

Waste Management Pharmaceutical Inventory In Muhammadiyah Mardhatillah General Hospital

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Abstract. Poor management of hospital pharmacy supplies adversely affects the quality of health services. It can impact several major problem on delays in patient care, financial problems, dissatisfaction with health workers especially doctors, and negative reviews from customers. But this problem is difficult to overcome because conflicts of interest within the hospital itself. In Indonesia, research about poor pharmaceutical management is still rare, so it is important to conduct research to addressed this problem.

Study was conducted in Muhammadiyah Mardhatillah general hospital. This type research is qualitative descriptive with this type of research the method of observation, review workflow, in depth interview (pharmacist, manager, clinician, nurse, wholesaller pharmaceutical) who have authority in pharmacy supply management. To determine the causes of the problem using the Ishikawa diagram.

Keyword : Pharmacy poor management, Impact of health service, Hospital problem

1. INTRODUCTION

Health is a basic human need that must be fulfilled, health can be viewed from the aspect of body, soul, and social (MOH 2009). If one aspect is not fulfilled, the individual cannot carry out productive activities in order to meet socio-economic needs.

Drug logistics is one of the basic needs for hospital operations, in general the special budget for drug logistics can spend up to 40% of the total budget of the Hospital (Imas, Dkk, 2015). If calculated globally, the world in 2009 can spend up to 600,000,000,000 dollars (Kelle et. Al 2012).

In the United States the issue of the crisis of drug shortages has become a serious concern. This has resulted in difficulties for clinicians, health care providers, and policy makers. Several causes can occur because of the difficulty of getting raw materials, problems in production, legal policies, and decisions in business. The drug crisis that occurred in the United States resulted in medication errors, delayed treatment, improper drug substitution (Ventola, 2011).

A drug management affects the quality of drug service to patients, in terms of quantity, quality, and type. So that a good management is needed, especially in the field of logistics (Heru Sasongko, Dkk, 2014). If drug management is poor or not managed effectively and efficiently food will be detrimental to the medical and non-medical sectors

A study in the United States examined the causes of the drug crisis among pharmacists. From a study conducted by the American Society of Health System Pharmacists (ASHP), it was revealed that labor costs, production time, and information on drug crises had a significant influence on this problem (Kakeh et, al 2011).

In Indonesia, research on the national drug crisis does not appear to have existed, research on this issue has only been done individually in each hospital. At Dr Sam Ratulangi Hospital

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in Tondano, a study was found stating that the facilities and storage in the drug warehouse, and data collection on expired date drugs had not met pharmaceutical standards that had been set by Permenkes No. 58 of 2014. The result has a negative impact on medical, social and economic aspects (Malinggas et al., 2015)

A study on the distribution and use of outpatient drugs at Orthophedi Hospital revealed that not all indicators in the distribution and use phases are running efficiently (Sasongko et al., 2014). From these findings can lead to increased dead stock, drug damage, until the availability of expired drugs (Sheina et al., 2010)

Muhammadiyah Mardhatillah of Hospital (MMH) is a class D General Hospital located in Randudongkal Pemalang, Central Java. This hospital is the only hospital that is the most affordable with the Randudongkal community and has a very strategic location. MMH is located about 50 kilometers from Pemalang so it must be the first reference if patients or communities need medical help

Many demands from the surrounding community so that MMH can provide comprehensive health services, one of which is the availability of medicines. Sometimes in providing pharmacy services MMH has stagnated and stockouted the drug, resulting in patients not being able to immediately get the drug prescribed by the user / doctor and forcing patients to wait until the hour or day.

At present Indonesia has entered the JKN Era where many Indonesian citizens are participants in the BPJS Health. The hospital in collaboration with BPJS Kesehatan must be able to carry out cost-efficient activities that have been determined by INA CBGs. If the Hospital is unable to adjust the rates of INA CBGs even though it has many patients and is unable to manage effectively and efficiently it can be ascertained that the hospital will suffer financial losses and the quality level will automatically decrease.

MMH has problems in the pharmaceutical sector that can potentially harm drug and financial warehouse stocks. This can be seen from the amount of pre-orders of drugs that are not balanced with the number of prescriptions by the doctors, resulting in drug stagnation in the warehouse which results in financial losses, in addition the stored drugs also have the potential to expire. In addition, the causes of planning are not appropriate, the distribution of drugs that are less effective, errors in recording and reporting activities, and ignorance of the pharmacy in knowing trending drugs also have the potential to cause drugs to become stockouts or experiencing scarcity. This causes waiters for patients to be delayed, or even an ineffective drug substitution occurs so that the efel therapy obtained by the patient becomes maximal.

The author's goal in taking this theme is to look for the causes of stockouts and the stagnation related to the management of drug procurement. So that in the future, the risk of experiencing losses in the drug warehouse and financial losses can be minimized as low as possible.

The scope of this research is limited only to the area of pharmaceutical management methods, and analysis of financial risk. With this limitation, researchers are expected to focus on the research objectives to be achieved.

The benefits of this research are used as reference material for RSMM Management so that it can provide an overview of pharmaceutical management that has been ongoing, and can

provide formulations on pharmaceutical management problems that have the potential to harm drug warehouse and pharmaceutical finance stock.

2. LITERATURE REVIEW

Waste is a scourge that is quite frightening for most manufacturing companies. Each company does have different characteristics, but in this case all have the same problems. Waste or, waste, in Japanese commonly referred to as "muda" which means an activity that absorbs or wastes all types of resources and time but does not produce any value (Liker et al., 2006)

The concept of waste needs to be applied to the structural personnel of an organization so that workers can be creative to solve the problem. Like the one done by Taiichi Ono, one of the leaders at Toyota who said that the people working at Toyota did not come to work but to think about solving this wasteful problem. Finally Taiichi Ono formulated 7 wastes which usually occur in a manufacturing company. The seven wastes are:

Waste of Overproduction (excessive production) A production of finished or semi-finished goods occurs where the goods produced are not necessarily ordered or bought according to the amount produced. Some reasons for overproduction include time consuming machine settings, poor production quality, or "Just in case" thinking that someone needs it.

Waste of Inventory (ineffective storage space) There is a buildup of finished, semi-finished, and raw materials in the storage room, causing huge capital, additional personnel for supervision, and tiring supervision work

Waste of defects Waste that occurs because of the presence of defective or damaged production goods which causes an increase in employee costs and replacement of spare parts. For example, Toyota recalled one type of car to be repaired due to a factory production

Waste of Transportation (Transfer / Transportation) Waste that occurs due to poor production layout, organization of workplaces that are not good so that it requires activities to move goods from one place to another. for example the location of a warehouse far from production.

Waste of Motion Waste that occurs due to unnecessary movements of workers and machines and does not provide added value to the product.

Waste of Waiting When a person or machine does not do work, that status is called waiting. Waiting can be due to an unbalanced process so that there are workers and machines who have to wait to do their jobs, damage machines, supply components that are late, lose work tools or wait for certain decisions or information.

Waste of Overprocessing Not every process can provide added value for manufactured products and customers. Processes that do not provide added value are excessive or excessive processes. For example: a repeated inspection process, an approval process that must go through many people, the cleaning process. All customers want a quality product, but the most important thing is not the repeated inspection process that is needed but how to guarantee the Product Quality at the time of manufacture. All we have to do is find the root cause of a problem and take action that is in accordance with the root cause.

Just in Time (JIT), is a method of production by determining the amount of production based on the number of items actually requested, when there is a demand on time. The JIT

philosophy was first used in Japan by Toyota, then adopted by many manufacturing companies in Japan and the United States such as Hewlett Packard, IBM and Harley Davidson

When carrying out this system, carefulness and thoroughness are needed to make the production time start the schedule for purchasing production materials, the schedule for receipt of production materials, the schedule for production, the product readiness schedule and the delivery schedule for finished goods. In general, modern manufacturing companies now use sophisticated computerized systems in the production schedule planning which also includes issuing purchase orders and Inventory control. Production Software can also exchange information from suppliers (vendors) to customers (customers) through Electronic Data Interchange (EDI) to ensure the truth reaches the most detailed data. So that the existence of this system is expected to be able to improve the time of adverse potential.

1. Just In Time benefits for companies

- a. There is no waste of storage
- b. Obtaining raw materials at the time of production
- c. Waste due to obsolete, outdated, or old-fashioned products will be very low
- d. Avoiding finished products that accumulate
- e. Forcing companies to produce quality goods so there are no high warranty claims

2. Weakness of the Just In Time production system

- a. There should be no fault tolerance so it is difficult to repair
- b. If there is a delay in the supply of raw materials, all production processes to distribution will be hampered
- c. High transaction costs due to high frequency
- d. If the demand for goods is suddenly high, then it cannot be provided as soon as possible

Research Result from Orthopedic Hospital

Good medication management is one aspect that affects the pharmacy services. Distribution stage is critical and complex in the drugs management cycle, while the drug use is an important step and become orientation in pharmacy services. The purpose of this study was to evaluate the management of stage drug distribution and use in outpatients. This study was conducted by a descriptive observational, design using retrospective and concurrent analysis. Qualitative and quantitative data was obtained as well as interview data from relevance department. Data were collected from February to March 2014. Efficiency in all of drug management stages were measured using indicators from WHO, Pudjaningsih, and Health Department, then compared with the the best result of different researches. The results showed that in distribution of the number of drug compatibility with card stock was 99.33%, drug storage system was First In First Out and First Expired First Out, 3.33% of drug were classified as dead stocks, average dispensing time was 7 minute for non mix recipe and less than 20 minute for mix recipe, the amount of drug delivered was 100%, 100% of prescriptions netted, no drug administration errors was 100%. The results showed in use of average number of drug per encounter was 2.2, the percentage of encounters with an antibiotic prescribed was 10.57%, the percentage of drugs prescribed by generic name was 70.18%, the percentage of encounters with an injection prescribed was 1.48%, 95.76% were

compliance with formularies, drug labeled correctly was 100% , patients understand how to use was 100%. The conclusion is indicators in stage distribution and use inefficient.

Research result from Sam Ratulangi Hospital

Medication management is one aspect of hospital management which is very important and interrelated that started the selection, planning, procurement, receipt, storage, distribution, destruction and withdrawal, control, and administration necessary for the activities of pharmaceutical services in the provision of health services as a whole, because of inefficiency and lack of launch drug management will have a negative impact on the hospital, either medically, socially and economically. The purpose of this research is to analyze the drug logistics management in hospital pharmacy installation DR Sam Ratulangi Tondano.

This study used a qualitative research method that aims to gain a more in-depth information about the logistics management of drugs in pharmaceutical installations Hospital Dr. Sam Ratulangi Tondano. Informants were selected in this study is based on the principle of suitability and adequacy. Informants of this study is the Director of the Hospital, Head of Administration, Planning Division Hospital, Head of Medical Support, Physician Specialist, Head Installation Pharmacy, Pharmacist, Pharmacist Assistants, and Nurse. Data were analyzed using content analysis method is to compare the results with existing theories. The results showed drug selection is done based on the 10 most prevalent diseases and in accordance with the National Formulary and based on E-Catalog. This is due to the ineffectiveness of the duties and functions of the Pharmacy and Therapeutics Committee. Planning is done by the use of drugs on previous period and added 10-20% buffer stock. Drugs goods received by the admissions committee. Once the drug is received, the drugs were stored in the warehouse pharmacy. Existing constraints warehouse facility pharmacy and pharmacy inadequate resulting in the accumulation stock of drugs. Distribution of prescription drugs based on individual methods. Culling and withdrawal of drugs that have been damaged or expired date is never done and not reported. Evaluation of drug use and destruction of the drug is still not up to standard. Administration in terms of recording and reporting is not running optimally. These happened, due to a lack of control and evaluation of hospital management. From this study it can be concluded that the drug logistics management in hospital pharmacy installation DR Sam Ratulangi Tondano not run in accordance with the Standards of Pharmaceutical Services in Hospitals specified in the Ministry of Health Regulation No. 58 Year 2014 The suggestion that need re-establishment of Pharmacy and Therapeutics Committee and make the hospital formulary and create SOP compliance with the Pharmaceutical Services in Hospitals specified in the Ministry of Health Regulation No. 58 Year 2014

Hypothesis

Based on the background of the problems that occur in the MMH in the field of stockout and drug handling, by understanding the concept of 7 types of waste and, the implementation of Just In time can improve stockout problems and drug stagnation in MMH.

This type of research is descriptive research with a qualitative approach. This study aims to determine the phenomena that occur in a company that is used as the focus of research. This study uses data in the form of words and images and not in the form of numbers. The results of this study describe the stockout phenomenon and drug stagnation that occur in MMH.

The location of the study is the location where the researcher conducts research with the aim to mainly take the phenomena that occur so that analysis can be carried out in depth. In determining the location of this study the authors conducted surveys and observations at the research sites in order to find conformity and reality in the field so that the research carried out can run smoothly and can minimize obstacles.

The research subjects here are studying the phenomenon of standard operating procedures in RSMM in relation to stockout and pharmaceutical stagnation. The purpose of the research subjects is not to deviate from the research objectives and not to trouble the researcher in carrying out the research process.

The data sources used here are pre-order records of drugs, drug warehouse stock records, trends in developing drug records, and the number of drug prescriptions performed by doctors.

The methods used for data collection are in the form of recording drugs, interviewing pharmacy staff, and assessing the performance of pharmacy staff.

The analysis tool used in this study is descriptive analysis. Descriptive research is research that is based on descriptive data of status, circumstances, attitudes, relationships or systems of thought, a problem that becomes the object of research. After getting the data obtained in this study, the next step is to process the collected data by analyzing the data, describing the data, and drawing conclusions.