ABSTRACT

Al Islam Hospital is one of the hospitals in Bandung City, Indonesia, that provides care for patients undergoing hemodialysis treatment. From 2020 to 2022, there was an increase of 3428 patients undergoing hemodialysis treatment at Al Islam Hospital, and the number of procedures performed increased to 25313. Considering the significant impact of hemodialysis treatment on the quality of life and survival of patients, it is important to have a continuous treatment plan and monitoring system for patient management. Based on the observations conducted, up to this point, Al Islam Hospital has not yet implemented an information system or continuous monitoring tool for patients undergoing HD treatment. In their communication, Al Islam Hospital still uses manual services in the form of personal messages from patient families to medical staff, leading to inefficient communication. This has resulted in issues such as delayed medical attention, miscommunication between medical staff and patient families, and wasting of time due to inefficiencies.

This research utilizes design thinking and Quality Function Deployment (QFD) to address the issue. Design Thinking aids in improving patient satisfaction and healthcare services by understanding the problem and providing effective outcomes through a patient- and medical staff-centered approach. Quality Function Deployment (QFD) aims to maximize the design prototype that aligns with user preferences through ranking the product specifications. Subsequently, testing is conducted to determine the effectiveness and acceptability of the designed outcome. This leads to the development of a smart monitoring system in the form of an application, which aims to remotely monitor the status of patients undergoing hemodialysis treatment and minimize symptoms that occur in these patients.

Keywords — Remote Monitoring, Hemodialysis, Smart Monitoring System, Design Thinking, Quality Function Deployment (QFD)