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## System Effectivity of Pharmacy Services Queue Time in Outpatient Pharmacy Depot RSD Dr. Soebandi Jember

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### ABSTRACT

Hospital pharmacy service is one of healthcare activity in hospital supporting quality health service. Good service time is associated and affecting customer satisfaction. Achievement results of Minimum Service Standard (MSS) in Pharmaceutical Depot RSD dr. Soebandi Jember in 2016 showed that service queue time of concocted drug was up to 3 hours and 35 minutes and for non-concoction drug was up to 2 hours and 14 minutes meaning that MMS had not been reached. The purpose of this research was to identify factors causing prolonged queue time of pharmacy service and give recommendation of alternative solution to queue time problem. This research used descriptive study approach by analyzing service flowchart, document review, observation, interview, and group discussion. The process of identifying the problem preceded by data collection stage, prioritizing the problem, determining the root of the problem, and determining the solution. The results of research along with the application of alternative solutions agreed upon was presented as a draft guidelines pharmacy services effectivity system. Implementation of pharmacy service activities based on the effectivity guidelines can speed up queue time despite resulting in pick hour up to 30-minute for concocted drugs and up to 22 minutes for non-concoction drug service. Implementation of system effectivity showed significant differences and were able to reach Pharmaceutical Depot MSS especially in its queue time.

Keywords: Queue time, Outpatient pharmacy depot, Effectivity

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### INTRODUCTION

#### Background

Today's emerging hospitals could be interpreted as labor-intensive, capital-intensive and tech-intensive industries because hospitals used large quantities of Human Resources (HR) with various qualifications, as well as the amount of funds used to perform various services. General hospital industry product is health services<sup>(1)</sup>.

Pharmacy service is one of the hospital services that must exist and cannot be separated from the health service system and oriented to patients' service and safety<sup>(2)</sup>. Hospital pharmacy service is one of healthcare activity in hospital supporting quality health service. Pharmacy service is inseparable from the hospital healthcare system oriented to patient care, provision of quality medicine, clinical pharmacy services that can be afforded by everyone in society. Pharmacy services with good pharmaceutical supplies could become one of the hospital's revenue centers because the turnover could reach 50-60% of hospital income<sup>(3)</sup>.

Implementation of pharmaceutical services becomes an important thing that must be paid attention by the hospital in maintaining quality service to improve patient satisfaction. Pharmaceutical services were involved in supplying medication, and ensuring that it is safe to be used, effective and appropriate so as to improve patients' quality of life. The final process of health services in hospitals showed that about 80% of patient visits concluded with drug prescriptions<sup>(1)</sup>.

One of the indicators that could be used as a guideline for pharmaceutical services was the Minimum Service Standard (MSS). MSS implemented in the hospital refers to the Decree of Health Minister of the Republic of Indonesia No. 129/Menkes/SK/II/2008 about hospital pharmacy service such as queue time of pharmacy service<sup>(4)</sup>.

Queue time became one of the important focuses in pharmaceutical services. Good service time had an impact on customer satisfaction, so hospital must control service time to achieve patients' maximum satisfaction level<sup>(5)</sup>. The main complaints that cause patient dissatisfaction came from the delay in service time and could affect patients' loyalty<sup>(6)</sup>. Pharmaceutical Depot of RSD dr. Soebandi had standard queue time 60 minutes for concocted drug service and 30 minutes for non-concoction drugs. Pharmacy service queue time topic was raised based on MMS yet achieved and agreement with management party to improve queue time of pharmacy service in Outpatient Pharmaceutical Depot where several efforts had been done to speed up service. Based on the existing problem, it was necessary to study factors that caused prolonged queue time, and alternatives to speed up pharmacy services.

The length of queue time in pharmacy service care in pharmaceutical depot could be caused by internal and external factors. Internal factors affecting pharmaceutical services was processes or procedures including screening stage, applying etiquette, dispensing, and delivery to patients. Other influential internal factors include availability and ability of Human Resources (HR) in Pharmacy Depot and availability of existing infrastructure. Other important external components were the number of incoming drug items, number of incoming prescription, service opening time, and also the most visited outpatient ward division distance with the pharmaceutical depot<sup>(7)</sup>.

RSD dr. Soebandi has been trying to consistently make various efforts in improving quality of healthcare services. Efforts has been made by dividing the pharmaceutical service depot into two places. Controlling service time to achieve service standards is important in improving service quality and also affecting patient satisfaction.

### Purpose

The purpose of this research was to identify factors causing prolonged queue time of pharmacy service and give recommendation of alternative solution of queue time problem at Pharmacy Depot of RSD dr. Soebandi Jember.

### METHODS

The research was conducted in August 2017 in Pharmaceutical Depot RSD dr. Soebandi Jember. This research was using descriptive study approach, preceded with a preliminary study for 2 weeks followed by problem identification process, data collection until determining solution is shown in Figure 1.

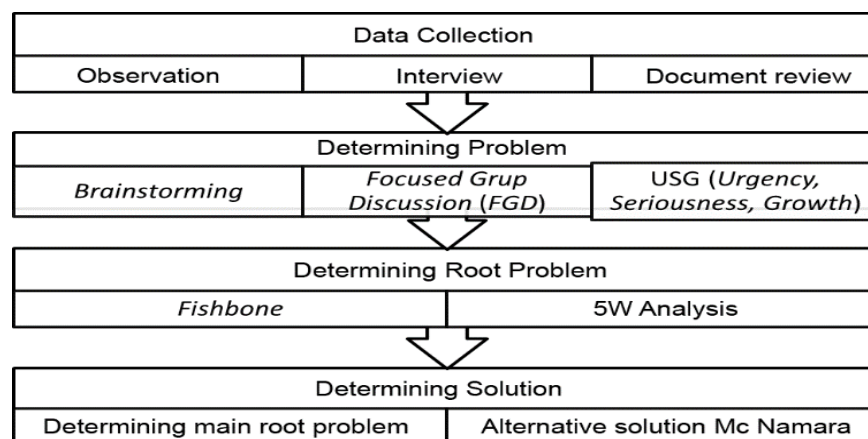


Figure 1. Design of identification process stage

Problem identifying process consisted of data collection stage, problem determination, determining root-problem, and determining solution. The first phase of determining problem priority could be done using Focused Group Discussion (FGD) method. FGDs were conducted with hospital management, pharmacy depot, outpatient installations (Irja), and several other members related to pharmacy services. Method used to select top priority problem was done by discussing to determine selected main problem using USG (Urgency, Seriousness, Growth) method with scale 1-5. The second stage was to find the root problem using analysis of 5 why and design method of Ishikawa diagram (fishbone) to determine factors of the main problem. The third stage was to find the root cause of the main problem using literature study and conducting second FGD to determine the priority scale of the proposed solution from the root of the main problem. The selected solutions and implementations were completed with details of types and resources.

## RESULTS

Data collection process and determination of the focus of the problem through FGDs with the Director and the management party determined main problem that was long queue time for pharmacy services in Outpatient Pharmacy Depot of RSD dr. Soebandi Jember. The root problem identification was done using the fish bone method combined with the 5 why analysis. There were 11 internal and external factors of root problems in prolonged queue time which was presented in Table 1.

Table 1. Tabulation of the root cause problem of prolonged pharmacy services of Outpatient Depot RSD dr. Soebandi Jember

No	Root Problems
1	Patients congestion at certain hours
2	Users (doctors) did not come on time
3	Electronic recipes had not been implemented
4	Lack of pharmacist
5	Lack of pharmaceutical technicians (PT)
6	Lack of administrative manpower
7	In House Training (IHT) for pharmacist was rarely done
8	Room to deliver drugs and dispensing room was separate
9	Pharmaceutical and Therapeutic Committees (PTC) was lacking in socializing formulary applications
10	Lacked communications between Pharmaceutical and Therapeutic Committees and users
11	Fund realization for drug procurement often hampered

Source: The results of fish bone method design and analysis of 5 why for prolonged pharmacy services.

Selected alternative solutions was made based on analysis and literature studies and consultations with field supervisors and supervisors. Results of proposed or alternative solutions related to the long queue time of pharmacy services Outpatient Pharmaceutical Depot RSD dr. Soebandi Jember is shown in Table 2.

Table 2. Alternative solution of prolonged pharmacy services of Outpatient Depot RSD dr. Soebandi Jember

No	Alternative Solution
1	Manual book of pharmacy queue time effectivity system
2	Implementation of electronic recipes
3	Increasing manpower (PT/Administration/ pharmacist)
4	In House Training (IHT) was given to refresh science and knowledge regarding services processes
5	Renovate depot rooms to connect dispensing room with room to deliver drugs
6	Socialization from PTC team (monitoring and evaluation activity and formulary)

Alternative solutions selected using McNamara method and were scored. The highest score for alternative solution were obtained, that was drafting manual about pharmacy queue time effectivity system. Alternative solution in the form of designing manual for pharmacy queue time effectivity system was based on document review and service flow observation result. The contents of the design of the manual for pharmacy queue time effectivity system were made by carry-over method based on the number of recipes received (10 recipes) then it will be passed to the next stage consisted of prescribing, transcribing, dispensing and administration according to the contents of the manual. Preparation of the manual was done by doing counseling to pharmacy officers, Head of Outpatient Pharmacy Depot, known by Head of Pharmaceutical Installation and hospital management.

Before the solution was implemented, the achievement of MSS of Pharmacy Depot related to queue time for concocted drugs were up to 3 hours 35 minutes and non-concoction drugs were up to 2 hours 14 minutes. The result of observation based on the implementation of the activity on 10 prescription samples at Outpatient Pharmacy Depot outside pick hours (concurrent incoming drugs), concocted drug queue up to 24 minutes and non-concoction drug up to 17 minutes. Different results of the findings was found at pick hours, where concocted drugs were up to 30 minutes and non-concoction drugs were up to 22 minutes.

## DISCUSSION

The length of queue time had certain impact on satisfaction based on customers' (patient) situation and expectation. Healthcare service activity with value of queue time is directly related to service quality and impact on patient satisfaction<sup>(8)</sup>. The length of queue time is influenced by internal and external factors. Improvement of

service quality Pharmacy Depot was an internal improvement effort and would be a consideration of improvement on other factors (internal factors).

The rules on MSS was in accordance with KMK No. 128 of 2008 regarding Minimum Service Standards in hospitals focusing on performance achievements of pharmaceutical installation where several points should be achieved, i.e. queue time for non-concoction and concocted drugs, no mistake in drug delivery, prescription written according to formulary, and patient satisfaction indicators<sup>(4)</sup>. Quality assessment procedure of pharmacy service queue time is defined as grace period since patient gives prescriptions until patient receives the drug. This standard includes queue time for drug services consisted of non-concoction drug services with a standard of  $\leq 30$  minutes, and concocted drug services with a standard of  $\leq 60$  minutes.<sup>(4)</sup> Outpatient Pharmacy Depot performed quarterly reporting and reporting annual performance achievements. The assessment process takes into account numerator factors that is cumulative number of service queue times surveyed in one month and enumerated by number of patients in the month. Efforts done by Pharmacy Installation to achieve the improvement of queue time of pharmacy service were by opening the service of Outpatient Pharmacy Depot on the second floor of Irja hoped to decreasing the waiting time of drug service.

Based on the achievement of MSS in 2016, it was found that the queue time for the service of concoction and non-concoction drugs had not reached the standard. Queue time result for drug service was 3 hours 35 minutes and non-concoction was 2 hours 14 minutes. Efforts that had been done were opening new Pharmacy Depot on the 2nd floor and long queue time for concocted drugs and non-concoction drugs had undergone improvement but still had not reached the standards according to the rules of MSS. Pharmacy services in pharmaceutical depot had been altered to improve queue time and periodically evaluate the performance of pharmaceutical services compared with patient expectations reported in the patient satisfaction survey periodically within 1 year. The application of alternative pharmacy service solutions in Outpatient Pharmacy Depot based on manual of drug service effectiveness system can further accelerate service time. The intervention using manual of system with carryover method was found to be significant time difference and able to reach the standard of MSS achievement related to the waiting time of pharmacy service. Prior to the intervention of activities socialization related to the alternative solutions in the form of drug service effectiveness system in pharmacy officials was conducted in the hope of improving understanding and achieve a faster queue time.

Socialization, implementation and evaluation are needed in activities and work culture. There are many evaluation techniques that can be used for quality improvement, which can also be used to perform performance appraisals such as Quality Control (QC) or Qualified Control Circle (QCC), Quality Assurance (QA), Total Quality Control (TQC), International Standard Organization (ISO), Total Quality Management (TQM), etc. The application of hospital POA related to drug service time efficiency system in evaluation activity is conducted based on Quality Control Cycle evaluation approach, with continuous evaluation process and results regarding its performance reported continuously<sup>(9)</sup>.

Implementation of service activities refers to the manual of pharmacy service effectivity system while outside pick-hours, found that pharmacy service were able to reach the MSS. The application of pharmacy service effectiveness system within pick hour, also found that MSS had been reached.

Based on the results, the implementation of the queue time efficiency system could be optimally achieved if the officer is available and in accordance with their respective duties and functions. Implementation based on the manual of pharmacy service queue time effectivity system still encountered several obstacles such as unaccustomed to carryover culture when there was accumulation of more than 10 recipes. Currently, the implementation of carryover to the next stage was according to the contents of the manual supervised by the Head of Pharmaceutical Depot.

Supervision activities or services needs to be supported and done by leaders. Leader figures should be able to direct, refine and exemplify the behavior of work culture according to organizational goals<sup>(10)</sup>. Efforts to facilitate monitoring and evaluation process could be done by arranging Plan of Action (POA) aimed to Head of Depot and known by Head of Pharmacy Installation in implementing service continuity and implementation of effectivity of pharmacy service activity. Evaluation of activities will be reported periodically through quarterly Pharmaceutical Department's performance reports and annual reports based on performance indicators of MSS of Pharmaceutical Installation related to the length of queue time for pharmacy services.

## CONCLUSION

Pharmaceutical installation in regional hospital dr. soebandi jembar has tried some services improvement efforts especially accelerating the time of drug services. Achievement results of Minimum Service Standard (MSS) in Pharmaceutical Depot RSD dr. Soebandi Jember in 2016 showed that queue time for service of drug and non-concoction drug is still not reaching the standard. Implementing manual book of pharmacy queue time effectiveness system will guide in reference to be effectiveness accelerate the service. The implementation of effectiveness system of drug services obtained faster service time results even though there is pick hour periode.

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