Patterns in Claim Processing: A Case Study of Care Health Insurance

Introduction

Background of Care Health Insurance

Care Health Insurance is a leading standalone health insurer in India, offering a wide range of products including individual, family, and group health plans. With a strong hospital network and customer-focused services, the company emphasizes efficient claim settlement as a key part of its operations. As the number of policyholders grows, ensuring a transparent and consistent claims process becomes essential.

Role of Effective Claim Processing in Customer Retention and Trust

Claim processing is the most critical stage in a health insurance journey, as it directly impacts customer satisfaction and retention. While pricing and coverage attract buyers, it is the efficiency and fairness of claims that build long-term trust. Delays, rejections, or repeated queries can lead to dissatisfaction, whereas timely approvals enhance the insurer's credibility and renewal rates.

Why This Case Study Matters

There is limited research on the detailed claim handling patterns within Indian private insurers. This case study of Care Health Insurance aims to analyze real claim data to uncover trends in approvals, rejections, and investigations. The insights will support better process design, reduce unnecessary queries, and enhance transparency, ultimately strengthening both the customer experience and internal efficiency.

Research Questions

To identify trends in claim handling, especially how different variables (e.g., claim type, hospital category, patient demographics) influence claim status and resolution.

How do variables like policy inception, treatment type, and claim amount category influence these outcomes?

Objectives

- To analyse the distribution of claim statuses (approval, rejection, query, investigation) in a selected period.
- To examine the association between claim outcomes and variables like treatment type, policy inception, and claim amount category.
- What are the most common reasons for claim approval, rejection, or query?
- Are certain types of claims (e.g., surgeries, maternity, chronic illness) more likely to be approved/rejected?

Materials And Methods

Study Design

Descriptive Cross-Sectional Design

Since the goal is to observe associations between selected variables and claim statuses without manipulating any factors, a non-interventional, observational design is most appropriate.

Study Period

The data analysed is drawn from claims processed over a three-month window, **March 2025 to May 2025**

Sample Size

The expected dataset comprises approximately **150 claim records**, sufficient to allow meaningful analysis across multiple variables (e.g., treatment type, claim amount, policy age).

Study Population

Inclusion Criteria: Health insurance reimbursement claims submitted between March 2025 to May 2025

Records containing complete entries for variables such as policy inception date, treatment type, claim amount category, claim status, and outcome reason.

Exclusion Criteria: Cashless claims

Study Tools / Variables

Variable	Type	Explanation
Policy Inception Date	Date	New policies have a 30-day wait period unless ported
Repeated Claim history	Categorical (Yes/No)	Indicates if the insured has taken **2 or more claims** previously. Frequent medical management claims often raise suspicion of fraud.
Pre-existing diseases	Categorical (Yes/No/Optional Benefit)	Shows whether the claimant had a pre-existing illness. Some policies reduce the waiting period (3–4 years to 30 days) if the optional benefit is added.
Treatment Type	Categorical (Medical/Surgical/Daycare)	Classifies the nature of treatment. **Surgical or daycare procedures** like D&C, CAG, and endoscopy are usually less questionable, and **medical management** is more prone to rejection due to certain T&C.
Claim Amount Category	Categorical (<30k, 30k–1L, >1L)	Based T&C: <30k = no paid receipts needed; >30k = paid receipts needed; >1L = ID proof mandatory.
Proper documents	Categorical (Yes/No/Query Needed)	Based on whether key documents like discharge summaries or investigation reports are provided. Up to 3 follow-ups (queries) are allowed.
Claim Status	Categorical (Approved / Rejected / Queried / Under Investigation)	The outcome of the claim. This is the **main dependent variable** (outcome).
Reason for Outcome	Text → Coded Categories	The justification for approval, rejection, or query — e.g., policy exclusion, missing documents, insufficient evidence, suspicion of fraud.

Data Collection Procedure

Anonymized claim records are extracted from Care Health Insurance's internal claims processing system. Records include claim status, treatment type, policy inception date, amount category, and documented reasons for the claim outcome.

Data Analysis Plan

The collected data will be analysed using **descriptive and exploratory analytical methods** to identify trends and associations between claim outcomes and key variables such as policy inception, treatment type, claim amount category, repeated claim history, pre-existing disease status, and documentation completeness.

Software/Tools

- Microsoft Excel for data cleaning, tabulation, charting, and pivot tables.

A. Descriptive Statistics

Purpose: To summarize the overall dataset and provide an overview of variables.

- Frequency and percentage of claim status categories: Approved, Rejected, Queried, and Investigation.
- Distribution of claims across:
    - Claim amount categories (<30k, 30k–1L, >1L),
    - Treatment types (Medical management, Surgical, Daycare),
    - Policy age groups (<3 months, 3–12 months, >1 year),
    - Document completeness (Submitted / Query Raised / Deficient).

Outputs: Tables and bar charts.

B. Cross-tabulations

Purpose: To identify relationships between variables and claim outcomes.

Crosstab	Key Insight
Claim Status × Treatment Type	Are medical management cases more often rejected?
Claim Status × Policy Age	Do early policy claims face more scrutiny due to pre-existing clauses or waiting periods?
Claim Status × Claim Amount Category	Are higher-value claims more likely to be queried or investigated?
Claim Status × Repeated Claim History	Is there a pattern of stricter checks for repeat claimants?
Claim Status × Documentation Status	Do incomplete or late documents lead to higher rejection rates?

Outputs: Crosstab tables with conditional formatting or stacked bar graphs for visual clarity.

C. Data Visualization

- Bar charts for claim status by category.
- Stacked graphs for multi-variable comparisons.
- Pie charts for reasons for rejection/query.
- Line chart for policy age vs. approval rate trend.

Ethical Considerations

- The data used is fully anonymized and used strictly for academic purposes.
- No patient identifiers will be accessed or published.
- Internal permission from Care Health Insurance has been obtained before data access.

Implications of Research

This study can help Care Health Insurance identify key friction points in the claim settlement journey. The insights can support operational decision-making, improve claim transparency, enhance customer satisfaction, and reduce unnecessary delays in approvals. Additionally, the methodology can serve as a model for other insurers seeking to analyse processing trends.

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