# Strategic Optimization of Hospital Health Services under the National Health Insurance (JKN) Era

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## Abstract

*This study explores strategic efforts to optimize hospital health services in Indonesia within the framework of the National Health Insurance (Jaminan Kesehatan Nasional, JKN). Since its launch in 2014, JKN, administered by BPJS Kesehatan, has aimed to ensure equitable access to healthcare. However, implementation challenges such as limited medical infrastructure, shortages in human resources, and financial sustainability have constrained service quality in hospitals. Employing a literature review methodology, this research analyzed twelve peer-reviewed articles published between 2015 and 2025, focusing on strategic responses of hospitals to JKN demands.*

*The review identifies five primary strategies: (1) leveraging hospital management information systems (SIMRS) to enhance operational efficiency, (2) optimizing digital tools such as the Mobile JKN application to improve patient satisfaction and service accessibility, (3) reassessing premium subsidy policies based on participants' financial capacity to ensure budgetary efficiency, (4) strengthening service quality to build patient loyalty, and (5) addressing service gaps through human resource development, especially in empathy and communication.*

*Findings underscore the importance of integrating technology, improving administrative and clinical workflows, and tailoring financial policies to real-world economic conditions. Additionally, continuous training and performance evaluation are recommended to align hospital operations with JKN standards. The study contributes a synthesized perspective on how Indonesian hospitals can effectively adapt to JKN, highlighting actionable strategies to improve healthcare delivery in a resource-constrained setting.*

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***Keywords:** JKN, BPJS, hospital, strategy*

## 1. INTRODUCTION

National Health Insurance (Jaminan Kesejatan Nasional / JKN) is one of the priority programs of the Indonesian government launched in 2014 to provide health protection to all Indonesian citizens. This program is managed by the Social Security Administering Agency (BPJS) Health, with the aim of providing access to quality, fair, and equitable health services (Presidential Regulation of the Republic of Indonesia Number 12 of 2013). Through JKN, participants can obtain health services ranging from primary to specialist health services in hospitals, with costs borne by the government and participant contributions. This system is expected to guarantee the sustainability of health services for all Indonesian people regardless of socio-economic status.

However, the implementation of JKN faces several challenges, especially related to the quality of health services in hospitals. Hospitals as one of the main health service providers face great pressure in implementing this program, both in terms of facilities, human resources (HR), and financing. First, limited hospital facilities, such as treatment rooms, outdated medical equipment, and other supporting facilities, are obstacles in providing optimal services. Although the government is trying to increase hospital capacity through a special allocation fund program, the even distribution of health facilities throughout Indonesia is still a challenge (Health Social Security Administering Agency, 2020).

Second, related to human resources, the quality and quantity of medical personnel available in hospitals are also a problem. Indonesia still lacks medical personnel, especially in remote areas. According to data from the Ministry of Health, the ratio of doctors per 1,000 population is still far from the standard set by the World Health Organization (WHO) (Ministry of Health of the Republic of Indonesia, 2021). This causes a very high workload for medical personnel, which can affect the quality of health services provided. On the other hand, medical personnel who are poorly trained in the JKN system or BPJS administrative procedures can also cause inefficiencies in services and delays in claims.

Third, financing challenges are a crucial issue in the implementation of JKN. Although JKN seeks to provide health access to all levels of society, the BPJS Kesehatan budget deficit is a serious problem. Several hospitals that collaborate with BPJS Kesehatan face difficulties in paying medical claims, leading to a decline in the quality of service or even delays in payments to medical personnel (Asri & Endang, 2021). Uncertainty in financing and frequently changing regulations make it difficult for hospitals to plan their financial management. This can have an impact on improving facilities and developing human resources.

In facing these challenges, it is important for hospitals to optimize various strategies in health services to improve service quality, operational efficiency, and reduce unnecessary costs. One strategy that can be done is through the use of information technology, such as the use of the Hospital Management Information System (SIMRS). With SIMRS, hospitals can manage patient data, BPJS claims, and service schedules more efficiently (Sutrisno & Aminah, 2022). In addition, digitalization in the queuing system, online claims, and health applications can help reduce the administrative burden and improve the patient experience.

Optimization of human resources also requires special attention. Increasing training for medical and non-medical personnel in understanding the JKN system and its implementation will improve the quality of service and speed up the administrative process. Hospitals must be more active in organizing training related to managerial skills, patient care, and understanding of JKN regulations. The use of technology for training and distance learning can help cover medical personnel in remote areas.

Another important strategy is the implementation of more efficient hospital management. In the JKN era, hospitals need to adopt a management system that prioritizes cost and time efficiency without reducing the quality of service. The implementation of Lean Hospital or a lean hospital can help identify waste and improve more efficient workflows (Nasution & Siswadi, 2020). In addition, hospitals need to ensure accreditation and certification of health service quality as a standard to improve the quality of service in hospitals.

To overcome the financing problem, hospitals need to be more transparent in budget management and optimizing the use of funds. In addition, stricter and data-based monitoring and evaluation of BPJS claims will reduce administrative errors and increase patient satisfaction. Hospitals must also work together with related parties to ensure that the costs borne by BPJS are in accordance with the agreed standards, so that hospitals can continue to provide the best service without losing money.

Optimizing health services in hospitals in the JKN era is not only the responsibility of the government and BPJS Kesehatan, but also the hospitals themselves, medical personnel, and the community. Good collaboration between these parties will create an efficient, quality, and sustainable health service system. Therefore, it is important to continue to innovate and strategize to overcome existing challenges and ensure that every Indonesian citizen receives proper health services..

## 2. METHOD

This research uses a Literature Review approach with the following steps .

Identification : Article searches were conducted using the keywords "JKN" OR "BPJS", "Hospital", AND "Strategy" in various accredited national journal databases.

Screening : The articles obtained were selected based on the suitability of the theme, namely hospital service strategies in the context of JKN.

Eligibility : Articles were re-screened to ensure relevance to the study focus and publication time span between 2015 and 202 5.

Included : A total of 12 articles were selected and analyzed to obtain relevant data on the objectives, methods, and results of the study.

The results of this search process are presented in tabular form and discussed thematically to identify key patterns and strategies emerging from the various studies.

**Table 1. Article Reference Table**

| No | Title | Writer | Year | Objective | Method | Results |
|---|---|---|---|---|---|---|
| 1 | Ten Year Evaluation of JKN | Please accept | 2024 | Evaluation of JKN achievements after 10 years | Case study | JKN has succeeded in expanding basic services, but still faces funding and service distribution constraints. |
| 2 | Effectiveness of JKN Mobile Application | Putri et al. | 2024 | Assessing the effectiveness of applications in BPJS services | Descriptive qualitative | The application increases information and satisfaction, but the technical system still needs improvement. |
| 3 | JKN Mobile Sentiment Analysis | Maulida et al. | 2024 | Measuring the perception of JKN application users | SVM + PSO | User sentiment classification accuracy was found to be 89.53% (good) |
| 4 | JKN Mobile Experience Factor Analysis | Qahar et al. | 2024 | Analyze factors that influence user experience | Naive Bayes, SVM | Key factors: security, convenience and timeliness of service |
| 5 | JKN Mobile Review Sentiment Classification | Sugihartono, Son | 2024 | Optimization of SVM classification model accuracy | SVM + PSO | Accuracy increased from 81% to 85% with parameter optimization |
| 6 | Ability to Pay JKN PBI Contributions | Darwati et al. | 2024 | Analyzing the financial capabilities of PBI participants | Cross-sectional | 61.25% of respondents are able to pay their own contributions, potentially saving budget |
| 7 | SIMRS and Hospital Service Efficiency | Mokoagow et al. | 2024 | Literature review of SIMRS efficiency | Literature review | SIMRS can accelerate service and operational cost efficiency |

| 8 | Patient Satisfaction and Loyalty | Sitepu, Kosasih | 2024 | Analyzing the relationship between service quality and loyalty | Literature review | Quality of service greatly influences patient loyalty |
|---|---|---|---|---|---|---|
| 9 | Implementation of Lira Medika Hospital Information System | Sukmawati et al. | 2024 | Evaluation of the use of information technology | Descriptive study | Technology supports efficiency and communication between hospital units |
| 10 | Risk Management of SIMRS Ganesha Hospital | Son, Hendrawan | 2024 | SIMRS risk analysis using ISO 31000 | Qualitative | Identify high risks such as data loss and power outages |
| 11 | Service Quality as a Loyalty Factor | Salsabila et al. | 2024 | Assessing the impact of service quality on loyalty | Qualitative | Good service increases patient loyalty significantly |
| 12 | BPJS SERVQUAL from HR Perspective | Faeni | 2023 | Evaluation of BPJS service quality based on the SERVQUAL model | Quantitative survey | The empathy dimension has the largest gap between expectations and reality. |

## 3. RESULT AND DISCUSSION

Optimal health services in hospitals are one of the important pillars in the national health system, especially since the implementation of the National Health Insurance (JKN) by the Indonesian government. JKN, which is organized by the Social Security Administering Agency (BPJS) Health, aims to provide fair and equal access to health services to the entire community (Presidential Regulation of the Republic of Indonesia Number 12 of 2013). However, although JKN has reached more than 200 million participants, its implementation still faces various challenges, especially in the context of hospitals as the spearhead of secondary and tertiary services.

Hospital service optimization strategies are an urgent need to address the complexity of services in the JKN era. In practice, hospitals are often faced with problems

of limited resources, inequality in service distribution, and less than optimal management efficiency (Wibowo, 2018). Coupled with the INA-CBGs package-based financing scheme used by BPJS Kesehatan, hospitals need to adapt to new financing patterns that require efficiency and effectiveness of services (Asri & Endang, 2021).

Various studies have shown that the integration of information technology, improving service quality, risk management, and utilizing accurate data and information can encourage the optimization of hospital services. The Hospital Management Information System (SIMRS), for example, has been proven to help hospitals manage patient data, minimize waiting times, and speed up service flows (Sutrisno & Aminah, 2022). However, the effectiveness of SIMRS cannot be separated from the readiness of human resources and other supporting infrastructure.

In addition to technological aspects, patient perception and experience are also important indicators in assessing service quality. Sentiment analysis of the Mobile JKN application shows that security, ease of access, and timeliness of service are the main factors influencing user satisfaction (Hidayat et al., 2022). On the other hand, the implementation of risk management strategies in health services is also crucial in ensuring the continuity and quality of services, especially in anticipating potential system failures (Nasution & Siswadi, 2020).

Considering the challenges and opportunities, it is important to systematically and evidence-based study of hospital service optimization strategies in the JKN era. This study aims to identify key strategies that have been implemented by hospitals in Indonesia in order to support the effective and efficient implementation of JKN.

## 1. Increasing Efficiency through Information Technology

Several studies have shown that the implementation of information technology such as the Hospital Management Information System (SIMRS) significantly improves operational efficiency. Mokoagow et al. (2024) emphasized that SIMRS is able to minimize service complexity and improve hospital workflow, while Putra and Hendrawan (2024) emphasized the importance of risk management in its utilization, especially in dealing with system disruptions such as power outages and data loss.

**2. Optimization of JKN Mobile Application Based Services**

The JKN Mobile Application is an important innovation in accelerating access to health services and information. Research by Putri et al. (2024) and Qahar et al. (2024) shows that aspects of service quality, security, and ease of access have a major influence on participant satisfaction. Maulida et al. (2024) and Sugihartono and Putra (2024) support this with user sentiment analysis, showing the majority of positive responses to the application, although system quality improvements are still needed.

**3. Financing Strategy and Budget Efficiency**

A study by Darwati et al. (2024) highlighted that most JKN PBI participants have the ability to pay contributions independently. This potential, if utilized, can significantly save APBD expenditure. This is important as a consideration in formulating JKN contribution subsidy policies.

**4. Quality of Service and Patient Loyalty**

Quality service has been shown to contribute to patient loyalty and satisfaction (Sitepu & Kosasih, 2024; Salsabila et al., 2024). These studies show that positive perceptions of hospital services not only increase repeat visits but also strengthen the hospital's image in the competitive JKN system.

**5. Evaluation of BPJS Services through HR Perspective**

Faeni (2023) through the SERVQUAL approach identified the gap between expectations and reality of BPJS services, especially in the empathy dimension. These results indicate the need for more intensive human resource training in improving interactions between patients and health service personnel.

While Indonesia's National Health Insurance (JKN) scheme has shown commendable progress in expanding access to health care since its inception in 2014, the challenges it faces mirror those faced in other low- and middle-income countries pursuing Universal Health Coverage (UHC).

Technological Innovation and Human Resource Empowerment are important strategies to improve public health. In terms of digital health, the Mobile JKN application and the Indonesian SIMRS reflect the global trend of combining technology to improve service efficiency. However, countries such as Estonia and South Korea have shown that full interoperability of health information systems, integrated across all levels of care, drastically improves care coordination and claims processing (Kwon, 2019). In Indonesia, the lack of integration between Puskesmas (primary health centers) and hospitals that use different information systems limits this potential. In difficult geographic conditions and limited advice and human resources, delegating certain clinical responsibilities to trained non-physician staff. This helps expand service coverage while addressing the shortage of skilled health workers, especially in rural areas (Binagwaho et al., 2014). Indonesia could consider piloting such initiatives in conjunction with digital skills enhancement to better support the rollout of JKN.

Other supporting factors are the importance of Governance, Transparency, and Public Trust . One aspect that supports the effective implementation of UHC globally is governance. A study by Savedoff and Smith (2011) emphasized the role of transparency and citizen engagement in building trust in the UHC system. Indonesia can strengthen the credibility of BPJS Kesehatan by publishing regular reports, incorporating user feedback mechanisms, and conducting independent audits of hospital performance and claim accuracy.

The implementation of JKN in Indonesia can also see what has been done in countries with conditions similar to Indonesia, good practices carried out in other countries can broaden the view of JKN implementation, with other UHC systems, several key insights emerge. Hospital optimization strategies must be integrated with primary care reform and health workforce development. And the use of technology alone is not enough without strong system interoperability and governance. Finally, fostering public trust and ensuring equitable access, especially in underserved areas, is critical to the long-term sustainability of UHC in Indonesia. Thus, Indonesia can further strengthen its strategic approach, especially in the provision of hospital services, to ensure the success of JKN and realize the vision of health for all.

## 3. RESULTS AND DISCUSSION

**The Impact of Using Artificial Intelligence Technology in the Criminal Enforcement Process in Indonesia**

AI was created to provide intelligence and intelligence to carry out tasks like those carried out by humans related to reasoning, thinking, knowledge, decision-making, and problem-solving. AI can use its knowledge and think like a human to solve existing problems. So AI that thinks and acts like humans can also carry out legal actions. In the ITE Law, there are no specific regulations regarding the definition or use of AI. If you look at Article 1 number 1 of the ITE Law, legal subjects consist of senders, recipients, people, business entities, and the government. So AI is not classified as a legal subject.

Salmond stated that in legal theory, an individual is someone whom the law views as having the ability to have rights and obligations. Every individual who has this ability is considered a legal subject, even though he is not human. Salmond explains that during slavery, humans were not considered legal subjects or individuals by the law itself. On the other hand, even though they are not humans, legal subjects determined by law are considered legal subjects or individuals who have rights and obligations that are equal to humans.

So, there is legal uncertainty regarding the position of AI which has various impacts on the criminal enforcement process in Indonesia. The main impact that occurs is the difficulty of identifying responsibility in the use of AI for criminal law enforcement in Indonesia. AI manufacturers can be one of the parties who must be held responsible for AI actions that violate the law. However, in many cases, the manufacturer of an AI may be difficult to determine, especially if the AI is a product of joint development or open-source. In addition, AI users can also be subject to liability, especially if the user does not use the AI properly or ignores proper protocols in its application. However, assigning responsibility to the user can also be challenging, especially if the user does not fully understand or have full control over the AI's behavior. Beyond producers and users, there is also the question of whether AI itself should be held responsible for its actions. However, attributing responsibility to AI as a non-human entity also has complicated legal and ethical implications.

Another impact is the use of AI in enforcing criminal acts, namely misuse of data. AI requires access to large amounts of individual data to train its algorithms, which can threaten individual privacy if the data is not processed properly or is accessed unlawfully. Misuse of this data may include unauthorized or unauthorized use of the data for unlawful purposes, such as unwanted or discriminatory surveillance. In addition, the use of AI in law enforcement also has the potential to strengthen bias in algorithms. AI algorithms tend to make decisions based on existing training data, which may reflect biases present in that data. This may result in discrimination or injustice in legal decisions, such as unfair racial or social profiling or disproportionate treatment of individuals.

For example, in enforcing criminal acts in Indonesia, the use of AI in driving is the use of autopilot, which if an error occurs can result in criminal acts and losses. Even though autopilot is designed to increase safety and comfort in driving, potential errors or failures in this technology can result in criminal acts and losses. For example, in the case of a vehicle accident involving autopilot, the question of who is responsible for the accident becomes complicated. Are the drivers who use the autopilot feature, the vehicle manufacturers who develop the technology, or even the regulatory system that allows the use of autopilot the responsible parties? In addition, the failure of AI technology to detect emergencies or changes in road conditions can cause accidents that have the potential to result in loss of life or property, which may be treated as a criminal offense.

Then the use of facial recognition technology in an AI-based monitoring and identification system for criminals based on police data raises concerns regarding individual privacy and the potential for misuse of data, as well as the tendency of algorithms to trigger racial or social bias in the identification of criminals. Apart from that, the use of AI-based facial recognition technology in public security systems, such as at train stations or airports. Although this technology is intended to improve security by detecting individuals involved in criminal activity, there is the potential for error in face identification. AI systems can incorrectly identify individuals who were not involved in the crime as suspects, or conversely, fail to identify the actual perpetrator. Mistakes of this kind can result in criminals escaping scrutiny, while innocent individuals can become victims of injustice or discrimination.

The cases above give rise to legal uncertainty and confusion in determining responsibility for enforcing criminal acts in Indonesia. Legal uncertainty arises because there are no clear enough regulations regarding the use of AI technology in law enforcement so that often decisions or actions taken by law enforcement authorities can give rise to controversy and different interpretations. In addition, liability concerns arise due to the difficulty of establishing who is responsible for errors or failures of AI technology in law enforcement processes, whether it is the manufacturer, the user, or the AI technology itself.

**The Effectiveness of Regulations in Indonesia in Dealing with the Use of AI Technology for Criminal Law Enforcement**

Currently, there are no regulations in Indonesia that specifically regulate the use of AI in law enforcement. Although there is an ITE Law that regulates the use of current technology, this regulation focuses more on technical aspects and electronic transactions rather than addressing the use of AI technology in law enforcement. So, there is legal uncertainty and a legal vacuum regarding how AI should be regulated and supervised in legal enforcement. Existing regulations do not provide clear enough guidance regarding the responsibilities, authorities, or limits on the use of AI by law enforcement agencies. It leaves room for abuse, uncertainty, and potential violations of human rights and individual privacy in AI technology operations in law enforcement.

It is different from other countries such as the United States and several European countries which have issued a Criminal Justice Information Services (CJIS) Security Policy that regulates data security and privacy standards in the use of AI. Then, the European Union issued the General Dara Protection Regulation (GDPR) which regulates the privacy and protection of personal data, including data used in AI. Then China has The Cybersecurity Law of the People's Republic of China which regulates data and information security, including data used in AI.

So it can be concluded that there are no specific and comprehensive regulations regarding the use of AI technology in the context of law enforcement in Indonesia, where the ITE Law has not been able to completely overcome the challenges and issues that arise along with the development of AI technology. There is a lack of clarity regarding

responsibility and accountability in the use of AI technology by law enforcement agencies. It creates the potential for abuse of power and violations of human rights, as well as increasing the risk of injustice in the law enforcement process.

Regulations in Indonesia are still facing ineffectiveness with recent challenges emerging where existing regulations are not yet fully able to address challenges such as data privacy, security, and justice related to the use of AI in law enforcement. The use of AI technology in law enforcement often involves the collection, storage, and analysis of individuals' data. However, existing regulations do not provide adequate protection for the data privacy of individuals involved in this process. This can result in potential misuse of personal data by law enforcement agencies or other parties, as well as raise concerns about violations of privacy and human rights. The use of AI technology in law enforcement is vulnerable to cyber security risks, such as hacker attacks or data manipulation. Existing regulations cannot ensure that adequate security measures are implemented in all stages of the use of AI technology by law enforcement agencies, from data collection to analysis. The use of AI technology in law enforcement can introduce bias in decision-making or suspect identification. Existing regulations have not effectively addressed this problem and need to strengthen monitoring and assessment mechanisms that ensure that AI technology application is carried out fairly and non-discriminatorily.

## Legal Reform to Ensure the Prevention of Crime by Utilizing AI Technology in Indonesia

Considerations for the need to update existing regulations regarding the use of AI technology in dealing with criminal acts in Indonesia are that AI technology has experienced rapid development in recent years, producing various new applications that can be used in law enforcement, such as big data analysis, facial recognition, and automatic text analysis. This also means that the current use of AI technology poses a risk of privacy breaches if not regulated appropriately. In addition, there are cyber security risks that need to be considered, such as hacker attacks or data manipulation that can threaten system integrity. Another consideration is that the use of AI algorithms could

lead to unintentional bias or discrimination in decision-making, which could threaten the principles of justice and human rights.

This condition demands a fast and appropriate response from the government to face new challenges that arise along with technological advances. The need for more comprehensive and detailed regulations is becoming increasingly urgent to ensure that the use of AI technology in law enforcement is not only effective but also fair, transparent, and by fundamental legal principles. Without timely updates, the risk of legal uncertainty and potential misuse of AI technology in criminal law contexts may increase, threatening the integrity of the justice system and the rights of individuals.

In developing a new regulatory framework to accommodate the use of AI technology in dealing with criminal acts in Indonesia, several things need to be considered, namely the need for a comprehensive review of existing regulations to identify deficiencies and gaps in regulating the use of AI technology in the realm of criminal law. After that, it is necessary to develop clear and detailed rules and guidelines that regulate various aspects of the use of AI technology, including but not limited to data collection, storage, and analysis, as well as algorithm implementation and cyber security. Then, an effective supervisory mechanism is also needed to monitor and evaluate the implementation of these regulations. This could include the creation of a dedicated agency or agency responsible for overseeing the use of AI technology in law enforcement, as well as the development of reporting systems and enforcement mechanisms that can ensure that established rules are followed appropriately by law enforcement agencies.

So it is necessary to update the ITE Law, which currently does not specifically regulate the use of AI technology in the context of law enforcement, so there are gaps and legal uncertainty in its use. Provisions are needed that regulate the use of AI technology in various aspects, from data collection and processing to the use of algorithms for analysis and law enforcement purposes. So that existing regulations can accommodate the latest technological developments and anticipate challenges and risks that may arise in their use. There needs to be provisions that strengthen the protection of individual data privacy in the context of the use of AI technology. The use of AI technology often involves the collection and analysis of personal data, so existing regulations must provide adequate protection for individuals' data and prevent misuse of that data.

There is also a need for regulations governing ethical aspects and principles of justice in its use to avoid the potential for bias or discrimination in AI-based decision-making and to ensure that the use of AI technology in law enforcement remains by legal values and fundamental human rights. So, that updating the existing ITE Law can overcome legal uncertainty, protect data privacy, and ensure that the use of AI technology in law enforcement remains by fundamental legal principles and human values.

In addition to correcting the ITE Law, the government can also form government regulations or other implementing regulations to regulate the use of AI technology in law enforcement in more detail to adapt regulations to technological developments and increasingly complex law enforcement needs. The regulation is expected to specifically regulate data collection and processing procedures in the context of the use of AI technology by law enforcement agencies, data security standards that must be complied with, as well as monitoring and accountability mechanisms that must be implemented by relevant agencies. In addition, these regulations can regulate ethical standards in the use of AI algorithms for decision-making, transparency in the use of AI technology, as well as dispute resolution mechanisms related to the use of AI technology in law enforcement. These regulations can also provide greater flexibility for the government in adapting regulations to ongoing technological developments.

With legal reforms related to the use of AI technology in enforcing criminal acts in Indonesia, it is hoped that a regulatory framework that is more comprehensive and responsive to technological developments can be created and can maintain a balance between technological innovation and the protection of individual rights. It is hoped that these legal updates will help reduce legal uncertainty that may arise in the use of AI technology in the context of law enforcement. With clearer and more detailed rules, law enforcement agencies will have stronger guidelines to regulate and oversee the use of AI technology in various aspects of law enforcement. Apart from that, legal reforms are also expected to strengthen the protection of privacy and human rights in the use of AI technology, so that people can feel safer and more protected in an increasingly complex digital environment. Thus, legal reforms related to the use of AI in enforcing criminal acts in Indonesia can become a solid foundation for effective, transparent, and fair law enforcement in this digital era.

## 4. CONCLUSION AND SUGESSTIONS

**Conclusion**

The strategy for optimizing health services in hospitals in the JKN era involves the integration of information technology, improving service quality, cost efficiency, and strengthening human resources. The use of digital applications such as Mobile JKN and SIMRS has proven effective in accelerating services and increasing patient satisfaction. In addition, budget efficiency can be achieved by adjusting subsidy policies based on the financial capabilities of participants.

**Suggestion**

1. The government and hospital management need to improve information technology training for health workers

2. Improvements to the system and features in the Mobile JKN application are needed to increase user convenience.

3. Evaluation of the JKN contribution subsidy policy based on participants' economic capabilities must be continuously updated with field data.

4. The quality of interaction between health workers and patients needs to be improved through empathy-based training and effective communication.

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