ABSTRACT

This research is the first phase of research to improve the process of service with lean concept. A case study of Salaya Hospital. The purpose of this study was to investigate the service process of Salaya Hospital. And to frame the concept of improving the service process of Salaya Hospital. To be more effective. Using the Lean concept helps in analyzing the work process. It also provides a framework for improving the development of new services. There were 1 director, 2 doctors, 5 nurses, and 3 staff members. The data were analyzed by descriptive statistics. The results of the research show that the new work process that has been developed with the relevant stakeholders. There are 27 processes that take an average of 71 minutes to 20 processes, which takes an average of 35 minutes. It helps in process analysis to reduce losses and reduce processes to make the process more efficient. In terms of process improvement, the downtime was as high as 36 percent, or 49.30 percent, of the reduction in work time, as a result of improvements, by reducing redundant processes, reducing waiting times, Not necessary of the worker By integrating a consistent workflow into the same process. The process does not produce value, it cuts out. It can handle the problem of waste service. The results of the hospital service improvement study. To see the need and have the basics to manage quality. The results of this study are as follows. To be tight. To be effective. And suitable for the context of the organization.

Keywords— The Lean Concept, Hospital, Quality Improvement

INTRODUCTION

The hospital is considered an organization that provides services. Is a professional organization (Professional bureaucracy) The introduction of professional knowledge as a base for the development of lean organizations to integrate the different types of organizations to achieve the goal of developing quality services. Be safe Fast delivery Low operating costs. Moral ethics Values in the view of the service recipient. Review existing standards. And develop sustainable services. The goal remains the same and will be better than ever. To improve the delivery of patient care, governments and health-care institutions adopted quality improvement methods that had been developed decades earlier in manufacturing industries. Many health-care practitioners are either unaware or are inexperienced about what these practices entail and whether they are successful in health care Jessica Goggin, Rubin I. Cohen, (2015).

In the development of service system. Quality Management throughout the organization. Researchers have the idea to apply the concept of lean management and development to apply for quality improvement, especially the service of Salaya Hospital. In order to have efficient work processes. Utilize existing resources to create value for customers. Add value and reduce waste. The concept and goal of the hospital remains. And for the continuous development of lean. The objective is to reduce administrative costs and to focus on eliminating unnecessary duties. The basic idea is: Keeping the flow of the process is ongoing. For the benefit of the patients. Lean thinking is a continuous process management tool. It is a tool that will empower organizations. Considering the operation to meet the needs of customers or patients in the hospital, which is the patient / patient, the lean system will play a role in creating value in the service. It eliminates wasted processes throughout the entire process. This leads to a reduction in service costs and good results for the hospital. At the same time, the importance of quality service delivery was also emphasized. Wattanapachat Montri (2011) studied the case study approach. Describe Lean Concepts in Nursing Quality Development. The hospital is one of five participating pilot hospitals. Research Results The use of lean concepts in the development of nursing service quality is categorized into three phases: Phase 1 Initiation of the project 1) persuasion of the Institute of Productivity 2) public relations policy throughout the organization 3) perceived problems, benefits, participation, and 4) training to see the real phase 2 implementation phase to bring the concept. Lean to use in developing quality nursing services. 1) Establish a lean
committee to teach. 2) Motivate to succeed. 3) Use the lean concept to improve the quality of nursing services. Steps are:
3.1) Find the problem together. 3.2) Look for value. 3.3) Flow seamlessly. 3.4) Deliver when needed. And 3.5) Continuously improve to develop the process. Internal to stimulate development. 5) Organize the stage. 6) Evaluation of follow-up development and 7) Continuous learning and development. Phase 3: Lean implementation was used to improve nursing service quality. 2) Service recipients are satisfied. 3) stimulate new ideas, 4) find opportunities for continuous improvement, and 5) actually do from all around.

**RESEARCH OBJECTIVES**

1. Study the services process of Salaya Hospital
2. For to frame the concept of improving the services process of Salaya Hospital

**RESEARCH METHODOLOGY**

This research will study to improve the process of hospital services. By applying the concept of lean to the hospital. The research process consists of 6 steps. Step 1: Study and collect basic information related to the concept of organizational development with lean. Step 2 Review the literature or related research papers. Step 3 Study the image. Incorporation of work processes in the hospital supply chain case study. Step 4, the Governance Use the lean concept. Step 5 Conclusion of the research. Step 6. See Figure 1.1.
Phase 1: studies and gather background information related to the concept of organizational development with lean concepts.

- **Lean Concept Study**
  - Lean principles and concepts will help to analyze the traditional processes of the hospital for further improvement.
  - Technology development and corporate management to quality to bring the plan to improve hospital services.
- **Quality management throughout the organization/Simulation Modeling**
  - Modeling, Simulation modeling of the process to bring the service to visualize before the actual system.
- **Research lean concepts to the hospital.**
  - Research related to the implementation of the guidelines development process using lean system prototype.

Phase 2: Review the literature or documentation related research.

- Research on Lean Concepts is a system for identifying and eliminating losses. Study the procedures and methods used in the design, development model based organization lean concepts, the fundamentals that are important to study before making processes, services or processes of a hospital case study.

Phase 3: studies, an overview of the processes occurring in the supply of hospital case study.

- Phase 4: Analyze the improvement of the hospital service process using the lean concept.
  - Apply lean thinking as a tool to analyze and process design work in the service of the hospital to provide quality and more efficient to focus on eliminating processes that do not create value out of the lean concepts aimed. Focused on eliminating lost 7 points (7 wastes).

Phase 5: Research Result Conclusions.

Phase 6: Make a research paper.

Figure 1.1. Processing Procedure
RESULTS

The result of the study of service process of Salaya Hospital. The results appear.
1. The study of the service process of Salaya Hospital.
2. The conceptual framework for improving the service process of the new Salaya Hospital.

From the diagram of the outpatient services (OPD) process of Salaya Hospital before the improvement of the lean approach. This is a study of the service process of the hospital’s service providers to patients who come to the hospital. By the hospital service process, prior to implementing the lean approach. The average time spent per patient was 71 minutes. The details are as follows.

Process 1: Patient submits the Queue card at the registration point when the patient arrives at the hospital. Or a patient ID card at the registration point for screening records. This is a document archive.

Process 2 Patient Waiting for Screening History After the patient has submitted the card at the registration point. Patients waiting to be screened. To get a card to see the doctor.

Process 3: Screening Officers When the officer receives the ID card. Patients will be screened for their history with the patient's hospital for further processing. And computer systems. And no full computer system. Screening time and searching may take a long time. This results in patients waiting for the documents.

Process 4: The staff calls the patient. When screening and retrieving the patient's history, the staff will issue a card for the patient to proceed in the next step.

Process 5 Patients Receive Queue Cards The patient received the card with the officer who made the
screening successfully.

Process 6: The staff sends a document to the nurse at the point of detection. Or the treatment queue card for patients. The screening officer will send the patient's history sheet to the primary screening point. To measure the height of the weighing scale, as well as the preliminary examination before the diagnosis with the doctor in the next step.

Process 7: Patient Waiting Patients waiting to check the pressure before seeing the doctor.
Process 8: Patient Check the pressure, Check the pressure before seeing the doctor.
Process 9: Patient Waiting for height and weight measurement. And measure the height before seeing the doctor.

Process 10: Patient Check of weighing and height measurement, Weighing patients and measure the height before seeing the doctor.

Process 11: Patient waiting for the name of the waiting room. After the patient has checked the weighing pressure, the height of the screening history with the nurse is already. I have to sit and wait for the doctor at the examination room, respectively.

Process 12: The nurse sends the screening information to the doctor's room. After the patient has checked the weighing pressure, the height of the screening history with the nurse is already. The nurse will send the patient's primary screening information to the physician for a diagnosis.

Process 13: The patients wait in front of the examination room. Wait for the name of the order to see the doctor.

Process 14: Patients enter the diagnostic room. When patients come to the doctor. The doctor will treat and diagnose the process.

Process 15: The doctor measured the pressure again. The doctor will check the pressure again to check the patient's body. For precision

Procedure 16: Medical treatment the doctor treats the symptoms of the disease to the patient according to the procedure of the doctor.

Process 17: The patient listened to the doctor's advice. After the diagnosis is complete, the doctor will recommend the treatment of the disease. To patients and send patients to the next process.

Process 18: Patients to make appointments with nurses. When the patient completes the examination, the patient must go out and make an appointment with the nurse. To get an appointment card again.

Process 19: The patient receives the appointment card. When the appointment is completed, the patient will have to walk to the waiting room in the dispensary.

Process 20: The nurse sends a prescription to the dispensary. When the appointment is completed, the nurse will collect the completed medical records and follow the procedure. Ordering documents to the dispensary. And the treatment document and make an appointment to the registration room for the staff to continue recording.

Process 21: The patients wait in front of the dispensary. When treatment the patient will have to wait for the name to receive the drug in the dispensary.

Process 22: Patients take medicine
Process 23: Pharmacists give instructions for use.

Process 24: The patients waiting to be called for payment. Once the patient has successfully taken the medication, the patient must wait for the name to be paid in front of the financial room.

Process 25: The process of paying patients in front of the paid room.

Process 26: The process of paying patients in front of the paid room.

Process 27: The staff kept the registration papers. Once the process has been completed successfully. Documents and information processed on that day must be logged. And keep the documents in the file by the registration process. Completed the hospital's patient service process.

Process 28: Patients return home.

From the study of the process of outpatient services of Salaya Hospital, it was found that all processes in the service were 27: Processes and found that each process was delayed by service process analysis. Delay in service is a major problem encountered. By identifying the process, the researcher can see the barriers in the work process. Causing delays with the redundant workflow. As a result, the researcher and those involved have planned to improve the work process by eliminating latent waste in the patient service process. Based on the previous workflow analysis, it is possible to plan improvements in the processes that make the flow of work processes consistent and consistent, reduce downtime, and eliminate waste. That's the delay. This will be a guideline for
improving the efficiency of the process, as shown in Figure 1.3.

Figure 1.3 Flow Chart of Outpatient Services (OPD) of Salaya Hospital after Lean Implementation

From the chart showing the process of providing the outpatient service (OPD) of Salaya Hospital, which together put the improvement approach using the lean concept. Together with the director of the hospital, the nurse and related staff. From the study of the service process of hospital service providers to the patients who came to the hospital. Time spent on services per patient was 71 minutes on average. The details have been discussed previously. The complexity of the service process has been identified. And also find a job that can work together. Based on the concept of lean. In order to effectively manage the work process or service, it is necessary to reduce and integrate the corresponding activity or process into the same process for smooth operation. And faster as well as convenient to patients who come to the service. It can also make the service team more patient. And faster. With the improvement plan, a new hospital patient service flow chart was created. Time spent on services per patient was 35 minutes on average. With details

Process 1: Patient submits the card at the registration point when the patient arrives at the hospital. Or a patient ID card at the registration point for screening records. This is a document archive.

Process 2 Patient Waiting for Screening History After the patient has submitted the card at the registration point. Patients waiting to be screened. To get a card to see the doctor.

Process 3: Screening personnel in the system. When the officer receives the ID card. Patients will be screened for their history with the patient's hospital for further processing. And computer systems. And no full computer system. Screening time and searching may take a long time. This results in patients waiting for the documents.

Process 4: The staff calls the patient receive queue cards. When screening and retrieving the patient's history, the staff will issue a card for the patient to proceed in the next step.

Process 5 Patients Receive Queue Cards The patient received the card with the officer who made the screening successfully.

Process 6 The staff sends the information to the nurse at the point of detection after the notification. Or the treatment queue card for patients. The screening officer will send the patient's history sheet to the primary screening point. To measure the height of the weighing scale, as well as the preliminary examination before the diagnosis with the doctor in the next step.
Process 7: Patient waiting for check-up, weighing and height measuring. Seated patient waiting for pressure check before seeing the doctor.

Process 8: Check the patient's weighing pressure and the height measure of the patient's weighing. And measure the height before seeing the doctor.

Process 9: The patient waits for his name to wait in front of the examination room. After the patient has checked the weighing pressure, the height of the screening history with the nurse is already. I have to sit and wait for the doctor at the examination room, respectively.

Process 10: The nurse sends the screening information to the doctor's room. After the patient has checked the weighing pressure, the height of the screening history with the nurse is already. The nurse will send the patient's primary screening information to the physician for a diagnosis.

Process 11: Patient sitting in front of the examination room. Wait for the name of the order to see the doctor.

Process 12: Patients into the diagnostic room. When patients come to the doctor. The doctor will treat and diagnose the process.

Process 13: The doctor performs the treatment, introduces the patient, and makes an appointment for the physician to perform the medical treatment for the patient according to the procedure of the physician. After the diagnosis is complete, the physician will recommend the treatment for the disease and make an appointment for further examination. To the patient and send patients to the next process.

Process 14: The patient receives an appointment card and waits in the dispensary room. When the patient completes the treatment, the patient waits for the drug at the dispensary.

Process 15: The doctor sends prescribing information and treatment to the system.

Process 16: The patient waits for the name of the dispensary.

Process 17: The patient receives the medication and pays at the dispensary. In this process, the patient receives medication and pharmacist's instructions at all

Process 18: Pharmacists give the patient instructions.

Process 19: The staff records the treatment data.

Process 20: The patients returned home.

The study of the patient service process of Salaya Hospital. The most prominent problem is that the working process is waiting too long. Effectively work effectively. It is a process that does not bring value. This study led to lean. The lean system is intended to reduce the factors that affect the work or flow of the work process. Redundant processes cause too much time to work. Lean system Reducing the time that does not add value to the workflow. By studying the process of providing hospital services in this time. To set up a process improvement approach using Lean Concepts to assist in analysis. The 27-step process takes an average of 71 minutes to 20 steps, with an average of 35 minutes, as it combines the same process. Service Processes 7, 8, 9 and 10 on the measurement of height, weight, and history of primary screening. Included in the single point. The nurse is solely responsible for separating the original checkpoint. The height of the weighing scale and the history of the initial medical history were 11 minutes, as shown in Figure 1.4.

![Figure 1.4](image-url)

Figure 1.4 shows the process of checking the original height measurement pressure.

After the integration, a consistent workflow can be made in the same process. The process is reduced from 4 processes to 2 processes, reducing the waiting process and reducing the working time in the process to 11 minutes. The average working time is 5.5 minutes, as shown in Figure 1.5. The conventional procedure was repeatedly measured by a physician before treatment, which took about 2 minutes. The redundant work caused no value has been cut out to make this process work time reduced to 2 minutes as shown in Figure 1.6.
Figure 1.5 shows a new height measurement process.

Figure 1.6 Duplicate Processes of Medical Pressure Measurement

After that, the work process was further analyzed. In the process, after the treatment, the patient must make an appointment to see the doctor next time. The original procedure will allow the patient to make appointments with the nurse. The patient must be moved to another location for the next appointments and must wait for the appointment before going to the dispensary. At this point, the traditional service process takes an average of 14.5 minutes, as shown in Figure 1.7

Figure 1.7 Medical screening process and original appointment card

In order to improve the service process, doctors have been able to make appointments to patients for the accuracy of the next treatment. The process of reconciliation with the patient is optimized, and the process of reconciling the processes is reduced to five (16 17 18 19). 20) The remaining three (13, 14 and 15) and reduce the time from 14.5 minutes to 5.5 minutes, the average time is shown in Figure 1.8

Figure 1.8 Medical screening process and new appointment card

The final process is a process where, after the diagnosis and appointment, the patient has to take the medication and pay for the treatment. The patient must wait for the medication to be ready to go to the waiting room to pay at the financial room. It was found that the process of service between the two processes was characterized by a waiting time of 2 (21 and 24) and a considerable waiting time with an average time of 10 minutes. The overall duration of the two processes is 16.5 minutes, as shown in Figure 1.9.
Researchers and those who perceive drug paraphernalia are knowledgeable enough to handle drug counseling. You can also pay for medicines and medical treatment. This will reduce the process of payment and waiting. Patients can receive medicine and pay for this process. The process was improved to the same process, reducing the processing time from 5 processes (16 21 22 23 24 and 25) to 3 processes (16 17 and 18) and reducing the time from 16.5 minutes. The average is 5 minutes, as shown in Figure 1.10.

A total of 27 steps took an average of 71 minutes, leaving only 20 steps, with an average time of 35 minutes. It helps in process analysis to reduce losses and reduce processes to make the process more efficient. As a means of improving the process, the downtime was as high as 36 percent, or 49.30 percent, of the reduction in the duration of the work, resulting in significant improvements by reducing duplication of work. And the process is consistent. In addition, the process causes more time to be wasted. The technology is used to help manage the documents and information of patients and to share information to each department for the speed of data transmission. Reduce the process of documenting Reduce the cost of office paper. The director of Salaya Hospital recognizes the importance of applying the technology to work very much, but the current work is already an information system, but not fully used.

This new workflow is just a kind of process improvement plan. If it is to work according to the guidelines laid out. To work in the same direction. Focusing on the service process is important. To promote the service process. By telling the process of using the service and the service clearly. And continuous service. To solve the problem, reduce the time and work process redundancy. As a result, patients are able to follow the procedure correctly. Hospitals can provide faster patient services and more patients. By reducing the process or managing new service processes. The quality of the treatment remains the same. Safe to the patient. And reliable continuously.

CONCLUSION AND DISCUSSION

Research Improving service processes with lean concepts. A case study of Salaya Hospital. The purpose of this study was to study the service process of Salaya Hospital for Outpatient Services (OPD). Services of Salaya Hospital By setting a framework for improving the hospital's service process. Based on the concept of lean. The guidelines will be discussed by interviewing one hospital director, two physicians, five nurses, and three staff members to collect hospital service information and inquire about the concept of process improvement. The service provided to patients or patients is reduced. Work more efficiently. This study is just a guideline to improve the service process with the lean concept. It will study the process of providing traditional services. And design a new service process. The hospital director sees the difference between traditional and new services. This is a guideline to improve the service of Salaya Hospital in the future. The result of the study of the service process of Salaya Hospital. The results appear.
1. The study of the service process of Salaya Hospital.
2. The conceptual framework for improving the service process of the new Salaya Hospital.

From the study of the process of outpatient services of Salaya Hospital, it was found that all processes in the service were 27 processes and found that each process was delayed by service process analysis. Delay in service is a major problem encountered. By identifying the process, the researcher can see the barriers in the work process. Causing delays with the redundant workflow. As a result, the researcher and those involved have planned to improve the work process by eliminating latent waste in the patient service process. Based on the previous workflow analysis, it is possible to plan improvements in the processes that make the flow of work processes consistent and consistent, reduce downtime, and eliminate waste. That's the delay. It is a way to improve the work process to be more effective.

Highly It is a process that does not add value in any way. This study uses lean systems to help improve lean processes. The aim is to reduce the factors that affect the work or flow of work processes. Duplicate processes are time consuming, too. Lean systems focus on reducing the time that does not add value to the workflow. By studying the process of providing hospital services in this time. To set up a process improvement approach using Lean Concepts to assist in analysis. There are 27 processes that take an average of 71 minutes to 20 steps, with an average of 35 minutes. It helps in process analysis to reduce losses and reduce processes to make the process more efficient. As a means of improving the process, the downtime was as high as 36 percent, or 49.30 percent, of the reduction in the duration of the work, resulting in significant improvements by reducing duplication of work. And the process is consistent. In addition, the process causes more time to be wasted. The technology is used to help manage the documents and information of patients and to share information to each department for the speed of data transmission. Reduce the process of documenting Reduce the cost of office paper. The director of Salaya Hospital recognizes the importance of applying the technology to work very much, but the current work is already an information system, but not fully used.

This new workflow is just a model of process improvement planning. If it is to work according to the guidelines laid out. To work in the same direction. Focusing on the service process is important. To promote the service process. By telling the process of using the service and the service clearly. And continuous service. To solve the problem, reduce the time and work process redundancy. As a result, patients are able to follow the procedure correctly. Hospitals can provide faster patient services and more patients. By reducing the process or managing new service processes. The quality of the treatment remains the same. Safe to the patient. And reliable continuously.

**SUGGESTION**

From research “Improve the Process of Service with Lean Concept: A Case Study of Salaya Hospital” There were suggestions below

1. In this study, the limitation of the duration of the patient's visit was based on the individual patient and the severity of the symptoms. There are no definite timelines for the treatment of individual patients. In this study, we look at the overall picture of the service. Think of the time of service as an average time to make the process work according to the framework of the study. If anyone wants to study lean systems in health services. With regard to the reduction of service time faster, it can be reduced to the maximum. You may be able to study the length of service provided by the patient's history of treatment.

2. For other agencies or hospitals that adopt lean systems. Apply to improve work processes or divide the service. Patients should be evaluated periodically. To bring the evaluation results to improve the service process continuously. And make the process more efficient. Lean is used to help solve the problem.

3. The Importance of Lean Systems It is used to improve the process, whether it is working in any department. Should be promoted. And training for all staff. Individuals involved in the work process. To understand the system of lean. To work in the same direction. And let everyone take part in planning and deciding on a solution. Should not be planned or managed only. This will result in organizations and organizations having a quality work process. And more efficiency.