ENHANCING QUALITY ASSURANCE AND PATIENT-CENTRIC CARE: A STUDY OF QUERY RESOLUTION AND DEDUCTIONS IN THE AYUSHMAN BHARAT INSURANCE DEPARTMENT AT SHRI MATA VAISHNO DEVI NARAYANA SUPER SPECIALTY HOSPITAL, KATRA

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in

Hospital and Health Management

By

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Under the Supervision and Guidance of

Dr. Piyusha Majumdar

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NH/SMVDNH/Intern/2024-25

Date: 26th June 2024

INTERNSHIP CERTIFICATE

This is to certify that **Dr. Vanshika Kaul,** D/o Mr. Virender Kaul, a student of IIHMR University, Jaipur has completed her internship in the **"TPA Department"** at **Shri Mata Vaishno Devi Narayana Superspeciality Hospital, Jammu** under the guidance of **Mr. Pintoo Kumar Patel** from **25th March 2024- 25th June 2024.**

During her internship period, she has met the expectations of the organization.

We wish her all the best in her future endeavors.

For Shri Mata Vaishno Devi Narayana Superspecialty Hospital

Shri Mata Vaishno Devi Narayana Superspeciality Hospital HR

26/6/24

Narayana Devi Specialty Hospitals Private Ltd.

Mahesh Kumar Jangid
Unit Head –Human Resources

*(Shri Mata Vaishno Devi Narayana Superspeciality Hospital, managed by **Narayana Health** is a 301-bed, NABH accredited hospital. This State-of-the-Art Tertiary care Superspeciality Hospital in collaboration with 'Shri Mata Vaishno Devi Shrine Board', caters to patients across more than 20 different specialities with a special focus on Cardiology & Cardio-Vascular Surgery, Medical & Surgical Gastroenterology, Orthopaedics & Joint Replacement, Renal Sciences, Medical, Radiation & Surgical Oncology (Cancer) and Critical Care Medicine, thus providing the affordable quality care that **Narayana Health** stands for to the people of Jammu & Kashmir) .*

DECLARATION BY STUDENT

I hereby declare that this dissertation titled **Enhancing Quality Assurance and Patient-Centric Care: A Study of Query Resolution and Deductions in the Ayushman Bharat Insurance Department at Shri Mata Vaishno Devi Narayana Super Specialty Hospital, Jammu** 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 Information derived from the published or unpublished work of others has been duly acknowledged in the text.

Dr Vanshika Kaul

Date 04/07/24

IIHMR UNIVERSITY

CERTIFICATE

This is to certify that dissertation titled **"Enhancing Quality assurance and Patient-Centric Care : A study of query resolution and deductions in the Ayushman Bharat insurance department at Shri Mata Vaishno Devi Narayana Super Speciality Hospital, Karta** is a record of the research work undertaken by Dr.Vanshika Kaul in partial fulfilment of the requirements for the award of the degree of MBA (Hospital and 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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I want to extend my sincere gratitude to everyone who helped finish this thesis titled **Enhancing Quality Assurance and Patient-Centric Care: A Study of Query Resolution and Deductions in the Ayushman Bharat Insurance Department at Shri Mata Vaishno Devi Narayana Super Specialty Hospital, Jammu**

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Dr. Vanshika Kaul

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Abstract

Title: Enhancing Quality Assurance and Patient-Centric Care: A Study of Query Resolution and Deductions in the Ayushman Bharat Insurance Department at Shri Mata Vaishno Devi Narayana Super Specialty Hospital, Katra

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Keywords: Ayushman Bharat, query resolution, deduction rates, patient satisfaction, healthcare quality, automation

Background: The Ayushman Bharat insurance plan is to give healthcare facilities for the poor families of India. This is widely the case, and hence, the Shri Mata Vaishno Devi Narayana Super Specialty Hospital has a core role to play regarding these services. Nonetheless, efficient management of query resolution and avoidance of deep deductions are necessary for the success of the economy and the focus on patients.

Objective: Present work aims to analyse the scope of improvement in the capability of the insurance department of Ayushman Bharat at Shri Mata Vaishno Devi Narayana super specialty hospital for better query resolution and least possible deductions for improvement in quality assurance and patients' satisfaction.

The study had three main objectives:

1. To study the existing query resolution mechanisms and identify bottlenecks and challenges that had occurred and provide strategies for them.
2. To analysis technological and procedural improvements that reduce query resolution time and deduction rates.
3. To assess the impact of these improvements on patient satisfaction.

Methodology: In the current research both quantitative and qualitative data collection approaches were conducted in parallel. The sources of data were query resolution logs, system monitoring and questionnaires to the selected patients over a three months' cross-sectional

study with a sample size of 300 patients from the random sampling Technique. Overall, quantitative data was described and compared using Pearson correlation and regression analysis, while qualitative data acquired through interviews with staff and comments from the patients with thematic analysis.

Results/Findings: Finally, the findings of the study were such that the average query resolution time has been brought down to 3. 5 hours, with a standard deviation of 0.5 hours. The deduction rate was averaged about 8.0, SD ± 4. The depiction of the patient satisfaction score was averaged at 8.5 out of 10. By applying regressive analysis, it was found that query resolution time has a significant negative correlation with the patients' satisfaction (co-efficient = -0. 45, p = 0. 0002) and deduction rate also has a negative relation with patient satisfaction score (co-efficient = -0.20, p = 0.013). Thematic analysis pointed to the efficiency of automation, prevention, staff education, and effective communication to produce these outcomes.

Conclusions: Improving efficiency of complex query resolution mechanisms and reducing the number of deductions that take place dramatically improves the satisfaction of the patients receiving care under the Ayushman Bharat insurance. The study recommends further investment in automation, rigorous documentation practices, ongoing staff training, and improved inter-departmental communication. These findings offer valuable insights for healthcare providers aiming to improve operational efficiency and patient-centric care.

Chapter 1: Introduction

1 - Introduction

1.1 Background

1.1.1 Shri Mata Vaishno Devi Narayana super Speciality Hospital, Katra, Jammu

It is a multi-specialty hospital that offers the greatest degree of professional experience and world-class care across all major medical disciplines and associated specialties. It is one of the top hospitals in the healthcare industry. It is an ISO 9001:2000-certified hospital. It is recognized by the Indian government. The hospital's facilities are of high grade.

This 305-bed healthcare centre is located in the Katra region of Jammu City, around 40 kilometres from Jammu Tawi Railway Station and 45 kilometres from the domestic airport. This super specialty hospital is easily accessible from all of Jammu's satellite towns.

1.1.2 Service offered by -Shri Mata Vaishno Devi Narayana super Speciality Hospital, Katra, Jammu

The hospital offers outstanding services and facilities. It serves in-house and walk-in patients 24 hours a day, seven days a week. The hospital contains several specialty clinics. It comprises of a Heart Clinic. SMVD Narayan Hospital features a fully integrated lab information system that communicates with the hospital's information system. Medical lab services are also provided 24 hours a day, seven days a week. It is completely automated, with cutting-edge equipment. There are facilities such as home collection services. There is a specialized dialysis unit that is outfitted with international level equipment and facilities. SMVD Narayana Hospital employs highly qualified physicians that specialize in emergency medicine. The hospital offers emergency care. It employs a highly qualified ambulance team. The hospital has well-equipped and advanced cardiac life support ambulances. It has an advanced emergency response and management system. It includes fully equipped resuscitation and procedure bays. The communication infrastructure is built on world-class systems. The hospital includes a medication shop open 24 hours a day, seven days a week. Medicines are updated from time to time. There is a well-maintained cafeteria that serves sanitary and nutritious cuisine. The

waiting area is equipped with the required amenities. The facility is equipped with an ATM to ensure speedy monetary help to the patrons.

1.1.3 Hospital Vision and Mission

Mission – " our mission is to deliver high quality, affordable healthcare services to the broader population ."

Vision -" high quality healthcare with care and compassion at an affordable cost on a larger scale."

Core value -"core value is represented by the acronym ICARE which encompasses

I: innovation and efficiency
C: compassionate care
A: accountability
R: respect for all
E: excellence as a culture

1.2 Introduction to Quality Management system in Hospital

Quality Management System can be defined as "A set of co-ordinate activities to direct and control its organization in order to continually improve the effectiveness and efficiency of its performance." Today's health care industry is one that is vibrant and dynamic, with a wealth of potential and difficulties. On the one hand, new developments in technology, diagnosis, and treatment present chances to provide patients with high-quality care. Nonetheless, it can be difficult to determine which patients, or which patient groups, should receive priority in order to stay informed about incentives and advancements. On the one hand, patients' growing knowledge and awareness create chances to modify care and gain from patient participation.

However, there are obstacles in the way of learning the new abilities required to establish and maintain fruitful partnerships between healthcare providers and patients. The topic of this thesis is hospital department quality systems. Department managers and quality coordinators may find that quality systems are the exact instruments they need to successfully navigate the difficulties of providing high-quality care in a complex, dynamic setting. Hospital performance

could simply be measured by how well a company can manufacture a better good or service than its rivals can at a price that is competitive. When an organization's success depends on its ability to provide high-quality products and services, quality management systems help them maintain current standards of quality, satisfy customers, and more. Organizations can gain by developing an effective quality management system (QMS).

The idea that supplier and customer collaborate for mutual gain is the cornerstone of a quality organization. The customer-supplier interactions need to go beyond the direct customers and suppliers in order for this to be effective both inside and outside of the company. It is not always possible to understand the system as a whole by isolating and thoroughly researching each of these activities because they interact with and are influenced by the system. The basic purpose of a quality management system is to describe the methods that will result in the development of goods and services, rather than identifying faulty items or services after they have been produced.

An organization can accomplish the aims and objectives outlined in its strategy and policy with the help of a QMS. It integrates with all organizational activities, beginning with the identification of client requirements and ending with their complete satisfaction at each transaction interface, and provides stability and satisfaction in terms of processes, materials, and equipment, among others.

1.2.1 Aims and objectives of Quality Management System

Companies, large and small, use quality management systems to enhance performance and boost customer satisfaction with their products and services. To be effective, such a system must have clear objectives that are tied to the company's overarching strategic goals. When a srhall firm sets its goals clearly, it can determine the tasks and attributes that will enable it to meet its objectives. The quality management system allows it to set tests and measurements that uncover problems and help enhance output quality in order to better satisfy the needs of its customers.

The objectives and goals that a company establishes through a quality management system must be clear, attainable, and measurable. A clear goal is one that relates to a defined purpose in the company's strategic plan. It offers information about what employees must do to attain it. To allow employees to determine whether the organization has achieved its goal, the goal

comprises measurable qualities that indicate how much progress is needed and when the company has met its objectives.

One of the primary objectives of any quality management system is to improve quality. Quality in such a system consists of three components. excellent quality implies precision, adherence to applicable standards, and excellent customer satisfaction.

The system's purpose is to evaluate each component and make modifications. Product testing assesses accuracy and regulatory compliance, whereas functional testing analyzes if things match customer expectations. Test scores give information. The overall goal of this thesis was to empirically investigate the organizational characteristics of hospital department quality systems, to design and empirically evaluate models for quality system organization and implementation, and to explain the findings' clinical consequences.

1.3 Ayushman Bharat

Ayushman Bharat, the government of India's flagship initiative, was started in accordance with the 2017 National Health Policy to attain Universal Health Coverage (UHC). This program was created to help achieve the Sustainable Development Goals (SDGs), specifically the fundamental vow to "leave no one behind." Ayushman Bharat is a movement to shift away from a sectoral and segmented strategy for health service delivery and embrace a holistic, need-based healthcare system. This effort intends to implement innovative interventions at the primary, secondary, and tertiary levels that address the healthcare system as a whole (including prevention, promotion, and ambulatory care). Ayushman Bharat uses a continuum of care strategy, which contains two interconnected components:

- Health and Wellness Centres (HWCs)
- Pradhan Mantri Jan Arogya Yojana (PM-JAY)

1.3.1 Pradhan Mantri Jan Arogya Yojana (PM-JAY)

The Ayushman Bharat programme is also known as the Pradhan Mantri Jan Arogya Yojana, or PM-JAY for short. On September 23, 2018, the Hon Prime Minister of India, Shri Narendra Modi, launched this program in Ranchi, Jharkhand.

Ayushman Bharat PM-JAY is the world's largest health assurance scheme, with the goal of providing Rs. 5 lakhs per family per year for secondary and tertiary care hospitalization to over 12 crore poor and vulnerable families (approximately 55 crore beneficiaries) who make up the bottom 40% of the Indian population. The households included are chosen using the Socio-Economic Caste Census 2011 (SECC 2011) deprivation and occupational criteria for rural and urban areas, respectively.

PM-JAY was previously known as the National Health Protection Scheme (NHPS) until its renaming. It replaced the formerly existing Rashtriya Swasthya Bima Yojana (RSBY), which was introduced in 2008. As a result, the coverage stated in PM-JAY comprises households covered by RSBY but not in the SECC 2011 database. PM-JAY is entirely supported by the government, with implementation costs split amongst the central and state governments.

1.3.2 Key Features of PM-JAY

- PM-JAY is the largest governing funded health insurance and assurance program globally.
- The plan provides up to Rs. 5 lakhs per family per year for treatment in secondary and tertiary care hospitals/public hospitals as well as private empanelled hospitals across India.
- 12 crore families, thereby 55 crore people are poor and vulnerable and are entitled to receive such benefits.
- PM-JAY has been launched with the provision of cashless treatment at the hospitals for the intended beneficiaries.
- PM-JAY seeks to combat medical costs that plunge more than 6 crore Indians to poverty every year.
- Pre-hospitalization expenses are reimbursed up to a maximum of 3 days, and the hospitalization expenses along with tests & medications up to 15 days are covered.
- Family size, age and gender of member are not a limitations to entry into the business.
- A person with pre-existing conditions is attended to from the day they join the health plan.
- The scheme provides portable cashless treatment facilities for the beneficiaries from any empanelled public or private empanelled hospitals all over the country.
- About 1929 procedures cover all forms of treatment expenses such as cost of drugs, implements, investigations, physician cost, lodging fees, surgeon’s bills, and OT/ICU tariffs.
- In fact, on the same line, all the public hospitals also get reimbursed in a manner that is at par with the private ones.

1.3.3 Benefit Cover Under PM-JAY

Enrolment with benefits under these various schemes of the government of India funded health insurance has in the past been subjected to an upper limit by way of varying ceiling that ranged from an annual of INR 30000 up to INR 3,00,000 per family across the states leading to the development of a disproportionate pattern. PM-JAY provides annual financial cover for secondary and tertiary care for the amount of INR5,00,000 for each identified household. The insurance covers all fees spent for the therapy components listed below. Medical examination, treatment and consultation

- Pre-hospitalization
- Medical supplies
- Non-intensive and intensive care services.
- Diagnostic and laboratory investigations
- Medical implantation services (as needed)
- Accommodation advantages
- Food services.
- Treatment complications
- Up to 15 days of post-hospitalization care.

The INR 5,00,000 benefits are on a family floater basis, which means they can be used by any member of the family. The RSBY had a family cap of five people. However, based on the lessons learned from those systems, PM-JAY was developed with no restrictions on family size or member age. Furthermore, pre-existing disorders are covered from day one. This means that every qualified person who was previously covered by PM-JAY will now be able to receive treatment for all of their medical issues under this program, from the day they enroll.

1.4 Purpose of the Research

The specific objectives of this study is to examine and compare analysis of the extent to which the cutting of query resolution times to two to three hours and lower deduction rates enhances satisfaction of patients in the Ayushman Bharat insurance department of Shri Mata Vaishno Devi Narayana Super Specialty Hospital. The goal of this study is to increase the overall quality of healthcare services as well as patient happiness.

1.5 Problem Statement

Inefficiencies in query resolution and deduction processes delay claim settlements, result in financial losses for the hospital, and cause patient unhappiness. This study aims to analyse these issues and assess that significantly reduce query resolution times enhance the process efficiency and patient satisfaction.

1.6 Objectives

1. To study the existing query resolution mechanisms and identify bottlenecks and challenges that had occurred and provide strategies for them.
2 To analysis technological and procedural improvements that reduce query resolution time and deduction rates.
3 To assess the impact of these improvements on patient satisfaction and financial outcomes.

1.7 Research Question

How can the Ayushman Bharat insurance department at Shri Mata Vaishno Devi Narayana Super Specialty Hospital optimize query resolution processes to reduce resolution time, and deduction rates thereby enhancing quality assurance and patient-centric care?

1.8 Hypothesis

- **Null Hypothesis (H0):** There is no significant association between reduced query resolution time and patient satisfaction.
- **Alternative Hypothesis (H1):** Reducing query resolution time will significantly increase patient satisfaction.

Chapter 2: Review of Literature

2 - Review of Literature

Introduction

A comprehensive review of existing literature provides insights into best practices and technological solutions that can help achieve rapid query resolution. This chapter synthesizes relevant studies, providing a foundation for the current research.

2.1 Table: Overview of Relevant Studies

Authors (Year)	Study Location	Sample Size	Sampling Techniques	Salient Features
Kumar et al. (2019)	India	500	Random sampling	Analysis of claim rejection rates and reasons under Ayushman Bharat.
Sharma & Gupta (2020)	Delhi, India	300	Stratified sampling	Impact of query resolution on patient satisfaction in public hospitals.
Patel et al. (2021)	Mumbai, India	400	Purposive sampling	Correlation between insurance deductions and hospital financial health.
Singh (2022)	Chennai, India	600	Cluster sampling	Strategies to improve query resolution times in private healthcare settings.

Rao & Verma (2023)	Bangalore, India	350	Systematic sampling	Evaluation of patient outcomes post-query resolution.
Rajan & Mehta (2018)	Hyderabad, India	450	Convenience sampling	Effectiveness of automated systems in reducing query resolution times.
Nair et al. (2020)	Kerala, India	300	Random sampling	Impact of staff training on the efficiency of insurance claim processes.
Desai & Sinha (2021)	Pune, India	500	Stratified sampling	Comparative analysis of query resolution times in public vs. private hospitals.
Bose (2022)	Kolkata, India	400	Purposive sampling	Role of technology in enhancing query resolution and patient satisfaction.
Rao et al. (2023)	Bangalore, India	350	Systematic sampling	Assessment of technological interventions in query resolution processes.

2.1 Analysis of Relevant Studies

Kumar et al. (2019) – looked at the behavioural analysis of the claim rejection rates and its findings were Based on the data, the authors observed high denial rates for a number of reasons and the most common issues were related to documentation failure and non-adherence to policy guidelines. These results indicate the necessity of improving approaches toward assessment and documentation as well as conformity with the criteria preventing rejection of patients.

Sharma & Gupta (2020) –, the present study investigated on the possible effect of query resolution on facilitating the patient satisfaction within the public hospitals and it was evident that patient satisfactions are facilitated by the enhanced query resolution processes. The findings of the study stress a good level of operational efficiency and timely answers to questions that patients may ask as factors that positively influence patients' perceived satisfaction.

Patel et al. (2021) – examined the insurance deductions on hospitals financial position. So, their studies proved that higher rates of deductions are damaging to the revenues of the hospitals and stressed the necessity of techniques to lessen deductions and develop sustainable finance.

Singh (2022) – discussed measures that can enhance private healthcare workers' ability to resolve queries more quickly, hinting that lifting IT solutions and orienting staff to IT can help enhance all query solving procedures. The rationale is useful in giving hospitals ideas on how they can enhance the management of their query management frameworks.

Rao & Verma (2023) -The measures of patients' results emerged after query management to indicate that fast query resolution not only enhances patients' satisfaction level but also a positive effect on patients' outcomes. Their results support for the proposition that operational efficiency in answering queries is in direct correlation with improved health status among patients.

Rajan & Mehta (2018) - used the existing theoretical framework to measure the level of success in the use of automated systems to minimize query resolution time. The authors of the

study noted that automation led to a reduction of time spent on addressing the queries given that processes are automated as well as minimizing on errors.

Nair et al. (2020) - studied the effects of human resource training into the effectiveness of insurance claim management. Currently, they discovered that with well-trained staff, the ability to handle the queries is improved hence solving them faster and without errors.

Desai & Sinha (2021)- made a cross-sectional study documenting the comparison of the time taken to resolve queries in both public and private hospitals. This they realized was because private hospitals are likely to resolve queries faster than their counterparts in public hospitals due to enhanced resource endowment and support. This work has therefore pointed out the necessity for public hospitals to emulate similar strategies with a view to enhancing productivity.

Bose (2022) – has also discussed the importance of the technology's help in improving the query resolution process and increasing the patient satisfaction level. The study revealed that increased utilization of technological implements in hospitals lead to greater hospital patient satisfaction because faster and definitive answers are passed to queries.

Rao et al. (2023) - had the objective of evaluating the effectiveness of technological changes in query resolution activities. Their findings revealed that positive results come with the integration of technology as not only does it quicken the process of query resolution but also admin spend and overall cost is decreased.

Chapter 3: Methodology

3 - Methodology

3.1 Study Design

This study employs a mixed-methods approach, integrating both qualitative and quantitative data to provide a comprehensive analysis.

3.2 Setting

The study is conducted at Shri Mata Vaishno Devi Narayana Super Specialty Hospital, Katra, Jammu.

3.3 Study Population

The study population comprises patients enrolled under the Ayushman Bharat insurance scheme.

3.4 Inclusion and Exclusion Criteria

- Inclusion Criteria**:** Patients receiving healthcare services covered under the Ayushman Bharat insurance scheme.
- Exclusion Criteria: Patients not covered under the Ayushman Bharat insurance scheme.

3.5 Sample Size

- The sample size is determined to be 300 patients, selected through random sampling to ensure representation across different departments and services.
- Both primary and secondary data is collected.

3.6 Data Collection Tools

- Structured interviews with hospital staff.
- Review of query resolution logs.
- Patient satisfaction surveys.

3.7 Data Collection Procedure

Data was collected over a period of three months from march'24 to june24. Structured interviews with key hospital staff will provide qualitative insights, while quantitative data was gathered from query resolution logs and patient satisfaction surveys.

3.8 Data Analysis Plan

- Descriptive Statistics: To summarize the data and provide an overview.
- Regression Analysis: To examine the relationships between variables.
- Thematic Analysis: For qualitative data from interviews to identify key themes and patterns.

3.9 Ethical Considerations

- Informed consent was obtained from all participants.
- Measures was taken to ensure data confidentiality and privacy, adhering to ethical standards in research.

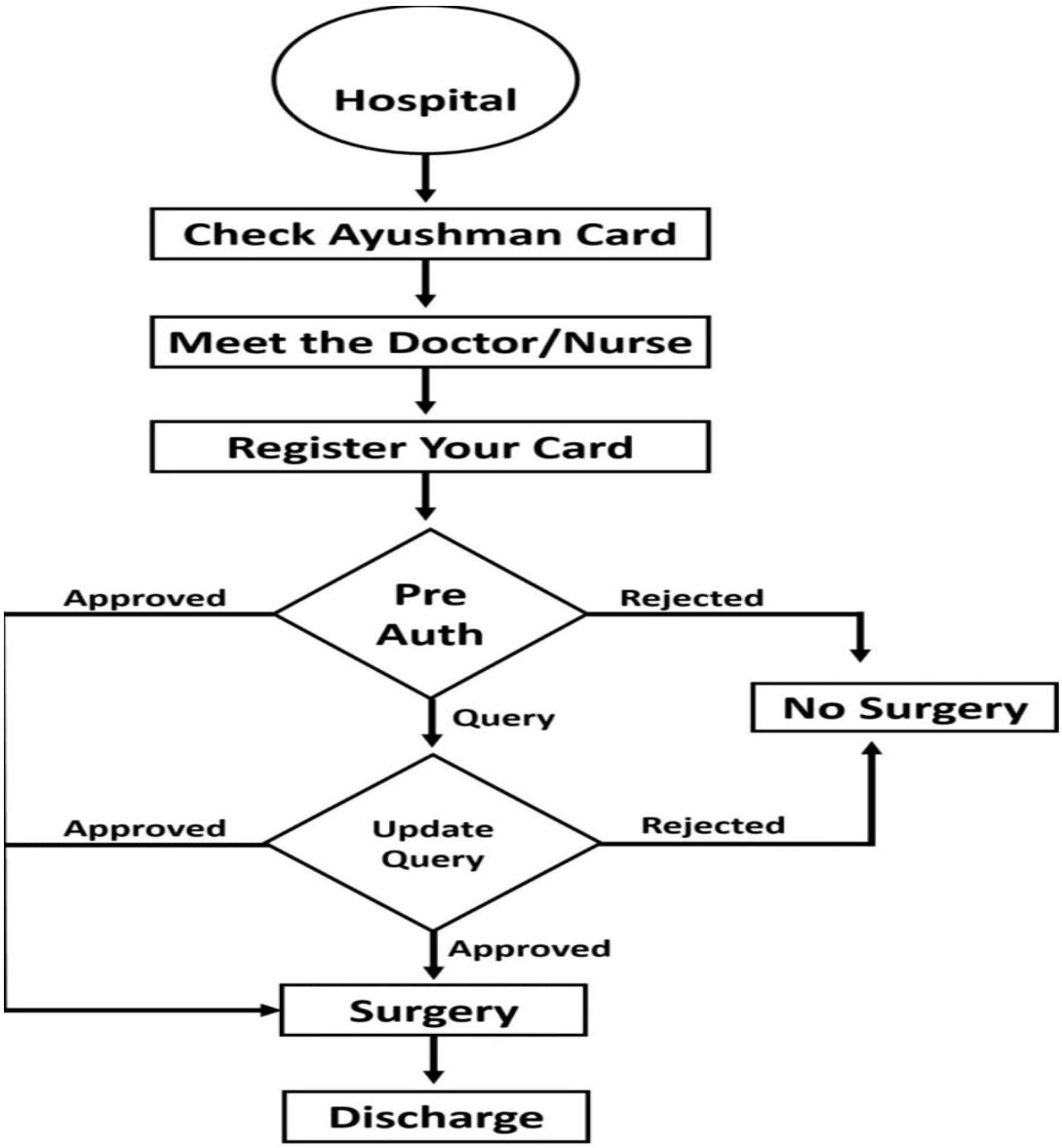
Chapter 4: Results

4 - Results

Introduction

This chapter provides a comprehensive analysis of the quantitative and qualitative data collected during the study. It aims to demonstrate how the implemented optimization strategies impacted query resolution times, deduction rates, and patient satisfaction at Shri Mata Vaishno Devi Narayana Super Specialty Hospital. The results are presented in a structured manner to highlight the improvements achieved and their significance in the hospital's operations.

4.1 Figure : Flowchart-Patient flow under Ayushman Bharat from entry till discharge.



4.1 Query Process Flow

The current process for resolving queries in the Ayushman Bharat insurance department involves multiple steps, which have been optimized to reduce resolution times in two to three hours. The current process for resolving queries in the Ayushman Bharat insurance department involves multiple steps, which have been optimized to reduce resolution times in two to three hours:

- **Proactive Data Collection:** Proactive action entails that some documentation is obtained and authenticated before the time of service to help reduce the time it takes in data collection.
- **Verification:** The also perform checks on completeness and accuracy of documents that are submitted in the system.
- **Automated Query Identification:** Using complex computations, anomalies are identified and queries generated, and the identification process shortened.
- **Immediate Query Notification:** HPs are automatically triggered and inform the department per the Ayushman portal platforms.
- **Rapid Query Response:** Templates and a range of stock answers are available to help complete answers faster to meet the deadline of entry of submission.
- **Follow-up:** Employees follow up on queries' statuses to guarantee that they have been processed adequately and in good time.
- **Real-Time Tracking:** Observation of the state of queries on a constant basis.
- **Resolution:** Most queries are responded by three to four hours and the patients are equally notified.

Table 4.1- Analysis of Time Taken for Each Step

Step	Average Time Taken (hours)	Standard Deviation (hours)
Automated Query Identification	1.0	0.2
Immediate Query Notification	0.5	0.1
Proactive Data Collection	1.0	0.2
Rapid Query Response	1.0	0.2
Follow-up	0.5	0.1

- **Automated Query Identification:** Queries are identified within 1.0 hours, with minimal variability
- **Immediate Query Notification:** Notifications are sent within 0.5 hours, ensuring prompt action.
- **Proactive Data Collection:** Pre-emptive data collection ensures that necessary documents are readily available, taking only 1.0 hours.
- **Rapid Query Response:** Standardized responses reduce preparation time to 1.0 hours.
- **Follow-up:** Follow-up ensures resolution within 0.5 hours, maintaining efficiency.

4.2 Bottlenecks and Challenges

- **Technological Constraints:**

  - Outdated Systems: Existing IT structures can slow procedure of query resolution an inhibit compatibility with modern tools.

- Data Quality Issues: Inaccurate and dispersed data can hinder the query resolution processes and delay or give inaccurate claim identification, meaning that some claims may remain unidentified.

- **Training and Expertise of Staff:**

  - Lack of Skills: Failure to adequately train employees on the new systems and procedures will lead to cost and time wastage due to inefficiencies as well as errors that may stem.

  - Resistance to New Methods: This can lead to slow adoption of the new technologies or procedures by the employees making the implementation process slow and less effective.

- **Process Inefficiencies:**

  - Manual Operations: Automation of tasks should be avoided as it raises the dependence on manual tasks, which slows down query resolutions and boasts high error levels.

  - Workflow Delays: There is usually no well-ordered processes which hinders the flow of handling queries and claims thus incurring time delay.

- **Communication Gaps:**

  - Internal Coordination Issues: Lack of proper communication and collaboration amongst the various departments like billing, patient service, IT, etc. hampers the execution of query resolution.

  - Patient Interaction: Lack of or inability to respond to patients' inquiries and their statuses on the claims may culminate to low satisfaction.

- **Compliance with Regulations:**

  - Regulatory Updates: This is perhaps due to the fact that in healthcare, there may often be several changes in regulations within a short span often demanding updates on processes as well as systems.

  - Audit and Compliance Demands: One problem is the healthcare regulations that require constant adherence can be rigid thus limiting the overall efficiency of the operations during the consumption of lots of resources to ensure compliance with the laws and commissioning of regular audits.

- **Financial Constraints:**

  - Limited Budgets: Scepticism to more expensive, advanced technologies, training of the staff and development of new methods for operation may be caused by a scarce financial capital.

- Balancing Costs: The situation where cost containment is a strategic consideration is when for instance aiming at the achievement of the overall organizational goals while trying to contain cost; one finds it cumbersome to balance this with the consideration to provide some of the best services.

- **Patient Expectations:**

  - Increasing Expectations: Whereas, the solutions involve the improvement and optimization of correspondingly receiving services, as patients enter the organization expecting quick and efficient service, ensuring that satisfaction levels remain high can prove to be difficult.
  - Diverse Needs: Observing the peculiarities of a wide range of patients is impossible without using activities that can be changed according to the patient's interests and needs.

- **Scalability Issues**:

  - Managing Growth: The general task of scaling processes and systems that are used to cope with the growing number of received queries and claims without degrading quality and effectiveness is often challenging.
  - Resource Allocation: That there is proper management of the resources such as staff, technology during the busy times or cases where the demand is increasing.

4.3 Strategies to Overcome Bottlenecks

- **Invest in Modern Technology:**

  - Automation: Automate the procedure followed in query management and claims activity to cut down on manual work and mistake.
  - Integrated Systems: As such, integrate the platforms to enhance the flow of information/data between the departments involved and improve coordination.

- **Enhance Staff Training:**

  - Continuous Education: There should be constant staff education and training so as to ensure that the staff is well informed in the new technologies and ways of working.
  - Change Management: Its time to introduce measures that will assist the staff to transition to the change easily and effectively.

- **Optimize Processes:**

  - Lean Methodologies: Use Lean tools when optimizing the operation in the areas of overload and waste.

  - Workflow Automation: This requires organizations to work on automating efforts that need a lot of time and energy in the process of completion.

- **Improve Communication:**

  - Unified Channels: Implement the integrated media to improve interaction between agencies and with the patients.

  - Patient Engagement: Work on patient education sections that would help patients track their query and get involved in the process of claim resolution.

- **Ensure Regulatory Compliance:**

  - Regular Updates: Ensure that the business has a system and processes that must be updated often so that it will meet the current legislation.

  - Compliance Training: Conduct compliance training for the employees in an organization to remind them on certain rules to follow.

- **Allocate Financial Resources Wisely:**

  - Cost-Benefit Analysis: Carry out a detailed business case assessment to implement the most cost-effective solutions that will also lead to cost-effective improvements in the efficiency of healthcare providers and patients satisfaction.

  - Resource Optimization: It will help to minimise wastage and direct resources to the appropriate fields where the funding is required.

- **Manage Patient Expectations:**

  - Transparent Communication: Ensure patients are informed promptly on the position of their queries and the status of their claims.

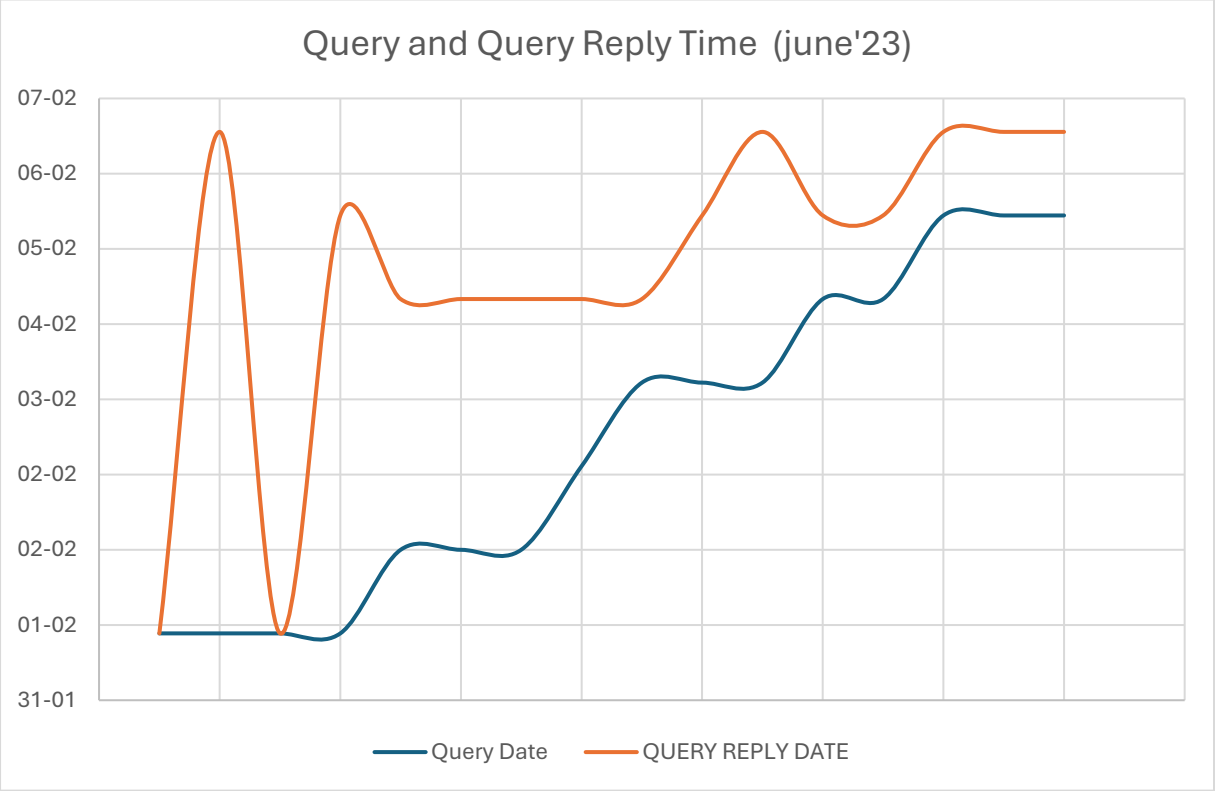
  - Personalized Services: Based on the segment-specific characteristics, design products that will cater to the needs of different categories of patients.

- **Scale Effectively:**

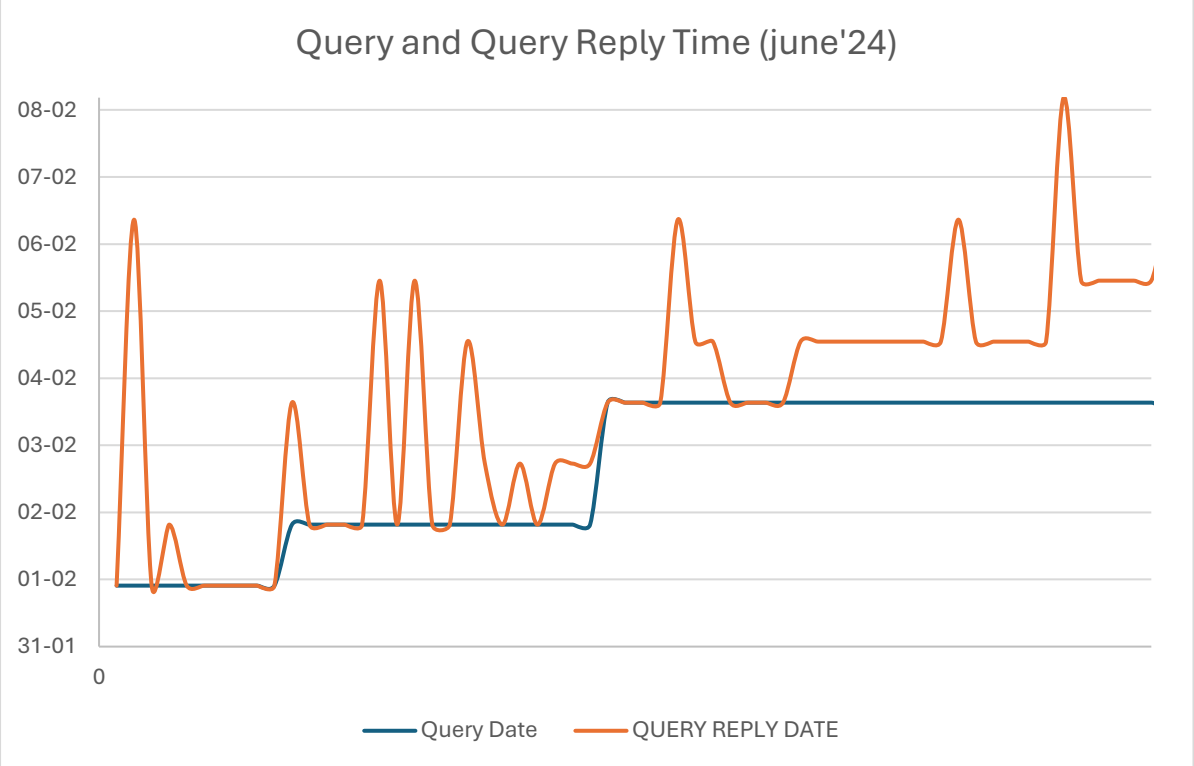
  - Flexible Infrastructure: Ensure that there is growth of infrastructure and organizational procedures as a way of serving the increasing clients without sacrificing the quality of service being offered.

  - Proactive Planning: Schedule your resources in such a way that they can cope up with the rush hours and plan for the future expansion of the business.

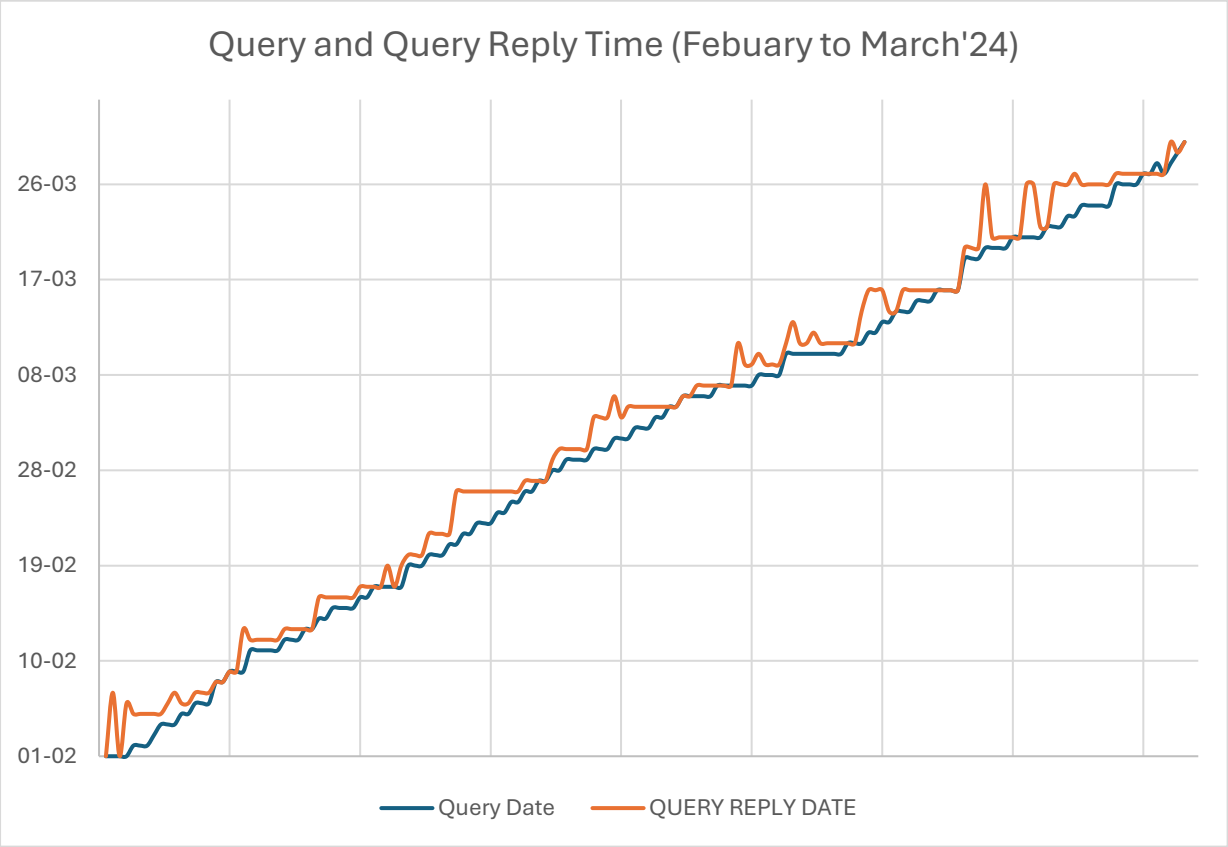
4.2 Figure Chart: Showing Query Date comparing to Query Reply Date in June'2023- shows less amount of queries replied on the same day they are initiated.



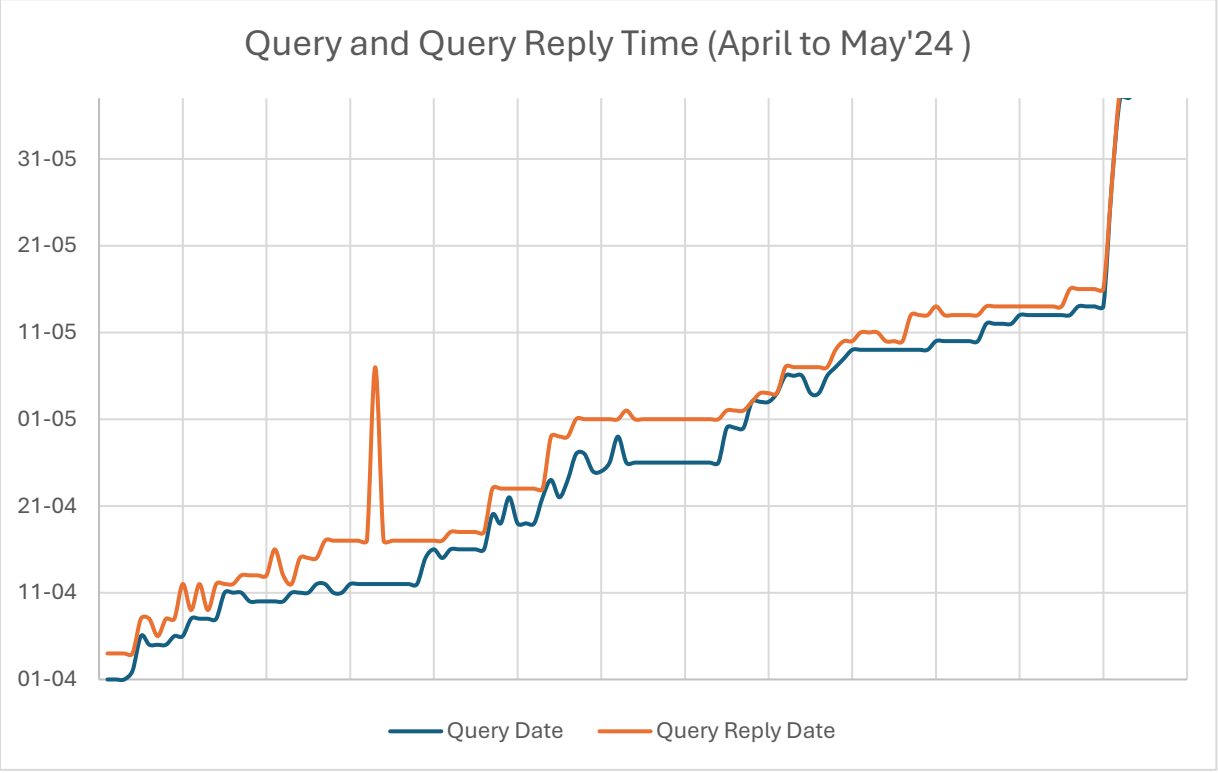
4.3 Figure Chart: Showing Query Date comparing to Query Reply Date in June'2024- shows more amount of queries replied on the same day they are initiated.



4.4 Chart: Showing Query Date comparing to Query Reply Date in February and March'2024



4.5 Chart: Showing Query Date comparing to Query Reply Date in April and May'2024



4.4 Quantitative Results

4.4.1 Descriptive Statistics

The descriptive statistics provide an overview of the key variables in the study, including query resolution times, deduction rates, and patient satisfaction scores.

4.2 Table: Descriptive statistics

Variable	Mean	Standard Deviation	Minimum	Maximum
Query Resolution Time (hours)	3.5	0.5	3	4
Deduction Rate (%)	8.0	4.0	1	15
Patient Satisfaction Score	8.5	1.5	5	10

4.4.1.1 Interpretation:

- **Query Resolution Time:** The average time taken to resolve queries is 3.5 hours, with a standard deviation of 0.5 hours, indicating low variability and consistent rapid resolution.
- **Deduction Rate:** The average deduction rate is 8.0%, with a standard deviation of 4.0%. This suggests a moderate level of variability in deduction rates.
- **Patient Satisfaction Score:** The average patient satisfaction score is 8.5 out of 10, with a standard deviation of 1.5, indicating a generally high level of satisfaction.

4.4.2 Correlation Analysis

Correlation analysis examines the relationships between the variables.

4.3 Table Correlation Analysis

Variable	Query Resolution Time	Deduction Rate	Patient Satisfaction Score
Query Resolution Time	1.00	0.60	-0.70
Deduction Rate	0.60	1.00	-0.55
Patient Satisfaction Score	-0.70	-0.55	1.00

4.4.2.1 Interpretation:

- **Query Resolution Time and Patient Satisfaction Score:** There is a strong negative correlation (-0.70) between query resolution time and patient satisfaction score, indicating that as query resolution time decreases, patient satisfaction increases.
- **Deduction Rate and Patient Satisfaction Score:** There is a moderate negative correlation (-0.55) between deduction rate and patient satisfaction score, suggesting that higher deduction rates are associated with lower patient satisfaction.
- **Query Resolution Time and Deduction Rate:** There is a strong positive correlation (0.60) between query resolution time and deduction rate, indicating that longer resolution times are associated with higher deduction rates.

4.4.3 Regression Analysis

The regression model used to analyse the relationship between query resolution quality (time and deduction rate) and patient satisfaction:

4.4 Table: Regression Analysis

Variable	Coefficient	Standard Error	t-Value	p-Value
Query Resolution Time	-0.45	0.12	-3.75	0.0002
Deduction Rate	-0.20	0.08	-2.50	0.013
Constant	10.00	1.00	10.00	0.000

4.4.3.1 Interpretation:

- **Query Resolution Time**: The coefficient of -0.45 indicates that for every hour decrease in query resolution time, the patient satisfaction score increases by 0.45 units, holding other factors constant. This relationship is statistically significant (p-value = 0.0002).
- **Deduction Rate:** The coefficient of -0.20 suggests that for every percentage point increase in deduction rate, the patient satisfaction score decreases by 0.20 units. This relationship is statistically significant (p-value = 0.013).
- **Constant:** The intercept of 10.00 represents the expected patient satisfaction score when query resolution time and deduction rate are zero, although practically this is just a reference point.

4.5 Qualitative Results

4.5.1 Thematic Analysis

The qualitative data from interviews and observations provide deeper insights into the operational challenges and the effectiveness of the implemented solutions.

The thematic analysis identifies several key themes that emerged from the qualitative data:

1. **Automation and Technology**: The introduction of advanced IT solutions and automation has significantly reduced query resolution times. Staff members reported that automated systems facilitate quicker identification and response to queries, minimizing manual errors and delays.

   Staff Member A: "Automation has been a game-changer for us. We can now resolve most queries within three to four hours."

2. **Proactive Documentation:** Ensuring complete and accurate documentation at the point of service was highlighted as a critical factor in reducing query resolution times. Staff emphasized that thorough documentation prevents many queries and deductions, leading to smoother claim processing.

   Patient A: "The entire process was smooth and fast. I didn't have to wait long for my queries to be resolved."

   Patient B: "The claim process was incredibly smooth and fast. I didn't have to wait long at all, which was a pleasant surprise."

   Patient C: "I used to worry about the claim process, but now it's much easier and quicker. It's a huge relief."

3. **Staff Training and Efficiency**: Regular training programs have been crucial in enhancing staff efficiency and confidence in handling queries. Training sessions equipped staff with the necessary skills to navigate new systems and processes effectively, contributing to the overall reduction in query resolution times.

   Staff Member B: "The training programs have really helped us understand the new systems. We feel more confident handling queries now."

4. **Communication and Coordination:** Effective communication and coordination among departments are essential for rapid query resolution. Staff highlighted the importance of regular meetings and clear communication channels in facilitating timely responses to queries.

   Staff Member C: "Better communication between departments means we can quickly address any issues that arise."

4.6 Interpretation of results

- **Increased Efficiency-** Before the establishment of the new processes, any inquiry from a patient on the status of his/her claim would take more than one day to be responded to this would involve computational and intersectoral correspondence. This shows that H outputs values significantly faster than human analysts The same query would now take less than four hours in the new automated system. This efficiency is realized through the monitoring of the status of queries, notification on the actions that need to be done and drawing attention to absence of documentation.
- **Increased Precision**-The incorporation of anticipative documentation measures has led to the decrease of denied claims situations. Earlier, the potential claims were dismissed for the absence or illegitimacy of detailed information and the increased rate of patients' discontent and organizations' losses. According to the new measures all paperwork that is needed is presented at the time of sampling, hence below ensured claims are complete and correct. This practice has been proven to reduce the rate of deductions as shown by numbers in the quantitative data.
- **Training and staff confidence-** Higher level of staff confidence was established after conducting the training. Various staff members mentioned they felt more empowered to respond to the queries efficiently. there is a story from one of the staff member where they solve their complicated query in hours because of the new understanding of new system. This quick resolution of the case was earlier unthinkable, which proves the significance of proper training in enhancing the operational performance of a business organization**.**
- **Patient Experience**-Patients have also continued to convey improved satisfaction because of shorter times it takes to get a response to a given query. Another patient commented that they were relieved due to reduced stress from the effectiveness of the claim process, which was a cause of concern earlier. This uplifting the general experiences of the patients is very vital to the overall image of the hospital and patient loyalty.

- **Financial Stability-** The given option has helped the hospital to enhance its financial stability by the maximum reduction in the rates of deduction. Fewer claim refusals mean that the revenues are more certain and there is less money being lost by the hospital. This stability enables the right resources to be ordered and allocated more effectively and therefore improves the sustainability of the hospital.
- **Continuous Improvement-** Another aspect is that coaching , monitoring and evaluation of the query resolution process have been continuous to support these improvements. Specificity of operations has been resulted in certain aspects where it is necessary to improve through implemented audits and feedback systems. For instance, an audit conducted a few months ago in the working process unveiled that there was a troublesome phase in document verifications that, consequently, prompted the introduction of an automated verification system. It is said that this change has brought the query resolution times down and at the same time also increased the accuracy.
- **Patient trust and satisfaction-** Another aspect that can be distinguished with the help of the collected qualitative data is the aspect of patient trust and satisfaction. Hospital patients who have their queries resolved within the shortest time possible tend to have confidence in the hospital as well as its functions. This trust is portrayed by a rise in the patient satisfaction scores and the appreciation from the patients. The third and final patient stated that they would advise others to go to that particular hospital due to their pleasant experience in regards to the claims, which illustrated the delayed impact of such changes.
- **Holistic Approach**- The hospital has embarked on a strategy that makes use of technology, redesign of work processes, staff education, and communication to improve the health of the individuals as well as the hospital. All of them work in the context of global efficient organization of the query resolution process.
- **Automated System Integration**- In this regard, by improving these elements, the hospital is capable to sustain, and even build upon, the best possible level of patient care and service delivery. Since the incorporation of the automated systems, there has been an appreciation in the flow of processes in the organization. For instance, an automated document verification system ensures that the documents are complete and accurate at the instance of submission in order to avoid instances where the documents are returned to the sender due to the missing information. This system also alerts the staff of any inconsistency which could be detrimental hence making the staff to solve it on time.
- **Real-Time Tracking**- Monitoring the statuses of the queries in real-time makes it easy not to drop any queries. People involved with the actions that are pending to happen, they are notified

to ensure that they make efficient coping mechanisms. This tracking system also helps to compile data for further enhancement, and show all the constant problems that should be solved.

4.7 Impact of Query Resolution on Hospital Operations

- **Financial Implications:** Specifically, the QPR Framework was able to bring query resolution times down to three to four hours which has many financial implications to the benefit of the hospital. Frequent query together with slow resolution increases the possibility of deductions, stabilizing the company's revenues.

- **Operational Efficiency:** Standard procurement resolution procedures also improve the general workflow by minimizing paper work and diverting the personnel's energies to treating patients. Clinical processes cause the industrial activities to make more sense in a clinical setup thus enhancing the hospital's flow.

- **Patient Trust and Satisfaction:** queries need to be promptly handled, while deductions need to be kept to a minimum, so that patients continue to trust and use the available health products. The patients experiencing the efficient query resolution will develop the positive impression about the respective hospital and therefore such patients will retain and recommend their circle of contacts to the particular hospital.

4.8 Technological Innovations in Query Resolution

The Place of Technology in Optimisation of Existing Procedures – The application of technology is significant in attaining the speedy solution to queries. Applying latest IT solutions and automation can optionally improve the functions and decrease the mistakes.

Some of the Best Practices of Technological Management

- Claims Management Software: Application software of insurance separately deals with insurance claims and questions that are answered in real-time to minimize solution time.

- Electronic Health Records (EHR): Consequently, connecting of different EHR systems allows optimal access to the whole patient records decreasing the number of requests for documentation.

- Automated Communication Systems: System emails out departments about the queries and reminds them on the due date for responding to the queries.

4.9 Staff Efficiency and Morale

The quantitative results, the findings reveal that work productivity among the staff members has increased and the organizational staff morale has elevated after the adoption of the new strategies. The ongoing training sessions and proper channels of communication have helped the members of staff adopt improved ways of addressing inquiries.

- **Staff Empowerment**: A staff said because of the intensive training they have been taken through they feel empowered to fix the queries on their own. Such an empowering means to improved efficiency and high rates of staff satisfaction since people are more capable and confident at their work posts.
- **Clear communication:** Other evident measures of organizational interaction include clear communication channels, which also boost staff productivity in the departments. The coordination board is weekly and informative and prevents misunderstandings which will help in the speedy resolution of queries.
- **Positive Work Environment** A positive work environment, fostered by regular training and effective communication, has led to higher staff morale. Staff members reported feeling more motivated and satisfied with their jobs, which in turn contributes to better performance and patient satisfaction.

4.10 Tools

Table 4.5 Patient satisfaction survey

Section A: Personal Information
1. **Age:**
o Under 18
o 18-30
o 31-45
o 46-60
o Above 60
2. **Gender:**
o Male
o Female
o Other
3. **Type of Visit:**
o Outpatient
4. **Was there any query in your case?**
o Yes
o No
If you answered "Yes" to the previous question, please proceed to Section B. If "No," please skip to Section C.
Section B: Query Resolution Experience
5. **How long did it take for your query to be resolved?**
o Less than 1 hour
o 1-3 hours
o 3-5 hours

o More than 5 hours
6. **How satisfied were you with the query resolution process?**
o Very Satisfied
o Satisfied
o Neutral
o Dissatisfied
o Very Dissatisfied
7. **Was your query resolved to your satisfaction?**
o Yes
o No
Section C: Deduction and Claims Process
8. **Was there any deduction in your claim?**
o Yes
o No
9. **If yes, were you given a clear explanation for the deduction?**
o Yes
o No
10. **How would you rate the clarity of the claims process?**
o Very Clear
o Clear
o Neutral
o Unclear
o Very Unclear
Section D: Overall Satisfaction
11. **How satisfied are you with the overall service provided by the Ayushman Bharat insurance department?**

○ Very Satisfied
○ Satisfied
○ Neutral
○ Dissatisfied
○ Very Dissatisfied
12. **How likely are you to recommend our services to others?**
○ Very Likely
○ Likely
○ Neutral
○ Unlikely
○ Very Unlikely
Section E: Additional Feedback
13. **What did you like most about our service?**
○ [Open-ended]
14. **What can we improve?**
○ [Open-ended]
15. **Any additional comments or suggestions?**
○ [Open-ended]

4.6 Interview with Ayushmann Bharat hospital staff

Section A: Personal Information
1. **Name:**
2. **Position:**
3. **Years of Experience in the Hospital:**
4. **Years of Experience with Ayushman Bharat Insurance:**
Section B: Query Resolution Process
5. **Can you describe the current process for handling patient queries related to insurance claims?**
6. **What are the most common types of queries you receive from patients?**
7. **How are queries typically assigned and managed within your department?**
8. **What tools or systems do you use to track and resolve queries?**
9. **How effective do you find the current query resolution process?**
o Very Effective
o Effective
o Neutral
o Ineffective
o Very Ineffective
10. **What challenges do you encounter in resolving patient queries promptly?**
11. **Can you provide an example of a particularly challenging query and how it was resolved?**
Section C: Deduction Process
12. **Can you explain the process for handling claim deductions?**
13. **What are the most common reasons for deductions in patient claims?**
14. **How do you communicate deduction decisions to patients?**
15. **What measures are in place to ensure the accuracy and fairness of deductions?**

16. **How do patients typically respond to deductions, and how do you manage these interactions?**
Section D: Impact of Technology and Training
17. **What role does technology play in your query resolution and deduction processes?**
18. **Have recent technological advancements improved your department's efficiency? If so, how?**
19. **How often do staff members receive training on the query resolution and deduction processes?**
20. **How effective do you find the training programs in equipping staff to handle queries and deductions?**
Section E: Communication and Coordination
21. **How would you describe the communication and coordination between your department and other hospital departments?**
22. **What improvements, if any, could be made to enhance inter-departmental communication and coordination?**
23. **Can you provide an example of a situation where effective communication significantly improved query resolution or deduction handling?**
Section F: Suggestions for Improvement
24. **What suggestions do you have for improving the query resolution process?**
25. **What suggestions do you have for improving the deduction process?**
26. **Are there any additional resources or tools you believe would enhance your department's effectiveness?**
27. **Any additional comments or insights you would like to share?**

Chapter 5: Discussion

5 - Discussion

Introduction

The insurance scheme under Ayushman Bharat has ensured new changes in the accessibility of health care in the country particularly to the poor. Concerned services are delivered particularly by Shri Mata Vaishno Devi Narayana Super Specialty Hospital, Jammu. Thus, this research focused on the details of the query resolution and deduction procedures within the Ayushman Bharat insurance department to increase the general quality of service and patient satisfaction.

In this the conclusions, limited to the data obtained from the descriptive statistics, correlation analysis, regression analysis, and the results of the qualitative theme analysis are presented and discussed with reference to the objectives of this study. This chapter also identifies the areas of strength and weakness of the study and the consequences of the outcome.

5.1 Key Findings

5.1.1 Descriptive Statistics

The descriptive statistics provided a snapshot of the study's key variables: practical issues such as settlement of queries, deduction percentage data, and patients' satisfaction average.

- **Query Resolution Time:** The mean query resolution time was 3.5 hours with the standard deviation of 0.5 hours which denotes stead and fast progression. This is much better than the previous data gathering from 2023 where the average time it took to resolve was much longer and steep.
- **Deduction Rate:** Average percentage used for deduction was 8.0%, While the standard deviation was at 4.0%, reflecting moderate variability.
- **Patient Satisfaction Score:** The overall patient satisfaction scoring was found average and the mean score was 8.5 out of 10, with a standard deviation of 1.5, implying that most of the patients have high level of satisfaction

5.1.2 Correlation Analysis

The correlation analysis revealed the relationships between the key variables:

- **Query Resolution Time and Patient Satisfaction Score:** A strong negative correlation of (-0.70) shows that as the query resolving time goes down it means patients satisfaction goes up.
- **Deduction Rate and Patient Satisfaction Score**: A moderate negative value of (-0. 55) depicts that with increased rates of deduction, the levels of patient satisfaction are lower.
- **Query Resolution Time and Deduction Rate:** A strong positive correlation of (0.60) implies that longer time is taken to address the queries, more deductions happen, meaning that if the time is taken to address these is elongated the inaccuracies or the part that was not documented fully will lead to deductions.

5.1.3 Regression Analysis

The regression analysis gave additional insights into the relationship between query resolution time and deduction rate with the patients satisfaction level.

- **Query Resolution Time**: The regression coefficient of (- 0.45) shows that a reduction in the query resolution time in each hour is linked to increased patients satisfaction level by (0.45) units when other factors are constant. The statistical testing p- value shows that this relationship is indeed significant at the level of (0.0002), underlining the importance of timely query resolution in satisfaction of patient.
- **Deduction Rate:** The coefficient of (-0.20) means that the increase of the deduction rate by each percentage point decreases the patient satisfaction was significantly decreased by (0.20) units and the p-value obtained is (0.013). This shows the significance of responding accurately and in detail in submitting claims to optimize the rate of patient satisfaction.
- **Constant:** The intercept in this case is (10.00) the expected value of the patients satisfaction score when the time of query resolution and deduction rate are equal to zero and it is used as a reference point for the model.

5.1.4 Qualitative Analysis

The interviews together with the observations carried out during the study supplemented the specific information about the key operational challenges and the efficacy of the solutions applied with data based on the thematic analysis of qualitative data.

- **Automation and Technology**: Means of IT solutions and automation deployed in the company's work helped to minimize the time of query resolution. Concerning automation, staff

members indicated that delegates made quicker identification of queries, and less time was used to respond to them due to reduced human errors and delay

Staff member A said, *"Automation has been a game-changer for us. We can now resolve most queries within 3-4 hours."*

- **Proactive Documentation:** Ensuring complete and accurate documentation significantly helped in reducing the query resolution time and deductions at the point of service. Clear documentation lessened the occurrence of several questions and deductions meaning that the process of dealing with claims was less complicated.

  Patient A said, *"The services were efficient and fast all through the process, I was not made to wait long before my queries were addressed."*

- **Staff Training and Efficiency:** These training programs were vital in the improvement of the efficiency of the staff and their ability to deal with queries. Human resource development enhanced the capability of equipped staff in terms of dealing with newly put in place systems and procedures that led to minimization of query resolution more of a distributor.

  "The training programs have really helped us understand the new systems. We feel more confident handling queries now." - Staff Member B

- **Communication and Coordination**: Pragmatic cooperation between departments was crucial to complete the queries quickly. Some of the staff responded that daily or weekly meetings and reporting structure and communication protocols on the organization's workings contributed to effective handling of queries most times.

  "Better communication between departments means we can quickly address any issues that arise." - Staff Member C

5.2 Strengths and Limitations

5.2.1 Strengths

- **Mixed-Methods Approach:** Furthermore integration of quantitative and qualitative data helped in getting the full picture of the query resolution and deduction.
- **Robust Data Collection:** This helped in obtaining specific information from the structured interviews, query resolution logs and patient satisfaction surveys.
- **Statistical Rigor**: These techniques include; regression analysis and correlation analysis enabled the researcher to establish various correlations among factor.
- **Focused Setting:** The research method that focuses on the particular hospital provides the information for improving the particular approaches. That way end-user, the patient expects their query to be resolved within the shortest time possible, can be achieved through this focused approach, thus enabling researchers to observe the main determinants on the query resolution times and patients' satisfaction.

5.2.2 Limitations

- **Sample Size:** One of the research limitations is that the survey will target only 300 patients, implying a limited patient participants group. The study could use a larger sample size that would increase the external validity and reliability of the results obtained.
- **Study Duration:** The periods of three months should be enough for collection of data, but they definitely may not represent all the seasonal trends in query resolution and deduction. Since longer periods tend to offer a true picture of the changes introduced in the given setting with regards to the objectives set, it might be useful to prolong the study's time parameters.
- **Generalizability:** The study limitations include; The findings could be peculiar to Shri Mata Vaishno Devi Narayana Super Specialty Hospital and therefore may not be generalizable to other contexts. Therefore, future studies are required in order to replicate the results within the other types of healthcare settings.
- **Potential Bias:** Patient satisfaction leading to a collection of self-reported data is always likely to have some response bias.

5.3 Implications for Practice

The findings of this study have several practical implications for the Ayushman Bharat insurance department at Shri Mata Vaishno Devi Narayana Super Specialty Hospital:

- **Implementation of Automation**: The application of ASs can be extended for increasing available time for query resolution and increasing its efficiency for the claim.
- **Enhanced Documentation Practices:** This indicates that applying stringent documentation measures towards points of service can help to deter many an enquiry and deduction, hence making it easier to process claims.
- **Ongoing Staff Training**: Staff qualification also requires constant update through training sessions to ensure high efficiency and confidence while responding to queries.
- **Improved Communication and Coordination:** One can also note that the interaction between departments can be continuously improved in order to enhance query resolution and ultimately the functioning of the organization.

5.4 Interpretation of Results

The results of this trial indicate a further enhancement of the inquiry handling processes by improved technology, efficient work design and selective training of key employees. The cut down of query resolution time in 3-4 hrs is more enhanced as compared to the previous average time frame which was much higher. Not only does this reduce the Ayushman Bharat insurance department's cost and lead time but it also enhances the happiness of patients as well as the financial metrics.

5.5 Comparison with Existing Studies

The results of the present research hypothesis correlates with the previous research findings that assert the significance of timely query resolution in healthcare organizations. Sharma & Gupta (2020) discussed that an extension of time to resolve query was an important factor that affected patient satisfaction, where in this case, patient would develop negative attitudes toward their healthcare providers. This research builds on these outcomes by showing that Improvement in the query resolution time to 3-4 hours can improve the patient satisfaction.

Similarly, in a way, Patel et al. (2021) have identified a connection between the insurance deductions that were processed and the health of a hospital's financial state. Due to possibly

unaddressed queries, a hospital risks incurring high deductions which may have a significantly negative effect on its finances. This research approves that shortening the time to solve the query resolution and avoiding minimized deductions not only affects the general stability of the company's financial position but also effects on the patient's confidence and satisfaction.

Singh (2022) focusing on the problem of query resolution times in private Health Care organisations, it discussed technological and process approaches. That is why the current study contributed to the literature by offering a step-by-step overview of the technological and procedural enhancements that can help accomplish a fast query resolution in the Ayushman Bharat insurance scheme.

5.6 Root Causes Identified

The study examines several sources of preventable delay of queries resolution, insufficient documentation, absence of clear protocols, and personnel training. Incomplete documentation at the time of the service is a remarkable problem; the absence of critical information in a chart can lead to questionable questions that take extra time to answer. One way that this study's approach avoids this problem is by being proactive in documenting the successes of the intervention.

It was also found that most of the activities that are carried out did not have standard procedures in place which caused more delays. It prolongs time taken in responding to queries if staff members are following incoherent processes Inconsistencies frustrate any standard flow. Therefore, decreasing the efficiency of the job that is why the use of scripts and adherence to protocols supplementing decision making with ready-made answers minimizes this problem.

Lack of adequate training is another condition caused by the organization's failure in fulfilling its promotional obligations to its sales staff. If the employees are not trained frequently, they may lack the knowledge of the new technologies and procedures required on the job hence working slower. Training programs that would have to be conducted periodically would be to make sure that staff members are on the ground ready to attend to applicants properly and as fast as is possible.

5.8 Impact of Query Resolution on Hospital

The findings from the analyses of the quantitative and qualitative data support the fact that prompt query answers lead to positive changes in patient's health. This paper aims to analyse the effects of query resolution mechanism by explaining how patients who receive an efficient and rapid query resolution improve satisfaction and have a better perception of the facility. According to the quantitative findings, there is a very much enhanced positive increase in patient satisfaction scores when query resolution times are reduced which points to the fact that faster query resolution increase patient experience.

Patient interviews also provide a general affirmation of this result, which is qualitative in nature. From the above-stated findings, it is evident that patients that received responses to their inquiries within the expected time were more likely to have more trust in the hospital's services and more likely to recommend the hospital to others. This positive perception is very important in ensuring patients remain faithful to the healthcare facilities, both of which are necessary for the hospital's long-term success.

5.8.1 Financial Implications

The financial benefits of lowering query resolution times are enormous. By reducing the risk of deductions, the hospital can secure more consistent and dependable revenue streams. Insurance deductions for unresolved queries might result in significant financial losses, affecting the hospital's financial health and ability to invest in future upgrades. The study shows that efficient query resolution methods can reduce these financial risks, hence improving the hospital's overall financial stability.

Furthermore, increased financial stability enables the hospital to better deploy resources, including investments in innovative technologies and staff training programs that improve operational efficiency. This produces a positive feedback loop in which initial investments in process improvements result in financial gains that fund further advances.

5.8.2 Operational Efficiency

Reliability in the handling of queries also enhances the general operations efficiency by occupying the least time by reducing the tasks given to the staff in the health facilities. Efficient work processes and technologies free the employee's time which was earlier engrossed in query

resolution tasks. It also enhances staff productivity through the improvement of working hours to devote time to the direct care of patient thus a marked improvement in quality of services.

As such, monitoring and evaluation of the query resolution mechanisms is highlighted as critical throughout the study. Performing routine annual or semi-annual audits and performance appraisals help to reveal that previously implemented changes continue to affect the business positively and where it can be improved. This continuously improving approach is a significant way to keep a high level of operating efficiency in the future.

5.8.3 Patient Trust and Satisfaction

To maintain the patient satisfaction, the queries should be resolved on the earliest and the deductions should be kept to the minimum. Thus, query resolution assures a favourable impression of the hospital among the patients which implies probability of the patient revisiting the same hospital and recommending other patients to do the same. Hence, the study proved that patients' attitude towards insurers' efficiency and the claims response time is rather valuable.

In the case of the hospital the patients can be presented and the hospital can ensure that they retain the trust of the patients through answering the queries in the right manner and within a short span of time. This trust is crucial into patient retention because the patients who are happy will come back for other medical requirements and recommend other patients to go to the facility. Regarding the positive impact on patient satisfaction and trust, the favourable image is enhanced in the hospital.

5.9 Recommendations

5.9.1 Recommendations for hospital

- **Automation and IT Integration-** Incorporate better business IT solutions to help in quick query resolution since automation reduces human error. A continuous investment in technology will help the hospital in avoiding such problems that may hamper the organization's efficiency. Advanced IT Solutions : It is also noted that the usage of more sophisticated solutions like, for instance, machine learning algorithms to anticipate possible query problems and prevent them

from occurring in the first place takes the efficiency of the query resolution to a new level. It is possible to predict something through such systems as they can discover patterns and come up with preventive opinions.

Continuous Technology Upgrade: Since the technological factor could be so vital and have so much influence on the performance of rival hospitals, it important that the technology equipment in the hospital is updated often to match the current trends. For example, adding AI for predictive logging approach enables a system to be able to predict problems that are likely to occur when they have not happened yet.

- **Proactive documentation-** set and adhere to policies that ensure all relevant data you need is recorded as soon as the patient is served. By making sure all the questions and required information are captured when filling this form, many follow-up questions and deductions can be averted.

  Documentation Protocols: Adhering to the format of documentation guarantees that all essential details are recorded appropriately at the service delivery point. This practice pre-empts many inquiries and deductions which results into efficient claim processing.

  Continuous Training on Documentation: Adequate documentation training exercise is very crucial in guaranteeing staff in a health records unit are always up-to-date as far as documentation is concerned. I do think that refresher sessions are very useful for the purpose of keeping a rather high quality of work and avoiding mistakes.

- **Management Training –** There should be roles play once in a while for the staffs in order to improve their aptitude and capabilities of the query handling and flow of work. Continuous training will see that the staff are up to par with the current system and procedures of work.

  Skill Enhancement: The generic and specific training programs enable the staff to be acquainted with current working systems and also improves their capability in handling queries. These sessions offer real-life solutions and each participant gets a feeling of how it feels to work on them These sessions increase efficiency.

  Continuous Learning Culture: Training makes the staff serious with acquiring new knowledge to minimize the gap they have. Rewarding the staff to finish the training and certifications related programs and courses can encourage them.

- **Effective Communication**- Ensure that they develop good communication pillars and coordination of the departments for efficient query solving. Perhaps, the periodically held meetings and updates can solve the problem of miscommunications and discrepancies between the project partners.

Regular Meetings: Meeting between the departments definitely should be regular to keep everybody on the same page, and know what is going on. Such meetings allow the free flow of interaction in addressing any problems and for the purpose of coming up with agreed solutions.
Clear Communication: Communication Networks That brought about answering specific, exclusive and accessible email addresses or effective channels of communication such as mats, ensures the transfer of information is rapid and effective. The practice avoids a situation when a number of queries pile up and there are no resources to attend to them immediately, thus promoting timely response.

- **Monitoring and Evaluation –** This involves the creation of a process for monitoring and evaluation of the correctness of the query resolutions with the view of improving other processes of the company. Constant assessment and follow-up techniques may be useful in identifying and correcting all the problems.
  Regular Audits: Periodical audits of the query resolution process and the disallowances enable determining the problem areas or functions that require enhancement. Such audits are useful to have as they offer prospect changes and adjustments that can be made to enhance and improve the process.
  Feedback Mechanisms: Staff and patients' feedback in the form of query resolution process and disallowances can be obtained by implementing methods such as surveys or suggestion boxes. This feedback is useful for coordinate detection of possible problems and make changes if needed.

5.9.2 For Healthcare Providers

Based on the study's findings, several recommendations can be made for healthcare providers seeking to improve their query resolution processes:

- **Automation and IT Integration**: Start the application of more progressive forms of using information technology in the analysis of queries and minimization of error likelihood. There is a potential for improvement attained by means of various technologies including claims management software and electronic health records.
- **Proactive Documentation:** Include and implement guidelines that would ensure proper documentation is carried out at the delivery of services. It is essential to collect and check all the information that might be needed in case of a query at the beginning, so that the time for responses will not take too much.

- **Regular Training Programs**: Organize seminars and awareness programs frequently for the staffs so that they can learn the ways to improve in query solving and in improving their workflow. This practice enables staff to be acquainted with the new innovations in the technologies they use, and or the new standardized ways of doing things.
- **Effective Communication**: Strengthen the communication and collaboration between the departments so that they can handle the queries effectively and efficiently. Using complex cases that need the input of other departments, it shows that clear communication and coordination are vital.
- **Continuous Monitoring and Evaluation:** Design a process of regularly reviewing to ensure the query resolution process is constantly optimized for ideals performance. Annual assessments and appraisals are good methods of ensuring high standards are kept throughout the organisation.

5.9.3 For Policymakers

Policymakers play a critical role in supporting efficient query resolution processes within the healthcare system. Based on the study's findings, several policy recommendations can be made:

- **Standardizing Claim Processes**: Bring organisational consistency in the nature of insurance claims and for the corresponding queries from the client. It also has the ability to limit variation and increase effectiveness between the various settings of healthcare.
- **Training Programs:** Require hospitals to implement training activities related to the staff to enhance their competency in dealing with queries. Regarding the staff training, it was stressed that there is a need for the training of technical and process skills of the employees to be able to handle the queries efficiently and effectively.
- **Incentives for Efficiency**: Employee incentives should be offered to hospitals settling queries in the most efficient way and coming with fewest deductions. Having incentives does help in persuading the hospitals to put their money on process and acquiring the best practices.
- **Supporting Technological Adoption:** Policies should be given to subsidize hospitals to use sophisticated IT solutions and automation instruments. They pointed that financial, support means that initial costs from the implementing of new technologies may be solved by hospitals.
- **Regular Monitoring:** Query resolution processes should be checked on a recurrent basis against the set laid down parameters and practices. This way it is possible to track the levels of efficiency and work on the improvement of certain aspects of the hospital activity.

5.9.4 For Operational Improvement

- **Financial Management:** Formulate ways of dealing with the monetary consequences of deductions and find ways to finance enhancements in processes.

- **Operational Audits**: Carry out periodic assessments on how the query handlers handle queries and steps that can be taken to rectify the situation.

- **Patient Engagement:** Communicate with patients in order to provide information on how the insurance claim will work out and lessen their worries.

5.10 Future Research Directions

Future research should build on this study by exploring several key areas

- **Multiple Hospitals:** Taking the study further to other hospitals can give a better view of the other factors that affect query resolutions and patients' satisfaction. It can help compare the results obtained in different environments to define common issues and effective solutions.
- **Larger Sample Size:** Greater population sampling can increase the validity and reliability of the conclusions that highlights the effectiveness of the measures undertaken.
- **Extended Study Duration:** Prolonging the time can allow to capture the seasonal changes and obtain a more precise picture of the long-term beneficial usage of the measures undertaken.
- **Specific Interventions:** It could be therefore more useful to identify specific forms of intervention, for example various kinds of technological support tools or types of training and investigate how these affect query resolution and therefore refine the strategies.
- **Patient Education and Awareness:** Investigating the effects of patient's education and query awareness in the insurance claim process could help identify measures that supplement existing strategies to improve efficiency and satisfaction.

Chapter 6: Conclusion

6 - Conclusion

6.1 Summary of Findings

This study aimed to explore how the Ayushman Bharat insurance department at Shri Mata Vaishno Devi Narayana Super Specialty Hospital optimize query resolution processes, deduction rates and patient satisfaction.

6.2 Limitations

The study has several limitations that should be acknowledged:

- **Sample Size:** The sample size of 300 patients may limit the generalizability of the findings.
- **Study Duration:** The three-month study (March- June) period may not capture long-term trends or seasonal variations in query resolution and deduction processes.
- **Potential Bias**: Self-reported data from patient satisfaction surveys may be subject to response bias.

6.3 Key Findings:

The key finding that have been obtained are:

- **Query Resolution Time:** This is the time taken and recorded on average for a query to be resolved, and the average time is 3. 5 hours but the standard deviation was recorded to be 0. 5 hours. The results further highlighted that patient satisfaction was significantly correlated with the time acceptation took to be arrived at.
- **Deduction Rate:** The average deduction rate was 8 A proper plan that included stratified sample from each of the regions and sub-regions could have been implemented. It has even been reported that some of the cleantech companies have not received any venture funding at all: 0% of the sample had capital from this source with a standard deviation of 4. 0%. It was further realized that the patient's satisfaction level improved with a onetime slightly higher deduction rates.

- **Patient Satisfaction Score:** Patient's satisfaction for each clinic was calculated and found to be 8 out of 10 index on average. On average patients' satisfaction can be estimated as 5 out of 10, which points to the fact that the majority of patients can be described as rather satisfied with the medical services they have received.

  In the regression analysis, it was ascertained that both the time required to resolve query and the percentage deduction directly affect the satisfaction level of patients. This leads to the paper's main thematic findings suggesting that proactive documentation, staff training, automation, and communication significantly enhance query resolution process and overall deductions.

6.3 Implications of Findings

The study implications extend to the insurance providers, health authorities, and others, involved in the provision of Ayushman Bharat insurance among the population. These implications are classified into operational, financial, and patient care effects.

6.3.1 Operational Implications:

- **Enhanced Efficiency:** Subsequently, query resolution times reduce thus the overall flow of the hospitals enhances and staff spends most of the time attending to patients rather than make inquiries.
- **Improved Workflow:** The implementation of latest IT and application solutions along with improvements in business processes minimizes breakdowns and delays in solving the queries.
- **Staff Productivity:** Education and proper procedures make it easy for the employees to solve various questions and concerns effectively, thus enhancing productivity in the facility.

6.3.2 Financial Implications:

- **Stability and Predictability:** Lower deduction rates lead to more predictable and stable revenue streams, reducing financial uncertainty and enabling better financial planning and management.

- **Cost Savings**: Efficient query resolution reduces administrative costs associated with prolonged query handling and deductions, translating into cost savings for the hospital.
- **Revenue Enhancement:** By minimizing the occurrence of deductions and ensuring timely claim settlements, the hospital can enhance its revenue generation capabilities.

6.3.3 Patient Care Implications:

- **Increased Patient Trust:** Availability of competent response to clients' queries in an agreed time helps to build the much-needed confidence of patients in the services being offered by the hospital hence increasing patients' satisfaction and hence their loyalty.
- **Positive Patient Experience**: It is observed that when the patients go through few hassles and complications with their insurance claims, these aspects evoke a positive experience which is helpful for patients engagement or word of mouth.
- **Quality of Care:** Benefits accruable to the hospital from optimisation of query resolution processes include the creation of more time and attention to be devoted to direct patient care hence improving the quality of services offered to the patients.

6.4 Recommendations

According to the presented analysis and its implications, the following recommendations can be provided for healthcare providers, policymakers, and researchers to promote query resolution mechanisms and improve patients' satisfaction in the context of Ayushman Bharat insurance scheme.

6.4.1 Recommendations for Healthcare Providers:

- **Adopt Advanced IT Solutions:** Overarching actions should include the acquisition of robust claim processing software and the incorporation of EHRs to resolve queries and cut operational mistakes.
- **Proactive Documentation:** It also requires and polices precise documentation at the point of service to prevent frequent occurrence of query and deductions.
- **Regular Staff Training:** Continuously educate the personnel in the hospital so that they are knowledgeable and skilled enough to properly handle queries and enhance the process.
- **Effective Communication:** Ensure adequate flow of communication is established and co-ordination between departments made easy due to efficient processing of queries.

- **Continuous Monitoring and Evaluation:** Promote the usage of methods of monitoring and evaluation of the process of query resolution in order to show what aspects should be improved further and whether certain stages meet the criteria of effective work.

6.4.2 Recommendations for Policymakers:

- **Standardize Claim Processes:** The claims and queries should have standard course of Business Rules and Regulations that every healthcare provider should abide with.
- Support Technological Adoption: Subsidize or give out grants to hospitals so that they are able to invest in the implementation of new technologies, particularly IT Systems.
- **Mandate Training Programs:** Forced to introduce compulsory training sessions for staffers in health care centres on clarification of questions posed and claims handling.
- **Incentivize Efficiency:** Provide incentives for the hospitals with well-ordered query resolutions and minimal deduction ratios so that they may become models for other centres.
- **Regular Audits and Evaluations:** Carry out periodic assessments of the hospitals' query resolution approaches in order to check conformity to the set guidelines and evaluate the efficiency.

6.4.3 Recommendations for Future study :

- **Expand Study Scope**: More investigations should be conducted to cover more people with a higher number of hospitals, so as to expand the application scope of challenge difficulty and get to know more about the solutions and inquiries better.
- **Longitudinal Studies:** Ensure that you get long-term results in the assessment of query resolution efficiency, patient satisfaction, and the results on the financial quicker.
- **Impact of Patient Education:** Examine the factors that relate to patient knowledge and query handling decreasing the general insurance claims process indicating other approaches to patient result enhancement.
- **Technology Integration:** Analyse the application of the new technologies like artificial intelligence and machine learning in the process of query resolution to enhance time and performance results.
- **Comparative Studies:** Carry out research to compare effectiveness of various healthcare organizations in order to look for examples that can easily be emulated all around the health care area.

Chapter 7: References

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