

## **IMPLEMENTATION OF AN INTEGRATED REFERRAL SYSTEM TO OPTIMIZE THE QUALITY OF REFERRAL SERVICES**

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### **ABSTRACT**

The Integrated Referral System (SISRUTE) is an information technology-based service innovation aimed at accelerating the referral process and improving service efficiency. At Alimuddin Umar Regional Hospital, the implementation of SISRUTE has not yet reached optimal performance. Internal reports indicate delays in data entry, the absence of dedicated personnel, and network and infrastructure issues that hinder the referral process. This study aimed to analyze factors associated with medication adherence among patients with type 2 diabetes mellitus at Alimuddin Umar Regional Public Hospital in 2025. This study aims to evaluate the implementation of SISRUTE at Alimuddin Umar Regional Hospital. A descriptive qualitative method was used with purposive sampling. Data were collected through in-depth interviews with 13 informants (management, medical, and administrative staff), field observations, and document review conducted in March-April 2025. Data analysis was carried out using an interactive analysis model. Most respondents demonstrated good medication adherence (84.8%). Bivariate analysis showed significant associations between family support ( $p=0.004$ ), diabetes knowledge ( $p=0.001$ ), and self-efficacy ( $p=0.000$ ) with medication adherence. Multivariate analysis identified self-efficacy as the most dominant factor influencing adherence ( $\beta=0.612$ ;  $p=0.000$ ). The findings revealed: (1) Communication between units occurs through formal and informal channels, but gaps in technical understanding still exist; (2) Human resources and technology are available but insufficient due to high workloads, limited budgets, and network disruptions; (3) Staff showed a positive attitude toward the system after training, but motivation remains inconsistent; (4) Bureaucratic structure and SOPs are in place, yet implementation is not uniform, and lengthy procedures slow down the referral process.

Keywords: bureaucracy; communication; integrated referral system (SISRUTE); ; resources; service quality

### **INTRODUCTION**

The Integrated Referral Information System is an information technology-based application that functions as a means of communication in the referral process. This application allows patient data from lower-level healthcare facilities to be forwarded to a higher level or equivalent horizontally or vertically. This system aims to speed up and simplify the patient referral process, improve the quality of referrals, and optimize the use of available health resources. Since its launch in 2016, the Integrated Referral Information System has assisted in the referral process of patients with specific cases such as emergencies. However, its implementation still encounters various obstacles in several health facilities (Ministry of Health of the Republic of Indonesia, 2023).

The success of the implementation of a policy is greatly influenced by various factors. Based on Edward III's policy implementation theory, there are four main factors that affect the effectiveness of policy implementation, namely communication, resources, disposition (executive attitude), and bureaucratic structure. In the context of an Integrated Referral Information System, clear communication between healthcare facilities is essential to ensure smooth referrals. The availability of resources, both in the form of competent health workers and adequate technological infrastructure, also plays a role in supporting the effectiveness of this system. In addition, the attitude and commitment of health workers in running the Integrated Referral Information System

and an uncomplicated bureaucratic structure also determine the success of its implementation (Amalia et al., 2022).

The results of a preliminary study conducted at Alimuddin Umar Hospital show that the implementation of the Integrated Referral System has provided a number of benefits, such as simplifying services and speeding up the patient referral process. However, the implementation of the Integrated Reference Information System still faces various significant obstacles. One of the main obstacles is the delay in sending referral data caused by the absence of a special officer on duty 24 hours to monitor the Integrated Referral Information System application. In addition, the lack of communication and coordination between officers is also an obstacle that affects the effectiveness of the referral system.

## **METHOD**

This study uses a Qualitative Descriptive approach to examine the management of the Integrated Referral System at the Alimuddin Umar Regional General Hospital in 2025. In qualitative research, data is obtained from sources called informants, which are individuals who provide responses or responses in accordance with those requested or determined by the researcher through the purposive sampling method. This method is used because researchers need informants who have knowledge, experience, and direct involvement in implementation. The data analysis in this study was carried out to organize and compile the data that has been collected, so that relevant patterns, categories, and themes can be found to reach appropriate and valid conclusions. The data analysis technique used is an interactive analysis model. The researcher has conducted an ethical assessment related to this research to the Research Ethics Committee of the Faculty of Health, Mitra Indonesia University. This study has paid attention to all the basic principles of bioethics with letter number: S.25/94/FKES10/2025.

## **RESULT AND DISCUSSION**

The results of interviews with 13 informants consisting of hospital management, medical personnel (specialist doctors, general practitioners, nurses), and administrative staff showed various responses related to the implementation of SISROUTE at Alimuddin Umar Hospital. The majority of informants said that this system is very helpful in speeding up the referral process, improving service efficiency, and making it easier to access and accuracy of patient data. As revealed by Informant D1 (Director of Hospital), "communication between units has been facilitated through formal media such as meetings and informal such as WhatsApp groups, but the implementation of operational standards is sometimes still hampered by lengthy bureaucratic procedures." The same thing was conveyed by the Informant Head of the Administration Section, who assessed that communication was going quite well, but supervision in the implementation of operational standards needed to be more consistent. Meanwhile, the Informant (Head of Nursing) highlighted the importance of post-training staff motivation because there is still an imbalance of personnel at a time of high workload.

From the medical personnel, Informant Ds1 revealed that "the beginning of the implementation was quite confusing, but this system makes the job easier if you get used to it." The Ds2 informant added that technical obstacles such as slow networks, especially during night shifts, still occur frequently. Du1 informants (general practitioners) complained about the increased workload during the referral process, while Du2 informants emphasized the need for case-based training to improve practical understanding. On the nurse side, Informant P1 stated that the training provided made her

more confident in using the application, although supervision support was still needed. P2 informants highlight network barriers and human resource shortages when working outdoors. From the administrative side, Informant A1 admitted that the use of SIMRS has helped the data input process, but staff understanding of the system still needs to be improved. Meanwhile, Informant A2 emphasized the importance of cross-professional training because there is often a data missynchronization between medical officers and admins.

### **Implementation of an Integrated Referral System Based on Communication Aspects**

The results of triangulation between key informants, supporting informants, and observations on the communication aspect show that communication in the implementation of the Integrated Referral System at Alimuddin Umar Hospital has functioned well as a coordination tool, both through formal channels such as meetings and informal through WhatsApp groups. Key informants stated that communication is essential and effective in speeding up the referral process. The supporting informant corroborated this by mentioning the existence of routine communication and periodic evaluations. However, field observations reveal that not all staff are active in informal communication, and the evaluation conducted has not reached all parties comprehensively. The conclusion of this triangulation shows that although communication has been carried out and used for coordination, its effectiveness has not been optimal due to differences in staff's level of understanding of the system. This shows that there is a gap in digital literacy and technical capabilities, especially in the operation of the Integrated Referral System. These findings are in line with the respondents' statement: "Communication in the implementation of the Integrated Reference System aims to equalize understanding and speed up the referral process," which indicates that communication is considered a means to unify perceptions between units. This is supported by research by Gupta et al. (2022) which confirms that the effectiveness of referral systems is highly dependent on fast and clear cross-departmental communication, especially through digital media. At Alimuddin Umar Hospital, the use of WhatsApp as a coordination tool reflects adaptation to the need for fast communication, but it still needs to be balanced with standardization of procedures.

In line with the research of Putri and Nugroho (2023), informal communication methods such as WhatsApp are indeed able to reduce bureaucracy, but they have weaknesses in terms of documentation consistency and the risk of miscommunication. The lack of technical understanding by some staff, as expressed in the quote: "The obstacle is the lack of understanding of some staff of the use of the system," indicates that the training has not reached all users of the system effectively. Putri and Nugroho (2023) also mentioned that resistance to change and low digital literacy are common challenges in digital transformation in Indonesia's health services. The hospital's efforts to conduct routine evaluations are also appreciative, as respondents revealed: "We regularly conduct surveys and evaluations to see the effectiveness of communication within the team." This is in line with the recommendations of Lee et al. (2021), who emphasize the importance of communication evaluation to identify coordination gaps and improve systems. However, as also criticized by Lee et al., evaluation will only have a significant impact if it is followed by concrete follow-ups, such as the creation of standard communication guidelines and effective feedback mechanisms. Based on this analysis, the researcher concluded that communication in the implementation of the Integrated Referral System at Alimuddin Umar Hospital has shown progress, but still needs strengthening. Reliance on informal communication needs to be balanced with the development of an integrated formal platform and staff training based on skill gap analysis. The involvement of external partners such as universities or the Ministry of Health can enrich the

content of training and help standardize communication systems. Thus, communication can truly be the main driver of the effectiveness of the overall implementation of SISROUTE.

### **Implementation of an Integrated Referral System Based on Resources**

The results of triangulation between key informants, supporting informants, and observation results show that the resources in the implementation of the Integrated Referral System at Alimuddin Umar Hospital are not fully ideal. Key informants stated that the availability of human resources is already there, but it still requires further training. The supporting informant added that workload increases when patient visits are high, while training is uneven and budget is a major obstacle. These findings are reinforced by observations that show that some staff are multitasking, lacking focus on the operation of the Referral System Terintegrasi, serta adanya hambatan jaringan dan keterbatasan perangkat keras. The conclusion of this triangulation shows that both human resources and technological infrastructure have not supported it optimally. Staff technical capability gaps, high workloads, and network and equipment disruptions are major obstacles. Therefore, strengthening resources should include continuous training, additional personnel as the load increases, and improving the quality of technological infrastructure and connectivity. This is in line with the informant's statement: "Training and support are at the very top of our list to ensure the system runs smoothly," which emphasizes the importance of training and mentoring. Barriers in the form of a lack of technical understanding, as expressed in the quote: "The obstacle is the lack of understanding of some staff to use the system," indicating that the training conducted has not reached all staff enough or has not been tailored to their specific needs. These findings are supported by research by Amin et al. (2021) who stated that the implementation of digital systems in the health sector requires continuous investment in human resource capacity development. They suggested needs-based training and hands-on on-the-job mentoring to address skills gaps. This approach is very relevant to be applied at Alimuddin Umar Hospital, considering that the role of staff in the operation of the system is direct and technical.

From a technological point of view, although hospitals have adopted adequate digital systems, disruptions such as slow networks and device limitations are operational constraints. This is in line with the findings of Chen & Lee (2022), who mentioned that the success of digital reference systems depends on infrastructure stability and regular system maintenance. They emphasized the importance of close cooperation between hospitals and technology providers to ensure the sustainability of the system. In terms of budget, both supporting informants and observation results show that limited funds are the main obstacle to training and infrastructure updates. The study of Sari et al. (2023) shows that 65% of regional hospitals face similar problems. This study recommends the establishment of a special budget post for human resource and technology capacity building, as well as efficiency efforts through priority scales. Based on this analysis, the researcher assessed that although Alimuddin Umar Hospital has shown initial efforts through training and cooperation with vendors, resource support still needs to be systematically improved. Some of the recommended strategies are: Modular and Evaluative Training: Module-based training with pre-test and post-test to ensure competency improvement. Dedicated Infrastructure and Technical Support Team: Establishment of a rapid response team to manage system outages and ensure devices remain in optimal function. System-Based Feedback: Establish a feedback loop system between users (staff) and management to detect training needs and technology improvements in real-time. Regional Budget Advocacy: Given that SISROUTE is part of a national priority program, hospitals need to actively advocate to local governments so that the allocation of health funds is proportionately increased. Thus, strengthening resources is one of the important

prerequisites to ensure the long-term success of the implementation of the Integrated Referral System at Alimuddin Umar Hospital.

## CONCLUSION

Implementation of an integrated referral system based on communication aspects. Communication between officers has been carried out through formal and informal channels, but the technical understanding of the Integrated Referral System is still uneven. Implementation of an integrated referral system based on resources at the Alimuddin Umar Regional General Hospital. Human resources and technology infrastructure have not fully supported the implementation of the Integrated Referral System; Further training, staff additions, and network improvements are still needed. Implementation of an integrated referral system (based on the disposition at the Alimuddin Umar Regional General Hospital. Officers' attitudes towards the Integrated Referral System have tended to be positive, but they still need support in the form of motivation, supervision, and continuous training to remain consistent. Implementation of an integrated referral system based on bureaucratic structure at Alimuddin Umar Regional General Hospital. Structures and SOPs are available, but their implementation still faces obstacles of non-compliance and slow coordination due to a bureaucratic system that is not yet adaptive.

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