

Analysis of waiting time for prescription services at the outpatient pharmacy installation of hospital x Pariaman city

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ABSTRACT

This study aims to determine the average waiting time for prescription services in the outpatient pharmacy installation of Hospital X Pariaman City. The waiting time for finished medicine (non-recipe) is the time from the patient submitting the prescription to receiving the finished medicine (non-recipe) with a minimum standard set ≤ 30 minutes. While the waiting time for concoction drug services is the time from the patient submitting the prescription to receiving concoction drugs with a minimum standard set ≤ 60 minutes. The method used in this study was incidental sampling technique. The number of samples in this study were 379 prescriptions. The average waiting time obtained for non-recipe recipes was 55.92 minutes and concoctions 61.23 minutes. The average waiting time obtained from this study has not met the Minimum Service Standards (MSS) set by the government in the Decree of the Minister of Health (Kepmenkes) of the Republic of Indonesia Number: 129/Menkes/SKII/2008. Factors that influence the length of waiting time for prescription services are officer shifts and the availability of Hospital Human Resources (HR).

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INTRODUCTION

To achieve quality health services, hospitals are expected to be able to meet the Minimum Service Standards (SPM) set by the government in the Decree of the Minister of Health (Kepmenkes) of the Republic of Indonesia Number: 129/Menkes/SKII/2008 concerning Hospital Minimum Service Standards, namely waiting time ready-made (non-concoction) drug services and waiting time for concocted drug services. Waiting time for finished (non-concocted) medicine is the time period from when the patient submits the prescription to receiving the finished (non-concocted) drug with a minimum standard set of ≤ 30 minutes. While the waiting time for concoction drug service is the time period from when the patient submits the prescription to receiving the concoction drug with a

set minimum standard of ≤ 60 minutes (Margiluruswati & Irmawati, 2017). 30 minutes. While the waiting time for concoction drug service is the time period from when the patient submits the prescription to receiving the concoction drug with a set minimum standard of ≤ 60 minutes (Margiluruswati & Irmawati, 2017).

Hospital X Kota Pariaman is a class B hospital in Pariaman city which has quite a lot of patient visits. Based on preliminary data obtained from the head of the Outpatient Pharmacy Installation of Hospital X Kota Pariaman, Outpatient IFRS Hospital X Kota Pariaman receives an average of 7000 prescriptions per month. Based on the results of initial observations conducted through interviews with patients, many patients complained about the long waiting time for prescription services. Data on the Minimum Service Standards for Hospital X Kota Pariaman regarding waiting time for drug service in 2016 shows that the average waiting time for finished drug service was 49.15 minutes and concoction medicine was 58.72 minutes. The waiting time for finished drugs in 2016 did not meet the standards and the concoctions met the standards. Then in 2017 the average waiting time for finished drug services increased to 50 minutes and concoction drugs was 61 minutes. The waiting time for prescription services in 2017 did not meet the minimum hospital service standards and in 2018 the waiting time for finished drug services was 46.82 minutes and concoction drugs was 70.84 minutes.

The average waiting time for finished and concocted drug services in 2016, 2017 and 2018 has not met the minimum hospital service standards set by the government in the Decree of the Minister of Health (Kepmenkes) of the Republic of Indonesia Number: 129/Menkes/SKII/2008 concerning Minimum Service Standards. The hospital is the waiting time for finished (non-concocted) drug services and the waiting time for concocted drug services. Waiting time for finished (non-concocted) medicine is the time period from when the patient submits the prescription to receiving the finished (non-concocted) drug with a minimum standard set of ≤ 30 minutes. While the waiting time for concoction drug service is the time period from when the patient submits the prescription to receiving the concoction drug with a set minimum standard of ≤ 60 minutes (Suryana, 2018).

According to the pharmaceutical installation staff, through interviews, it was found that the long waiting time for prescription services was caused by prescriptions piling up at certain hours, the network for inputting medicines into the health BPJS (Social Security Administering Agency) online application often had disruptions, and the number of Pharmacy Technical Workers who did not adequate so that the waiting time for prescription services becomes long (Mulya et al., 2023). Waiting time for prescription services is a problem that is still often found in health care practices, and one component that has the potential to cause dissatisfaction is waiting for a long time. The length of patient waiting time is one of the important things in determining the quality of health services (Laelihah & Subekti, 2017). In Laelihah & Subekti's (2017) research, waiting time for services is a problem that is still widely encountered in health care practices, and one of the components that has the potential to cause dissatisfaction, where waiting for a long time causes dissatisfaction with patients. Associated with quality management, the aspect of long waiting time for patients to get health services is one of the important things and greatly determines the quality of health services provided by a health service unit, as well as reflecting how hospitals process service components that are tailored to the situation and expectations of patients. In terms of context, waiting time is a problem that always causes patient complaints in some hospitals, often the problem of waiting time for this service does not get attention by hospital management. A hospital ignores the length of waiting time in its health services, so in totality the quality of hospital services is considered unprofessional and can reduce patient satisfaction as well as the patient's family.

Based on the background above, the researcher is interested in conducting research on "Analysis of Waiting Time for Prescription Services at the Outpatient Pharmacy Installation at Hospital X Kota Pariaman".

RESEARCH METHOD

The research data source is primary data in the form of the average waiting time for concocted and non-concocted prescription services at the Hospital Outpatient Pharmacy Installation.X CityPariaman and secondary data used is Minimum Service Standards.

Working Method

1. Polulation

The population in this study were all prescriptions received at the hospital's outpatient pharmacy installationX CityPariaman. The population in the study was obtained from the average monthly prescription so that a population of 7000 recipes was obtained.

2. Samples and Sampling Techniques

The research sample was prescription outpatients who received Hospital Outpatient Pharmacy Installation servicesX CityPariaman with incidental sampling technique. The number of samples as a source of research data is calculated using the formula(Mulyati et al., 2022 ; .Fika et al., 2022)(Benichou et al., 2018):

$$n = \frac{N}{N(d^2)+1} \tag{1}$$

Information :

- n = sample
- N = population size
- D = limit of error (0.05)

Then the sample size to be studied is obtained: It is known that: N (population) = 7000 (average non-concoction recipes per month)

$$n = \frac{7000}{7000 (0,05^2)+1}$$

$$n = \frac{7000}{18,5}$$

n = 378.378 (rounded to 379)
So the sample in this study was 379.

Variable Operational Definition

In this process, there are explanations related to variables, operational definitions and ways of measuring each variable presented in the minutes. The operational definition of variables can be seen in table 1 below.

Table 1. Operational definition		
Variable	Operational definition	Measuring Method
Waiting Time for Non-Mixed Services	The waiting time for non-concoction drug prescription services is the time period from when the patient submits the prescription to receiving the non-concoction drug.	≤ 30 minutes
Mixing Service Waiting Time	The waiting time for concoction drug service is the time period from when the patient submits the prescription to receiving the concoction drug.	≤ 60 minutes
Number of Medicinal Items	Each additional drug item in the prescription will provide additional time at each stage of prescription	The number of medicinal items in one prescription

Officer Shifts	service. Number of drug items in one recipe. Distribution of time for Hospital Pharmacy Installation officersX CityPariaman, divided into morning and evening shifts.	Interview with Hospital Pharmacy Installation staffX CityPariaman
Queue Number and HR Availability	Giving queue numbers to patients, divided into queues A, B, and General. The number of officers is in accordance with their workload.	Interview with Hospital Pharmacy Installation staffX CityPariaman.
Drug Availability	Availability of drugs in accordance with the prescription received	Complete and incomplete

Based on table 1, it can be explained that there are research variables, namely Non-Compounding Service Waiting Time, Compounding Service Waiting Time, Number of Drug Items, Officer Shift, Queue Number and Availability of Human Resources and Drug Availability. There is a definition of each variable and how to measure each variable, it can be seen that in the Non-Compound Service Waiting Time and Compound Service Waiting Time variables there is the time required for patients in minutes. In the variable Number of Drug Items based on the number of drug items in one prescription. The Officer Shift, Queue Number and HR Availability and Drug Availability variables are adjusted to the results of the interview.

Data collection technique

The collection technique in this study was through direct observation/observation with this research instrument using a Data Collection Sheet containing the patient's name, serial number, time of prescription submission and drug delivery, type of prescription, staff shift, number of prescription items or number of R/, completeness of the prescription.

Data Analysis Techniques

Data analysis using SPSS to calculate descriptive statistics including the mean, median and standard deviation (Mulyati et al., 2022) (Vounzoulaki et al., 2020) (Nofrizal, 2019) (Yulinah, 2022) from the waiting time for outpatient prescription services at the Hospital Pharmacy InstallationX CityPariaman and calculating the correlation to see the relationship between the causal factors found during the study and the waiting time for prescription services.

RESULTS AND DISCUSSIONS

Results

Sample Characteristics

From the research results, the number of samples in this study was 379 recipes, consisting of 332 non-concoction recipes and 47 concoction recipes. The number of samples can be seen in Table 2.

Table 2. The percentage of research samples obtained at the Outpatient Pharmacy Installation of Hospital X Kota Pariaman

No.	Recipe Type	Amount	Percentage
1.	Non Concoction	332	87.6%
2.	Concoction	47	12.4%
	Total	379	100%

Based on table 2, it can be explained that the percentage of the total sample in the study obtained in the outpatient pharmacy installation of hospital x pariaman city was 379 prescriptions, consisting of 87.6% non-recipe prescriptions and 12.4% were prescription concoctions.

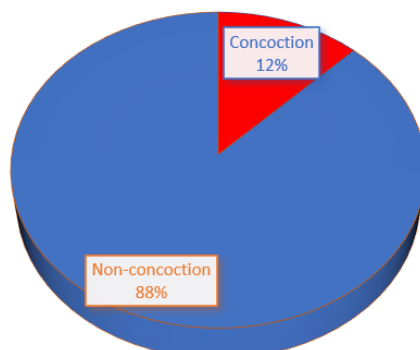


Figure 1. Figure frequency distribution of the number of research samples

From Figure 1. it can be seen that from the research the percentage of mixed samples was 12.4% and 87.6% non-mixed.

Prescription Service Waiting Time

Based on the results of this study it can be seen that the average waiting time for prescription services is 56.39 minutes for non-concoction recipes and 62.06 minutes for concoction recipes. Complete data can be seen in Table 3.

Table 3. Average, Median, maximum time, minimum time, standard deviation Waiting Time by Recipe Type (in minutes)

Recipe Type	Time average	Median	max. time	Time min	Standard Deviation
Non Concoction	55,92	50.00	137	2	29.88
Concoction	61,23	62.00	135	6	27,81

From Table 3. it can be seen that the average waiting time for non-concoction recipes is 55.92 minutes and for concoctions is 61.23 minutes. The median time for concocted recipes was 62.00 minutes and 50.00 minutes for non-concocted recipes, the fastest time for serving concocted recipes was 6 minutes and 2 minutes non-concocted, the standard deviation of concocted recipes was 27.81 minutes and 29.88 minutes. The average waiting time for concoction recipes is longer than non-concoction recipes.

Table 4. Average drug items in one outpatient prescription at the pharmacy installation at Hospital X Kota Pariaman

Recipe Type	Average
Concoction	4.35
Non Concoction	4.89

Based on table 4, it can be explained the average number of drugs in one prescription on an outpatient basis in the pharmaceutical installation of Hospital X Pariaman City, where there are types of concoction prescriptions with an average of 4.35 and types of non concoction prescriptions with an average of 4.89.

Table 5. Frequency of number of drug items in one prescription

The number of drug items in one prescription	Frequency
1	15
2	36
3	51
4	78
5	55

6	31
7	31
8	31
9	14
10	6
11	2
12	2
Total	379

Based on table 5, it can be explained the frequency of the number of drug items in one prescription, where there are a number of drug items of 1 item to 12 items and there is a frequency of the number based on data from outpatient care in the pharmaceutical installation of hospital x pariaman city. of the total frequency of the number of drug items in one prescription there is a total of 379.

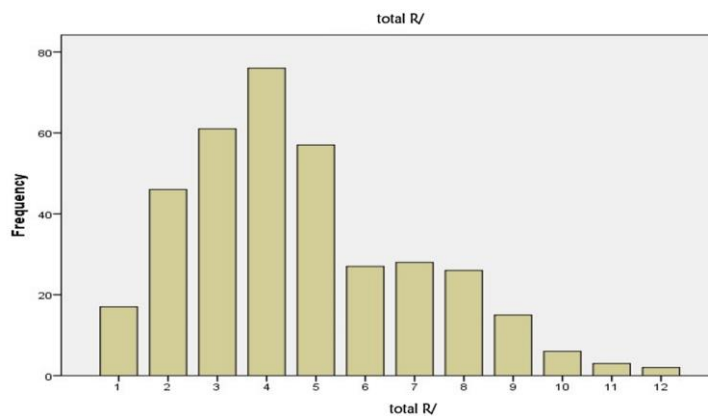


Figure 2. Bar chart of the frequency of the number of drug items in a prescription

Based on figure 2. it can be seen that the average number of drug items in one concoction recipe is 4.35 and non-concoction is 4.89 drug items. On average, there are more non-concoction prescription drug items than concoction recipes. And the number of drug items most often prescribed is 4 drug items.

Table 6. Correlation coefficient between number of drug items and waiting time for prescription service

Recipe type	Correlation coefficient	Number of samples
Non Concoctions and Concoctions	-0.45	379

Based on table 6, it can be explained that the correlation coefficient between the number of drug items and the waiting time for prescription services with a total of 379 samples, the correlation coefficient is -0.45.

Table 7. Average waiting time for prescription services based on officer shifts

Officer Shifts	Number of Samples	Average Waiting Time (minutes)
Morning	214	45.03
Afternoon	165	71.56

Based on table 7, it can be explained that the average waiting time for prescription services in minutes, there is a duty shift variable which is divided into a morning duty shift with a sample size of 214 and an afternoon duty shift of 165, from each shift time there is a difference in waiting

time and it shows that the average waiting time for prescription services is longer in the afternoon shift, which is an average of 71.56 minutes.

Table 8. Average waiting time for prescription services based on queue number

Medicine supplies	Number of Samples
Complete	375
Incomplete	4

Based on table 8, it can be explained the average waiting time for prescription services based on queue numbers, which are divided into queue code A for chronic BPJS patients, Queue B for non-chronic BPJS patients and Queues for general patients. From the results of the calculation of the average queue time A for chronic BPKS patients with an average time of 66.95 minutes.

Discussion

In the pharmaceutical installation of Hospital X Kota Pariaman there are 5 stages of prescription services. The first stage is that the incoming prescription is received by the pharmacist, then the pharmacist checks the completeness of the prescription and other requirements and then provides a queue number. The second stage is entering prescriptions into the RS SIM application (Hospital Management Information System). Especially for chronic prescriptions, they must be input in advance into the health BPJS (Social Security Administering Agency) drug claim application. The third stage is the preparation of the drug, for prescription concoctions it requires a longer time because you have to calculate the dose first, then mix and wrap it. The fourth stage is the provision of labels. The fifth stage is the delivery of drugs by pharmacists to patients.

From Table 4. it can be seen that the number of concoction recipes is 47 recipes and non-concoctions are 3332 recipes. The average waiting time for non-concoction recipes is 55.92 minutes and for concoctions is 61.23 minutes.

From Table 6. The waiting times for non-concoctions are 55.92 minutes and 61.23 minutes for concoctions. The results of this study stated that the average waiting time for prescription services at the outpatient pharmacy installation at Hospital X Kota Pariaman did not meet the Minimum Service Standards (SPM) requirements set by the government in the Decree of the Minister of Health (Kepmenkes) of the Republic of Indonesia Number: 129/Menkes /SKII/2008 concerning Hospital Minimum Service Standards, namely waiting time for finished (non-concocted) drug service and waiting time for concocted drug service.

Waiting time for finished (non-concocted) medicine is the time period from when the patient submits the prescription to receiving the finished (non-concocted) drug with a minimum standard set of ≤ 30 minutes. Meanwhile, the waiting time for concoction drug services is the period from when the patient submits the prescription to receiving the concoction drug with a set minimum standard of ≤ 60 minutes (Margiluruswati & Irmawati, 2017).

Meanwhile, the waiting time for concoction drug services is the period from when the patient submits the prescription to receiving the concoction drug with a set minimum standard of ≤ 60 minutes (Margiluruswati & Irmawati, 2017). The waiting time for concoctions requires a longer time than non-concoction recipes, starting from calculating the dosage, compounding, packaging, to giving labels (Fitriah & Gracia Therecella Anabella Role Sinaga, 2008).

According to Wongkar L in his research, the average waiting time for prescription services is influenced by several factors, one of which is the type of prescription. Concoction recipes require a longer time starting from calculating the dose, compounding, to giving labels. To be able to meet the average waiting time for prescription services set by the Minister of Health (Kepmenkes) of the Republic of Indonesia Number: 129/Menkes/SKII/2008 concerning Hospital Minimum Service Standards, outpatient pharmacy installation staff at Hospital X Kota Pariaman are expected to be more agile in completing prescriptions, improving the quality of work, because waiting time is one

of the quality indicators contained in the SNARS (National Standard for Hospital Accreditation) (Arini et al., 2020).

From Table 6. It can be seen that the average number of drug items in one non-concoction recipe is 4.35 items and 4.89 items in concoction. Another factor that affects waiting time according to Wongkar L is the number of drug items in one prescription (Sari, 2021). In this case, each additional drug item in the prescription will provide additional time at each stage of prescription service (Fika et al., 2022). In his research, it was shown that a large number of drug items required a longer service time of 66 minutes compared to a small number of items, namely 33.8 minutes (Sari, 2021).

From Table 8, the correlation coefficient between the number of drug items in one prescription and the waiting time is -0.4. These results state that the number of drug items in one prescription does not affect the waiting time for prescription services at the outpatient pharmacy installation at Rumah X Kota Pariaman. Because patients with complicated diseases need a lot of drugs (Setiawan et al., 2022; Fika, 2020; Trisna et al., 2022).

From Table 9. Another factor that affects the waiting time for prescription services is the officer's shift. Morning shift every Monday – Friday from 07.30 WIB – 12.00 WIB. Afternoon Shift 13.00 WIB – 16.00 WIB (except Friday 13.30 WIB – 16.30 WIB). The average waiting time for prescription services for the morning shift is 45.03 and the afternoon shift is 71.56 minutes. In this study, the results showed that the afternoon shift required longer time than the morning shift. This is due to the policy of Hospital X Kota Pariaman which gives 1 hour to rest from 12.00 WIB – 13.00 WIB. During that 1 hour, many patients who were to submit prescriptions had queued outside so that when the outpatient pharmacy was reopened, prescriptions piled up.

In Table 10. other factors found in the field that affect waiting times are queue codes. The average waiting time for prescriptions with queue A is 66.95 minutes, queue B is 51.07 minutes and general is 43.46 minutes. In the Pharmacy Installation Outpatient Hospital X Kota Pariaman, there are 3 queue number codes, namely: queue A, queue B and General. Queue A is given to BPJS (Social Security Administering Body) health patients who submit chronic prescriptions, namely prescriptions for taking drugs per month of use. Queue B is given to BPJS (Social Security Administering Body) patients who submit a prescription for taking medicine every 7 days or 1 week of use.

According to research conducted by Wijaya, one of the factors that influence waiting time is the availability of sufficient and skilled human resources, length of work, workload, employee knowledge and skills. (Rahman, 2019) Work experience is an individual's background so that it can affect performance behavior individuals and mentions that the longer a person's work experience, the more skilled he will be (Umam, et al., 2023). And the longer a person's working period, the more insight and maturity they will have in carrying out their duties (Pitri, 2020).

It was discovered at the time of the research that the number of Pharmacy Technicians at the Outpatient Pharmacy Installation at Hospital X Kota Pariaman was 5 people with details of 1 person for the pharmaceutical installation warehouse, 1 person for production, 3 people for service and 3 pharmacists with details of the installation head pharmacist pharmacy 1 person, pharmacist procurement 1 person, pharmacist service 1 person. In the Regulation of the Minister of Health of the Republic of Indonesia Number 56 of 2014 concerning Human Resources for Class B General Hospitals article 32 "Pharmacists in Pharmacy Installations consist of at least 4 (four) pharmacists who work in outpatient care who are assisted by at least 8 (eight) pharmacists. pharmaceutical technical personnel (Schwarz et al., 2014).

For the criteria for the number of pharmacists currently meeting the regulations of the minister of health, it is advisable for the hospital to increase the number of HR (Human Resources), especially the number of pharmaceutical technical personnel and add facilities such as adding computers, to improve service quality and meet the waiting time requirements for prescription

services and fulfill HR requirements (Human Resources) for class B public hospitals in Permenkes number 56 of 2014 (Schwarz et al., 2014).

According to Wongkar L in his research, incomplete drugs in one prescription will also increase the waiting time for prescription services because it takes additional time to write a copy of the prescription (Fika, R. Setiawan, 2018). In Table 12. The availability of drugs at Hospital X Kota Pariaman is quite complete, out of 379 samples, only 4 of them were incomplete. The person in charge of the pharmaceutical installation warehouse at Hospital X Kota Pariaman is quite good at paying attention to drug stocks at the Pharmacy Installation warehouse at Hospital X Kota Pariaman.

CONCLUSIONS

Based on the results of research conducted at the X Kota Hospital Outpatient Pharmacy Installation regarding Waiting Time for Prescription Services, it can be concluded that: a) The average waiting time required to complete a concoction prescription is 61.23 minutes, while the time required to complete a non-medical prescription the mix is 55.92 minutes. b) The average waiting time for concoction and non-concoction prescription services at the Outpatient Pharmacy Installation of Hospital X Kota Pariaman has not met the Minimum Service Standards (SPM) set by the government in the Decree of the Minister of Health (Kepmenkes) of the Republic of Indonesia Number: 129/Menkes /SKII/2008 concerning Hospital Minimum Service Standards, namely the waiting time for prescription services, namely non-concoction recipes ≤ 30 minutes and for concoction recipes ≤ 60 minutes. The results of this study are expected to be information and input for Hospital X Kota Pariaman" in improving the quality of outpatient services by shortening the waiting time for patients. Research Limitations is Every study is inseparable from limitations and shortcomings, as well as this study. This study uses a cross sectional design that each research subject is only observed at one time, thus the data of this study may change over time considering the study tested patient satisfaction which can change following the development of service quality in the hospital.

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