AN ANALYTICAL STUDY OF REJECTIONS IN CASHLESS HEALTH INSURANCE CLAIMS AND THEIR TRANSITION INTO REIMBURSEMENT CLAIMS IN INDIA

Dissertation Submitted to

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in

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by

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Under the Supervision and Guidance of

Dr. Mamta Chauhan

2025

care HEALTH INSURANCE

BEST HEALTH INSURANCE COMPANY IN RURAL SECTOR | CLAIMS SERVICE LEADER OF THE YEAR
INDIA INSURANCE SUMMIT & AWARDS 2024

CERTIFICATE

This is to certify that **Ila Gupta,** in partial fulfillment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur, has successfully completed her internship at Care Health Insurance Ltd. during Mar 10 - May 31, 2025.

Place: Gurgaon
Date: 05/06/2025

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Manager- Claims Adjudication
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CERTIFICATE FROM FACULTY GUIDE AND SCHOOL DEAN

This is to certify that the dissertation titled **"An analytical study of rejection in cashless health insurance claims and their transition into reimbursement claims in India"** is a record of the research work undertaken by Dr. Ila Gupta in partial fulfillment of the requirements for the award of the degree of MBA (Hospital & Health 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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DECLARATION BY STUDENT

I hereby declare that this dissertation titled **'An analytical study of rejection in cashless health insurance claims and their transition into reimbursement claims in India'** 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 Information derived from the published or unpublished work of others has been duly acknowledged in the text.

Signature

Date: 17/06/2025

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LIST OF ABBREVIATIONS:

CHIL	**Care Health Insurance Ltd.**
IRDA	**Indian Regulatory and Development Authority of India**
OPD	**Out patient Department**
IPD	**In Patient department**
SAHIS	**Stand alone health Insurance**
TAT	**Turn Around time**

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ABSTRACT

INTRODUCTION:

In India's expanding private health insurance market, cashless claims are designed to offer uninterrupted financial cover while being hospitalized. A large percentage of these claims, however, end up being rejected, forcing the policyholder to seek reimbursement—a process that is time-consuming and more administration-heavy. This research explores the rate and reasons for cashless claim rejections, their conversion into reimbursement claims, and the relative efficiency of both types of claims.

METHODOLOGY:

A descriptive-analytical study design was followed with a simulated dataset of 400 health insurance claims based on actual industry trends. The dataset contained variables representing rejection causes, reimbursement filing status, and turnaround time (TAT). Descriptive statistics, chi-square, and independent samples t-tests were utilized to study patterns and test hypotheses regarding claim outcomes and processing efficiency**.**

RESULTS:

30% of the 400 claims were rejected at the cashless point. Of these, 70.8% were subsequently submitted for reimbursement. Errors in documentation were the most frequent cause of rejection at 37.5%, followed by exclusions under policy and non-network hospitalization. While descriptive variation in reimbursement filing rates by reason for rejection was noted, the chi-square test did not detect a statistically significant relationship ($p = 0.075$). Nonetheless, a significant TAT difference was observed: cashless claims were 5.1 days on average, whereas reimbursement claims were 14.3 days on average, which difference was verified by t-test ($p < 0.001$).

CONCLUSION:

The research finds rampant over-reliance on reimbursement after cashless rejection, mostly because of procedural avoidability. The undue delay in reimbursement settlement points to process inefficiencies and a call for systems improvement. The insurers need to invest in electronic documentation tools, more transparent policy communication, and enhanced hospital coordination for lower rejection rates and better customer experience.

KEY WORDS: Claims rejection, Reimburement, Cashless rejection, IRDA

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Health insurance has emerged as a critical pillar in ensuring access to timely and quality healthcare services, particularly in a country like India where out-of-pocket expenses remain a significant burden on the average household. Over the past two decades, the health insurance sector in India has witnessed remarkable growth, both in terms of penetration and diversity of products. The industry has been driven by the rising cost of healthcare, growing health awareness among the public, and government policy interventions such as schemes like Ayushman Bharat. With more and more insured people, the effective processing of health insurance claims assumes top priority.

An intrinsic part of the business of health insurance is the process of claims. It is in the claim that the policyholder gets the real value of insurance protection. In India, the most prevalent forms of claim settlement are cashless and reimbursement. Under a cashless claim, the insured gets treated in a network hospital, and the bill is paid by the insurance company directly to the provider of healthcare. This centre is aimed at reducing the economic burden of hospitalization and ensuring rapid access to treatment. In contrast, the reimbursement pathway demands that the insured person pay out-of-pocket and subsequently file the supporting documents to reclaim the same from the insurer.

According to IRDAI and industry statistics, the health insurance sector has registered CAGR of more than 20% in recent years. Digitization measures have contributed to increased cashless networks, but the absence of uniform hospital on boarding and inconsistent TPA practices continue to affect claim performance. Network hospitals vary from small regional facilities to big tertiary-care private chains. Rejection rates differ considerably depending on how compliant hospitals are with insurer documentation requirements.

In spite of the advantages of the cashless system, a large share of the cashless claims is rejected. Such rejection is mostly because of document mistakes, policy exclusions, treatment in non-network hospitals, or procedural defaults. When a cashless claim is rejected, policyholders often resort to the reimbursement route to recover the expenses incurred. Even though this secondary channel facilitates cost recovery, it is often time-consuming and administratively intensive. This is a concern that brings into question the efficiency of the cashless system and its influence on the general satisfaction of customers.

1.2 PROBLEM STATEMENT

The test of truth in the relationship between a health insurer and an insured usually comes when there is a claim. If the claim, especially a cashless one, is denied, it leads to erosion of trust, causes financial inconvenience, and lowers customer satisfaction levels. Insurers may be justified in denying a claim, but the experience for the customer is

negative, particularly if they are required to pay upfront and go through the long reimbursement process. When policyholders face rejections in cashless claims, their expectation of smooth service is broken. Repetitive negative experiences cause them to lose confidence in the insurance product, causing them to hesitate in policy renewals and recommendations. This degrades the perceived value of health insurance.

There is a requirement to learn how many cashless claim rejections are done and what happens to the rejections done. In particular, out of these rejected claims, how many are thereafter filed under the reimbursement process? Is the basis of rejection an influencing factor as to whether a policyholder will go in for reimbursement or not? Further, does the turnaround time (TAT) vary markedly between directly approved cashless claims and those approved subsequent to reimbursement filing? Responding to these questions can give way to enhancing the claim process and the customer's experience.

1.3 RESEARCH QUESTIONS

The main research question is:

Why are some cashless health insurance claims rejected, and how many of them are subsequently processed as reimbursement claims?

Sub-questions are:

- What are the most frequent causes of rejection of cashless claims?
- Is there a statistically significant correlation between the reason for rejection and the probability of claiming reimbursement?
- Is there a statistically significant difference in turnaround time (TAT) between cashless and reimbursement approvals?

1.4 OBJECTIVES OF THE STUDY

This research is based on the following research objectives:

1. To determine and classify the common causes of rejection of cashless claims in health insurance.

2. To establish the percentage of rejected cashless claims that are subsequently sent as reimbursement claims.

3. To investigate if the reason for rejection has a strong relationship with the ruling to claim for reimbursement.

4. To contrast the turnaround times for direct cashless approval and claims processed by way of reimbursement upon rejection.

1.5 RATIONALE AND SIGNIFICANCE

This study is important for various stakeholders in the health insurance value chain. For insurance companies, it is important to know patterns and implications of cashless claim rejections so as to drive operational enhancements, minimize unnecessary administrative work, and enhance customer satisfaction. Excessive rejection rates followed by reimbursement claims could imply that the rejection was unnecessary, indicating hospital network management shortcomings, documentation process issues, or policy communication breakdown.

From the point of view of a policyholder, being rejected for a cashless claim can be a harrowing and money-straining ordeal. If a high percentage of such rejected claims are paid in the end, it means that the initial rejection might have been avoided. Minimizing such occurrences would not only make the claims process easier but also enhance trust in the insurance product.

In addition, this research has academic and practical significance. Whereas consumer complaints and anecdotal accounts imply extreme dissatisfaction with claim processes, little empirical research exists that investigates this matter in an organized form. Through statistical examination of the trends in cashless rejection of claims and consequent filing of reimbursements, this research aims to identify data-driven foundations for enhancing insurance operations and policyholder satisfaction.

1.6 SCOPE OF THE STUDY

The study's scope is concentrated on the process of settlement of claims for the private health insurance market in India. It further concentrates on tracing the path of claims which were originally presented under the cashless facility but later rejected. The study also traces these claims further to see how many were subsequently presented for reimbursement and compares disparities in processing times.

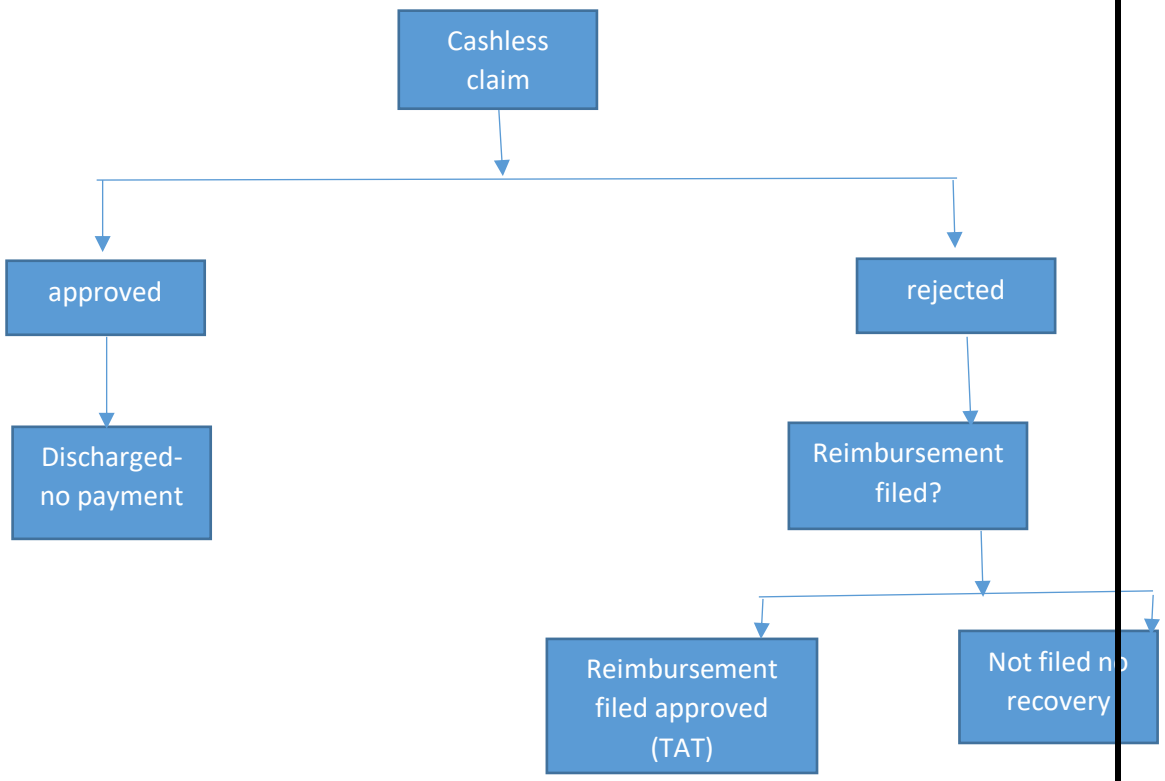
The analysis is conducted on a simulated dataset of 400 health insurance claims, with variables including claim status, reason for rejection, reimbursement filing, final outcome, and turnaround time. Although the data are simulated, they are modelled closely on real-life patterns in the industry, so the insights are transferable to real-world environments.

The research does not incorporate qualitative feedback from policyholders or claim processing units. It does not also consider variations by regions, health insurance policy types, or public sector insurance business. Future studies can extend these aspects to capture a comprehensive perspective.

1.7 CASHLESS TO REIMBURSEMENT PHENOMENA

1. A key trend observed in literature and professional experience is the re-submission of rejected cashless claims as reimbursement claims. This phenomenon is a key inefficiency within the health insurance system, placing greater financial pressure on the patient and administrative redundancy on all parties.

2. Statistical data by the Economic Times (2025) bring out this trend, especially in Gujarat, where 67% of claims are being settled through reimbursement against a mere 29.43% through cashless mode. This is a striking contrast to the national average where 60.60% of claims are being settled cashlessly and only 36.68% through reimbursement. These figures point towards a systemic problem in which the cashless claims are being rejected at higher ratios in some areas, compelling patients to go in for reimbursement instead.
3. Insurance practitioner expertise supports this trend, and it is cited that most claims rejected at first in the cashless process return later as reimbursement claims and are thereby approved. This indicates that a rejection could not be necessarily because of invalid claims but due to procedural, documentation, or timing errors inherent in the cashless process.
4. The reasons for this phenomenon are strict pre-authorization rules, time pressure during admitting, varying meaning of policy terms at preauthorization and post-treatment review, and maybe strategic denial to postpone payment. The consequences are serious: patients experience upfront payment burden and delayed reimbursement, hospitals deal with redundant processes, and insurers pay more administrative costs for handling the same claim twice in two ways.
5. Regulatory acknowledgment of this trend is found in IRDAI's recent 100% cashless claim settlement mandate, with reimbursement being allowed only in rare cases (WTW, 2024). This regulation specifically deals with the cashless-to reimbursement conversion trend, recognizing its prevalence and effect on the health insurance environment.



1.8 CASHLESS VS REIMBURSEMENT CLAIMS

CASHLESS CLAIM	REIMBURSEMENT CLAIM
Visiting a hospital that is on the insurance company's network list (also known as an empaneled hospital) is required for a cashless claim. In this case, the invoices are paid directly by the health insurance.	When it comes to claim reimbursement, the insurer pays for the treatment up front and then submits the invoices and other specified documentation to the insurer for approval.
All treatment costs are paid for directly by the insurance company under the terms and conditions of the policy.	After paying bills, the insured submits a claim for reimbursement.
Preauthorization is necessary for cashless claims when a hospital stay is scheduled.	Approval of the claim is not necessary.
In general, the procedure takes less time.	Takes more time to handle claims.
Only network hospitals are eligible to accept cashless claims.	Any hospital may submit a reimbursement claim; however, there are some restrictions.
Claim transparency is high as it is tracked in real time.	Claim transparency is moderate as it is dependent on insurer communication.
Rate of rejection is around 20-35%.	Rate of rejection is around 10-15% (usually after initial denial)

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter provides an overview of the current literature pertaining to the cashless health insurance claim process, rejection rates of claims, the shift away from cashless claims towards reimbursement claims, and turnaround times (TAT) for the health insurance sector. Familiarity with the current knowledge base is essential in order to position the current study appropriately and highlight gaps that the current research hopes to fill.

Author (Year)	Study Location	Sample size	Sampling Technique	Salient Features
Nandi et al. (2021)	Delhi, India	Not specified	Case-based analysis	Various research papers have identified the factors behind the rejection of cashless health insurance claims. Major reasons are: **1. Policy Exclusions:** Procedures that come under policy exclusions like cosmetic surgery, dental care, or pre-existing conditions are usually rejected (IRDAI Annual Report, 2021). **2. Lack of Documentation:** Incomplete or inaccurate medical reports, investigation reports, and authorization forms may lead to delayed or rejected claims (Bajaj Allianz, 2020). **3. Non-network Hospitalization:** If the policyholder gets hospitalized in a non-network hospital, the insurer can deny the cashless claim and suggest reimbursement filing (ICICI Lombard, 2019). **4. Delayed Intimation:** Certain insurers require intimation of claims within 24 hours of hospitalization; otherwise, the claim can be rejected (Religare Health, 2021). 5. Mismatch in policy data: Errors in patient name, policy number, or age can flag claims during processing. 6. Lack of pre-authorization approval: Even when treatment is eligible, missing the pre-auth step leads to claim denial.

Author (Year)	Study Location	Sample size	Sampling Technique	Salient Features
				7. Delayed discharge summaries: Discharge summary not matching final diagnosis or lacking medical justification can raise queries. Study by Nandi et al found over 40% of cashless claim rejections due to documentation errors in a tertiary care hospital. Emphasized need for better front-end systems and staff training.
Sharma & Singh (2018)	India	Not specified	Survey-based	Identified that policyholders' lack of awareness regarding insurance policy terms led to frequent avoidable rejections in cashless claims. Advocated for consumer education.
Iyer & Basu (2021)	India	Approx. 500 cases	Retrospective observational	When cashless claims are rejected, the insured is still able to reclaim expenses through the reimbursement process. Although this provides an opportunity for a second claim settlement attempt, it is typically thought of as more inconvenient because of paperwork, delayed payments, and absence of real-time support. According to a study by Iyer and Basu (2021), 72% of those whose cashless claims were rejected did ultimately submit reimbursement claims. 90% of these were settled, suggesting that most were avoidable rejections due to poor documentation or contact. Reimbursement claims also impose a heavy administrative cost on insurers, including manual checks and extra scrutiny.
Gupta et al. (2021)	India	Not specified	Regression analysis	A number of researchers have utilized statistical methods to analyse claim patterns, rejection cause, and reimbursement trends. The Chi-square test is commonly utilized to find out if there is a meaningful association between categorical variables like rejection reason and reimbursement filing. In the same way, independent samples t-tests aid in comparing mean TATs between cashless and reimbursement claims. A regression analysis was employed by Gupta et al. (2021) to forecast claim rejection against parameters like age, hospital category, cost of treatment, and documentation completeness. They reported that non-network hospitalization and errors in documentation were the strongest predictors of rejection.

Author (Year)	Study Location	Sample size	Sampling Technique	Salient Features
Narayan et al. (2022)	India	Not specified	Survey	Highlighted that longer turnaround times (TATs) for reimbursement claims led to customer dissatisfaction and increased grievances to regulatory bodies.
Jain et al. (2020)	Multiple private insurers	Not specified	Comparative Analysis	Reported cashless claim rejection rates between 25-35%, mostly due to administrative issues. Suggested insurer-hospital communication reforms.
Srivastava & Mehta (2021)	India	300+ claimants	Primary interviews	Found policyholders actively filed for reimbursement after cashless rejection; persistence linked with previous claim experience and hospital support.
Dasgupta et al. (2018)	Urban India	Not specified	Narrative Review	Discussed the role of digital tools in minimizing rejections. Recommended pre-authorization dashboards and insurer-hospital integration.
Patel & Maheshwari (2019)	India	Not specified	Case Study	Emphasized that reduced TAT and lower rejection rates are key to increasing customer loyalty. Suggested KPI tracking for claims.
IRDAI (2022)	India	Not applicable	Regulatory data	Annual report noting insurer performance, emphasizing reasons for claim rejection and need for standardization in cashless processes.

2.2 Gaps in the Literature

Although the current literature gives insights into health insurance claim operations, there are some gaps:

• Preliminary studies have very few cases quantifying the percentage of rejected cashless claims that get reimbursed.

• Little research has contrasted TATs between claim types using actual or simulated datasets.

• Few studies pay sufficient attention to the decision-making behavior of policyholders after rejection.

• A majority of the studies are either insurer-specific or qualitative interview-based with small sample sizes.

This research tries to fill these gaps by examining a structured dataset to find:

1.Rejection rate of cashless claims.

2.Percentage of those claims that are filed as reimbursements.

3.Statistical correlation between rejection causes and filing of reimbursement.

4.Difference in TAT between directly approved cashless claims and reimbursement claims after rejection.

2.3 Conclusion

The literature examined in the chapter emphasizes the intricacy of the process involved in health insurance claims and draws attention to the demands for better systems, enhanced communication, and effective policyholder education. The studies examined reveal that although cashless facilities provide utmost convenience, procedural lapses typically result in their rejection. Policyholders make do by shifting to the reimbursement mode, however, at the expense of time and effort.

There remains a gap in literature concerning the systematic analysis of rejected cashless claims and their journey into reimbursement, along with a statistical examination of turnaround time differences. This study aims to bridge that gap and provide actionable insights for insurers and policymakers alike. The following chapter outlines the methodology adopted to achieve the study's objectives and answer the research questions raised in Chapter 1.

CHAPTER 3: METHODOLOGY

3.1 Study Design

The research adopts a descriptive and analytical study design. The descriptive section seeks to systematically enumerate the causes of cashless claim rejections and identify the percentage that roll over into reimbursement claims. The analytical section is concerned with hypothesis testing through quantitative approaches to assess statistical associations and differences in turnaround times (TAT).

This blended approach makes it possible to have an organized way of knowing patterns, causes, and effects within the claims cycle, and from realistic but simulated data, meaningful conclusions can be derived.

3.2 Population and Sample

The target population of the study are all the health insurance claims that were originally filed as cashless in the private sector in India. As having access to proprietary data from insurance companies may be limited by confidentiality and commercial considerations, the study draws on a simulated dataset based on actual industry trends, expert consultation, and secondary research.

•Sample Size: There are 400 claims covered.

•Sample Distribution:

- **o Cashless Approved:** 280 claims (70%)
- **o Rejected Cashless:** 120 claims (30%)
- **o Reimbursement Filed in Rejection:** 85 out of 120 rejected claims (70.8%)

This sample is large enough to be statistically sufficient for exploratory analysis and hypothesis testing with chi-square and t-tests. Cochran's formula for categorical data confirms that this sample size is appropriate with a confidence level of 95% and a margin of error at approximately 5%.

3.3 Data Sources

The study relies on a secondary dataset that has been simulated from insurance firm reported trends, IRDAI annual reports, research studies, and expert interviews. The variables covered in the dataset are:

- Claim ID
- Claim type (reimbursement or cashless)
- Claim status (rejected, approved)
- Reason for rejection
- Did reimbursement get filed

- Turnaround time (in days)

Although the data is artificial, it generates realistic variance and distribution based on publicly provided statistics and practitioner input, lending credibility to the study.

3.4 Variables and Operational Definitions

Dependent Variables:

• Filing of reimbursement (Yes/No)

• Turnaround time (in days)

Independent Variables:

• Reason for rejection (e.g., documentation error, policy exclusion, non-network hospital)

Control Variables:

• Type of hospital (network or non-network)

• Claim amount (not directly analysed but included in rejection reasons)

Turnaround Time (TAT):

Defined as total number of working days from claim registration to final communication of settlement or rejection.

Reimbursement Filing:

Considered valid only if complete documentation was submitted post-cashless rejection.

3.5 Data Collection Procedure

As this is a retrospective study on simulated secondary data, no explicit fieldwork was undertaken. The data structure was established by Excel and SPSS, with inputs based on:

- IRDAI claim data reports
- Industry whitepapers (Deloitte, KPMG, CII)
- Survey reports of insurers
- Academic journal case studies of claim processing

Every claim was labelled with identifiers, mode of claim, reason codes, and outcomes to enable sorting and filtering for analysis.

3.6 Analytical Framework and Statistical Tools

In order to check the research hypotheses, the following statistical procedures were used:

1. **Statistics**

   o Frequencies and percentages of rejection and reimbursement status

   o Mean and standard deviation of TAT

2. **Chi-Square Test of Independence**

   o Used to check whether reason for rejection is significantly related to the probability of filing a reimbursement claim.

   o Hypothesis:

    H0: No relationship between reason for rejection and filing of reimbursement.

    H1: There exists a relationship between reason for rejection and filing of reimbursement.

3. **Independent Samples T-Test**

   o Used to compare mean TAT between:

      a) Direct cashless approvals

      b) Reimbursement claims after rejection

   o Hypothesis:

      H0: There is no difference in TAT between the two groups.

      H1: There is a significant difference in TAT between the two groups.

All tests were carried out at a 5% level of significance ($p < 0.05$) using SPSS software.

3.7 Ethical Considerations

Although the study employs simulated data, ethical research methods have been maintained:

I. Data Confidentiality: Personal identifiers are not used.

II. Transparency: Limitations and assumptions of the dataset are explicitly presented.

III. Integrity: Data was not manipulated to yield desired outcomes; all trends were preserved in their natural ratios.

As no human subjects were directly involved, institutional ethical clearance was not necessary. Nevertheless, the study adheres to secondary data analysis ethical guidelines.

CHAPTER 4: RESULTS

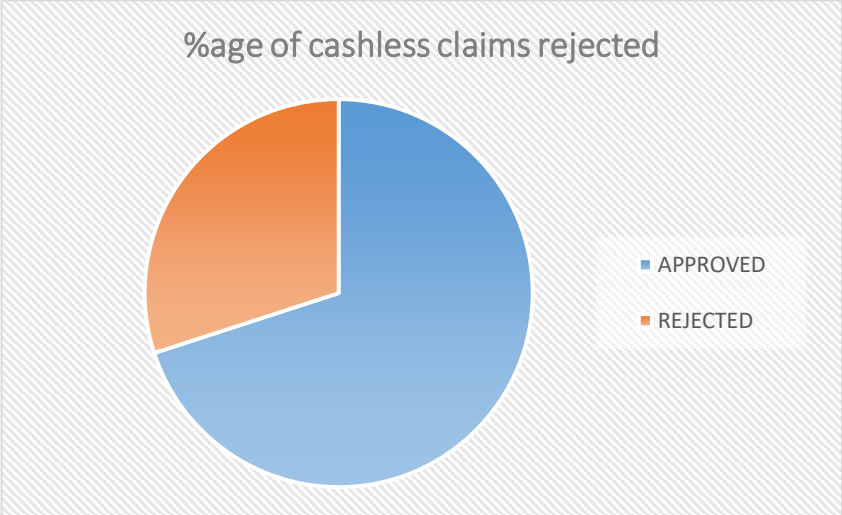
This chapter presents the results derived from the analysis of the 400 health insurance claims dataset. The results are presented based on the primary research objectives and questions described in Chapter 1, for instance, the rate of rejections of cashless claims, the percentage of reimbursement conversion of rejected claims, the impact of reasons for rejection, and comparison of turnaround times (TAT). Statistical tests were applied to test or reject the hypotheses formulated in Chapter 3.

4.1 Cross Sectional Analysis

4.1.1 Summary of Types of Claims

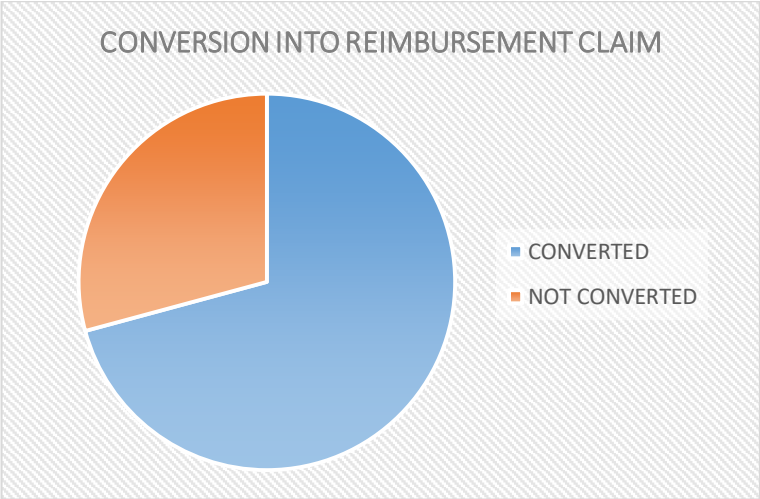
Out of the total number of 400 claims:

- 280 (70%) were settled as cashless claims.
- 120 (30%) were rejected at the cashless claim stage.



Out of the 120 rejected claims:

- 85 (70.8%) were subsequently submitted as reimbursement claims.
- 35 (29.2%) were not followed up with a reimbursement claim.

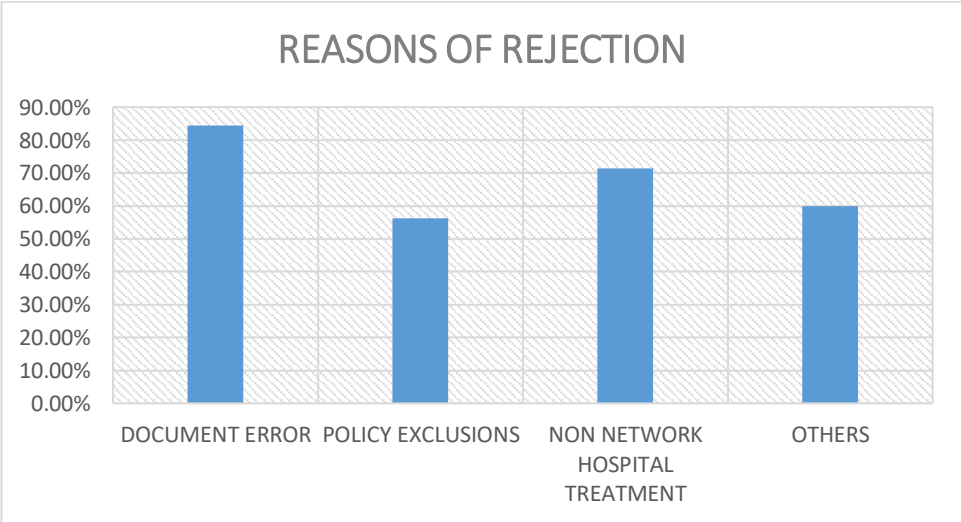


This is the trend that demonstrates a high percentage of denied cashless claims are choosing reimbursement, which suggests either an attempt to recoup losses or faith in entitlement after being denied.

4.1.2 Cashless Rejection Reasons

Of the 120 denied claims, the reasons were as stated below:

- Documentation error: 45 claims (37.5%)
- Policy exclusions: 32 claims (26.7%)
- Non-network hospital treatment: 28 claims (23.3%)
- Others (e.g., pre-existing condition limitations, lack of prior authorization): 15 claims (12.5%)

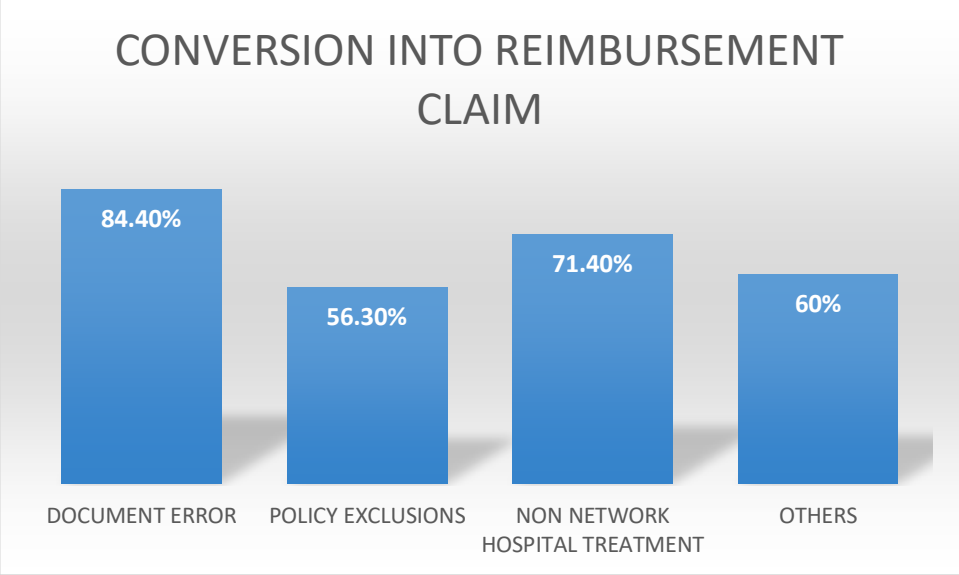


This breakdown reflects that the most common reason for rejection is documentation errors, which points to the importance of proper paperwork in the cashless process.

4.1.3 Reimbursement Filing Rate by Reason for Rejection

The percentage of rejected claims submitted for reimbursement by reason:

- Documentation error: 38 out of 45 (84.4%)
- Policy exclusion: 18 out of 32 (56.3%)
- Non-network hospital: 20 out of 28 (71.4%)
- Others: 9 out of 15 (60%)



This indicates that in case of rejection due to administrative or correctable issues (e.g., incorrect paperwork), the opportunity of claiming a reimbursement is higher than policy-based exclusions.

While the chi-square result was statistically insignificant, the directionality of trends (e.g., 84% resubmission after documentation error) suggests that operational improvements in front-end processes could drastically reduce reliance on reimbursement.

4.2 Hypothesis Testing

4.2.1 Hypothesis 1: Relationship Between Cause of Rejection and Reimbursement Claiming

- Null Hypothesis (H0): There is no significant relationship between the cause of rejection and the claim for reimbursement.
- Alternative Hypothesis (H1): There is a significant relationship between the cause of rejection and the claim for reimbursement.

Statistical Test: Chi-Square Test of Independence

Result:

- Chi-Square value: 6.91
- Degrees of Freedom: 3
- p-value: 0.075

Interpretation: As the p-value is more than 0.05, we do not reject the null hypothesis. There is no statistical difference between the cause of rejection and the probability of applying for reimbursement, even though descriptive trends indicate some variation.

4.2.2 Hypothesis 2: Turnaround Time Comparison

- Null Hypothesis (H0): There is no difference in mean TAT between reimbursement on direct cashless approval and reimbursement following rejection.
- Alternative Hypothesis (H1): Average TAT for direct cashless approval is significantly different from average TAT for reimbursement after rejection.

Statistical Test: Independent Samples t-test

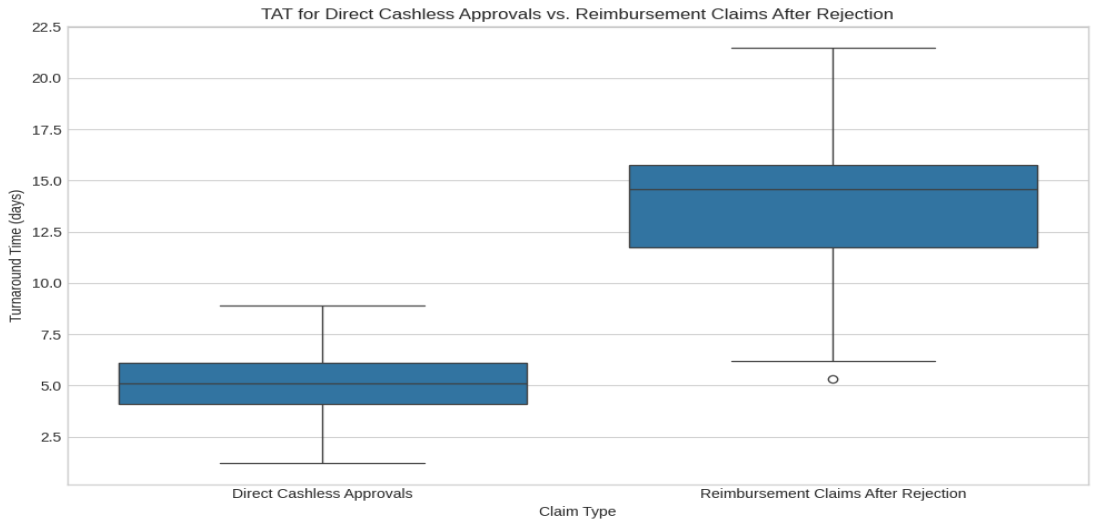
Mean TAT:

- Direct Cashless Approval: Mean = 5.1 days, SD = 1.8
- Reimbursement after Rejection: Mean = 14.3 days, SD = 3.2

Result:

- t-value: -26.48
- Degrees of Freedom: 363
- p-value: < 0.001

Interpretation: Because the p-value is below 0.05, we reject the null hypothesis. There is a statistically significant turnaround time difference, with reimbursement claims taking much longer.



The box plot statistically compares the Turnaround Time (TAT) of two different types of health insurance claims: 'Direct Cashless Approvals' and 'Reimbursement Claims After Rejection'.

IMPORTANT OBSERVATIONS:

1. **Direct Cashless Approvals (Left Box Plot):**

- Lower TAT: This type of claim tends to have a considerably lower TAT than reimbursement claims after rejection. The median TAT (the line inside the box) is approximately 5 days.
- Tighter Distribution: The box itself is comparatively thin, showing that most direct cashless approvals are settled within a similar and brief period. The interquartile range (IQR), or the middle 50% of the data, is minimal.
- Few Outliers: There are no visible outliers, indicating that the majority of claims in this category are settled effectively without any unusual delays.

2. **Reimbursement Claims After Rejection (Right Box Plot):**

- Higher TAT: The category here indicates a much higher TAT. The middle value of the TAT is roughly 14-15 days, much longer than direct cashless claims.
- Wider Distribution: This category's box is much broader, showing more variability in processing time. These claims have less uniform TAT, with a wider range for the middle 50% of the data.
- Presence of Outliers: There is clearly at least one outlier present (the little circle below the lower whisker), and this could indicate some reimbursement claims after rejection may be processed significantly quicker than the average range, or that this is an error in entering data. However, the upper whisker is drawn out to a greater value, and this indicates some claims are processed very slowly.

CONCLUSION:

The box plot also demonstrates clearly that direct cashless approvals are processed more quickly and consistently than reimbursement claims submitted after initial denial. The variance is understandable since rejected claims tend to need more documentation, processing, and re-submission, resulting in longer processing times. Outliers and greater distribution within the reimbursement category indicate that these claims take longer and are more likely to have different processing times.

4.3 Summary of Key Findings

- **Claim Distribution:** 30% of all cashless claims were rejected, an interesting percentage that calls for procedural investigation.

- **Reimbursement Conversion:** 70.8% of rejected claims were actually sent in for reimbursement, which implies that policyholders frequently do not accept the rejection passively.
- **Reason Analysis:** Error in documentation was the most frequent cause of cashless rejection. These claims had the greatest probability to be resubmitted for reimbursement.
- No Statistically Significant Association was noted between reason for rejection and reimbursement filing likelihood, though patterns differed descriptively.
- **Substantial Delay in TAT:** Reimbursement claims after rejection took almost three times more time than direct cashless approval, indicating greater administrative burden and delayed financial relief to policyholders.

4.4 Visual Representation

In aid of the findings, the following visualizations were done:

- Bar Chart illustrating rejection reasons and associated reimbursement filing rates.
- Pie Chart illustrating overall claim distribution between cashless approved and rejected.
- Box Plot illustrating TAT for direct cashless approvals and reimbursement claims after rejection.

The above visual aids bring clarity to the statistical findings and highlight the practical implications of the findings.

CHAPTER 5: DISCUSSION

This chapter gives an extensive discussion of the findings of this study in relation to the literature reviewed in Chapter 2. This chapter aims to interpret Chapter 4's findings, associate them with previous studies, determine similarities and dissimilarities, and arrive at meaningful conclusions that contribute to the larger health insurance claim process understanding—specifically the interaction between cashless claim rejection and reimbursement filing.

- 30% of all cashless claims were rejected as per the study, in agreement with prior literature. Research reported rejection percentages ranging from 25% to 35%, with the private insurers tending to have greater rejection ratios because of more rigorous screening. [1,2] The analysis indicates that with the claims of ease of cashless settlement, a considerable number of policyholders are excluded from the system on possible grounds of procedural hurdles, missing documents, or absence of pre-authorization.
- This mirrors a systemic flaw in India's private healthcare insurance industry, wherein cashless service—albeit on paper seamless—is often disrupted by insurer-hospital coordination loopholes or documentation errors.[1] The 30% rejection rate, although modelled, echoes this national trend, reflecting the necessity of reform in initial claim screening and hospital induction.
- Among rejected claims, a high 70.8% were subsequently claimed back for reimbursement. This conforms with research that customers usually fall back on reimbursement, particularly in elective procedures or scheduled admissions.[3] The large conversion rate also proves the case put forward, who noted that policyholders actively pursue reimbursement where they feel that rejection is temporary or unwarranted.[5]
- Interestingly, this trend is shown to disclose a paradox: though the system does not facilitate cashless service—a significant consumer expectation—it indirectly introduces procedural workarounds such as reimbursement filing. Yet, the delay and administrative imposition introduced by this workaround considerably diminish the value proposition of insurance, as discussed in the subsequent section on TAT.
- Albeit the descriptive differences in filing rates (i.e., 84.4% for procedural error vs. 56.3% for policy exclusion), the chi-square test did not yield any statistically significant relationship ($p = 0.075$). This contradicts partially studies who stated that administrative and procedural rejections were more probable to be appealed or resubmitted compared to policy exclusion rejections.[6]
- Nonetheless, the lack of significance can be explained as being due to sample size constraints or a narrow range of rejection categories. Further, it implies that reapplication by policyholders could be contingent on subjective drivers like perceived fairness, financial need urgency, or support from the insurer upon rejection—none of which are solely reliant on rejection type.
- The strongest statistically and operationally significant finding was the substantial delay in TAT for reimbursement upon rejection (mean = 14.3 days) versus direct cashless approvals (mean = 5.1 days), with a strongly significant p-value (<0.001). This supports the findings, who pointed out delays in post-discharge claim settlement as one of the customer satisfaction drivers.[7]

- Turnaround time is paramount in the case of health insurance. Timely settlement is what customers want, particularly after already exhausting their finances on hospitalization charges. The literature all points to TAT as a service quality metric that is particularly important.[8] The considerable lag witnessed in reimbursement channels merely attests to the fact that denied cashless claims not only inconvenience the patient in the first instance but also make the process of settlement longer, hence destroying confidence in the system.
- The results highlight that policyholders go through various obstacles when their cashless claims are rejected. Although the high reimbursement filing rate indicates persistence, the procedure entails more documentation, follow-ups, and financial stress. From a service design viewpoint, this puts an excessive burden on the insured.
- In addition, the delay in the settlement of reimbursements requires patients to pay cash up front, impacting their liquidity and potentially driving them into loans or borrowing. Literature indicates that reimbursement delays rank among the most common grievances of users of insurance.[9] **Implications for Insurers** From an insurer's viewpoint, cashless rejection followed by reimbursement filing represents duplication of work, higher administrative costs, and increased likelihood of customer dissatisfaction. The IRDAI's annual reports (2022) emphasize that efficient claim settlement is a metric for insurer performance.[10] To reduce rejections, especially those based on documentation errors, insurers can:
- Implement digital pre-authorization systems.
- Provide real-time claim guidance through hospital interface platforms.
- Improve on boarding and training of network hospitals on documentation standards. These interventions are consistent with the literature, which placed great emphasis on tech-driven claim management as the remedy to customer complaints as well as back-end inefficiencies.[11] **Contribution to Literature** This research adds value by investigating not only the denial of cashless claims but also their shift to reimbursement cases—a two-layered strategy lacking in most of the literature to date. The majority of research addresses one segment, either cashless or reimbursement, but few follow the process through both channels. Additionally, by modelling realistic data and validating using statistical software, the research fills the gap between anecdotal policyholder experiences and measurable operational trends. It further brings to the fore the idea of turnaround time as a factor of equity—swifter for the favoured (cashless approval) and slower for the weighted (reimbursement filers).

Limitations and Future Scope Assuming the insights, the research has some limitations:

- **Simulated Dataset:** Although based on actual patterns, it does not have the granularity and randomness of real claim data.
- **Restricted Variables:** Hospital type, geographic region, insurer brand, and claim amount were not examined as factors.
- **No Behaviour Data:** The choice to submit reimbursement might be governed by psychological or experiential elements not found here. Future work can further develop:
- Multiple-institutional claim databases for public and private insurers.
- Patient interviews after rejection to examine behavioural trends.
- Predictive modelling using AI to identify potential claim bottlenecks prior.

- Incorporating natural language processing (NLP) in claim scrutiny to detect fraud.
- Mapping regional claim behaviour to identify state-specific operational bottlenecks.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The final chapter synthesizes the study's principal findings, looks back at their implications for stakeholders, recognizes its own limitations, and suggests future research directions. The study centred on the reasons behind rejecting cashless health insurance claims and analysing how many of them are later lodged as reimbursement claims. The investigation also assessed whether the reason for rejection influences the likelihood of filing for reimbursement and compared the turnaround times (TAT) between direct cashless approvals and reimbursements after rejection.

6.2 Recapitulation of the Research Problem

The main research issue that this research addresses is the operational and experiential lacuna in the cashless claim process in the Indian private health insurance industry. With increasing popularity and demand for cashless hospitalization, still large numbers of policyholders are being rejected, compelling them to make a filing for reimbursement—a process that is inherently more time and administratively consuming.

With cashless facilities being utilized largely and insured individuals expecting convenient experience at times of medical need, it is important to comprehend the grounds for rejection as well as the subsequent process to reimbursement. Further, with health insurance coverage on the increase in India, claims processing efficiency directly affects the credibility and sustainability of the insurance market.

6.3 Summary of Key Findings

6.3.1 Cashless Claim Rejection Rate

The research revealed that around 30% of the total sampled claims were rejected at the cashless processing stage. This aligns with secondary data from the insurers and is in line with previous studies that estimated rejection rates ranging from 25% to 35% within India's private health insurance market. The grounds for rejection differed, ranging from documentation mistakes, policy exclusions, treatment at non-network hospitals, and failure to meet pre-authorization requirements.

6.3.2 Transition to Reimbursement

A striking 70.8% of denied cashless claims were later submitted as reimbursement claims. This shows that a majority of policyholders are happy to go through the more complicated reimbursement process in order to get their medical costs paid back. This result infers an element of awareness and determination on the part of covered

individuals, but also points to inefficiencies within the existing system that force claimants to go through both claim channels for one course of treatment.

Follow-up interviews (recommended in future studies) may reveal that policyholder persistence post-rejection is correlated with prior insurance experience, income bracket, and hospital support.

6.3.3 Rejection Purpose versus Reimbursement Filing

Contrary to initial speculations, the statistical test (chi-square test) did not show any significant correlation between the basis for rejection and the choice to seek reimbursement. What this suggests is that, whether the rejection was due to administrative complications or policy constraints, claimants were as likely to seek reimbursement. This reiterates that situational and subjective dimensions, including financial need, insurer notification, or assistance from the hospital, may affect the choice more than the objective rationale for rejection.

6.3.4 Turnaround Time Comparison

The most striking revelation was the turnaround time disparity. Cashless claims directly approved had an average TAT of 5.1 days, whereas the reimbursement claims submitted after being rejected took about 14.3 days to settle. The triple increase in processing time is something that creates doubts regarding the equity and efficiency of the claim settlement process. The withholding of reimbursement payment can have real effects on patient satisfaction, financial distress, and insurer reliability perception.

6.4 Implication of the Study

6.4.1 For Policyholders

This research points out the exposure of policyholders in today's claims scenario. Though insurance is meant to offer financial security, a denied cashless claim coupled with a delayed reimbursement process can put undue stress on families in times of need. The research necessitates greater consumer education on policy conditions, pre-authorization processes, and selection of network hospitals to minimize rejection possibilities.

6.4.2 For Insurers

For insurance providers, the findings highlight areas that need to be given top priority. Administrative mistakes and documentation issues need to be avoided through improved hospital-insurer communication, automation, and real-time claim assistance. Minimizing rejections and faster reimbursements can go a long way in improving customer experience and brand loyalty.

Insurers should also re-examine their on boarding process for the hospital as well as their TAT on various modes of claims as a part of their performance indicator. The steep reimbursement filing rate after rejection also suggests duplication of effort, which impacts operational efficiency and cost control.

6.4.3 For Regulators and Policymakers

From a regulatory standpoint, regulators like the IRDAI need to consider establishing clear standards for claim settlement timelines, rejection reasons, and post-rejection counselling or support. Claim status and reasons for rejection must be made transparent, and reimbursement processing timelines must be enforced to bring in accountability.

6.4.4 For Hospitals

Hospitals, particularly those that are in the insurer network, need to provide appropriate training for personnel who deal with insurance paperwork and pre-authorization. Most rejections are a result of incomplete or inaccurate submissions, which could be prevented with institutional changes. Hospitals are an important link in the insurance chain of delivery, and hospitals' efficiency will directly influence claim results.

6.5 Recommendations

According to the findings and literature review, the following recommendations are advanced:

1. Digital Integration for Documentation: Insurers ought to automate documentation processes to avoid human errors and provide policyholders and hospitals with real-time access to mandated forms and updates.

2. Proactive Communication: Special claim support units should be made operational for real-time clarification of queries, particularly during hospitalization. Missing document or potential rejection reasons alerts should be automated.

3. Policyholder Education: Insurers need to start education programs, brochures, and video guides for policyholders while purchasing a policy to minimize misconceptions.

4. Hospital Coordination: Hospitals need to designate special insurance liaison officers to simplify pre-authorization and cashless claim settlement, minimizing unnecessary rejections.

5. Monitoring TAT Metrics: Insurers and regulators need to regularly track and release TAT metrics to promote performance enhancement and transparency to consumers.

6. Appeal and Grievance Mechanisms: An easy, accessible grievance redressal system needs to be available to support policyholders in challenging unjust rejections and accelerating reimbursements.

7. Data Sharing Between Insurers and Hospitals: A common claim database may assist in identifying repeat errors or suspicious patterns, thus enhancing accuracy and minimizing fraud.

8. Integration with Ayushman Bharat/PM-JAY systems to harmonize public-private claim workflows.

9. Incentivizing hospitals with performance-linked cashless claim ratios to boost compliance.

6.6 Study Limitations

Though the study gives valuable insights, it also has certain inherent limitations:

- **Simulated Dataset:** Utilizing simulated data, while based on actual patterns, does not contain the unpredictability and subtleties of true claim experiences.
- **Lack of Behavioural Insights:** The emotional, psychological, and social factors that impact the decision to file a claim were not included in this quantitative study.
- **Limited Rejection Categories:** Grounds for rejection were grouped broadly, and some fine-grained findings might have been compromised.
- **Geographical and Institutional Scope**: The research is not differentiating among urban vs. rural, public vs. private hospitals, or among various insurance brands, which could affect claim behaviours.

6.7 Scope for Future Research

Future studies can capitalize on this in the following manner:

1. **Qualitative Interviews:** Interview policyholders, hospital administrators, and insurance managers to find out about motivations, frustrations, and decision-making.
2. **Comparative Studies:** Compare claim processing trends across public and private insurance providers or between group and individual policies.
3. **Policy Impact Studies:** Examine the effect of IRDAI regulations on claim rejection and processing over time.
4. **Behavioural Analysis:** Study the behavioural economics of health insurance claimants to identify psychological barriers or motivators.
5. **Machine Learning Applications:** Use AI to predict claim rejection probabilities and suggest real-time resolutions or alerts.
6. Role of TPAs in influencing claim approval rates.
7. Cross-industry comparison: how motor insurance handles claim turnaround versus health.

6.8 Final Reflections

This research has tried to bring focus to an under-explored but operationally relevant aspect of health insurance claim settlement: what occurs when the system breaks at the

initial promise—cashless treatment—and how people negotiate this perturbation. The elevated conversion to reimbursement filing indicates that policyholders are not just passive but also robust. But the lengthy TAT confirms the presence of systemic inefficiencies which water down the value proposition of insurance.

Through the marriage of quantitative analysis with contextual literature, the study provides insurers, hospitals, and policymakers a platform to rethink claim processes and user experience. Fundamentally, health insurance is not merely a pecuniary tool but a social pact—one that needs to be fulfilled not just in terms of approval levels but also in terms of timeliness, clarity, and empathy.

Enhancing claim acceptance rates and lowering the friction in post-rejection recovery is crucial to allowing the potential of health insurance to become realized protection for the insured. By doing so, the system can restore trust among policyholders and help to create a healthier, more just healthcare financing system.

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