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The Drugs Administration System At The Pangkajene Regency Health Service Pharmacy Installation

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ABSTRACT

The aim of this research is to determine the drug administration system at the Pangkajene and Kepulauan District Health Service Pharmacy Installation. The research method used descriptive qualitative at the Pangkajene and Kepulauan District Health Service Pharmacy Installation Office with data collection techniques, namely observation, interviews with 11 informants and document review. The research results found that the drug administration system in the distribution function was carried out in stages from the Pangkajene and Kepulauan District Health Service Pharmacy Installation to 23 Community Health Centers and 1 Primary Hospital in La Bakkang based on the Medicine Request Sheet every month, then it would be distributed again from the Community Health Center to the local Auxiliary Health Center and Village Health Post. The function of the drug destruction sector is carried out according to the stages and minutes, as well as coordinating with related parties; The Police, Prosecutor's Office, Head of the District Food Drug Control Agency, and implementation functions are carried out in three forms; inventory control, usage. Regarding expired medicines, referring to Minister of Health Regulation Number 72 of 2016, recording and reporting are carried out by administration of availability (stock), financial administration and administration of deletion (destruction) as a form of drug management. So that the drug administration system in pharmacy installations can be better, it is recommended to improve the quality of human resources through linear continuing education programs.

Keywords: Administration System, Medicine, Pharmacy Installation

INTRODUCTION

Based on Law Number 36 of 2009 concerning health, it is stated that every human being has the same right to obtain access to resources in the field of health

services and also obtain safe, quality health that can be met. Health services are one form of public service that is a basic need of the people, where every individual has ever felt sick so that they will automatically need health services to cure the pain they suffer.

Health efforts are carried out in the form of activities through promotional services (efforts to improve health levels), prevention efforts, health rehabilitation and curative (treatment) which are carried out in an integrated, comprehensive and sustainable manner. Curative health services according to Law Number 36 of 2009 are activities and/or a series of treatment activities aimed at curing diseases, reducing suffering due to disease, controlling disease and controlling disability so that the quality of sufferers can be maintained as optimally as possible. In line with one of the main targets of the health sector development plan, namely the fulfillment of drug needs.

It is stated in the policy above that drugs are materials or combinations of materials, including biological products used to influence or investigate physiological systems or pathological conditions in order to determine the diagnosis, prevention, healing, recovery, health improvement and contraception for humans. The availability of drugs for health services is greatly influenced by the accessibility of drugs. Based on data from the Directorate General of Pharmacy and Medical Devices 2017 concerning the District Pharmacy Installation, vaccines and medicines have been arranged as planned, in reality there are several provinces that have reached the target of 60 percent, namely; 26 provinces, but there are still 8 provinces that have not met the target. Strategic Plan 2016, namely; Banten, East Nusa Tenggara, Maluku, South Sulawesi, North Sumatra, West Papua Province, West Sulawesi and the Special Region of Indonesia Jakarta. The province that is most affected is DKI Jakarta at around 53.67%. (Directorate General of Pharmacy and Medical Devices. 2017).

Poor drug management causes the level of drug availability to be insufficient, there may be a shortage of drugs, there are a number of drugs that are not distributed properly, this is a mistake from drug management towards the amount that is not sufficient, also the price of drug production is not cheap, due to the use of drugs that are not rational. Therefore, good and correct regulation is needed as well as effective and efficient continuously, (Hijrah, 2013).

According to the World Health Organization (WHO), in developing countries, the cost of medications accounts for 24-66% of total health expenses. The purchase of such medications is substantial, which is why it must be managed effectively and efficiently. Planning is the initial effort in regulating medications, aimed at ensuring the fulfillment of medication needs, which also supports the success of subsequent activities in the pharmacy sector, which will ultimately help provide services at healthcare facilities. The goal is to create a plan for managing the inventory of medications to meet the determined needs. If errors occur, the impact will disrupt the overall flow, leading to negative factors such as waste, stockouts, unavailability of medications, damage, and others (Sasongko and Okky, 2016).

Efforts to improve pharmaceutical logistics management have been outlined in Indonesia's 2010-2014 Strategic Plan. The electronic catalog and the initiation of e-

logistics for medications are among its implementations. Since 2013, there have been 432 Health Offices at the provincial, district, and municipal levels, as well as Government Hospitals, that have been using the e-catalog, an implementation that has saved up to 30% in drug procurement costs. Meanwhile, e-logistics has been used by 405 pharmaceutical installations in districts or cities. E-logistics simplifies the management and monitoring of drug availability. Healthcare services require efficient logistics management for drugs and medical supplies. The goal of logistics management is to ensure that goods, both finished and raw, are delivered on time, in the correct quantity, and to the right location at the lowest cost (Subagya in Febriawati, 2013).

The Ministry of Health of the Republic of Indonesia has made several efforts to improve public health services, one of which is through providing medications that can be purchased by people at all levels. This aligns with the implementation of Law Number 32 of 2004 concerning regional autonomy, which impacts health institutions at the central, provincial, and district/city levels. Similarly, pharmaceutical and healthcare supply agencies have been granted authority over pharmaceutical storage. As a result, pharmaceutical management regulations, which had been in place for years, were modified to align with the new legal provisions.

Pharmaceutical logistics systems are regulated under the Minister of Health Regulation Number 35 of 2014 concerning Pharmaceutical Service Standards. Article 3 paragraph (2) states that the management of pharmaceutical drugs, medical devices, and other materials involves activities such as preparation, provision, delivery, proper placement, disposal, control, and administration (recording and reporting). The government agency that supplies medicines is responsible for managing the availability of medications and government assets in both central and regional governments, with the goal of supporting healthcare services.

The management of medications in districts specifically aims to maximize financial utilization through improved effectiveness and efficiency in the management of medications. The distribution method for medications at the Pharmaceutical Installation of the Health Office of Pangkajene and Kepulauan District uses the First In, First Out (FIFO) system. However, medication management does not yet use an alphabetical system because the pharmacy installation facilities, such as shelves, pallets, trolleys, and building space, are inadequate to accommodate all medicines and healthcare supplies. This is evident in the accumulation of over 10 boxes of medicines, the lack of special cabinets for narcotic drugs, psychotropic substances, and other addictive substances (NAPZA), as well as the absence of cabinets for damaged or expired medications. As a result, the medication inventory is sometimes too much and sometimes too little, compounded by a shortage of staff knowledgeable in pharmaceutical administration and distribution systems, leading to the burden of delivering medications to remote areas.(Umi Farida, Henni Zainal, 2023)

Based on the researcher's observations, it appears that the issue with pharmaceutical logistics in Pangkajene and Kepulauan District lies in its management. Therefore, the researcher has titled this study "The Pharmaceutical Administration System at the Pharmacy Installation of the Health Office of Pangkajene and Kepulauan District."

1. Definition of a System

In an organization, there are various departments with distinct functions and activities, each producing output in the form of data and information. This data represents a collection of facts reflecting the state or activities of concrete work, which is then called the outcome of the work. These parts of the organization are interconnected in a continuous chain, inseparable from one another, and this interconnectedness forms what is known as a system. According to Gordon B. Davis (Haryadi, 2009: 23), "A system consists of interrelated parts that operate together to achieve some goal or purpose." Kadir (2014: 61) states that "A system is a collection of elements that are interrelated or integrated, intended to achieve a particular objective." In agreement with Sutarman (2012: 13), who says, "A system is a collection of elements that are interconnected and interact within a unity to perform a process aimed at achieving a main goal." From these definitions, it can be concluded that a system is a set of elements, a collection of components that are functionally interrelated and interact with each other to achieve the expected goal.

2. Definition of Administration

In a broad sense, administration refers to the overall process of organizing activities that are based on certain rational principles, involving two or more people, to achieve a predetermined goal using certain resources and facilities (Siagian, 2011: 267). Blanchard and Hersey (2010: 9) define administration as the process of cooperation with and through individuals and groups to achieve organizational goals. According to Sagala (2009: 26), administration is a series of systematic activities carried out by a group of people to manage the operations or mission of an organization to accomplish a specific goal. Daryanto (2006: 7) further defines it as activities undertaken to achieve a goal or a process of managing work to accomplish a predetermined objective.

From these definitions, it can be understood that an administrative system is a mechanism used to organize, manage, and process various information and data related to administration within an organization. This system plays a crucial role in ensuring that all administrative activities are carried out efficiently and effectively, while also supporting data-driven decision-making. An administrative system involves various elements that work together to facilitate document management, data management, and other administrative processes. This system typically includes software and procedures designed to automate routine tasks, reduce manual workload, and enhance the accuracy and speed of information processing.

3. **Elements and Functions of Administration**

The elements of public administration (Syafiee, 2006: 49-72) are: Organization: A system of cooperative efforts by a group of people who are formally bound to achieve

predetermined goals. Management: A series of activities involving the movement of people and direction of work facilities to ensure that the objectives of cooperation are truly achieved. Management is often equated with governance, as both aim to achieve a goal. Communication: A series of activities that involve transmitting information from one person to another in order to achieve a specific goal. In other words, it is the process of delivering information or news from one party to another through media, leading to reciprocal understanding and feedback.

1) Personnel: A series of activities involving the collection, recording, processing, reproduction, transmission, storage, maintenance, depreciation, and destruction of information.
2) Supplies: Activities involving the provision, utilization, and maintenance of facilities and infrastructure, as well as the disposal of unserviceable facilities and infrastructure.
3) Finance: The process concerning the procurement, allocation, use, and accountability of money.
4) Secretariat: The process of collecting, recording, processing, transmitting, and storing informational materials.

Meanwhile, according to The Liang Gie (2012: 4), the functions of administration (referred to as management administration) include the following activities: a) Management and direction (Evans), b) Organization of administration (Grager),c) Efficient execution (Robinson),d) Management (Haynes),e) Control and direction (Nourse),f) Direction (Davies),g) Planning, controlling, organizing, and directing (Terry)

4. Pharmaceutical Management

According to the Ministry of Health Regulation No. 72 of 2016 on the Management of Pharmaceutical Preparations, Medical Devices, and Disposable Medical Supplies, it is stated that the management cycle of medicines is supervised during various stages, including the selection, planning, preparation, receipt, storage, distribution, destruction, withdrawal, and recording of drugs. The management of the availability of pharmaceutical supplies, medical equipment, and consumables must be carried out in a multidisciplinary manner, coordinated using effective techniques to ensure quality and address cost issues. Below is the sequence of steps involved in the management process:

1) Selection of Medicines

The selection of medicines refers to the Minister of Health Regulation No. 72 of 2016, which establishes that the selection of medicines, medical devices, and materials is the process of choosing types of medicines, medical devices, and materials based on needs. The selection of these materials is based on:

a) Formula and established rules for diagnosis and therapy;
b) Established rules for the availability of required materials as determined

previously;
c) Disease patterns;
d) Effectiveness and safety;
e) Evidence-based treatment;
f) Quality;
g) Market value;
h) Availability in the market.

This policy implies that the selection of medicines must be based on therapeutic formulas, the disease cycle, safety, quality, and cost, so medicines are not selected arbitrarily for public health needs.

2) Planning

According to Minister of Health Regulation No. 72 of 2016, planning involves determining the quantity and timing of the procurement of medicines in line with efforts to ensure that standards are met accurately and efficiently. This involves setting targets, technical standards, and logistics arrangements. It also includes estimating the required quantities of medicines and medical supplies for preparation at pharmacies and other healthcare facilities. Medicine selection in healthcare facilities should be based on essential medicines lists, facility formularies, correct medicine quantities, and the types of diseases in the facility, focusing on general medicines. The aim of preparing medicines is to ensure that:

a) Correct quantities and forms are available as needed;
b) Efforts are made to avoid shortages of medicines;
c) Medicines are used based on actual need;
d) Efficiency in the use of medicines is improved.

In technical guidelines for planning, the following factors should be considered:

a) Available funds;
b) Determining priorities;
c) Using up existing stock;
d) Past usage reports;
e) Medicine ordering lead time;
f) Future improvements.

The common methods for estimating future medicine needs include: Consumption Method: This method calculates the quantity based on the previous year's report, considering the quantities of medicines required until the end of the year, and potential future trends. A report analysis is used as a guide for future medicine procurement planning. Epidemiological Method: This method considers the number of disease cases from the previous year to estimate the future need for medicines based on the incidence of diseases. Combination Method: This method combines the consumption and epidemiological methods. It is commonly used in healthcare units as both methods have their strengths and weaknesses.

3) Procurement

According to Minister of Health Regulation No. 72 of 2016, procurement is the activity aimed at fulfilling the preparation of needs. Effective procurement must ensure adequacy, quantity, timely delivery, and compliance with cost and quality standards. Procurement is an ongoing process that starts with selection, determining the required quantity, adjusting to budget, specifying procurement technicalities, selecting suppliers, determining contract terms, monitoring, and making payments. The functions of medicine procurement are:

a) Ensuring the availability of medicines in the required quantities for healthcare services;

b) Ensuring medicine quality;

c) Ensuring that medicines are available when needed.

When conducting medicine procurement, the following factors should be considered:

a) Characteristics of medicines for public health;

b) Requirements that must be met by distributors;

c) Determining the process for preparing medicines;

d) Receiving and inspecting delivered medicines;

e) Paying serious attention to the physical condition of the medicines.

4) Receiving

According to Minister of Health Regulation No. 72 of 2016, receiving refers to the activity of ensuring that the received medicines meet the correct type, specifications, quantity, quality, delivery time, and cost, as stated in the purchase order, and that the physical condition is satisfactory.

5) Storage

All received goods must be stored in a way that guarantees their quality and safety. Medicine storage requirements include stability and safety, circulation, lighting, room conditions, ventilation, and classification of types of medicines. The storage activity involves placing and storing medicines in a secure location, protecting them from theft or physical damage that could affect their quality. The purpose of storage is to; Maintain the quality and availability of medicines; Prevent misuse; Ensure easy retrieval and monitoring.

The storage method can be based on therapeutic clusters, alphabetical classification, and the principles of First Expired, First Out (FEFO) and First In, First Out (FIFO). Additionally, pharmaceutical information must be provided based on needs. Key components to consider include:

1) Medicines and chemicals with important warnings;
2) High-concentration electrolytes should not be placed in regular care units;
3) High-concentration electrolytes should be placed in patient care units with security measures;
4) The storage area should be free from contaminants.

The pharmacy installation must ensure proper storage and conduct regular inspections. Medicines should be stored away from:

1) Flammable materials;
2) Medical gases should be stored upright, secured, and labeled appropriately.

The pharmacy installation must prepare emergency medicines storage areas that are easily accessible and secure from theft. Emergency drug storage should:

1) Have a pre-determined quantity and types of emergency medicines;
2) Not be mixed with other medicines;
3) Be replaced immediately after use for emergencies;
4) Be checked regularly for expiration;
5) Not be lent out for other uses.

6) Distribution of Medicines

According to the technical regulations for medicines, the distribution of medicines involves a series of activities aimed at delivering medicines from the storage location to the service units, ensuring quality, stability, quantity, and timely delivery. The pharmacy installation must establish a distribution mechanism that ensures the proper supervision and control of medicines at healthcare units.

Distribution of medicines and medical equipment is a key responsibility of pharmaceutical services. It plays a vital role in ensuring the availability of medicines and medical devices needed by healthcare service units. According to Minister of Health Regulation No. 72 of 2016, the distribution mechanisms for healthcare units can include:

1) Floor stock system (adequate for the room);
2) Individual prescription system;
3) Unit-dose system;
4) Combined system.

The distribution mechanism is designed to facilitate easy access by healthcare units while considering efficiency and resource effectiveness.

7) Withdrawal and Disposal

Disposal refers to the activity of removing pharmaceutical stock that is no longer useful due to expiration, damage, or quality issues. The disposal process is based on specific regulations and involves:

a) Creating a list of unused items;
b) Preparing a report for the disposal activity;
c) Coordinating with related parties regarding time, method, and location;
d) Ensuring the location is sterile;
e) Carrying out the disposal according to the established report.

8) Control

Control refers to the activity aimed at ensuring the fulfillment of targets, ensuring there is no surplus or shortage in healthcare facilities. The objective of control is to balance inventory and demand. Stocktaking results should align with demand based on one-year calculations. The functions of medicine availability control are:

a) Ensuring stock is neither exhausted nor excessive;
b) Maintaining steady stock levels;
c) Avoiding partial purchases;
d) Ensuring efficiency.

Control activities determine: Optimal stock: The quantity of medicines provided to service units to avoid shortages or gaps; Safety stock: A reserve stock to anticipate unexpected issues, such as delivery delays; Lead time: The time required from ordering to receipt of the medicines.

9) Record-Keeping and Reporting

According to Minister of Health Regulation No. 72 of 2016, pharmaceutical management activities should be reported periodically by pharmacy installations and pharmaceutical documents. The reporting involves:

a) Coordination with related agencies;
b) Preparation of comprehensive reports;
c) Annual administrative activities.

10) Definition of Medicines

The definition of medicines according to the Indonesian Minister of Health Regulation No. 58 of 2014 is that medicines, including biological products, are used to influence or investigate physiological systems or pathological conditions for the purposes of diagnosis, prevention, treatment, recovery, health improvement, and contraception for humans. Sumardjo (2006) states that medicine is a chemical substance that affects living organisms and is used for diagnosing, preventing, and treating diseases. In general, medicines are all single or mixed substances used by all living beings to prevent, alleviate, or cure diseases (Syamsuri, 2005).

RESEARCH METHOD

This study focuses on the medication administration system at the Pharmacy Installation of the Health Office of Pangkajene and Kepulauan District. The research design is qualitative with a descriptive approach, as the study aims to describe phenomena or events as they are. The research method used in this study is a survey, which involves managing medications at the Pharmacy Installation of the Pangkajene Regency Health Office to gather relevant facts in relation to the research objectives. This activity is carried out to give meaning to the data and information that has been collected and is conducted continuously from the beginning to the end of the research. The analysis and interpretation of the data are done by referring to the theoretical

foundation related to the research problem and based on "consensus judgment." The implementation of data analysis in this study has no fixed procedure established as a guideline by experts. As such, the researcher must develop the accuracy and precision themselves. However, in this study, the researcher adopts the stages established by Miles and Huberman (Sugiono, 2009: 21), which are: (1) data reduction, (2) data display, and (3) conclusion drawing and verification.

RESEARCH RESULTS AND DISCUSSION

As previously outlined, the management of pharmaceutical logistics is regulated by the Minister of Health Regulation No. 72 of 2016 concerning the Management of Pharmaceutical Availability, Medical Equipment, and Consumable Medical Supplies. It mentions that the management of pharmaceutical services, medical devices, and consumables in this study specifically refers to the duties and functions of the Distribution Section at the Health Office of Pangkajene and Kepulauan District, which include: distribution, destruction and withdrawal, control, recording, and reporting.

1. Distribution

The Pharmacy Installation is a Technical Implementation Unit of the Pangkajene and Kepulauan Health Office that has the task of managing medicines. It handles 1 General Hospital, 23 Community Health Centers, and 9 clinics in Pangkajene and Kepulauan District. Its tasks include planning, receiving, storing, distributing, recording, monitoring, and evaluating. The Pharmacy Installation still uses a manual method in managing medicine data, so the data is not integrated.

The distribution referred to here is a series of activities for sending medicines, which guarantees validity, according to dosage form and quantity, and is carried out regularly so that the needs of health service units are met. The goal of distribution is to ensure the availability of medicines in adequate quantities and avoid shortages or excess availability of medicines.

Based on the explanation from the person responsible for the Pharmacy Installation of Pangkajene and Kepulauan Health Office, the distribution aims to ensure availability and equal distribution across all health service units Community Health Centers, Village Midwives in the working area of Pangkajene and Kepulauan District, which can be outlined as follows:

Ensuring the delivery of medicines is regular and meets the needs, so they are available when required. Ensuring the quality of medicines. Ensuring completeness and proper use of medicines at health service units. Ensuring overall readiness of medicines according to service and health program needs. Efficiency in the use of the budget at health service units.

Considering the critical nature of drug distribution across the entire Pangkajene and Kepulauan District, which has a topography of islands, mountains, hills, and ponds, the person responsible for the Pharmacy Installation of Pangkajene and Kepulauan District

Health Office explained that the distribution activities are carried out in two types: routine and special. These are explained as follows:

Regular distribution activities to meet the needs of health services at health service units. Special distribution activities that include: Health programs of the Health Office. Emergency preparedness for unexpected events. Handling disasters (both natural and social). Viewed from the aspect of routine distribution, it is part of management planning, so the distribution method uses management patterns. According to the Head of the Medicine Distribution Unit at the Pharmacy Installation of Pangkajene and Kepulauan District Health Office, it is known that the distribution management of medicines at the Pharmacy Installation of Pangkajene and Kepulauan District Health Office uses an optimum and minimum stock formula. The Pharmacy Installation of Pangkajene and Kepulauan District plans and distributes medicines to health service units in its work area. Therefore, the work program is carried out as follows:

a. Formulation of Maximum Stock

Formulating the maximum inventory is done by considering the average turnover of distribution, waiting time, and established safe stock. The technique for calculating the maximum stock at the Pharmacy Installation of Pangkajene and Kepulauan District is as follows: Maximum Stock = medicine usage for a certain period + safety stock + waiting time.

a) Medicine usage in a certain period = 2500 tablets (a)
b) Safety stock (buffer stock) 10% = 250 tablets (b)
c) Remaining stock as of December 31 = 100 tablets (d)
d) Waiting time (lead time) 10% x 2500 = 250 tablets (c)
e) Formula: Optimum Stock = (a + b + c) = 2500 + 250 + 250 = 3000 tablets Therefore, the demand = (a + b + c) – d = (2500 + 250 + 250) – 100 = 2900 tablets.

At the end of the distribution period, the stock should include a safety stock in each health service unit. The preparation plan at the Pharmacy Installation ensures that medicine stocks are adequate to meet the needs of medicines during the next distribution period. The storage positions have been prepared to anticipate delays in medicine requests for health service units or delivery by the Pharmacy Installation of Pangkajene and Kepulauan District.

b. Determining the Frequency of Medicine Deliveries to Service Units

The frequency of medicine deliveries to service units also requires planning, considering the vast work area and the available budget. According to the Head of the Medicine Distribution Unit at the Pharmacy Installation of Pangkajene and Kepulauan District Health Office, it is known that the frequency of medicine distribution to health service units is determined by considering:

1) The available budget

2) The distance and geographical conditions from and to the health service units.
3) The storage facilities at the health service units.
4) The available facilities at the Pharmacy Installation of Pangkajene and Kepulauan District Health Office.

c. Creating Location Maps, Routes, and Number of Shipments

To ensure that the budget and delivery time are used effectively and efficiently, the Pharmacy Installation of Pangkajene and Kepulauan District Health Office needs to create location maps of health service units in its work area. According to the Head of the Medicine Distribution Unit at the Pharmacy Installation of Pangkajene and Kepulauan District Health Office, the Pharmacy Installation has already created maps and distribution routes for medicines. This is especially needed for active distribution, considering the distance (km) between the Pharmacy Installation and each health service unit. By considering the boundaries of the region, transportation costs, and available facilities, a distribution rayon system is established.

In addition, efforts are made to utilize activities that can assist in transporting medicines to health service units, such as scheduled visits by staff from the Community Health Centers to the Pangkajene and Kepulauan District Health Office, meetings between heads of Community Health Centers, and medical staff meetings at the regency level. Based on these considerations, a distribution schedule is determined for each distribution rayon. For example, some rayons may be served once a month, others quarterly, and some may only be served every 6 months, adjusted to the available budget. A list of rayons and the sequence of distribution for each rayon, along with the name of the head of each health service unit and the responsible person for managing medicines, is prepared.

d. Distribution Mechanism

To distribute medicines across the wide and difficult topography of Pangkajene and Kepulauan District, a good mechanism and coordination are required. According to the Head of the Medicine Distribution Unit at the Pharmacy Installation of Pangkajene and Kepulauan District Health Office, the distribution mechanism is as follows:

1. The Pharmacy Installation of Pangkajene and Kepulauan District Health Office distributes medicines to Community Health Centers and other health service units based on estimated consumption.
2. The main Community Health Centers distributes medicines to Basic medical services and other health service units within its area.
3. Medicine distribution can also be done directly from the Pharmacy Installation to basic medical services based on the approval of the head of the Community Health Centers.
4. The distribution of medicines to health service units can be done through delivery or pick-up, where Community Health Centers or hospitals arrange their own pick-up from the Pharmacy Installation.

5. Medicines to be distributed to Community Health Centers or hospitals must be accompanied by delivery documents or proof of medicine shipment.
6. Before distributing medicines, the following checks should be conducted:
    1) The form and classification, as well as the quantity of medicines.
    2) The quality and condition of the medicines.
    3) The contents of the package and dosage.
    4) The validity of the medicine documents.
7. Every time medicines are taken from the storage, they must be immediately recorded in the stock card and master stock card.

Thus, distribution is carried out hierarchically from the Pharmacy Installation of Pangkajene and Kepulauan District Health Office to the 23 Community Health Centers and 1 Primary Care Hospital (La Bakkang) within the Pangkajene and Kepulauan District area, based on the Medicine Request Sheet submitted by the head of the Community Health Centers or Primary Care Hospital, and approved by the person responsible for the Pharmacy Installation of Pangkajene and Kepulauan District Health Office. This distribution occurs monthly or based on special requests (medicine vouchers), and is subsequently distributed from Community Health Centers to basic medical services.

2. Drug Withdrawal and Destruction

Drug withdrawal and destruction is a process conducted by the Pharmacy Installation on drugs that have been distributed to health service units. However, due to certain reasons, these drugs need to be recalled and destroyed. The legal basis for the withdrawal and destruction of a drug is stipulated by the Head of the Pharmacy Installation at the Pangkajene and Kepulauan District Health Office. It is known that the withdrawal and destruction of drugs is based on the Ministry of Health Regulation No. 74 of 2016 regarding Pharmaceutical Service Standards at Public Health Centers and/or the Food and Drug Supervisory Agency (BPOM), as these are included in the relevant policies.

The action of withdrawing and destroying pharmaceutical products and medical materials that are no longer usable must be carried out using techniques that comply with the applicable regulations. The withdrawal of pharmaceutical supplies that do not meet government regulations is carried out by the Pharmacy Installation or the marketing authorization holder, based on the recall recommendation from BPOM (mandatory recall), or voluntarily by the marketing authorization holder (voluntary recall), with the obligation to report to the Head of BPOM. The withdrawal of consumable medical products is carried out on products whose marketing authorization has been revoked by the Minister.

Withdrawal can occur due to information or clarification from BPOM regarding pharmaceutical products that do not meet established standards, marketing authorization, or if there have been numerous case reports, inconsistencies, or negative

pharmaceutical effects in the market. This can also happen if BPOM's MESO team receives reports about a product with notes or specific cautionary treatments, leading to the revocation of its marketing authorization.

Regarding the criteria for a drug to be withdrawn and destroyed, according to the Head of the Pharmacy Installation at the Pangkajene and Kepulauan District Health Office, the criteria for a drug that must be recalled and destroyed are as follows:

a) The product violates quality standards.
b) The product has expired.
c) The product does not meet the requirements for use in health services or for scientific development.
d) The product no longer has a valid marketing authorization.

Next, the destruction stage is an activity carried out by the Pharmacy Installation of the Pangkajene and Kepulauan District Health Office when a drug is declared no longer usable. According to the explanation by the Head of the Pharmacy Installation at the Pangkajene and Kepulauan District Health Office, it is known that the destruction of drugs must go through certain stages based on regulations. This means that there must be a mechanism and proof when a drug is destroyed, to ensure it cannot be misused by individuals for criminal purposes. The stages for destroying pharmaceutical drugs and unused medical materials are as follows:

a) Attach a list of the items being destroyed.
b) Create an official report documenting the destruction of the items.
c) Coordinate the time, technical details, and location of the destruction with other relevant parties.
d) Prepare the location for the destruction activity.
e) Carry out the destruction based on the classification and form of the drugs, as well as the applicable policies.

Based on data from the Pharmacy Installation at the Pangkajene and Kepulauan District Health Office, the destruction of a number of nutritional program drugs was carried out on February 5, 2018, at the Pharmacy Installation, witnessed by representatives from the Prosecutor's Office, the Police, the Head of the Pharmaceutical Section, the Head of the Division, and the person in charge of the installation and staff. The items destroyed included Vitamin A, around 500 catheters, and others. The destruction method used was melting (mixing with water) followed by placing it in a hole (excavation).

3. Control

Control actions are activities that ensure the achievement of the desired targets according to the plan and the work plan that has been made, so that there is neither an excess nor a shortage of medicines in the primary health care units. The objective is to prevent both an overstock and a shortage of medicines in these units.

Regarding drug supervision, according to the Head of the Drug Control and Reporting Unit at the Pharmacy Installation of the Pangkajene and Kepulauan District P Health Office, there are three types of drug control implemented by the Pharmacy Installation of the Pangkajene and Kepulauan District Health Office: 1) Control of availability, to prevent a shortage of medicines; 2) Control of usage, to ensure that medicines are always available and not used excessively or for purposes other than intended; and 3) Control to prevent medicines from expiring, to avoid waste.

Efficient use of medicines can be achieved through proper drug planning and supervision. If the management is inefficient, it will negatively affect both the health care units and the patients, both medically and economically. Based on reports from several health units, some have not fully implemented proper drug planning and supervision mechanisms, resulting in issues such as stockouts, excessive stock, damaged drugs, and medicines passing their expiry date at service locations.

Planning the availability of medicines and supervising the inventory of medicines at health units is part of the pharmaceutical governance chain, which includes: selection, planning of drug needs, procurement, receipt, distribution, destruction, recall, administration, monitoring, and evaluation. According to the Minister of Health Regulation No. 72 of 2016 concerning the Standards for Pharmaceutical Services in Hospitals, it is stated that pharmaceutical service providers in hospitals and health units must ensure the availability of pharmaceutical products, medical devices, and consumable medical materials that are safe, of good quality, beneficial, and affordable.

Regarding the drug control mechanism implemented by the Pharmacy Installation of the Pangkajene and Kepulauan District Health Office, according to the pharmacy manager at the Pharmacy Installation of the Pangkajene and Kepulauan District Health Office, the drug control mechanism follows the guidelines from the Ministry of Health of the Republic of Indonesia. These guidelines serve as a reference for drug planning and inventory control in government institutions, particularly in hospitals, and as a guide for pharmacists in carrying out drug planning and inventory control according to the standards. This ensures that the criteria of correct type, correct quantity, correct timing, and efficiency are met.

Figure 1: Drug Inventory Inspection Figure 2: Improper Drug Storage

The procedure for implementation is as follows:

1) Warehouse and pharmacy staff who are assigned responsibilities create a drug plan and ensure the necessary preparations are made for the Pharmacy Installation.
2) Staff prepare a plan based on the inventory of drug receipts from the Health Office warehouse over the past year, referred to as the Drug Requirement Plan.
3) The pharmaceutical supplies planning staff calculate the required pharmaceutical supplies based on the determined needs, which is then submitted to the leadership for analysis.
4) If approved by the leadership, the pharmaceutical supply needs plan will be submitted to the Pangkajene and Kepulauan District Health Office.
5) Pharmacy warehouse staff make monthly reports based on drug usage within the month.

4. **Recording and Reporting**

Daily recording and reporting are part of administration. As previously explained, administration in a narrow sense refers to activities that involve recording and reporting all activities related to the management of pharmaceutical supplies and consumable medical materials, including their receipt, storage, distribution, and use in the Pharmacy Installation of the Pangkajene and Kepulauan District Health Office or other service units. The objectives of recording and reporting are:

1) To provide evidence that the management of pharmaceutical supplies and consumable medical materials has been carried out,
2) To serve as a data source for organizing and controlling,
3) To serve as a data source for generating reports.

Regarding daily recording and reporting activities in the Pharmacy Installation of the Pangkajene and Kepulauan District Health Office, according to the Pharmaceutical Management Unit, there are at least three types of administration as forms of daily recording and reporting activities in the Pharmacy Installation of the Pangkajene and Kepulauan District Health Office:

1) Drug Stock Availability Administration. Recording drug stock availability includes records of purchasing plans, distribution, and remaining stock kept in reserve.
2) Financial Administration. Financial records involve calculating the cost of drugs to be purchased and the remaining stock for each unit/package. This is important as a financial management document for the pharmacy.

5. Administration of Disposal

The mechanism for recording the disposal of items is the process carried out when physical data, as well as pharmaceutical supply data, have been confirmed as destroyed. Therefore, the remaining data must be removed from ownership, because if it is not deleted, there could be discrepancies during inventory check. Even though physically

the items or money no longer exist, if the physical data still exists, it will be counted as if the stock is still available, which may lead to financial burdening on the Pharmacy Installation budget. The function of this recording and reporting is as important documentation that includes all expenditures, both related to the drug data and any supporting documentation accompanying the drug expenditure.

CONCLUSION

Based on the research findings that have been previously described regarding the management of medicines at the Pharmacy Installation of the Pangkajene and Kepulauan Health Office, it can be concluded that the distribution is carried out in stages from the Pharmacy Installation of the Pangkajene and Kepulauan District Health Office to 23 Public Health Centers and one Primary Health Center (RS Pratama) in the Pangkajene and Kepulauan District area, based on the Drug Request Form) submitted by the Head of the Community Health Center and Hospital Pratama and approved by the Head of the Pharmacy Installation of the Pangkep Health Office every month or based on special requests (medicine notes). The distribution is then carried out from the Community Health Center to the Village Health Post and Community Health Post in the respective areas. The destruction of medicines is carried out in stages, following procedures and reports, and coordinated with relevant parties, such as the timing, location, and quantity. There is also a categorization of the types of medicines to be destroyed. For example, on February 5, 2018, at the Pharmacy Installation, witnessed by representatives from the Prosecutor's Office, Police, Head of the Pharmaceutical Section, Head of the Department, and staff, including Vitamin A, catheters (about 500 pieces), and others. The control is carried out in three forms: control of stock availability, usage, and expired medicines, based on the Ministry of Health Regulation No. 72 of 2016 on Pharmaceutical Service Standards. Additionally, the recording and reporting have been carried out for stock availability (inventory), financial administration, and disposal (destruction) administration as part of the pharmaceutical management implementation.

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