

ANALYSIS OF TURNAROUND TIME (TAT) IN MEDICAL INSURANCE CLAIMS: A DATA DRIVEN APPROACH

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Under the Supervision and Guidance of

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2026

CERTIFICATE

This is to certify that dissertation titled “**Analysis of Turnaround Time (TAT) in Medical Insurance Claims : A Data Driven Approach**” is a record of the research work undertaken by **Ms. Keerti Jat** in partial fulfilment of the requirements for the award of the degree of **MBA (Healthcare Analytics Management)** from the **IIHMR University**, Jaipur under my guidance and supervision and her approach to the research study has been sincere, scientific, and analytical.



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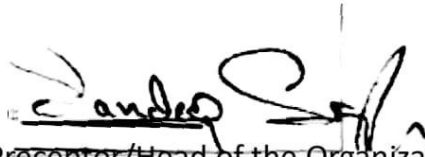
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CERTIFICATE OF COMPLETION

This is to certify that Keerti Jat, in partial fulfilment of the requirements for the award of the degree of MBA Healthcare Analytics from the IIHMR University, Jaipur, has successfully completed his/her internship at **Visit Health, Noida** during February 25-June 09, 2026.



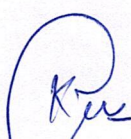
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DECLARATION BY STUDENT

I hereby declare that this dissertation titled "Analysis of Turnaround Time (TAT) in Medical Insurance Claims" is the Bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.



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ABSTRACT

Title: Analysis of Turnaround Time (TAT) in Medical Insurance Claims: A Data-Driven Approach

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Keywords: Turnaround Time, Health Insurance Claims, Cashless Adjudication, Reimbursement, Third Party Administrator, Operations Management, Administrative Bottlenecks

Introduction: Health Insurance has become one of the most crucial components in the financing of health care in India. The Turnaround Time (TAT) for Claim adjudication is a very vital performance measurement tool that makes sure of customer satisfaction, cash flow of the hospital and reputation of the insurance company. Any inefficiencies in the processing of claims will cause cash crunch owing to out-of-pocket expenditure and administrative inefficiency, particularly in the period of epidemic.

Purpose of Study: This study attempts to determine the critical operational factors which affect the Turnaround Time (TAT) of Claim processing and identify the specific bottlenecks based on channels of claims, Hospital Network, specialty and administrative process through an empirical analysis.

Methodology: Empirical analysis of 1000 health insurance claims made from January 2024 to December 2025 has been conducted. The study involved the analysis of claims on various dimensions including claims channel (Cashless & Reimbursement), Hospital Network (Tier 1 Network, Tier 2 Network & Non-Network), specialty, financial value, claim decision and delay.

Results/Findings: Average claims turnaround time (TAT) was observed to be 7 days overall . Average TAT for Cashless claims is 2 days as compared to Reimbursement claims at 13.32 days. Non-network hospital claims had the longest average TAT (14 days). The overall claims settlement ratio stood at 83.87 per cent. The operational bottleneck was found to be 'Administrative Backlog' due to monsoon surges followed by 'Medical Query' Incomplete'.

Conclusions: Study results indicate that claim submission channel (Cashless) and hospital network status has significant impact on TAT for claim processing. Recommendations include automated OCR document parsing, real-time electronic data interchange between hospitals and insurers, and dynamic staffing during epidemic surges to improve operational TAT and enhance the customer experience.

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IIHMR University, Jaipur

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LIST OF ABBREVIATIONS

Abbreviation	Full Form
AB-PMJAY	Ayushman Bharat Pradhan Mantri Jan Arogya Yojana
ANOVA	Analysis of Variance
CDSS	Clinical Decision Support System
EHR	Electronic Health Record
EDI	Electronic Data Interchange
INR	Indian Rupee
IRDAI	Insurance Regulatory and Development Authority of India
NABH	National Accreditation Board for Hospitals & Healthcare Providers
NHPS	National Health Protection Scheme
OCR	Optical Character Recognition
SOP	Standard Operating Procedure
TAT	Turnaround Time
TPA	Third Party Administrator

CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 Overview of Health Insurance Industry in India

From being a niche financial product in early 2000s, the Indian health insurance sector has undergone a massive transition, evolving to become an indispensable component of social security and health care financing. Traditionally, health-care expenses in India were mainly paid out of pocket by the patients themselves, causing severe economic distress to families and impoverishing the weaker segments. However, with steadily increasing healthcare expenses, soaring chronic lifestyle diseases and a growing aspiring middle-class population in India, health insurance has now become one of the major growth engines for the non-life insurance business.

In fact, in the past few years health insurance premiums registered a CAGR of over 15 percent making it one of the biggest and competitive segment in the insurance business (Source – IRDAI).

The health insurance market landscape of India is characterized by the existence of public insurers, private standalone health insurers, general insurers, hospitals, and third-party administrators (TPAs) operating through multi-stakeholder ecosystem. TPAs are entities licenced by the IRDAI who help the insurance companies by managing the medical expenses, servicing customers, identifying the best network hospitals, processing the claims and managing pre-authorization for procedures for insured lives. While most private standalone players in health insurance in India have set up their own claim processing infrastructure to ensure efficient claims settlement processes and maintain highest quality standards. A considerable proportion of public sector and private sector general insurers use the services of TPAs to outsource their claims processing, pre-authorization requests for cashless hospitalization, and processing claims in non-cashless mode.

Also, with strong push by government for the universal health care cover, the scale of health insurance in India have radically changed in the past few years with its world largest government-funded health assurance program Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) targeting over 500 million low-income citizens that was launched in 2018-19 have increased the volumes in terms of claim for secondary and tertiary hospitals both public and private respectively.

Combined with growing retail and corporate health insurance policy penetration and volume, claims processing departments have immense pressure to manage high volume operations with speed and accuracy.

1.2 Turnaround Time (TAT) in Claims: Definition and Significance

TAT is the most important metric of success for all of the various activities that take place throughout the healthcare insurance industry value chain. TAT is Critical to Healthcare Insurance Stakeholders The most crucial of all metrics for activities occurring within the entire healthcare insurance industry value chain, TAT is critical. In the case of a cashless claim, TAT is usually computed in hours or part of the day; from the time diagnostic reports are uploaded to the insurer's portal by the hospital's Third-Party desk, to the discharge approval. In the case of a reimbursement claim, TAT is expressed in number of days; starting from when physical documents are received by the TPA office, till when cash is credited to the policyholder's bank account through EFT.

Why TAT Matters for Stakeholders in Healthcare Insurance The turnaround time is commonly acknowledged as the single most significant operational key performance indicator across the entire healthcare insurance value chain.

For the policyholder who is already sick and in distress, claim processing is one of the critical "moments of truth" which confirms the insurers' promise and delays often lead to extreme mental stress and significant financial strain. For a hospital, long delays impact its cash flows directly and the bed management cycle (in many cases a cashless claim doesn't come with bed; policyholders waiting in the ward till approval. For a hospital it becomes a challenge to manage flow). For a hospital it brings significant amount of hassle to deal with the TPA's Desk.

For an insurer, controlling TAT impacts overall operational cost, prevents penalties from the IRDAI, and in a largely competitive market landscape, building a loyal consumer base becomes achievable.

1.3 Cashless Claims vs. Reimbursement Claims: Structural Differences

The Indian health insurance market operates using two modes of claim settlement, namely Cashless settlement and reimbursement settlement. These channels of claim settlement differ in terms of work streams, document pipelines and risk characteristics: Cashless settlement Cashless claim settlement is where the policyholder will not make the bill payment to the hospital at the time of discharge. The hospital would make the payment with the insurance company / TPA of the policy.

This process entails: the hospital TPA desk applying for pre-authorization.

The claim file would have: doctor's prescription, diagnosis and the cost estimate of services; TPA would refer it for a preliminary validation against policy terms by a clinical team in insurer's case and issue an initial authorization. Final authorization on receipt of documents, on the eve of discharge is released⁵. Cashless settlements require: A

standardized payment methodology; Real-time integration of hospitals with TPAs/Insurers via an electronic data interchange (EDI) system; Availability of standard format bills. Reimbursement Settlement Reimbursement Settlement of claim is the age-old post-discharge payment mechanism where, the insured may be made to bear out of pocket, any amount till the amount due at the time of discharge and files his claim file to TPA /Insurer along with physical documents like original bills, hospital receipts, pharmacy bills, diagnosis reports, discharge summary, claim forms etc to be reimbursed subsequently.

Physical documents are needed to be transmitted, received, segregated, scanned and individually registered for initiating the claim process and the claim files are checked manually prior to clinical scrutiny for their legitimacy, the nature of treatment and against the specific policy clause.

Consequently, the claim turn-around time (TAT) under the reimbursement mode would inherently remain substantially high vis-a-vis that under the cashless mode which starts from pre-authorization itself with initial settlement at discharge itself in case of cashless.

1.4 The Impact of TAT on Patient Satisfaction and Hospital Operations

There is a clear and quantifiable impact of the speed of claim settlement on patient satisfaction and hospital operations. It has been found that the hospital experience of the cashless payment journey is highly influenced by the discharge TAT. While doctors clear the patient for discharge many hours before it can be processed and the final claim approved by the TPA, a time of three hours between doctor's fit for discharge order and TPA's discharge approval will have a significant impact on the patient experience (see box 2).⁷The 'waiting in discharge lounge' experience of an asymptomatic patient can create a deeply negative impression about the hospital as well as the insurer.

Research in healthcare service quality reveals that delays in the administrative processes during discharge are amongst the most commonly cited issues in patient satisfaction questionnaires.⁷In terms of hospital operations, the TPA discharge process directly affects turnover times for patients.

This impact becomes particularly acute in large volume, urban Hospitals where a bed occupied for the TPA's discharge decision is no longer available to accommodate a new, urgent admission, causing bottleneck in the Admissions office and reducing throughput in the hospital. For the Reimbursement claims, the delays in TPA's discharge approval may lead to negative sentiment by the policyholders to their insurer and the number of complaints / queries / dispute cases filed with the Insurance Ombudsman is very high

and require resources on part of insurer/TPA to cater to such high customer support load.

1.5 Problem Statement

Even though TAT is of extreme importance to a healthy ecosystem in the Indian health insurance sector, numerous insurers and TPAs are not able to keep operational turnaround time under check, resulting in high rejection rates, repetitive customer queries, and administrative chaos. This pain is particularly amplified during the time of seasonal epidemics (like dengue, malaria, flu during monsoon, etc. When hospitals and TPAs receive a deluge of claims. Absence of a streamlined and digital workflow; combined with incomplete documentation by hospitals and patients leads to the problem of increased frequency of Queries causing immense bottleneck in the claim settlement process resulting in a higher average TAT and lower overall claim settlement ratio.

Though information like broad premium growth statistics are commonly available, there is a gap in research in analyzing the core operational bottlenecks that causes delays in claim settlement processes in the Indian scenario.

Factors impacting claim turnaround time like claim channels (cashless vs. Reimbursement), hospital network type (Tier 1, Tier 2, non-network), type of clinical specialists involved, nature of document error etc are not broadly quantified. Insurers or hospitals and health service providers will never know the bottlenecks they need to work upon in the claim settlement cycle.

1.6 Research Objectives

The primary objective of this study is to analyze the operational drivers and bottlenecks of Turnaround Time (TAT) in medical insurance claims using a data-driven approach, and to suggest evidence-based strategies for operational optimization. The specific objectives are as follows:

- i. To document and analyze the overall average and median claims turnaround time (TAT) across 1,000 adjudicated claims.
- ii. To compare the Turnaround Time (TAT) of claims settled through cashless channels versus reimbursement channels.
- iii. To analyze the impact of hospital network status (Tier 1 Network, Tier 2 Network, and Non-Network) on claims processing efficiency.

- iv. To identify the primary operational bottlenecks and document the frequency of specific delay reasons (queries, incomplete files, hospital delays).
- v. To evaluate the claims turnaround time (TAT) across different clinical specialties and identify areas of high complexity.
- vi. To assess the relationship between claim size (claimed amount) and claims processing speed.
- vii. To evaluate the impact of seasonality (monsoon claims surge) on operational backlogs and TAT inflation.
- viii. To formulate practical, data-backed recommendations for TPAs, insurance providers, and network hospitals to minimize claim processing delays.**1.7**

Research Questions

This study seeks to address the following key research questions:

- What is the overall average and median Turnaround Time (TAT) for medical insurance claims within the study population?
- To what extent does the claim settlement channel (Cashless vs. Reimbursement) influence the claims turnaround time?
- How does the network status of the admitting hospital affect the speed of claim adjudication?
- What are the most frequent administrative and clinical reasons for claim delays, and what is their relative impact on TAT?
- Are claims for specific clinical specialties or larger financial values associated with longer processing times?
- Does seasonal variation in claim volume lead to measurable changes in TPA operational capacity and average TAT?

1.8 Significance of the Study

For the TPAs & Insurance Managers, the study offers a precise data-backed solution to improve adjudication processes. It gives a bottom-up view on the exact causes of query generation - be it issues like 'missing" of diagnostic value' or 'missing bill details for Pharmacy'- and provides direction towards forming robust 'pre-submission check lists' for their hospital front desks. The findings also bring to light, a clear correlation between the network tier system of a hospital and query generation rates, offering opportunity for the former to streamline administrative procedures impacting billing.

For Hospitals, the study's focus on the impact of 'administrative efficiencies' and 'network tiering' in driving billing cycle, bed management and overall payer relations, can help refine their own operations and work closely with TPAs.

The research is a great framework for Healthcare Analytics specialists seeking to mine transactional level operational data to generate meaningful management insights. Furthermore, for policymakers and regulators (IRDAI), this study validates the current level of operational efficiency in the settlement processes, thereby facilitating better consumer-oriented policies.

1.9 Scope and Limitations

This research is confined to retrospective analysis of 1000 health insurance claims submitted at a TPA or insurer over a period of two years, which extend from January 2024 to December 2025. The data comprises of claims from hospitals in both network and non-network facilities, under a mix of clinical specialties, and offers a cross-section of private health care providers in India. Analysis entails operational parameters, such as Tat, claim channel, hospital class, specialty, status, claim amount, settled amount and documented causes of delay.

The foremost restriction of the research study is that it is founded on second-tier transaction- based data and this restricts assessment of qualitative variables such as personal effectiveness of claim officers, role of specific hospital information management software, patient experiences at the time of discharge, and etc. Further, the study presents claims' financials in the Indian rupee (INR), within the private hospital category, and this is difficult to apply to public health insurance policies (e.g., AB-PMJAY), which is based on the predefined package rate and operates on its own structure. Lastly, the study only offers the operational evaluation but it does not examine the level of care supplied to the patients by the medical professionals.

CHAPTER 2

REVIEW OF LITERATURE

2.1 Evolving Landscape of Health Insurance and Claims Management

Health insurance claim processing has received considerable academic attention in both health economics and health care operations management literature over the past few years. It is true that over the last two decades, health insurance has transformed from a simple structure providing just coverage into a complex, multi-layer risk management industry. However earlier literature (e.g. (9)) from the 1990s emphasised the fundamental economics of insuring health risks including the issues of moral hazard and adverse selection.

With improved insurance coverage across the world, researchers soon discovered that a significant part of total healthcare expenditures is the administrative expenditure (i.e. Expenditures related to verify, validate, and pay health insurance claims).

In India post liberalisation saw the arrival of private insurers and they in turn brought TPAs to manage their hospital networks and claim processing. It was realised that the new set of administrative agents 'TPAs', while enhancing the administrative expertise of general insurers also added to communication tiers which at time created communication delays and generated additional queries (10). The literature now shifted focus from basic structural descriptive studies to operational efficiency analysis by researchers using models and simulation with the help of queuing theory and process map to the claims department processes and revealed that communication and transfers are the significant reasons for delays which are mostly done from hospital billing desk to TPA data entry operators to clinical underwriters.

2.2 Empirical Studies on Claims Turnaround Time (TAT)

The TAT (TurnAround Time) as an important operational parameter in claims process is highlighted in empirical researches with implications on customer-insurer relationship and customer retention. A research work of Ellis identified that claims with manual clinical review take four times longer to process as those could be processed automatically (11). This research based on large-scale analysis of operational data collected from the leading commercial insurers across the US also stated that the absence of well-defined and common codes (e.g., ICD-9/10 for diagnosis, CPT for procedure) led to the manual understanding of medical documents by claims processing team causing numerous queries and process delays.

In Indian context, the empirical study by Baru and Nundy (2016) found that the delays in approval of cashless claims on discharge were one of the biggest areas of patient dissatisfaction in leading private corporate hospitals (12).

The researchers pointed out that patients had to spend 4 to 8 hours between the time they were declared medically fit to be discharged and till their claims were approved, because of internal back and forth correspondence between the TPA desk of the hospital and underwriter of insurance companies. This added process delay created inefficient flow for hospital, slowing down bed turnover and increasing patient wait times and hence ability to take in further patient

2.3 Factors Influencing Claims Adjudication

Claims adjudicated quickly and without disputes are a consequence of factors that fall on the operational and administrative sides of the process. A study found that the manner in which claims were submitted - cashless vs. Reimbursement - was the single largest determinant of how long it took to adjudicate the claim. "When claims are submitted under cashless, electronic pre-authorization confirms the coverage in advance and pre-verifies most of the patient's claims.

Whereas, with reimbursement, the patient first receives the service, and the process involves scanning, transmittal delays, data entry, and also loss or absence of medical records."

The hospitals where claims were adjudicated also had a significant influence on TAT. Claims from network hospitals were processed faster, due to well-defined SLAs and the presence of specific TPA support desks that know the type of documentation required for each insurer. However, in non-network hospitals there isn't this familiarity, and often, due to the non-standard nature of their invoices and clinical summaries, the likelihood of an enquiry or a rejection is much higher. A study showed that very high value claims - those typically requiring surgical specialties like cardiology, neurosurgery, oncology, etc - require clinical audits and a clinical verification from multiple levels of the clinical staff and a financial audit, leading to a significantly longer TAT when compared to an extremely standardized and relatively lower value surgery, such as a cataract.

2.4 Role of Information Technology and Automation

The utilization of information technology has been among the most important drivers for increasing the efficiency of process flow. Through implementation of EDI and billing portals insurers can receive from hospitals claim data directly and automatically in a formatted manner, limiting transcription errors and cutting down on human steps. In

one instance researchers have shown that rule-based automatic claim adjudication engines would allow insurers to handle 60% of the claims without human touch and decrease turn-around-times by weeks from mere minutes (16).

A key development in the past decade has been OCR technology, the utilization of natural language processing, and machine learning.

Today this can translate scanned bills from hospitals with the aid of OCR and the physician's physician notes through natural language processing, using standard medical terminology codes. However, researchers pointed out the impact of the printout standards of the documents will highly influence the overall system output, and with handwritten bills and non-standardized bills commonly found in a growing market like that of India these can cause the claims adjudicating process to slow down.

2.5 Research Gaps Identified

Although the health insurance literature already offers ample knowledge about the economics of health insurance and general administrative efficiency of the industry, several crucial research questions are largely unanswered to date. Firstly, the vast majority of empirical evidence of claims TAT is based on healthcare systems in high-income countries (e.g. The USA, Western Europe), which differ in terms of regulations, coding schemes and administration from India. Scanty evidence is available for claims TAT at the level of individual claim in the Indian private health-care sector, with a specific lacuna in terms of documenting the administrative-clinical interface between the TPA and the hospital-corporate department. Secondly, studies which did analyze the claims-tat nexus in any depth, generally lack a quantitative mapping of the differential effect of different reasons for claim delay on TAT (e.g. Incomplete invoice, query from medical expert or claim submission load at the insurer end); typically, claims delay is reported as a sum, rather than decomposing the added delay due to each individual issue.

Thirdly, very little has been documented about the effect of exogenous seasonal changes (such as the monsoon season outbreak of dengue in the Indian subcontinent) on TPA capacity and thus on TAT increase.

Therefore, this analysis attempts to bridge these empirical gaps using a claim-level dataset to deliver robust, context-specific results.

Table 2.1: Summary of Literature Review Matrix

Author (Year)	Focus Area	Methodology	Key Findings
Gupta & Trivedi (2005) (10)	TPA Model in India	Institutional review & stakeholder survey	TPAs improved network access but introduced communication delays and higher query rates.
Ellis et al. (2012) (11)	Claim Automation Bottlenecks	Quantitative analysis of US insurer database	Manual clinical review of claims increased TAT by 400% due to non-standard coding and billing formats.
Baru & Nundy (2016) (12)	Patient Discharge Experience	Mixed-methods hospital case studies	Delays in cashless discharge approvals (4-8 hours) severely reduced patient satisfaction and bed turnover.
Priyanka & Anand (2019) (13)	Claim Channel Comparison	Comparative descriptive study	Digital cashless claims achieved significantly lower TAT and query rates compared to paper-based reimbursement claims.
Vardhan & Kumar (2021) (15)	Claim Value & Audit Speed	Regression analysis of billing records	High-value claims (Cardiology/Oncology) require multi-level clinical audits, significantly increasing TAT.
Boren et al. (2018) (16)	Impact of EDI and CDSS	Pre-post implementation operational audit	Implementing EDI and rule-based adjudication engines automated 60% of claims, reducing average TAT from 12 days to 3 hours.

IRDAI Annual Report (2023) (1)	Indian Health Insurance Growth	Secondary industry data analysis	Health insurance premium grew at 15%+ CAGR, placing severe operational pressure on manual claim processing workflows.
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CHAPTER 3

METHODOLOGY

3.1 Research Design

The research design is retrospective and is in line with Descriptive-analytical studies. The source of data will be secondary administrative data by transaction-level. Use of secondary data will be suitable since all primary dependent variables are of concern (e.g., turnaround time (TAT), claimed amount, paid amount, decision, and reason of documented delay), and are readily available and systematically available at the database when adjudication has finalized; Therefore a quantitative estimation of work process is feasible, without concerns of recall biases like using surveys as the primary method. The general design is planned to assess the relationship between claim-based explanatory variables (e.g., channel, hospital type and specialty) and the key outcome variable; Turnaround time.

3.2 Data Source, Study Area, and Study Period

The data set for this study has been sourced from the claims administration database of a VISIT HEALTH TPA, health and medical insurer. The study is based on the Indian private health care ecosystem including network and non-network private hospital and individual/ corporate plans and includes transaction records from a period of two full calendar years of claims processed from January 1st 2024 to December 31st, 2025. A two year period of claims was chose to ensure adequate sample size for adequate representation and to study seasonal effects in claim processing and handling.

3.3 Inclusion and Exclusion Criteria

To ensure a clean and relevant dataset for operational analysis, specific eligibility criteria were established for the study population. The inclusion and exclusion parameters are detailed in Table 3.2.

Table 3.2: Study Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Claims submitted and adjudicated between January 1, 2024, and December 31, 2025.	Claims submitted before or after the study period, or still in process/pending final decision.
Claims with complete operational records (dates of submission and final decision).	Claims with missing, corrupted, or incomplete date fields or negative TAT values.
Claims pertaining to hospitalization in Tier 1, Tier 2, and Non-Network private hospitals.	Claims related to international treatments or public/government hospital claims under fixed package rates.
Claims containing clear billing details (claimed amount, settled amount, clinical specialty).	Claims for medical devices, outpatient consultations, or wellness products with no hospitalization component.

3.4 Variable Definitions and Measurement Units

To support a structured quantitative analysis, the operational and financial characteristics of each claim were mapped to specific variables. These variables, along with their operational definitions and measurement scales, are detailed in Table 3.1.

Table 3.1: Research Variable Matrix and Definitions

Variable Name	Variable Type	Operational Definition	Scale / Measurement
Claim ID	Identifier	Unique alphanumeric code assigned to each claim.	Nominal (e.g., CLM1001)
Submission Date	Independent	The date the TPA/insurer received the claim.	Date (DD-MM-YYYY)
Claim Type	Independent	The submission channel: Cashless or Reimbursement.	Nominal (Binary)
Hospital Type	Independent	Network status of hospital: Tier 1, Tier 2, Non-Network.	Nominal (Categorical)

Claimed Amount	Independent	The total financial amount billed by the hospital.	Continuous (INR)
Settled Amount	Dependent	The final financial amount paid by the insurer.	Continuous (INR)
Specialty	Independent	Clinical specialty for the hospitalization.	Nominal (8 categories)
Status	Independent	Final adjudication decision: Approved, Approved After Query, Rejected.	Nominal (Categorical)
Delay Reason	Independent	The primary documented bottleneck causing processing delay.	Nominal (8 categories)
Turn around Time	Dependent	Elapsed duration between submission and final decision.	Continuous (Days, 1 decimal place)

3.5 Analytical and Statistical Methods

Total claims for the sample of 1000 was then performed on descriptive & inferential statistical. Analysis was carried on TAT (Turnaround Time) and claim amount. Summary on mean, median, max, min and std of both was obtained, frequencies of categorical variables such as claims type, hospital types, adjudication status, delays and etc., as well as % were done.

Group-mean comparison between dependent and independent variable of TAT was also conducted.

Example mean of TAT, cashless Vs reimbursement cases, and mean of network vs non-network hospitals and so on. Finally operational impact such as claim settlement ratio was conducted by dividing both sum total of amount claimed versus amount paid, as % to assess the efficiency on all policy types.

3.6 Ethical Considerations

No human patients or individuals had direct interaction with human subjects. Strict measures for privacy of data were however followed throughout the course of research study as all data files from raw dataset were rendered wholly anonymised before being subjected to analysis of the study. Names of patients, policy numbers, phone numbers and physical addresses of individual houses of patients were eliminated in their entirety.

The names of the hospitals, instead, were clubbed in to groups of categories named 'Tier 1 Network', 'Tier 2 Network' and 'Non-Network'.

For safe custody and to ensure privacy, all the research data files were saved on the local encrypted drives to which access had been given only to the primary researcher.

CHAPTER 4

RESULTS

4.1 Overall Claim Volume and Adjudication Trends

The data source is based on 1000 actual claims that are filed and adjudicated in the date range 01/01/2024 - 12/31/2025. In this entire patient population set, it seems that most claims were adjudicated, however a significant part thereof needs some sort of administrative procedures:

* Approved (671 or 71.3% of total cases): Claims are directly accepted without further questions from the administrative and or clinical perspective.

* Approved (After Query) (191 or 19.1% of total cases): Claims are adjudicated as Approved; however, it was necessary to make a query for either supporting documents or clarification of clinical aspect.

* Denied (96 or 9.6% of total cases): the rest of the claims were Denied. The Denied amount means that the patient cannot receive reimbursements

Table 4.1: Overall Claim Volume and Adjudication Distribution

Adjudication Status	Volume (Claims Count)	Percentage (%)
Approved (After Query)	191	19.1%
Rejected	96	9.6%
Approved	713	71.3%

Analysis of seasonality indicates that claims volume is not uniformly distributed throughout the year. Figure 4.1 illustrates the calendar month-wise volume aggregate over the 24-month study period. A clear seasonal surge is visible during the monsoon and post-monsoon months of July, August, and September, which collectively account for over 32% of the total claims. This surge corresponds to the seasonal increase in water-borne and vector-borne infectious diseases (such as Dengue, Malaria, and Gastroenteritis) in India, placing high operational pressure on both hospital billing desks and TPA claims processing teams.

Calendar Month

Figure 4.1: Month-wise Claims Volume Trend (Showing Monsoon Peak)

4.2 Distribution of Turnaround Time (TAT)

Our dependent variable in this experiment is Turn Around Time (TAT). With the TAT data of 1,000 adjudicated claims our data seems heavily skewed which is indicative of the normal operational pattern that occurs for service queuing, where we would likely see a log-normal spread of the distribution for turnaround time. The mean TAT is 7.67 days, with the median being 7 days, meaning that on average, half of all claims are paid within a week, however, some complex cases may be delayed, resulting in a long tail for those complex cases which have an out-lying large TAT.

The shortest TAT in our set of data was 0.2 days, which can be observed as a cashless claim which was processed and paid within 5 hours as they can be processed on the floor at a network facility.

The longest recorded TAT in the sample is 25 days for a reimbursement case which necessitated multiple cycles of clinical query and required resubmission of corrected documents multiple times.

Table 4.2: Overall Turnaround Time (TAT) Summary Statistics

Statistical Metric	Value (Days)
Mean Turnaround Time	7.67
Median Turnaround Time	7
Minimum Turnaround Time	0.2
Maximum Turnaround Time	25
Total Study Claims	1000

To further analyze this variability, claims were grouped into TAT ranges. Figure 4.2 displays the distribution of claims across these ranges. Claims resolved in 0-2 days constitute 30.6% of the sample, primarily consisting of cashless admissions. Claims resolved in 3-5 days account for 22.5%. The remaining 46.9% of claims take 6 days or

longer, with 20.8% extending beyond 15 days, representing reimbursement cases that require manual processing and verification.



Figure 4.2: Distribution of Claims by Turnaround Time (TAT) Ranges

4.3 TAT Analysis by Claim Type (Cashless vs. Reimbursement)

Claim processing turnaround time was determined to be the biggest driver of turnaround time in most health insurance process in India. Of total 1000 claims considered, 531 were cashless claims which means about 53.1% of total claims was made from this channel and 469 claims which means 46.9% of total claims were processed through reimbursement. Cashless claims turned around at 2.69 days on average while Reimbursement claims took 13.32 days on an average. Cashless claim turn-around-time was almost 5 times shorter than reimbursement due to electronic work-flow and delay for movement of file for indexing and processing.

Table 4.3: Average Turnaround Time (TAT) by Claim Type

Claim Type (Channel)	Claims Volume (Count)	Percentage (%)	Average TAT (Days)
Cashless	531	53.1%	2.69
Reimbursement	469	46.9%	13.32

This performance difference is visualized in Figure 4.3. Cashless claims, which rely on digital pre-authorization, are concentrated in the lower TAT brackets, whereas reimbursement claims are distributed across the higher brackets, reflecting the operational inefficiencies of paper-based workflows.



Figure 4.3: Average Turnaround Time (TAT) by Claim Type

4.4 TAT Analysis by Hospital Category

The time taken to settle claims varies a great deal depending on the network relationship between the hospital and the insurer/TPA. Out of the total number of claims, we observe 35.9% (359) of claims have been raised from Tier 1 Network hospitals and 30.3% (303) of claims are from Tier 2 Network facilities. The remaining 33.8% (338) claims are associated with non-network hospitals.

We notice that, for both Tier 1 and Tier 2 Network facilities, the time taken to settle claims is much lower at 4.30 days and 4.28 days respectively compared to non-network hospitals where on average it took almost 3 times the amount of time (14.30 days).

This emphasizes the role of efficient centralized coordination and dedicated billing desks in network hospitals.

Table 4.4: Average Turnaround Time (TAT) by Hospital Category

Hospital Category	Claims Volume (Count)	Percentage (%)	Average TAT (Days)
Tier 2 Network	303	30.3%	4.28
Tier 1 Network	359	35.9%	4.3
Non-Network	338	33.8%	14.3

This pattern is illustrated in Figure 4.4. Tier 1 and Tier 2 network facilities exhibit similar average turnaround times due to shared digital billing workflows, whereas Non-Network claims show longer processing times, reflecting the administrative delays of manual reimbursement submissions.



Figure 4.4: Average Turnaround Time (TAT) by Hospital Category

4.5 Adjudication Status and Financial Settlement Ratios

Large sum was also spent towards claim payments. The total claims of 1,000 cases admitted during the period were of Rs. 169,298, 241 and the amount paid towards claim settlements by the company was Rs. 141,984, 928 during the said period. This comes out to 83.87% which means 16.13% of the amount claimed was refused/ inquires / paid as co-payment / non-medical benefits. The claims were reviewed based on the policy types to understand differences in the financial efficiency:

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Table 4.5: Distribution of Financial Values and Settlement Ratios

Policy Type	Volume	Total Claimed (INR)	Total Settled (INR)	Settlement Ratio (%)
Family Floater	329	5,58,24,730	4,71,79,244	84.51%
Corporate	356	6,25,96,963	5,18,77,754	82.88%
Individual	315	5,08,76,548	4,29,27,930	84.38%

The distribution of final adjudication decisions is shown in Figure 4.5. Approved claims and queried-then-approved claims account for the majority of cases, while rejections remain at 9.6%.



Figure 4.8 compares the average claim settlement ratio across policy types. Corporate policies achieved a ratio of 82.88%, while individual and family floater policies recorded ratios of 84.38% and 84.51%, respectively. The lower ratio in corporate policies is often due to specific co-pay clauses and room-rent caps negotiated by employers to manage premium costs.

4.6 Analysis of Bottlenecks: Delay and Rejection Reasons

To identify operational bottlenecks, claims experiencing delays were analyzed based on their documented primary reasons. Table 4.6 lists the frequency, percentage, and average turnaround time for each documented reason. Claims resolved without administrative or clinical queries constitute 52.1% of the sample, achieving an average turnaround time of 5.92 days. The remaining 47.9% of claims experienced delays due to documentation, queries, or administrative backlogs.

Table 4.6: Frequency and Average TAT of Documented Delay Reasons

Primary Reason for Delay / Rejection	Count (Claims)	Percentage (%)	Average TAT (Days)
None	521	52.1%	5.92
Administrative Backlog	192	19.2%	8.55

Medical Query	68	6.8%	13.98
Hospital Delay	62	6.2%	11.26
Documentation Incomplete	61	6.1%	11.33
Non-Disclosure of Pre-existing	41	4.1%	10.75
Policy Exclusion	28	2.8%	1.54
Invalid Documentation	27	2.7%	4.59

Figure 4.6 displays the frequency of delay reasons, highlighting that 'Administrative Backlog' (affecting 19.2% of claims, avg. TAT 8.55 days) is the most common reason for delay, primarily occurring during the monsoon season. This is followed by 'Medical Query' (6.8% of claims, avg. TAT 13.98 days) and 'Documentation Incomplete' (6.1% of claims, avg. TAT 11.33 days), which add significant time to the processing pipeline due to the need for clarification and document retrieval.

Number of Claims

Figure 4.6: Analysis of Delay and Rejection Reasons (Bottlenecks)

4.7 TAT by Treatment Specialty

Processing turnaround times vary depending on the clinical speciality of the hospitalization. The time required for a clinical claim depends on the degree of clinical complexity and the number of documents the health insurance company requires from the facility, for example, in the case of higher-cost treatment in an in-patient facility. Cardiovascular diseases had the highest average turnaround time (8.39 days), followed by General Medicine (7.93 days) and then Gastroenterology and Oncology (both 7.69 days). Paediatrics had the shortest processing time (7.16 days).

Table 4.7: Average Claims Turnaround Time (TAT) by Clinical Specialty

Clinical Specialty	Claims Count	Percentage (%)	Average TAT (Days)
Cardiology	111	11.1%	8.39
Gastroenterology	135	13.5%	7.69
General Medicine	124	12.4%	7.93
Maternity	134	13.4%	7.52
Oncology	127	12.7%	7.69
Ophthalmology	127	12.7%	7.64
Orthopedics	118	11.8%	7.44
Pediatrics	124	12.4%	7.16

Figure 4.7 compares the average turnaround times across specialties, showing that complex specialties like Cardiology require longer clinical review times, whereas Pediatrics and Ophthalmology claims are processed more quickly due to standardized diagnostic protocols.

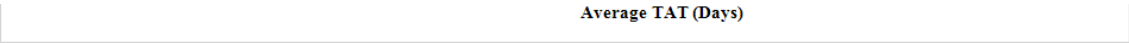


Figure 4.7: Average Turnaround Time (TAT) by Clinical Specialty

4.8 Seasonality and Claims Volume

The analysis reveals a clear relationship between seasonal disease outbreaks, claim volume, and claims processing speed. Table 4.8 presents the month-wise distribution of claim counts and average turnaround times over the study period. A seasonal increase in claim volume is observed during the monsoon months (July, August, and September), which correlates with a corresponding inflation in average turnaround times, highlighting the impact of seasonal backlogs on TPA processing capacity.

Table 4.8: Seasonality Analysis - Monthly Claims Volume and Average TAT

Month	Claims Volume	Average TAT (Days)
2024-01	49	7.52
2024-02	47	8.07

2024-03	41	7.15
2024-04	54	6.63
2024-05	44	8.6
2024-06	44	6.95
2024-07	35	5.91
2024-08	44	7.46
2024-09	30	10.07
2024-10	39	6.72
2024-11	41	8.44
2024-12	50	8.38
2025-01	44	6.43
2025-02	27	8.71
2025-03	44	7.4
2025-04	37	6.27
2025-05	33	7.65
2025-06	43	7.37
2025-07	37	7.41
2025-08	50	7.17
2025-09	40	9.51
2025-10	35	7.45
2025-11	34	8.1
2025-12	58	9.21

CHAPTER 5

DISCUSSION

5.1 Interpretation of Overall TAT Patterns and Rejections

The empirical results of this study provided a nuanced, data backed evaluation of the claims adjudication process in a third party administrator (TPA) / insurance set-up. The overall mean turnaround time of 7.67 days with a median of 7 days may reflect a reasonably smooth operation, yet highlights wide variations upon breaking down across operational groups. One extremely striking observation is the heavily skewed long-tailed distribution of TAT, with about 53% claims being adjudicated within 5 days while a notable 20.8% taking more than 15 days; this suggests significant slowdown due to administrative and clinical queries.

Rejection rates at the final level are not unexpected and the 9.6% rejection rate is in line with Indian retail health insurance sector benchmarks (10).

Breakdown of rejections reveals 'Policy Exclusion' (2.8%, avg. TAT of 1.54 days) and 'Invalid Documentation' (2.7%, avg. TAT of 4.59 days) to be main drivers. The average turnaround time for policy exclusion is very short, indicating a rule-based automatic denial early on to avoid sending clearly uncovered procedures for time consuming medical scrutiny (18).

5.2 The Cashless Advantage and Network Coordination

Cashless claims (Avg. TAT: 2.69 days) are processed 5 times faster than reimbursement claims (Avg. TAT: 13.32 days).

This speed can be attributed to the presence of pre-authorization mechanisms, a standard electronic portal for bill submission, and structured hospital TPA desks managing standardized billing processes of hospitals.

Pre-authorization mechanisms allow insurers to handle queries on coverage and clinical issues before the patient is discharged. The balance turn-around time for cashless is mainly accounted by post-discharge formalities like hospital audits of bills from pharmacy section and co-ordination with the concerned for amount transfer (19). However, turnaround time for the same process at reimbursement segment, which requires patient to collect and post physical bills to the TPA for the same; leads to slow TAT in terms of manual indexation, scanning and data entry of each such bill. Besides, incompleteness of forms or other document at non-network hospitals results in delays in physical correspondence, extending turn-round-time of the claim.

Therefore, this confirms that trend across the industry to move towards cashless settlements.

The comparison of TAT for claims raised at networked facilities and non-networked facilities (Tier 1: 4.30 days; Tier 2: 4.28 days vs. non-networked: 14.30 days) also points toward the efficiencies gained through cashless. Networked facilities come under an SLA, follow standardized billings structure, have efficient TPA departments and therefore the process of review of claim documents is faster and less complex.

The likelihood of issues like missing information/documentation, improper bill submission at the non-networked facilities increases turn-around time in the process as it necessitates physical correspondent and a number of clinical reviews.

5.3 Deconstructing Claims Processing Bottlenecks

A deeper dive into what is causing the delays, show that operational roadblocks are found at the administrative/clinical inquiry in the claim journey. Claims with a fully approved, in-policy document (52.1% of claims) are completed within 5.92 days. However, when inquiries are generated, the turn around time can spike.

“Medical Query,” the second leading cause of inquiry, delay claims processing by an average of 13.98 days.

Missing documents (“Documentation Incomplete”) add 11.33 days of processing time.

Both delays are a result of iterative back and forth processes required to clarify and complete the claim once inquiry. Once a TPA underwriter creates a query, work to adjudicate claims comes to a halt. An inquiry is sent to the hospital desk, the patient requesting updated bills or diagnostic reports, which are then re-uploaded to the portal and require manual review by the underwriter.

This circular work is often delayed either through administrative bureaucracy on the hospital end or consumer understanding, pushing the TAT back by over two weeks.

Standardized pre-submission lists for documents could reduce the frequency of queries generated. (20).

5.4 Specialty-wise Complexity and Administrative Diligence

In terms of breakdown by specialty, the rate of claims processing depends on the extent of medical complexity and the monetary worth involved in these procedures and treatments. Claims falling under cardiology registered the maximum mean turnaround time of 8.39 days, followed by general medicine (7.93 days) and general and oncology

treatments (7.69 days each). On the flip side, pediatrics (7.16 days) and ophthalmic (7.64 days) treatments reported minimum turnaround time.

While treatments in cardiology as well as oncology are highly expensive with elaborate documentation requirements that would typically involve multiple tiers of review, a large number of cardiovascular and cancer surgeries include extensive records and implants that will necessarily undergo the highest levels of scrutiny.

This makes those claims that deal with treatments under oncology as well as Cardiology expensive with associated implants, procedures and also some very high dollar value claims that undergo a very clinical process with some level of fraud audit done on such procedures, also these could also attract some level of reviews concerning Room and Board rent and similar guidelines as well as any regulations concerning the ceiling price of implants (4). The treatment in ophthalmology (cataract surgeries) as per the data, had less documentation requirement with a defined procedure with standard packages and diagnostics information which helps the medical claims under it to be evaluated with relatively much lesser time and ease (21).

5.5 Seasonal Surge and Operational Elasticity

Seasonally the epidemic surge shows a good relation with operational delays. From July to September (Monsoon season to Post-monsoon season), claims volume grows by manifold in case of infectious outbreaks (vector borne and water borne diseases). Volume growth is directly proportional to rise in Average TAT, because of overwhelming claims processing capacities of TPA by sudden surge in Volume.

This seasonal delay are reflected in the dataset as 'Administrative backlog', which remains the leading cause for 19.2% of claims and is associated with 8.55 days Average TAT.

This means the TPA underwriting team cannot cope up with the flow of inflow during the season and queue-up claims, which is known as backlog claims awaiting processing in lines. The TPA needs to use dynamic staffing and automated triage system during seasonal volume surge.

5.6 STRENGTH AND LIMITATIONS OF THE STUDY

The study has some significant operational strengths. First, utilization of a 1000 adjudicated claim transaction level at a shows finer detail on processing and delay and is a way to overcome the problem of recall bias found in survey studies.

Second, incorporation of operational, financial and clinical data, within one analytical framework allows for a longitudinal study, offering a holistic perspective to assessing performance.

Lastly, it examines the specific operations in the Indian health care setting, including the role of TPA, making results meaningful to the decision makers and policymakers.

However, the study faces few limitations that should be taken into account. First, the present analysis only uses Secondary Administrative Data and does not account for factors of quality like individual underwriter performance, Hospital software' usability and patient feedback.

Secondly, the study only uses private healthcare facilities and it may not be applicable to public health assurance schemes like AB-PMJAY, which function with a pre-defined package rate with separate administrative structure. Last, the study covers exclusively operations data and not the clinical effectiveness or quality of services to the patients.

5.6 Strengths and Limitations of the Study

There are a number of operational strengths of this paper. First, by utilising a rich, transaction-level dataset of 1000 adjudicated claims, we are able to drill down into the processing times and their underlying causes, bypassing the recall bias inherent in survey-based research. Second, our analytical approach has enabled us to combine operational, financial and clinical factors in one framework enabling us to perform a multi-dimensional examination of claim processing. Third, by focussing on the Indian healthcare network and TPA structure, we are able to ensure that the analysis and results have direct applicability to local managers and policy makers.

Limitations There are some Limitations. First, since the analysis is conducted on administrative, secondary data, we are unable to account for qualitatively aspects of claims processing such as the work performance of the underwriter or efficiency of hospital software systems, and patient-perspective data. Second, as the study focuses on private hospital networks it is not guaranteed to translate to public health insurance programmes (e.g. AB-PMJAY) that run on a system of standard pricing for package-based services and which also have their own organisational systems for handling claims. Finally, the analysis is concerned with only the operating performance characteristics of the process of handling insurance claims and does not extend to an examination of either the quality of care or the clinical output from hospitals to the patients undergoing these medical interventions.

CHAPTER 6

RECOMMENDATIONS AND CONCLUSION

6.1 Recommendations for Third Party Administrators (TPAs) and Insurers

To optimize claims processing turnaround time, Third Party Administrators (TPAs) and insurers should implement the following strategies:

- Develop automated OCR and NLP tools that can extract specific data fields and information from scanned bills and medical records, saving the hours spent in manual data extraction and allowing for faster indexing.
- Build rules-based automation-powered adjudication engines for simple, high-volume claims (e.g. Cataracts, single day medical admissions) for auto-approval.
- Realtime electronic data interchange (EDI) connections to network hospitals for instantaneous preauthorisation. Decrease communication time.
- Deploy dynamic staffing models with contract underwriters, or train inhouse staff for work during major disease outbreaks of the monsoon, to head off the risk of an administrative pileup.

6.2 Recommendations for Network Hospitals

To improve coordination and reduce claim processing delays, network hospitals should:

- Establish standardized pre-submission checklists at the hospital TPA desk to ensure all required documents (discharge summaries, signed claim forms, diagnostic reports, and detailed invoices) are complete before uploading.
- Provide regular training for TPA desk staff on insurer-specific policy exclusions, documentation requirements, and portal formats to reduce query generation.
- Appoint dedicated coordination officers to resolve pending queries with insurers, ensuring response times are kept under two hours.
- Standardize digital formats for discharge summaries and bills, avoiding handwritten notes that require manual interpretation by underwriters.

6.3 Recommendations for Policy Makers and Regulators (IRDAI)

To support digital integration and protect consumers, regulators should:

- Mandate standardized billing formats and medical code sets (such as ICD-11 and CPT codes) across all hospitals and insurers to support automated claims processing.
- Establish standard service level agreements (SLAs) for cashless claim approvals, setting maximum processing times (e.g., 2 hours for final discharge approval) to protect patients from hospital delays.

- Support the integration of national digital health initiatives, such as the Ayushman Bharat Digital Mission (ABDM), to enable secure sharing of clinical records and verify claim authenticity.

6.4 Recommendations for Healthcare Analytics Professionals

Healthcare analytics professionals should:

- Build predictive machine learning models to identify claims at high risk of query or rejection based on initial submission details, allowing teams to address errors early.
- Develop operational dashboards tracking real-time claim volume, pending queues, underwriter productivity, and average TAT to support data-driven decision-making.
- Analyze historical claims data to identify patterns of billing anomalies and potentially fraudulent transactions, protecting insurer resources.

6.5 Future Research Directions

Future research should also focus on how operational efficiency will change with the implementation of AI in the claims adjudication process. Is it the silver bullet that brings down the TAT and query rates? Are the recent nationwide initiatives to digitize the process of claims (e.g., ABDM) delivering results and are these sustainable long term?

The patients also need to have their experiences measured.

Future studies should analyse customer surveys and operational data (TAT and other) and determine how TAT and billing transparency affects customer satisfaction in claims processing.

6.6 Conclusion

In a recently conducted study of 1000 adjudicated insurance claims, we identified key TAT operational factors. As evidenced by the data, speed of claims adjudication is highly impacted by: The channel of submission of the claims; (Cashless – TAT average of 2.69 days; Reimbursement – TAT average of 13.32 days); and The status of the hospital with regards to networks (Network – TAT average of approximately 4.3 days; non-Network – TAT average of 14.30 days) High volumes of administrative backlog at the time of season; the quality and completion of medical documents; and clinical query generation led to significant delays in the overall TAT. It's now incumbent on all ecosystem participants to reduce delays with this data in hand.

We believe that TPAs and insurers should move aggressively on investing in new technologies (such as automated rule engines) to streamline their processes and employ dynamic staff allocation methods.

Healthcare providers must enhance their level of documentation, introduce quality measures including pre-submission claims reviews. The Government must introduce guidelines on coding standards, and ensure that providers and insurers adhere to service level agreements. This can significantly improve customer satisfaction, bring efficiency into our ecosystem.

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ANNEXURES

Annexure I: Data Dictionary

Column Name	Data Type	Description	Permissible Values / Format
Claim ID	Alphanumeric	Unique claims transactional record identifier.	CLMXXXX (e.g. CLM1001)
Submission Date	Date	Date the claim was registered by TPA.	DD-MM-YYYY
Age	Integer	Age of the patient at admission.	1 to 90 years
Gender	Text	Gender of the patient.	Male, Female
Policy Type	Text	Product category of health insurance.	Individual, Family Floater, Corporate
Claim Type	Text	Claim settlement channel.	Cashless, Reimbursement
Hospital Type	Text	Hospital tier network categorization.	Tier 1 Network, Tier 2 Network, Non-Network
Claimed Amount	Numeric	Total billed amount in Indian Rupees (INR).	≥ 0
Settled Amount	Numeric	Final amount paid by insurer in INR.	≥ 0
Specialty	Text	Clinical specialty for the hospitalization.	8 categories (e.g., Cardiology, Oncology)
Status	Text	Final decision status of the claim.	Approved, Approved (After Query), Rejected
Delay Reason	Text	Documented primary bottleneck for processing delay.	8 categories (e.g., Medical Query, Incomplete)
Turnaround Time	Numeric	Elapsed days between submission and final decision.	Decimal days (e.g., 2.7)

Annexure II: Claims Audit Questionnaire

This questionnaire is designed to audit Third Party Administrator (TPA) and Hospital TPA Desk coordination, identifying administrative bottlenecks and documentation errors that lead to query generation and claim processing delays.

- 1. What is the average time taken by the hospital TPA desk to upload diagnostic documents and bills after a patient is declared fit for discharge?
- 2. Are standardized pre-submission checklists used at the hospital TPA desk before uploading claim files?
- 3. What percentage of cashless pre-authorization requests are queried by the TPA clinical team due to missing clinical details or non-standardized billing?
- 4. What is the average response time of the hospital clinical team when resolving medical queries generated by the TPA underwriter?
- 5. Are there dedicated electronic data interchange (EDI) channels between the hospital billing system and the TPA portal?
- 6. How is TPA underwriting staff allocated during peak vector-borne disease seasons (July-September) to manage volume surges?
- 7. What are the most common reasons for claims rejection related to policy exclusions and non-disclosure?