JURNAL OF HEALTH MANAGEMENT,
ADMINISTRATION AND PUBLIC HEALTH POLICIES

Volume 3 No 2 (2025)
E-ISSN : 2987-5471
P-ISSN :

Inhibiting Factors in the Implementation of SIMGOS at RSUD Dr. Adnaan WD Payakumbuh, 2025

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DOI: https://doi.org//10.52060/4m29s668

ABSTRAK

Sistem Informasi Manajemen Generik Open Source (SIMGOS) merupakan inisiatif Kementerian Kesehatan untuk meningkatkan mutu pelayanan dan manajemen rumah sakit berbasis teknologi informasi. Namun, penerapannya di RSUD dr. Adnaan WD Payakumbuh belum optimal. Penelitian ini bertujuan untuk menggambarkan faktor-faktor penghambat implementasi SIMGOS di rumah sakit tersebut. Penelitian menggunakan metode kualitatif deskriptif yang dilaksanakan di RSUD dr. Adnaan WD Payakumbuh. Pengumpulan data dilakukan melalui wawancara mendalam dan studi dokumentasi. Hasil penelitian menunjukkan bahwa faktor sumber daya manusia menjadi hambatan utama, khususnya pada dokter penanggung jawab pelayanan dan perawat senior yang mengalami kesulitan beradaptasi dengan sistem karena terbiasa menggunakan pencatatan manual. Keterbatasan dana juga menghambat ketersediaan infrastruktur, perangkat pendukung, serta pelaksanaan pelatihan dan pemeliharaan sistem. Selain itu, strategi komunikasi dan pemahaman staf terhadap kebutuhan pengembangan SIMGOS ke depan belum berjalan optimal. Kesimpulan penelitian ini menekankan pentingnya pelatihan berkelanjutan, dukungan anggaran yang memadai, serta penerapan standar operasional prosedur secara tegas guna meningkatkan efektivitas implementasi SIMGOS dan mutu pelayanan rumah sakit.

Kata Kunci: Faktor SDM, faktor Dana dan Anggaran, faktor Strategi dan Cara

ABSTRACT

The Generic Open-Source Management Information System (SIMGOS) is an initiative of the Indonesian Ministry of Health aimed at improving the quality of hospital services and management through information technology. However, its implementation at RSUD dr. Adnaan WD Payakumbuh has not been optimal. This study aimed to describe the factors inhibiting the implementation of SIMGOS at the hospital. A descriptive qualitative research design was employed, conducted at RSUD dr. Adnaan WD Payakumbuh. Data were collected through in-depth interviews and document analysis. The findings indicate that human resource factors constitute the main barrier, particularly among attending physicians and senior nurses who experience difficulties adapting to the system due to long-standing reliance on manual documentation. Financial constraints also hinder the availability of infrastructure, supporting equipment, as well as training and system maintenance activities. In addition, ineffective communication strategies and limited staff understanding of future SIMGOS development needs further impede implementation. This study concludes that continuous training, adequate budget support, and strict enforcement of standard operating procedures are essential to enhance the effectiveness of SIMGOS implementation and improve hospital service quality.

Keywords: Human resources factors; financial and budget constraint, strategic planning and implementation factors

Volume x No x (20xx)
E-ISSN : 2987-5471
P-ISSN :

BACKGROUND

Hospital Management Information Systems (HMIS) are essential in supporting effective healthcare services, particularly in providing accurate, timely, and integrated information for decision-making and policy development. The increasing complexity of healthcare delivery requires hospitals to adopt information systems that enhance efficiency, transparency, and service quality.

In Indonesia, the implementation of HMIS is regulated by the Regulation of the Minister of Health No. 82 of 2013, which mandates hospitals to establish management information systems capable of producing reliable and up-to-date data. This regulation emphasizes the importance of standardized health information to support national health governance.

To fulfill this mandate, the Indonesian Ministry of Health developed the Generic Open-Source Hospital Management Information System (SIMGOS). This system is designed to be openly accessible, allowing hospitals to use, modify, implement, and maintain the software independently. Through SIMGOS, data uniformity and interoperability within the National Health Information System are expected to be achieved.

RSUD dr. Adnaan WD Payakumbuh officially implemented SIMGOS on May 16, 2023, in accordance with Regulation of the Minister of Health No. 24 of 2022 concerning Medical Records. This regulation replaced previous policies that were no longer aligned with technological advancements and the growing demands of healthcare services.

Despite the regulatory framework and institutional support, the implementation of SIMGOS at RSUD dr. Adnaan WD Payakumbuh has not been fully optimized. Several service units have not yet utilized the system consistently, indicating gaps between policy formulation and practical implementation.

Preliminary observations identified limitations in human resource capacity as a major barrier, particularly among senior healthcare staff who are accustomed to manual documentation. Insufficient and uneven training has further contributed to low system adoption and inconsistent data entry practices.

Financial and infrastructural constraints also pose significant challenges. Limited budget allocation affects the availability of hardware, software, system maintenance, and continuous training programs, thereby slowing the overall adoption of SIMGOS within the hospital.

In addition, weaknesses in communication strategies and the enforcement of standard operating procedures have hindered effective implementation. Therefore, a comprehensive analysis of the inhibiting factors affecting SIMGOS implementation at RSUD

dr. Adnaan WD Payakumbuh is essential to formulate targeted strategies for improving system utilization and enhancing hospital service quality.

METHOD

This study was conducted at RSUD dr. Adnaan WD Payakumbuh over a one-month period in May 2025, specifically in the SIMRS Unit. A qualitative descriptive approach was employed to explore factors inhibiting the implementation of the Generic Open-Source Management Information System (SIMGOS). This approach aims to provide a comprehensive description by comparing existing theories and previous studies sourced from national and international literature.

The study involved five informants selected through purposive sampling, consisting of the Head of the SIMRS Unit (one person), SIMRS staff (two persons), the Head of the Logistics Warehouse (one person), and a Medical Records officer (one person). Data were collected through in-depth interviews and documentation review, including reports, records, and relevant literature.

Data analysis was conducted using qualitative descriptive analysis, involving data organization, categorization, synthesis, pattern identification, and conclusion drawing to ensure a clear understanding of the findings.

RESULTS

1. Inhibiting Factors in the Implementation of SIMGOS

a) Human Resource Factors

Human resources (HR) refer to individuals within an organization who design, implement, and manage activities to achieve institutional objectives. Without adequate and competent human resources, organizational operations cannot be effectively carried out.

Based on interviews conducted at RSUD dr. Adnaan WD Payakumbuh, human resource factors constitute a significant barrier to SIMGOS implementation. A large proportion of system users are over 45 years of age, which has resulted in difficulties in operating SIMGOS applications. Limited computer literacy and low familiarity with digital systems, due to long-standing reliance on manual documentation, have led many users to perceive SIMGOS as slowing down their work processes. This challenge is particularly evident in-patient care units, both outpatient and inpatient services, where high patient volumes require fast and accurate service delivery. The combination of high workload, limited digital skills, and insufficient human resources further complicates

system utilization and negatively affects service quality.

b) Financial and Budgetary Factors

Financial and budgetary factors play a critical role in organizational operations, particularly in the planning, implementation, and sustainability of information systems. Effective financial management is essential to ensure the availability of resources required to achieve institutional goals.

Interview findings revealed that limited funding has resulted in inadequate infrastructure, including insufficient network devices, servers, and system security components such as firewalls. Several service units, particularly inpatient wards, operate with only one computer and one printer, which restricts access to SIMGOS. Inadequate budget allocation also affects the procurement of essential operational equipment such as servers, printers, and other supporting devices. Consequently, system access is frequently disrupted, affecting electronic medical record (EMR) entry and the printing of patient control cards. These limitations have led to suboptimal service delivery and pose a growing challenge as the number of hospital units continues to expand annually.

c) Strategic and Implementation Factors

Strategic and implementation factors are essential elements in developing effective organizational planning and ensuring the successful execution of information systems. Well-defined strategies are required to identify both internal and external factors that influence organizational objectives.

Interview results indicated that SIMGOS implementation has been disrupted by limited availability of supporting system infrastructure and insufficient staff capacity to analyze future system requirements. This includes inadequate facilities for user training and limited efforts to enhance information technology competencies through structured training programs. Since SIMGOS is a shared application developed by the Indonesian Ministry of Health rather than by the hospital itself, its implementation relies heavily on coordination among hospital management, including the Director, the Head of Human Resources Development, IT teams, and medical record officers. Although SIMGOS implementation strategies are formally structured and clearly defined, inconsistent adherence and limited operational support continue to hinder optimal system performance.

DISCUSSION

1. Human Resource Factors

Human resources (HR) refer to individuals within an organization who design, implement, and manage activities to achieve institutional goals. Without adequate and

competent human resources, organizational operations cannot be effectively carried out. Interview results at RSUD dr. Adnaan WD Payakumbuh indicate that a large proportion of SIMGOS users are aged over 45 years, which has become a major constraint in operating the system. Limited computer literacy and low digital competence, due to long-term reliance on manual documentation, have resulted in unfamiliarity with computerized and digital systems. Consequently, many users perceive SIMGOS as slowing down their work processes. This challenge is particularly significant in-patient care units, including outpatient and inpatient services, where high patient visits volumes require fast and efficient service delivery. The imbalance between service demand and the number of available human resources further exacerbates difficulties in adapting to the SIMGOS application.

According to Anugrah Prasetyo Aji et al. (2019), hospitals are required to implement Hospital Management Information Systems supported by competent and well-trained human resources. Although SIMGOS has been implemented, its application has not been fully adopted across all hospital units due to limitations in human resources, equipment availability, and the absence of structured training schedules and budget allocations. These limitations have contributed to low discipline in data entry, resulting in data that are incomplete, inaccurate, and difficult to interpret. This finding is consistent with Suyanto (2015), who reported that human resources play a critical role as primary users of new information systems. Difficulties in technology adoption can become a major barrier during the implementation stage, as system utilization is closely linked to human behavior.

From the researcher's perspective, the high outpatient visit rates at RSUD dr. Adnaan WD Payakumbuh are not proportional to the available human resources, particularly among users aged over 45 years. This condition necessitates targeted and continuous training programs for physicians and senior nurses who are less familiar with digital systems. Training should be conducted in multiple stages, accompanied by regular evaluations to assess staff performance and system mastery. Moreover, training should be provided comprehensively to all users, not limited to the IT team, to reduce system dependency and optimize SIMGOS utilization.

2. Financial and Budgetary Factors

Financial and budgetary factors play a crucial role in organizational operations, particularly in supporting planned activities and ensuring sustainable system implementation. Effective financial management is essential to allocate and manage resources to achieve organizational objectives. Interview findings revealed that limited funding has resulted in inadequate infrastructure, including insufficient network devices,

servers, and system security components such as firewalls. Several inpatient units operate with only one computer and one printer, significantly restricting access to SIMGOS. Without adequate budget allocation, it is difficult to meet essential operational needs, including servers, printers, and other supporting equipment. As a result, system operations are frequently disrupted, preventing users from accessing SIMGOS, completing electronic medical records (EMRs), and printing patient control cards.

The lack of adequate facilities and infrastructure has led to suboptimal service delivery and negatively affected patient satisfaction. Furthermore, limited budget availability poses increasing challenges as the number of service units within the hospital continues to grow annually. According to Anugrah Prasetyo Aji et al. (2019), funding plays a vital role in ensuring the successful implementation of SIMGOS by guaranteeing the availability of required resources. Although the hospital has established budgetary policies for SIMGOS, the high costs associated with equipment procurement and system maintenance, coupled with lengthy budget approval processes, have delayed system optimization. This finding aligns with Nurhaidah (2016), who identified budget constraints as a key limitation in completing infrastructure requirements for Hospital Information System implementation. From the researcher's perspective, inaccurate budget planning and insufficient allocation have significantly affected system sustainability. Continuous technological advancements require ongoing investment in system security, data storage capacity, and staff training. Therefore, regular evaluation of budget planning is necessary to ensure system requirements and staff needs are adequately fulfilled to support optimal SIMGOS operation.

3. Strategic and Implementation Factors

Strategic and implementation factors are essential elements in developing effective organizational planning and achieving successful system adoption. Strategies are required to identify both internal and external influences that affect organizational objectives. Interview results indicate that SIMGOS implementation has been disrupted by limited supporting infrastructure and insufficient staff capacity to analyze future system needs. These include inadequate facilities for user training and limited efforts to enhance IT competencies through structured training programs. Additionally, SIMGOS is a shared application developed by the Indonesian Ministry of Health and not internally developed by the hospital, which limits flexibility in system customization. Stakeholders involved in SIMGOS implementation include hospital management, led by the Director as the primary decision-maker, the Head of Human Resource Development, IT teams, and medical record officers. Although SIMGOS strategies and procedures are formally structured and well-defined, inconsistent compliance with standard operating

procedures (SOPs) remains a significant challenge.

According to Anugrah Prasetyo Aji et al. (2019), employees often fail to consistently read and follow established SOPs, resulting in reporting errors and data inaccuracies. Effective implementation requires clear operational methods that consider available facilities, time allocation, financial resources, and organizational capacity. This finding is supported by Augustyana and Mulyani (2025), who emphasized the importance of structured strategies, socialization, training, and early-stage monitoring in adopting new applications. Such approaches facilitate system familiarization, acceptance of change, and evaluation of system effectiveness. From the researcher's perspective, limitations in hospital infrastructure and weak commitment to system utilization have hindered SIMGOS optimization. Although communication strategies are relatively effective and service delivery runs smoothly, incomplete adoption across all units and inconsistent user commitment continue to limit system effectiveness. Stronger institutional commitment, improved infrastructure, and strict enforcement of system usage are required to ensure SIMGOS operates optimally and supports hospital performance.

Based on the study conducted at RSUD dr. Adnaan WD Payakumbuh in 2025 involving interviews with five informants, it can be concluded that the effectiveness of SIMGOS implementation is influenced by human resources, funding, and strategic factors. Limited digital competence among some medical staff highlights the need for mandatory and continuous training to enhance system utilization and service quality while reducing the technical burden on the IT team. Budgetary constraints have resulted in inadequate infrastructure and limited system maintenance and upgrades, indicating the importance of strengthened financial planning, evaluation, and monitoring to ensure system sustainability. Although implementation strategies and standard operating procedures have been established, inconsistent user compliance and technical limitations of the SIMGOS application hinder optimal performance. Therefore, stricter enforcement, adaptive strategies, and continuous system development are required to optimize SIMGOS implementation and support future hospital information system improvements.

AUTHOR CONTRIBUTION

Wulan Triani contributed to the study conception and design, data collection, data analysis, and manuscript drafting. Silvia Adi Putri was responsible for data collection, data validation, and interpretation of research findings. Rantih Fadhilya Adri contributed to data analysis, critical revision of the manuscript, and final approval of the version to be published. All authors have read and approved the final manuscript.

CONFLICT OF INTEREST

There is no conflict of interest in this research.

ACKNOWLEDGEMENT

We would like to express their sincere gratitude to RSUD dr. Adnaan WD Payakumbuh for granting permission and providing support during the research process. Appreciation is also extended to all informants who willingly participated and shared valuable information that contributed significantly to this study. Special thanks are addressed to the hospital management, medical record officers, and the information technology team for their cooperation and insights related to the implementation of the Hospital Management Information System (SIMGOS). The authors are also grateful to previous researchers whose works served as important references and theoretical foundations for this study. Finally, heartfelt appreciation is conveyed to all parties who provided academic guidance, encouragement, and assistance, both directly and indirectly, in completing this research.

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