Contents lists available at IOCS

Science Midwifery

journal homepage: www.midwifery.iocspublisher.org

Analysis of the inaccuracy of the prosedure code for outpatient BPJS patients in 2024 at Dr. Harjono S. Hospital, Ponorogo Regency

Ivana Salsabila Myrilla Anggraini[1], Sinta Novratilova[2]

[1,2]Applied Bachelor's Degree of Applied Health Information Management, Politeknik Indonusa Surakarta, Surakarta, Indonesia

ARTICLE INFO

Article history:

Received Jul 9, 2025
Revised Jul 15, 2025
Accepted Jul 23, 2025

Keywords:

4M (Man, Money, Method, Machine)
Code Inaccuracies
Coding
Outpatient
Prosedure

ABSTRACT

The implementation of the Indonesian Case Based Groups (INA-CBG) system is a crucial instrument in the National Health Insurance (JKN) program for the payment of health service claims at advanced referral health facilities (FKRTL). The success of this system depends heavily on the accuracy of the codification of the diagnosis (ICD-10) and the action/procedure (ICD-9-CM) which is a representation of the service output. Code accuracy is not only essential for the collection of claim costs, but also plays an important role in nursing care, improving service quality, and analyzing morbidity-mortality data. A preliminary study at Dr. Harjono S. Ponorogo Hospital in January-February 2025 found 12 outpatient claim files (cardiac and neurological polys) in the June-August 2024 period with inaccuracies in the code of procedure, including 10 files that were not coded and 2 files that were incorrectly coded. Furthermore, initial observations through interviews with internal verifiers indicated the absence of a Standard Operating Procedure (SPO) for coding BPJS patients and the absence of coding evaluations from internal parties and hospital management. Based on these problems, this study aims to analyze the factors that cause the inaccuracy of the procedure code of outpatient BPJS patients at Dr. Harjono S. Hospital, Ponorogo Regency.

Corresponding Author:

Ivana Salsabila Myrilla Anggraini,
Bachelor of Applied Health Information Management,
Politeknik Indonusa Surakarta,
Jl. K.H Samanhudi No.31, Bumi, Kec. Laweyan, Kota Surakarta, Jawa Tengah, 57142, Indonesia
Email: 24.ivana.salsabilamyrillaanggraini@poltekindonusa.ac.id

INTRODUCTION

Coding, or coding, in medical records is the process of processing data to provide a representation of code in the form of letters, numbers, or a combination of both on a clinical data component. Precision in the coding of diagnoses and medical procedures has far-reaching implications. In addition to being the basis for collecting claim fees, accurate codes are also crucial for nursing care, improving service quality, comparing morbidity and mortality data, and presenting data on the top 10 diseases (Nurjannah et al., 2022). Code inaccuracies can negatively impact clinical data management, reimbursement processes, and overall health care quality.

Although the urgency of code accuracy is strongly emphasized, the reality on the ground shows that code inaccuracies in diagnosis and procedure are still frequently found. This triggers a clinical coding audit, which is the process of examining medical record documents to ensure that the steps and results of the coding are accurate, precise, and in accordance with applicable rules. This audit serves to review errors, trace the source of the cause, compare the encoding information with the patient's medical records, and identify areas in coding practice that need improvement. During the audit process, four aspects of coding quality will be evaluated, namely validity, reliability, completeness, and timeliness (Hatta Gemala R, 2017).

The results of the research conducted by Sukawan et al., 2024 the accuracy of coding injury diseases and external causes of 5 types of injuries, the highest code inaccuracies were in fracture cases as many as 41 cases where most of the inaccuracies were not listed the fifth character code to explain closed and open fractures Coding of injury diseases and external causes from 65 injury code medical records was 33.8% accurate and 66.2% inaccurate. The external causes code is completely (100%) inaccurate because it is not coding. The ICD 9 CM action code shows 83.08% accurate and 16.92% inaccurate because no action code is listed. Coding procedures are appropriate, but SPOs need to be reviewed and created specifically for coding injuries and external causes. The inaccuracy is caused by the lack of classification and codification training, incompleteness of medical information in medical records and limited knowledge of coding officers regarding injury coding and external causes. Coders are advised to improve training and supplement medical information to ensure better coding accuracy (Sukawan et al., 2024).

The results of the research of Yeni Tri et al., 2024 show that from 154 documents, the accuracy of the code was obtained with a percentage of 70% greater than the inaccuracy of the code with a percentage of 30%, which was divided into 4 classifications, namely incorrect code as much as 30% (14 documents), incorrect 4th category as much as 9% (4 documents), incomplete code as much as 41% (19 documents) and not given additional code as much as 20% (9 documents). The factors that cause the inaccuracy of the code are the doctor's writing that is not clear, the coder is not thorough in reviewing the supporting sheets, and other health workers (midwives and nurses) are not accurate in writing supporting information on the childbirth code. The suggestion is that coders should be more thorough in reading medical information and it is necessary to hold training on coding to increase the knowledge of coders and other health workers more fully in writing supporting information so that it can increase the level of code accuracy (Yeni Tri et al., 2024).

Several studies have confirmed the existence of the problem of coding inaccuracies. The research of Sukawan et al. (2024) highlights significant inaccuracies in the coding of injury diseases and external causes, with the inaccuracy rate reaching 66.2% for injury codes and 100% for external causes due to no coding. The main causes include the lack of classification and codification training, incompleteness of medical information in medical records, and limited knowledge of coding officers. Yeni Tri et al. (2024) found 30% of code inaccuracies, caused by doctor's writing that could not be read clearly, inaccuracy of coders in checking supporting sheets, and lack of accuracy of other health workers in writing supporting information.

A preliminary study carried out at Dr. Harjono S. Ponorogo Hospital from January to February 2025 revealed similar problems. It was found that 12 outpatient claim files at the heart and neurological polyclinic in the June-August 2024 period had inaccuracies in the code of procedure. Of these, 10 claim files were not coded, and 2 claim files had errors in providing codes. For example, polyneural patients undergoing a CT-scan of the head are not coded, even though the CT-scan results are available and listed on the care billing. Similarly, polycardiac patients with a heart Treadmill examination were not coded, even though the results were recorded and included in the billing. Initial observations through interviews with coders at the insurance verification and guarantee installation also showed that the Standard Operating Procedures (SPO) for coding BPJS patients were not yet available in hospitals. Furthermore, the coder confirmed that there has been

no routine evaluation related to coding from both the internal installation and hospital management.

RESEARCH METHOD

This type of research uses a descriptive qualitative approach. A descriptive quantitative approach was used to provide an overview and analyze the level of inaccuracy of the procedure code of outpatient BPJS patients through medical record data to explore in detail the factors that caused the inaccuracy of the code based on the 4M method (Man, Money, Method, Machine) through interviews with key informants. The research design used is cross-sectional because the collection of data related to the inaccuracy of the procedure code of outpatient BPJS patients from medical records in 2024 is carried out at a certain time. In addition, this design allows the identification of relationships between variables (code inaccuracies) and the observed causative factors simultaneously.

This research was carried out at the Insurance Verification and Guarantee Installation of Dr. Harjono S. Hospital, Ponorogo Regency. The data collection process is scheduled to take place from January to June 2025.

The population in this study is divided into two, namely Subjects (Informants), namely all officers at the Verification and Insurance Guarantee Installation of Dr. Harjono S. Hospital, Ponorogo Regency, which totals 12 people, and Objects (Medical Record Documents) of all medical records of outpatient BPJS patients at Dr. Harjono S. Hospital, Ponorogo Regency from January to December 2024, totaling 123,018 sheets.

Sampling is also divided based on the subject and object of research, namely the subject (informant) using the purposive sampling technique, which is a way to determine the sample by considering certain criteria and considerations that are in accordance with the research objectives (Sugiyono, 2020). The subjects to be interviewed are 6 people, consisting of 3 outpatient claims coding officers, 1 claim verifier, and 1 Head of Insurance Verification and Assurance Installation as source triangulation informants. One additional informant from healthcare professionals involved in clinical documentation will also be considered to complement the perspective. The inclusion criteria for the subject are: (1) Claim Verifier, (2) Outpatient Claims Coding Officer on duty in 2024, and (3) Willing to be interviewed and Object (Medical Record Document) using simple random sampling technique. This method was chosen because the population of medical records is assumed to be homogeneous, so that each medical record has an equal chance of being selected (Sujarweni, 2020). The number of samples was determined using the Slovin formula, with an error tolerance level (e) of 10% and the number of samples of medical records to be analyzed was obtained as many as 100 sheets.

The variables identified in this study included inaccuracies in the procedure code of outpatient BPJS patients, Man (Human Resources: knowledge, skills, rigor, officer workload), Money (Budget: training, incentives, financial impact), Method (Method/Procedure: operational standards, workflow, documentation), and Machine (Equipment/Technology: SIMRS, completeness of coding tools).

The instrument used in this study is an procedure code audit checklist sheet containing items that allow comparison between the codes listed in the medical record/SIMRS with the codes that should be based on ICD-9-CM and clinical documentation, the International Classification of Diseases and Health Problems (ICD-9-CM) volume 3 as an official reference standard for the validation and determination of medical codes of action/procedures, structured interview guidelines are used to collect qualitative data regarding the 4M factors from key informants, and the Hospital Management Information System (SIMRS) is used as a secondary data source to obtain outpatient data (identity, date of visit, diagnosis, procedure, billing) and codification data (ICD-9-CM code of procedure that have been coded by the coder) from 2024.

Data was collected through two main methods, namely Observation (Document Review) by conducting direct observation and audit analysis of 100 medical record samples of outpatient BPJS patients. This process involves comparing the procedure codes recorded in the SIMRS/medical records with the ICD-9-CM standard, supported by all relevant clinical documentation. The results are recorded in a checklist sheet to measure the degree of inaccuracy. The interview method was conducted with 6 key informants (research subjects) using interview guidelines that have been compiled to explore in-depth information regarding perceptions, experiences, and factors that contribute to the inaccuracy of the code of actio procedure n based on the 4M framework.
The data analysis in this study was carried out in several stages. The first stage of data collection was obtained from observation and interviews. The second stage is data reduction, which is the process of selecting, simplifying, and changing the data obtained from the interview results. Third, presenting data in the form of descriptive text descriptions. Fourth, the conclusion drawn in this study is based on the formulation of the problem and condenses the discussion. Finally, using the source (data) triangulation technique, namely the Head of Insurance Verification and Assurance Installation to test the validity of data related to the research problem being researched by the researcher.

RESULTS AND DISCUSSIONS

Characteristics of Coding Officers at Dr. Harjono S. Ponorogo Regency Hospital

The results of data collection have been obtained by researchers to find out the age, length of work, and training that the coding officers have participated in obtained through the results of interviews.

Table 1. Informant characteristics

Informant number	Position	Education	Tenure	Follow Training	
				Yes	Not
1	Outpatient Coder Officer	DIII Hospital Administration	5 years		
2	Outpatient Coder Officer	S1 Electrical Energy	5 years		
3	Outpatient Coder Officer	S1 Economy	5 years		
4	Outpatient Coder Officer	S1 Public Health	5 years		

The number of officers who became informants amounted to 4 people, namely 3 outpatient coding officers and 1 verifier, with informant education qualification 1 DIII Hospital Administration, informant 2 with S1 Electrical Energy education qualifications, informant 3 with S1 Economics educational qualifications, 4 informants with S1 Public Health education qualifications. All informants stated that they had worked for 5 years.

Inaccuracy of the procedure code of BPJS Outpatient Patients at Dr. Harjono S. Hospital, Ponorogo Regency

Analysis of 100 medical records of outpatient BPJS patients in the observed period showed inaccuracies in the coding of procedure. The results of this observation compare the code of procedure given by the Hospital (RS) with the procedure code of the researcher's study.

Table 2. Inaccuracy of the procedure code

Number	Clasifications	Number of Documents	Precentage
1	Wrong Code	30	30%
2	Uncoded	70	70%

The problem that occurred was that it was found to have the wrong code of procedure or not in accordance with the procedures given based on the ICD-9-CM guidelines as many as 30

medical records (30%). Most of the medical records, 70 (70%), were found to be not coded at all, even though they were recorded.

The inaccuracy of the procedure code of the outpatient BPJS patient due to the wrong code can be seen in the following example:

Example 1

Procedure : IUD Extraction
RS Code : 93.57
Researcher Code : 97.71

The results of the analysis showed that the appropriate procedure code was 97.71 (Removal of intrauterine contraceptive device) while the code 93.57 (Application of other wound dressing) was for wound care.

Example 2

Procedure : Echocardiography / USG Jantung
RS Code : 89.52
Researcher Code : 88.72

The results of the analysis in the case were 88.72 (Diagnostic ultrasound of heart/Echocardiography) while the code was 89.52 (Electrocardiogram).

The inaccuracy of the procedure code for outpatient BPJS patients because it is not coded can be seen in the following examples:

Example 1

Procedure : USG Total Abdomen
RS Code : -
Researcher Code : 88.76

The results of the analysis in the case said that the code of procedure was not coding. The results of the ultrasound and bills are already in the medical record documents.

Example 2

Procedure : ESWL
RS Code : -
Researcher Code : 98.51

The results of the analysis in the case said that the code of procedure was not coding. Surgery reports and bills are already on the medical record document.

Factors that cause code inaccuracies the procedure of outpatient BPJS patients based on the Man aspect

The Man aspect of this study focuses on the quality of the human resources involved in the coding process, including educational background, training, experience, workload, and rigor. The variety of educational backgrounds suggests that not all coding officers come from majors directly related to medical records or coding, which can affect initial understanding and competence in coding. In this case, it is still not in accordance with the Regulation of the Minister of Health of the Republic of Indonesia Number 55 of 2013 which states that one of the duties of a medical recorder is to carry out a clinical classification system and coding of diseases and medical procedure related to health in accordance with correct medical terminology (Indonesian Ministry of Health, 2013).

Based on interview activities related to coding training experience, informant 1 stated "No" to having participated in coding training before. Informants 2, 3, and 4 stated that they had "Never" participated in the previous coding training. Not all officers receive coding training, which is crucial to ensuring a uniform and up-to-date understanding of coding standards. Officers who have never attended the training are at a higher risk of making mistakes. Research by Fitriana et al., 2024 shows that the factors that cause inaccuracies in diagnosis codes and procedure are influenced by human resources who verify codes that do not meet the competence of medical recorders, and there is no special training for coding officers (Fitriana et al., 2024).

Based on interview activities related to workload, there were varied responses showing that the coder workload was not uniform among officers. High workloads (such as those experienced by Informant 3) have the potential to increase the risk of errors and reduce accuracy in coding. These results are comparable to researchers Yeni et al., 2024 who said that due to the high workload, coders tend to lack understanding in the coding process, so they are less thorough in reading various medical record sheets to determine the code (Yeni Tri et al., 2024).

Based on interview activities related to accuracy, there is a difference in perception regarding the level of accuracy of coding officers. Although most of the informants considered that they had been thorough, the "not yet" statement from informant 4 indicated that there were areas that needed improvement, or perhaps a reflection of the officer who did not have coding experience. Rigor is a crucial factor in producing the right code of procedure. The results of the research by Yeni et al., 2024 mention the causes of inaccuracies in the diagnosis code and the act of lack of accuracy in reading sheets containing additional information that supports the accuracy of the code (Yeni Tri et al., 2024).

Factors causing code inaccuracy the procedure of outpatient BPJS patients based on the Money aspect

The money aspect explores the incentives, budgets, and financial impacts related to the inaccuracy of the code of procedure. The Regulation of the Minister of Health (Permenkes) Number 76 of 2016 is the main basis for the implementation of Indonesian Case Based Groups (INA-CBG's) in the National Health Insurance (JKN) emphasizes that the financing of health services is highly dependent on accurate clinical data, especially diagnostic codes and medical procedures. The INA-CBG's system is a prospective financing method used by BPJS Kesehatan for health facilities. The amount of service fees to be paid is fully determined by the grouping process in INA-CBG's software. This software works by processing the patient's clinical data, namely the diagnosis code (based on ICD-10) and the medical procedure code (based on ICD-9-CM) entered (Indonesian Ministry of Health No. 76, 2016).

The majority of informants (Informants 1, 3, and 4) said that there was no specific reward or punishment from the hospital management if it was known that there was an inappropriate code of procedure. Informant 2 gave the answer "Not so far," indicating that although it does not currently exist, it is possible that in the future the policy could be implemented. This shows that the reward and punishment system related to coding accuracy has not been the main focus of hospital management. The application of the concept of reward and punishment is very beneficial for officers because these concepts can motivate and punish officers who make mistakes so that officers can introspect themselves on their performance (Munika, 2023).

There are a variety of answers regarding the procurement of coding training budgets. Informant 1 stated "Sometimes there is, sometimes not," which indicates inconsistencies in the availability of budgets for training. Informant 2 states "Not yet," indicating that the coding training budget has not been allocated. Instead, Informant 3 replied "Yes," indicating that the budget was available. Informant 4 gave the answer "If proposed there is," which implies that the procurement of training budgets is reactive, i.e. it will only be considered if there is a proposal or proposal. This suggests that coding training may not yet be a proactive priority in budget allocation. Research by E. Garmelia et al., 2022 states that coders need to attend regular training and seminars to support the knowledge gained through education. A medical recorder must take part in training to understand the growing knowledge so that the officer's skills in carrying out coding increase (Garmelia et al., 2022).

All informants (Informants 1, 2, 3, and 4) consistently stated "Yes" or "Yes" that there was an influence if there was a coding error. While this interview doesn't detail the type of influence, this answer strongly indicates that coding errors have significant consequences. In the context of BPJS and the "Money Aspect," this influence is most likely related to inappropriate claims, potential financial losses for the Hospital, or delays in administrative processes that have an impact

on revenue. Regulation of the Minister of Health (Permenkes) Number 76 of 2016 states that INA-CBG's are formed based on the grouping of primary diagnoses, secondary diagnoses, and medical procedures that are input into the grouper. If the input (diagnosis and procedure code) is wrong, then the output (the INA-CBG's group and its tariffs) will also be wrong. This shows that code accuracy is the determinant of tariffs (Indonesian Ministry of Health, 2016)

Factors causing code inaccuracy procedure of outpatient BPJS patients based on Method aspects

The 'Method' aspect examines standard procedures, workflows, and monitoring and evaluation mechanisms related to the coding process. There are differences of views regarding the understanding of Standard Operating Procedures (SOP). Informant 1 stated "should have been," implying disbelief or the possibility of the absence of such documents in his unit. Meanwhile, Informants 2, 3, and 4 consistently stated "there is already an SOP" or "There is." This indicates the possibility of SOPs, but they may not have been socialized or implemented evenly to all parties involved. Proper codification systems and consistent implementation of Standard Operating Procedures (SOP) will improve the accuracy, security, and efficiency of the medical record data management process. In this context, counseling to medical record workers is one of the important steps to ensure that they understand and can apply these principles in their daily work activities (Aini & Khalifatulloh, 2025). The coding flow described by the informant has a core similarity, which starts with SIMRS, followed by checking the completeness of documents or patient examination vouchers, and coding is only done after the documents are complete. This indicates the presence of a standard flow that is followed.

The majority of informants (Informants 1, 2, 3, and 4) consistently identified incompleteness of supporting information/medical documentation as the main obstacle in filling out the code of procedure. This includes supporting examinations, anamnesis, or information from the police. Informant 4 also added an "understanding of the rules," which indicates the officer's knowledge issues related to coding regulations. Incompleteness of medical record data is a significant factor in the cause of code inaccuracy. The lack of completeness in filling out medical records has a major impact on its quality, so the incompleteness of the documents makes it difficult for coders to find the information needed to determine the right and specific code (Yeni Tri et al., 2024).

Factors that cause code inaccuracies the procedure of outpatient BPJS patients based on the Machine aspect

The 'Machine' aspect tests the availability and use of equipment or technology that supports the coding process, such as reference books and information systems. Regulation of the Minister of Health of the Republic of Indonesia Number 82 of 2013 Article 4 concerning Hospital Management Information System states that every hospital is required to manage and develop a medical record information system (SIMRS) and must be able to improve and support the health service process in hospitals (Indonesian Ministry of Health, 2013).

Only Informant 1 stated that he always used the ICD-9-CM book independently. Informants 2 and 3 state they don't always use it, and Informant 4 is not involved in coding. This indicates that not all coders consistently refer directly to the ICD-9-CM book, which can be a source of error if relying on the memory or help of others who may not always be accurate. All informants consistently stated that there was a supporting book that was used to make coding easier. This indicates that there are additional resources available to help the coder. The diagnostic codes and procedure used in the ICD-10 and ICD-9 CM are important data that are used as a reference in determining the amount of health service costs. Diagnoses must be coded precisely, accurately, and in a timely manner in order to be used in medical record decision-making. If the diagnosis is written in the medical record file is not correct, it will affect the accuracy in the coding process and can have an impact on the amount of cost (HJ & Wariyanti, 2020).

All informants stated that the codification process was carried out electronically. This suggests that hospitals have been using digital systems in the coding process, which is generally expected to improve efficiency and reduce manual errors. All informants confirmed that the officers directly coded using SIMRS. This shows the direct integration between the coding process and the hospital management information system, which is an efficient practice. Based on Ramdhan Gunawan's research, Hari, 2024 states that the Hospital Management Information System (SIMRS) at RSUD X is generally effective in assisting the BPJS claim process. SIMRS has succeeded in reducing the burden of manual work, especially in patient data entry into the INA-CBGs system, thereby reducing the need for manual data entry that is carried out one at a time. This system has also significantly improved the accuracy and efficiency of the claims process (Gunawan & Hari, 2024).

CONCLUSION

An incorrect procedure medical code as many as 30 medical records (30%) were found to have incorrect procedure codes or did not match the procedures provided based on ICD-9-CM guidelines and most of the medical records, i.e. 70 medical records (70%), were found to be not coded at all, even though the procedure was recorded. Hospital management needs to conduct an evaluation of hospital coding, it can be with coding audits and so on to be able to review how the quality of coding for BPJS claims is. In the human aspect, coding officers have varied educational backgrounds, not all of which are directly relevant to medical records. The officer who does the coding should be in accordance with his competence, namely a Medical Recorder in accordance with applicable regulations. There are inconsistencies in the coding training that officers attend, as well as differences in the perception of workloads and individual accuracy levels. To improve the accuracy of coding, training should be held for coding officers on how to code actions. In the monetary (financial/budget) aspect, it was found that there is no clear reward system and punishment related to coding accuracy being a significant factor. Officers are aware of the impact of coding errors, the absence of incentives or direct consequences can reduce motivation to improve accuracy. Budgeting for coding training has not been consistent or proactive. It is recommended that the concept of punishment and reward be enforced for coding officers so that there are better changes in terms of officers and officers are more enthusiastic in improving coding performance. In the aspect of methods (methods/procedures), it was found that the incompleteness of medical documentation from the doctor (anamnesis, supporting results, or completeness of poly) was the main obstacle identified by all informants. Decrees/SOPs for codifying procedures already exist, there are inconsistencies in socialization and implementation, as well as differences of views on the existence and effectiveness of monitoring and evaluation systems for code accuracy. The hospital should hold a workshop for medical personnel about the importance of being able to write a patient's anamnesis clearly and completely as well as the completeness of filling out medical record files so that they can be coded appropriately and accurately. In the mechanical aspect (equipment/technology), it was found that the codification process has been carried out electronically and integrated with SIMRS. There are indications that not all officers consistently refer to the ICD-9-CM book when coding, which can potentially be a source of error even if a supporting book is available.

ACKNOWLEDGEMENTS

On this occasion, the researcher would like to express his gratitude to the Director of Dr. Harjono S. Ponorogo Regency Hospital for giving permission to take data at the hospital. The researcher also expressed his gratitude to the Indonusa Polytechnic Surakarta for providing a lot of assistance in this research process.

References

Aini, N. D. N., & Khalifatulloh, B. D. D. (2025). Empowerment of Medical Record Officers Related to Increasing Knowledge in Preparing Clinical Coding SOPs. *SELAPARANG: Journal of Progressive Community Service*, *9*(2), 576–582.

Aprilia, A. K. D., Nurmawati, I., & Wijayanti, R. A. (2020). Identify the Causes of Delays in Providing Outpatient Medical Record Documents at Husada Utama Hospital Surabaya in 2020. *J-REMI: Journal of Medical Records and Health Information*, *1*(4), 630–638. https://doi.org/10.25047/j-remi.v1i4.2130

Decree of the Minister of Health of the Republic of Indonesia. (2020). *Professional Standards for Medical Recorders and Health Information*. *2507*(February), 1–9.

Djaali. (2020). *Quantitative Research Methodology*. PT Bumi Aksara.

Dr. dr. Shirley Ivonne Moningkey, M.Kes., Prof. dr. Wahyuni Lukita Atmodjo, PAK, P. D. (2023). *Guide to Writing Thesis Final Project for Health and Medicine*. Andi Publisher.

Fitriana, S. M., Pradita, R., Widowati, V., & Tahayu, K. R. (2024). *Analysis of the Accuracy of Diagnosis and Action Codes in the Childbirth Case of JKN Patients at Hospital X Special Region of Yogyakarta*. *9*(2), 327–337.

Garmelia, E., Irmawati, I., & Hanifah, L. N. (2022). Analysis of PMIK's Ability to Completeness and Accuracy of Childbirth Diagnosis Codes in Hospitals. *Indonesian of Health Information Management Journal (INOHIM)*, *10*(2), 112–117. https://doi.org/10.47007/inohim.v10i2.432

Gunawan, R., & Hari. (2024). INPATIENT BPJS CLAIM RATES AT X REGIONAL GENERAL HOSPITAL Abstract (Indonesia) BPJS Kesehatan (Health Social Security Organizing Agency) is. *JHMSS Journal of Hospital Management Services System*, *2*(2), 67–81.

Gunawan, T. S., & Christianto, G. M. (2020). Electronic Medical/Health Records (RMKE): Health System Integration. *Indonesian Journal of Medical Ethics*, *4*(1), 27. https://doi.org/10.26880/jeki.v4i1.43

Hatta, Gemala R. (2013). *Health Information Guidelines for Health Service Facilities. Revised Edition*, *2*. University of Indonesia Press.

Hatta, Gemala, R. (2017). *Guidelines for Health Information Management in Health Service Facilities*. University of Indonesia.

H. J., & Wariyanti, A. S. (2020). The Accuracy of the Diagnosis Code in the Era of National Health Insurance (JKN). *Link*, *16*(2), 98–104. https://doi.org/10.31983/link.v16i2.6369

L.J, M. (2017). *Qualitative Research Methods*. PT. Teenager Rosdakarya.

Laela Indawati. (2017). Identification of UnsProvision of Disease and Action Codes (Systematic Review). *Indonesian of Health Information Management Journal (INOHIM)*, *5*(2), 59–64.

Ministry of Health of the Republic of Indonesia No. 76. (2016). Regulation of the Minister of Health of the Republic of Indonesia number 76 concerning INA-CBG Guidelines in the Implementation of JKN. *Regulation of the Minister of Health of the Republic of Indonesia Number 76 Tah*, 1–275.

Ministry of Health, R. (2021). Regulation of the Minister of Health of the Republic of Indonesia No.26 of 2021 concerning Amendments to the Regulation of the Minister of Health. *Minister of Health of the Republic of Indonesia Regulation of the Minister of Health of the Republic of Indonesia*, *879*, 2004–2006.

Ministry of Health of the Republic of Indonesia. (2022). Regulation of the Minister of Health of the Republic of Indonesia No. 24 of 2022 concerning Medical Records. *Regulation of the Minister of Health of the Republic of Indonesia Number 24 of 2022*, *151*(2), 1–19.

Munika, L. A. (2023). *Factors Affecting the Accuracy of the Diabetes Mellitus Diagnosis Code at Bhirawa Bhakti Hospital Malang* City [Malang Polytechnic]. perpustakaan.poltekkes-malang.ac.id

National, J. K., Nation, T. L., Sheets, T., & Republic, N. (2013). *NATIONAL NEWS*. *1400*.

Nurjannah, N. S., Mudiono, D. R. P., Farlinda, S., & Djasmanto, D. (2022). Determinants of Accuracy of the Main Diagnosis Code at Pertamina Central Hospital South Jakarta. *Journal of Medical Records & Health Information Management*, *1*(1), 35–40. https://doi.org/10.47134/rmik.v1i1.14

Permatasari, F. K., Sukmaningsih, W. R., & Novratilova, S. (2024). The Relationship between Service Quality Aspects and Outpatient Satisfaction at Karanganyar Health Center. Journal of Health Information Management Indonesian (JHIMI), 3(1), 41-46.

President of the Republic of Indonesia. (2023). Law of the Republic of Indonesia Number 17 of 2023 concerning Health. *Law*, *187315*, 1–300.

Putri, S., Yulia, N., Indawati, L., & Dewi, D. R. (2024). Accuracy of Coding Diagnosis and Medical Actions 10 Most Diseases. Surya Medika: Scientific Journal of Nursing and Public Health Sciences, 19(2), 103-109.

Rijali, A. (2019). Qualitative Data Analysis. *Alhadharah: Journal of Da'wah Science*, *17*(33), 81. https://doi.org/10.18592/alhadharah.v17i33.2374

Sugiyono. (2020). *Quantitative, Qualitative, and R&D Research Methods*. Alphabet.

Sujarweni, V. W. (2020). *Research Methodology*. New Library.

Sukawan, A., Setiawan, D., Putra, H., Barsasella, D., & Dewi, F. (2024). *Accuracy of Coding Injuries and External Causes Based on ICD-10 and ICD-9 CM in Hospital X*. *6*(1), 50–57. https://doi.org/10.25047/j-remi.v6i1.5572

Utami, M. C., & Wardhani, F. A. (2023). THE RELATIONSHIP BETWEEN THE LEVEL OF PUBLIC KNOWLEDGE ABOUT ANTIBIOTICS AND COMPLIANCE WITH THE USE OF ANTIBIOTICS AT THE SUKOWONO HEALTH CENTER. *Doctoral Dissertation, Dr. SOEBANDI University*.

Wicaksono, A. (2022). *Educational Research Methodology (Brief Introduction)*. Garudhawaca Publishers.

Yeni Tri, U., Linda, W., & Santi, S. (2024). Analysis of the accuracy of the diagnosis code and action of inpatient obstetrics cases at Waras Wiris Boyolali Hospital. *Infokes: Scientific Journal of Medical Records and Health Informatics*, *14*(1), 14–21. https://doi.org/10.47701/infokes.v14i1.3773