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Insurance claim settlement delays and their consequences for service quality and financial management

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ABSTRACT

Background: Delays in health insurance claim payments remain a persistent challenge for healthcare providers in Indonesia, particularly private clinics that rely heavily on insurance reimbursements for operational sustainability. **Methods:** This study employed a qualitative case-study approach at MMC using in-depth interviews with clinic managers, administrative staff, and medical personnel, supported by document analysis of insurance claims data from 2022–2023. Data were analyzed using thematic coding and triangulation techniques. **Findings:** The results indicate a declining proportion of claims paid within the agreed settlement period (N-1, defined as claims settled within one month after submission), alongside a significant increase in delayed claims, including claims settled after two months (N-2) and those exceeding two months (>N-2). Claim payment delays were primarily caused by incomplete medical records, limited administrative capacity, inadequate management information systems, and financial constraints on the insurer's side. These delays disrupted clinic cash flow, delayed staff salary payments, constrained drug availability, and negatively affected service quality. **Conclusion:** Late payment of health insurance claims significantly undermines both financial stability and service quality at MMC (a private healthcare clinic in Mataram City, Indonesia). Strengthening administrative capacity, improving medical documentation completeness, and optimizing clinic–insurer coordination are critical strategies to mitigate claim delays and ensure sustainable healthcare service delivery. **Novelty/Originality of this article:** This study contributes novel insights by explicitly linking claim-settlement time categories (claims settled within one month, two months, and more than two months) with service quality implications at the clinic level, providing empirical evidence from Indonesia's private healthcare sector.

KEYWORDS: insurance claims; payment delays; service quality.

1. Introduction

Health insurance plays a crucial role in modern healthcare systems by functioning as a financial protection mechanism that reduces the economic burden of medical expenses for individuals while ensuring the sustainability of healthcare providers. In Indonesia, the role of health insurance has become increasingly significant alongside rising public demand for accessible and high-quality healthcare services. The expansion of health insurance coverage, both public and private, has reshaped healthcare financing patterns and altered the relationship between insurers and healthcare providers. Within this system, health insurance institutions act not only as risk-pooling mechanisms but also as strategic actors that influence service delivery through reimbursement policies and provider payment mechanisms.

In the perspective of health financing theory, provider payment mechanisms are designed to create predictable cash inflows for healthcare facilities, enabling them to

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maintain liquidity, invest in infrastructure, and ensure continuity of care. Timely reimbursement of insurance claims is therefore a critical determinant of operational stability, particularly for private clinics that depend heavily on insurance payments for daily expenditures. IH Insurance is one of the major health insurance providers in Indonesia that collaborates with various healthcare facilities, including private clinics such as MMC. Despite this partnership, delays in insurance claim payments remain a persistent challenge faced by healthcare providers and have become a structural issue within Indonesia's health financing system. Recent health services research highlights that delays in reimbursement mechanisms can significantly disrupt healthcare provider operations, leading to reduced service efficiency and compromised care quality. A recent interrupted time-series study investigating reimbursement payment models found that changes in payment policies had measurable impacts on service efficiency and quality of care, demonstrating the sensitivity of health service delivery to reimbursement structures (Pan & Liu, 2025). Furthermore, growing evidence suggests that delayed insurer payments are associated with operational and financial strains in healthcare settings, forcing providers to reorganize service delivery priorities, often at the expense of patient responsiveness and continuity of care (Larry & Emily, 2025).

Delayed insurance claim payments can arise from multiple factors, including complex verification procedures, incomplete medical documentation, administrative inefficiencies, coding errors, and mismatches between insurer and provider information systems. Yuliyanti & Thabrany (2018) reported that more than 30% of insurance claims in Indonesia experience delayed payments, resulting in declining operational efficiency and reduced service quality across healthcare facilities. Such delays are particularly problematic for private clinics that lack substantial financial reserves and rely on timely reimbursements to sustain routine operations. MMC, located at Jl. Catur Warga No.13, Mataram Timur, Mataram City, West Nusa Tenggara, serves a diverse patient population, including outpatients and patients requiring special care. A significant proportion of its operational revenue is derived from insurance claims, making the clinic highly vulnerable to payment delays.

According to cash-flow theory, stable and timely cash inflows are essential for organizations to meet short-term obligations, manage operational costs, and maintain service continuity. Disruptions in cash flow can lead to liquidity constraints that affect procurement processes, salary payments, and maintenance of facilities. Mandvikar & Achanta (2024) emphasize that unstable cash flow in healthcare organizations limits their ability to procure medicines, medical equipment, and other essential consumables. Inconsistent availability of these resources can slow service delivery, compromise clinical effectiveness, and ultimately reduce patient satisfaction. Empirical research in health services has found that delays in insurer reimbursements not only impair cash flow but also lead providers to shift focus toward alternative revenue streams or cash-paying patients, reduce investment in essential supplies, and compromise service responsiveness ultimately undermining care quality (Tindyebwa et al., 2023). In the context of MMC, delayed insurance claim payments create financial uncertainty that constrains drug procurement, delays equipment maintenance, and limits the clinic's capacity to respond to increasing patient demand.

Beyond financial implications, delayed claim payments also affect human resource management in healthcare organizations. Healthcare workers are a critical component of service quality, and their performance is closely linked to financial stability and organizational support. Nwobodo et al. (2023) found that healthcare workers operating in financially constrained environments experience higher levels of stress, lower job satisfaction, and reduced work motivation. Delays in salary payments and increased workload pressures may weaken staff morale and reduce responsiveness to patient needs. These conditions may negatively affect provider–patient interactions and diminish the overall quality of care delivered. Consequently, financial inefficiencies in claim payments can indirectly translate into poorer health service outcomes.

Delayed insurance claim payments may also strain institutional relationships between healthcare providers and insurance companies. Effective healthcare financing requires

trust, transparency, and sustained collaboration between insurers and providers. Semarajana & Soewondo (2019) argue that persistent payment delays increase organizational conflict, reduce trust, and weaken cooperation between healthcare providers and insurance institutions. Over time, such tensions can undermine strategic partnerships, hinder coordination in service delivery, and negatively affect the reputation of both parties. In the long run, weakened insurer–provider relationships may reduce system efficiency and compromise the sustainability of healthcare services.

Service quality in healthcare is commonly assessed using the Donabedian framework, which conceptualizes quality through three interrelated dimensions: structure, process, and outcomes. Structural components include financial resources, human resources, facilities, and equipment; process components involve clinical and administrative activities as well as provider–patient interactions; and outcome components reflect patient satisfaction, health status, and perceived quality of care. The World Health Organization (WHO) defines healthcare quality as the degree to which health services increase the likelihood of desired health outcomes and are consistent with current professional knowledge. Within this framework, delayed insurance claim payments primarily weaken structural elements, particularly financial resources and infrastructure, which subsequently disrupt service processes and adversely affect outcomes.

At the operational level, MMC evaluates service quality using indicators such as patient waiting time, availability of medicines and medical equipment, continuity of care, and patient satisfaction. Ferreira et al. (2023) demonstrate that healthcare facilities receiving timely insurance reimbursements consistently achieve higher patient satisfaction scores compared to facilities experiencing payment delays. Timely claim payments enable clinics to maintain smooth operations, ensure adequate staffing, provide essential medical supplies, and create a supportive environment for both patients and healthcare workers. Conversely, delayed payments may lead to longer waiting times, service interruptions, and reduced patient trust.

Despite the growing body of research on insurance claim delays and healthcare service quality, empirical studies that explicitly link claim-settlement categories with service quality outcomes at the clinic level remain limited, particularly within Indonesia's private healthcare sector. Most existing studies focus on hospitals or national health insurance schemes, leaving a research gap regarding private clinics that operate under mixed financing arrangements. This study addresses this gap by examining the impact of delayed IH insurance claim payments categorized into N-1, N-2, and >N-2 claims on the quality of services at MMC. By integrating health financing theory, cash-flow analysis, and the Donabedian service quality framework, this study aims to provide a comprehensive understanding of how payment delays affect clinic operations, workforce performance, and patient care outcomes. The findings are expected to contribute to policy discussions on improving insurance claim management and strengthening the financial sustainability of private healthcare providers in Indonesia.

1.1 Insurance claim delays and healthcare service quality

Delays in insurance claim payments have been widely documented as a major operational, financial, and managerial challenge for healthcare providers, particularly in systems where service continuity depends heavily on third-party reimbursements. Administrative inefficiencies, incomplete documentation, inaccurate medical coding, and prolonged verification procedures are consistently identified as the primary contributors to delayed reimbursements across both public and private healthcare facilities (Noviatri, 2016; Yuliyanti & Thabrany, 2018). These delays not only affect financial performance but also disrupt the operational stability of healthcare organizations.

Empirical evidence from hospital-based studies in Indonesia demonstrates that insurance claim delays significantly influence institutional cash flow and administrative efficiency. A study conducted at Universitas Indonesia Hospital revealed that a substantial proportion of outpatient insurance claims remained pending due to incomplete claim files

and discrepancies in diagnostic and procedural coding. These issues directly affected hospital revenue realization, delayed financial reporting, and weakened service continuity, particularly in outpatient and pharmacy services (Pradani et al., 2017). The findings suggest that administrative quality and documentation accuracy are critical determinants of timely reimbursement.

In the context of Indonesia's national health insurance system, Social Health Security Administration/*Badan Penyelenggara Jaminan Sosial Kesehatan* (BPJS Kesehatan)–related studies further corroborate these operational challenges. A qualitative study at Awal Bros Hospital Pekanbaru showed that delayed claim payments increased operational costs, intensified administrative workloads, and gradually eroded the quality of healthcare services delivered to patients. Financial uncertainty caused by pending claims forced hospital management to delay procurement of medical supplies and restrict operational spending, which ultimately affected patient waiting times and service responsiveness (Semarajana & Soewondo, 2019).

Similar findings from various hospital settings indicate that documentation errors, delayed submission processes, and weak coordination between healthcare providers and insurers are persistent contributors to claim postponements (Noviatri, 2016). When claims are not reimbursed on time, healthcare facilities face liquidity constraints that limit their ability to maintain adequate stocks of medicines, medical devices, and consumables. Over time, this condition compromises the consistency and reliability of service delivery, especially in facilities that depend heavily on insurance-based payments.

These national findings align with global evidence showing that inefficiencies in claims processing reduce healthcare facilities' financial capacity, disrupt service workflows, and ultimately undermine timely and high-quality patient care. A cross-country study on healthcare reimbursement systems found that delayed payments were associated with longer patient waiting times, reduced staff motivation, and lower patient satisfaction scores (Ferreira et al., 2023). Collectively, these studies highlight that insurance claim delays are not merely administrative issues but systemic problems that directly influence healthcare service quality.

Delays in health insurance claim payments have been empirically shown to affect not only the financial performance of healthcare facilities but also the quality of healthcare services delivered to patients. Yuliyanti & Thabrany (2018) demonstrated that delayed reimbursement under Indonesia's National Health Insurance/*Jaminan Kesehatan Nasional* (JKN) scheme disrupted hospital cash flow, constrained pharmaceutical procurement, and weakened service performance, particularly in outpatient and pharmacy units. Their findings highlight that timely claim settlement is a critical prerequisite for sustaining healthcare service quality. Similarly, Noviatri (2016) identified administrative errors, incomplete claim documentation, and inaccuracies in diagnostic and procedural coding as the primary causes of delayed insurance claims in Indonesian hospitals. These deficiencies prolonged claim processing times and increased administrative workload, which indirectly reduced service efficiency and continuity. The study emphasizes that administrative capacity and documentation quality play a decisive role in ensuring timely reimbursement.

Evidence from other developing countries further confirms the systemic nature of this issue. A study by Atinga et al. (2015) on Ghana's National Health Insurance Scheme found that delayed reimbursements placed healthcare providers under severe liquidity pressure, resulting in postponed salary payments, reduced availability of medical supplies, and compromised service delivery. These financial constraints forced healthcare facilities to adopt cost-containment measures that adversely affected patient care quality. Moreover, a cross-country analysis conducted by Ferreira et al. (2023) revealed that inefficiencies in healthcare reimbursement systems were significantly associated with longer patient waiting times, reduced healthcare worker motivation, and lower patient satisfaction levels. This study concluded that reimbursement delays represent a structural weakness within health financing systems that can undermine both operational efficiency and service quality across healthcare settings.

1.2 Theoretical frameworks linking claim delays and service quality

Comprehensively understand the impact of insurance claim delays on healthcare service quality, several interrelated theoretical frameworks are relevant. First, health financing theory emphasizes the central role of reimbursement mechanisms in ensuring financial sustainability, service continuity, and equity within healthcare systems (Thabrany, 2014). In insurance-based healthcare models, reimbursements serve as the primary source of operational funding for providers. Delays in insurance payments disrupt predictable cash inflows, which are essential for procuring medicines, paying staff salaries, maintaining medical infrastructure, and financing daily clinical operations core structural determinants of service quality.

A systematic review on health financing challenges in Southeast Asia highlights that inadequate and untimely reimbursement mechanisms remain major barriers to achieving Universal Health Coverage (UHC) and responsive health systems. The review emphasizes that payment delays weaken provider confidence, reduce service availability, and increase financial vulnerability, particularly among small and medium-sized healthcare facilities such as private clinics (WHO, 2018).

Second, cash-flow theory provides an organizational perspective on how delayed reimbursements affect operational performance. Cash-flow theory posits that stable and predictable financial inflows are essential for organizational survival, effective planning, and long-term sustainability. In healthcare settings, disruptions in cash flow constrain the ability of clinics and hospitals to invest in essential resources, manage operational risks, and respond to patient demand (Mandvikar & Achanta, 2024). When cash flow becomes unstable due to delayed insurance payments, healthcare providers may be forced to postpone equipment maintenance, reduce service capacity, or rely on short-term financing, all of which negatively affect service delivery processes and clinical outcomes.

Third, in assessing healthcare service quality, the Donabedian model remains one of the most widely applied and influential frameworks. This model conceptualizes quality through three interrelated dimensions: structure, process, and outcomes (Donabedian, 1988). Structural components include financial stability, availability of resources, physical infrastructure, and workforce capacity. Process components involve the technical and interpersonal aspects of care delivery, including administrative efficiency and clinical procedures. Outcomes reflect patient satisfaction, health status, and service effectiveness. Within this framework, delays in insurance claim payments primarily weaken the structural dimension by reducing financial stability and resource availability. Structural weaknesses then cascade into process inefficiencies, such as longer waiting times, reduced service responsiveness, and administrative bottlenecks. Ultimately, these deficiencies manifest in poorer outcomes, including decreased patient satisfaction and compromised quality of care (Ferreira et al., 2023). The Donabedian model thus provides a comprehensive analytical lens to explain how financial disruptions caused by delayed reimbursements translate into measurable declines in healthcare service quality.

In addition to these core frameworks, contemporary health economics and health systems literature further strengthens the theoretical linkage between insurance claim delays and healthcare service quality. Recent studies in health financing emphasize that provider payment mechanisms play a critical role in shaping organizational behavior, service efficiency, and quality of care within insurance-based health systems. Inefficient and delayed reimbursement systems have been shown to distort provider incentives, increase financial uncertainty, and weaken service delivery capacity, particularly in settings where healthcare providers depend heavily on third-party payments (Cashin et al., 2014; Mathauer et al., 2017). From a health systems governance perspective, Soucat et al. (2017) argue that timely and predictable provider payments are a core requirement for effective strategic purchasing and health system resilience. When reimbursement flows are delayed, healthcare providers face constrained managerial autonomy and reduced ability to allocate resources efficiently, leading to suboptimal service provision. Similarly, Mbau et al. (2018) demonstrate that payment delays under social health insurance schemes negatively affect

provider motivation and organizational performance, particularly in low- and middle-income countries.

The service quality literature further supports this relationship. Kruk et al. (2018) highlight that unreliable health system financing including delayed reimbursements undermines structural readiness and process quality, resulting in poor patient experiences and compromised clinical outcomes. Moreover, Papanicolas et al. (2018) emphasize that financial instability within healthcare organizations weakens operational efficiency and responsiveness, both of which are essential dimensions of service quality. From an organizational performance standpoint, Kaplan & Norton (2001) assert that financial sustainability is a foundational driver of internal process performance and customer outcomes. In healthcare organizations, delayed insurance payments impair liquidity and limit investments in workforce development, information systems, and quality improvement initiatives. Empirical evidence from hospital financing studies indicates that liquidity constraints are significantly associated with reduced service readiness, delayed care provision, and lower patient satisfaction (Forgia & Couttolenc, 2008; OECD, 2019).

At the policy level, global health system analyses by the World Health Organization (2010) and more recent evaluations by WHO stress that timely provider payment is essential for maintaining workforce morale, ensuring service continuity, and sustaining public trust in health systems. These findings reinforce the argument that insurance claim delays constitute a structural disruption with cascading effects across financial stability, service processes, and healthcare outcomes.

1.3 Empirical evidence from Southeast Asia and Indonesia

Empirical evidence from Southeast Asia further underscores the relationship between insurance reimbursement delays and healthcare quality indicators. Although studies focusing specifically on private clinics remain limited, hospital-based research provides valuable insights into systemic challenges faced by healthcare providers operating under insurance-based payment schemes. Several studies conducted in Indonesian hospitals report that pending insurance claims significantly increase financial pressure on healthcare facilities, which subsequently affects the availability of medicines, medical devices, and consumable supplies essential for service continuity (Yuliyanti & Thabrany, 2018). These financial constraints often force healthcare providers to delay procurement processes and restrict operational expenditures, thereby weakening service responsiveness and patient satisfaction. At the operational level, research on health insurance claim management involving Third Party Administrators (TPAs) demonstrates that missing documentation, delayed claim submission, and incomplete medical records are strongly associated with claim pendency and reimbursement delays (Semarajana & Soewondo, 2019). Similar findings were reported by Noviatri (2016), who identified inaccuracies in diagnostic coding and weak coordination between clinical and administrative units as persistent contributors to delayed claim verification in Indonesian hospitals. These empirical patterns reveal structural and administrative inefficiencies that not only prolong reimbursement cycles but also reduce organizational efficiency and divert healthcare personnel from patient-centered activities.

Evidence from other Southeast Asian countries reinforces these findings. A study conducted in Thailand by Tangcharoensathien et al. (2011) found that delays in provider payments under national health insurance schemes negatively affected provider motivation, operational planning, and service delivery capacity, particularly in facilities with limited financial reserves. Similarly, research in Vietnam by Nguyen et al. (2023) showed that delayed reimbursements were associated with disruptions in service provision and increased reliance on informal cost containment measures, which posed risks to service quality and equity in access to care.

Moreover, international and regional literature suggests that operational inefficiencies in claims management can be mitigated through targeted administrative and technological interventions. Studies indicate that administrative optimization strategies such as

structured staff training, digitalization of claim submission systems, standardized medical documentation, and strengthened communication channels between healthcare providers and insurers can significantly reduce claim pendency and improve reimbursement timeliness (WHO, 2021). These findings imply that improving claims management systems is not merely a financial necessity but a strategic approach to safeguarding healthcare service quality, particularly in private clinics that operate with limited cash-flow buffers.

1.4 Research gaps and rationale for the current study

Despite the growing body of literature examining insurance claim processes and service quality in hospital settings, there remains a significant research gap concerning private clinics and non-BPJS insurance providers such as IH. Most existing studies focus predominantly on national insurance schemes or hospital-level analyses, with limited attention to clinic-level dynamics and private insurance arrangements (Semarajana & Soewondo, 2019).

Recent studies highlight that provider payment delays under social or private insurance schemes continue to pose systemic challenges, particularly in low- and middle-income countries. Mathauer et al. (2017) emphasize that weak purchasing and delayed provider payments undermine service delivery capacity and threaten financial sustainability at the facility level. Similarly, Barasa et al. (2021) demonstrate that delayed reimbursements exacerbate liquidity constraints and reduce managerial flexibility, especially in smaller healthcare facilities that lack financial buffers. These findings suggest that clinic-level analysis is essential to capture the full impact of reimbursement delays on service quality. Moreover, while service quality has been widely studied using the Donabedian framework, empirical studies rarely link this framework explicitly with health financing and cash-flow theories in a unified analytical approach. Kruk et al. (2018) and more recent work by Braithwaite et al. (2020) argue that fragmented analytical models limit the understanding of how structural financing weaknesses translate into process inefficiencies and poor patient outcomes. Without such integrative frameworks, existing research tends to treat financial performance and service quality as separate domains rather than interconnected dimensions of healthcare system performance.

In addition, recent health systems research underscores the growing importance of examining mixed and private insurance arrangements alongside national schemes. OECD (2020) and WHO (2021) note that private insurers play an increasingly prominent role in healthcare financing in many countries, yet empirical evidence on how their reimbursement practices affect service delivery at the primary care and clinic level remains scarce. This gap is particularly relevant in Indonesia, where private insurance schemes such as IH complement the national health insurance system and serve a substantial segment of the population.

Furthermore, few studies integrate health financing theory, cash-flow theory, and the Donabedian quality framework into a single analytical model. This lack of integrative analysis limits the understanding of how delayed insurance reimbursements simultaneously affect financial structures, service processes, and patient outcomes. Therefore, this study seeks to address these gaps by examining the impact of delayed IH insurance claim payments on structural, process, and outcome dimensions of service quality.

The existing literature consistently confirms that delays in insurance claim payments undermine financial stability and healthcare service quality. Structural inefficiencies in administrative workflows and verification processes increase the likelihood of pending claims, which subsequently affect clinical resource availability, workforce morale, and patient outcomes (Ferreira et al., 2023; Yuliyanti & Thabrany, 2018). The integration of health financing theory, cash-flow theory, and the Donabedian framework reinforces the conclusion that timely reimbursement is a critical prerequisite for sustainable, high-quality healthcare delivery. However, the specific impacts of delayed claims within private clinic

settings particularly involving non-BPJS insurers such as IH remain underexplored, thereby providing a strong justification for the present study.

2. Methods

This study employed a qualitative research approach with a retrospective case study design to analyze the impact of delayed IH insurance claim payments on service quality at MMC. A qualitative approach was chosen to obtain an in-depth understanding of organizational, administrative, and operational dynamics related to claim management and service delivery that cannot be adequately captured through quantitative methods alone. The retrospective design enabled the analysis of past claim submission and payment processes and their implications for clinic operations and service quality during the 2022–2023 period.

The study was conducted at MMC, a private healthcare facility located in Mataram City, West Nusa Tenggara, Indonesia. The clinic provides outpatient and limited specialized services and relies significantly on insurance reimbursements, particularly from IH Insurance, to support its daily operations. A total of 12 informants participated in this study. Informants were selected using purposive sampling, based on their direct involvement in insurance claim management, service delivery, and financial decision-making at the clinic. The informants consisted of 2 clinic management representatives (clinic director and finance manager), 5 administrative staff involved in claims submission and verification, 3 medical personnel (doctors and nurses), 2 representatives from IH Insurance involved in claims processing

This composition allowed for a comprehensive perspective on claim payment delays from managerial, administrative, clinical, and insurer viewpoints. The criteria for selecting informants included; (1) direct involvement in insurance claim submission, verification, or payment processes; (2) minimum of one year of work experience at MMC or IH Insurance; (3) willingness to participate and provide informed consent; (4) ability to provide relevant information related to service quality and operational impacts of claim delays.

Data were collected using methodological triangulation to enhance the validity and reliability of the findings. Documents related to insurance claim submission and payment processes were reviewed, including financial statements, administrative reports, internal claim records, and correspondence between the clinic and IH Insurance. Claims archive data were analyzed to examine claim submission timelines, payment dates, claim settlement categories (N-1, N-2, and >N-2), and claim values during the study period. Interviews with semi-structured interviews were conducted with all informants to explore experiences, perceptions, and challenges related to claim delays and their impact on clinic operations and service quality. Each interview lasted approximately 45–60 minutes and was audio-recorded with participants' permission. One FGD was conducted involving medical and non-medical staff to identify shared experiences and collective perceptions regarding the effects of delayed claim payments on service delivery, workload, and patient care.

Data analysis followed a thematic analysis approach. The analysis process consisted of several stages; (1) data transcription, interview and FGD recordings were transcribed verbatim, (2) open coding, initial codes were generated to identify key issues related to claim delays, financial impacts, service quality, and human resource challenges, (3) categorization, codes were grouped into broader categories, such as administrative factors, financial impacts, service disruption, and workforce performance, (4) theme development, major themes were developed by linking categories to the study objectives and theoretical frameworks, including health financing theory, cash-flow theory, and the Donabedian service quality model, (5) triangulation, findings from interviews, FGDs, and document analysis were cross-checked to ensure consistency and credibility.

Ethical principles were strictly observed throughout the research process. All participants were informed about the study objectives, procedures, and their right to withdraw at any time. Written informed consent was obtained prior to data collection. Participant anonymity and confidentiality were maintained by using codes instead of real

names. Institutional permission was obtained from MMC management, and all data were used solely for academic research purposes.

3. Results and Discussion

3.1 Claim submission conditions

Changes in the payment mechanism to hospitals into prospective payments with the INA CBGs system require improvements in claims management by hospitals. Claims management is a process that begins when a claim is received at the insurance office until the claim is verified, recorded, and paid. During the study period, IH insurance completed an average of 1,121 claim bundles consisting of hundreds of individual claims per month. These claim bundles are distinguished based on the patients who come out into claims N-1, N-2, and more than N-2.

3.1.1 The impact of late payment of IH insurance claims on the quality of services

In the process of assessing how well claims are managed by health clinics, this study analyzes the trend of claims settlement during the 2022-2023 study period. The results show a tendency for delays in claims settlement, marked by an increase in the proportion of claims N-2 and more than N-2, starting from November 2022. At the beginning of the study period, 61% of claims were in the N-1 category, but by the end of the study period, this proportion had dropped to only 36%. On the other hand, N-2 claims increased from 28% in February 2022 to 46% in February 2023. Since November 2022, there has been a significant change in claims settlement with a sharp decrease in N-1 claims and an increase in the proportion of claims N-2 and more than N-2. This study found that the average proportion of N-1 claims was 60%.

Table 1. Distribution of IH insurance claims by settlement category (2022–2023)

Year	N-1 (%)	N-2 (%)	>N-2 (%)	Total Claims (%)
2022	61	28	11	100
2023	36	46	18	100

The data show a substantial decline in on-time claim settlements (N-1) from 61% in 2022 to 36% in 2023. Conversely, the proportion of delayed claims increased significantly. Claims categorized as N-2 rose from 28% to 46%, while claims delayed for more than two months (>N-2) increased from 11% to 18%. These findings indicate a worsening trend in claim settlement performance, which directly affects the clinic's cash flow and operational capacity.

3.1.2 Causes of delay in claim payment

From in-depth interviews, it was found that the cause of claim delays can come from internal factors of the hospital, such as:

> *"Non-compliance of some doctors to fill in medical records is an obstacle for the hospital to submit claims to IH insurance"* (Informant 1- Staff of administrative and medical records unit).

> *"Inadequate management information systems make the claim process longer ..."* (Informant 2- Finance manager).

> *"The number and competence of administrative personnel are not comparable to the number of claims submitted ..."* (Informant 3- Staff of administrative and medical records unit).

> *"The understanding of coding by each coder is different. However, the delay in claim payments is not only caused by internal factors of the hospital, but also internal factors of the IH insurance party, the financial condition of the insurance party which has experienced a deficit in the last 4 years has led to a tendency to delay claim payments to hospitals/clinics"*. (Informant 4- Finance manager).

Findings from in-depth interviews and FGDs revealed that delays in claim payments were caused by both internal and external factors. Internal factors included incomplete medical records, inconsistent coding practices among coders, limited administrative staff capacity, and inadequate management information systems. One administrative informant stated:

> *"Non-compliance of some doctors in completing medical records is a major obstacle in submitting claims to IH Insurance."* (Informant 5- Head of medical records unit).

External factors were also identified, particularly related to the financial condition of the insurance provider. Several informants indicated that financial deficits experienced by IH Insurance over recent years contributed to delayed reimbursements to healthcare facilities.

3.1.3 Clinic management, financial, conditions and insurance claim management

Late payment of claims indirectly affects the quality of service in the clinic, health clinics cannot order drugs and lack of medical equipment maintenance costs, In fact, almost all hospitals and clinics that experience late payment of claims result in late payment of doctors' salaries, medical doctors' salaries have been delayed for 3 months. This delay also causes patient care to stop, the clinic can also be threatened with closure due to unpaid claims.

It is certain that the cash flow condition in the clinic is also affected by the delay in payment of claims, if it continues to happen then the health clinic can go bankrupt. To overcome cash flow disruptions, health clinics do several ways, to overcome financial problems such as having to ask for loans from banks. Anticipatory steps by the government need to be taken to prevent the termination of health clinic operations, certainty of payment is needed so that the services received by patients can run well.

Claims are very important for healthcare management because claims are standardized records. However, frequent denials and rejections place significant financial and administrative pressure on both payers and service providers. A study by IEEE (2017) addressed this problem by introducing an automated method to identify claim denials and rejections using machine learning. This study suggests a unique method to categorize claims that are subject to rejection based on distinguishing features using machine learning algorithms. This novel method, which uses Claim Adjustment Reason Codes (CARC) for feature engineering, makes a substantial contribution towards the creation of the first machine learning-driven claims risk detection system. Similarly, public and private health insurance systems are affected by the increasing global healthcare expenditure, which can be attributed to a number of factors. In particular, fraudulent activities in these systems add unnecessary expenses to insurance providers. In response, a study by researchers Johnson & Nagarur (2016) suggests a multi-step method for insurance companies to detect fraudulent activities. These steps include identifying inconsistencies, gathering information for a comprehensive risk analysis, and using decision tree-based techniques to ensure the veracity of claims. When applied to actual insurance data, the results showed satisfactory results.

3.2 Discussion

Delays in payment of health insurance claims, especially IH, can have a significant impact on the quality of services at health facilities, including the MMC. This delay not only affects the cash flow and operations of the clinic, but also has a direct impact on the quality of services provided to patients. In this discussion, the various impacts of late payment of IH insurance claims on the quality of services at the MMC will be analyzed.

Delayed claim payments had a direct impact on clinic management and service delivery. Informants consistently reported disruptions in drug procurement, delays in infrastructure maintenance, and postponed salary payments for doctors and medical staff—some extending up to three months. These financial constraints led to reduced staff motivation, increased workload stress, and occasional interruptions in patient care services. Furthermore, delayed reimbursements threatened the clinic's financial sustainability. To maintain operations, the clinic was forced to seek short-term bank loans, increasing financial risk and operational costs. Informants emphasized that prolonged delays could potentially lead to service reduction or clinic closure if not addressed through systemic improvements.

3.2.1Impact of delays on service quality

According to HIAA (Health Insurance Association of America) in Ilyas (2006), claim settlement includes collecting evidence or facts related to service events, comparing them with policy provisions, and benefits paid by the insurance company. Several aspects required to settle a claim include: a) the existence of two parties bound by an agreement, b) clear rights and obligations of both parties, c) informed consent, and d) documented evidence. These aspects are fulfilled in the contract between IH insurance and each hospital/clinic. The procedures and documents required are also written in the contract. Ideally, all claims (100%) are categorized into N-1 to ensure that the hospital has healthy financial liquidity. However, in practice, claim settlement often faces obstacles that cause delays in claim settlement. Delays in claim payments have a wide impact on various aspects of service suc as Table 2.

Table 2. Impacts of delayed claim payments on clinic service performance

No	Aspect affected	Description of impact
1	Availability of medicines and equipment	Delays in claim payments disrupt the clinic's ability to procure medicines and medical equipment, causing shortages that reduce the quality of patient care.
2	Payment of doctors and staff salaries	Late claim payments lead to delayed salary disbursement for doctors and medical staff, lowering morale and performance and ultimately affecting service quality.
3	Continuity of clinic operations	Disrupted cash flow threatens the sustainability of clinic operations and may increase the risk of bankruptcy, reducing access to health services in the area.
4	Patient care	In severe cases, delayed claim payments may result in postponed or discontinued patient services, directly endangering patient health and safety.

This study found that at the national level, the average N-1 claim only reached 60%. This figure indicates a delay in claim payments. Based on in-depth interviews with informants, it was found that the cause of this delay could come from the hospital, such as: medical compliance to fill out medical records, inadequate coder competence, insufficient number of claim administrators, and inadequate management information systems. Many hospital/clinic directors also admitted that their ability to manage claims on time needed to be improved.

These results are in line with research conducted by Noviatri (2016) which found the following factors: quality of verifiers, physician discipline, coding officers, inefficient

hospital information systems, implementation of clinical pathways that must be followed by doctors according to clinical standards that can contribute to disputes and delays in claim processing. Likewise, Pradani et al. (2017) found five main causes of delays in claim verification, namely; (1) doctors do not fill out medical records completely, (2) there is no routine feedback from claim management to doctors, (3) lack of standard operating procedures for verification returns, (4) lack of rewards and penalties for claim administration units, and (5) the absence of a system that bridges current electronic medical records and insurance claim processing.

3.2.2 Threats to clinic management and cash flow

From in-depth interviews with informants, it was found that there were three main problems faced by hospital management due to late payment of claims; 1) disruption of drug availability, 2) declining performance of doctors due to late payment of medical services, 3) inadequate service quality in terms of infrastructure due to lack of maintenance costs. This finding is similar to a study in Ghana. The National Health Insurance (NHIS) in Ghana, which has been implemented since 2001, has also faced many obstacles in its implementation. Some of the problems in hospital management since the implementation of the NHIS in Ghana include: late payment of claims from insurance institutions affecting hospital cash flow, procurement of drugs and medical consumables, inadequate logistics and human resources, limited space in hospitals that is not comparable to the increase in the number of patients, and moral hazard by members. Late payments cause hospitals to be unable to purchase and procure drugs and other supplies which affects the delivery of these items from suppliers.

As a result, the Indonesian Hospital Association/*Perhimpunan Rumah Sakit Seluruh Indonesia* (PERSI) filed a complaint to the National Social Security Council/*Dewan Jaminan Sosial Nasional* (DJSN) over late payments in 164 hospitals, totaling IDR 3 trillion. Of course, for private hospitals that have to pay monthly salaries, the delay creates serious cash flow problems. Hospital management needs to anticipate their financial consequences. Corbett (2005) recommends seven measurements to consider in assessing financial conditions, namely: (1) financial strength index, (2) modified Z score, (3) operating cash flow ratio, (4) cash flow coverage ratio, (5) cash interest coverage ratio, (6) cash flow to total debt ratio, and (7) total free cash flow ratio. These ratios can be used by hospital directors to provide early warning when financial conditions are in doubt. To ensure that hospitals/clinics are always solvent and cash flow runs smoothly to ensure timely treatment, the IH insurance company pays claims within 15 working days after the claim is submitted. However, in reality, many hospitals or clinics are not ready to process claims on time.

Table 3. Strategic measures to mitigate the impact of delayed claim payments on clinic service quality

No	Strategic action	Description
1	Claims management system improvement	Enhance the claims management process through training for doctors and administrative staff and the adoption of more advanced information technology to accelerate submissions.
2	Optimization of management information system	Invest in a robust management information system that can efficiently manage claims data and shorten processing time.
3	Collaboration with insurance companies	Strengthen communication and coordination with insurance providers to ensure claims are processed and paid in a timely manner.
4	Government support	Advocate for proactive government policies that guarantee timely claim payments to health facilities in order to sustain operations and service quality.

Based on in-depth interviews, it is known that more than 50% of patients in private hospitals or clinics are members of IH insurance. This condition creates a high risk for hospitals or clinics if their management is unable to process claims on time. Although the

insurance has settled clean claims within 15 working days, claim submission and claim verification ended with many hospitals not receiving claims within a month after the patient was discharged. In an effort to overcome the negative impact of late claim payments and maintain service quality, the MMC needs to take several strategic steps in Table 3.

4. Conclusions

This study demonstrates that delays in the payment of IH insurance claims have a significant and multifaceted impact on service quality at MMC. Empirical findings reveal a marked decline in claims settled on schedule (N-1) alongside a substantial increase in delayed claims categorized as N-2 and >N-2. This trend indicates worsening reimbursement performance, which directly disrupts clinic cash flow and undermines operational stability.

The study identifies several interrelated factors contributing to delayed claim payments. Internal factors include incomplete medical records, inconsistent coding practices, limited administrative capacity, and inadequate management information systems. External factors, particularly financial constraints on the insurer's side, also play a critical role in prolonging reimbursement timelines. These delays negatively affect key dimensions of healthcare service quality, including the availability of medicines and medical equipment, timely payment of medical staff salaries, continuity of clinic operations, and overall patient satisfaction. From a policy perspective, the findings highlight the urgent need for systemic improvements in insurance claim governance. Insurance providers should strengthen claim verification processes, invest in digitalized claim management systems, and ensure financial sustainability to meet reimbursement obligations in a timely manner. Government authorities and health regulators are encouraged to enhance oversight mechanisms, enforce reimbursement timelines, and develop policy instruments that protect healthcare providers from prolonged payment delays. Strengthening coordination between insurers and healthcare facilities is essential to maintaining service quality and financial resilience within the healthcare system.

At the organizational level, healthcare facilities, particularly private clinics, should implement strategic financial management measures to mitigate the impact of delayed reimbursements. Establishing reserve funds, improving internal claim management capacity, and investing in integrated health information systems may help reduce operational vulnerability and ensure service continuity during periods of financial uncertainty. Despite its contributions, this study has several limitations. First, the research focuses on a single private clinic, which may limit the generalizability of the findings to other healthcare settings. Second, the qualitative design relies on informant perceptions and retrospective data, which may be subject to recall bias. Future research is therefore recommended to employ comparative multi-site studies, mixed-method approaches, and longitudinal designs to better capture the long-term effects of claim payment delays across different healthcare facilities and insurance schemes.

In conclusion, addressing delays in insurance claim payments is crucial not only for protecting the financial sustainability of healthcare providers but also for safeguarding the quality and continuity of patient care. Effective policy interventions and improved claim management practices are essential to strengthening Indonesia's healthcare financing system and ensuring equitable, high-quality healthcare services.

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Author Contribution

The author solely conceived the study, designed the methodology, collected and analyzed the data, and prepared the manuscript.

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