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ANALYSIS OF PENDING BPJS CLAIMS ISSUES IN THE CASEMIX UNIT OF RS ISLAM MASYITHOH BANGIL 2025

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Abstract
This study analyzes pending claims within the INA-CBG–based reimbursement process at the Casemix Unit of RS Islam Masyithoh Bangil in 2025. Under Indonesia's National Health Insurance (JKN), claim submission functions as a critical interface between clinical services and financing governance; disruptions in this process may affect both operational workflows and hospital cash flow. This research employed a descriptive case study design using semi-structured interviews, non-participant observation, and document review. To strengthen the process-based analysis, the study incorporated descriptive quantitative tabulation of monthly verification documents from January–November 2025 at the claim level (unique SEP), covering claim status, service type, pending categories, and submitted value. The dataset recorded 5,272 claims, of which 2,417 were pending (45.8%), with a cumulative pending submission value of IDR 8,427,504,800 and marked month-to-month fluctuations. The composition of pending categories shifted across months, predominantly involving coding rules and service standards, while administrative completeness remained consistently present at a smaller proportion. These findings indicate that pending claims represent a recurrent process output arising from interdependent documentation practices, coding accuracy, and cross-unit coordination within the INA-CBG framework. The study concludes that strengthening internal verification, standardizing documentation and classification, and establishing routine monitoring indicators are essential to improve claim efficiency and organizational sustainability.

INTRODUCTION

The implementation of Indonesia's National Health Insurance program (Jaminan Kesehatan Nasional/JKN) through BPJS Kesehatan constitutes a public policy instrument designed to secure equitable and sustainable access to health services. Within the JKN framework, hospitals are required not only to meet clinical service standards but also to comply with the prescribed financing mechanisms. In this context, *BPJS Kesehatan* claims function as a critical nexus linking the delivery of medical care to the reimbursement process. The smooth processing of claims directly affects hospital cash-flow stability and service continuity; therefore, claim-related problems should not be viewed merely as administrative issues, but also as matters of governance in service delivery and health financing (Peraturan Menteri Kesehatan Republik Indonesia Nomor 27 Tahun 2014 tentang Petunjuk Teknis Sistem Indonesian Case Based Groups (INA-CBGs), 2014).

Since the introduction of the Indonesian Case-Based Groups (INA-CBGs) payment system, BPJS Kesehatan claims have operated within a more complex structure because

they require the integration of clinical services, medical documentation, diagnostic and procedural coding, and claim verification. INA-CBGs assume that all clinical processes provided to patients can be accurately translated into properly recorded medical information, then converted into codes and corresponding payment packages in accordance with applicable provisions (Peraturan Menteri Kesehatan Republik Indonesia Nomor 27 Tahun 2014 tentang Petunjuk Teknis Sistem Indonesian Case Based Groups (INA-CBGs), 2014). In practice, this integration is strongly influenced by the quality of recordkeeping and the availability of clinical documents. The literature on electronic medical record adoption indicates that barriers related to documentation, consistency of data entry, and organizational factors may affect the quality of clinical data that subsequently underpins administrative processes (Kruse et al., 2016). Consequently, even minor mismatches across clinical data, documentation, and coding may propagate into problems during claim verification.

One prominent manifestation of problems in the claim process is the emergence of pending claims. Pending status is generally understood as a condition in which a claim cannot yet be declared eligible for payment at the verification stage due to missing items, inconsistencies, or the need for specific clarification. Research on the approval of inpatient BPJS claims shows that document completeness and the alignment of clinical and administrative information are key determinants of whether a claim is accepted or deferred (Ariyanti & Gifari, 2019). Meanwhile, studies on delays in claim submission to verifiers emphasize that claim-related problems may originate from internal hospital workflow dynamics, including the orderliness of administrative pathways and the readiness of supporting documents accompanying the claim (Nuraini & Lestari, 2021). These findings suggest that pending claims are not always the result of a single error at one stage; rather, they may be produced by a sequence of interdependent processes.

At the organizational level, pending claims have implications beyond delayed reimbursement. Deferred claims may reflect challenges in cross-unit coordination and in consistently translating medical services into INA-CBG payment packages. In addition, packaged-based financing dynamics are also connected to issues of tariff adequacy and its comparison with hospital service tariffs, underscoring that claims do not stand alone but are embedded within broader financing and operational efficiency contexts (Fathah & Safitri, 2024). Accordingly, pending claims should be understood as a processual phenomenon that requires a comprehensive reading of workflows, documentation practices, and verification mechanisms.

In hospital claim governance, the *casemix* unit occupies a strategic position as a bridge between clinical services and the INA-CBG financing system. This unit is responsible for ensuring that claim data and documents, such as the Participant Eligibility Letter (Surat Eligibilitas Peserta/SEP), medical summaries (*resume medis*), procedure notes, supporting examination results, and cost details are complete, consistent, and verifiable. However, because it operates at a coordination node across professions and units, the *casemix* unit is also vulnerable to becoming an accumulation point for problems, particularly when differences arise in interpreting document completeness, when clinical documentation does not match the procedures performed, or when workflows across units are not synchronized. This situation aligns with evidence that the quality and consistency of documentation are key determinants in claim approval or deferral.

Against this backdrop, the present study is situated at RS Islam Masyithoh Bangil and focuses on BPJS Kesehatan claim submissions processed by the *casemix* unit in 2025.

As a participating JKN hospital, RS Islam Masyithoh Bangil implements a claim pathway that involves layered administrative and clinical documentation. Variations in document completeness and consistency, along with coordination dynamics within *casemix* workflows, may influence claim outcomes, including the occurrence of pending claims that require corrective actions or clarification.

Although the issue of pending BPJS Kesehatan claims has been widely discussed, many studies tend to concentrate on identifying general causal factors or to portray administrative and coding aspects in isolation. There remains limited research that traces pending claims as an output of the interaction between *casemix* workflow dynamics and claim-document characteristics within a specific hospital context. This study therefore aims to address that gap by positioning pending claims not merely as delayed payments, but as a processual phenomenon involving documentation practices, internal coordination, and the translation of clinical services into the JKN financing system.

Based on internal claim verification documents at RS Islam Masyithoh Bangil for the period January–November 2025, the monthly verification dataset recorded 5,272 claims, of which 2,417 were pending (45.8%). The pending percentage varied across months, ranging from 38.2% (March) to 98.2% (June), while the cumulative value of pending claim submissions reached Rp 8,427,504,800. This pattern indicates that pending claims are not incidental; rather, they recur and fluctuate in line with process and verification dynamics. They should therefore be read as outputs of processes involving documentation, coding, and cross-unit coordination.

In line with this focus, this study aims to analyze pending BPJS Kesehatan claims in the *casemix* unit of RS Islam Masyithoh Bangil in 2025 within the INA-CBG payment framework. More specifically, the study examines: (1) the BPJS Kesehatan claim submission process in the *casemix* unit; (2) the conditions underlying the occurrence of pending claims, particularly those related to workflow pathways and the completeness and consistency of claim documents; and (3) the relationship between claim-document characteristics and *casemix* workflow dynamics in the emergence of pending claim status.

RESEARCH METHOD

This study employed a descriptive qualitative approach with a case-study design, aiming to develop an in-depth understanding of BPJS Kesehatan pending claims as part of the INA-CBG–based claims management process in the *Casemix* Unit of RS Islam Masyithoh Bangil in 2025. A qualitative approach was selected because the study was not intended to measure quantitative relationships, but rather to trace and explain workflows, documentation practices, and coordination dynamics that underlie the occurrence of pending claims within a hospital organizational context (Dong & Wu, 2025).

The study was conducted at RS Islam Masyithoh Bangil, Pasuruan Regency, East Java, with data collection carried out during September–October 2025. Informants were selected purposively based on their direct involvement in BPJS Kesehatan claim submission and management processes, while also considering the adequacy of information obtained. Informants included *casemix* unit staff, medical records officers or claim administration personnel, medical professionals involved in service documentation and the preparation of medical summaries, as well as managerial personnel with oversight functions related to claim management. The inclusion criteria comprised a minimum of one year of work experience in claim-related functions and an adequate understanding of BPJS Kesehatan claim workflows and documentation.

Data were collected using three primary techniques: semi-structured *in-depth interviews*, non-participant observation, and document review. Interviews were conducted to elicit informants' experiences, understandings, and practices regarding the claim submission process, the handling of pending claims, and the role of the *casemix* unit in cross-unit coordination (Du et al., 2025). The interview instrument consisted of an open-ended question guide developed in accordance with the study focus. Non-participant observation was undertaken to directly examine the claims management workflow within the *casemix* unit, including internal verification, coding, and follow-up procedures for pending claims. Document review involved examining documents related to BPJS Kesehatan claim management, such as claim files (with patient identifiers removed), verification records, internal *casemix* unit guidelines, and other relevant administrative documents. Instruments used for observation and documentation included an observation guide and a document checklist to ensure consistency in data tracing.

In addition to qualitative data, this study used a review of BPJS Kesehatan claim verification documents for the period January–November 2025 as supporting quantitative data. The data were extracted at the claim level (based on unique NOSEP) to avoid double counting, with variables including claim status, type of service, category of pending type, and submitted claim value. Quantitative analysis was conducted descriptively through frequency tabulation, percentages, and monthly value aggregation to depict trends in pending claims and their composition. Quantitative findings were then integrated with interview, observation, and document review results to strengthen the interpretation of processes and coordination dynamics.

The collected data were analyzed thematically through organizing, repeated reading, coding, and grouping the data into categories and themes that reflect patterns and dynamics of BPJS Kesehatan pending claims. Analysis was conducted iteratively from the initial stages of data collection through to the formulation of conclusions by comparing findings across data sources. Data trustworthiness was maintained through source and method triangulation, as well as clarification with informants when discrepancies emerged. All research procedures were carried out with due attention to research ethics, including obtaining permission from the hospital and safeguarding data confidentiality, particularly with respect to patient-related information.

RESEARCH RESULTS AND DISCUSSION

Structure and Workflow of *BPJS* Claim Submission in the *Casemix* Unit

The *BPJS Kesehatan* claim system based on *Indonesian Case Based Groups (INA-CBGs)* is a prospective payment mechanism that groups health services according to documented diagnoses and medical procedures. Under this system, claims depend not only on the services delivered, but also on the congruence of clinical and administrative documentation that forms the basis for tariff grouping (Fu et al., 2025).

The claim workflow begins with the delivery of medical services to patients. Each medical procedure, diagnosis, and supporting examination must be comprehensively documented in the *rekam medis* (medical record). The *resume medis* (medical discharge summary) serves as a key document summarizing the entire episode of care and providing the primary basis for the coding process. The health information management literature emphasizes that the quality of clinical documentation is pivotal for the accuracy of subsequent administrative processes, including health insurance claims.

After the patient is discharged, the service file is submitted to the medical records unit for review of administrative and clinical completeness. At this stage, staff verify patient identity consistency, the completeness of required forms, supporting examination results, and the presence of signatures and professional validation by medical personnel. This stage functions as an initial control point before the file proceeds to the *casemix* unit (Aragón et al., 2022).

The *casemix* unit then codes diagnoses and procedures in accordance with the applicable classification system, which is subsequently processed through *INA-CBGs* software to determine the tariff group. Coding accuracy is critical, as minor errors in diagnostic or procedural codes may shift the financing group or trigger requests for clarification from *BPJS* verifiers. Studies on *revenue cycle management* indicate that coding errors are among the primary sources of delayed or rejected claims in *diagnosis-related group (DRG)*–based payment systems (Chandawarkar et al., 2024).

Before submission to *BPJS Kesehatan*, the *casemix* unit conducts an internal verification to ensure consistency across clinical documents, coding outputs, and administrative data such as the *Surat Eligibilitas Peserta (SEP)*. This internal verification aims to minimize the risk of corrections or pending status during external verification. Once deemed complete, claims are submitted electronically for verification by *BPJS Kesehatan*.

The findings indicate several internal control points: (i) review at the medical records stage, (ii) the coding stage, and (iii) the final verification stage prior to submission. These three checkpoints function as *quality control* mechanisms to ensure data integrity and document conformity. In *DRG*-based financing systems, robust internal controls have been shown to reduce the incidence of problematic claims (Fulla et al., 2025).

Despite these control mechanisms, several vulnerable points were still identified, including discrepancies between diagnoses and supporting examination results, suboptimal completeness of the *resume medis*, and differing interpretations of specific codes. The complexity of the *INA-CBGs* system means that any inconsistency may prompt clarification requests from *BPJS* verifiers. While case-group payment systems are designed to promote efficiency, they also require a high degree of documentation precision.

Overall, the structure and workflow of claim submission in the *casemix* unit demonstrate that a claim is the product of a sequence of interconnected stages. Pending status does not arise suddenly at the final stage; rather, it is a consequence of the interaction among documentation quality, coding accuracy, and the effectiveness of internal controls.

Administrative and Clinical Factors Contributing to Pending Claims

Pending-status claims in the *BPJS Kesehatan* system within the *casemix* unit indicate the presence of discrepancies or deficiencies identified during the verification stage. The findings show that administrative and clinical factors do not operate in isolation; rather, they interact within a single chain of processes under the *INA-CBGs*–based claim system. Together, these factors form recurring patterns in the dynamics of claim submission and subsequent clarification (Wu et al., 2022).

From an administrative perspective, pending claims are frequently associated with inconsistencies in patient identity data, incomplete *Surat Eligibilitas Peserta (SEP)* documentation, and the absence of required supporting documents. External verification requires consistency between data recorded in the system and the accompanying physical or electronic documents. Variations in identity spelling, discrepancies in service dates, or missing administrative attachments commonly trigger requests for clarification from verifiers.

Referral administration also emerged as a variable influencing claim smoothness. Misalignment in referral pathways or referral documents that are not properly recorded has implications for eligibility assessment and reimbursement appropriateness. In case-based health financing systems, administrative verification functions as an initial filter before clinical evaluation proceeds. Nuraini and Lestari observed that delays or disorder in internal hospital administration contribute to deferred claims during the verification phase (Chang et al., 2025).

Beyond administrative issues, this study found that clinical aspects and the quality of medical documentation occupy a central position in the dynamics of pending claims. A *resume medis* that fails to provide a complete account of the clinical course, medical interventions, and supporting examination results increases the likelihood of additional clarification during verification (Feng et al., 2024). Consistency among the principal diagnosis, secondary diagnoses, and recorded procedures is a key element in the *INA-CBGs* grouping process.

The accuracy of diagnostic and procedural coding constitutes the subsequent stage that determines *INA-CBGs* grouping outcomes. Research on the accuracy of *ICD* codes indicates that coding errors or imprecision can affect financing classification and increase the risk of problematic claims (O'Malley et al., 2005). *DRG*-based systems depend on precise alignment between diagnoses, procedures, and clinical evidence. When that alignment is not consistently reflected in documentation, a claim may be designated as pending because additional verification is required.

These findings suggest that pending claims are not simply the result of administrative deficiencies or clinical errors considered separately. The interaction between administrative completeness, the quality of medical documentation, and coding accuracy forms a mutually reinforcing chain within the *INA-CBGs* claim system.

Table 1.
Kategori Faktor Penyebab Klaim Pending

No.	Factor Category	Key Indicators (Findings)	Implications for the Claim Process
1	Administrative	Identity data inconsistencies	Requires clarification
2	Administrative	Incomplete SEP documentation	Claim is deferred
3	Clinical	Incomplete resume medis	Documentation revision required
4	Clinical	Diagnosis–procedure mismatch	INA-CBGs re-grouping

Source: Processed by Author, 2026.

The table demonstrates that administrative and clinical factors have distinct characteristics, yet both operate within an interconnected claim-processing chain. Administrative factors typically emerge at the early to mid stages, particularly during file completeness checks before and after coding. Clinical factors, in contrast, are more often identified during substantive evaluation of medical services as reflected in the *resume medis* and supporting clinical documents.

Within the administrative category, the findings indicate that identity inconsistencies, missing attachments, and data discrepancies across documents generate additional clarification requirements. This clarification process prolongs the claim cycle

because it necessitates document retracing and internal coordination before resubmission can occur. This pattern underscores that administrative precision functions as a formal prerequisite within a document-based verification system (Zhang et al., 2025).

Within the clinical category, the dynamics are more closely associated with the quality and consistency of medical documentation. A *resume medis* that does not comprehensively portray the patient's clinical trajectory or a mismatch between the recorded diagnosis and documented procedures raises questions during the evaluation of *INA-CBGs* grouping. This condition does not necessarily indicate deficiencies in service delivery; rather, it reflects written representations that do not sufficiently support the structure of case-based financing classification.

The interaction between these two categories indicates that pending claims cannot always be clearly separated into purely administrative or purely clinical problems. In several cases, administrative deficiencies are linked to clinical content that is not adequately documented (Xiong et al., 2025). This finding highlights that documentation quality and administrative orderliness constitute a single, integrated set of determinants shaping claim verification outcomes.

Because the *INA-CBGs* system relies on the relationship between diagnoses, procedures, and documentary evidence, data integrity becomes a central element (Li et al., 2025). When even minor discrepancies occur in recording practices or document completeness, the verification process tends to assign pending status as a control mechanism. This pattern supports the interpretation of pending claims as part of a quality-control function within health financing governance.

Quantitative Trends in Pending Claims, January–November 2025

This subsection presents a quantitative overview of pending claims based on monthly verification documents for the January–November 2025 period. Tabulation was conducted at the *claim-level* to maintain counting consistency and to avoid double counting in months where repeated entries occurred under the same unique *SEP* number. The summarized variables include the total number of claims, the proportion of pending claims, the total submitted value of pending claims, and the monthly composition of pending categories.

Cumulatively, the January–November 2025 period recorded 5,272 claims in the monthly verification dataset, of which 2,417 claims were classified as pending (45.8%). The total submitted value of pending claims during this period reached Rp 8,427,504,800. This aggregate figure indicates that pending claims recurred over an extended period, with varying intensity across months.

The variation in pending percentages was substantial. In months with high claim volumes, the pending proportion fell within a moderate range—for example, March at 38.2% (574 of 1,504 claims), April at 40.3% (629 of 1,559 claims), and May at 42.6% (691 of 1,621 claims). During the same period, the dataset also included non-pending statuses such as *pembahasan* and *tidak layak*, indicating that the pending proportion reflects the position of pending status within the broader monthly verification outcomes.

By contrast, in months with relatively small claim volumes, the pending proportion tended to be higher. January showed 96.0% (120 of 125 claims) and February 91.7% (77 of 84 claims), demonstrating the dominance of pending status in those monthly datasets. A similar pattern appeared in June at 98.2% (54 of 55 claims) and October at 96.6% (28 of 29 claims). From a reporting perspective, these patterns should be interpreted as characteristics of verification outputs in specific months—particularly when the available dataset for those months predominantly captured claims categorized as pending or *tidak layak.*

In terms of monetary exposure, the largest totals of pending claim submissions occurred during high-volume months, namely May (Rp 2,275,498,700), April (Rp 1,980,967,600), and March (Rp 1,735,887,900). In other months, pending values remained substantively visible despite smaller claim counts, such as July (Rp 524,108,000) and August (Rp 458,214,700). This pattern underscores the importance of interpreting pending status not only through percentages, but also through the value exposure held back during follow-up processes.

The monthly composition of pending categories also fluctuated. In some months, pending status was more frequently associated with service standards, such as January (50.0%) and September (54.3%). In other months, pending status was dominated by coding rules, including February (55.8%), June (55.6%), July (60.2%), October (53.6%), and November (58.8%). Meanwhile, administrative completeness tended to appear consistently across months, though generally at a smaller proportion compared to the two dominant categories, particularly during January–May and August.

Table 2.
Monthly Trend of Pending Claims (January–November 2025)

No.	Month	Total Claims	Pending (n)	% Pending	Total Pending Claim Value
1	Januari	125	120	96,0%	Rp 365.087.900
2	Februari	84	77	91,7%	Rp 337.186.400
3	Maret	1.504	574	38,2%	Rp 1.735.887.900
4	April	1.559	629	40,3%	Rp 1.980.967.600
5	Mei	1.621	691	42,6%	Rp 2.275.498.700
6	Juni	55	54	98,2%	Rp 246.374.900
7	Juli	108	98	90,7%	Rp 524.108.000
8	Agustus	93	83	89,2%	Rp 458.214.700
9	September	52	46	88,5%	Rp 206.114.100
10	Oktober	29	28	96,6%	Rp 191.204.600
11	November	42	17	40,5%	Rp 106.860.000

Source: Processed by Author, 2026.

Table 3.
Composition of Pending Types per Month (January–November 2025)

No.	Month	Coding Rules	Service Standards	Administrative Completeness	Other (lainnya)
1	January	36 (30,0%)	60 (50,0%)	24 (20,0%)	0 (0,0%)
2	February	43 (55,8%)	25 (32,5%)	9 (11,7%)	0 (0,0%)
3	March	207 (36,1%)	262 (45,6%)	105 (18,3%)	0 (0,0%)
4	April	240 (38,2%)	282 (44,8%)	107 (17,0%)	0 (0,0%)
5	May	277 (40,1%)	305 (44,1%)	109 (15,8%)	0 (0,0%)
6	June	30 (55,6%)	22 (40,7%)	2 (3,7%)	0 (0,0%)
7	July	59 (60,2%)	15 (15,3%)	17 (17,3%)	7 (7,1%)
8	August	33 (39,8%)	26 (31,3%)	17 (20,5%)	7 (8,4%)
9	September	17 (37,0%)	25 (54,3%)	4 (8,7%)	0 (0,0%)
10	October	15 (53,6%)	10 (35,7%)	1 (3,6%)	2 (7,1%)
11	November	10 (58,8%)	6 (35,3%)	1 (5,9%)	0 (0,0%)

Source: Processed by Author, 2026

Taken together, the two tables show that pending claims recurred throughout January–November 2025 with a fluctuating monthly pattern. In proportional terms, the pending percentage ranged widely, from 38.2% in March to 98.2% in June. High-volume months (March–May) exhibited pending proportions in the 38.2%–42.6% range, while several low-volume months (e.g., June and October) recorded exceptionally high pending percentages. This indicates that the interpretation of pending status should consider the context of monthly verification outputs and the characteristics of the recorded dataset in each period, rather than treating the pattern as uniform throughout the year.

Beyond proportion, the value dimension provides a different perspective. The highest totals of pending claim submissions occurred in high-volume months—particularly May, April, and March—positioning pending claims as a substantial financial exposure in hospital claim management. In other months, although pending percentages were high, pending values were not necessarily the largest. This distinction reinforces the need to differentiate two readings of pending status: as *process burden* (counts and percentages) and as *value exposure* (the total submitted value held back), because each has different implications for the workload of the *casemix* unit and for operational stability.

Monthly shifts in pending-type composition further show that the dominant category was not constant. In some months, pending status was driven more by service standards, whereas in other months it was dominated by coding rules (Tian et al., 2025). Administrative completeness appeared consistently, but generally at smaller proportions than the two main categories. These shifts provide quantitative context for a more targeted interpretation of administrative and clinical factors, including how documentation practices, coding accuracy, and the readiness of supporting evidence interact within the verification process.

Coordination Dynamics and the Strategic Role of the *Casemix* Unit

The *casemix* unit occupies a central position in the governance of *BPJS Kesehatan* claims because it sits at the intersection between clinical service delivery and the *INA-CBGs* case-based financing system. Quantitative findings for January–November 2025 indicate that pending claims recurred throughout the period 2,417 of 5,272 claims (45.8%) with a cumulative pending submission value of Rp 8,427,504,800. The wide month-to-month variation in pending proportions and the magnitude of value exposure held back underscore that *casemix* coordination is not merely a technical issue, but an operational concern that must be interpreted alongside documentation practices, coding processes, and internal verification dynamics (Matthias & Kumpel, 2021).

The study shows that claim effectiveness is strongly shaped by the quality of cross-unit coordination. The end-to-end workflow file collection from service units, completeness checks by the medical records unit, followed by coding and internal verification by *casemix* staff requires continuous communication. During high-volume months such as March–May, the number of pending claims ranged from 574 to 691 per month, with pending values between Rp 1,735,887,900 and Rp 2,275,498,700. This pattern reflects heightened needs for file synchronization, clinical clarification, and confirmation of supporting data so that claims can be resubmitted accurately and in a timely manner.

Workload pressure and case complexity also influenced coordination dynamics. During periods of high patient volume, communication intensity and clarification needs increased, which in turn may affect the level of meticulousness in internal verification prior to submission. The health operations management literature notes that service systems involving multiple stages and actors require clearly defined coordination mechanisms to

maintain process stability. Without well-documented communication standards and procedures, the risk of information misalignment tends to increase.

The monthly composition of pending types indicates that coordination needs are not uniform over time. In certain months, pending status was dominated by service standards (e.g., January at 50.0% and September at 54.3%), meaning that clarification more often required strengthening clinical documentation, completing supporting examinations, and ensuring consistency in the clinical narrative. In other months, pending status was dominated by coding rules (e.g., February at 55.8%; June at 55.6%; July at 60.2%; October at 53.6%; and November at 58.8%), shifting coordination demands toward coding accuracy and the alignment of diagnoses and procedures with recorded clinical data.

Beyond its coordinating function, the *casemix* unit also operates as an internal quality-control mechanism. Pre-submission verification reflects a *quality assurance* function intended to ensure congruence among diagnoses, procedures, and supporting documents. In *DRG*-based payment systems, internal control functions play a key role in safeguarding grouping accuracy and minimizing problematic claims during external verification (Busse et al., 2013).

Coordination dynamics are also shaped by the context of monthly verification outputs. In several low-volume months, the pending percentage was extremely high for example, June at 98.2% and October at 96.6%. This pattern requires careful interpretation of workload and follow-up priorities, while also highlighting the importance of internal triage mechanisms to distinguish claims requiring administrative clarification, clinical clarification, or coding adjustments prior to resubmission.

To strengthen this strategic role, the findings indicate that the availability of *standard operating procedures*, clear task allocation, and the consistent use of document checklists contribute to maintaining claim quality particularly because administrative completeness continued to appear across months, even though its proportion was generally smaller than the two dominant categories (Levin et al., 2024). In this sense, the *casemix* unit functions not only as a processing hub, but also as a governance instrument that stabilizes the interface between clinical documentation and financing verification within the *INA-CBGs* system.

Follow-Up Mechanisms for Pending Claims and Organizational Implications

Pending claim status introduces additional stages into the claim management cycle in the *casemix* unit. After receiving verification results from *BPJS Kesehatan*, the *casemix* unit identifies the reasons for deferral, traces the required supporting documents, and determines the necessary corrections before the claim is resubmitted. During January–November 2025, the cumulative submitted value of pending claims reached Rp 8,427,504,800; therefore, follow-up mechanisms become decisive for maintaining claim-cycle continuity and financing stability.

On the administrative side, follow-up actions generally involve completing supporting documents, correcting identity data, or adjusting information that is not synchronized between physical documents and the electronic system. This process requires coordination with the medical records unit and service administration. On the clinical side, clarification may involve medical personnel to refine the recorded diagnoses, procedures, and supporting examination results that underpin coding, so that claim documents can adequately support the *INA-CBGs* grouping structure.

The composition of pending types indicates that the focus of follow-up can shift across months. When pending status is dominated by service standards, follow-up demands reinforcement of clinical evidence and completeness of supporting examinations. When

pending status is dominated by coding rules, follow-up places greater emphasis on coding consistency and the alignment of diagnoses and procedures with the clinical narrative. This pattern requires an internal triage mechanism so that claims requiring clinical clarification, administrative correction, or coding adjustment can be routed through the appropriate follow-up pathway.

Corrective work for pending claims has direct implications for claim-cycle duration and cash-flow stability. In months with large pending values, the accumulation of claims requiring clarification expands the value exposure held back during follow-up. Monitoring monthly pending values can therefore serve as an operational indicator to determine claim-resolution priorities, without compromising compliance with verification requirements (Perkins et al., 2024).

Follow-up mechanisms also function as an instrument for internal process evaluation. Recurrent pending cases with similar reasons can inform improvements to document checklists, strengthened communication with clinicians, and adjustments to coding procedures (Marano & Noussia, 2022). In this sense, follow-up should not be understood merely as a technical correction of deferred claims, but also as an organizational learning process grounded in operational experience.

The organizational implications of pending claims are reflected in the workload borne by the *casemix* unit and its supporting units. Monthly fluctuations in pending volumes require flexible task allocation, scheduling of clarification activities, and sufficient resources to maintain the accuracy of internal verification. Imbalanced workload management may extend claim resolution time, particularly when clarification requires cross-professional coordination and repeated document revisions.

Overall, this analysis indicates that follow-up mechanisms for pending claims are integral to *BPJS Kesehatan* claim governance. The integration of document standardization, orderly workflows, and systematic monitoring of pending indicators (counts, percentages, composition, and submitted values) provides a basis for strengthening hospital responsiveness to external verification dynamics within the *INA-CBGs*–based financing system.

Discussion

The interpretation of this study's findings becomes more robust when situated alongside the quantitative trends in claims for January–November 2025. Across this period, the monthly verification documents recorded 5,272 claims, of which 2,417 were classified as pending (45.8%), with a cumulative submitted pending value of Rp 8,427,504,800. These aggregate figures and the associated value exposure underscore that pending claims represent a recurrent phenomenon in *INA-CBGs*–based financing governance. They are therefore appropriately understood as process outputs shaped by clinical documentation, administrative completeness, coding accuracy, and verification mechanisms (Jedwab et al., 2022).

The month-to-month variation in pending percentages further indicates that the intensity of pending status was not uniform throughout the year. In high-volume months such as March–May, pending proportions ranged from 38.2% to 42.6%, while the submitted value of pending claims during the same period was the largest. Conversely, some months with relatively small claim volumes showed exceptionally high pending proportions, such as June (98.2%) and October (96.6%). This contrast suggests that pending status should be interpreted through two complementary lenses: *process burden* (counts

and percentages) and *value exposure* (submitted value). Each lens captures a different dimension of claim management and yields distinct operational implications.

The monthly composition of pending types also reveals shifts in dominance that offer cues regarding process vulnerabilities. In certain months, pending status was more strongly associated with service standards, whereas in other months it was dominated by coding rules. Administrative completeness appeared consistently, although typically at a smaller proportion. This compositional dynamic aligns with the qualitative findings that pending status may arise from misalignment between the clinical narrative, supporting evidence, and the representation of information within the coding system, as well as from inconsistencies across the administrative documents attached to claims.

Within the *INA-CBGs* framework, verification functions as a control mechanism that tests a hospital's internal consistency. Pending status may thus be understood as a corrective signal that prompts the organization to reassess the accuracy of documentation, the alignment between diagnoses and procedures, and the completeness of supporting evidence. In this sense, pending status does not merely represent delayed reimbursement; it also reflects the extent to which packaged payment systems require disciplined documentation and precise coding so that claims can be processed as accountable financing packages (Zalukhu & Permanasari, 2025).

These findings reinforce the *casemix* unit's position as a cross-unit and cross-professional coordination hub. When pending status is dominated by service standards, follow-up activities tend to require stronger clinical evidence, more complete supporting examinations, and greater consistency in the *resume medis*. When pending status is dominated by coding rules, follow-up efforts more often require coding adjustments and the alignment of diagnoses and procedures with the available documentation. This variability in follow-up needs supports the importance of an internal triage mechanism that differentiates pathways for administrative clarification, clinical clarification, and coding adjustment prior to resubmission (Mohammad et al., 2021).

From an organizational perspective, the large submitted pending values in certain months position pending management as both an operational and a financial issue. Strengthening internal verification prior to submission, standardizing document checklists, and routinely monitoring pending indicators can help reduce repeated deficiencies of the same type. At the same time, workload management for the *casemix* unit and supporting units becomes critical, because clarification processes increase coordination demands and time allocation particularly when pending claims accumulate during high-volume periods.

Overall, the analysis indicates that pending claims are produced through the interaction among the financing system, the quality of clinical information, and hospital organizational governance. The *INA-CBGs* structure demands data precision, while organizational dynamics determine how that precision is implemented in day-to-day practice. Understanding this relationship provides a comprehensive view of the role of pending claims within a case-based health service financing system.

CONCLUSION

Based on the findings of this study, the following conclusions are formulated to address the research questions and objectives concerning pending *BPJS Kesehatan* claims in the *Casemix* Unit of RS Islam Masyithoh Bangil in 2025.

1. The *BPJS Kesehatan* claim submission process in the *Casemix* Unit proceeds through a sequence of interdependent stages, beginning with clinical service documentation, followed by file collection and completeness verification,

diagnostic and procedural coding within the *INA-CBGs* framework, internal verification, and ultimately submission and external verification. In this chain, the *casemix* unit functions as a coordination hub because it integrates administrative and clinical elements so that claims can be assessed as verifiable financing packages.

2. The conditions underlying pending claims fall into three main domains: administrative completeness, compliance with service standards (particularly the availability of supporting clinical and diagnostic evidence), and adherence to coding rules. Trend data for January–November 2025 show that pending claims recurred in monthly verification documents—2,417 of 5,272 claims (45.8%)—with month-to-month fluctuations and a cumulative pending submission value of Rp 8,427,504,800. This pattern indicates that pending status is not an isolated incident, but is structurally related to documentation consistency and the adequacy of clinical representation within the coding process.
3. The relationship between claim-document characteristics and *casemix* workflow dynamics is reflected in the month-to-month variation in pending-type composition. In some months, pending status was dominated by service standards, whereas in other months it was dominated by coding rules; meanwhile, administrative completeness appeared consistently, although generally at a smaller proportion. These compositional shifts imply different follow-up pathways, meaning that the effectiveness of pending-claim management depends on internal verification mechanisms, the quality of cross-unit coordination, and the timely preparation of supporting evidence prior to resubmission.
4. Future development based on this study can focus on strengthening the standardization of document formats and the classification of pending reasons to improve consistency in monitoring across periods, as well as developing routine operational indicators (pending counts, percentages, composition, and values) as a basis for claim management. Subsequent studies may incorporate measurements of pending-claim resolution time, analyses by service unit or case type, and evaluations of how improvements in internal verification procedures affect changes in pending patterns and the value exposure held back during follow-up.

Overall, the findings point to further opportunities to enhance claim management through strengthening *standard operating procedures*, refining clinical and administrative documentation checklists, and leveraging more integrated health information systems to improve data consistency. Future research may also be directed toward quantitative analysis of claim-cycle duration and its impact on hospital cash flow, as well as comparative evaluations across hospitals implementing *INA-CBGs*–based claims to identify best practices in controlling pending claims.

REFERENCES

Aragón, M. J., Chalkley, M., & Kreif, N. (2022). The long-run effects of diagnosis related group payment on hospital lengths of stay in a publicly funded health care system: Evidence from 15 years of micro data. *Health Economics*, *31*(6), 956–972. https://doi.org/10.1002/hec.4479

Ariyanti, F., & Gifari, M. T. (2019). Analisis Persetujuan Klaim BPJS Kesehatan pada Pasien Rawat Inap. *Jurnal Ilmu Kesehatan Masyarakat*, *8*(04), 156–166. https://doi.org/10.33221/jikm.v8i04.415

Busse, R., Geissler, A., Aaviksoo, A., Cots, F., Häkkinen, U., Kobel, C., Mateus, C., Or, Z., O'Reilly, J., Serdén, L., Street, A., Tan, S. S., & Quentin, W. (2013). Diagnosis related groups in Europe: Moving towards transparency, efficiency, and quality in hospitals? *BMJ*, *346*, f3197. https://doi.org/10.1136/bmj.f3197

Chandawarkar, R., Nadkarni, P., Barmash, E., Thomas, S., Capek, A., Casey, K., & Carradero, F. (2024). Revenue Cycle Management: The Art and the Science. *Plastic and Reconstructive Surgery – Global Open*, *12*(7), e5756. https://doi.org/10.1097/GOX.0000000000005756

Chang, J., Chen, S., Li, A., Yang, X., Luo, H., Yilamu, M., Fu, B., Xu, N., Liu, J., & Tian, H. (2025). Facilitators and barriers to the implementation of DIP payment methodology reform in a public hospital in Guangzhou: A qualitative study based on the implementation of the meta-framework for research (CFIR) framework. *Frontiers in Public Health*, *13*, 1569855. https://doi.org/10.3389/fpubh.2025.1569855

Dong, X., & Wu, J. (2025). Does DRG-based payment lead to unintended effects on care quality? A case under global budget with price adjustment in China. *BMC Health Services Research*, *25*(1), 1448. https://doi.org/10.1186/s12913-025-13625-5

Du, L., Fang, S., & Zhang, Q. (2025). Trend analysis of medical expenses under DRG payment reform in China. *Scientific Reports*, *15*(1), 36961. https://doi.org/10.1038/s41598-025-20902-0

Fathah, R. N., & Safitri, T. A. (2024). Analisis Perbandingan Tarif Rumah Sakit dan Tarif INA-CBG pada Pelayanan Rawat Inap di RS PKU Muhammadiyah Yogyakarta. *EKOMA: Jurnal Ekonomi, Manajemen, Akuntansi*, *3*(3), 858–871. https://doi.org/10.56799/ekoma.v3i3.3126

Feng, X., Cheng, L., & Wei, H. (2024). Study on the cost-control effect of diagnosis-related groups based on meta-analysis. *Medicine*, *103*(37), e39421. https://doi.org/10.1097/MD.0000000000039421

Fu, Y., Gao, G., Xing, H., Dai, S., Cai, X., & Tian, J. (2025). Research on the Primary Factors Influencing the Quality of Clinical Coding Under DRG Payment Systems: A Survey Research. *Healthcare*, *13*(8). https://doi.org/10.3390/healthcare13080849

Fulla, R., Basinda, N., Tupa, T., Chilipweli, P., Kapesa, A., Konje, E. T., Morona, D., & Mshana, S. E. (2025). Patterns and Mitigation Strategies for Rejected Claims Among Health Facilities Providing Services for the National Health Insurance Fund in Mwanza, Tanzania. *Healthcare*, *13*(3). https://doi.org/10.3390/healthcare13030320

Jedwab, R. M., Franco, M., Owen, D., Ingram, A., Redley, B., & Dobroff, N. (2022). Improving the Quality of Electronic Medical Record Documentation: Development of a Compliance and Quality Program. *Applied Clinical Informatics*, *13*(4), 836–844. https://doi.org/10.1055/s-0042-1756369

Kruse, C. S., Kristof, C., Jones, B., Mitchell, E., & Martinez, A. (2016). Barriers to Electronic Health Record Adoption: A Systematic Literature Review. *Journal of Medical Systems*, *40*(12), 252. https://doi.org/10.1007/s10916-016-0628-9

Levin, J. S., Crespin, D. J., Kim, J., Reid, R. O., Whaley, C. M., & Dworsky, M. (2024). *Methodologies to Measure Upcoding in Provider Settings: A Scoping Review*. https://www.rand.org/pubs/research_reports/RRA2683-1.html

Li, J., Peng, M., Deng, S., Wu, J., & Zhou, W. (2025). The impact of diagnosis-related groups on medical costs, service efficiency, and healthcare quality in Meishan,

China: An interrupted time series analysis. *PLOS ONE*, *20*(5), e0325041. https://doi.org/10.1371/journal.pone.0325041

M, B., & C, K. (2021). Hospital responses to the refinement of reimbursements by treatment intensity in DRG systems. *Health Economics*, *30*(3). https://doi.org/10.1002/hec.4204

Mohammad, L. M., Vidalis, B. M., Fatemi, L., Coffman, R. R., Qeadan, F., & Kimmell, K. T. (2021). Use of Standardized History and Physical Examination for Neurosurgical Patients Improves Clinical Documentation and Reimbursement. *World Neurosurgery*, *148*, e667–e673. https://doi.org/10.1016/j.wneu.2021.01.056

Nuraini, N., & Lestari, P. P. (2021). Analisis Faktor Penyebab Keterlambatan Pengajuan Klaim BPJS Rawat Inap ke Verifikator BPJS di RSUD Genteng Banyuwangi. *Jurnal Kesehatan*, *9*(3), 140–149. https://doi.org/10.25047/jkes.v9i3.231

O'Malley, K. J., Cook, K. F., Price, M. D., Wildes, K. R., Hurdle, J. F., & Ashton, C. M. (2005). Measuring Diagnoses: ICD Code Accuracy. *Health Services Research*, *40*(5p2), 1620–1639. https://doi.org/10.1111/j.1475-6773.2005.00444.x

Peraturan Menteri Kesehatan Republik Indonesia Nomor 27 Tahun 2014 tentang Petunjuk Teknis Sistem Indonesian Case Based Groups (INA-CBGs) (2014). https://peraturan.bpk.go.id/Details/117564/permenkes-no-27-tahun-2014

Perkins, S. W., Muste, J. C., Alam, T., & Singh, R. P. (2024). Improving Clinical Documentation with Artificial Intelligence: A Systematic Review. *Perspectives in Health Information Management*, *21*(2), 1d.

Tian, J., Mejia, J., Schaal, A., Rousseau, P., Islam, K., Espinoza, E., Inniss, K., Louis, M. A., & Mandava, N. (2025). Clinical Document Improvement in Surgical Residency Training. *Advances in Health Information Science and Practice*, *1*(1), PMCY2154. https://doi.org/10.63116/PMCY2154

Wu, Y., Fung, H., Shum, H.-M., Zhao, S., Wong, E. L.-Y., Chong, K.-C., Hung, C.-T., & Yeoh, E.-K. (2022). Evaluation of Length of Stay, Care Volume, In-Hospital Mortality, and Emergency Readmission Rate Associated With Use of Diagnosis-Related Groups for Internal Resource Allocation in Public Hospitals in Hong Kong. *JAMA Network Open*, *5*(2), e2145685. https://doi.org/10.1001/jamanetworkopen.2021.45685

Xiong, Y., Yao, Y., Li, Yuehua, Chen, S., Li, Yunfei, Lin, K., & Xiang, L. (2025). Impact of diagnosis-related group payment on medical expenditure and treatment efficiency on people with drug-resistant tuberculosis: A quasi-experimental study design. *International Journal for Equity in Health*, *24*(1), 1. https://doi.org/10.1186/s12939-024-02368-0

Zalukhu, L. A., & Permanasari, V. Y. (2025). Scoping Review: Factors Causing Claim Pending in Indonesian Hospitals. *Jurnal Health Sains*, *6*(9), 252–262. https://doi.org/10.46799/jhs.v6i9.2679

Zhang, H., Fu, X., Wu, Y., Tang, Y., Jin, H., & Xie, B. (2025). The Impact of DRG-Based Payment Reform on Inpatient Healthcare Utilization: Evidence from a Natural Experiment in China. *Healthcare*, *13*(19). https://doi.org/10.3390/healthcare13192424