community health center warehouse to internal service units (pharmacies, laboratories, delivery rooms, emergency rooms) and the community health center network (integrated health posts, CKG activities). Each unit is required to prepare a monthly LPLPO as the basis for distribution. Drug delivery is accompanied by an LPLPO form signed by the community health center drug manager as the provider and the unit manager as the recipient. Distribution implementation has been

accompanied by SOPs. No significant obstacles were encountered, except when warehouse stock was empty, resulting in no drugs being distributed.

"The distribution process starts from us dropping it from the warehouse, some to the pharmacy, some to the lab, some to the integrated health post (posyandu) or CKG activities, some to the delivery room. The service unit also makes a monthly LPLPO, so if, for example, they run out of medicine, it is immediately sent to the warehouse... Now, the medicine that is handed over must be accompanied by a signed LPLPO form, which includes the signature of the medicine manager as the one who gave it, and the signature of the person in charge of the unit as the one who received it." ***(Key Informant, PPA, 35 years old)***

"There's an SOP. They usually first assess the drug needs in each unit, then adjust the distribution time to suit each individual's needs." ***(Key Informant, FAS, 48 years old)***

"There are no obstacles, except that the goods are out of stock, so we don't want to distribute them. As long as there are still some, we can distribute them immediately." ***(Key Informant, PPA, 35 years old)***

5. Recording and Reporting

a. Recording

Recording is done using double-entry: manual recording using stock cards verified at the end of each month, and digital recording using the e-Puskesmas, SIFARMA, and SMILE applications. Narcotics and psychotropic drugs are recorded separately and adhere to stricter standards.

"Well, we have something called a stock card, so it can be used for control... at the end of the month, we check the noodles, we adjust the physical and stock card, we check the conformity. The purpose is so we know the condition of the drug stock here, so we can control which ones are out of stock and which ones are still available." ***(Key Informant, PPA, 35 years old)***

"For drug recording, we use a stock card... In addition to the stock card, we also input it into the e-Puskesmas application for recording daily services, the SIFARMA application for reporting and requesting drugs, and we also input it into SMILE every time a drug is issued... For narcotics and psychotropics, there is a separate record book. Every time something is issued, it must be immediately recorded how much was issued, who it is for, and how much stock is left. Nothing can be missed." ***(Key Informant, TNK, 42 years old)***

b. Reporting

Reporting is done digitally through the SIFARMA application to the Kendari City Health Office. Reports include daily (Yanfar, PIO) and monthly (LPLPO, SIPNAP, SIMONA,

SMILE, top 20 drug reports, counseling reports, POR, program drug reports, and inventory reports).

"There are many types of reports, there are daily reports such as Yanfar reports and PIO reports... For monthly reports, there are SIPNAP reports, namely drug reports, then there are SIMONA reports... there are LPLPO reports, SMILE reports, reports on 20 frequently issued drugs, counseling reports, POR reports (Rational Drug Use), program drug reports and inventory reports. Now the reporting is no longer manual, it is all inputted into the SIFARMA application and sent to the Kendari City Health Office." ***(Key Informant, PPA 35 years old)***

DISCUSSION

1. Medication Planning

Drug planning at the BLUD UPTD Mokoau Community Health Center has been implemented in accordance with the Technical Guidelines for Pharmaceutical Service Standards at Community Health Centers (Ministry of Health of the Republic of Indonesia, 2019). Drug selection is carried out collaboratively involving pharmacists, doctors, warehouse coordinators, and all pharmacy staff, while the leadership plays a role in supervision. The involvement of various health professionals is important because drug needs are greatly influenced by service patterns and disease patterns, thus increasing accuracy in determining the types of drugs to be planned. The community health center formulary has been compiled with reference to DOEN and FORNAS, and is reviewed routinely every year as needed. This is in line with research by Fauziah et al. (11) at the Bara-Baraya Community Health Center which stated that drug selection refers to DOEN and FORNAS, and the community health center formulary is useful in controlling drug quality, costs, and availability.

Data collection was conducted through stocktaking activities and the use of LPLPO from all service units as a source of data on consumption, morbidity, remaining stock, and buffer stock. This comprehensive approach reflects that data collection not only meets administrative needs, but also serves as a basis for rational decision-making in determining drug needs. This finding is in line with research by Permatasari et al. (12) at the Cikulur Community Health Center which utilized annual LPLPO summary data as a source of planning data.

Drug needs are calculated using a combination of consumption and morbidity methods. This combination allows for more comprehensive needs projections and reflects actual service

conditions. Drug needs estimates are based on consumption calculations plus a buffer stock as safety stock, determined based on disease patterns and the number of patient visits , as required by Indonesian Ministry of Health standards.

2. Drug Procurement

The drug request process at the BLUD UPTD Mokoau Health Center has been carried out in a structured manner through routine request mechanisms (monthly LPLPO and quarterly delivery) as well as special requests in the event of shortages. Submissions through the SIFARMA application demonstrate the digitalization of the process that supports efficiency and transparency. The request process runs on time without delay, reflecting good coordination between the health center and the Health Office. This is in line with Sunandar et al. (13) who stated that the health center submits LPLPO requests every month to the health office's pharmaceutical warehouse installation.

Independent procurement is a solution when there is a stock shortage at the IFK, especially for essential and fast-moving drugs that cannot be interrupted. Based on the results of interviews, drug shortages at the IFK are caused by the difficulty of accurately predicting needs and budget constraints. Independent procurement is temporary and cannot be a permanent solution. This condition is in line with Simamora et al. (14) who found that stock shortages at the IFK encourage health centers with BLUD status to make direct purchases from PBF. The use of JKN funds with recommendations from the Health Office demonstrates the flexibility of BLUD status that is utilized responsibly.

Drug receipts were conducted according to procedures, including double-checking the physical drug records with the SBBK (Special Drug Administration) at the time of handover. However, challenges persisted, including excess stock due to program drug drops that did not always match actual needs, and the risk of expired drugs due to long lead times and relatively short shelf lives (less than two years). This presents a systemic challenge that needs to be addressed through improved coordination between the IFK and community health centers in managing program drugs.

3. Drug Storage

General aspects of drug storage at the Mokoau Community Health Center's Public Health Service (BLUD UPTD) largely meet standards. The FIFO and FEFO systems are consistently implemented, storage is based on temperature and dosage form, pallets are used as storage bases, refrigerators are equipped with temperature cards, and standard operating procedures (SOPs) for power outages with chiller boxes are in place. The three-color marking system

(green, yellow, and red) for drugs nearing their expiration date is an effective form of quality control in quickly identifying drug expiration status.

However, the condition of the pharmaceutical warehouse at Mokoau Health Center is still inadequate. Based on the 2010 guidelines of the Director General of Pharmaceutical Development, the minimum area of a drug storage warehouse is 3x4 m2, while the warehouse at Mokoau Health Center is only about 2.5x2.5 m2. This condition causes some drugs to have to be stored outside the warehouse, thus risking the safety and stability of drug quality. In addition, ventilation and lighting in the warehouse are not optimal, which is contrary to Minister of Health Regulation Number 74 of 2016 (15) which requires drug storage rooms to pay attention to ventilation and allow sufficient light to enter. This finding is in line with Handayani et al. (16) at Batua Health Center and Safitri & Wahyuni (17) at Meureubo Health Center who found that the warehouse conditions were cramped and ventilation was inadequate.

In the specific aspect of storage, high alert drugs have been given special labels and stored separately. LASA drugs are managed by inserting other drugs between drugs that have similar names or packaging, accompanied by special labels at the storage location. Narcotic and psychotropic drugs are managed according to Minister of Health Regulation Number 5 of 2023 (18) with a double lock system, not easily moved, and not visible to patients. Although special narcotics and psychotropics cabinets are not yet available and still use temporary table cabinets, all the substance of the regulatory requirements have been met. The Community Health Center has also submitted a request for the procurement of special cabinets as a commitment to improving facilities. This is in line with Tuda et al. (17) at the Tuminting Community Health Center which implemented high alert labels and separate storage of LASA drugs.

4. Drug Distribution

Drug distribution at BLUD UPTD Mokoau Health Center has been carried out in accordance with the 2019 Indonesian Ministry of Health standards. Determination of the type and amount of drugs distributed takes into account average usage, remaining stock, disease patterns, and the number of visits to each service unit, so that distribution is carried out proportionally according to actual needs. This finding is in line with Sunandar et al. (13) which shows that drug distribution activities at Cibuaya Health Center are adjusted to the needs of each sub-unit.

The implementation of drug delivery to sub-units and health center networks is carried out from the health center drug warehouse to various service units within the health center,

namely the pharmacy, laboratory, delivery room, and emergency room, as well as to the health center network such as integrated health posts (posyandu) and Free Health Check (CKG) activities. The distribution mechanism is carried out by each service unit, where each unit is required to prepare a monthly LPLPO as a basis for submitting drug needs to the warehouse. If the drug stock in a unit runs out before the distribution schedule, the unit can immediately record its needs in the request book and then take it directly from the warehouse, so that the availability of drugs in the service unit can be maintained. Distribution using an LPLPO signed by both parties ensures accountability for the transfer of drugs from the warehouse to the service unit. This study is in line with research conducted by Rani et al. (19) which shows that the implementation of drug delivery is carried out in the following way: the drug warehouse delivers/sends drugs and is received at the service sub-unit, taken by the service sub-unit officer himself. The medicine is handed over with a signed LPLPO form and one copy is kept as proof of handover/receipt of the medicine, signing the document handing over the medicine to the sub-unit in the form of a sub-unit LPLPO.

5. Recording and Reporting

Drug recording at the BLUD UPTD Mokoau Health Center is carried out using a double recording system that combines manual recording (stock cards) and digital (e-Puskesmas, SIFARMA, SMILE). The stock card functions as a daily stock control tool that is verified at the end of each month through stock taking. The use of three digital applications simultaneously shows the development of a fairly advanced drug management information system. Specifically for narcotics and psychotropics, recording is carried out in separate books with very strict standards with no tolerance for missed expenditures, as a form of legal compliance. This finding is in line with Fauziah et al. (11) who implemented stock cards and service-connected applications in the recording system at the Bara-Baraya Health Center.

Drug reporting is carried out digitally through SIFARMA with complete and diverse report types, including daily reports (Yanfar, PIO) and monthly reports (LPLPO, SIPNAP, SIMONA, SMILE, reports of the 20 most frequently used drugs, counseling reports, POR, program drugs, and inventory). All of these report types have met all the requirements for report types stipulated in the 2019 Technical Guidelines for Pharmaceutical Service Standards at Community Health Centers. Digitalization of reporting makes the process more efficient, standardized, and allows direct monitoring by the Kendari City Health Office for the purposes of verification and integrated drug needs planning.

CONCLUSION

Based on the results of research conducted at the BLUD UPTD Mokoau Health Center, Kendari City in 2025, it can be concluded that:

1. Drug planning at the BLUD UPTD Mokoau Community Health Center has been implemented in accordance with the Technical Guidelines for Pharmaceutical Service Standards at the Community Health Center. Drug selection is carried out by a team with reference to the National Essential Drug List (DOEN) and the National Formulary (FORNAS). Data collection is carried out through stocktaking and LPLPO activities using data on drug usage from previous periods, morbidity data, remaining stock data, buffer stock, and proposed drug needs from each service unit. Drug needs are calculated using the consumption method and the morbidity method. The estimated drug needs are based on the consumption method calculation plus buffer stock as safety stock, which is determined based on disease patterns and the number of patient visits.
2. Drug procurement at the BLUD UPTD Mokoau Community Health Center has been carried out through routine and special request mechanisms using LPLPO sent through the SIFARMA application. Independent procurement is carried out when there is a shortage of drugs at the City Pharmacy Installation (IFK), especially for essential and fast-moving drugs, by utilizing JKN funds in accordance with applicable regulations. Although the drug procurement process has run well and on time, several obstacles were still encountered, namely the shortage of drug stocks at the IFK which forced the community health center to conduct independent procurement, excess stock due to dropping program drugs that do not always match the real needs of the community health center, potentially causing drug accumulation and expiration, and quite long delivery waiting times with relatively short drug expiration dates.
3. Drug storage at the Mokoau Public Health Center's Public Health Office (BLUD UPTD) has generally been implemented in accordance with pharmaceutical service standards. Drug storage applies the FIFO (First In First Out) and FEFO (First Expired First Out) systems, grouping drugs based on dosage form and storage conditions, and monitoring storage room temperature. High-alert and LASA drugs are managed specifically through separate labeling and storage. Management of narcotics and psychotropics has complied with applicable regulations through a double-lock system and access restrictions. However, obstacles remain, such as cramped warehouse conditions, suboptimal lighting and ventilation, and the lack of a dedicated narcotics and psychotropics cabinet.

4. Drug distribution at the Mokoau Community Health Center's Public Health Unit (BLUD UPTD) has been carried out in accordance with applicable standards. The type and quantity of drugs distributed are determined based on the actual needs of each service unit, taking into account average drug usage, remaining stock, disease patterns, and the number of patient visits. The process of delivering drugs to sub-units and the community health center network is carried out from the community health center's drug warehouse through a distribution mechanism supported by the LPLPO document and supported by SOPs that regulate the entire distribution process. In general, no significant obstacles were found in drug distribution, except when there was a stock shortage in the warehouse.
5. Drug recording and reporting at the Mokoau Community Health Center's Public Health Office (BLUD UPTD) has been carried out in an orderly and integrated manner. Drug recording is carried out through a double recording system, namely manually using stock cards and digitally through the e-Puskesmas, SIFARMA, and SMILE applications. Specifically for narcotics and psychotropic drugs, recording is done separately in a special book in accordance with applicable regulations. Drug reporting is carried out routinely in the form of daily and monthly pharmaceutical service reports. All reports have been inputted through the SIFARMA application and sent to the Kendari City Health Office for verification so that the reporting process is more efficient, standardized, and supports the control and planning of drug needs at the community health center.

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