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Research Article

Distribution Flow Overview of Medicine and Medical Devices at X Purwodadi Hospital

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Abstract: Pharmacy services in a hospital support quality health services. Distribution is a crucial aspect of hospital pharmacy services, which aims to ensure the timely availability of pharmaceutical supplies within the unit. The purpose of this study was to determine the alignment of distribution procedures at X Hospital with the Standard Operating Procedure (SOP) and Permenkes No. 72 of 2016. This study was non-experimental with a qualitative descriptive method with a total sampling technique. The instruments used in this study were checklist sheets, interview guidelines, hospital SOP, and Permenkes No. 72 of 2016. The implementation of the study was through observation, document review, and in-depth interviews with all pharmacy employees at X Hospital. Interviews were conducted with 1 key informant, 8 informants in the pharmacy warehouse section, and 29 informants in the inpatient and outpatient services sections. Data obtained from the checklist results were processed using Microsoft Excel, and the results of the interviews were transcribed and interpreted. Based on the results of interviews and observations, it was shown that the implementation of distribution refers to the hospital SOP. The distribution system used is a centralized system and UDD (Unit Dose Dispensing) for inpatients. The results of the study also showed the percentage of conformity of the distribution process with the hospital SOP of 86.8% and conformity of distribution with Permenkes No. 72 of 2016 of 66.59%.

Keywords: Distribution, UDD, Centralization, Medicines and Medical Devices

1. Introduction

Hospital pharmacy services are one of the hospital activities that support quality health services [1]. Pharmaceutical services in hospitals include clinical pharmacy services and management [2]. Management of pharmaceutical supplies is closely related to the hospital's spending budget. The budget for drug spending in hospitals accounts for 40-50% of the total health service operations [3]. One part of drug management activities is distribution.

According to the regulation of the Indonesian Ministry of Health No. 72 of 2016, distribution is a series of activities in order to distribute or deliver pharmaceutical preparations, medical devices, and disposable medical materials from storage locations to patient service units while still ensuring quality, type, quantity, and timeliness [4]. The implementation of good distribution is expected to guarantee that the quality of drugs obtained by patients is the same as that issued by pharmaceutical companies [5]. The purpose of drug distribution is to ensure the availability of pharmaceutical supplies in service units in a timely manner, type, and quantity [6].

Problems that often occur in hospitals are delays in drug distribution to the pharmacy depot. This can be detrimental to patients and employees, so in this case, it shows that drug distribution is an important thing in hospitals [7]. According to research conducted by Rahmayati (2017) at Tangerang General Hospital, there was a shortage of drugs, and drugs were almost out of stock as much as 32.30%. This caused the distribution process at Tangerang General Hospital to be disrupted [8].

Based on the description above, it shows that there are still hospitals that carry out the distribution process without meeting the requirements, so it is necessary to research the description of the distribution flow that occurs in hospitals.

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2. Preliminaries

Distribution is a series of activities in order to distribute/deliver Pharmaceutical Preparations, Medical Devices, and Medical Disposable Materials from the storage location to the service unit/patient while still ensuring quality, stability, type, quantity, and timeliness [4]. The main objective of good drug distribution is the implementation of a system to ensure drug quality and the distribution of drugs evenly and regularly [1]. Therefore, drug distribution is an important key to the process of distributing drugs to patients [9].

Based on previous research by Nuha (2019), it was conducted retrospectively with a descriptive analytical method which showed that the match between the number of drugs and the stock card was 100% and the distribution system used was decentralized [10]. The novelty in this study is using a qualitative descriptive method by interviewing several informants, applying triangulation of sources and methods as a data validity technique, assessing the suitability of Permenkes No. 72 of 2016 and SOP to the drug distribution system in hospitals.

3. Proposed Method

This study is non-experimental with a qualitative descriptive method and a total sampling technique. This study was conducted at Hospital X, Purwodadi, in March-May 2023. The instruments used in this study were checklist sheets, interview guidelines, hospital SOPs, and Permenkes No. 72 of 2016. The research was carried out through observation, document review, and in-depth interviews with all pharmacy employees at X Hospital. Interviews were conducted with 1 key informant, 8 informants in the pharmacy warehouse section, and 29 informants in the inpatient and outpatient services sections. Key informants are informants who are considered to know about all the material that will be used as research material. The validity of the data in this study was carried out using source triangulation and method triangulation. The data obtained from the checklist results were analyzed using Microsoft Excel, and the interview results were transcribed and interpreted. The results of the data analysis are presented in narrative and tabular form. Scoring is done using a score of 1 (Yes) and 0 (No), which is calculated using the formula [11]:

$$\boldsymbol{P = (F/N)\, x\, 100\%} \quad (1)$$

Explanation:
P : Presentation
F : Number of "Yes" Answers
N : Number of Samples

4. Results and Discussion

This study was conducted at Hospital X, where the implementation of the study has obtained ethical permission and has been approved with the registration number: KEPK/UMP/34/V/2023. The study was conducted by interviewing 38 informants in the pharmacy department, with details of the informants as shown in Table 1.

Table 1. List of Pharmacy Officers Who Became Informants

No	Position	Quantity
1	Pharmacist	5
2	Pharmaceutical Technical Personnel	26
3	Inpatient administration	2
4	Pharmaceutical Warehouse Administration	1
5	Pharmacy Warehouse Officer	3
6	Head of Pharmaceutical Warehouse	1
	Total	38

Based on Table 1, it shows that the total number of pharmaceutical installation employees is 38 people consisting of 5 pharmacists where 3 pharmacists work in the pharmacy warehouse and 2 pharmacists work in the outpatient and inpatient pharmacy, 26 TTK who work alternately in inpatient and outpatient care, 1 pharmacy warehouse coordinator, 2 inpatient patient administration staff who are not pharmacists, 1 pharmacy warehouse administration staff and 3 non-pharmaceutical staff are tasked with compiling pharmaceutical supplies and assisting in the distribution process from the pharmacy warehouse to the inpatient and outpatient pharmacy.

The research was carried out to determine compliance with applicable requirements/regulations related to several components, including:

a. Human Resources (HR)

Human resources (HR) are productive individuals who work as drivers of an organization, both in institutions and companies that function as assets, so their abilities must be trained and developed [12]. Human resources in pharmaceutical installations are divided into 3, namely:

1) Outpatient pharmacy

The total number of pharmacists in the outpatient and inpatient pharmacies is 26 people who always change every day according to the duty schedule that has been made. In the outpatient pharmacy installation for those on duty from morning to evening every day, there are 9 TTKs on duty to serve the drug distribution process for outpatient patients. And for the number of TTKs on duty from afternoon to evening, there are 4 TTKs on duty to serve the distribution process in the outpatient pharmacy.

2) Inpatient Pharmacy

The number of TTK on duty in the morning to serve the distribution process of drugs and medical devices in the inpatient pharmacy is 3 people and 2 non-pharmacy people who are tasked with administering to inpatient discharged patients. While for those on duty during the day, there are 5 TTK and 2 non-pharmacy people who are tasked with administering to discharged patients. For night duty, the number of TTK on duty is 3 people.

3) Pharmacy Warehouse

Based on interviews conducted with the head of the Pharmacy Installation and the head of the pharmacy warehouse, the number of pharmacy officers in the Pharmacy Warehouse is 8 people, where each person in the pharmacy warehouse has different duties and responsibilities. The warehouse officers consist of 3 pharmacists where 1 pharmacist is the head of the pharmacy installation, 2 pharmacists are tasked with assisting in the procurement process of drugs and medical devices, 1 TTK who is tasked as the head of the pharmacy warehouse, 3 non-pharmaceutical people who help organize incoming goods and 1 non-pharmaceutical person is tasked with the administration of the pharmacy warehouse.

Based on the interview results, it shows that the number of human resources has not met the standard, where in the Minister of Health Regulation No. 56 of 2014, there must be 12 pharmacists and 20 TTKs who have STRTTK. However, based on the informant's statement at Hospital X, there are only 5 pharmacists and 26 TTKs, but 6 of the TTKs still do not have STRTTKs or are in the process of making new STRTTKs [13].

b. Facilities and infrastructure

Facilities are anything that can be used as a tool to achieve a purpose or goal [14]. The benefits of facilities are to speed up existing work [15]. Facilities and infrastructure in the management process in the pharmaceutical sector, namely:

1) Pharmacy Warehouse

Information related to facilities and infrastructure in this study was obtained based on the results of the checklist and informant interviews. The results of the checklist can be seen in Table 2.

Table 2. Results of the Checklist of Facilities and Infrastructure in the Pharmaceutical Warehouse

No.	Informant	Question						
		X1	X2	X3	X4	X5	X6	X7
1	1	1	1	1	1	1	1	1
2	2	1	1	1	1	1	1	1
3	3	1	1	1	1	1	1	1
4	4	1	1	1	1	1	1	1
5	5	1	1	1	1	1	1	1
6	6	1	1	1	1	1	1	1
7	7	1	1	1	1	1	1	1
8	8	1	1	1	1	1	1	1
Total		8	8	8	8	8	8	8
Percentage (%)		100	100	100	100	100	100	100
Total Percentage (%)								100

Information :
X.1. : There are chairs and tables
X.2. : There are 5 computers and printers
X.3. : There are 20 elbow shelves for storing medicine
X.4. : There are 2 refrigerators to store in cold temperatures
X.5. : There are 6 ACs to maintain the room temperature
X.6. : There are 2 trolleys for delivering goods
X.7. : There are 4 cabinets for storing documents.

Score 1 : The answer is "yes."
Informant 1: Head of Pharmaceutical Installation
Informant 2: Pharmaceutical Warehouse Coordinator
Informant 3: Head of daily implementation
Information 4: Procurement coordinator
Informant 5-7: Pharmaceutical warehouse worker
Informant 8: Pharmaceutical warehouse administration

Based on the results of the checklist, interviews, and reviewing documents from the hospital inventory list regarding the facilities and infrastructure in the pharmacy warehouse, namely 5 computers that function to enter data on new drugs from Pharmaceutical Wholesalers, and a printer that functions to produce good prints in the form of images or writing [16]. The printer at Hospital X functions to print proof of drug transfer from the warehouse to the inpatient and outpatient pharmacy.

The number of 20 elbow racks that function as a place to store drugs and medical devices before being distributed to inpatient and outpatient depots. The pharmaceutical warehouse also has 2 showcase refrigerators that function to store drugs that must be stored at cold temperatures, because improper drug storage can damage the quality of the drug [17].

And 6 ACs function to maintain the temperature and humidity of the room where the area of the room for storing drugs is approximately 5x8, where the storage temperature of drugs is usually stored at low temperatures or room temperature depending on the nature of each drug and if the lack of temperature control can damage the quality and content of active substances in the drug [18]. There are 2 Trolleys used to distribute drugs and medical devices to the inpatient and outpatient pharmacy installation depots, 4 cabinets, and wooden display cases that function to store pharmaceutical warehouse documents.

2) Inpatient and Outpatient Pharmacy Installation

Information related to facilities and infrastructure in inpatient and outpatient installations was obtained based on the results of checklists and informant interviews. The results of the checklist can be seen in Table 3.

Table 3. Results of the Facilities and Infrastructure Checklist at the Installation Inpatient and Outpatient

No.	Informant	Question								
		X1	X2	X3	X4	X5	X6	X7	X8	X9
1	1	1	1	1	1	0	1	1	1	1
2	2	1	1	1	1	0	1	1	1	1
3	3	1	1	1	1	0	1	1	1	1
4	4	1	1	1	1	0	1	1	1	1
5	5	1	1	1	1	0	1	1	1	1
6	6	1	1	1	1	0	1	1	1	1
7	7	1	1	1	1	0	1	1	1	1
8	8	1	1	1	1	0	1	1	1	1
9	9	1	1	1	1	0	1	1	1	1
10	10	1	1	1	1	0	1	1	1	1
11	11	1	1	1	1	0	1	1	1	1
12	12	1	1	1	1	0	1	1	1	1
13	13	1	1	1	1	0	1	1	1	1
14	14	1	1	1	1	0	1	1	1	1
15	15	1	1	1	1	0	1	1	1	1
16	16	1	1	1	1	0	1	1	1	1
17	17	1	1	1	1	0	1	1	1	1
18	18	1	1	1	1	0	1	1	1	1
19	19	1	1	1	1	0	1	1	1	1
20	20	1	1	1	1	0	1	1	1	1
21	21	1	1	1	1	0	1	1	1	1
22	22	1	1	1	1	0	1	1	1	1
23	23	1	1	1	1	0	1	1	1	1
24	24	1	1	1	1	0	1	1	1	1
25	25	1	1	1	1	0	1	1	1	1
26	26	1	1	1	1	0	1	1	1	1
27	27	1	1	1	1	0	1	1	1	1
28	28	1	1	1	1	0	1	1	1	1
29	29	1	1	1	1	0	1	1	1	1
Total		29	29	29	29	29	29	29	29	29
Percentage (%)		100	100	100	100	100	100	100	100	100
Total Percentage (%)										100

Information:
X.1. : There is a computer and a printer
X.2. : There is a shelf used to store medicine
X.3. : There is a plastic drawer for storing medicine.
X.4. : There is a wooden cupboard for storage
X.5. : There is a trolley for delivering goods
X.6. : There is a refrigerator to store medicine at cold temperatures.
X.7. : There are tables and chairs
X.8. : There is air conditioning to maintain temperature and humidity
X.9. : There is a Pulverator and Sealing

Score 1 : Answer "yes"
Score 0 : Answer "no"
Informant 1: Head of Pharmacy Installation
Informant 2: Pharmacist in charge of inpatient pharmacy
Informant 3: Pharmacist in charge of outpatient pharmacy
Information 4-29: Pharmaceutical Technical Personnel

Based on the results of the checklist and interviews with outpatient and inpatient pharmacists regarding facilities and infrastructure, it shows that the facilities and infrastructure used are the same, the only difference is the number of each item available. One of them is that the number of computers in outpatient care is greater because there are computers used to input chronic BPJS prescriptions and computers to display outpatient queue numbers. The function of outpatient and inpatient computers is the same, namely to input prescriptions for outpatient and inpatient patients. A printer that functions to print drug receipts and patient name labels. A label is a piece of paper that contains the rules for use of the drug [19]. In addition, there are medicine shelves, plastic drawers used to store medicines, a show case refrigerator whose function is to store medicines at cold temperatures. A long table used to mix and process medicines, an air conditioner used to maintain the temperature and humidity of the room.

Outpatient and inpatient pharmacy installations also have Pulverizers and sealing. Pulverizers function to smooth tablets and Sealing which functions to glue the powder paper so that it is tightly closed from the surrounding air [20]. However, outpatient and inpatient pharmacies do not have trolley suggestions like pharmacy warehouses because inpatient and outpatient pharmacies do not have a process of delivering goods.

Based on the results of research conducted at the pharmacy installation, it can be seen that the facilities used for managing the distribution of drugs and medical devices or disposable medical materials are quite good, where these facilities are used to encourage the realization of pharmaceutical services at the Pharmacy Installation properly. According to Budiyono (2020) facilities are tools or means and infrastructure to help employees support performance in meeting employee needs, so that they can increase employee work productivity [21]. Therefore, it can be concluded that the facilities and infrastructure in the pharmacy warehouse and outpatient pharmacy and inpatient pharmacy are quite complete. The existing facilities and infrastructure are in accordance with Permenkes No. 72 of 2016. In addition, the area of the pharmacy warehouse is approximately 4x5 meters, where this area has entered the standard of the minimum standard set by the Ministry of Health in 2008, which is a minimum of 3x4 meters.

c. Distribution Procedure

Procedures are a collection of several commands or rules that have an activity [22]. The procedure used as a guideline in Hospital X is the hospital's SOP. SOP is a document that describes daily operational activities with the aim that the work is carried out correctly and consistently [23]. The function of SOP is to create a work commitment as an internal or external assessment tool [24].

Based on interviews that have been conducted with key informants, namely, every pharmaceutical activity carried out in the hospital must have an SOP that regulates, including the distribution process of drugs and medical devices, in addition to regulating how the distribution process is. In addition, the SOP also explains what tasks must be carried out by Pharmaceutical Technical Personnel related to drug distribution procedures. The key informant in this study is an informant who has extensive knowledge or clear and reliable information related to the entire material that is the main subject of this study, by the statement of Khosiah et al., (2017) that key informants are those who provide clear and reliable information related to the information they want to get [25].

Table 4. Distribution Procedure Checklist Results

No.	Informant	Question	
		X1	X2
1	1	1	1
2	1	1	1
3	1	1	1
4	1	1	1
5	1	1	1

6	1	1	1
7	1	1	1
8	1	1	1
9	1	1	1
10	1	1	1
11	1	1	1
12	1	1	1
13	1	1	1
14	1	1	1
15	1	1	1
16	1	1	1
17	1	1	1
18	1	1	1
19	1	1	1
20	1	1	1
21	1	1	1
22	1	1	1
23	1	1	1
24	1	1	1
25	0	0	0
26	0	0	0
27	0	0	0
28	0	0	0
29	0	0	0
Total		24	24
Percentage (%)		82.75	82.75
Total Percentage (%)			82.75

Information :
X.1 : There is an SOP that regulates the distribution process
X.2: There is a task description in the SOP
Score 1: answer "yes"
Score 0: Answer "no"
Informant 1: Head of Pharmacy Installation
Informant 2: Pharmacist in charge of inpatient pharmacy
Informant 3: Pharmacist in charge of outpatient pharmacy
Information 4-29: Pharmaceutical Technical Personnel

The checklist results in table 4, it shows that hospital pharmacists who are aware of the SOP and job descriptions related to the distribution process of drugs and medical devices at Hospital X are 82.75%. There are a small number of 5 informants who are not aware of the SOP and job descriptions regarding the distribution process. This is because the 5 informants are new pharmacists. In addition, it is also possible that the pharmacist in charge of inpatient and outpatient care missed conveying the SOP and job descriptions, so that new officers only carry out their duties based on the activities that are usually carried out daily in that section. Compliance in implementing SOPs and job descriptions is very helpful in consumer satisfaction [22].

Compliance in carrying out job descriptions carried out by employees can improve employee performance, namely providing the right proportion of time for employees and providing appropriate work. A job description is a written statement issued by a company or agency that explains the responsibilities, duties, functions and authorities of employees [26]. The function of the job description is to assist employees in completing their tasks because employees have direction regarding what their work is [15].

d. Distribution System

Based on interviews conducted by 29 pharmacists at the Pharmacy Installation of Hospital X, the distribution system used in the hospital is a centralized distribution system and UDD for inpatients. Centralization is the distribution of drugs and pharmaceutical goods centered in one place [27], and for UDD is a drug distribution system in the hospital, where drugs are packaged in a single form and given to patients for single use during treatment [28]. The conformity of the distribution system with SOP and Permenkes No. 72 of 2016 was obtained based on the results of the informant checklist, which can be seen in Tables 5 and 6.

Table 5. Results of the Distribution System Conformity Checklist with Hospital SOP

No.	Informant	Question									
		X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
1	1	1	1	1	1	1	1	0	1	1	1
2	2	1	1	1	1	1	1	0	1	1	1
3	3	1	1	1	1	1	1	0	1	1	1
4	4	1	1	1	1	1	1	0	1	1	1
5	5	1	1	1	1	1	1	0	1	1	1
6	6	1	1	1	1	1	1	0	1	1	1
7	7	1	1	1	1	1	1	0	1	1	1
8	8	1	1	1	1	1	1	0	1	1	1
9	9	1	1	1	1	1	1	0	1	1	1
10	10	1	1	1	1	1	1	0	1	1	1
11	11	1	0	1	1	1	0	0	1	1	1
12	12	1	0	1	1	1	0	0	1	1	1
13	13	1	1	1	1	1	1	0	1	1	1
14	14	1	1	1	1	1	1	0	1	1	1
15	15	1	1	1	1	1	1	0	1	1	1
16	16	1	1	1	1	1	1	0	1	1	1
17	17	1	1	1	1	1	1	0	1	1	1
18	18	1	1	1	1	1	1	0	1	1	1
19	19	1	1	1	1	1	1	0	1	1	1
20	20	1	1	1	1	1	1	0	1	1	1
21	21	1	1	1	1	1	1	0	1	1	1
22	22	1	1	1	1	1	1	0	1	1	1
23	23	1	1	1	1	1	1	0	1	1	1
24	24	1	1	1	1	1	1	0	1	1	1
25	25	1	1	1	0	1	1	0	1	1	1
26	26	1	1	1	0	1	1	0	1	1	1
27	27	1	1	1	0	1	1	0	1	1	1
28	28	1	1	1	0	1	1	0	1	1	1
29	29	1	1	1	0	1	1	0	1	1	1
Total		29	27	29	24	29	27	0	29	29	29
Percentage (%)		100	93	100	82	100	93	0	100	100	100
							Total Percentage (%)				86.8

Information:

X.1.: Outpatient and inpatient pharmacy staff make requests for medicines and medical devices to the Pharmacy Warehouse.
X.2.: Requests for medical devices and drugs from the IKO IGD clinic and depot are served by inpatient pharmacy staff.
X.3.: Requests for medication and medical devices for inpatients are served by the inpatient pharmacy.
X.4.: The order of inpatient services is Cito, home, new, and additional.
X.5.: Pharmacy warehouse officers receive, prepare, and deliver medicines and medical devices to the inpatient pharmacy.
X.6.: Pharmacy staff re-examine incoming goods from the warehouse.
X.7.: The entire distribution process for both drugs and medical devices for inpatients and medical devices (BMHP) in the medical treatment room is carried out by pharmacy staff.
X.8. : Requests for medical devices (BMHP) in the treatment room are served by the inpatient pharmacy.
X.9. : Requests for medical devices (BMHP) use the form determined by the pharmacy.
X.10. : The drug and medical device distribution system uses centralization, and for inpatients uses UDD.
Score 1: answer "yes"
Score 0: answer "no"
Informant 1: Head of Pharmacy Installation
Informant 2: Pharmacist in charge of inpatient pharmacy
Informant 3: Pharmacist in charge of outpatient pharmacy
Information 4-29: Pharmaceutical Technical Personnel

Based on Table 5, it shows that compliance with drug distribution based on hospital SOP is 86.8%. There are 5 informants who do not know the order of processing drugs for inpatients according to the existing SOP, and there are 2 informants who stated that goods coming from the warehouse are sometimes not re-examined by the pharmacist on duty because when on duty the pharmacy is busy. In addition, 2 informants also stated that requests for medical devices from polyclinics and depots are not served at the inpatient pharmacy, but are served by the pharmacy warehouse because there are some items in the inpatient pharmacy that are out of stock and several pharmacists suggest taking them directly from the pharmacy warehouse.

The distribution process of drugs and medical devices for inpatients and disposable medical devices, according to all informants, is not carried out by pharmacists because the distribution is still collaborated and assisted by room staff. This is because the number of pharmacy human resources is not sufficient to distribute drugs and medical devices to inpatients or to treatment rooms. According to the hospital SOP, the distribution flow begins with the pharmacist requesting drugs and medical devices to the pharmacy warehouse, then the pharmacy warehouse officer prepares and delivers the drugs and medical devices according to the request to the outpatient and inpatient pharmacy depots. The pharmacist who receives the goods re-examines the goods coming from the pharmacy warehouse. The distribution process in the inpatient section is assisted by room staff distributing drugs and medical devices to patients. The distribution process for outpatients is carried out by the pharmacy.

Table 5. Results of the Distribution System Conformity Checklist with the Minister of Health Regulation No. 72 of 2016

No.	Informant	Question								
		X1	X2	X3	X4	X5	X6	X7	X8	X9
1	1	1	1	1	1	1	0	0	1	1
2	2	1	1	1	1	1	0	0	1	1
3	3	1	1	1	1	1	0	0	1	1
4	4	1	1	1	1	1	0	0	0	1
5	5	1	1	1	1	1	0	0	0	1
6	6	1	1	1	1	1	0	0	0	1
7	7	1	1	1	1	1	0	0	0	1

8	8	1	1	1	1	1	0	0	0	1
9	9	1	1	1	1	1	0	0	0	1
10	10	1	1	1	1	1	0	0	0	1
11	11	1	0	1	1	1	0	0	0	1
12	12	1	0	1	1	1	0	0	0	1
13	13	1	1	1	1	1	0	0	0	1
14	14	1	1	1	1	1	0	0	0	1
15	15	1	1	1	1	1	0	0	0	1
16	16	1	1	1	1	1	0	0	0	1
17	17	1	1	1	1	1	0	0	0	1
18	18	1	1	1	1	1	0	0	0	1
19	19	1	1	1	1	1	0	0	0	1
20	20	1	1	1	1	1	0	0	0	1
21	21	1	1	1	1	1	0	0	0	1
22	22	1	1	1	1	1	0	0	0	1
23	23	1	1	1	1	1	0	0	0	1
24	24	1	1	1	1	1	0	0	0	1
25	25	1	1	1	1	1	0	0	0	1
26	26	0	1	1	1	1	0	0	0	1
27	27	0	1	1	1	1	0	0	0	1
28	28	0	1	1	1	1	0	0	0	1
29	29	0	1	1	1	1	0	0	0	1
Total		26	29	29	29	29	0	0	3	29
Percentage (%)		89	100	100	100	100	0	0	10	100
	Total Percentage (%)									66.59

Information:

X.1.: Pharmacists are fully responsible for the drug distribution process at X Hospital.

X.2.: The distribution process at X Hospital uses a one-door system.

X.3.: The distribution system implemented at X Hospital is evaluated periodically.

X.4.: Distribution of individual outpatient/inpatient drugs through pharmacy installations

X.5.: The distribution process used in X Hospital uses a centralized distribution system and UDD for inpatients.

X.6.: Distribution of pharmaceutical supplies is temporarily delegated to the person in charge of the room if there is no pharmacist on duty.

X.7.: Distribution of pharmaceutical supplies (medical devices and disposable media) to treatment rooms is carried out by pharmacy staff.

X.8. : Pharmacists provide information and warnings about drug interactions on all types of drugs provided in the room (floor stock)

X.9. : Pharmaceutical preparations. Medical devices and disposable medical supplies stored in the treatment room must follow the type and quantity required.

Score 1: answer "yes"

Score 0: answer "no"

Informant 1: Head of Pharmacy Installation

Informant 2: Pharmacist in charge of inpatient pharmacy

Informant 3: Pharmacist in charge of outpatient pharmacy

Information 4-29: Pharmaceutical Technical Personnel

Based on Table 6, it shows that the conformity of the distribution process with Permenkes No. 72 of 2016 is 66.59%, this needs to be improved. There are 3 informants who said that those responsible for the distribution process are not only pharmacists but all pharmacists on duty and involved in the distribution process in the hospital. This is because according to the informant, the responsibility in the distribution process is the TTK who is involved in the distribution process every day.

As for the distribution process of drugs and medical devices for inpatients provided in the treatment room, all are carried out by the respective room officers. This is because the number of TTK is still lacking, so that the delegation of drug distribution from the pharmacy to the room officers is by the room nurse. According to the informant, the distribution system used for inpatients is the UDD drug distribution system. This system is considered to be able to reduce the drug return process and minimize errors, so it is more effective and helps minimize errors.

This is in line with the statement that the use of the UDD system in inpatients can reduce the process of returning drugs from the room to the inpatient pharmacy [29]. And the use of the UDD system reduces the occurrence of errors in the administration and control of the pharmacy installation is much wider from the prescription received until the patient receives the drug per unit [30].

The distribution system carried out at Hospital X uses a centralized distribution system. The advantage of a centralized system is that controlling drugs and pharmaceutical supplies becomes easier, but the centralized system also has limitations, namely the delay in providing drugs to patients [3].

6. Conclusions

The distribution process of drugs and medical devices at Hospital X is carried out with a centralized distribution system and UDD for inpatients. The distribution process is carried out by referring to the hospital SOP as a guideline for implementation. The conformity of the distribution system with the hospital SOP is 86.8%, and the conformity of the distribution system with Permenkes No. 72 of 2016 is 66.59%.

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References

[1] Susanto, A.K., Citraningtyas, G.,& Lolo, W.A.Evaluasi penyimpanan dan pendistribusian obat di gudang instalasi farmasi Rumah Sakit Advent Manado, Pharmacon Jurnal Ilmiah Farmasi, 6(4): 87–96, 2017.

[2] Oktaviati, E., Fatimah, N. & Husnul, W. Evaluasi pengelolaan obat di instalasi farmasi Rumah Sakit Tingkat IV Samarinda', Prosiding Sekolah Tinggi Ilmu Kesehatan, 2021.

[3] Satibi. Manajemen Obat di Rumah Sakit.Yogyakarta:Gajah Mada University Press, 2014.

[4] Kemenkes RI. Peraturan Menteri Kesehatan Republik Indonesia Nomor 72 tentang Standar Pelayanan Kefarmasian Di Rumah Sakit.Jakarta:Kementrian Kesehatan Republik Indonesia, 2016.

[5] Hartini, I.S. & Marchaban. Evaluasi pelaksanaan cara distribusi obat yang baik (CDOB) pada Apotek di kecamatan Mlati Kabupaten Sleman Yogyakarta', Majalah Farmaseutik, 1: 1(2),: 394–398, 2016.

[6] Khasanah maulidiyatul. Gambaran sistem distribusi perbekalan farmasi pasien rawat inap kelas VIP dan kelas III di RSUD tidar kota Magelang.Skripsi. Magelang:Universitas Muhamadiyah Malang, 2018.

[7] Rusdiana, N., Saputra, B. & Noviyanto, F. Alur distribusi obat dan alat kesehatan instalasi farmasi rumah sakit umum daerah Malingping, Farmagazine, 2(1): 24–29, 2015.

[8] Rahmayanti, V.Gambaran sistem distribusi obat dan bahan medis habis pakai (BMHP) di instalasi rawat inap Rumah Sakit Umum Kota Tangerang Selatan tahun 2017.Skripsi,Tangerang:Universitas Negeri Islam Syarif Hidayatulah Jakarta, 2017.

[9] Adipangarsa, R. Implementasi kebijakan distribusi obat pelayanan kesehatan dasar Menurut SK Menteri Kesehatan RI.Skripsi, Semarang:Univeritas Diponegoro Semarang, 2013.

[10] Nuha, U. Analisis pengelolaan obat pada tahap distribusi di instalasi farmasi Rumah Sakit Islam Sultan Agung Periode 2017-2018.Skripsi,Semarang:Universitas Sultan Agung Semarang, 2019.

[11] Arikunto, S.Prosedur penelitian suatu pendekatan praktik. Jakarta: Rineka Cipta, 2013.

[12] Susan, E. Manajemen Sumber Daya Manusia, Jurnal Manajemen Pendidikan, 9(2): 952–962, 2019.

[13] Kemenkes RI. Peraturan Menteri Kesehatan Republik Indonesia Nomor 56 tentang Klsifikasi dan Perizinan Rumah Sakit. Jakarta: Kementrian Kesehatan Republik Indonesia, 2014.

[14] Afriansyah hade & Zafar, M. Administrasi Sarana dan Prasarana Pendidikan. jurnal sarana dan prasarana.1:1-4, 2020.

[15] Syelviani, M. Pengaruh deskripsi pekerjaan terhadap kinerja pegawai negeri sipil pada kantor camat Tembilahan, Journal of Economy, Business and Accounting, 87(1,2):149–200, 2017.

[16] Agustina, I.& Haryanto, D. Sistem pakar diagnosis kerusakan pada printer Ink Jet dengan menggunakan metode Forward Chaining, Jurnal Manajemen dan Teknik Informatik, 1(1):171–180, 2018.

[17] Puspita, N.& Wardiyah, W. Pengembangan meda Motion Graphic sebagai materi eedukasi penyimpanan obat yag benar di rumah tangga, Jurnal Teknologi dan Seni Kesehatan, 10(2): 92–101, 2019.

[18] Ningsih, V.D. Pengaruh suhu penyimpanan obat kapsul komersil terhadap organoleptik, Jurnal Farmasi Tinctura, 2(1):10–17, 2020.

[19] Dewi, B.K. persepsi dan pengetahuan masyarakat tentang etiket obat sebagai media informasi obat di kabupaten Wonosobo.1:1-2, 2022.

[20] Sukmawati, W.W., Kusndi, Purgiyant. Gambaran waktu tunggu pelayanan di Klinik Pratama Tentrem Sehat Ulujami Pemalang, (129): 1–5, 2020.

[21] Budiyono. Pengaruh disiplin kerja dan fasilitas kerja terhadap produktivitas kerja karyawan pada PT. Karya Gemilang Surakarta. Skripsi,Surakarta : Fakultas Ekonomi Universitas Muhamadiyah Surakarta, 2020.

[22] Mukti, T.C. Pengaruh Standar Operasional Prosedur (Sop) pelayanan terhadap kepuasan konsumen, Jurnal Manajemen dan Kewirausahaan, 2(1):14–26, 2017.

[23] Gabriele.analisis penerapan standar operasional prosedur (sop) di departemen marketing dan HRD PT. Cahaya Indo Persada, Jurnal AGORA, 6(1): 1–10, 2018.

[24] Natasia, N., Loeqijana, A. & Kurniawati, J. Faktor yang mempengaruhi kepatuhan pekaksanaan SOP Asuhan Keperawatan di ICU-ICCU RSUD Gambiran kota Kediri', Jurnal Kedokteran Brawijaya, 28(1): 21–25, 2014.

[25] Khosiah, Hajrah, & syafril. Persepsi Masyarakat Terhadap Rencana Pemerintah Membuka Area Pertambangan Emas Di Desa Sumi Kecamatan Lambu Kabupaten Bima. JISIP (Jurnal Ilmu Sosial Dan Pendidikan), 1(2): 141-149, 2017.

[26] Sandria, M., Samsudin, A., Komariah, K. Peran ketepatan job desc, Jurnal Ekobis Nusantara, 3(2): 10–16, 2020.

[27] Febriawati, H.Manajemen Logistik Farmasi Rumah Sakit,1.Yogyakarta:Gosyen Publising, 2013.

[28] Larasati, N. & Wulandadari, C.A. Penerapan unit dose dispensing menggunakan sistem informasi manajeman di instalasi farmasi RS Panti Rapih, Journal of Management and Pharmacy Practice, 8(4): 153, 2019.

[29] Kusumahati, E., Anita, D., Patrisia, M.Gambaran sistem distribusi unit dose dispensing (UDD) terhadap retur obat injeksi generik di instalasi farmasi rawat inap salah satu rumah sakit di kota Bandung, 7(2): 236–239, 2021.

[30] Herwanto, M.E., Fatimawali., Posangi.J., Surya. W.S. Analisis faktor-faktor yang mempengaruhi proses pendistribusian obat dan alat kesehatan dari gudang farmasi ke instalasi rawat inap Di Rsu Gmim Bethesda Tomohon, Jurnal Kesehatan Masyarakat, 6(3): 2572–2585, 2022.