

Factors Associated with the Return of iDRG Claim Files for BPJS Patients

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A B S T R A C T

The return of iDRG (Indonesian Diagnosis Related Group) claim files for BPJS patients can affect the claim payment process and the financial condition of hospitals. Claim returns are generally caused by incomplete administrative documents, incomplete medical records, and inaccurate diagnosis or procedure coding. This study aimed to identify the factors associated with the return of iDRG claim files for BPJS patients at RSU Faga Husada, Baubau City, Southeast Sulawesi, Indonesia. A quantitative analytic method with a cross-sectional approach was used. The population consisted of 110 iDRG claim files for the October–December 2025 period, and the total sampling technique was applied so that all 110 files were included as the study sample. Data were collected through observation and documentation using a checklist instrument and were analyzed using the Chi-Square test. The results showed that most claim files had complete administration (86 files, 78.2%), complete medical records (100 files, 90.9%), and accurate coding (85 files, 77.3%). Of the 110 files, 55 (50.0%) were returned and 55 (50.0%) were not returned. The Chi-Square test showed significant associations between administrative factors ($p = 0.000$), medical record completeness ($p = 0.001$), and coding accuracy ($p = 0.000$) with the return of iDRG claims, with coding accuracy showing the strongest association. It is concluded that administrative factors, medical record completeness, and coding accuracy are significantly associated with the return of iDRG claim files for BPJS patients, and hospitals need to strengthen internal verification and coder competency to reduce claim returns.

INTRODUCTION

Hospitals are health care institutions that provide comprehensive personal health services, including outpatient, inpatient, and emergency care. BPJS Kesehatan, established to organize the National Health Insurance (JKN) program, collaborates with health facilities through the INA-CBG payment system to ensure equitable access to services. The Ministry of Health, together with BPJS Kesehatan, has set a policy to transition to the Indonesian Diagnosis Related Group (iDRG) system, which was planned to take effect on 1 October 2025 (Azzahra, 2025).

The iDRG is a health care financing classification system that groups patients based on similarities in diagnosis, medical procedures, severity level, and resource utilization during treatment, and it serves as the basis for determining hospital payment rates under the JKN program. The implementation of iDRG is intended to create a more standardized, efficient, and transparent payment system while encouraging cost control, improved service quality, and rational use of health care resources through accurate documentation and coding (Hutabarat *et al.*, 2025).

As a health care institution providing comprehensive personal health services, a hospital is required to organize outpatient, inpatient, and emergency services supported by adequate medical, nursing, and administrative resources, including medical record management (Peraturan Menteri Kesehatan Republik Indonesia Nomor 3 Tahun 2020). Within the JKN scheme, the accuracy of medical record documentation and claim administration submitted by the hospital directly determines whether the claim proposed to BPJS Kesehatan can be verified and paid without being returned.

The return of a claim file occurs when a verifier rejects a claim because it does not meet administrative or clinical requirements. The main causes generally include inaccurate coding of diagnoses and procedures, inconsistency between the diagnosis and supporting examination results, incomplete medical records, and differing interpretations between the attending physician and the verifier. Because the iDRG system determines tariffs based on diagnosis, procedure, and severity level,

documentation and coding errors can change the tariff group and cause claims to be returned, which in turn delays payment and affects hospital finances (Tuzzahra *et al.*, 2024).

Previous studies have shown that claim returns in DRG-based payment systems are influenced by inaccurate diagnosis and procedure coding, inconsistency between diagnosis and supporting examinations, incomplete medical record documentation, administrative errors, and limited understanding of coding guidelines (Tuzzahra *et al.*, 2024). Similar findings were reported for BPJS claims in Indonesia, where administrative non-compliance and coding inaccuracy were significant contributors to claim rejection (Rizki *et al.*, 2025). However, the factor most strongly associated with the return of iDRG claims specifically had not yet been examined at RSU Faga Husada, Baubau City.

A study conducted at RSUD Majenang similarly found that claim returns in the INA-CBG and iDRG payment process were largely driven by coding errors, incomplete supporting documents, and a mismatch between the coded diagnosis and the physician's clinical judgment, underlining that coding-related problems are a recurring issue across different hospitals and payment schemes (Zahra *et al.*, 2024). These findings suggest that the pattern of claim returns is not unique to one institution, but the relative contribution of administrative, medical record, and coding factors may differ depending on each hospital's internal claim management process.

Based on preliminary observation, the study hospital returns approximately 10–20 BPJS claim files each month, a condition considered problematic because it delays payment, increases workload, and affects hospital finances. The causes identified included incomplete files (medical resumes and administrative documents), diagnosis inconsistency, and coding errors in ICD-10 and ICD-9-CM that affect the iDRG tariff. Therefore, this study aimed to analyze the factors associated with the return of iDRG claim files for BPJS patients, namely administrative factors, medical record completeness, and coding accuracy. The findings of this study are expected to serve as an evaluation tool for the hospital's medical record and claims management unit in reducing the number of returned iDRG claim files, and as a reference for further research on iDRG claim management in other hospitals.

METHODOLOGY

This study used a quantitative analytic method with a cross-sectional approach, in which the independent variables (administrative factors, medical record completeness, and coding accuracy) and the dependent variable (return of iDRG claim files) were measured at the same point in time. The study was conducted at RSU Faga Husada, Baubau City, Southeast Sulawesi, from January to June 2026. The population consisted of all 110 iDRG claim files for BPJS patients submitted by the hospital during the October–December 2025 period. The total sampling technique was used, in which the entire population is used as the sample (Sugiyono, 2013). So that all 110 claim files were included in this study.

Data were collected through observation and documentation, using a checklist instrument developed based on the operational definition of each variable: completeness of the Certificate of Participant Eligibility (SEP), patient identity, and claim forms for the administrative variable; completeness of the medical resume, supporting examination results, the attending physician's signature, and the primary and secondary diagnoses for the medical record variable; and the accuracy of ICD-10 and ICD-9-CM codes for the coding variable. Data were analyzed descriptively to determine the frequency distribution of each variable, and analytically using the Chi-Square test at a significance level of 0.05 to examine the association between each independent variable and the return of iDRG claim files.

RESULTS & DISCUSSION

RSU Faga Husada is a general hospital located on Jl. Betoambari No. 182, Katobengke, Baubau City, Southeast Sulawesi. Originally established as a specialist clinic in 2007, the facility was developed into a Class D general hospital, with construction beginning in 2013 and operations starting with an initial capacity of 30 beds. The hospital's medical record unit, which manages the administration, documentation, and coding of BPJS claims, is staffed by three medical record personnel.

Of the 110 iDRG claim files for BPJS patients analyzed for the October–December 2025 period, 55 files (50.0%) were returned by the BPJS Kesehatan verifier and 55 files (50.0%) were not returned. Based on the administrative factor, 86 files (78.2%) had complete administration and 24 files (21.8%) were incomplete. For medical record completeness, 100 files (90.9%) were complete and 10 files (9.1%) were incomplete. For coding accuracy, 85 files (77.3%) were coded correctly and 25 files (22.7%) were coded incorrectly, as summarized in Table 2.

Table 1. Distribution of Administrative Completeness, Medical Record Completeness, Coding Accuracy, and Claim Return Status of iDRG Claim Files (n = 110)

Variable	Category	n	%
Administrative Factor	Incomplete	24	21.8
	Complete	86	78.2
Medical Record Completeness	Incomplete	10	9.1
	Complete	100	90.9
Coding Accuracy	Inaccurate	25	22.7
	Accurate	85	77.3
Claim Return Status	Not returned	55	50.0
	Returned	55	50.0

Source: Primary data, 2026.

The results of the Chi-Square analysis of the association between each factor and claim return are presented in Table 3.

Table 2. Distribution and Chi-Square Test Results of Factors Associated with the Return of iDRG Claim Files

Variable	Category	Not Returned n (%)	Returned n (%)	Total (n)	χ^2	p-value
Administration	Incomplete	0 (0.0)	24 (100.0)	24	30.698	0.000
	Complete	55 (64.0)	31 (36.0)	86		
Medical Record	Incomplete	0 (0.0)	10 (100.0)	10	11.000	0.001
	Complete	55 (55.0)	45 (45.0)	100		
Coding Accuracy	Inaccurate	0 (0.0)	25 (100.0)	25	32.353	0.000
	Accurate	55 (64.7)	30 (35.3)	85		

Source: Primary data, 2026.

All 24 files with incomplete administration (100.0%) were returned, while among the 86 files with complete administration, 31 (36.0%) were still returned. The Chi-Square test showed a significant association between administrative factors and claim return ($\chi^2 = 30.698$, $p = 0.000$).

All 10 files with incomplete medical records (100.0%) were returned, whereas among the 100 files with complete medical records, 45 (45.0%) were returned. The association between medical record completeness and claim return was statistically significant ($\chi^2 = 11.000$, $p = 0.001$).

All 25 files with inaccurate coding (100.0%) were returned, while among the 85 files with accurate coding, 30 (35.3%) were returned. Coding accuracy showed the strongest association with claim return among the three variables ($\chi^2 = 32.353$, $p = 0.000$).

Administrative verification is the first stage of claim review before clinical verification. Documents such as the Certificate of Participant Eligibility, correct patient identity, complete claim forms, and consistency between the physical file and the information system must be fulfilled before a claim can proceed to clinical review; any deficiency causes an immediate return, which explains why all administratively incomplete files in this study were returned. This finding is consistent with previous research showing that administrative errors and non-compliance with claim procedures contribute significantly to claim rejection in iDRG-based payment systems (Rizki *et al.*, 2025), and that administrative aspects are one of three dominant factors in claim returns, alongside medical and coding aspects (Haq & Werdani, 2025). The remaining 21.8% of files with incomplete administration suggest that internal quality-control mechanisms before claim submission are not yet fully optimal, possibly due to the limited number of medical record staff, the absence of a structured internal verification system, high claim volume processed within a short period, and incomplete synchronization between the hospital information system and the E-Klaim/iDRG application.

Medical records form the core clinical documentation used for iDRG grouping. Incompleteness in the medical resume, primary and secondary diagnoses, supporting examination results, or the attending physician's signature prevents accurate grouping, so all files with incomplete medical records in this study were returned. This finding aligns with previous research indicating a significant relationship between the completeness of the medical resume and the timeliness of BPJS claim submission (Zein & Painan 2019). However, 45.0% of files with complete medical records were still returned, indicating that formal completeness alone does not guarantee claim acceptance; the accuracy and clinical consistency of the documented content, particularly regarding coding and consistency with supporting examinations, remain equally important. Consistent monitoring of medical record quality, for example through a digital tracking system that flags incomplete documents before submission, has

been shown to help hospitals detect deficiencies earlier and reduce the risk of claim return (Ismail *et al.*, 2026).

The iDRG system relies on the Indonesian Coding Standard (Kementerian Kesehatan Republik Indonesia, 2025a), referring to ICD-10-IM for diagnoses and ICD-9-CM-IM for procedures, to form a seven-digit code consisting of the Major Diagnostic Category, Treatment Partition, Disease Cluster, Patient Type Designation, and Complexity Level. Errors in determining the primary diagnosis, use of non-specific codes, or inconsistency between diagnosis and procedure can alter the grouping result and lead to claim return, consistent with this study's finding that coding accuracy had the strongest statistical association with claim return among the three factors examined. This supports previous findings that coding inaccuracy is a major cause of claim rejection in iDRG-based systems (Alya Anisa, 2024). Nevertheless, 35.3% of accurately coded files were still returned, indicating that coding correctness alone does not guarantee claim acceptance; consistency with supporting documents and compliance with claim submission regulations also play a role.

Overall, all three factors examined, namely administrative completeness, medical record completeness, and coding accuracy, were significantly associated with the return of iDRG claim files. Coding accuracy showed the strongest association ($\chi^2 = 32.353$), followed by administrative factors ($\chi^2 = 30.698$) and medical record completeness ($\chi^2 = 11.000$). This finding underlines the importance of strengthening coder competency and administrative quality control in an integrated claim management system, in line with the Ministry of Health's circular letter on iDRG implementation within the National Health Insurance program (Kementerian Kesehatan Republik Indonesia, 2025). These results reinforce that claim management cannot rely on a single control point; administrative screening, clinical documentation review, and coding verification need to function as a continuous chain, since a weakness at any single point is sufficient to cause a claim to be returned.

CONCLUSION

Based on the results and discussion, it can be concluded that administrative factors ($p = 0.000$; $\chi^2 = 30.698$), medical record completeness ($p = 0.001$; $\chi^2 = 11.000$), and coding accuracy ($p = 0.000$; $\chi^2 = 32.353$) each had a significant association with the return of iDRG claim files for BPJS patients. Coding accuracy showed the strongest association among the three factors, followed by administrative completeness and medical record completeness, indicating that claim management quality in the iDRG system depends heavily on coder competency together with disciplined administrative and clinical documentation practices. This study was limited to a single hospital and a three-month observation period, so the findings may not be generalizable to other hospitals implementing iDRG; future research covering multiple hospitals and a longer observation period is recommended to obtain a more comprehensive picture of the factors influencing iDRG claim returns.

Based on these conclusions, the hospital is advised to strengthen administrative verification before a claim file is submitted to BPJS Kesehatan, for instance through a pre-submission checklist covering the Certificate of Participant Eligibility, patient identity, and claim forms. Medical record staff and attending physicians are encouraged to complete the medical resume, primary and secondary diagnoses, supporting examination results, and required signatures in a timely and thorough manner. Coding staff are advised to regularly update their competency in applying ICD-10 and ICD-9-CM through training, periodic coding audits, and closer coordination with attending physicians, given that coding accuracy showed the strongest association with claim return in this study.

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