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Optimization of Digital-Based Outpatient Administrative Service Systems to Improve Patient Satisfaction in Hospitals in Sidoarjo City

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ABSTRACT

The rapid development of digital technology has encouraged hospitals to improve the quality and efficiency of outpatient administrative services. However, many hospitals still experience problems related to long waiting times, inefficient administrative processes, and limited utilization of digital systems, which may affect patient satisfaction. This community service program aimed to optimize the implementation of digital-based outpatient administrative service systems to improve service quality and patient satisfaction in hospitals in Sidoarjo City.

The program was conducted using a participatory approach through training, mentoring, and evaluation activities involving hospital administrative staff. The activities included education on online registration systems, electronic medical records, digital queue management, and patient-centered administrative services. Direct mentoring was also provided to assist participants in implementing digital systems in daily administrative activities. Program evaluation was carried out using pre-test and post-test assessments, observations, and patient satisfaction questionnaires.

The results showed an improvement in participants' knowledge and skills regarding digital administrative services. The implementation of digital systems contributed to reduced patient waiting times, improved efficiency in administrative workflows, better accuracy of patient data management, and increased patient satisfaction with outpatient services. Participants also demonstrated greater confidence and readiness in utilizing digital technology within hospital administrative processes.

In conclusion, the optimization of digital-based outpatient administrative service systems effectively improved the quality and efficiency of outpatient services in hospitals in Sidoarjo City. Continuous training, infrastructure support, and regular system evaluation are recommended to ensure sustainable implementation and further enhancement of patient satisfaction.

1. INTRODUCTION

The rapid development of information technology in the digital era has encouraged transformation in healthcare services, particularly in hospital outpatient administrative systems.(1) Hospitals are required to provide fast, accurate, effective, and efficient services to improve service quality and patient satisfaction.(2) Outpatient administration is an essential component of hospital services because it serves as the first point of interaction

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between patients and healthcare facilities.(3) Administrative processes that are still carried out manually often cause various problems such as long waiting times, delays in service, data input errors, and low work efficiency among administrative staff.(4)

The increasing public demand for high-quality healthcare services has also led to higher expectations for modern and integrated hospital service systems.(5) The implementation of digital-based administrative systems, such as online registration, electronic medical records, and digital queue management systems, has become one of the solutions to improve the effectiveness of outpatient services.(6) Several studies have shown that digital innovation in healthcare services can increase service efficiency and patient convenience, although challenges in implementation still require continuous system optimization.(7)

Furthermore, previous studies indicate that the quality of administrative services has a significant relationship with outpatient satisfaction levels in hospitals.(8) Factors such as service speed, staff responsiveness, system reliability, ease of access to information, and administrative accuracy are important aspects influencing patient satisfaction.(9) This demonstrates that optimizing digital-based administrative systems can be an effective strategy to improve hospital service quality.(10)

On the other hand, many patients still complain about complicated administrative procedures, long queues, lack of transparency, and suboptimal integration of digital services in hospitals.(11) In several cases, patients who register through online systems are still required to complete manual verification and wait in conventional queues. These conditions present challenges for hospitals in improving administrative service quality that is more efficient and patient-centered.(12)

Sidoarjo City, as one of the supporting urban areas in East Java, continues to experience population growth and increasing healthcare service demands. Hospitals in Sidoarjo City need to adapt to technological developments in healthcare services in order to provide optimal administrative services to the community.(13) Therefore, community service activities focusing on the optimization of digital-based outpatient administrative systems are needed to improve the competence of hospital administrative staff in delivering fast, effective, and responsive services.(14)

Through this community service program, it is expected that the knowledge and skills of hospital administrative staff in utilizing digital technology will improve, outpatient service processes will become more efficient, patient waiting times will decrease, and overall patient satisfaction with hospital services will increase.

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2. METHODE

This community service program will be implemented using a participatory approach through training, mentoring, and evaluation activities involving hospital administrative staff in Sidoarjo City. The program begins with a preparation stage consisting of coordination with hospital management, identification of problems in outpatient administrative services, and assessment of the current digital service system. Initial observations and interviews with administrative staff and patients will be conducted to identify obstacles such as long waiting times, inefficient administrative processes, and limited utilization of digital systems.

The implementation stage includes educational and training activities focused on optimizing digital-based outpatient administrative services. The training materials will cover online patient registration systems, electronic medical record administration, digital queue management, effective communication skills, and strategies to improve service efficiency and patient satisfaction. The training process will use lectures, discussions, simulations, and case studies to enhance participants' understanding and practical abilities in operating digital administrative systems.

After the training sessions, mentoring and direct assistance will be provided to administrative staff during the implementation of digital systems in daily services. This mentoring process aims to strengthen staff competencies, reduce administrative errors, and improve the effectiveness and efficiency of outpatient services. In addition, educational activities for patients will also be conducted to increase public understanding regarding the use of digital registration systems and digital healthcare services.

Program evaluation will be conducted using pre-test and post-test assessments to measure improvements in participants' knowledge and skills. Observations and patient satisfaction questionnaires will also be used to evaluate the effectiveness of the program in improving administrative service quality. The success of the program is indicated by increased staff competency, improved efficiency of outpatient administrative services, reduced patient waiting times, and increased patient satisfaction with hospital services.

To support the sustainability of the program, continuous coordination with hospital management will be carried out to encourage the ongoing development and optimization of digital administrative systems. Educational materials and standard operating procedure guidelines will also be

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provided as references for future implementation and service improvement.

3. RESULTS AND DISCUSSION

TThe implementation of this community service program showed positive outcomes in improving the quality of digital-based outpatient administrative services in hospitals in Sidoarjo City. The program was attended by hospital administrative staff who actively participated in training, simulations, and mentoring activities related to the use of digital administrative systems. Based on the pre-test and post-test evaluations, there was an increase in participants' understanding and skills regarding online registration systems, electronic medical records, digital queue management, and patient-centered administrative services.

During the mentoring process, administrative staff demonstrated better ability in operating digital service systems and managing patient data more accurately and efficiently. The implementation of digital administrative procedures also contributed to a reduction in patient waiting times and improved workflow efficiency in outpatient service units. Patients reported that the digital registration and queue systems made the administrative process easier, faster, and more organized compared to conventional manual services.

The findings of this program indicate that optimizing digital-based administrative systems can improve both service effectiveness and patient satisfaction.(15) The improvement in administrative efficiency was reflected in faster patient registration, reduced data duplication errors, and improved coordination between administrative staff and healthcare providers.(16) These findings are consistent with previous studies stating that the use of digital health service systems can enhance service quality, operational efficiency, and patient experience in healthcare facilities.(17)

In addition, the training and mentoring approach used in this program proved effective in increasing staff confidence and readiness to adopt digital technologies in hospital administration.(18) Active participation and direct practice enabled participants to better understand the practical application of digital systems in daily services.(19) This approach also encouraged problem-solving discussions among staff regarding technical and operational challenges encountered during implementation.(20)

However, several challenges were still identified during the program implementation.(21) Some administrative staff experienced difficulties in adapting to new technologies due to differences in digital literacy levels.(22) Technical obstacles such as unstable internet connections and limited digital infrastructure also affected the

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optimization process.(23) Furthermore, some patients, especially elderly patients, still required assistance in using online registration systems and digital service features.(24)

Despite these limitations, the overall implementation of the program successfully contributed to improving the quality of outpatient administrative services in hospitals in Sidoarjo City. Continuous training, infrastructure support, and system evaluation are necessary to maintain and further improve the effectiveness of digital-based administrative services.(25) Therefore, collaboration between hospital management, administrative staff, and healthcare technology providers is essential to ensure sustainable digital transformation in hospital services and to continuously improve patient satisfaction.(26)

4. CONCLUSION

The community service program on the optimization of digital-based outpatient administrative service systems in hospitals in Sidoarjo City was successfully implemented and demonstrated positive impacts on the quality of hospital administrative services. The training and mentoring activities improved the knowledge, skills, and readiness of administrative staff in utilizing digital systems for outpatient services, including online registration, electronic medical records, and digital queue management.

The implementation of digital-based administrative systems contributed to increased service efficiency, reduced patient waiting times, improved accuracy of patient data management, and enhanced coordination among healthcare service providers. In addition, patients experienced greater convenience and satisfaction with the outpatient administrative process due to faster and more organized services.

Although several challenges were encountered, such as differences in digital literacy among staff and limitations in technological infrastructure, the overall program showed that digital transformation in hospital administration can significantly improve service quality and patient satisfaction. Therefore, continuous training, infrastructure development, and regular system evaluation are recommended to support the sustainability and effectiveness of digital-based administrative services in hospitals.

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