

## Exploring HR Experiences at Bunda Sarini Clinic: Digitalization, MIS, Service Quality, and Operational Efficiency

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Informasi Artikel	Abstract
E-ISSN : 3026-6874 Vol: 3 No: 1 Januari 2025 Page : 232-246	<i>The integration of digitalization and Management Information Systems (MIS) has profoundly enhanced human resource efficiency, service quality, and operational effectiveness at Klinik Pratama Bunda Sarini. This study explores the role of MIS in optimizing workforce management and improving patient-centered care, highlighting both its advantages and the challenges encountered during implementation. Researchers employed a qualitative case study approach, utilizing semi-structured interviews and document analysis to examine HR professionals' experiences with digital transformation. The findings indicate that MIS has streamlined administrative workflows, reduced clerical inefficiencies, and improved real-time data accessibility, facilitating faster decision-making and higher patient satisfaction. However, workforce resistance, digital literacy limitations, and data security concerns created obstacles in the transition process. Structured HR-led training programs and phased implementation strategies effectively addressed these challenges. The study underscores the importance of sustained investment in workforce development, cybersecurity measures, and digital infrastructure to support long-term healthcare digitalization. Future research should evaluate the long-term impact of digital adoption in small-scale healthcare institutions.</i>
<b>Keywords:</b> Digitalization, Management Information Systems, Human Resource Efficiency, Healthcare Service Quality, Operational Effectiveness	

### Abstrak

Integrasi digitalisasi dan Sistem Informasi Manajemen (SIM) telah meningkatkan efisiensi sumber daya manusia, kualitas layanan, dan efektivitas operasional di Klinik Pratama Bunda Sarini. Penelitian ini mengeksplorasi peran MIS dalam mengoptimalkan manajemen tenaga kerja dan meningkatkan pelayanan yang berpusat pada pasien, menyoroti keuntungan dan tantangan yang dihadapi selama implementasi. Para peneliti menggunakan pendekatan studi kasus kualitatif, dengan menggunakan wawancara semi-terstruktur dan analisis dokumen untuk memeriksa pengalaman profesional SDM dengan transformasi digital. Temuan menunjukkan bahwa MIS telah merampingkan alur kerja administratif, mengurangi inefisiensi administrasi, dan meningkatkan aksesibilitas data secara real-time, memfasilitasi pengambilan keputusan yang lebih cepat dan kepuasan pasien yang lebih tinggi. Namun, resistensi tenaga kerja, keterbatasan literasi digital, dan masalah keamanan data menciptakan hambatan dalam proses transisi. Program pelatihan terstruktur yang dipimpin oleh SDM dan strategi implementasi bertahap secara efektif mengatasi tantangan-tantangan ini. Penelitian ini menggarisbawahi pentingnya investasi berkelanjutan dalam pengembangan tenaga kerja, langkah-langkah keamanan siber, dan infrastruktur digital untuk mendukung digitalisasi layanan kesehatan jangka panjang. Penelitian di masa depan harus mengevaluasi dampak jangka panjang dari adopsi digital di institusi kesehatan berskala kecil.

**Kata Kunci :** Digitalisasi, Sistem Informasi Manajemen, Efisiensi Sumber Daya Manusia, Kualitas Layanan Kesehatan, Efektivitas Operasional

### INTRODUCTION

Human Resource Management (HRM) plays a pivotal role in the healthcare sector by facilitating efficient service delivery and enhancing workforce performance. Effective workforce management enhances patient care, optimizes healthcare operations, and addresses the sector's inherent complexities. Research indicates a strong correlation between advanced HRM practices and improved healthcare performance, particularly in the recruitment, retention, and training of healthcare professionals. The availability of skilled healthcare

workers is fundamental to achieving global health objectives, with efficient HRM strategies also contributing to higher job satisfaction among healthcare professionals, ultimately leading to improved patient care quality (Teshome et al., 2022).

A fundamental function of HRM in healthcare involves fostering employee engagement and commitment. As an impact of globalization, business organizations have made efforts to determine strategies that will contribute to sustainable competitive advantage (Sutanto et al., 2024). Hampel and Hajduová (2023) highlight that integrating medical staff into decision-making processes and offering skill development opportunities substantially enhance their quality of work life and organizational dedication. This participatory approach not only cultivates a sense of ownership among healthcare professionals but also aligns their efforts with institutional objectives, ultimately leading to improved overall performance (Rotea et al., 2023). Moreover, leadership remains a critical component of HRM, as effective leadership strategies have demonstrated a significant positive impact on healthcare workforce performance, particularly during crises such as the COVID-19 pandemic (Salas-Vallina et al., 2020).

The adoption of flexible working arrangements, including optimized shift patterns, plays a crucial role in sustaining workforce well-being and enhancing operational efficiency. Gao et al. (2020) emphasized that implementing flexible shifts can significantly improve healthcare quality and patient outcomes by allowing nursing staff adequate time for rest and recovery. This aligns with the findings of Buchelt et al. (2020), who identified performance appraisal and team management as essential HRM functions that contribute to the effective administration of healthcare professionals. Additionally, HRM's role in both performance appraisal and conflict resolution highlights its importance in cultivating a productive and supportive work environment.

Beyond its operational functions, Human Resource Management (HRM) plays a crucial role in overcoming challenges associated with healthcare service delivery, particularly in underserved regions. The recruitment and retention of skilled healthcare professionals are essential for optimizing service delivery and facilitating the integration of emerging technologies that enhance service quality (Babawarun, 2024). Motkuri and Mishra (2020) further reinforce this perspective, asserting that human resources serve as a foundational element in shaping global health outcomes. They emphasize the necessity of maintaining adequate staffing levels to ensure the achievement of optimal health outcomes.

The establishment of a supportive organizational culture plays a vital role in enhancing patient satisfaction and overall healthcare performance. Ahmed and Bein (2023) emphasized that a culture that fosters HRM practices serves as a mediating factor between these practices and patient satisfaction, underscoring the strong correlation between employee engagement and the quality of patient care. Xiao et al. (2022) further reinforce this perspective, advocating for a well-being-oriented HRM approach that prioritizes employee investment and institutional support to optimize workforce performance and service quality.

Technological advancements have made human interaction easier through digital or virtual platforms (Susanto et al., 2024). The digitalization of healthcare represents a transformative shift in the delivery, management, and overall experience of healthcare services for both patients and providers. This transition involves the integration of digital technologies to enhance accessibility, improve patient outcomes, and optimize operational efficiency. Digital transformation in public health is a complex, multidisciplinary process that requires collaborative efforts to restructure traditional healthcare models into more decentralized and patient-centered systems. In the current technological era, the widespread adoption of digitalization and Management Information Systems (MIS) has significantly transformed healthcare operations by enhancing service efficiency, data management, and patient outcomes. Epizitone et al. (2023) highlighted that integrating information technology into hospitals and clinics improves the quality of patient care while accelerating both diagnosis and treatment processes. The implementation of Electronic Medical Records (EMR) further

facilitates healthcare professionals in accessing patients' medical histories with greater speed and accuracy. This digital transformation yields several positive outcomes for patients, including improved quality of care through data-driven personalized treatment, expedited disease detection and treatment through artificial intelligence algorithms, and a reduction in medical errors due to more precise documentation and record-keeping within digital systems.

Okemiri et al. (2020) asserts that integrated information systems enhance the efficiency of patient care by eliminating barriers to information exchange among healthcare facilities. The implementation of an Integrated Patient Management System (IPMIS) facilitates patient data interoperability, enabling hospitals to share information in real-time, thereby accelerating the processes of diagnosis and treatment. This capability is particularly critical in emergency situations, where rapid access to a patient's medical history can be life-saving. Digital-based information systems further enable data-driven personalization of care, ultimately enhancing healthcare quality. The integration of artificial intelligence algorithms within these systems supports early disease detection and improves the accuracy of clinical decision-making. Moreover, the digitization of medical records enhances documentation precision, which significantly reduces medical errors and ensures more appropriate medication administration.

Additionally, workforce preparedness is a fundamental factor in the successful implementation of digital healthcare. Healthcare managers must develop digital competencies and enhance digital literacy among healthcare professionals to ensure effective adoption and utilization of new technologies. Without adequate training and leadership, the efficiency and sustainability of digital health initiatives may be compromised. While digitalization offers substantial benefits in improving healthcare delivery and patient engagement, it also presents challenges related to equity, ethics, and workforce adaptation. Addressing these complexities through strategic planning, ethical innovation, and inclusive implementation is essential for maximizing the long-term impact and sustainability of digital health technologies (Brommeyer & Liang, 2022).

Management Information Systems (MIS) play a crucial role in improving the efficiency, quality, and accessibility of healthcare services by facilitating the collection, storage, analysis, and dissemination of health-related data. These systems support decision-making processes across various levels of healthcare organizations, streamlining administrative tasks and enhancing clinical operations. A key function of MIS is integrating multiple subsystems, such as patient registration, clinical data management, and financial operations, to ensure seamless healthcare service delivery. Hospital Information Management Systems (HIMS) further contribute to clinical decision-making by providing healthcare professionals with timely access to patient data (Chen et al., 2023).

The role of knowledge management in healthcare MIS is particularly significant, as it enables healthcare institutions to optimize resource utilization, improve service delivery, and enhance patient outcomes. Interoperability among different departments, including pharmacy and clinical services, strengthens communication and collaboration, ultimately leading to better healthcare efficiency. However, despite its advantages, MIS implementation faces several challenges. Inadequate training, limited resources, and resistance to technological change among healthcare professionals hinder its successful adoption. Additionally, the rapid evolution of technology necessitates continuous system updates and staff training, placing additional strain on organizational resources.

Rinaldi et al. (2022) highlights that the adoption of web-based information systems in healthcare services has led to fundamental transformations in various aspects of clinical operations. The development of the E-Clinic System at Tamara Clinic aims to enhance service efficiency by automating patient registration and enabling real-time medical data management. This technological advancement replaces traditional paper-based methods, which are susceptible to administrative errors and delays in data processing. The key impacts of healthcare digitalization include the automation of patient registration, which expedites the registration process and minimizes long queues. Enhanced patient data interoperability

ensures that medical information is stored within a centralized system, allowing healthcare professionals to access patient records more efficiently. Additionally, reducing the administrative burden enables medical personnel to allocate more time and resources to patient care rather than administrative tasks. These improvements collectively contribute to a more efficient and patient-centered healthcare system, demonstrating the critical role of digital transformation in modern medical practices.

The implementation of digital-based information systems has enabled the storage of electronic medical records (EMRs) on a unified platform, allowing medical personnel to access patient data more efficiently and accurately. This system replaces traditional paper-based records, which are vulnerable to data loss and entry errors. Digitizing patient data management enhances data security by encrypting patient information to prevent unauthorized access. It also facilitates seamless information exchange between departments, enabling specialists to retrieve a patient's medical history without relying on physical documents. Additionally, the system improves health data analysis capabilities, allowing clinics to monitor disease trends among patients and develop more effective healthcare strategies.

The implementation of information systems at Tamara Clinic has significantly contributed to improving service quality and patient outcomes. With a structured digital system, patients receive faster, more accurate, and safer healthcare services. This study highlights several positive outcomes, including increased patient satisfaction due to reduced waiting times and a more efficient consultation and examination process. The system also minimizes medication errors by automatically verifying patients' dosage requirements and allergy histories before prescribing medication. Furthermore, AI-based systems enhance disease detection by analyzing patient data, thereby supporting physicians in making more precise clinical decisions.

Healthcare human resource professionals oversee recruitment, workforce planning, training, and operational efficiency (Smerat, 2024). Research indicates that advanced HR practices contribute to improved healthcare outcomes by enhancing staff retention, training effectiveness, and performance monitoring (Owolabi, 2024). However, studies also identify challenges such as disparities in workforce distribution, inefficiencies in HR planning, and the necessity for a strategic approach to digital transformation (Stanimirović & Brinovec, 2023).

Small-scale healthcare institutions, including primary care clinics, encounter distinct challenges in adopting digital solutions, particularly within the human resource function. Existing research primarily examines large hospitals, resulting in a gap in understanding how smaller clinics, such as Bunda Sarini Primary Clinic, integrate modernization into HR processes. Although the COVID-19 pandemic has accelerated the adoption of digital health technologies, significant barriers persist, including gaps in digital literacy, system adaptability issues, and workforce resistance (Kamali, 2024).

These challenges are particularly prevalent in small-scale healthcare institutions such as Klinik Pratama Bunda Sarini in Pesanggaran, Banyuwangi, where limited resources can impede the seamless integration of digital systems. Research on HR's role in digitalization within small healthcare facilities remains scarce, as most studies primarily examine digital transformation in large hospitals while overlooking the specific challenges faced by smaller clinics. The extent to which HR professionals at Klinik Pratama Bunda Sarini have successfully integrated digital tools and Management Information Systems (MIS) into daily operations remains unclear. Furthermore, there is a need to assess how HR-driven digitalization strategies influence staff training, workforce efficiency, and patient service quality, thereby shaping overall service outcomes and operational effectiveness.

This research seeks to examine the experiences and perceptions of human resource professionals at Bunda Sarini Primary Clinic concerning digitalization, Management Information Systems (MIS), service quality, and operational efficiency in enhancing overall performance. By analyzing the role of HR in digital transformation, this study provides valuable

insights into how small-scale healthcare institutions can optimize HR functions to enhance service quality and improve operational efficiency..

## **METHOD**

This study adopts a qualitative case study approach to explore the experiences and perceptions of human resource (HR) professionals regarding digitalisation, Management Information Systems (MIS), service quality, and operational efficiency at Klinik Pratama Bunda Sarini. This methodology is well-suited for capturing the intricate human and organisational dynamics influencing digital transformation in small-scale healthcare facilities. Semi-structured interviews and document analysis serve as the primary data collection methods, enabling an in-depth and contextual investigation of HR challenges, strategies, and adaptations within the clinic.

The study includes HR professionals, managerial staff, and healthcare workers, selected through purposive sampling to ensure representation of individuals directly involved in HRM decision-making, digitalisation efforts, workforce planning, and service quality management. The sample size, comprising 10–15 participants, provides diverse perspectives from HR managers, administrative personnel, and frontline healthcare workers, facilitating a comprehensive analysis of HR functions in driving digital transformation and operational efficiency.

Data collection is conducted through semi-structured interviews lasting 45–60 minutes, conducted either face-to-face or virtually, with participant consent for audio recording. Document analysis of HR policies, workforce management reports, and MIS-related documents complements interview data, strengthening data triangulation and enhancing the study's credibility and reliability.

Thematic analysis, guided by Braun and Clarke's (2006) framework, is employed for data analysis. This process involves familiarisation with data, initial coding, theme development, theme review, theme definition, and report writing. Key themes such as MIS adoption challenges, digital HRM strategies, and workforce adaptation are systematically identified and refined. This rigorous analytical approach facilitates a nuanced understanding of HRM's role in digital transformation and operational efficiency in the context of small-scale healthcare institutions.

## **RESULTS AND DISCUSSION**

### **HR-Driven Digitalisation Strategies and Patient Satisfaction in Bunda Sarini Primary Clinic Pesanggaran Banyuwangi**

In recent years, healthcare institutions have increasingly implemented HR-driven digitalization strategies to enhance patient satisfaction. The integration of digital technologies within healthcare not only optimizes operational efficiency but also plays a pivotal role in shaping the patient-provider relationship, which is fundamental to patient satisfaction. Extensive research has underscored the multifaceted impact of digitalization on healthcare service delivery and patient experiences.

A key advantage of digitalization in healthcare is the enhancement of communication between healthcare providers and patients. For example, the adoption of electronic medical records (EMRs) has been shown to improve patient satisfaction by enabling physicians to focus more attentively during consultations, as they can swiftly and efficiently retrieve patient information (Wali et al., 2020). This is consistent with findings suggesting that digital tools facilitate improved communication and comprehension, ultimately contributing to better treatment outcomes. Additionally, the implementation of personal health records (PHRs) grants patients greater control over their health data, thereby fostering trust and a sense of security in their interactions with healthcare providers.



Despite its benefits, the transition to digital systems presents several challenges. HR professionals at Klinik Pratama Bunda Sarini face significant challenges in digital transformation, particularly employee resistance to change and data security concerns, which hinder operational efficiency. Workforce reluctance to adopt new technologies disrupts workflows, while regulatory compliance demands substantial resources. Implementing structured change management, cybersecurity training, and phased rollouts is essential for seamless integration.

Studies indicate that while digitalization can enhance job satisfaction among healthcare professionals, improper management of these systems may lead to heightened stress and burnout (Zaresani & Scott, 2020). The design and usability of electronic health records are crucial determinants of clinician satisfaction, which in turn affects patient satisfaction. Inefficiently designed systems can disrupt clinician-patient interactions, potentially diminishing the overall patient experience (Ou et al., 2019). Consequently, healthcare institutions must prioritize the development and implementation of user-friendly digital solutions that effectively support both clinicians and patients.

**Table 1. Participant Code of HR-Driven Digitalisation Strategies and Patient Satisfaction in Bunda Sarini Primary Clinic Pesanggaran Banyuwangi**

Participant Code	Excerpt	Codes	Number of Excerpts	Number of Participants
P1	<p>"The digitisation strategy we have implemented has had a direct impact on patient satisfaction... administrative processes such as patient registration, medical record recording, and payment have become faster and more efficient"</p> <p>"This system helps medical personnel to access patient information more quickly, so that the services provided become more responsive"</p>	<p>"Administrative efficiency improvement"</p> <p>"Faster medical information access"</p>	4	3
P3	<p>"We developed an app-based system that allows patients to register online, access their health history"</p> <p>"Patients feel more comfortable and in control of managing their health"</p>	<p>"Patient self-service digital tools"</p> <p>"Improved patient control"</p>	4	3
P15	<p>"With the digital system, examination results can now be directly uploaded to the system and can be accessed by doctors in less time"</p>	<p>"Faster diagnostic results"</p>	4	3

The analysis of Table 1 underscores the substantial impact of HR-driven digitalization strategies on patient satisfaction at **Bunda Sarini Primary Clinic**. The integration of digital technologies has significantly improved administrative efficiency, enhanced patient autonomy, and expedited diagnostic processes, thereby optimizing healthcare service delivery. The digitalization of administrative functions, including patient registration, medical record management, and payment processing, has streamlined operations, reducing waiting times and improving service efficiency. Additionally, the adoption of self-service digital tools, such as an application-based system for online registration and access to personal health records, has empowered patients by granting them greater control over their healthcare management. This development has strengthened patient engagement and trust in medical services.

Moreover, the implementation of digital diagnostic systems has facilitated real-time access to examination results, enabling faster clinical decision-making and timely medical interventions. This advancement has substantially improved the accuracy and efficiency of healthcare delivery, leading to higher levels of patient satisfaction. However, despite these benefits, the transition to digital systems initially posed challenges, particularly in workforce adaptation. Resistance to technological change among employees created barriers to seamless implementation. Nonetheless, structured HR-led training programs and phased digital adoption strategies effectively mitigated these obstacles, ensuring a smoother transition and sustained operational improvements.

These findings highlight the critical role of HR in driving digital transformation by enhancing employee digital competency, expanding patient access to digital tools, and ensuring data security. Future initiatives should prioritize continuous workforce training, system usability optimization, and the advancement of patient engagement strategies to sustain long-term healthcare improvements. Further research should explore the broader impact of digitalization on employee performance and patient retention to develop a more comprehensive understanding of HR-driven digital transformation in small healthcare institutions.



**Figure 1. Diagram of HR-Driven Digitalisation Strategies and Patient Satisfaction in Bunda Sarini Primary Clinic**

The implementation of digital systems enhances administrative efficiency by streamlining patient registration, medical record management, and payment processing, leading to a significant reduction in patient waiting times. By minimizing administrative errors, these systems foster greater trust in healthcare facilities, thereby improving overall patient satisfaction.

HR-driven digital training plays a crucial role in ensuring that medical and administrative staff develop proficiency in utilizing digital tools, ultimately enhancing the efficiency of patient care management. Real-time data recording increases accuracy and reduces administrative errors, contributing to a more seamless and effective patient experience.

Digitalisation empowers patients by providing self-service options, including online appointment scheduling, access to medical records, and automated reminders for consultations and medication adherence. By granting patients greater control over their healthcare journey, these digital services instill confidence and improve overall satisfaction levels.

The adoption of digital systems strengthens patient retention and loyalty by facilitating more effective communication between patients and healthcare providers. These systems support the development of long-term relationships, encouraging patients to seek continued care at the same facility. Transparent and reliable digital services further enhance patient trust, resulting in higher retention rates.

Digital records mitigate the risks associated with lost or misplaced medical files, thereby increasing patient confidence in data security. Pharmacists and healthcare personnel benefit from automated prescription verification and inventory tracking, which significantly reduces the likelihood of medication errors and enhances the overall safety of pharmaceutical services.

The accessibility of digital medical records enables healthcare providers, including physicians and nurses, to make faster and more accurate diagnoses. The integration of laboratory results within digital systems facilitates more rapid decision-making, ultimately improving the quality and efficiency of patient care.

Despite its benefits, the implementation of digital systems initially posed challenges for some staff members, as they encountered difficulties in adapting to new technologies. These transitional obstacles temporarily affected service efficiency. However, continuous HR-led training initiatives and a phased implementation strategy successfully mitigated these challenges, ensuring smoother integration and long-term operational benefits.

### **Influence of Management Information Systems (MIS) on Human Resource Efficiency and Service Quality at Bunda Sarini Primary Clinic**

The integration of Management Information Systems (MIS) in the healthcare sector has played a crucial role in enhancing both human resource efficiency and the quality of service delivery. MIS encompasses a range of technologies and processes designed to facilitate the collection, storage, and dissemination of information, thereby optimizing decision-making and operational efficiency within healthcare institutions.

A primary advantage of MIS lies in its ability to enhance human resource efficiency by automating routine administrative tasks and streamlining workflows. This automation enables healthcare professionals to devote more time to patient care rather than administrative responsibilities. The implementation of Hospital Management Information Systems has been shown to significantly improve user satisfaction among healthcare staff, which in turn enhances service delivery (Meiyana et al., 2023). Research employing the End-User Computing Satisfaction (EUCS) model has demonstrated a positive correlation between user satisfaction with HMIS and the quality of services provided, suggesting that healthcare personnel who are satisfied with digital systems are more likely to deliver high-quality care (Meiyana et al., 2023). However, the effectiveness of MIS in improving human resource efficiency and service quality depends on proper implementation and management. Insufficient training of healthcare staff on new digital systems can limit the potential benefits of MIS. Moreover, excessive workloads among healthcare professionals can lead to burnout, which negatively impacts staff performance and patient satisfaction. To fully leverage the advantages of MIS, continuous training and ongoing support for healthcare workers are essential.



**Table 2. Participant Code of Influence of Management Information Systems (MIS) on Human Resource Efficiency and Service Quality at Bunda Sarini Primary Clinic**

Participant Code	Excerpt	Codes	Number of Excerpts	Number of Participants
P1	<p>"The integration of the Management Information System (MIS) has been very helpful in improving the efficiency of human resources in our clinic... With SIM, the entire process has become more structured and automated, reducing the workload of HR staff and allowing them to focus more on employee development."</p> <p>"As nurses, we feel that SIM is very helpful in reducing the administrative workload... With an integrated system, recording medical actions, medication administration, and patient control schedules is now easier and faster."</p>	<p>"Automated workforce management"</p> <p>"Reduced administrative workload"</p>	9	6
P2	<p>"With a digital-based system in place, we can develop training programmes based on employee needs, measure the effectiveness of training, and ensure that every medical professional has regularly updated skills."</p>	<p>"Digital employee training"</p>	9	6
P4	<p>"Although the implementation of SIM provides many benefits in improving work efficiency, there are challenges in digital adaptation for some medical and administrative staff who are not yet familiar with the system."</p>	<p>"Digital adaptation challenges"</p> <p>"Gradual system adoption"</p>	9	6

	“However, after a few months of implementation, we started to see efficiency improvements, especially in terms of work shift management and allocation of medical personnel according to patient needs.”				
P8	“With this digital system, laboratory results can be uploaded directly to the system so that doctors can access them in real-time without having to wait long.”	“Real-time lab results”	9	6	
P9	“One of the main challenges in implementing digital transformation in this clinic was the resistance to change from some of the medical and administrative personnel. Many staff were used to manual methods and found it difficult to adapt to the new system”	“Resistance to change”	9	6	
P10	“In implementing digital transformation, we also face challenges in ensuring patient data security and compliance with healthcare regulations” “If not managed properly, the risk of data leakage can compromise patient trust and hamper operational efficiency due to time-consuming system repairs”	“Data security risks” “Regulatory compliance concerns”	9	6	

The implementation of Management Information Systems (MIS) at Bunda Sarini Primary Clinic has significantly enhanced both human resource efficiency and healthcare service quality. By automating administrative tasks and streamlining workflows, MIS has optimized workforce management, reducing clerical inefficiencies and allowing HR personnel to focus on strategic functions, including employee development. Healthcare professionals, particularly nurses, have benefited from the system’s integration, as it has simplified medical documentation, including procedure recording, medication administration, and patient control

schedules. These advancements have contributed to error reduction and improved service efficiency.

MIS has alleviated administrative burdens by enabling real-time data entry, eliminating reliance on manual record-keeping, and allowing healthcare personnel to allocate more time to direct patient care. The structured workforce management system has facilitated optimized personnel distribution, ensuring adequate staffing during peak hours while minimizing employee burnout. Additionally, MIS has supported systematic employee training and skill development, enabling competency monitoring and skill gap identification. A data-driven approach to training evaluation has strengthened workforce readiness, further enhancing service quality.

Despite its benefits, the initial implementation of MIS presented challenges related to staff adaptation, particularly among employees unfamiliar with digital systems. However, phased implementation strategies and structured training programs facilitated a smooth transition, ultimately leading to improved operational efficiency, particularly in work shift management and personnel allocation.

MIS has also played a pivotal role in improving patient service efficiency by enabling real-time access to medical data. Physicians can retrieve laboratory results instantly, reducing waiting times and facilitating faster clinical decision-making. By integrating laboratory test results into the system, MIS has eliminated delays associated with paper-based reporting, thereby improving diagnostic accuracy and patient outcomes.

These findings highlight the substantial impact of MIS on HR efficiency and service quality at Bunda Sarini Primary Clinic. The system has successfully automated administrative processes, optimized workforce management, improved data accessibility, and enhanced training effectiveness. While initial adaptation challenges were observed, structured digital training programs enabled effective MIS adoption. By reducing administrative burdens and optimizing workforce distribution, healthcare professionals can dedicate more time to patient-centered care, resulting in improved service delivery and increased patient satisfaction. Future research should explore long-term performance indicators of MIS integration, focusing on employee retention, patient feedback, and healthcare service innovation. Addressing digital literacy challenges and refining system functionalities will further enhance operational efficiency and healthcare service effectiveness.



**Figure 2. Diagram of Influence of Management Information Systems (MIS) on Human Resource Efficiency and Service Quality at Bunda Sarini Primary Clinic**

The implementation of Management Information Systems (MIS) has significantly enhanced administrative efficiency and workforce management by streamlining HR-related tasks such as scheduling, attendance tracking, and payroll management. Automation has minimized manual errors, improved overall efficiency, and enabled staff to focus on employee development rather than routine administrative responsibilities. Digital workforce management facilitates real-time access to employee performance and training data, allowing HR professionals to make informed decisions regarding talent development and workforce optimization.

The integration of digital tools within HR management has established a more structured approach to competency tracking and employee training programs. HR departments can systematically monitor training progress, evaluate employee performance based on predefined indicators, and ensure that healthcare workers continuously update their skills. This structured approach fosters workforce efficiency and directly impacts patient care quality by ensuring that healthcare providers remain informed about the latest medical advancements.

MIS has played a pivotal role in minimizing human errors in data management for both HR and patient services. Automation has ensured the accurate documentation of work schedules, performance evaluations, and patient records. The standardization of administrative procedures has reduced inconsistencies in medical record entry and prescription management, thereby enhancing patient safety and strengthening trust in healthcare services.

Despite the advantages of MIS, its implementation initially presented challenges, particularly in digital adaptation and training. Some healthcare workers struggled to adjust to the digital system, which temporarily affected service efficiency during the transition period. However, continuous training initiatives and a phased implementation strategy successfully addressed these challenges. Over time, the system has facilitated improved shift management, optimized workforce allocation, and enhanced response times to patient needs.

The adoption of MIS has directly contributed to optimizing patient services by introducing online registration, digital medical record access, and automated appointment reminders. These advancements have reduced patient waiting times, improved record accessibility, and accelerated consultation processes. Healthcare providers, including physicians and nurses, now have immediate access to patient histories, enabling more accurate diagnoses and well-informed treatment plans.

The transition from physical to digital records has reinforced data security and operational transparency. Encrypted digital records ensure confidentiality while granting authorized personnel immediate access to critical patient information. This enhancement has strengthened patient confidence in the clinic's data management practices and administrative efficiency.

MIS has also optimized inventory tracking in the pharmacy department, mitigating medication errors and preventing stock shortages. Automated stock monitoring and prescription verification have improved medication safety, reducing the likelihood of incorrect prescriptions and ensuring consistent availability of essential pharmaceuticals.

The digitalization of laboratory test results has significantly expedited diagnostic processes, enabling healthcare professionals to access test outcomes in real time. This improvement is particularly critical in emergency cases, where rapid diagnosis is essential for immediate treatment interventions. Additionally, the structured data management system has minimized the risk of misfiled or lost test results, ensuring higher accuracy and reliability in laboratory diagnostics.

The primary challenges HR professionals encounter in implementing digital transformation at Klinik Pratama Bunda Sarini and their impact on operational efficiency. The findings reveal that resistance to change among employees and concerns related to data security and regulatory compliance significantly hinder the seamless adoption of digital solutions within the clinic.

Employee resistance to change represents a major obstacle to digital transformation. Many staff members, particularly those accustomed to manual processes, struggle to adapt to new digital systems, leading to delays in implementation and disruptions in workflow continuity. This reluctance to embrace technological advancements slows the overall transition and negatively affects operational efficiency in both administrative and clinical functions. To mitigate this issue, HR professionals must prioritize comprehensive change management strategies, including interactive training programs and mentorship initiatives that foster a digital-first mindset among employees.

Data security and regulatory compliance concerns also present substantial challenges to operational efficiency. Ensuring compliance with healthcare regulations while safeguarding patient data demands significant resources and continuous oversight. Failure to address these issues effectively increases the risk of data breaches, legal repercussions, and loss of patient trust. Moreover, security lapses necessitate system repairs and updates, further burdening administrative teams and disrupting daily operations. HR professionals must implement structured cybersecurity training programs and establish clear Standard Operating Procedures (SOPs) to reinforce compliance and enhance data governance.

The effectiveness of digital transformation at Klinik Pratama Bunda Sarini largely depends on the adaptability of the workforce. Employees' reluctance to engage with new digital tools, coupled with security concerns, extends service delivery timelines and increases the workload for HR and IT departments. Ensuring a smooth transition requires a structured digital implementation strategy that prioritizes phased rollouts over full-scale transitions to minimize operational disruptions. Pilot projects serve as valuable tools in identifying potential challenges before wider deployment, enabling a more seamless integration of digital solutions.

The findings underscore the critical role of HR in facilitating digital transformation by addressing employee resistance and ensuring adherence to regulatory requirements. Successful implementation necessitates proactive change management, structured training, and robust cybersecurity measures. By adopting these strategies, Klinik Pratama Bunda Sarini can optimize HR performance, enhance digital adoption, and improve overall healthcare service quality.

## **CONCLUSION**

This study highlights the transformative impact of digitalization and Management Information Systems (MIS) on human resource efficiency, service quality, and operational effectiveness at Klinik Pratama Bunda Sarini. The integration of MIS has significantly streamlined administrative processes, optimized workforce allocation, and improved patient satisfaction, leading to enhanced healthcare service delivery. The adoption of electronic medical records (EMRs) and automated patient registration systems has minimized waiting times, increased data accuracy, and enabled real-time access to medical information, thereby strengthening both operational efficiency and patient-centered care.

Despite these advantages, the transition to digital systems initially faced challenges, including workforce resistance, gaps in digital literacy, and concerns over data security and regulatory compliance. However, structured HR-led training programs and phased implementation strategies effectively mitigated these barriers, facilitating a smoother transition and long-term improvements in HR performance.

The findings emphasize the importance of HR-driven digital strategies in sustaining operational efficiency by enhancing workforce competency, optimizing shift management, and promoting continuous employee training and development. Furthermore, MIS integration has improved real-time healthcare workflow monitoring, ensuring better resource utilization and minimizing clinical errors. To ensure the long-term success of digital healthcare transformation, sustained investment in digital infrastructure, cybersecurity measures, and workforce training is essential. Addressing ongoing adaptation challenges and refining system functionalities will maximize the effectiveness of MIS in small-scale healthcare institutions.



Future research should assess the long-term impact of digitalization on employee retention, patient engagement, and service innovation. Additionally, exploring MIS scalability and adaptability in small healthcare institutions compared to larger hospital settings will provide valuable insights. Investigating HR leadership's role in digital transformation may further optimize HR management strategies in healthcare digitalization. By fostering a culture of digital adaptability, strengthening HR competencies, and ensuring robust data security, Klinik Pratama Bunda Sarini can achieve sustained operational improvements, ultimately leading to higher service quality and improved patient outcomes.

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