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Procurement Analysis of Pharmaceutical Supplies with Lean Hospital Approach in Pharmacy Department of Hospital "X" Tegal, Indonesia

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ABSTRACT: Pharmacy Departments in hospitals are one of the biggest revenue contributors in hospitals. But on the other hand, pharmaceutical departments are also one of the biggest expenditure sources in hospitals, so it needs to be done well management. Then we need an analysis to identify wasteful activities.
The method used is direct observation to observe the process of selection, planning, procurement, and received of medicines. Then conducted in-depth interviews with structural involved in the process of managing pharmaceutical supplies, see routine reports, Standard Operating Procedures (SOP), Policies, Guidelines for Hospital Pharmacy Services and Organization, and other supporting documents. Waste data analysis from interviews was conducted with current state mapping, root problem analysis with Root Cause Analysis and system improvement designs made in the form of Future State Mapping.
In this study, it was found that waste occurred in the process of selection, planning and procurement, and received of medicines, including waste of waiting, waste of inventory, waste of human potential, waste of defect, waste of transportation, and waste of over processing. Proposed improvement in the selection, planning, procurement, and received process is the creation of an ITbased system and improvement of effective and efficient procedures to accommodate the work of managing pharmaceutical supplies, particularly in the selection, planning, procurement, and received process.

KEYWORDS: Management, pharmaceutical supplies, lean hospital, waste, procurement, .

INTRODUCTION

Medicine costs are a component of costs that are relatively easy to intervene. in countries with high income levels, the government spends around 10% of the budget on medicines, whereas in countries with low-income levels, the government spends 25% on drug budgets. About one third of the annual hospital budget is spent on materials and supplies, including medicines. The Pharmacy Department is one of the most widely used therapeutic facilities in hospitals and one of the few areas where large sums of money are spent on repeat purchases. For this reason, methods are needed to improve the process and reduce waste. One method that can be used is lean.

The Pharmacy Department of Hospital "X" Tegal is one of the biggest revenue contributors in the hospital. In January - June 2021, Pharmacy Department contributed 46.25% of total hospital revenue. But on the other hand, pharmacy Department is also one of the biggest sources of expenditure in hospitals, in January - June 2021, Pharmacy costs amounted to 40.82% of the total hospital costs. So, it needs to be done well management. From the 2020 Pharmacy Department performance data, it is known that the Inventory Turn Over Ratio in 2019 is 14.5 times, the average deadstock value of the drug is 7.25%, still above the established standard of ≤5%, there is a vacancy of the drug which can be seen from the percentage of drugs delivered to patients is not 100%, and the average pharmaceutical inventory inventory value for January - June 2021 is 40.27% when compared to pharmaceutical revenue, it is still far compared to the established standard of ≤20%.
Based on the background above, this research was conducted to identify waste in the process of managing pharmaceutical supplies and their causes at the Pharmacy Department of Hospital "X" Tegal and to provide alternative proposals for improvements to eliminate waste from the process. This research can be used in improving the management of pharmaceutical
supplies so that they are more efficient and improve the quality of service, as well as providing optimal satisfaction to stakeholders.
The purposes of this study are: Identify the flow of pharmacy supply management processes in Hospital "X" Tegal when reviewed using the Lean Hospital approach, analyzing the root cause of waste in the process of managing pharmaceutical supplies in the

Pharmacy Department of the Hospital "X" Tegal and propose improvements with the lean hospital approach to reduce or eliminate waste to stakeholders in the Pharmacy Department of Hospital "X" Tegal.

METHOD

This type of research used in this research is descriptive method. The data obtained in the form of qualitative data. The study was conducted for 6 months from February to June 2022 at Hospital "X" Tegal. The research was carried out by observing the implementation of the drug management process, namely by observing the processes that occur during selection, planning, procurement, and received. Then conducted in-depth interviews with the Pharmacy Therapy Team, as well as pharmacists and Pharmaceutical Technical Personnel at the Pharmacy Department of the Hospital "X" Tegal to find waste in the process of managing drugs with a lean hospital approach and the root causes of waste. Activities in drug management are identified into three categories, namely value added, necessary but non-value added, and non-value added. Identification is carried out during in-depth interviews with informants. The results of identification of these activities are illustrated by value stream mapping. Then for the root cause analysis is presented in the form of a fishbone diagram. Proposed improvements made with future state mapping.

RESULT AND DISCUSSION

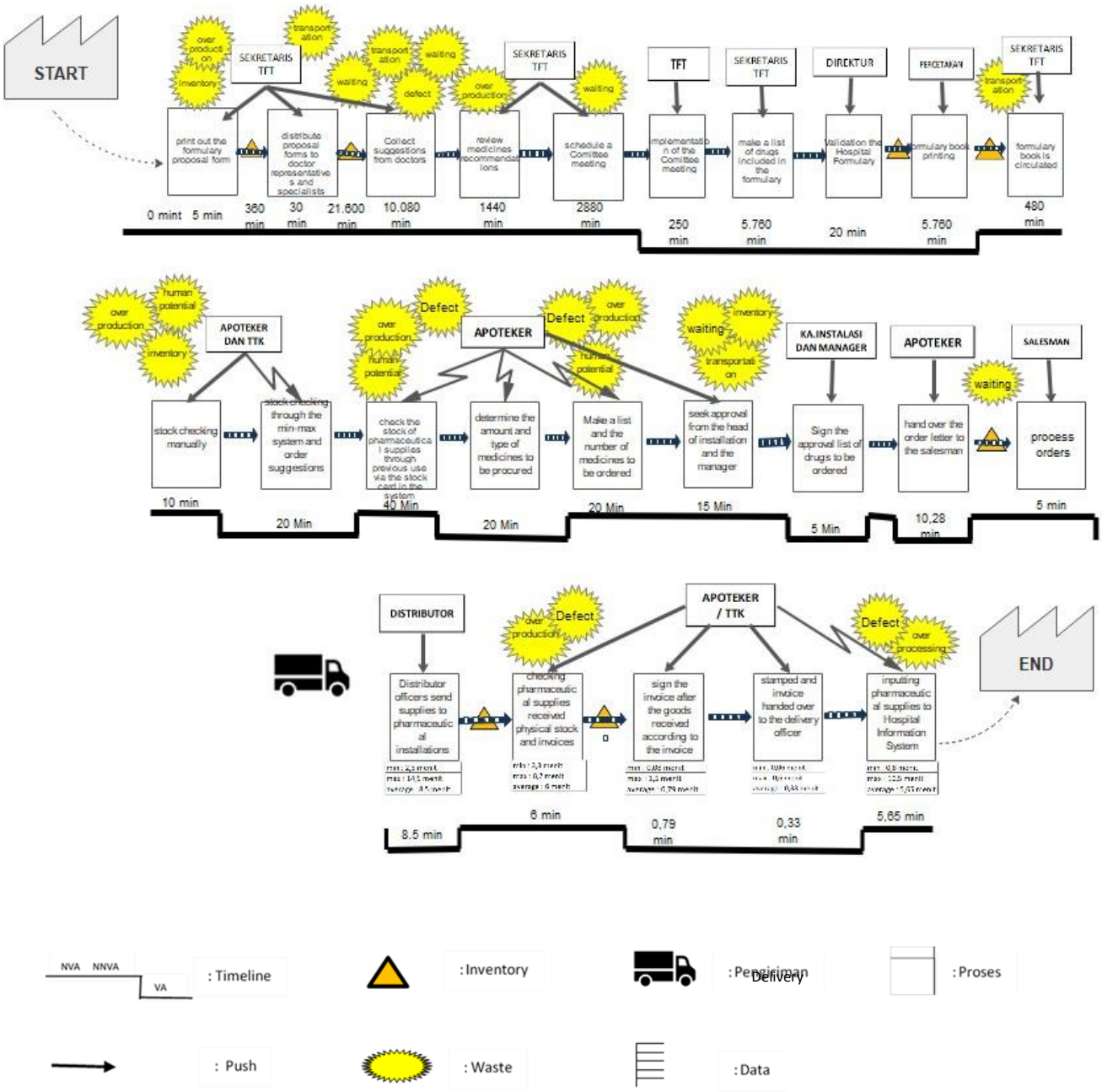
In this research, what will be analyzed is waste and the root causes of the problems in the process procurement. The Lean Hospital method is used in this study because it can find out waste activities in the process of medications management in the Pharmacy Department of Hospital "X" Tegal.

The selection process at Hospital "X" Tegal takes 54,125 minutes or around 55 days. Of this total time, activities that fall into the value-added category only require 5 days or 11.25%, while non-value-added values are 88.75%. It appears that the percentage of waste is greater than 30% so the selection process is still not efficient. Waste that occurs in the selection process is waste transportation because the proposal form is still manual, waste waiting, because collecting the proposal form must wait, waste of inventory, and waste of defect. After analyzing the root cause of the problem, it appears that the cause of waste is the Pharmacy and Therapy Comittee secretary having difficulty communicating with the doctors, the proposed drug in the form of handwriting, the proposed medicine does not include scientific reasons, the Pharmacy and Therapy Comittee archive has not been organized.

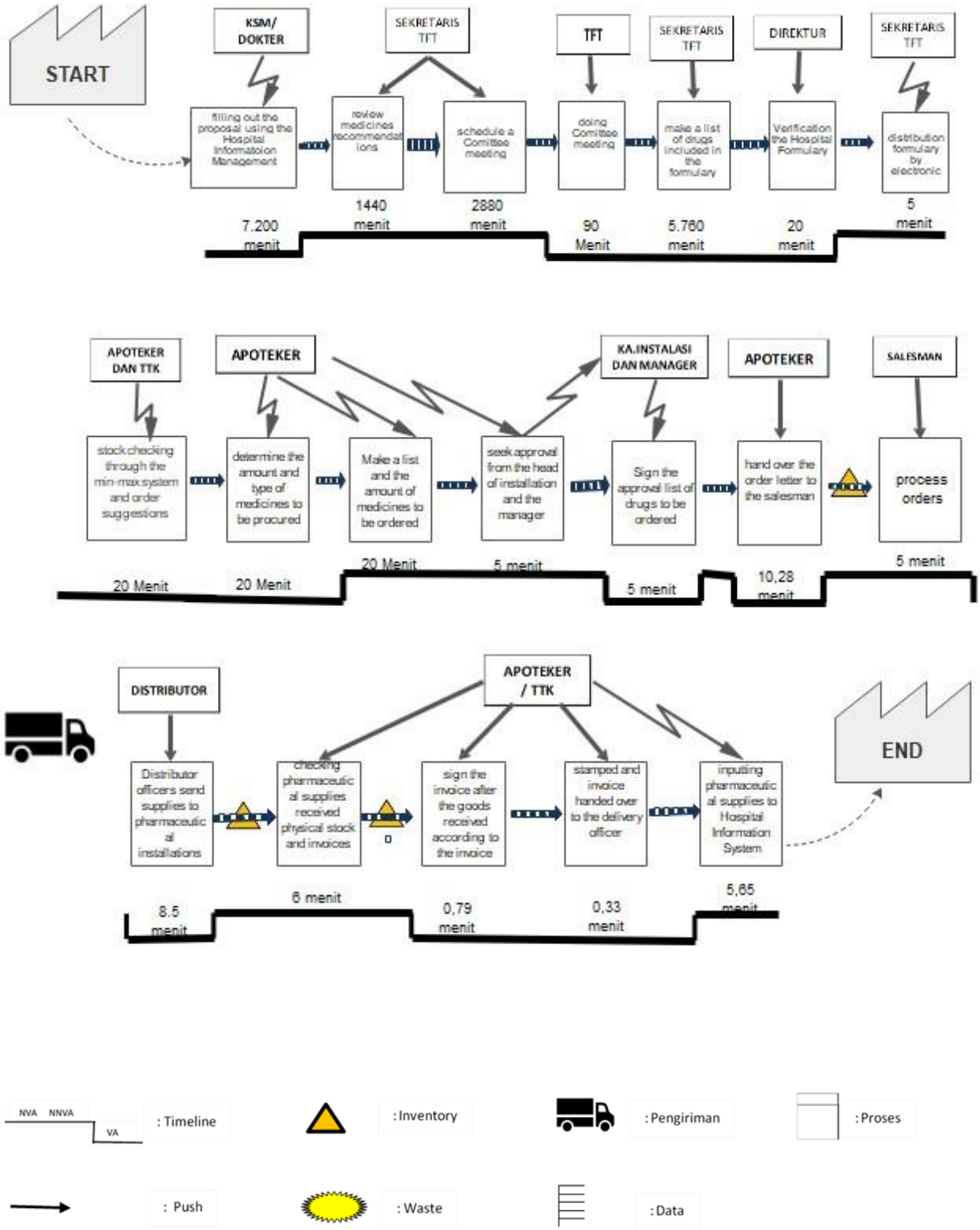
The planning process at Hospital "X" Tegal takes 90 minutes. Activities that fall into the non-value-added category are 40 minutes or 55.56%. The percentage of time for activities that are included in the value-added category is 50 minutes or 44.44%. The waste that occurs in the planning process is waste of inventory, waste of human potential, waste of overprocessing in the stock checking process because it is done repeatedly, waste of defects because checking stock by defects has the potential to be missed, and waste of transportation when asking for the signature of the head of the installation. and manager. After analyzing the root cause of the problem, it can be seen that the cause of waste is that the pharmacy staff is not focused on planning activities, the pharmacy staff does not understand the technical planning, the amount of planning for pharmaceutical supplies is missed (insufficient or excessive) and uses the defecta book as a planning proposal.

The time required for the process of procurement of pharmaceutical supplies at Hospital "X" Tegal is 55 minutes. Activities included in the non-value-added category were 72.73%. The percentage of time for activities that are included in the valueadded category is 27.27%. The high non-value added is due to waste of defects due to lock orders, waste of waiting due to waiting for officials to sign their approval. After analyzing the root cause of the problem, it can be seen that the cause of waste is that the pharmacy officers are not focused on procurement activities, and the buffer stock has missed.

The time needed for the process of receiving pharmaceutical supplies at Hospital "X" Tegal is 21.27 minutes. Activities included in the non-value-added category were 54.77%. The percentage of time for activities that are included in the value-added category is 45.23%. waste of waiting when the process of waiting for the arrival of drugs from the distributor, waste of defects if there is a delay in drug arrival, and waste of inventory. The root of the problem with waste in the admissions process is the absence of special admissions officers.



Picture 1. Current State Mapping Procurement Process in Pharmacy Department of Hospital "X" Tegal, Indonesia



Picture 2. Future State Mapping Procurement Process in Pharmacy Department of Hospital "X" Tegal, Indonesia

CONCLUSION

There is a lot of waste in the procurement process of pharmacy supplies in Hospital "X" Tegal, including waste of overproduction, waste of inventory, waste of defect, waste of motion, waste of transportation, waste of human potential. Analysis of the root of the problem using a fishbone diagram shows the following results are: the root of the problem in the selection process are the secretary of Pharmacy and Therapy Comittee has difficulty communicating with doctors, the proposed drug in the form of handwriting, the proposed medicine does not include scientific reasons, the Pharmacy and Therapy Comittee archive has not been organized; the root of the problem in the planning process are that pharmacists are not focused on planning activities, pharmacy

officers do not yet understand the technical planning, the number of pharmaceutical supplies is missed (less or too much), and uses a defect book as a planning proposal;and the root of the problem in the procurement process are the absence of a special procurement officer and buffer stock inaccuracy. The root of the problem in the received process are the accumulation of goods at the time of receipt, delays in arrival of the goods, goods received not in accordance with the order letter and / or invoice. Improvements that need to be done include changing the flow of activities to be shorter, and the use of electronic systems so that they become more effective and efficient.

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