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The Impact of Electronic Medical Records on BPJS Claims and Physician Performance

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ABSTRACT

With the digital transformation, Electronic Medical Records (EMR) have become crucial for operational efficiency and better healthcare. By the end of 2023, all Indonesian healthcare facilities are expected to implement EMR (Regulation No. 24, 2022). However, challenges with BPJS claims often arise post-EMR implementation. This study analyzes EMR's impact at RS A on BPJS claims and physician performance, aiming to identify mitigation strategies for these issues. Using mixed methods, this study combines primary data from 5 respondent interviews and secondary data on BPJS claims pre- and post-EMR implementation at RS A (Jan-Aug 2023). Secondary data analysis employs tables, graphs, and descriptive statistics (mean, median, and standard deviation) to detail BPJS claims patterns. The Chi-Square test is used to analyze the relationship between physician performance and BPJS claim document completeness. EMR implementation increased cases by 11.27% and nominal BPJS claims by 15.04%. Physician performance analysis showed no significant relationship between variables and BPJS claim document completeness ($p > 0.05$). Challenges post-EMR included data errors, lack of staff training, technical constraints, and incomplete integration of operational processes with EMR. Mitigation strategies include staff training, periodic monitoring, internal audits, process improvements, and management evaluation.

Conclusion: EMR implementation at RS A increased cases and BPJS claims. However, challenges persist post-implementation. Effective mitigation strategies can enhance efficiency and BPJS claim quality.

Introduction

Health services refer to a place or facility used to carry out promotive, curative, preventive, and rehabilitative activities in the health sector. These activities are carried out by government agencies, local governments, or communities. The main goal of health services is to achieve outcomes that benefit patients, service providers, and the general

public (Sari, Lubis, & Tambunan, 2024). Healthcare facilities need to continuously improve the quality of their services to compete using technological advances. One of the technological developments used in this case is Electronic Medical Records (RME). RME is an information technology that is used to collect, process, store, and access patient medical data stored in hospitals through a database system (Aryanto & Sulthon, 2023).

With the advancement of digital transformation, EMR has become an important step towards operational efficiency and better care. Through Permenkes No.24 of 2022, all health facilities in Indonesia are expected to have implemented an EMR system by the end of 2023. However, challenges related to BPJS claims often arise after EMR implementation. An Electronic Medical Record (EMR) is a form of medical record that previously existed in paper format but is now converted into electronic form. This process involves transferring records or forms that were previously recorded manually on paper into electronic form (Darianti, Dewi, & Herfiyanti, 2021).

The Social Security Organizing Agency (BPJS) is the institution responsible for managing social security programs in Indonesia. Established to provide financial protection to all Indonesians, BPJS provides various insurance programs, including BPJS Kesehatan. The BPJS Kesehatan program provides access to affordable health services for participants, with costs partially or fully covered by the government. BPJS Kesehatan participants pay a monthly fee according to the chosen class of service, and in exchange, they get access to a range of health facilities and medical services that cover prevention, treatment, and rehabilitation. BPJS Kesehatan plays an important role in improving the welfare of the community by providing financial protection against health risks, thus ensuring that quality health services can be enjoyed by all levels of society in Indonesia.

In its implementation, BPJS claims using EMR sometimes encounter obstacles that cause delays in submitting claims. There are several evaluation results related to the implementation of BPJS claims conducted by academics.

The results of the Evaluation of the Implementation of Electronic Medical Record (EMR) in Outpatient Queen Latifa Yogyakarta Hospital conducted by (Salim, Hani, & Wulandari, 2022) showed that service user satisfaction was 97.5% good, usability was 95.1% good, user comfort was 95.1% good, information quality was 87.7% good, performance expectations were 87.7% good, and officer attitudes were 95.1% good. The conclusion is that the implementation of electronic medical records in the outpatient department of Queen Latifa Hospital Yogyakarta is in a good category.

Another study by (Zulfikar, Nyorong, & Nuraini, 2023) on evaluating the implementation of outpatient SIMRS on the BPJS claim reporting system at Aek Kanopan Hospital, North Labuhan Batu Regency concluded that the variables of Reporting, Coding, Verification and Submission affected the BPJS claim reporting system, Coding had the most effect on the BPJS claim reporting system at Aek Kanopan Hospital, North Labuhan Batu Regency. Hospital Management Information System is an integrated information system prepared to handle the entire hospital management process, starting from system services and actions for patients, medical records, pharmacies,

pharmaceutical warehouses, billing, personnel databases, employee payroll, and accounting processes to be controlled by management.

Another problem is the return of claim files or incompleteness of BPJS Health claim files at RSUD Dr R.M Djoelham Binjai, namely, inappropriate or incomplete filling of items in filling outpatient medical records, such as mismatches between diagnoses and medical resumes, then the therapy provided is not by the existing diagnosis made by the patient's responsible doctor (DPJP). There are also obstacles in its implementation, there are still files that are late in returning which slows down the process of submitting BPJS claims because they have to wait and also causes inaccuracy of officers so that errors occur in the process of coding and data entry because of the accumulated files. In addition, differences in understanding of the completeness of claim files between the hospital and the BPJS Health verifier also affect pending claims (Santiasih et al., 2022).

(Puspaningsih, Suryawati, & Arso, 2022) found that the causes of pending BPJS Health claims in hospitals were the determination of diagnosis codes and incomplete medical resumes. Some of the factors that cause pending BPJS Health claims in hospitals can be in the form of lack of coder knowledge, writing diagnoses that are difficult to understand/incomplete, and incomplete recapitulation of services provided by the hospital due to the large number of BPJS patients that must be handled. Efforts to reduce the occurrence of pending BPJS Health claims should be carried out with good cooperation between health workers and coders, for nurses and doctors to be more careful in writing patient data on service recapitulation files, and health workers to be more careful when filling out medical resumes.

In addition, (Bagus & Nyoman, 2020) informed that the implementation of BPJS Health's integrated Clinical SIM and ERM fulfils aspects of feasibility based on acceptance, need, integration, and practicality. However, the obstacles in this study are related to the implementation aspect due to the lack of human resources, infrastructure, implementation methods, budget, and the lack of implementation of Clinical SIM and ERM.

Based on the background explanation and some of the findings described above, researchers want to further analyze the case of BPJS claims after conversion to ERM at ABC Hospital and try to identify improvement strategies that can help overcome these problems with the research title "The Increase Of BPJS Claims At Hospital After Changing To E-Medical Records: Case Analysis And Mitigation Strategy.

Research Methods

This study utilized a mixed-methods approach combining primary and secondary data to investigate the impact of Electronic Medical Data System (EMRS) implementation on BPJS Health claim patterns. Primary data was obtained through interviews with 5 respondents involved in the health system. These interviews provided a first-hand view of the actors on the ground, capturing an in-depth understanding of their experiences regarding changes in BPJS claims following the implementation of ESDM.

In addition, secondary data was used to obtain a more comprehensive picture of the changes in BPJS claims over a specific period, i.e. before and after ESDM implementation from January to August 2023. This secondary data includes information on the number of claims, types of services, and claims processing by BPJS Kesehatan.

Analysis of the secondary data will involve the use of tables, graphs, and descriptive statistics, such as mean, median, and standard deviation. Through these methods, the study will detail and explain changes in BPJS claim patterns before and after the implementation of the EMR. The use of tables and graphs will help visualize the trends of change, while descriptive statistics will provide a numerical overview of the distribution characteristics of the claims data.

Qualitative data obtained from interviews will be analyzed in depth to understand respondents' views, perceptions, and experiences related to the impact of EMR implementation. This qualitative analysis can provide more contextual insights and illustrate subjective aspects that may not be visible through secondary data analysis.

Results and Discussion

Descriptive Statistical Analysis Results

Before calculating statistically, the following is the data obtained from the hospital which has been reprocessed into a more concise form.

Table 1
Number of BPJS Claims in January-August 2023

Bulan	Jumlah Klaim	Jumlah Pasien	Jumlah Kasus
Januari	18.916.322.200	7.812	11.129
Februari	19.421.009.900	7.582	11.049
Maret	22.745.483.100	8.288	12.570
April	18.513.316.321	6.135	8.870
Mei	21.981.983.800	8.672	13.315
Juni	22.972.704.760	8.282	12.363
Juli	23.258.983.400	8.838	13.611
Agustus	22.846.668.800	8.543	13.367

Based on the table data above, it can be seen that there is an increase in the number of claims, patients, and cases every month except in April. To be able to describe in more detail the increase in BPJS claims at the Hospital, statistical calculations will be made consisting of mean (average value), median (middle value), and standard deviation. The following presents the results of these statistical calculations.

Table 2
Descriptive Statistical Analysis Test Results

	Mean	Median	Standard Deviation
Number of Claims	21,332,059,035	22,363,733,450	2,019,624,158
Number of Patients	6,952	8,047	2,930

Number of Cases	12,034	12,467	1,608

Based on the table above, shows that the average number of claims is about 21,332,059,035, with a distribution that tends to have a deviation of about 2,019,624,158 from the mean. The median which is almost equal to the mean indicates a relatively symmetrical distribution. Meanwhile, the mean number of patients is about 6,952, with a fairly dispersed distribution with a standard deviation of about 2,930. The median being lower than the mean may indicate a left skewness. Meanwhile, the average number of cases is about 12,034, with a distribution that tends to be more concentrated around the mean, characterized by a relatively low standard deviation (1,608). The median, which is almost equal to the mean, indicates a relatively symmetrical distribution.

Table 3
relationship between doctor performance and completeness of BPJS claim documents

Variabel	Completeness Variable				p	OR (95%CI)
	Complete		Incomplete			
	n	%	n	%		
Work Motivation						
Good	7	46,7	10	66,7	0,461¥	0,44 (0,10 – 1,92)
Less	8	53,3	5	33,3		
Training						
Good	9	60	12	80	0,213£	0,38 (0,07 – 1,92)
Less	6	40	3	20		
Work environment						
Good	5	33,3	4	26,7	0,500£	1,38 (0,29 – 6,60)
Less	10	66,7	11	73,3		
Reward dan Punishment						
Good	0	0	0	0	–	–
Less	15	100	15	100		
Workload						
Good	5	33,3	10	66,7	0,144¥	0,25 (0,06 – 1,14)
Less	10	66,7	5	33,3		
Compensation						
Good	8	53,3	7	46,7	1,000¥	1,31 (0,31 – 5,48)
Less	7	46,7	8	53,3		

Keterangan : ¥ Continuity Correction; £ Fisher's Exact

From the results of the relationship test on the completeness of BPJS claim documents using the Chi-Square test, the p value> 0.05 was obtained so it can be concluded that there are no variables that have a significant relationship to the completeness of BPJS claim documents.

The increase in the number of bag claims is a good sign that there is public awareness in terms of health, but new problems arise in its implementation. These factors include data errors, lack of staff training, technical constraints, and changes in operational processes that have not been fully integrated with the EMR system:

1. Data Error

Data is important information in making BPJS claims. If there are errors, the claim submission process can be hampered. Data errors that often occur include participant identification errors (name, NIK, or BPJS number registered in the system), Medical Service Data Discrepancies, Data Input Errors by the Hospital, Participant Negligence in Providing Information, and Technical Errors in the BPJS system or errors in data processing can affect the integrity of claim data.

2. Lack of Human Resources

Lack of human resource (HR) competence in the context of BPJS claims can cause several problems in the administration and claims handling process. Some of the problems that may arise due to a lack of HR competence are Errors in inputting claim data into the system, such as incorrectly writing identity numbers, participant names, or medical information. Inability to handle BPJS policy changes, if HR is not up-to-date with BPJS policy changes, they may face difficulties in managing claims according to the latest provisions. Medical judgment errors may misinterpret medical records or fail to identify actual medical service needs. Inability to handle participant complaints, incompetent DMs may struggle to handle participant complaints related to claims, both in providing explanations and resolving issues. Lack of Understanding of the Claims Process, If HR do not have a good understanding of the entire BPJS claims process, they may take inappropriate actions or overlook important stages in the claims process.

3. Technical Constraints

Technical constraints in the BPJS claims process can include several issues related to the information systems, hardware, software, and technology infrastructure used. Some of the issues that may arise due to technical constraints are System disruptions or downtime that may hinder access and processing of claims data. Software errors, which may experience bugs or errors, resulting in errors in data processing. Technology Infrastructure Limitations, such as weak servers or unstable internet connections, can hinder the performance of the claims system. Data Security Issues, Potential data security breaches can result in unauthorized access or alteration of claims data. Data Inconsistencies Between Systems, Data mismatches between BPJS systems and healthcare providers' systems can cause difficulties in validating and handling claims. Difficulties in integrating BPJS systems with third-party systems, such as hospitals or pharmacies, may hinder the smooth flow of information.

4. Changes in operational processes that have not been fully integrated with the EMR system

Operational process changes that are not fully integrated with the EMR (Electronic Medical Record) system may cause several problems in the BPJS claims process. Here are some of the issues that may arise: Inconsistencies in data entered into the EMR system and the BPJS claims system may not always be consistent or appropriate, especially if there are disagreements or errors in the operational change process. Delays in Information Submission, if new operational processes are not well integrated, information required

for claims may experience delays in being submitted between the healthcare provider and BPJS. Lack of Automation of Claims Process, if the claims process still relies on manual work and is not fully integrated with the EMR system, the claims process can be slow and prone to human error. Difficulty in Performance Monitoring and Evaluation, if there is no good integration between operational processes and the EMR system, it is difficult to effectively monitor and evaluate performance. Difficulty in Training Human Resources, Operational changes that are not integrated with the EMR system can make it difficult to train human resources to master new procedures.

Several studies show the problems that occur in health facilities, one of which is by (Yasifa, Syahidin, & Herfiyanti, 2022) found several problems during the observation of incomplete medical records, the process of analyzing the completeness of medical records was carried out manually, the illegibility of diagnoses written by doctors on medical resumes, the absence of doctors' signatures, and the absence of photocopies of patient identity cards, such as photocopies of ID cards and photocopies of BPJS cards resulting in delays in the claim process. Therefore, an information system is needed to support the completeness of medical records so that the BPJS claim process runs correctly and smoothly. The information system that researchers build helps PMIK in carrying out BPJS claim activities.

Research (Kusumawati, 2020) conducted at Koja Hospital from June to July 2019 by taking data on pending claims during 2018, limited to pending inpatient claims and those related to medical problems and medical resumes. In addition, in-depth interviews were conducted with one verifier, one coder, and one grouper. 40.6% of the files were coding and input errors, 21.9% were misplaced diagnoses, and 37.4% were incomplete medical resumes. Thus, it is necessary to update the knowledge of the latest coding rules and rules for coders and the implementation of electronic medical records to make it easier for DPJP to complete the required medical resumes.

Another problem is the incidence of pending claims at Dr. Cipto Mangunkusumo Hospital due to several things including administration, medical, coding, inappropriate and others (Nabila, Santi, Tabrani, & Deharja, 2020). In addition, the results of research (Leonard, 2016) show that there are still problems in the input, process and environment in the implementation of JKN patient service claims at Dr M Djamil Padang Hospital. The input factor is known that in the implementation of diagnosis claims filled by PPDS who have a lack of understanding and knowledge about filling in ICD 10 and ICD 9 CM according to the rules, there is still a lack of coding grouping HR skills due to lack of training and there are still HR placements that are not by competence. Not yet bridging/connecting between INA CBGs, SIM RS and BPJS applications with IT that has not been supported. Based on the process of the management function, most of the problems occur at the implementation stage. Environmental factors are the absence of internal policies in the form of sanctions and strict regulations in completing medical record files, and the existence of independent IT policies that have not been supported.

Based on the results of research and discussion regarding the problems that occur in the BPJS claim process after EMR implementation, all of them are almost similar,

starting from the application of the system that is not perfect, data mismatches, data entry errors, incompetent human resources, and so on.

To deal with the problems that occur, a mitigation strategy is carried out by the Hospital, the following is the discussion.

The existing down-referral program makes it easier for primary healthcare facilities to refer patients to hospitals. Hospitals have an important role in the HAFIZ program, which often appears in services. The existence of a Data and Information Center (Pusdatin) unit in the hospital aims to ensure re-visits or re-control of patients so that the impact of the existence of Pusdatin can be better felt by patients. Management efforts in improving service performance involve the hospital as a referral centre for small hospitals to achieve complete services according to type B. Finally, Google reviews are the focus of the hospital management's attention, demonstrating the importance of the hospital's image and reputation in the eyes of the community, as well as its significant impact on social media.

Internal referral refers to a process where one referral can cover several polyclinics associated with that referral. In other words, one referral can be used to serve different types of polyclinics without the need to request a new referral for each polyclinic separately. The advantages of this system are especially evident in cases of complex illnesses, where patients may require visits to different polyclinics for appropriate treatment. This minimizes administrative hassle and makes it easier for patients to access the various health services required to manage their illness.

Measures that need to be taken in the service after the patient has received health care include re-screening according to their respective fields, evaluation of the rates that have been billed by the finance unit, and the presence of administrative personnel for outpatient and inpatient services. The coding arrangement should be aligned within the service, known as one-day claims service. This process also involves pre- and post-claim coding audits, along with pre-and post-claim evaluations by finance, medical services, and medical record quality managers regarding the completion of medical records reinforced by the optimization of the ERM system.

1. The verification process in health services is carried out in layers, especially in inpatient cases involving the person in charge, pharmacist, coder, and person in charge. In addition, in outpatient cases, verification takes place through a series of steps, starting from the cashier, involving the coder, to the claim submission. At this stage, the person in charge has a special role in handling claim submissions for cases that have a potential risk of pending, ensuring that the process runs accurately and efficiently.
2. Regular meetings between the PIC (Person in Charge), claimants, medical personnel, healthcare managers and other relevant parties are conducted to discuss and resolve issues related to pending claims and to design effective procedures for handling the service that is the source of the problem. In these meetings, they identify the bottlenecks that lead to pending issues and develop better governance to address these issues.

3. Regular training for coders is necessary to continuously improve their competency in medical coding. This training can include updates on the latest regulations and guidelines, application of the latest technology, and improvement of technical skills in the coding process. With regular training, coders can maintain a high level of expertise, ensuring accurate coding quality and compliance with applicable standards.
4. Coding audits are conducted to monitor and evaluate the accuracy of the submitted coding. This process involves careful examination of the medical documents produced, comparing them with the coding that has been done, and ensuring compliance with applicable guidelines and regulations. Coding audits are an important tool in ensuring the quality and accuracy of medical coding and help in preventing potential pending claims issues.

After it was declared that COVID-19 is no longer a pandemic and does not require independent isolation for a long period, this situation creates a more comfortable atmosphere for patients. Patients are no longer afraid or reluctant to visit the hospital. This phenomenon is reflected in the increase in the utility rate of using BPJS cards to get health services.

This change was recognized by the central Social Security Administration (BPJS), which noted that more people sought health care after a period of uncertainty during the pandemic. With the reduced fear of COVID-19 transmission and the overall recovery of the public health situation, patients feel more confident to access the healthcare services they need. The increase in the utilization rate of BPJS cards as a means of payment shows the improvement of people's confidence in the healthcare system and their readiness to return to get the necessary care.

Several regions have implemented Universal Health Coverage (UHC), where the program can be run effectively if more than 90 per cent of the population has become participants in the Health Social Security Organizing Agency (BPJS). Within the UHC framework, BPJS Kesehatan is activated immediately when there is an emergency at the hospital. This means that citizens who have registered as BPJS participants can quickly and easily gain access to necessary health services without excessive financial constraints. Through the implementation of this UHC program, the region can achieve broad health insurance coverage and improve the availability of medical services when needed, creating an important foundation for overall community health improvement.

Problems in delays in claim settlement can occur in any part, including at the time of registration, doctor, coder, or case-mix. The participant registration process (SEP) experiences misalignment between the Vclaim system and SIMRS. At the doctor stage, delays can be caused by the lack of completeness of medical resumes and diagnoses that are not by the Electronic Standards (SE) of the Insurance Organizing Agency (BA) which are still in pending status and the Medical Service List (DPM). The coder needs to maintain accuracy in coding to ensure that each code matches the information contained in the BA pending claims. Meanwhile, in case-mix, accuracy is needed in checking the completeness of the file and verifying that the bill matches the actions performed. This

entire process requires good coordination between the various relevant sections to ensure that each stage is processed accurately and by applicable regulations, thereby reducing the risk of delayed claims.

This table shows the relationship between doctor performance and completeness of BPJS claim documents based on certain variables. However, from the results of statistical tests conducted, no significant relationship was found between these variables and the completeness of BPJS claim documents.

1. Work Motivation: There is no significant relationship between work motivation (favourable or unfavourable) and completeness of BPJS claim documents. This suggests that work motivation does not directly impact the completeness of claim documents in this context.

2. Training: Similar to work motivation, training (good or poor) also showed no significant relationship with the completeness of BPJS claim documents. This indicates that the level of training received by staff does not significantly affect the completeness of claim documents.

3. Work Environment: This study did not find a significant relationship between the quality of the work environment (good or less) and the completeness of BPJS claim documents. This implies that the work environment, as perceived by respondents, does not affect the completeness of claim documents.

4. Reward and Punishment: The analysis showed no data for the variable 'Reward and Punishment', which indicates that the impact of reward and punishment on the completeness of BPJS claim documents was not assessed in this study.

5. Workload: There was no significant relationship between workload (favourable or unfavourable) and completeness of BPJS claim documents. This indicates that the workload experienced by officers does not significantly affect the completeness of claim documents.

6. Compensation: Similar to workload, there is no significant relationship between compensation (good or less) and completeness of BPJS claim documents. This suggests that the level of compensation received by staff does not significantly affect the completeness of claim documents.

Conclusion

Based on the research findings, it can be concluded that the implementation of Electronic Medical Records (EMR) at Hospitals contributes to a significant improvement in terms of the number of patients, cases, and the number of claims with the national health insurance program (BPJS). This improvement reflects a positive change in health data management through the E-Medical Record (EMR) system. However, it should be acknowledged that the increase in the nominal amount of BPJS claims is also accompanied by some challenges and issues post-implementation of the Electronic

Medical Data System (EMDS). In the results of the study, none of the variables analysed (work motivation, training, work environment, workload, compensation) showed a significant relationship with the completeness of BPJS claim documents. This implies that other factors not included in the analysis may play a more significant role in determining the completeness of claim documents.

These challenges may involve aspects such as system integration difficulties, data security, and the need for enhanced human resource skills in operating the EMR system. While this improvement provides a positive outlook on the benefits of technology adoption, it is crucial to continuously identify and address obstacles that may arise during the use of the EMDS system. Therefore, while the increase in BPJS claims indicates success in adopting electronic medical records at A Hospital, further improvement and development steps need to be taken to overcome the identified obstacles. These efforts will support the sustainability of EMR implementation, enhance efficiency, and ensure that the benefits of these changes can be optimally enjoyed by the entire healthcare system.

Bibliography

Aryanto, Dede Dwi, & Sulthon, Besus Maula. (2023). Perancangan Sistem Electronic Medical Record Rumah Sakit Guna Mempermudah Pengklaiman Terhadap Penjamin Asuransi BPJS. *Resolusi: Rekayasa Teknik Informatika Dan Informasi*, *4*(1), 8–20.

Bagus, Fajar Manuaba Ida, & Nyoman, Hariyasa Sanjaya I. (2020). Feasibility Study on the Implementation of Clinic SIM and ERM Integrated Pcare as a BPJS Kesehatan Application at Udayana University Clinic. *WMJ (Warmadewa Medical Journal)*, *5*(2), 60–69.

Darianti, Delfina, Dewi, Vina Ervina Destiana, & Herfiyanti, Leni. (2021). Implementasi Digitalisasi Rekam Medis Dalam Menunjang Pelaksanaan Electronic Medical Record Rs Cicendo. *Jurnal Ilmiah Manusia Dan Kesehatan*, *4*(3), 403–411.

Kusumawati, Ayu Nadya. (2020). Faktor–Faktor Penyebab Pending Klaim Rawat Inap di RSUD Koja tahun 2018. *Cermin Dunia Kedokteran*, *47*(1), 25–28.

Leonard, Devid. (2016). Pengorganisasian Klaim Pelayanan Pasien JKN Di RSUP Dr M Djamil Padang. *Menara Ilmu: Jurnal Penelitian Dan Kajian Ilmiah*, *10*(72).

Nabila, Salma Firyal, Santi, Maya Weka, Tabrani, Yusirwan, & Deharja, Atma. (2020). Analisis faktor penyebab pending klaim akibat koding berkas rekam medis pasien rawat inap di RSUPN Dr. Cipto Mangunkusumo. *J-REMI: Jurnal Rekam Medik Dan Informasi Kesehatan*, *1*(4), 519–528.

Puspaningsih, Mira, Suryawati, Chriswardani, & Arso, Septo Pawelas. (2022). EVALUASI ADMINISTRASI KLAIM BPJS KESEHATAN DALAM MENURUNKAN KLAIM PENDING. *Journal of Syntax Literate*, *7*(6).

Salim, Nasiatul Aisyah, Hani, Ulfah Rizqie Miftah, & Wulandari, Dewi Ariyani. (2022). Evaluasi Pelaksanaan Elektronic Medical Record (EMR) di Rawat Jalan RSU Queen Latifa Yogyakarta. *Infokes: Jurnal Ilmiah Rekam Medis Dan Informatika Kesehatan*, *12*(2), 7–12.

Sari, Irna Permata, Lubis, Fauzi Arif, & Tambunan, Khairina. (2024). Analisis Efektivitas Program BPJS Kesehatan Dalam Meningkatkan Kesehatan dan Kesejahteraan Masyarakat. *Reslaj: Religion Education Social Laa Roiba Journal*, *6*(1), 512–521.

Yasifa, Tsaniya Aini, Syahidin, Yuda, & Herfiyanti, Leni. (2022). Designed and Built an Information System for Bpjs Polyclinic Claim File Completeness At Muhammadiyah Hospital Bandung. *Jurnal Teknik Informatika (Jutif)*, *3*(4), 1089–1097.

Zulfikar, Agus, Nyorong, Mappeaty, & Nuraini, Nuraini. (2023). Evaluasi Implementasi SIMRS Rawat Jalan Terhadap Sistem Pelaporan Klaim BPJS di RSUD Aek Kanopan Kabupaten Labuhan Batu Utara. *Journal of Healthcare Technology and*

Medicine, *9*(1), 612–622.