MINH
MALAHAYATI INTERNATIONAL JOURNAL OF NURSING AND HEALTH SCIENCE
ISSN 2620-9152 (Print)
ISSN 2621-4083 (Online)
DOI: 10.33024
Nomor: 79/E/KPT/2023

ARTICLE INFORMATION
Received: April, 17, 2025
Revised: August, 30, 2025
Available online: August, 31, 2025
at : https://e-jurnal.iphorr.com/index.php/minh

Hospital finances, service quality in hospital care and the Indonesian national health insurance system

Firda Nur Laila*, Vip Paramarta, Farida Yulianty, Kosasih, Afira Febriani

Universitas Sangga Buana, Bandung
Corresponding author: *E-mail: firda.fnl@gmail.com

Abstract

Background: Indonesia's National Health Insurance (NHI) program represents a significant step toward achieving Universal Health Coverage (UHC). While it has successfully broadened healthcare access, the program faces considerable challenges regarding financial sustainability, which directly affects hospital operations and service quality.
Purpose: To assess the impact of NHI implementation on hospital financial performance and service quality in Indonesia, identify influencing factors, and offer strategic policy recommendations.
Method: A systematic literature review was conducted using the PRISMA protocol. Relevant studies published between January 2020 and February 2025 were sourced from five major databases (PubMed, Scopus, Web of Science, ScienceDirect, and ISJD). Articles were selected based on rigorous inclusion and exclusion criteria and analyzed thematically.
Results: Following the introduction of the NHI program, many hospitals encountered financial strain, mainly due to delayed claim reimbursements and reimbursement rates considered inadequate. These financial constraints led to reduced investment in workforce development, medical technology, and infrastructure. A positive link was identified between hospital financial health and the quality of care delivered.
Conclusion: The future success of the NHI program is highly dependent on its ability to ensure both the financial viability of hospitals and the delivery of high-quality healthcare. A failure to maintain this balance may undermine the broader health system's effectiveness.
Suggestions: A cohesive policy approach is essential, involving collaboration among the Social Security Administering Body for Health, healthcare providers, and the government. This includes establishing fair reimbursement rates, expediting claim processes, and supporting hospitals in maintaining and enhancing service quality.

Keywords: Financial Balance; National Health Insurance; Service Quality.

DOI: https://doi.org/10.33024/minh.v8i6.874

INTRODUCTION

Launched in 2014, Indonesia's National Health Insurance (NHI) program represents a pivotal component of the country's strategy to achieve Universal Health Coverage (UHC). Designed to provide equitable, comprehensive, and affordable healthcare for all citizens, the NHI has become the largest social health insurance initiative globally, covering over 220 million people. This program has significantly reshaped the healthcare financing landscape in Indonesia, particularly in terms of hospital service delivery (Agustina, Dartanto, Sitompul, Susiloretni, Achadi, Taher, & Khusun, 2019). Despite these advancements, the NHI continues to face substantial challenges, particularly concerning its financial sustainability. The Social Security Administering Body for Health, which manages the program, has consistently reported budget deficits, reaching IDR 13 trillion in 2019. Although premium adjustments were made in 2020, these financial issues remain unresolved. Hospitals, as the primary service providers, are directly impacted by delayed reimbursements and payment rates perceived as inadequate (Mahendradhata, Trisnantoro, Listyadewi, Soewondo, Marthias, Harimurti, & Prawira, 2017).

The growing number of NHI-covered patient visits has also strained hospital capacities, making it increasingly difficult to maintain service quality. Many healthcare facilities are caught between financial constraints and the obligation to deliver high-standard care. Research indicates that 68% of hospitals in Indonesia struggle to sustain service quality due to funding limitations under the NHI system. These difficulties are further exacerbated by disparities in infrastructure and financial resources between urban and rural hospitals. As a result, financial imbalances not only affect hospital operations but also compromise the quality of healthcare delivery (Nugraheni, Mubasyiroh, & Hartono, 2020). Further studies confirm a strong correlation between hospital financial health and clinical outcomes, where financially constrained hospitals often lack the ability to invest in human resources, technology, and facility improvements—ultimately undermining the quality of care (Alkayyis, 2024).

While numerous studies have assessed the NHI's impact on healthcare accessibility and financial protection for the public, there remains a gap in research that comprehensively examines how NHI implementation influences hospital financial health and service quality. Recent findings highlight the necessity for an NHI system that balances patient needs, provider sustainability, and insurer responsibilities, with financial equilibrium and service quality emerging as fundamental pillars of this balance. These insights align with the World Health Organization (WHO) framework, which emphasizes system efficiency, responsiveness, and financial protection as key indicators of a successful health system (World Health Organization, 2020). Indonesia's complex geography, demographics, and socio-economic diversity offer a unique context for exploring these dynamics (Adyas, 2021).

The transition to a national insurance model has brought about systemic changes in Indonesia's healthcare sector. Yet, the program's long-term viability hinges on its ability to reconcile financial sustainability with the maintenance of care quality. A sustainable insurance framework demands ongoing collaboration among regulators, service providers, and the public to refine implementation strategies. This study seeks to analyze the financial and service quality impacts of NHI implementation on Indonesian hospitals. Specifically, it aims to: (1) assess changes in hospital financial performance pre- and post-NHI implementation; (2) identify factors influencing financial stability in hospitals under the NHI system; (3) evaluate the link between hospital finances and service quality indicators; and (4) provide strategic recommendations to enhance NHI implementation in a way that ensures both financial viability and quality healthcare provision (Kodali, 2023).

Article 28H paragraph (3) of the 1945 Constitution of the Republic of Indonesia affirms every citizen's right to social security to support a dignified life. This constitutional mandate was followed by the enactment of Law No. 40 of 2004, which established the National Social Security System. Within the health sector, this system is administered by the Social Security Administering Body for Health (Ningtyas, 2019).

Health insurance plays a critical role in improving access to care. Programs like the National Hospital Insurance Fund's outpatient scheme were introduced to reduce out-of-pocket spending and ease financial

Firda Nur Laila*, Vip Paramarta, Farida Yulianty, Kosasih, Afira Febriani

Universitas Sangga Buana, Bandung
Corresponding author: *E-mail: firda.fnl@gmail.com

DOI: https://doi.org/10.33024/minh.v8i6.874

burdens on patients. However, contractual arrangements between insurers and healthcare facilities often encounter financial difficulties, impeding the delivery of quality care (Mumenya, 2018). Globally, various cost-containment strategies—such as cost-sharing and service capping—have been adopted to maintain insurance program sustainability (Pujiyanti, Setiawan, Sari, & Suwandi, 2020).

Strategic hospital management is also essential in navigating the challenges of the NHI era. Tools like Hospital Management Information Systems and frameworks such as the balanced scorecard have been shown to improve both efficiency and service quality. Effective internal governance and marketing strategies are also vital in enhancing hospital competitiveness in an increasingly market-driven environment (Purwadhi, Widjaja, Meylina, & Rosmaini, 2024).

Previous studies have highlighted the joint role of the Ministry of Health, the Social Security Administering Body for Health, and healthcare facilities in managing inpatient costs. Their collaborative approach—based on quality and cost control—aims to deliver high-quality services within budget constraints. Core components of this strategy include quality monitoring, financial oversight, health commitments, and regulatory supervision (Hidayat & Bachtiar, 2024).

RESEARCH METHOD

Employing a systematic literature review guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework to examine the impact of Indonesia's National Health Insurance (NHI) program on hospital financial performance and quality of care. This approach was selected to ensure a comprehensive, transparent, and structured synthesis of current scientific evidence.

The literature search was conducted across five major electronic databases: PubMed, Scopus, Web of Science, ScienceDirect, and the Indonesian Scientific Journal Database (ISJD). To ensure the relevance and currency of the findings, the search was restricted to articles published between January 2020 and February 2025. A combination of Indonesian and English keywords was used—such as "National Health Insurance," "Social Security Administering Body for Health," "Universal Health Coverage," "rumah sakit," "hospital," "keuangan," "financial sustainability," "mutu pelayanan," "quality of care," and "Indonesia"—along with Boolean operators (AND, OR) to optimize both sensitivity and specificity in identifying relevant literature.

Inclusion criteria were established as follows: peer-reviewed original research articles, studies conducted within the Indonesian context, research explicitly analyzing the impact of NHI on hospital financial conditions and/or service quality, and articles written in either Indonesian or English. The Exclusion criteria included: opinion pieces, editorials, or letters to the editor, studies lacking empirical data, research not centered on hospital settings, and duplicate publications.

The selection process was carried out in stages following PRISMA guidelines. Initially, two independent reviewers screened titles and abstracts. Articles that met the criteria were then reviewed in full text for final inclusion. Any discrepancies between reviewers were resolved through discussion, with a third reviewer acting as a mediator when necessary. To assess the methodological quality of the included studies, the Mixed Methods Appraisal Tool (MMAT) version 2018 was utilized, enabling evaluation across different research designs.

Data extraction was conducted using a standardized form developed specifically for this review. Extracted information included: study characteristics (authors, publication year, study design), sample details (hospital type and number), data collection methods, financial indicators analyzed, quality of care indicators assessed, and key findings related to NHI's impact.

A narrative synthesis approach with thematic categorization was employed for data analysis. Key themes identified included: changes in hospital financial performance post-NHI implementation, factors affecting financial balance, the connection between financial stability and service quality, strategies adopted by hospitals to address financial pressures while maintaining care standards.

Finally, the synthesized findings were interpreted in light of Indonesia's health system context, the limitations of the included studies, and their broader implications for policy and practice.

Firda Nur Laila*, Vip Paramarta, Farida Yulianty, Kosasih, Afira Febriani

Universitas Sangga Buana, Bandung
Corresponding author: *E-mail: firda.fnl@gmail.com

DOI: https://doi.org/10.33024/minh.v8i6.874

RESEARCH RESULTS

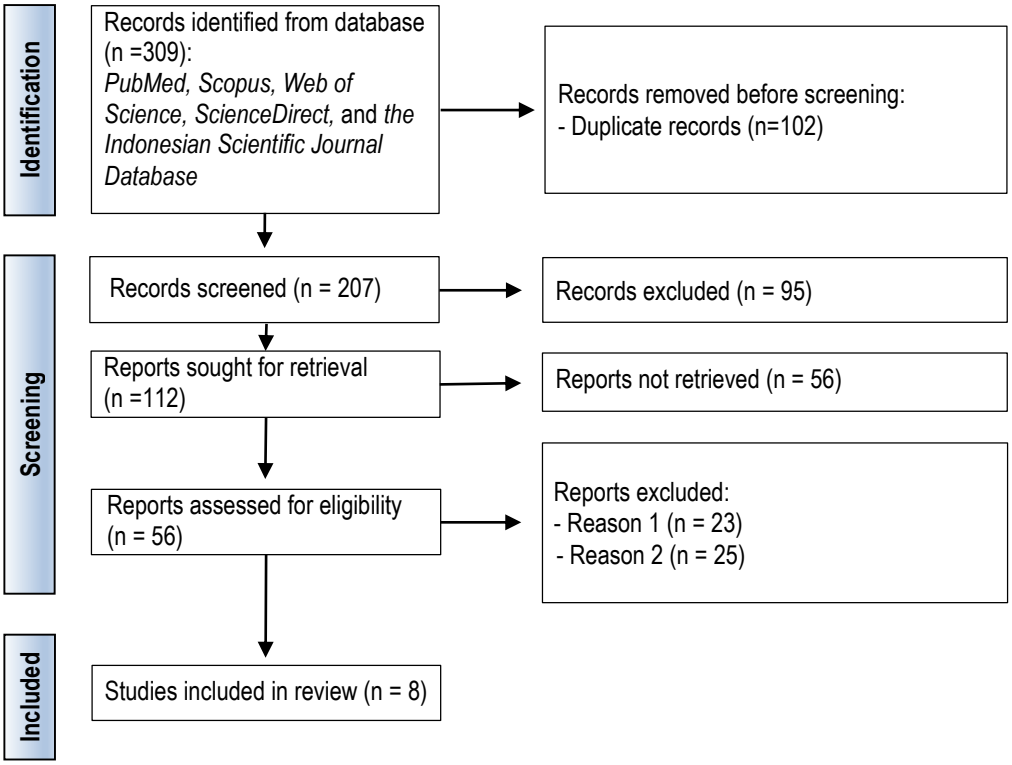


Figure PRISMA Flowchart

Firda Nur Laila*, Vip Paramarta, Farida Yulianty, Kosasih, Afira Febriani

Universitas Sangga Buana, Bandung
Corresponding author: *E-mail: firda.fnl@gmail.com

DOI: https://doi.org/10.33024/minh.v8i6.874

Table The Main Characteristics of Included Studies

(Author, Year) (Country)	Purpose	Method	Results
(Residharmini et al., 2023) Indonesia	To analyze the workload and coding staff requirements in the National Health Insurance claims process	Qualitative research using quantitative data. The work sampling method was used to analyze the workload and observe the working time available for each officer. The frequency and time required to complete activities reflect the workload value, which will then be used to calculate the coding officer staffing requirements using the Workload Indicator Staffing Needs (WISN) method.	The workload of coding staff is high, only capable of entering 63.7% of claim data, so additional staff are needed
(Syahputri et al., 2024) Indonesia	To analyze factors that cause Social Security Administering Body for Health claims to be delayed (pending)	A qualitative case study method. Data collection techniques were conducted through in-depth interviews, observation, and documentation studies.	Pending claims are caused by incomplete medical documents and differences in perception between Social Security Administering Body for Health and the hospital.
(Octora et al., 2024) Indonesia	To analyze the role of Social Security Administering Body for Health in the social security system and its impact on the health business sector	A descriptive-analytical approach was used, by conducting a review of the regulations governing Social Security Administering Body for Health, as well as a literature study related to the implementation of the National Health Insurance (National Health Insurance) program and the legal challenges faced.	Social Security Administering Body for Health has a strategic role in the socio-economic system, but there are still legal and compliance challenges
(Mursyid, 2024) Indonesia	To analyze of the Impact of National Health Insurance Program Implementation on the Performance of XYZ Hospital	An observational design with a quantitative research method was conducted at XYZ Hospital, using secondary data obtained from medical records and financial reports (2013-2023).	There was no increase in the number of outpatient or inpatient visits before and after the implementation of the National Health Insurance program. However, with the sharp decline in the number of cash-paying patients

Firda Nur Laila*, Vip Paramarta, Farida Yulianty, Kosasih, Afira Febriani

Universitas Sangga Buana, Bandung
Corresponding author: *E-mail: firda.fnl@gmail.com

DOI: https://doi.org/10.33024/minh.v8i6.874

(Author, Year) (Country)	Purpose	Method	Results
			and the increase in BPJS Health insurance patients, it can be concluded that many cash-paying patients without health insurance switched to using BPJS Health insurance when seeking treatment at XYZ Hospital.
(Lestari et al., 2021) Indonesia	To Measure hospital service and financial performance before and after National Health Insurance	Descriptive (observational) research using quantitative research methods at RSKIA SADEWA. The data used was secondary data from medical records, services, and financial reports from 2011 to 2019.	Patient visits increased by 35%-36%, BOR increased, hospital revenue increased by 93%, but solvency decreased slightly
(Putra et al., 2023) Indonesia	To analyze the impact of Social Security Administering Body for Health tariff increases on hospital equipment and patient satisfaction	A quantitative study using a cross-sectional approach. The population in this study is outpatients at Kendari Regional General Hospital. The sample in this study uses purposive sampling with a total of 365 participants.	The increase in contributions has a significant effect on the completeness of hospital equipment but does not have a significant effect on patient satisfaction.
(Lubis et al., 2023) Indonesia	To examine the influence of health infrastructure on community participation in National Health Insurance	A literature review was used, and an article search was conducted utilizing the Google Scholar search engine. The search yielded "30" published articles that matched the research title between 2020 and 2023 that fit the inclusion criteria of this study	Accessibility of health service infrastructure, availability of medical personnel, supporting facilities, service quality, and regional disparities are factors that influence the participation of national health insurance participants. Knowledge, income, community views, education, and health infrastructure are factors that can influence people's interest in becoming National Health Insurance participants.

Firda Nur Laila*, Vip Paramarta, Farida Yulianty, Kosasih, Afira Febriani

Universitas Sangga Buana, Bandung
Corresponding author: *E-mail: firda.fnl@gmail.com

DOI: https://doi.org/10.33024/minh.v8i6.874

DISCUSSION

The implementation of the National Health Insurance (NHI) program has led to major shifts within Indonesia's healthcare system, particularly in hospital operations. These changes have influenced both the financial stability and service quality of hospitals, warranting deeper analysis. Operationally, the NHI has increased the workload of healthcare professionals, especially those handling claim administration. Prior research indicates that hospital medical records personnel have experienced a substantial rise in workload, with only 63.7% of claims processed due to staff limitations. This highlights the need for additional staffing to ensure efficient processing of NHI claims (Residharmini, Maba, & Wiryawan, 2023). Furthermore, delays in claim reimbursements by the Social Security Administering Body for Health are often caused by incomplete medical documentation and differing interpretations between hospitals and the agency, directly disrupting hospital cash flow (Syahputri, Khairani, & Gurning, 2024).

Financially, the introduction of NHI has significantly altered both the patient mix and revenue structure of hospitals. The proportion of patients covered by NHI has grown sharply, while the number of out-of-pocket (cash) patients has declined. This shift requires hospitals to adapt their financial management strategies (Mursyid, 2024). Although studies from 2011 to 2019 noted a 35–36% increase in patient visits and a 93% rise in total hospital income post-NHI, hospitals also reported a slight decrease in solvency, revealing the complexity of maintaining financial health under the program. Regulatory aspects also play a central role in ensuring the sustainability of NHI. Despite holding a key position in Indonesia’s socio-economic structure, the Social Security Administering Body for Health continues to face legal and regulatory compliance issues that impact hospital operations (Octora, Efrila, & Maryani, 2024).

Another study involving 365 hospitals found that increased NHI contributions were associated with better hospital equipment availability; however, this did not correlate directly with patient satisfaction, indicating that improvements in infrastructure do not always enhance the perceived quality of care (Putra, Samsualam, & Rusydi, 2023). Additionally, inequities in the distribution of healthcare infrastructure across regions have been shown to influence public participation in the NHI program, which in turn affects hospital performance (Lubis, Yani, Firzah, & Gurning, 2023).

Overall, evaluating the impact of NHI on hospital finances and service quality reveals a range of interconnected challenges. While the growing number of NHI-covered patients presents opportunities for increased revenue, it also leads to increased administrative, operational, and financial pressures (Mursyid, 2024; Lestari et al., 2021). Persistent issues such as reimbursement delays, tariff discrepancies, and the need for expanded infrastructure and workforce capacity pose ongoing threats to hospital sustainability and quality service delivery (Residharmini et al., 2023; Syahputri et al., 2024). Addressing these issues requires aligned regulatory frameworks, streamlined claim processing systems, investments in human resources, equitable infrastructure development, and fair reimbursement rates (Putra et al., 2023; Lubis et al., 2023).

Evidence from previous studies also shows that post-NHI implementation, hospitals experienced an increase in both outpatient and inpatient visits. Bed Occupancy Rates (BOR) rose, and Cesarean Section (SC) rates declined. Financial performance indicators such as Return on Assets (ROA), Quick Ratio, solvency, and Current Ratio (CRR) showed improvement. These positive trends suggest progress, but sustained performance will depend on continuous evaluation and targeted interventions (Lestari et al., 2021).

CONCLUSION

The implementation of the National Health Insurance has significantly reshaped hospital operations in Indonesia, impacting both financial balance and service quality. Increased administrative workload, delayed claim processing, and shifts in patient composition have altered hospital revenue structures and strained cash flow. Despite rising patient visits and revenue, hospital solvency has declined slightly, reflecting financial management challenges. Regulatory factors and unequal infrastructure distribution further influence program effectiveness. These findings underscore the need for an integrated strategy to address the operational,

Firda Nur Laila*, Vip Paramarta, Farida Yulianty, Kosasih, Afira Febriani

Universitas Sangga Buana, Bandung
Corresponding author: *E-mail: firda.fnl@gmail.com

DOI: https://doi.org/10.33024/minh.v8i6.874

financial, and structural challenges hospitals face under the National Health Insurance system.

SUGGESTION

To improve the effectiveness and sustainability of the National Health Insurance system, the following strategies are recommended: (1) enhance administrative efficiency through integrated information systems, standardized medical documentation, and regular training for coding staff; (2) adjust reimbursement rates based on actual service costs, regional differences, and case complexity, supported by a robust quality monitoring system; (3) improve healthcare infrastructure and ensure equitable distribution of health workers, particularly in remote areas; and (4) strengthen regulatory frameworks to promote fair, transparent, and accountable collaboration between Social Security Administering Body for Health and healthcare providers.

REFERENCES

Adyas, A. (2021). The Indonesian strategy to achieve universal health coverage through National Health Insurance System: challenges in human resources.

Agustina, R., Dartanto, T., Sitompul, R., Susiloretni, K. A., Achadi, E. L., Taher, A., & Khusun, H. (2019). Universal health coverage in Indonesia: concept, progress, and challenges. *The Lancet*, *393*(10166), 75-102.

Alkayyis, M. Y. (2024). Implementation of the National Health Insurance Programme in Achieving Universal Health Coverage in Indonesia. *Jurnal Jaminan Kesehatan Nasional*, *4*(2), 85-95. Retrieved from: https://jurnal-National Health Insurance.bpjs-kesehatan.go.id/index.php/jNational Health Insurance/article/view/197

Hidayat, D., & Bachtiar, A. (2024). Analisis Manajemen Kendali Biaya Pelayanan Rawat Inap Pasien Social Security Administering Body for Health. *Syntax Idea*, *6*(4), 1973-1982.

Kodali, P. B. (2023). Achieving universal health coverage in low-and middle-income countries: challenges for policy post-pandemic and beyond. *Risk management and healthcare policy*, 607-621.

Lestari, W., Trisnantoro, L., & Andayani, N. L. P. E. P. (2021). Gambaran kinerja rumah sakit sebelum dan sesudah era jaminan kesehatan nasional (National Health Insurance). *Jurnal Manajemen Pelayanan Kesehatan*, *24*(03), 95-101.

Lubis, A. S., Yani, F. A., Firzah, N., & Gurning, F. P. (2023). Pengaruh Infrastruktur Pelayanan Kesehatan terhadap Keikutsertaan Peserta National Health Insurance di Indonesia. *Jurnal Kesehatan Tambusai*, *4*(3), 2947-2955.

Mahendradhata, Y., Trisnantoro, L., Listyadewi, S., Soewondo, P., Marthias, T., Harimurti, P., & Prawira, J. (2017). The Republic of Indonesia health system review. In *The Republic of Indonesia health system review*.

Mumenya, J. W. (2018). Effect of National Hospital Insurance Fund Outpatient Scheme on Financial Sustainability of Public Hospitals in Kenya a Case of Sub-County Hospitals in Nakuru County, Kenya (Doctoral dissertation, JKUAT).

Mursyid, H. (2024). Analisis Pengaruh Implementasi Program Jaminan Kesehatan Nasional Terhadap Kinerja RS XYZ Kota Depok. *Jurnal Rekam Medis Dan Informasi Kesehatan*, *7*(1), 17-31.

Ningtyas, D. A. (2019). Pengaruh Undang-Undang Nomor 40 Tahun 2004 Tentang Sistem Jaminan Sosial Nasional Terhadap Kebijakan Mutu Pelayanan Kesehatan di Fasilitas Kesehatan Rujukan Tingkat Lanjutan (FKRTL). *Jurnal Infokes (Informasi Kesehatan)*, *3*(1), 42-57.

Nugraheni, W. P., Mubasyiroh, R., & Hartono, R. K. (2020). The influence of Jaminan Kesehatan Nasional (National Health Insurance) on the cost of delivery services in Indonesia. *Plos one*, *15*(7), e0235176.

Firda Nur Laila*, Vip Paramarta, Farida Yulianty, Kosasih, Afira Febriani

Universitas Sangga Buana, Bandung
Corresponding author: *E-mail: firda.fnl@gmail.com

DOI: https://doi.org/10.33024/minh.v8i6.874

Octora, R., Efrila, E., & Maryani, A. (2024). Peran Social Security Administering Body for Health Dalam Sistem Jaminan Sosial dari Perspektif Hukum Bisnis. *Jurnal Cahaya Mandalika ISSN 2721-4796 (online)*, *3*(1), 652-657.

Pujiyanti, E., Setiawan, E., Sari, E. R., & Suwandi, I. P. (2020). Kajian literatur sistematis: skema pengendalian biaya dalam asuransi kesehatan nasional di beberapa negara. *Jurnal Ekonomi Kesehatan Indonesia*, *4*(2), 3.

Purwadhi, P., Widjaja, Y. R., Meylina, L. K., & Rosmaini, S. (2024). Pengaruh Kebijakan Manajemen Strategis Terhadap Daya Saing Rumah Sakit Di Era Jaminan Kesehatan Nasional: Systematic Literature Review. *EKOMA: Jurnal Ekonomi, Manajemen, Akuntansi*, *3*(6), 2326-2340.

Putra, A. P., Samsualam, S., & Rusydi, A. R. (2023). Pengaruh Tarif Iuran BPJS Rumah Sakit dan Willingness to Pay Terhadap Kelengkapan Peralatan dengan Kepuasan Pelayanan di Rumah Sakit Umum Daerah Kendari. *Jurnal Mirai Management*, *8*(1), 326-341. Retrieved from: https://journal.stieamkop.ac.id/index.php/mirai/article/view/5211

Residharmini, G. A. P., Maba, I. W., & Wiryawan, I. W. G. (2023). Analisis Beban Kerja dan Kebutuhan Tenaga Koding Data Klaim Jaminan Kesehatan Nasional di Instalasi Penjaminan RSD Mangusada Kabupaten Badung. *Briliant: Jurnal Riset dan Konseptual*, *8*(4), 962-972.

Syahputri, F. A., Khairani, K., & Gurning, F. P. (2024). Analisis Faktor Penyebab Pending Klaim Social Security Administering Body for Health Rawat Inap di Rumah Sakit Umum X Kota Medan. *JKM (Jurnal Kesehatan Masyarakat) Cendekia Utama*, *12*(3), 339-355.

World Health Organization. (2020). Health 2020 Targets, Indicators and Monitoring Framework. Retrieved from: https://iris.who.int/bitstream/handle/10665/336780/63wd08e-Health2020Targets-131341.pdf

Firda Nur Laila*, Vip Paramarta, Farida Yulianty, Kosasih, Afira Febriani

Universitas Sangga Buana, Bandung
Corresponding author: *E-mail: firda.fnl@gmail.com

DOI: https://doi.org/10.33024/minh.v8i6.874