Waste In The Patient Discharge Process Flow Using Lean Thinking Method At Wihdatul Ummah Medical Center In 2025

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Abstract

Background: The discharge process for inpatients is a critical component of hospital service systems, impacting operational efficiency and service quality. Inefficiencies in this phase can lead to wasted time, reduced patient satisfaction, and workflow disruptions between service units. Objective: This study aims to identify and analyze forms of waste in the discharge process of inpatients at Wihdatul Ummah Medical Center using the Lean Thinking approach. Method: This study used a qualitative descriptive design with data collection techniques through observation, document study, and in-depth interviews with 11 informants, consisting of clinic directors, doctors in charge of patients (DPJP), ward heads, nurses, administrative staff, pharmacy staff, and patients' families. Results: It was found that the discharge process did not have a well-documented and socialized written SOP. This resulted in wasted time in the form of motion waste for BPJS patients (due to physical transfers between service units) and waiting waste for non-BPJS patients (due to delays in administrative processing and medication reconciliation). The root causes include weak inter-unit coordination, manual work processes, lack of integrated information systems, and insufficient education for patients and their families. Conclusion: The study recommends the appointment of Point of Service (POS) officers, the use of discharge preparation lists, strengthening patient education, implementing visual management, and developing and implementing discharge SOPs. These efforts are expected to reduce time wastage, speed up the discharge process, and improve service quality and patient satisfaction.

Keyword: *Discharge process; service quality and Medical Center.*

I. INTRODUCTION

In the healthcare system, the process of discharging inpatients is a stage that often receives little attention, even though it plays a crucial role in ensuring the efficiency of service flow and patient satisfaction. Unorganized discharge can lead to service delays, bed occupancy, and complaints from patients and their families. These issues can disrupt service continuity, slow patient turnover, and result in resource wastage in terms of time, labor, and facilities. Therefore, systematic and efficient discharge management is a critical element in hospital management (Fuentes et al., 2023). Patients who are satisfied with the services they receive tend to have a higher interest in returning to use hospital services or health facilities in the future. (Multazam, A. M et al., 2022)

One relevant approach to analyzing and improving the discharge process is Lean Thinking. Lean Thinking is a management method that was originally developed in Japanese manufacturing, which emphasizes the identification and elimination of waste in work processes, as well as increasing added value for customers (Womack & Jones, 1996). In the context of healthcare services, the application of Lean Thinking has proven effective in improving efficiency, reducing service times, and decreasing the workload of medical staff (Graban, 2016; Martin & Osterling, 2014).

Wihdatul Ummah Medical Center is one of the healthcare facilities facing challenges in managing the discharge process for inpatients. Based on initial observations, it was found that the discharge process at this facility is carried out without written Standard Operating Procedures (SOPs) that are documented and thoroughly disseminated. As a result, there is inconsistency in the discharge process, such as BPJS patients having to move between units to complete administrative procedures and collect medications, while non-BPJS patients experience prolonged waiting times due to delays in cost calculations and medication reconciliation.

This waste indicates that there are many non-value-added activities (activities that do not add value for patients), which cause inefficiencies in the service process. Additionally, weak coordination

between units, manual work systems, and insufficient education for patients and their families exacerbate the problem. These conditions not only affect patient waiting times but also the overall performance of the hospital (Kumar et al., 2021; Sari et al., 2018).

The purpose of this study is to identify the types and forms of waste that occur in the discharge process of inpatients at Wihdatul Ummah Medical Center. Additionally, this study aims to analyze the root causes of such waste using the Lean Thinking approach. Through this analysis, it is hoped that strategic and practical recommendations can be provided to improve the patient discharge process, enhance time efficiency, and support efforts to improve the quality of healthcare services at the institution. Research at Ibnu Sina Hospital in Makassar examined the impact on patient loyalty by conducting a marketing mix study (product, price, place, promotion, people, process, and physical evidence) (Mahmud NU, 2018). One aspect of the "process" is the patient's experience during treatment, including the discharge process, which can determine whether patients are satisfied and want to return to use the health services.

Lean Thinking was first introduced by Womack and Jones (1996) as a systematic approach to improving process efficiency by eliminating waste and retaining only activities that add value. In the healthcare sector, Lean is used to streamline workflows, reduce waiting times, minimize errors, and accelerate the completion of medical procedures (Womack & Jones, 1996; Helmold & Samara, 2022).

According to Graban (2016), there are seven types of waste in healthcare services: overproduction, waiting, unnecessary transportation, overprocessing, excess inventory, unnecessary motion, and defects. In the context of patient discharge, common types of waste include waiting (long wait times for administration or medication), motion (physical movement of patients or documents between units), and overprocessing (repetition of processes due to a lack of integrated systems).

Previous studies, such as those conducted by the Institute for Healthcare Improvement (IHI), show that implementing Lean in the discharge process can reduce patient waiting times by 30–50%, reduce staff workload, and improve patient satisfaction (IHI, 2020). Therefore, Lean Thinking is considered relevant and useful for application in this study.

I. METHOD

This study employs a descriptive qualitative approach aimed at gaining a deep understanding of the inpatient discharge process flow and the forms of waste (waste) that occur within it. Lean Thinking is used as an analytical framework to identify non-value-added activities and opportunities for process improvement.

The population in this study included all parties directly or indirectly involved in the discharge process of inpatients at Wihdatul Ummah Medical Center. The sample was selected purposively, based on the informants' involvement and relevance to the process being studied. The sample consisted of 11 informants, including 1 Clinic Director, 1 Patient Care Physician (PCP), 1 Ward Supervisor, 1 Nurse, 1 Administrative Staff, 1 Pharmacy Staff, and 5 Patient Family Members. The research began with a preliminary study through direct observation of patient discharge procedures. This was followed by a review of documents related to internal hospital policies and service records. The main stage was conducted through in-depth interviews with informants using semi-structured interview guidelines. Data was collected using triangulation to increase the validity of the findings.

The main instrument in this study was an in-depth interview guide developed based on the principles of Lean Thinking and the seven types of waste. In addition, observation sheets were used to record activities and discharge process flows, as well as medical records and administrative records as secondary data.

Data was analyzed using thematic analysis. The analysis process began with transcribing the interview results, data reduction, categorization, and extraction of main themes. Subsequently, waste mapping was conducted based on the seven types of waste in the Lean Thinking approach.

II. RESULTS AND DISCUSSION

The results of the study indicate that the discharge process for inpatients at Wihdatul Ummah Medical Center is not yet effective and efficient. The discharge process is not supported by written Standard Operating Procedures (SOPs) that are documented and thoroughly disseminated to all staff. As a result, the discharge process is inconsistent among staff and between units, and highly dependent on individual experience in handling patients. This leads to delays in discharge times, particularly during periods of high patient volume or when coordination between units is poor (Sari, 2018). This aligns with previous research indicating that the absence of SOPs in healthcare processes can result in variability and inefficiency in service delivery (Kumar, 2021).

Through Value Stream Mapping (VSM) analysis, it was found that most activities in the patient discharge process were categorized as non-value-added activities, such as waiting time for billing, repeated verification of medical documents, and manual prescription retrieval at the pharmacy. Value-added activities only accounted for a small portion of the total discharge flow, such as final checks by doctors and patient education. VSM successfully identified process stages that cause waste, such as manual processes, repeated physical movement by staff and patients, and unproductive waiting time (Graban, 2016). These findings are supported by previous studies stating that VSM is effective in breaking down and mapping healthcare processes to identify bottlenecks and waste (Martin & Osterling, 2014).

The most dominant forms of waste found in this study were motion waste in BPJS patients and waiting waste in non-BPJS patients. Motion waste arose from the physical movement of patients and staff from the treatment room to the administration and pharmacy sections, which were not integrated into the system. Meanwhile, waiting waste arose from the length of the manual billing process, delays in drug reconciliation, and waiting times for prescriptions. This aligns with Lean principles, which state that any activities that do not add value to the patient must be identified and eliminated to improve the efficiency of the healthcare system (Womack & Jones, 2003).

The root causes of this waste include weak coordination between work units, manual work methods that have not been digitized, limited integration of information systems between departments, and a lack of patient and family education regarding discharge procedures (Fuentes, 2023). This study aligns with the findings of Putri and Wulandari (2020), who emphasized that patient education in discharge planning plays a crucial role in accelerating the process and preventing delays caused by administrative or pharmaceutical unpreparedness.

To address these issues, researchers recommend implementing various Lean Thinking-based interventions, such as appointing Point of Service (POS) officers to serve as liaisons between units, using a discharge preparation list to avoid workflow errors, strengthening patient and family education, and implementing visual management to monitor discharge status in real time. The development and implementation of patient discharge communication SOPs are also important steps to ensure the process is more systematic and controlled. Previous studies also support the application of Lean approaches as an effective strategy to reduce waste and improve the efficiency of healthcare processes in healthcare facilities (Wirandari & Utarini, 2019; Triwanggono, 2017).

III. CONCLUSION

This study concludes that the process of discharging inpatients at Wihdatul Ummah Medical Center is still inefficient and not documented in a standardized SOP. The irregular discharge flow causes various forms of waste, particularly motion waste among BPJS patients and waiting waste among non-BPJS patients. The lack of standardized work processes, manual methods, poor coordination between units, and insufficient integration of information systems are the primary causes of waste. The results of the value stream mapping analysis also indicate that most activities in the discharge process are non-value-added. This not only prolongs discharge time but also negatively impacts patient satisfaction and the

effectiveness of clinical services. By identifying these areas of waste, the Lean Thinking approach has proven effective in analyzing and providing direction for improving the patient discharge process.

IV. RECOMMENDATIONS

Based on these findings, it is recommended that Wihdatul Ummah Medical Center immediately develop and implement a comprehensive written SOP for the discharge of inpatients to all work units. The clinic is also advised to appoint a dedicated Point of Service (POS) officer to facilitate coordination between units in the discharge process. The use of a discharge preparation list should be integrated as a quality control tool, and education for patients and their families about the discharge process should be enhanced to prevent errors or delays. Additionally, the implementation of an integrated information system across administrative, pharmacy, and nursing departments is a strategic step to reduce time and resource wastage. By consistently applying Lean Thinking principles, it is expected that the patient discharge process will become faster, more efficient, and patient-centered.

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