Evaluation of Drug Management in Pharmaceutical Installation Dr. Soesilo Hospital, Tegal Regency

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ABSTRACT

Drug management is an important aspect for hospitals, especially in the stages of selection, planning, and procurement, distribution, and use. Inefficiency and poor drug management can cause losses for the hospital. The purpose of this study was to determine the management of drugs in the Pharmacy Installation of the dr. Soesilo, Tegal Regency whether it has met the standards set. This research is descriptive-evaluative with retrospective and concurrent data collection. The data obtained are grouped into quantitative data which is presented in tabular form to see changes visually, and qualitative data obtained through observation and interviews. The data obtained were analyzed using indicators and compared with standards. The target population is all data in the form of documents for 2020 and 2021 as well as data observed when this research took place at the Pharmacy Installation of the Regional General Hospital Dr. Soeselo, Tegal Regency. The results of this study become input for the Pharmacy Installation of the Regional General Hospital Dr. Soeselo Tegal Regency in implementing effective and efficient drug management. This research can be a source of information for the Regional General Hospital Dr. Soeselo Tegal Regency in the context of determining policy directions in terms of drug management.

Keywords: Hospital Pharmacy, Drug Management, Drug Management Cycle, Hospital Services, Pharmacy Installation

1. Introduction

1.1 Background

Hospital is a health service facility that provides complete health services for a person by providing inpatient, outpatient, and emergency services. emergency. In carrying out their duties, in hospitals, various installations work continuously to provide services to patients with their respective responsibilities. Hospital Pharmacy Installation is an installation that is responsible for managing drugs in hospitals. This management includes starting from the stages of selection, planning, procurement, storage, distribution to use.

Drug management is closely related to hospital budgets and spending. According to the Indonesian Ministry of Health, nationally, drug costs can cover 40-50% of the total operational costs of health services. This is considered quite reasonable considering the importance of the

function of drugs for health services. To maximize the role and position of this drug, its management must be carried out effectively and efficiently to provide the greatest benefit to

patients and hospitals. Embrey (in Mukhlis, 2016) states that the goal of drug management is the availability of essential drugs and accessible to the entire population to ensure the safety, efficacy, and quality of drugs produced and equitable distribution, increase the presence of essential drugs in health facilities, and rational use of drugs by the community.

According to Quick (in Oktaviani et al, 2017) the drug management cycle includes 4 stages, namely:*selection* (selection), *procurement*(procurement), *distribution* (distribution), and *use* (use). The interrelated stages in the drug management cycle require an organized supply system so that activities run well and support each other so that the availability of drugs can be guaranteed that supports health services and becomes a potential source of hospital income.

Based on the research of T. Mukhlis (2016) who conducted an analysis of drug management at the Lhokseumawe city health office in 2016, it was concluded that drug management had not been carried out efficiently. Pramukantoro's research (2019) which evaluated drug management in the pharmaceutical installations of the Surakarta City Health Office in 2015 also stated that although the management at the *selection* and *procurement* was by standards, the *distribution* and *use* were not appropriate based on drug management indicators according to the Ministry of Health and WHO.

Based on previous studies, drug management that is not smooth and inefficient can cause losses to hospitals, so the researchers intend to evaluate drug management so that problems and weaknesses in its implementation can be identified. This is done for improvement efforts to improve health services to the community.

The formulation of the problem can be arranged according to the results of previous studies, including an overview of drug management, especially at the Dr. Regional General Hospital. Soeselo, Tegal Regency. This management includes the stages of selection, planning, procurement, distribution, and use. The general objective of this research is to improve the quality of health services at Dr. Soeselo, Tegal Regency through improved drug management. On the other hand, the specific goal to be achieved is for researchers to get an overall picture of the stages of drug management starting from the selection, planning, procurement, distribution, and use of drugs.

1.2. Problem Formulation

Based on this background, the following problems can be formulated:

- How is the selection of drugs in the Pharmacy Installation of the Regional General Hospital Dr. Soeselo in 2022?
- How is the planning and procurement of drugs in the Pharmacy Installation of the Regional General Hospital Dr. Soeselo in 2022?
- How is the storage of drugs in the Pharmacy Installation of the Regional General Hospital of Dr. Soeselo in 2022?
- How is the distribution of drugs in the Pharmacy Installation of the Regional General Hospital Dr. Soeselo in 2022?
- How is the use of drugs in the Pharmacy Installation of the Regional General Hospital Dr. Soeselo in 2022?
- How is the supervision and evaluation of drug management at the Pharmacy Installation of Dr. Soeselo in 2022?

1.3. Scope

Of the Research The scope of this research is limited to the governance system from planning to the application of drug management in the Pharmacy Installation of the Dr. General Hospital. Soeselo, Tegal Regency. Matters outside the system such as personnel, hospital policies, etc. will be excluded from this study. This limitation is intended to specialize research in the scope of governance and its implementation at the Dr. Regional General Hospital. Soeselo, Tegal Regency regarding drug management.

1.4. Objectives

1.4.1 General
Objectives This study aims to evaluate the management of drug management in the Pharmacy Installation of the Regional General Hospital Dr. Soeselo in 2022.

1.4.2 Specific Objectives
In connection with the general objectives above, the specific objectives of this research are to:

- Knowing the selection of drugs in the Pharmacy Installation of the Regional General Hospital Dr. Soeselo in 2022.
- Knowing the planning and procurement of drugs in the Pharmacy Installation of the Regional General Hospital Dr. Soeselo in 2022.
- Knowing the storage of drugs in the Pharmacy Installation of the Regional General Hospital Dr. Soeselo in 2022.
- Knowing the distribution of drugs in the Pharmacy Installation of the Regional General Hospital Dr. Soeselo in 2022.
- Knowing the use of drugs in the Pharmacy Installation of the Regional General Hospital Dr. Soeselo in 2022.
- Knowing the supervision and evaluation of drug management in the Pharmacy Installation of Dr. Soeselo in 2022.

1.5 Research Benefits

1.5.1 Theoretical Benefits
- For researchers, this research is useful to improve the application of knowledge gained during education at Jenderal Sudirman University
- For the Master of Management study program at Jenderal Sudirman University, this research can add references to the evaluation of drug management in hospitals.

1.5.2 Practical Benefits
- The results of this study become input for the Pharmacy Installation of the Regional General Hospital Dr. Soeselo, Tegal Regency in implementing effective and efficient drug management.
- This research can be a source of information for the Regional General Hospital Dr. Soeselo, Tegal Regency to determine the policy direction in terms of drug management

2. Literature Review

2.1 Hospitals

2.1.1 Definition of Hospitals
According to Law of the Republic of Indonesia Number 44 of 2009 Article 1 concerning hospitals, hospitals are health service institutions that provide complete individual health services that provide inpatient, outpatient, and emergency services.

A hospital is also a place for health maintenance and improvement activities that aim to seek optimal health degrees for the community. According to Siregar and Amalia (in Syilvi, 2021) what is included in health efforts are maintenance, health improvement, disease prevention, disease healing, and recovery must be carried out in harmony.

2.1.2 Classification of Hospitals
According to Law no. 44 of 2014, hospitals can be grouped according to the type of service and management. Based on the services provided, hospitals can be categorized into general hospitals and special hospitals. As for management, hospitals can be divided into public hospitals and private hospitals.

2.2 Hospital Pharmacy

Installation Hospital pharmacy installations are health service delivery facilities whose duties include providing safe, quality, useful, and affordable pharmaceutical preparations, medical devices, and medical consumables (Menkes RI, 2016). The functions of hospital installations can be grouped into two main parts, namely the management of pharmaceutical preparations, medical devices, and medical consumables, and clinical pharmacy services.

2.3 Management of Drug Management

According to Terry and Leslie (in Mukhlis, 2016) management is a process or framework that involves guiding or directing a group of people towards organizational goals or real goals. In simple terms, management is a joint effort to achieve goals by implementing the functions of planning, *organizing*, *actuating, and controlling*.

Drug management is a series of activities that include aspects of planning, procurement*,* warehousing, distribution of drugs, *and* rational use of drugs. Embrey (in Mukhlis, 2016) states that the goals of drug management are the availability of essential drugs and accessibility to

the entire population, ensuring the safety, efficacy, and quality of drugs produced and equitable distribution, increasing the presence of essential drugs in health facilities, and rational use of drugs by the community.

2.3.1 Drug
Drug selection is intended so that in its procurement, the drugs to be provided are drugs that are actively used for patients in hospitals. WHO has set an indicator for drug selection called the Formularium. The Indonesian Ministry of Health in implementing the National Health Insurance Program

has also established a National Formulary (Fornas) which contains a list of selected drugs needed and available at health service installations.

2.3.2 Drug

Planning in the health sector is a process to formulate problems that develop in the community, determine the needs and resources that must be provided, set goals, and develop practical steps to achieve the goals that have been set.

The methods commonly used to prepare estimates of drug needs in each health service unit are: (Ministry of Health, 2010).

- Consumption method
  This method is carried out by analyzing the previous year's drug consumption data. Things that need to be considered include:
  - Data collection and data processing
  - Data analysis for information and evaluation
  - Calculation of estimated drug needs
- Epidemiological method
  This method is carried out by analyzing drug needs based on disease patterns, estimated visits, and waiting time (lead time). time). The steps in this method include:
  - Determining the number of people to be served
  - Determining the number of case visits based on the frequency of the disease
  - Providing standards/guidelines for the treatment used
  - Calculating the estimated drug needs
  - Adjusting the allocation of available funds.

2.3.3 Procurement of Drugs

Procurement is an activity intended to realize demand planning. Effective procurement must ensure availability, quantity, and time at an affordable price and following quality standards. Procurement is a continuous activity starting from the selection, determining the amount needed, adjusting between needs and funds, selecting procurement methods, selecting suppliers, determining contract specifications, and monitoring the procurement and payment process (Menkes RI, 2016).

Based on Presidential Regulation No. 4 of 2015 concerning the fourth amendment to Presidential Regulation no. 54 of 2010 concerning the procurement of government goods and services. Selection of drug procurement is done through e-purchase *with* the system *the e-catalog*. The principle of selecting providers of goods/services

electronically is aimed at being efficient, effective, transparent, open, competitive, fair/non-discriminatory, and accountable.

The steps taken in drug procurement through E-Purchasing are as follows: (Perpres, 2015).

- The Working Group (Pokja) of the Procurement Service Unit (ULP)/Procurement Officer makes a drug purchase package in the E-Purchasing application based on the Drug Procurement List. Drug purchase packages are grouped by the provider.

- The ULP Working Group/Procurement Officer then sends a request for drug purchase to the drug provider/Pharmaceutical Industry which is included in the procurement package group.
- Drug providers/Pharmaceutical Industries that have received drug purchase requests through E-Purchasing from the ULP Working Group/Procurement Officials approve drug purchase requests and appoint distributors/Pharmaceutical Wholesalers (PBF). If approved, the drug provider/Pharmaceutical Industry submits a purchase request to the distributor/PBF for follow-up. If refused, the drug provider/Pharmaceutical Industry must convey the reasons for the refusal.
- Approval of the drug provider/pharmaceutical industry is then forwarded by the ULP Working Group/Procurement Officer to the Commitment Making Officer (PPK) for follow-up. If the drug purchase request is rejected by the drug provider/pharmaceutical industry, ULP will use other procurement methods following Presidential Regulation No. 4 of 2015.
- PPK will then enter into a sale and purchase agreement/contract for the drug that has been approved with the appointed distributor/PBF. by the drug provider/Pharmaceutical Industry.
- The distributor/PBF then carries out the supply of drugs following the contents of the sale and purchase agreement/contract.
- The PPK then sends the drug purchase agreement and completes the payment history by uploading it to the E Purchasing application.
- PPK reports items and quantities of drugs that are rejected or not fulfilled by drug providers/Pharmaceutical Industry to the Head of the Government Goods/Services Procurement Policy Agency (LKPP) c.qDirector of Catalog System Development, a copy to the Director General of Pharmaceutical and Medical devises c.qDirector Development of Public Medicines and Health Supplies no later than 5 (five) working days. If the E-Purchasing application experiences operational/offline problems (electrical power failure, network disruption, or application disruption), the purchase can be carried out manually.

2.3.4 Distribution of Drugs

Distribution is a series of activities in the context of dispensing and delivering drugs, guaranteed validity, right types and quantities evenly and regularly to meet the needs of health service units. as well as the stockpiling of certain drugs. Drug distribution activities in districts/cities consist of:

- Routine distribution activities which include distribution for general service needs in health service units
- Special distribution activities which include distribution of drugs for
  - Health program
  - Extraordinary Events (KLB)
  - Disasters (natural and social)

2.4 Supervision and Evaluation

Supervision carried out by Health Pharmacy Installation (IFK) officers is a planned observation process from a higher unit (Provincial/District/City Pharmacy Installation) on the implementation of drug management by officers in lower units (Puskesmas/Puskesmas Pembantu/ other UPTs).
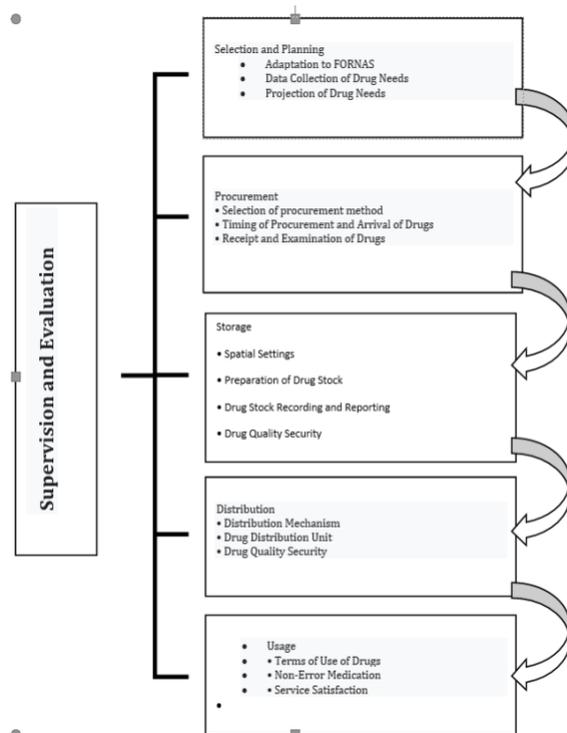
Observations are directed at keeping the work or activities carried out by mutually agreed guidelines. (Ministry of Health, 2010).

Supervision can be carried out in the following ways:

- Meet with the head/officer of the intended institution to convey the purpose of supervision.
- Collect data and information by:
  - Study the available data
  - Interviews and discussions with the supervised.
  - Direct observation.
- Discuss and analyze the findings:
  - Matching various data, facts and information obtained.
  - Assess the level of success of the implementation of the task.
  - Find various kinds of problems and their causes.
  - Make temporary conclusions on the results of supervision.
- Carry out certain intervention actions if problems are found that need to be addressed immediately.
- Report to the head of the institution visited about:
  - The level of achievement of the work of the supervised unit
  - Problems and obstacles found.
  - The cause of the problem.
  - Intervention actions that have been carried out.
  - Main follow-up plan required

2.5 Thinking Framework

The framework of thinking in this research can be seen in the following figure:

3. Research Methodology

3.1 Research Design

This research is a descriptive-evaluative study with *concurrent* and *retrospective*. Research materials include primary and secondary data. Primary data were obtained from concurrent data collection which was carried out at the time of the study by direct observation of documents recorded in a checklist or recorded directly in notebooks, as well as interviews with parties involved in drug management at the pharmacy installation of the Regional General Hospital Dr. Soeselo, Tegal Regency. Secondary data were obtained from retrospective data collection by analyzing document documents in 2020 and 2021 on indicators of the suitability of available drug items with the National Formulary, frequency of procurement of each drug item per year, percentage and value of expired and/or damaged drugs, level of drug availability, average amount. The average of drug items per prescription, the percentage of antibiotic prescriptions, the percentage of injection prescriptions, and the percentage of drugs that enter the hospital formulary.

The data obtained are grouped into qualitative data and quantitative data. Qualitative data analysis was carried out by content analysis, the name first identification of findings, secondly modifications were made and the results were grouped according to content groups, then presented in textual form in the form of narratives. Quantitative data are presented in tabular form to visually see changes.

3.2 Research Location and Time

This research was conducted at the Regional General Hospital Dr. Soeselo, Tegal Regency. The research data collection was carried out in July-December for *concurrent* and *retrospective*.

3.3 Population

The target population is all data in the form of documents for 2020 and 2021 as well as data observed when this research took place at the Pharmacy Installation of the Dr. Soeselo, Tegal Regency.

3.4 Data Collection

3.4.1 Primary Data
- Interview
  Researchers conducted in-depth interviews with informants who can provide information that is by the research topic. Presented textually in descriptive sentences, especially evaluations of the related support system. The tools used are writing instruments and cell phones as *recorders*.

- Observations
  Researchers made direct observations and recorded the accuracy of data regarding stock cards, warehouse arrangements, the percentage of drugs that were completely labeled, and the percentage of drugs that could be delivered at the Pharmacy Installation of the Dr. Soeselo, Tegal Regency.

3.4.2 Secondary

Secondary data was obtained by analyzing the previous year's documents, namely 2020 and 2021, namely in the form of prescriptions, drug stock cards, purchase reports, and hospital formulary at the Pharmacy Installation of the Dr. General Hospital. Soeselo, Tegal Regency.

3.5 Steps of Research Work

This research will be carried out with the following steps:

- Handling an application for permission from the Postgraduate Director of the Faculty of Economics and Business, Jenderal Soedirman University to conduct research at the Dr. General Hospital. Soeselo, Tegal Regency.
- Manage the approval letter from the Director of the Regional General Hospital, Dr. Soeselo, Tegal Regency to obtain permission to conduct research and data collection, by bringing a letter of recommendation from the University.
- Collecting and recording data by analyzing the previous year's documents, namely 2020 and 2021 which will be taken at the Pharmacy Installation of the Dr. General Hospital. Soeselo, Tegal Regency in July – December 2022.
- Perform direct data collection at the time of prescribing and drug distribution services by researchers at the Pharmacy Installation of the Dr. General Hospital. Soeselo, Tegal Regency.
- Conducted interviews with several informants at the Pharmacy Installation of the Dr. Soeselo, Tegal Regency, is the coordinator of the hospital pharmacy installation, the pharmacist for supplies, and the pharmacist for the service department.
- Analyze the data obtained and make a research report.

4. Research Results

Based on field observations, Dr Soeselo Regional General Hospital, Tegal Regency, has managed drugs according to applicable standards. This is evidenced by the steps that have been passed, namely, the stages of selection, planning, procurement, distribution, and use.

Drug selection is based on scientific, medical and statistical selection. Hospitals choose drugs that have a lower risk of side effects than their therapeutic effects. In addition, the type of drug is chosen by avoiding duplication or similarity of types. So that more diverse drugs adjust to the history of patients in the hospital.

Drug procurement goes through various stages. After knowing which type of drug suits the needs, the head of the pharmacy department of the warehouse submits it to the head of the pharmacy installation. If it is at this stage, then the head of the pharmacy installation will make a letter of order and submit it to the respective distributors.

Drug distribution is an activity to distribute drugs or provide pharmacy for various types of patients. Such as drugs for individual services, therapeutic processes, inpatient, outpatient and support medical services. This distribution is carried out and each service unit has a supply of drugs according to its type.

The use of drugs carried out by the Dr. Soeselo Regional General Hospital, Tegal Regency, was based on the patient's medical history. In addition, the hospital must also record when there is

acceptance, record the expiration date of the drug and the ingredients of the drug. So that its use is right on target.

5. Conclusion

Based on the results of the study, it can be concluded that the Dr Soeselo Regional General Hospital, Tegal Regency, has implemented drug management according to standards. However, this still needs to be reviewed continuously to maintain the quality and reputation of the hospital itself. Because good service will make people believe in going to the hospital for treatment.

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