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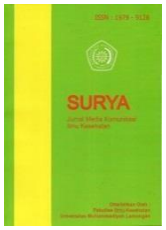

Quality Analysis of Management Information Systems Drug Inventory in The Pharmacy Warehouse Dr. Suyudi Paciran Lamongan Hospital

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ABSTRACT

Introduction: Management Information System (SIM) is one of the most important assets in the era of globalization. The role of technology makes information processing easier because processing is very necessary so that the information produced can be useful for its users, especially in pharmaceutical warehouse drug inventory. The results of the initial survey through interviews showed that there were problems at dr. Suyudi like the discrepancy between the data on drug stock inventory in the computer inventory system and the drug stock in the pharmaceutical warehouse. The purpose of the research is to analyze human resources, SPO, Data, Software, Hardware of drug inventory management information systems in pharmaceutical warehouses.
Methods: Descriptive qualitative research design with purposive sampling technique. Data collection instruments are in the form of interview guidelines, observation and document review.
Results: The results of human resources research (can run smoothly if supported by human resources who have adequate quality and capacity). SPO (SPO is available but the applicable SPO has not been carried out optimally by pharmacists). Data (the existence of data can help officers in minimizing errors and losses). Software (can help ease the work because the supply of drug data is already stored on the computer but the obstacle is often errors and slow). Hardware (important to support the smooth flow of drug supply activities through the hospital SIM application and facilities are in accordance with standards).
Conclusion: Based on the results of the study, it is expected that the management will evaluate the supply of drugs in the pharmaceutical warehouse in using the hospital driver's license.

Keywords: Health worker, Knowledge, Occupational Health and Safety (K3)

INTRODUCTION

Hospitals are places of public health services with certain characteristics that are affected by the development of health science, technological advancements, socio-economic life and culture of the community. A hospital is a place where the sick receive protection from the explosion of life, the care and attention of nurses and medical assistants, and the individual care of a skilled physician. Hospitals must improve high-quality services that can be reached by the public. (Law of the Republic of Indonesia Number 44 of 2009 concerning Hospitals).

In this era of globalization, technology has developed quite rapidly. The role of technology makes information processing easier because processing is very necessary so that the information produced can be useful for its users. Along with the development of information and communication technology, business competition in the industrial world is getting tighter. The number of companies is increasing and continues to make efforts and strategies in maintaining their business. (Rizky et al., 2020).

Management Information System (SIM) comes from the word Management of Information System. Management Information System or commonly abbreviated SIM means a group of people, a set of guidelines and the selection of data processing equipment, storing, processing and using data to reduce uncertainty in decision-making by providing information to managers so that it can be used in time efficiently.

From previous research, Reni Murnita, et al. (2016), on the evaluation of the performance of the pharmaceutical management information system at Roemani Hospital Muhammadiyah with *the hot fit* model method, it was concluded that from the aspect of time speed, the information provision has not been fulfilled because when viewed on the existing data system it is inaccurate and has to wait until the end of the month after the equalization of drug data with manual calculations, accurate drug data can be seen.

This is categorized as good only from the *technology* aspect while from the *human* and *organizational aspects* it is categorized as not good such as the absence of a training program on information systems for pharmacy officers, the absence of SPO for pharmacy officers and driver's license officers which causes delays in the correction if there is a problem with the system, the absence of a pharmaceutical information system master plan and the absence of supervision in the pharmaceutical section by the head of pharmacy so that he could not supervise the pharmacy officers.

One of the solutions that must be taken is an analysis in the management information system in the pharmaceutical warehouse drug inventory to minimize errors that occur during inventory in the pharmaceutical warehouse. This problem should not be ignored because the inconsistency of real data in drug *stock* inventory with *the computer inventory system can make mistakes in stock* reportsand if the mistake is made continuously, it can result in losses for the

hospital. If the drug inventory in the pharmacy warehouse has implemented a driver's license as a *decision support system*, it is expected that the drug stock is in accordance with reality.

METHOD

The type of research used is qualitative descriptive because this research is limited to trying to reveal a situation (event) as it is or only in the nature of revealing facts.

The population in this study is the party involved in the management of drug supplies in pharmaceutical warehouses are the Head of Pharmaceutical Installation, the Head of the Drug Supply Installation in the warehouse and pharmaceutical technical personnel.

The sample in this study is some of the warehouse officers of the drug supply warehouse at dr. Suyudi Paciran Hospital, Lamongan Regency and sampling is based on inclusion and exclusion criteria. The sampling used in this study is purposive sampling.

RESULTS

Based on table 1 who became the informants in this study, there were 4 people consisting of the head of pharmaceutical installation, planning and procurement, the coordinator of pharmaceutical supplies and the administration of the pharmaceutical warehouse

The results of the interview showed that the pharmacy warehouse officer of dr. Suyudi has a background in D3/S1 Pharmacy with a working period of 3-6 months, while those with 3-8 years of experience have resigned. Drug management involves the head of the installation, warehouse officers, directors as PO signatories, as well as pharmacists and depot staff.

The head of the pharmaceutical installation takes care of the procurement of empty medicines, while pharmacists and assistants help warehouse officers collect data on slow/fast moving drugs, drugs approaching expiration, and arrange drugs according to FEFO principles.

The effort made is that warehouse officers improve their skills through workshops or seminars, with adequate computer capabilities.

The results of the observation explained that the availability of SPO in pharmaceutical warehouses starting from planning, procurement, receipt, storage, distribution, elimination, control, recording and reporting is all available.

The results of the observation were obtained that the planning and procurement data was complete, such as the existence of the SPO for planning and procurement, the report on the results of the recap of the number of drugs for 1 month, the list of distributors, the order letter for the drug, the record of the number and type of drugs according to the calculation, the data on the remaining stock, the document of the drug order approved by the director.

The observation results showed that in the reception section, the data was complete including drug ED data, the type and number of drugs received, the drug receipt expedition book, and the drug batch number.

Table 1. Respondent Characteristics

They report	Age	Gender	Education	Length of Work
Head of Pharmaceutical Agency	36 yrs	Women	Pharmacist	10 yrs
Planning and procurement	26 yrs	Women	Pharmacist	2 yrs
Supply coordinator	26 yrs	Women	Pharmacist	2 yrs
Pharmaceutical warehouse administration	25 yrs	Male	D3 Pharmaceuticals	3 yrs

In the distribution section, complete data is also available, such as stock taking implementation reports which are carried out every six months and stock taking results data. However, in the control section at dr. Suyudi, the data is not fully available, which means that there is still no data on stuck medicines.

The interview results explained that the SIMRS application function in the pharmacy warehouse is very helpful in providing various information, such as viewing the minimum stock of drugs, drug ED, drug batch number, entering and exiting drugs, and entering invoices, so that all data is available in the system. However, there are obstacles in the form of frequent errors and slowness that cause stock disputes between the warehouse and the computer system. The information generated by the application is in accordance with the needs of pharmaceutical warehouse officers because all data is stored in SIMRS, and if there are additional data or discrepancies, confirmation can be made to the SIMRS customer team.

The display of information in this application includes drug receipts, stock details, stock cards, drug lists in pharmaceutical warehouses, ED stock check columns, minimum unit stock, drug stock adjustments, unit drug requests, unit outbound drugs, drug stock reports, PO from invoices, and drug distributor stock reports. The party involved in designing this SIMRS application is the IT Team from dr. Suyudi Paciran Hospital.

It can be concluded that the availability of software / SIMRS applications already exists and there is already an SPO for guidelines for pharmaceutical practitioners in the use of the SIMRS application.

The results of the interview explained that in the pharmacy warehouse of dr. Suyudi Paciran Hospital, there is already a SIMRS facility in the form of a computer unit containing the SIMRS application, a pharmaceutical warehouse form, and a printer to print all the data needed by the officers. These facilities or infrastructure facilities are considered adequate to support the smooth operation of drug supply activities in the warehouse using the SIMRS application.

The results of the observation explain that facilities or infrastructure to carry out SIMRS in the pharmaceutical warehouse is very important to support the smooth operation of drug supply activities in the pharmaceutical warehouse by developing the SIMRS application because SIMRS will not be able to run smoothly without computer technology.

DISCUSSION

Analyzing human resources (Human Resources) drug inventory management

information system in the pharmacy warehouse of dr. suyudi Hospital

According to researchers, human resources are one of the important factors that play a role in the implementation of drug supplies in pharmaceutical warehouses. If compared to this policy, the human resources that play a role in managing drug supplies in the pharmacy warehouse of dr. Suyudi still does not meet his standards.

In terms of education, when compared to the guidelines, it has met the standard, therefore in its implementation the pharmacy warehouse officer of dr. Suyudi did not find it difficult to carry out his duties and did not take long to learn about the implementation of drug supplies in the pharmaceutical warehouse.

Efforts to increase the knowledge, skills and experience possessed by human resources in pharmaceutical warehouses by participating in seminars or workshops and in terms of knowledge in operating the computers of pharmacy officers at dr. suyudi Hospital are quite good.

According to the researcher, the results of this study show that the increase in the knowledge and skills of pharmacy officers in the pharmacy warehouse of dr. Suyudi Paciran is carried out through training or seminars related to the process of managing drug supplies with a hospital license because in the pharmaceutical warehouse the hospital has been used to work in the warehouse which aims to improve the knowledge, skills and work performance of pharmaceutical warehouse officers. Training is an effort to build human resource knowledge supported by policies is one of the right ways of innovation or renewal to enable officers to have the ability and responsibility according to the demands of change in the era of globalization which is accompanied by competition in various fields, especially Dr. Suyudi Hospital has used computers in drug supplies, officers must be given training to increase their insight related to the quality of hospital driver's licenses, bat supplies which is in the pharmacy warehouse of Dr. Suyudi Paciran Hospital.

Analyzing the SPO (Standard Operating Procedure) information system for the management of drug supplies in the pharmacy warehouse of dr. Suyudi

According to the researcher, that the Standard Operating Procedure (SPO) According to the researcher, the SOPs for drug inventory in the warehouse include selection, planning, procurement, acceptance, storage, distribution, disposal, control, recording, and reporting.

The standard operating procedures have been made quite well. In the implementation of the procedure that was made, it has begun to be carried out by the pharmacy warehouse officer of dr. suyudi Hospital, although there are still points that are missed and not carried out by the pharmacy warehouse officer.

The non-implementation of points in the SPO caused drug supply activities in the pharmaceutical warehouse to be disrupted. Standard operational procedures are procedures or stages that are carried out and that must be passed to complete a certain work process. With the implementation of SPO, each activity can run regularly according to the planned flow.

Analyzing the data of the drug inventory management information system in the pharmacy warehouse of dr. Suyudi

According to the researcher, the data also functions as evidence and as a report on the person responsible for the duties of an employee, when compared to the data at the dr. suyudi Hospital with the Permenkes, everything is complete.

However, in its implementation, it turns out that not all available documents are filled in regularly by pharmaceutical warehouse officers. Such as residual stock data. Based on the results of field observations and document reviews, leftover stock data such as stock cards are rarely filled in by warehouse officers. This is because they do not have enough time to fill in the data.

According to the researcher, that the lack of stock card in the contents causes sometimes officers to feel confused if there is a difference between the data on the number of drugs on the manual drug stock card, the remaining drug stock in the *computer inventory* system and the physical amount of drugs stored. Even though the drug stock card is very useful for knowing the amount of drug inventory, as a tool for controlling inventory, as a source of input for making procurement plans and as a control tool at the pharmacy installation of dr. Suyudi Paciran Lamongan Hospital.

Analyzing Drug Inventory Management Information System Software in the Pharmacy Warehouse of RSU dr. Suyudi

According to the researcher, that the function of implementing a hospital SIM in the pharmacy installation of dr. suyudi Hospital is to ease the workload because with regard to the report is already in the computer if needed, the desired data can be printed directly without having to make a manual system, besides that also the hospital SIM can be done to control various things that include pharmaceuticals can see the stock of drugs that have begun to decrease.

However, the hospital SIM used in the pharmaceutical warehouse is still not optimal because there are several obstacles that actually become obstacles, namely the information system *is erroneous* , sometimes slow, for example, there are often times when the stock is not the same, in the warehouse there are 10 stocks but the stock in the hospital SIM application is only 2 or 3, the obstacle often changes by itself, namely causing stock disputes between the inventory in the warehouse and *the inventory system.*

Analyzing the hardware of the drug inventory management information system in the pharmacy warehouse of dr. Suyudi

Based on the results of the interview, the completeness of facilities is a factor that must be fulfilled by every health service provider, with the completeness of the facilities used in providing a service, the service will be able to be provided optimally.

Likewise with the facilities used in the supply of drugs in the pharmacy warehouse of dr. Suyudi Paciran, based on the results of observations and interviews with officers who are in the pharmaceutical installation is quite good and adequate such as in the pharmaceutical warehouse there is 1 computer and 1 printer, one of the very important facilities is a computer because in the pharmacy warehouse of dr. Suyudi Paciran Hospital has used the Hospital SIM Application for the management of his drug supplies.

According to researchers, for modern hospitals such as dr. Suyudi Paciran

Hospital, information technology is not only a supporting means to improve performance, but also the main weapon in competing and minimizing security risks and is very important to support the smooth operation of drug supply in the warehouse using the hospital SIM application.

In the drug supply in the pharmaceutical warehouse, information processing is also carried out with computers for the operations of the organization and the computer facilities of dr. Suyudi Paciran Hospital are very adequate. The computer technology supports the driver's license of drug supplies in providing information for the benefit of management in pharmaceutical warehouses.

CONCLUSION

Based on the research entitled Analysis of the quality of the information system for the management of drug supplies in the pharmaceutical warehouse of Dr. Suyudi Paciran Hospital, the researcher drew the following conclusions: Human Resources at the Pharmacy Warehouse of RSU dr. Suyudi's qualifications are appropriate and efforts to improve knowledge and skills through seminars or workshops

Standard Operating Procedures for Drug Supplies in the Pharmaceutical Warehouse of dr. Suyudi has been there starting from planning, procurement, receipt, distribution and control have been carried out optimally, but there are some SPOs that are not implemented optimally because the officers do not understand the content of the planning SPO. Data in the pharmaceutical warehouse drug inventory of dr. Suyudi has been prepared including data on planning, procurement, receipt, distribution, and control. Drug inventory software in pharmaceutical warehouses occurs when the amount of stock changes by itself, sometimes slow and errors, when the drug input has been written correctly but the output is different. The hardware in the drug inventory in the pharmaceutical warehouse is sufficient and feasible with the existence of computer devices and adequate facilities in the drug inventory.

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