“STRENGTHENING OPERATIONAL PROCESSES TO ENHANCE FINANCIAL OUTCOMES AT SAHYADRI HOSPITALS"

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Sahyadri®
HOSPITALS

INTRODUCTION

Revenue Cycle Management (RCM) is the end-to-end financial process used by healthcare organizations to track and manage patient revenue from appointment scheduling to final payment, including billing, claims processing, and reimbursement.

It connects 4 Pillars of healthcare :

- Patient
- Provider
- Payer
- Payment

NEED FOR STUDY

PROCESS FLOW

Phase	Step	Activity
1. Pre-Visit	Appointment Scheduling	Patient books via phone, portal, or walk-in
	Insurance Verification	Check coverage, co-pay, deductible
	Pre-Authorization	Obtain prior approvals for procedures/tests
2. Point of Service	Patient Registration	Collect demographics, insurance info, consents
	Financial Counseling	Inform about costs and payment options
	Service Delivery	Provide consultation/treatment/surgery
3. Post-Service	Medical Coding	Convert clinical info into codes (ICD, CPT, HCPCS)
	Charge Capture & Billing	Compile charges, generate itemized bill
	Claims Submission	Submit claims to insurers
	Claim Management	Monitor status, correct & resubmit denials
4. Payment	Payer Reimbursement	Receive insurance payments
	Patient Responsibility	Collect co-pays and dues
5. Follow-Up	Denial Management	Review and appeal denied claims
	Patient Communication	Address doubts, send reminders, manage plans
	Compliance & Reporting	Audits, reporting, legal adherence

RESEARCH METHODOLOGY

Sample Size: 282

Setting: Kothrud Branch of Sahyadri Hospital

Sampling Technique: Observative Study and secondary data

Study Design: Mixed methods (Qualitative and Quantitative)

Data Collection: Billing, Discharge, Insurance claim audit reports, Financial metrics

Study Duration: 3 Months

Inclusion Criteria – Insured Patients

Exclusion Criteria: OPD PATIENTS

Tools: Excel, Interview guides

Study Duration: 3 months (March to May)

RESEARCH QUESTION

PROBLEM STATEMENT

What are the key operational inefficiencies in the revenue cycle at Sahyadri Hospital, and how do they contribute to revenue leakage?

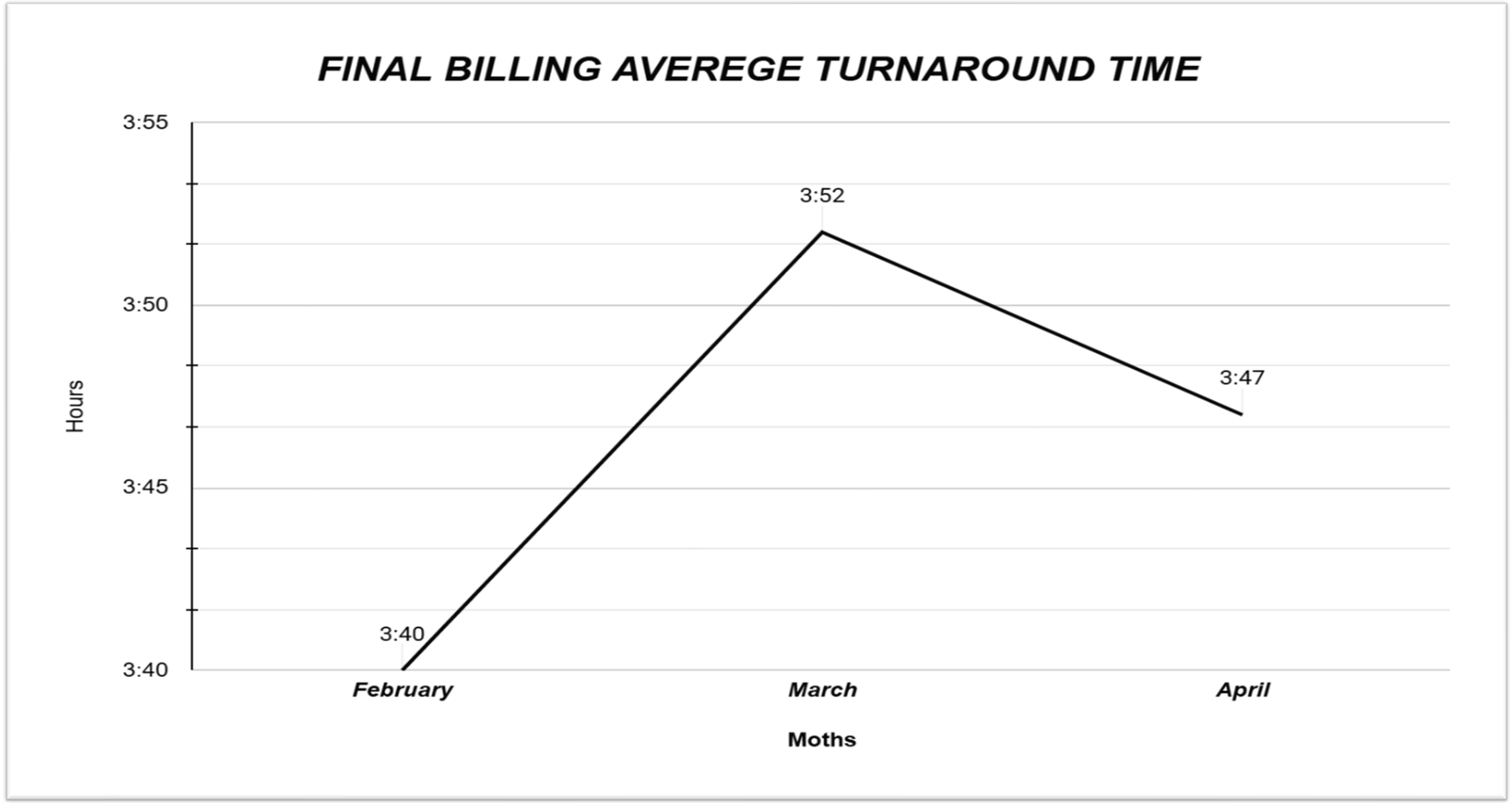
RESEARCH OBJECTIVES

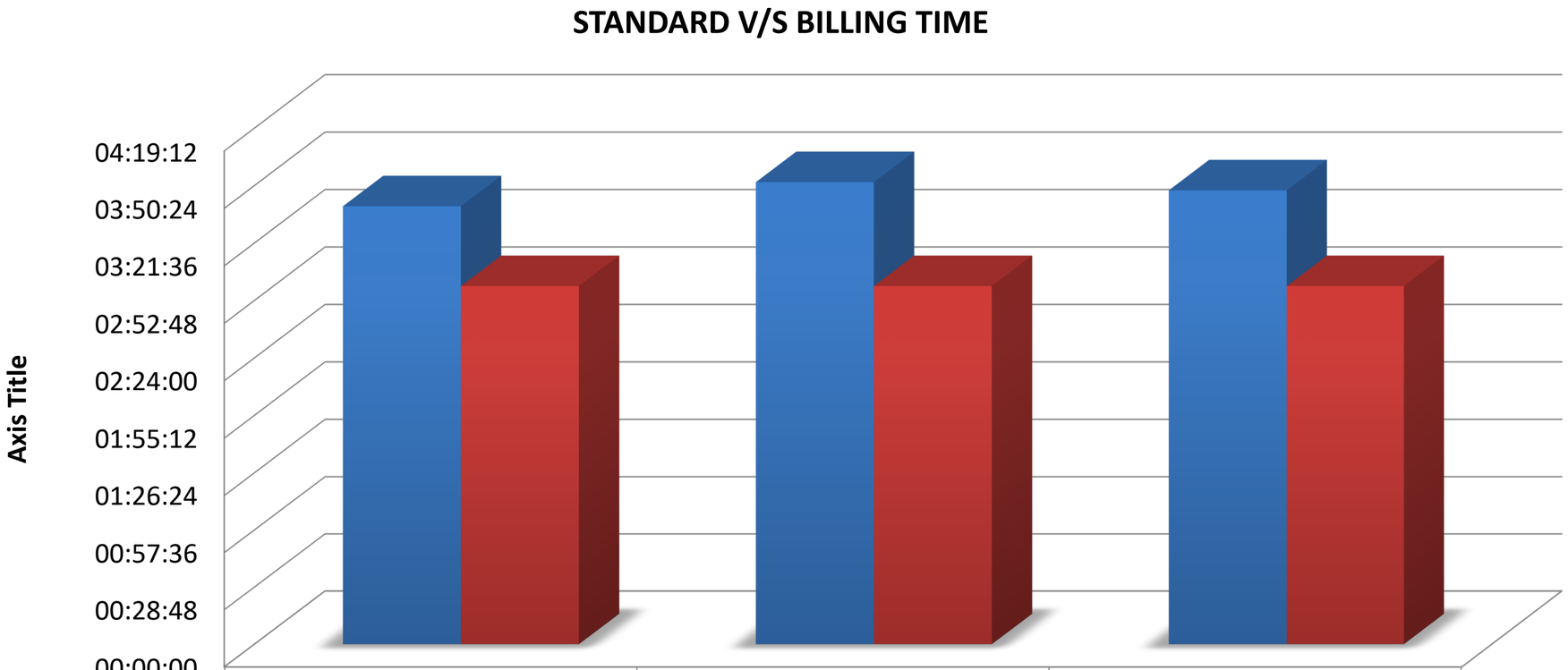
1. To identify operational gaps in billing, discharge, and insurance departments.
2. To assess the impact of these inefficiencies on claim denials and financial performance.
3. To evaluate key performance indicators such as billing turnaround time and Days Sales Outstanding (DSO).
4. To suggest process-level interventions to improve RCM outcomes
5. Assess their financial impact on Sahyadri Hospitals.

DATA ANALYSIS

BILLING DEPARTMENT

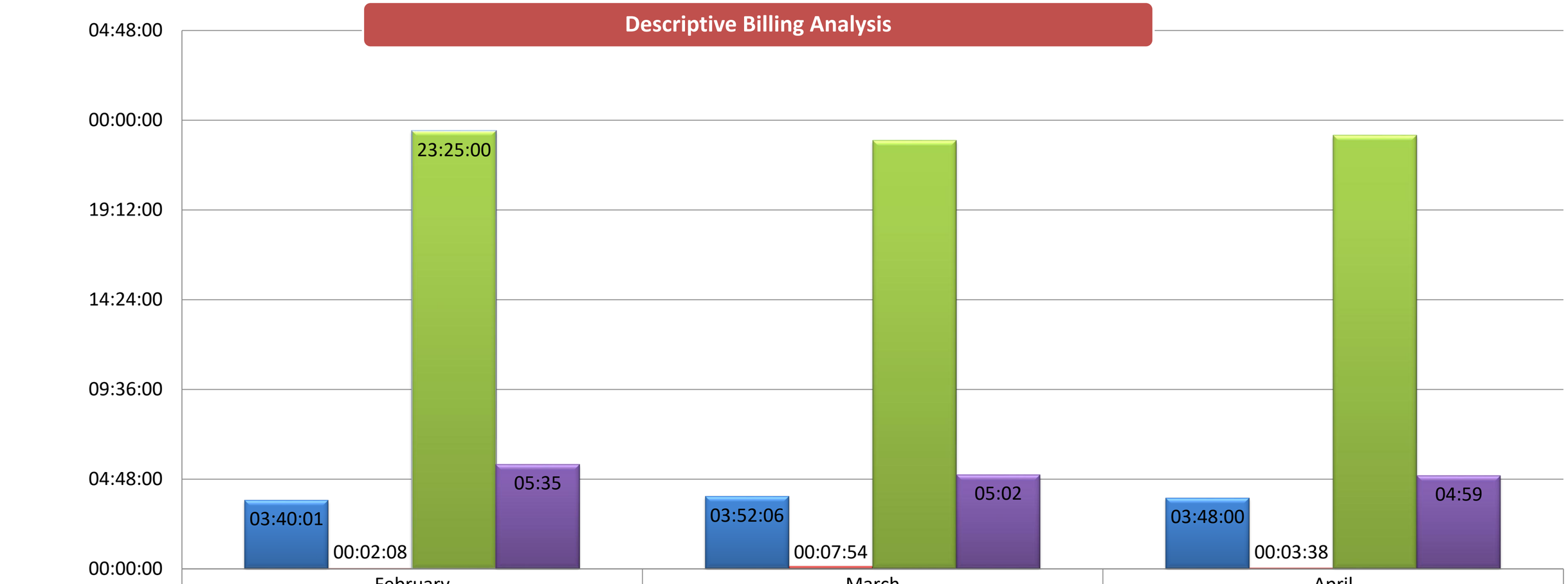
BILLING AUDIT :No significant inefficiencies identified due to the usage of the SHIVAM billing software, which enables real-time error correction.





	February	March	April
Average Time	03:40:01	03:52:06	03:48:00
NABH Standard	03:00:00	03:00:00	03:00:00

Interpretation : TAT consistently exceeded by ~40–52 minutes over three months.

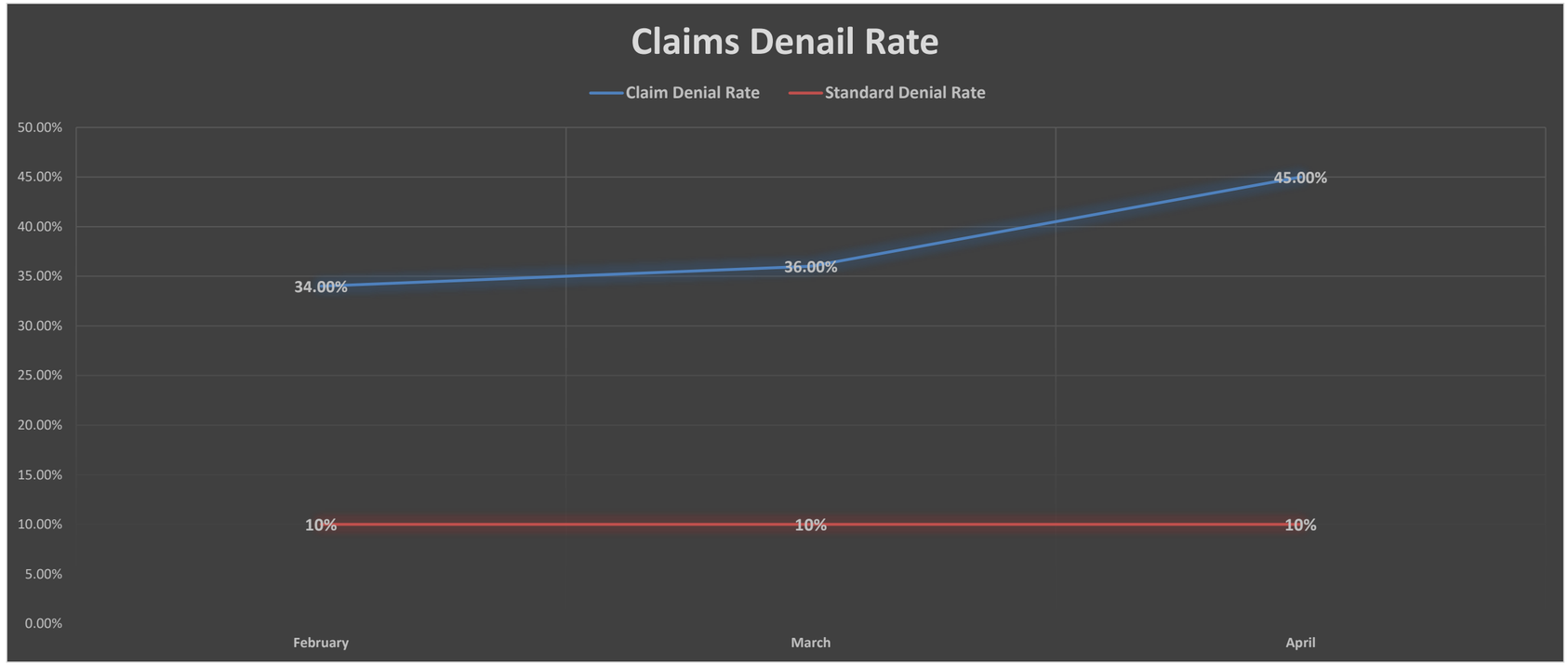


	February	March	April
Average	03:40:01	03:52:06	03:48:00
Minimum	00:02:08	00:07:54	00:03:38
Maximum	23:25:00	22:55:00	23:11:48
Std. Dev. (in days)	05:35	05:02	04:59

Mean: ~3h 45m (consistently above standard)
Minimum: <10 minutes (efficient discharges)
Maximum: ~24 hours (due to insurance/documentation delays)
Standard Deviation: High → Indicates inconsistency

Claims Denial Rate

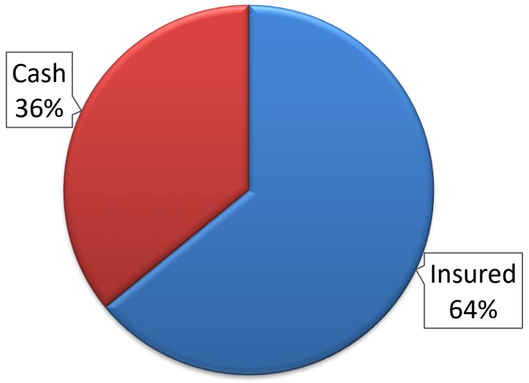
Month	Denial Rate	Standard Denial Rate
February	34.00%	10%
March	36.00%	10%
April	45.00%	10%

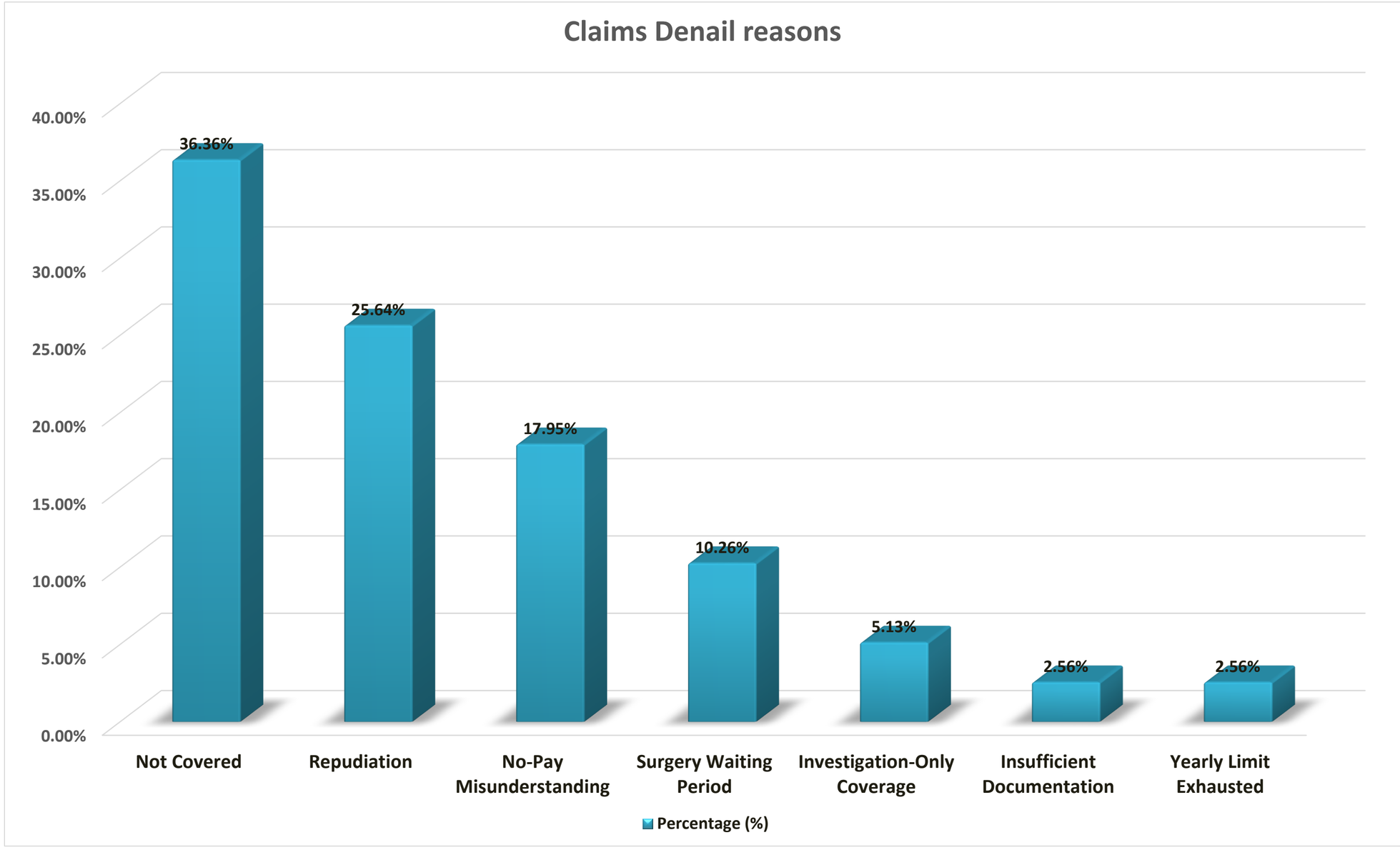


Claims Denial Rate v/s Standard Rate

INSURANCE DEPARTMENT

Distributation of Patients

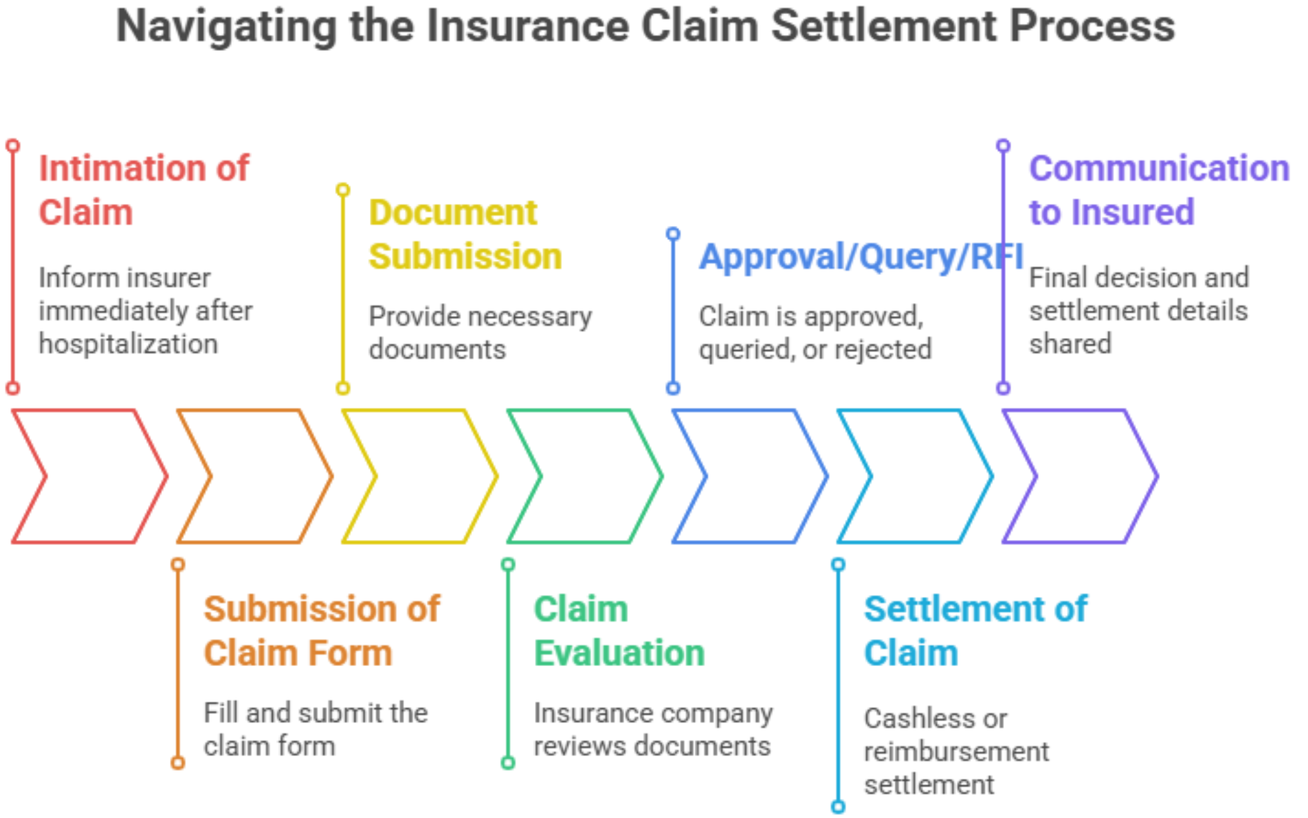




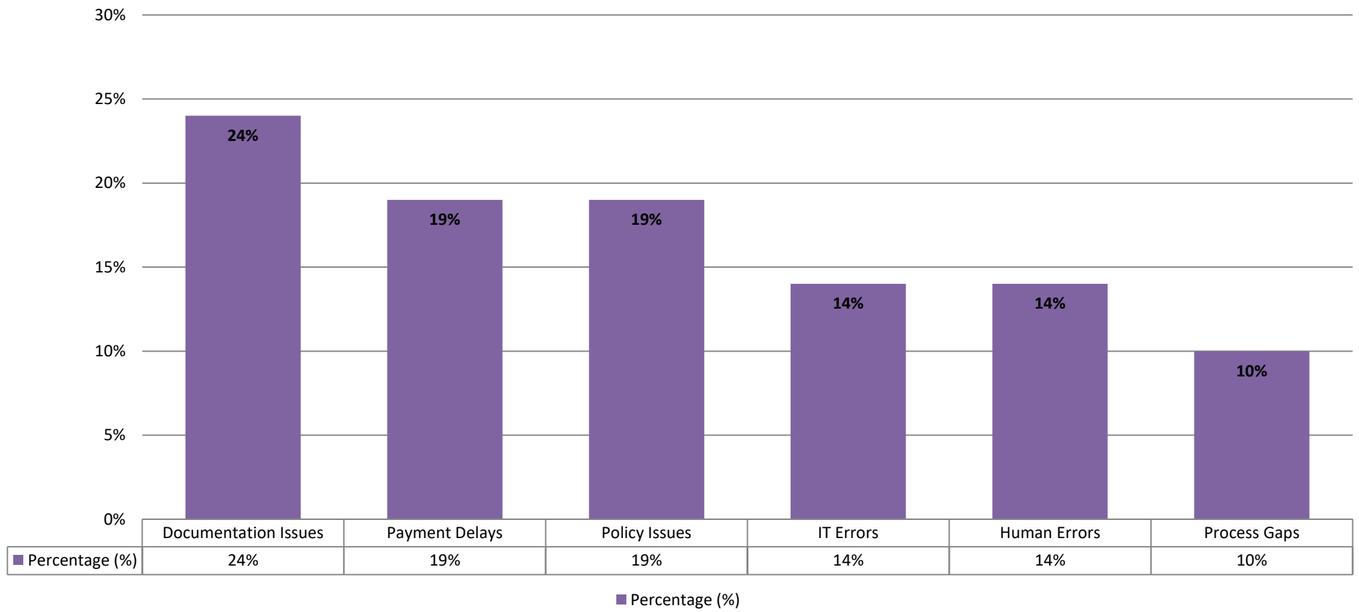
Reason	Meaning	Responsible Person/Process
Not Covered (36.36%)	Treatment not included in the policy	Patient Counsellor & Insurance Verification Team
Repudiation (25.64%)	Claim rejected by insurer despite submission	TPA Team & Insurer
No-Pay Misunderstanding (17.95%)	Patient/attendant misunderstood no-pay clause	Admission Desk & Counsellor
Surgery Waiting Period (10.26%)	Surgery excluded due to waiting period clause	Insurance Desk & Policy Screening Process
Investigation-Only Coverage (5.13%)	Policy covers only diagnostic tests, not treatment	Pre-Authorization Team
Insufficient Documentation (2.56%)	Claim lacked required medical or administrative papers	Treating Department & TPA Documentation Team
Yearly Limit Exhausted (2.56%)	Policy's annual sum insured fully used	Policyholder & Counselling Team

- **CLAIM SETTLEMENT:**

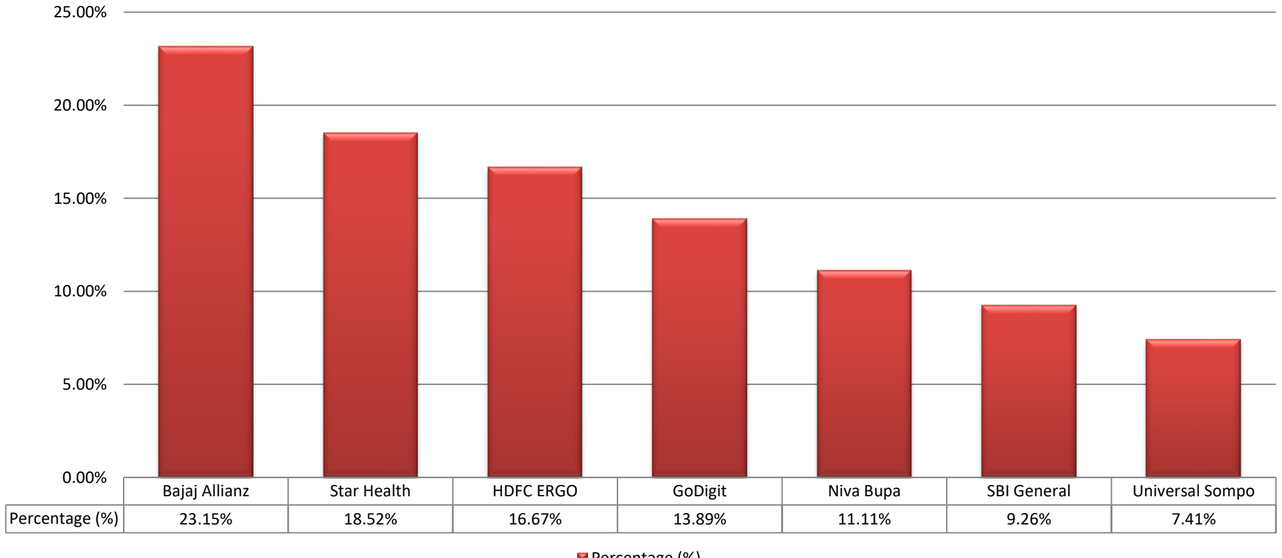
- **Claim settlement** is a crucial component of the health insurance and hospital revenue cycle management. It refers to the process through which an insured patient or hospital is reimbursed or paid for medical services availed under a valid insurance policy. Efficient claim settlement not only ensures timely cash flow for hospitals but also builds trust among patients and insurers. Delays or denials in this process often lead to dissatisfaction, administrative burden, and financial strain



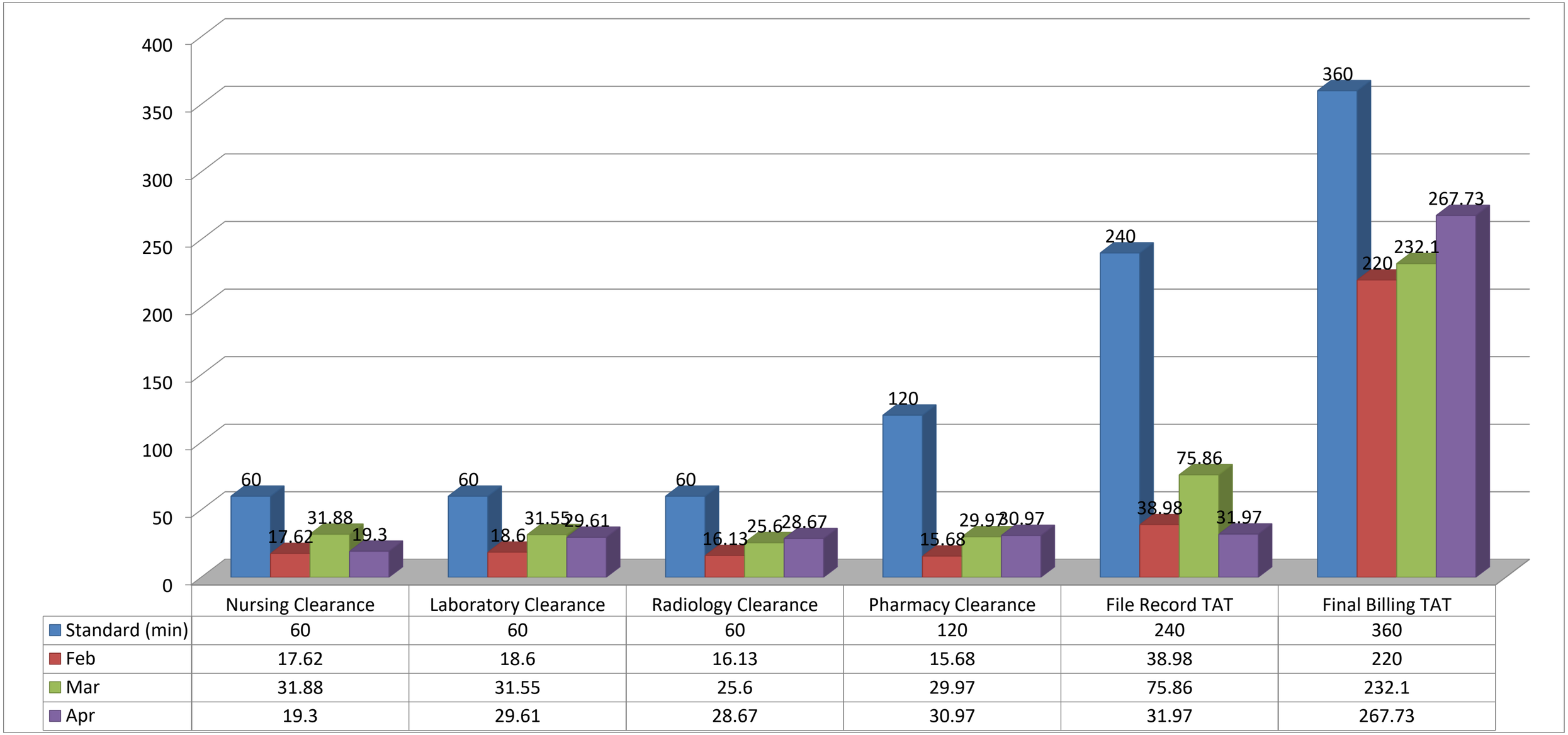
Common Claim Settlement Delays



Claim Settlement Percentage by Insurance Company



DISCHARGE



	Nursing Clearance	Laboratory Clearance	Radiology Clearance	Pharmacy Clearance	File Record TAT	Final Billing TAT
Standard (min)	60	60	60	120	240	360
Feb	17.62	18.6	16.13	15.68	38.98	220
Mar	31.88	31.55	25.6	29.97	75.86	232.1
Apr	19.3	29.61	28.67	30.97	31.97	267.73

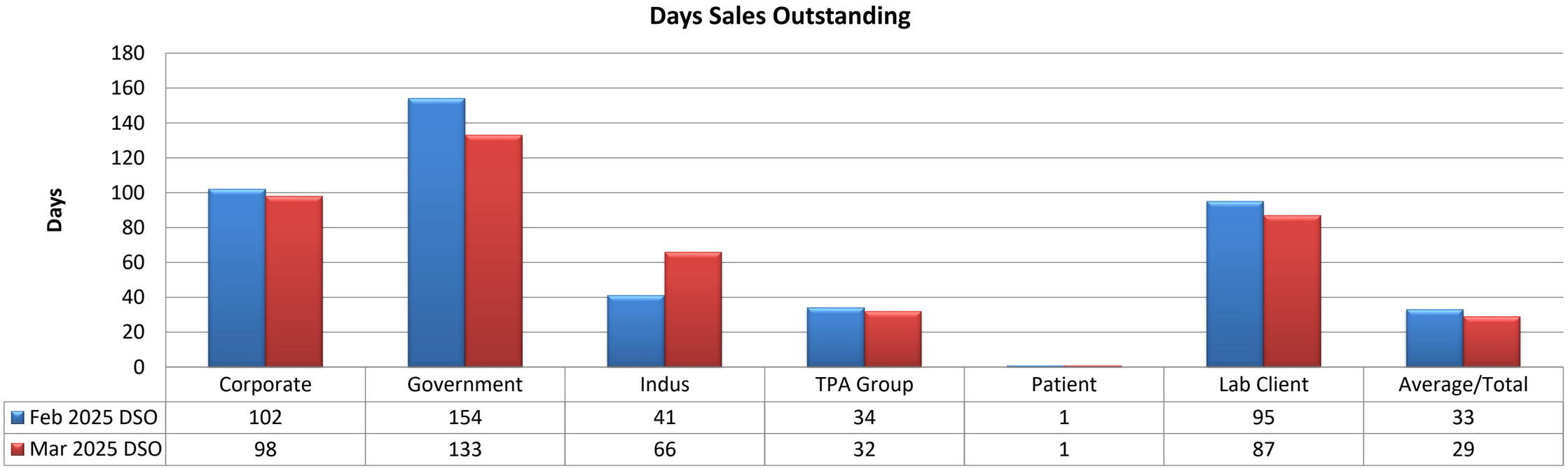
Turnaround Time (TAT) Analysis – Feb to Apr

Component	Observation	Remarks
Nursing Clearance	Consistently < 60 minutes	Excellent efficiency
Pharmacy Clearance	Maintained < 120 minutes	Indicates streamlined operations
Radiology & Lab TAT	Cleared reports promptly	Shows effective interdepartmental coordination
File Record TAT	Fluctuated but within acceptable range	Manageable; monitor for consistency
Final Billing TAT	Rose from 220 mins (Feb) to 267.73 mins (Apr)	Below 360-min benchmark; improvement possible
Overall Efficiency	Supported by departmental collaboration	Focus on billing optimization for better outcomes

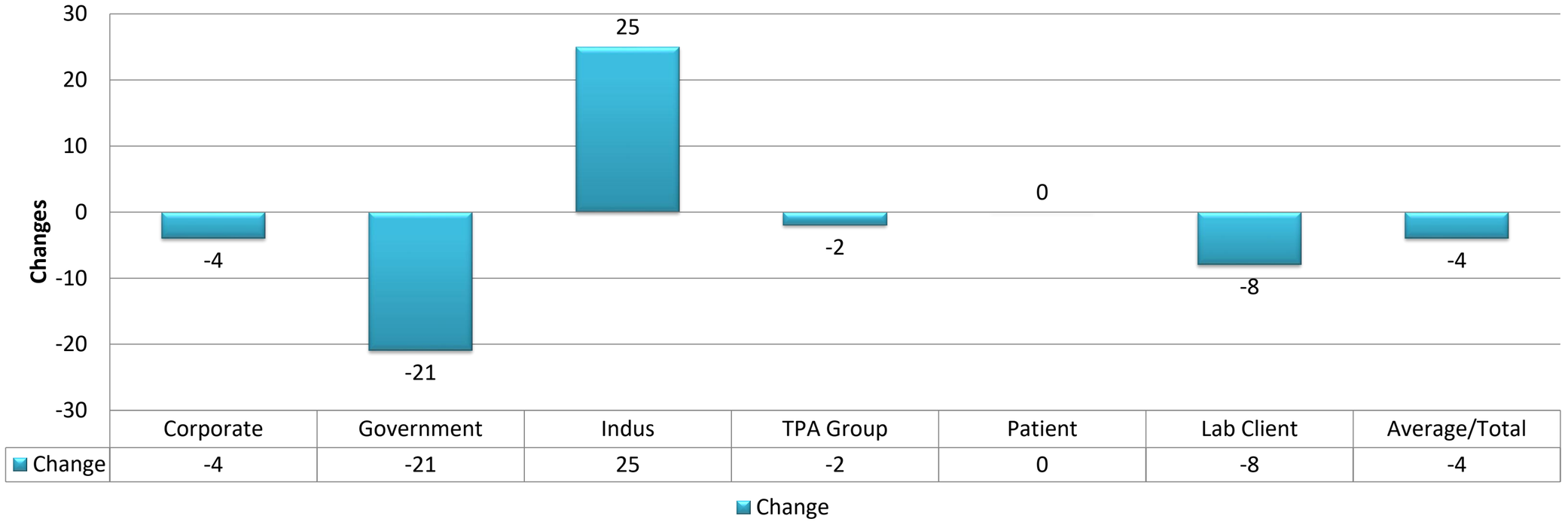
Days Sales Outstanding (DSO)

Financial indicator that calculates the average number of days it takes a company to collect payment after a sale. It shows how effectively a company handles its accounts receivable and can be a good predictor of liquidity and cash flow.

Significance : The purpose of DSO is to help understand the efficiency of a company's credit and collection processes.



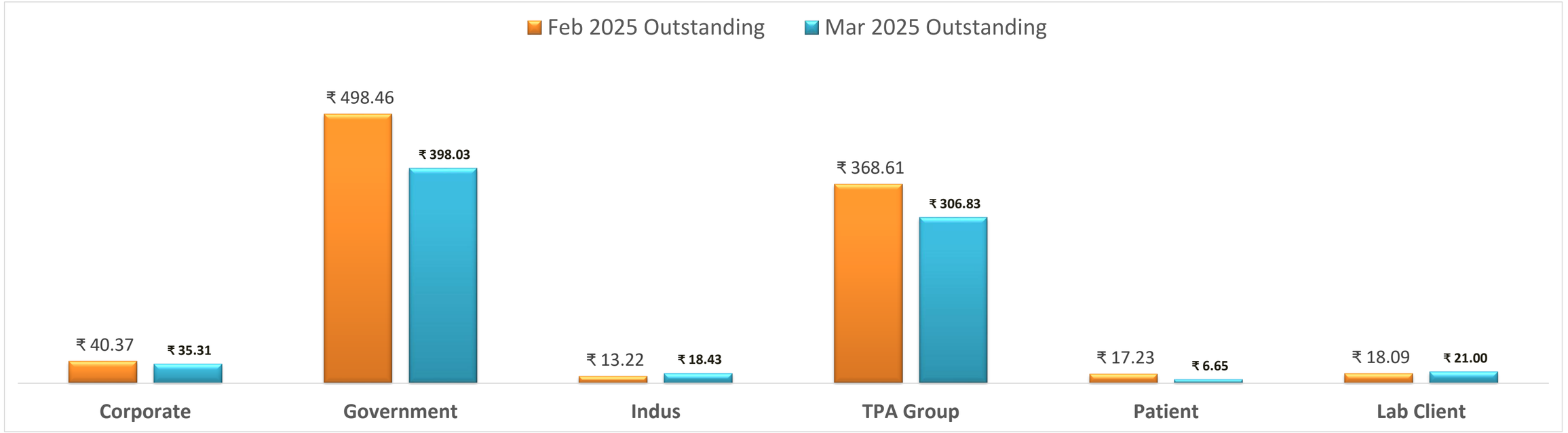
	Corporate	Government	Indus	TPA Group	Patient	Lab Client	Average/Total
Feb 2025 DSO	102	154	41	34	1	95	33
Mar 2025 DSO	98	133	66	32	1	87	29



Category	DSO Change	Interpretation
Overall DSO	↓ 4 days (33 → 29)	Improved collection efficiency
Government	↓ 21 days	Significant improvement in receivables
Lab Clients	↓ 8 days	Faster payments observed
Corporate & TPA	Slight decrease	Marginal gains in collection efficiency
Indus	↑ 25 days	Delay in payments; needs urgent corrective action
Patient	No change	Stable collection timeline

ACCOUNTS RECEIVABLE DAYS

Outstanding Amount is the total amount that a hospital or healthcare institution has yet to receive from various payers after providing medical services. This sum remains in Accounts Receivable (AR) until it is fully paid.



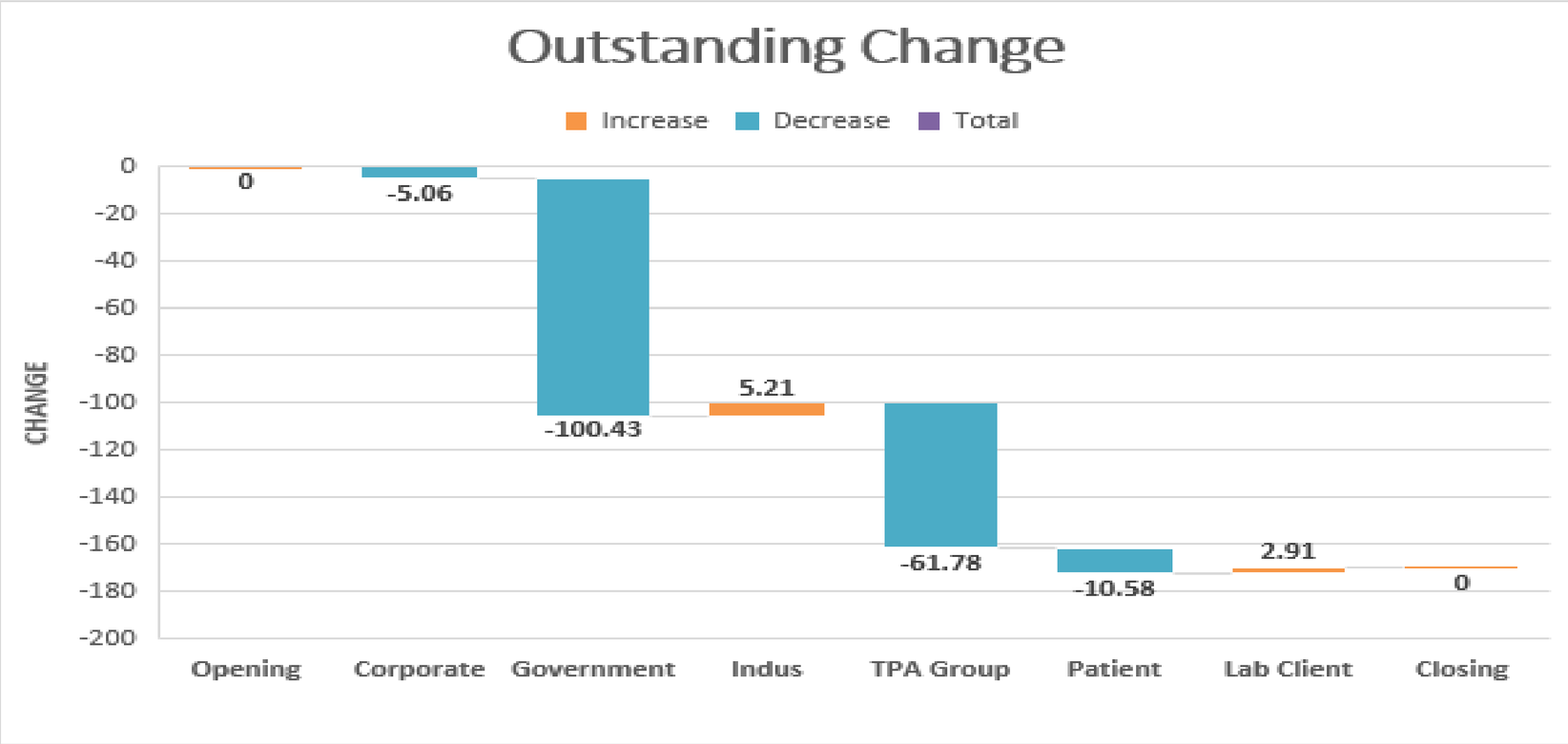
Outstanding Dues Trend (Feb–Mar 2025)

Major Reductions:

- **Government:** ₹498.46M → ₹398.03M
- **TPA Group:** ₹368.61M → ₹306.83M
- **Corporate:** ₹40.37M → ₹35.31M
- **Patient:** ₹17.23M → ₹6.65M

Increased Dues:

- **Indus:** ₹13.22M → ₹18.43M
- **Lab Clients:** ₹18.09M → ₹21M



Waterfall Chart Interpretation – Feb to Mar 2025
Opening Balance (Feb): ₹955.98M
Reductions in Dues:
- **Government:** ↓ ₹100.43M (largest drop)
- **TPA Group:** ↓ ₹61.78M
- **Corporate:** ↓ ₹5.06M
- **Patient:** ↓ ₹10.58M

Increases in Dues:
- **Indus:** ↑ ₹5.21M
- **Lab Clients:** ↑ ₹2.91M

Net Result:
Significant net decrease in total outstanding dues by **end of March 2025**, driven mainly by **Government and TPA collections**

Revenue Leakage by Department

Department	Type of Leakage	Impact	Comments
Insurance/TPA Desk	- High denial rate (up to 45%) - Delays in claim processing - Incomplete documentation	High	Major contributor due to denial and delay issues
Billing Department	- Final bill TAT exceeding NABH standards - Errors in itemization & documentation	Medium-High	Affects timely discharge and claim submission
Medical Records (MRD)	- Delay in discharge summaries - Incomplete clinical documentation	Medium	Leads to claim denials and billing delays
Admission Desk	- Inadequate insurance verification - Lack of awareness on policy terms	Medium	Root cause of policy mismatch & denial
Clinical Departments (Doctors)	- Missing/ambiguous documentation - Unclear surgical/procedure notes	Medium	Impacts claim approval
Nursing & IP Coordination	- Delayed documentation for clearances - Discharge process bottlenecks	Low-Medium	Slows final billing
Finance & Accounts	- High outstanding amounts, especially Govt & TPA - Delayed follow-ups	High	Major cause of cash flow issues
Lab & Indus Clients	- Rising outstanding balances - Poor follow-up on collections	Medium	Revenue leakage through client non-payment

RECOMMENDATIONS

1.Billing Department

• Automate final billing processes with EHR/EMR integrations.

• Integrate EHR/EMR to automate final billing triggers.

• Track billing time by case type and prioritise insurance discharges.

• Train staff to adhere to the NABH 2-hour norm.

2.Address Claim Denials :

Need to look into claims denial rates as its exceeding the standard value by following pre discharge audits to measure accuracy .
Imply as separate Task force for this issues to handle such denials.

3. Strengthen Discharge Coordination

- Introduce discharge tracking dashboards (Electronic medical records).
- Real-time interdepartmental clearance via mobile/desktop alerts
- Daily review of high TAT discharge cases

4. Improve Insurance Education

- Provide patients with pre-admission insurance briefings
- Display surgery waiting period, coverage limits prominently in OPD/IPD

5. Other Recommendations :

- **Automate documentation checks** at MRD and insurance desk.
- **Improve interdepartmental coordination** for discharge and billing.
- **Conduct regular denial audits** with department-wise feedback.
- **Enforce SOP adherence** for insurance verification and clearance timelines.
- **Track AR aging reports** department-wise monthly.