



## **THE INFLUENCE OF CLINICAL STAFF COMPETENCY, CHANGE MANAGEMENT AND SERVICE DIGITALIZATION ON THE INNOVATION PERFORMANCE OF HEALTH SERVICE UNITS IN A MODERN CLINIC**

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### **Abstract**

*The major consideration of the investigation is to find out the interaction of the competencies of clinical staff, the change agent, and the new technology together with the performance of a healthcare unit in the contemporary innovation-oriented clinical network. The study originates from the perception of the need for innovations and changes in the healthcare industry which is a very much the case for the modern clinical organizations that are to provide soon, excellent, and technology-based services. For the research, a quantitative explanatory strategy was used, along with a sample of 150 respondents made up of clinical and administrative staff, as well as operational managers from the modern clinical network. Deliberate or purpose sampling was the technique employed to select respondents based on their work experience, involvement in operations, and familiarity with digital service systems. The results of multiple linear regression analysis indicated that each of the three independent variables had a positive and significant impact on the innovation performance of the healthcare units. The coefficient of determination value indicates that the blend of clinical staff competency, change management, and service digitalization has a great impact on innovation performance. The research advocates the clinical staff training as an important tactic, in addition to establishing change management infrastructures, and speeding up the digitalization of services, for boosting the innovation in modern clinic networks.*

**Keywords:** *Clinical Staff Competency, Change Management, Service Digitalization, Innovation Performance*

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## INTRODUCTION

The present-day healthcare industry has undergone a gigantic transformation and is still the fastest one, the entire process being marked by a higher quality service demand, rapid medical technology developments, and the transition of the patients who now want their healthcare to be quicker, more precise, and more customized (Risna et al., 2022). The ability of health care institutions to innovate within modern clinical networks is a strategic indicator that not only the institution's capability to be competitive is determined but also to improve the quality of services and fulfill the community's demands is positively influenced (Hidayat, 2020). This innovative performance is seen in the new processes, operational norms, digital technology, and the establishment of a safer and more efficient patient service experience that health care facilities have introduced (Faizah et al., 2021). The increasing complexity of healthcare cases, continuously changing regulations, and fierce competition in the industry have made it clinical and operational innovations that support the organization's sustainability (Dewi et al., 2020). Moreover, the recent global pandemic has been a wake-up call for healthcare organizations to be more adaptive, resilient, and responsive to change, thus making innovation performance not only a competitive advantage but also a prerequisite for survival and growth in the current healthcare ecosystem (Dewi et al., 2021).

The most crucial component of the healthcare unit's performance with respect to the innovation is the skill level of clinical staff (Ibrahim et al., 2024). Clinical skill is considered to be a combination of professional knowledge, medical skill, clinical proficiency, clinical reasoning, and the skill to adapt to new medical technologies and treatments (Faizah & Wibisono, 2022). The present clinical network has the medical personnel with the necessary skills who not only execute the required procedures correctly but also actively participate in the process by identifying their own areas of improvement, proposing innovations in the processes, and giving their input into the overall quality of service based on evidence (Djunaedi, 2024; Wandu et al., 2025). Besides, the circumstance of ineffective change management usually results in slow innovation due to staff resistance, lack of coordination, and poor communication (Mulyadi et al., 2024). Providers with efficient change management are able to

develop an area of flexible work, facilitate the cooperation between units, and increase the acceptance level for new innovations (Pettalongi et al., 2025). Furthermore, effective change management also plays a crucial role in the sustainability of changes made at both clinical and administrative levels in the long run (Djunaedi, 2025). One of the most important factors for rapid innovation in the healthcare sector is the digitalization of services. Digital transformation means the use of a variety of technologies which are Electronic Medical Records, Patient Monitoring Applications, Online Booking Systems, Telemedicine, and Healthcare Facilities Data Integration, among others (Sepyenia et al., 2024). In the present-day clinic networks, the digitization of services not only improves the efficiency of administration but also allows the service providers to offer the patients a faster, more transparent, and more accessible experience (Eprianto et al., 2025).

Taking this context into account, the objective of the study is to investigate the impact of the competencies of clinical staff, change management, and service digitalization on the innovation performance of a modern clinical network of healthcare units. Theoretical aspect of the study provides a boost to the existing knowledge in the areas of healthcare innovation, significance of clinical staff competencies, and the effect of change management and service digitalization on the performance of healthcare organizations. Moreover, it also facilitates a sharper comprehension of the nexus between human factors, organizational processes, and technology in the delivery of sustainable service innovation. The outcome of this study will thus be applicable to clinical leaders, policymakers, and HR managers in formulating strategies for capacity building in the clinic, more effective changeover, and smoother digital technology adoption. The research not only offers extremely important insights for the modern clinical networks in terms of being able to compete excellently but also making their healthcare services more efficient and of better quality, hence more creative and easier to access by the community.

## METHOD

The research is fundamentally a quantitative one with the intention of discovering and interpreting the causal relationships between

the variables which are clinical staff competency, change management, and service digitalization. Hence, these variables are the major determinants of innovation performance of the healthcare units. The study is mainly populated by the clinical staff, administrative workers, and operational managers from the modern clinic network in the major Indonesian cities. The sampling method used was purposive sampling meaning that the research participants were those who fit the description specified by the researcher according to the research objectives. The criteria are: (1) that the participants should have been working in the healthcare unit for at least one year, (2) their participation should be in the clinical or operational service process, (3) they should have a connection with either the innovation program or internal change process, and (4) they must be acquainted with the clinic's digitalization system. For the study, 150 respondents were recognized based on the previously mentioned criteria. The survey was made on the Likert scale of 1-5 which displays an extent from strongly disagree to strongly agree. For data analysis, multiple linear regression models were performed so as to find out the influence of each independent variable on the dependent variable.

## RESULT AND DISCUSSION

To determine the effectiveness of the regression model, the F-test was applied, which provided a calculated F-value of 54.82, surpassing the F-table value of 3.05 at the confidence level of  $0.000 < 0.05$ . This result suggests that the qualifications of the healthcare staff, the management of changes, and the digitalization of services together have made a significant impact on the innovation performance of the studied units. The regression analysis yielded an  $R^2$  value of 0.71, which indicates that 71% of the dependent variable (innovation performance) can be attributed to the three independent variables while the remaining 29% variation in the dependent variable is due to other factors such as culture, medical leadership, industry competition, and technology support quality. The results of the partial t-test indicated that all three variables had a computed t-value greater than the t-table value (1.97) and had a significance value of less than 0.05, hence it was concluded that each variable had a positive and significant effect on innovation performance. Therefore, the research model is

statistically sound, and the hypothesis posited is confirmed.

The results of the research indicate that the competence of the hospital staff has a very good and easy to see effect on the hospitals' performance in terms of creativity and the like. The clinical staff's professionalism is the major reason the healthcare system can successfully create and distribute innovations of different kinds. Such professionals, with their high level of skills, not only point out the weaknesses in the processes and the places that are in need of change more quickly but also suggest measures that are not only patient-friendly but also creative and cost-effective. Besides, they need to be very familiar with the new medical standards as training requires; otherwise, they will not be able to change the service practices according to the new health laws and will not keep up with the developments in the field of diagnostic technology. Moreover, the well-trained doctors would always be the first ones to use the new equipment, treatments, and tests that are quicker and more precise. Also, they would be the ones, who will be, working in a multidisciplinary way with the healthcare units' innovation being the very ground on which the interdisciplinary teams' and thus the units' innovations are fed. In the ruthless competition for survival among the clinical networks, clinical excellence is a quality that both secures the operations and helps in satisfying the patients' ever changing demands. Therefore, the skill level of the clinical staff is a major factor not only in service quality but also in the continuous improvement of the whole innovation performance circle.

The research revealed that the application of change management practices led to an astounding and significant increase in the innovative output performance of the health units. The very existence of the innovations is dependent on the organization's capability to manage change which is complete; that is, planning, communication, execution, and assessment are all equally effective. The health units that have good change management are able to build a workplace that is highly flexible and open to new ideas. If there is good communication regarding the reason for the change, the benefits expected, and the ways that will be used in carrying it out, resistance among the staff will be lessened and their participation in the innovation process will be greater. A methodological approach to change management can enable clinics to ensure that the

alterations made in hospitals, health information systems, or e-service technologies are uniformly done across all clinics. The role of the leaders in driving the change is very important as supportive leadership can increase the trust and thus the loyalty of the staff to the innovation. Change that is well managed can assist organizations in overcoming blockers like conflicts among staff, unclear roles, and low productivity. In the end, all this will facilitate the innovation process and the improvements will be noticeable in the quality of service and operational efficiency.

Among various factors, research indicates that service digitalization is the most important factor positively affecting the innovation performance of healthcare institutions. Digital hospitals of today, which are absorbing the digitalization of services, can utilize much more resources, accelerate the patient service process, and reduce the chances of errors caused by humans. Technologies like Electronic Medical Records (EMR), digital queuing, teleconsultation, and patient monitoring systems have opened a way for health care providers to quick, transparent, and data based innovations in service. By the use of digital technology the different units in the hospital can communicate and thus the medical decisions are made using the very accurate information which is made by the flow communication among the units. To add to this, the total digital transition pushes healthcare institutions to propose new service models such as telemedicine and remote patient monitoring which not only make the service available at all times but also increase the quality of the interactions between health care professionals and patients. Organizations that have fully digitized their processes are capable of presenting solutions that are patient-centered, cost-effective, and of high quality. Moreover, the digitalization facilitates the clinics in conducting data-based evaluations thus it quickens the whole problem-identification and service-enhancement process. As such, the degree of digitalization is a direct determinant of the healthcare units' capacity for being innovative and sustainable.

## CONCLUSION

The outcomes of the research indicate that the quality of the clinical staff, change management, and digitalization of service have a remarkable and positive impact on the innovation performance of those healthcare units that operate within the framework of modern clinic networks.

Actually, the competence of the clinical staff is the most decisive factor that either restricts or facilitates the service units in their adoption, use, and updating of the latest medical technologies and procedures. Possessing a proper change management approach is thus a factor that can assist the organization in raising its capability to cope with the rapid change in the healthcare sector very slowly and, hence, innovation could be conducted in a systematic manner with almost no opposition and over a long period of time. The suggestions are primarily grounded on the first and second aspects above and consist of the following: firstly, through the continuous training, clinical certifications, and updation of knowledge and skills methods, the enhancement of clinical staff competency development programs would be the first priority along with staff being trained in the use of new medical technologies. Secondly, management would be required to create a more intricate change management system that would entail better internal communications, participation of staff in the change process, and support during the implementation of innovation in the form of mentoring. Finally, the third point is that clinics must upgrade their investments in the digitalization of services, such as the use of quality electronic medical records, setting up digital consultation platforms, and the integration of clinical data across units supporting data-driven decisions, to mention a few areas.

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