DISSERTATION REPORT

AT

THUMBAY UNIVERSITY HOSPITAL, UAE

A REPORT ON

Assessment of Denial Management: Thumbay University Hospital, United Arab Emirates

BY

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PG/22/029

Under the guidance of

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PGDM (HOSPITAL AND HEALTH

MANAGEMENT) 2022-2024

IIHMR DELHI

NAAC 'A' Grade

International Institute of Health Management Research, New Delhi

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Dr Divakar Parihar** student of **PGDM (Hospital & Health Management) from International Institute of Health Management Research**, New Delhi has undergone internship training at "Thumbay **University Hospital, Ajman, United Arab Emirates** "**from** March 2024 to May 2024.

The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical. The Internship is in fulfilment of the course requirements.

I wish him all success in all his future endeavors.

Dr. Sumesh Kumar
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Certificate of Approval

The following dissertation titled "**Assessment of Denial management: Thumbay University Hospital, United Arab Emirates"** at "**IIHMR Delhi**" is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of PGDM (Hospital & Health Management) for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

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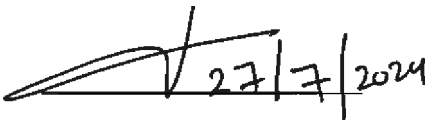
Dr. Yasmeen	
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Certificate from Dissertation Advisory Committee

This is to certify that Dr. Divakar Parihar, a graduate student of the PGDM (Hospital & Health Management) has worked under our guidance and supervision, is submitting this dissertation titled "Assessment of Denial Management" at "Thumbay University Hospital" in partial fulfilment of the requirements for the award of the PGDM (Hospital & Health Management).

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

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CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled "**Assessment of Denial Management"** and submitted by **Dr. Divakar Parihar** Enrolment No. **PG/22/029** under the supervision of **Dr. Yasmeen** for award of PGDM (Hospital & Health Management) of the Institute carried out during the period from **March 2024 to May 2024** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute orother similar institution of higher learning.

Signature

FEEDBACK FORM

Name of the Student: Dr. Divakar Parihar

Name of the Organization: Thumbay University Hospital, UAE

Area of Dissertation: Assessment of Denial Management

Attendance: Full.

Objectives achieved: Determined, Focused & Hard Working.

Deliverables: Actively Participated in all activities, Health Camps Organized by Organization.

Strengths: Optimistic, Hard Working & Focused.

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Suggestions for Institute:

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Date: 27/7/2024

Place: Thumbay University Hospital, UAE.

ABSTRACT

INTRODUCTION- Denial management in healthcare is critical for ensuring financial stability and operational efficiency within healthcare providers. This dissertation evaluates the denial management processes at Thumbay Group's central Revenue Cycle Management (RCM) office in Ajman, UAE. Using a retrospective cross- sectional study design, this research analyses 37,591 insurance claim denials from various insurers over a three-month period in 2024. The study identifies the frequency and types of denial codes, assesses the most common reasons fordenials, and provides strategies to improve claim acceptance rates.

METHODOLOGY- A retrospective Cross-sectional study conducted to assess the denials of all the active empanelled payers, the frequency of various denial codes and type of rejection of claims and pathway of claim errors. Secondary system generated data be collected through the HIMS of facility in the form of rejection report in an encrypted excel.

RESULT- The findings reveal that the primary reasons for claim denials include non- compliance with contractual agreements (12.4%), insufficient clinical documentation (9.7%), calculation discrepancies (8.9%), and patient coverageissues (8.2%). The insurers with the highest denial rates were NAS Insurance and Next-care Insurance, particularly for outpatient services. These insights underscore the need for enhanced documentation practices, rigorous eligibilityverification, and streamlined authorization processes.

CONCLUSION- The dissertation emphasizes the importance of targeted interventions to addressthese issues, suggesting that improving training, making operational changes, and leverage technology can significantly reduce denial rates. Effective denial management not only boosts financial performance but also enhances patient satisfaction by reducing billing conflicts and out-of-pocket expenses. The studyconcludes with recommendations for ongoing monitoring and adjustment of billing and coding practices to ensure compliance with insurer guidelines and promote a more efficient healthcare system.

This research contributes to the understanding of denial management in healthcare, offering practical solutions to optimize revenue cycles and improve overall healthcare delivery.

ACKNOWLEDGEMENT

I am deeply grateful for the invaluable guidance and support provided by **Dr. Yasmeen** & **Dr. Farheen** & **Dr Nadha** throughout the course of this dissertation project. Her expertise, insightful feedback, and constant encouragement were instrumental in shaping this work. I sincerely thank **Dr Anuradha** Bhardwaj for her unwavering commitment and dedication to my academic growth and helping me out in the dissertation process.

I would also like to extend my appreciation to the faculty and staff of Thumbay University Hospital for creating an enriching learning environment and for providing the necessary resources and support. Special thanks go to my colleagues and friends for their camaraderie and constructive discussions that helped me navigate through various challenges during this project.

I am profoundly thankful to my family for their love, patience, and unwavering support, which gave me the strength to persevere. Their belief in my abilities has been a constant source of motivation.

Lastly, I express my gratitude to all those who contributed directly or indirectly to this dissertation. Your support has been vital in completing this work successfully.

Date: 31.07.2024 **Dr. Divakar Parihar**

TABLE OF CONTENTS

LIST OF FIGURES

List of Abbreviations

Sr. No	Abbreviation	Full-form
1	ARM	Account Receivable Management
2	CPT	Current Procedural Terminology
3	GMU	Gulf Medical University
4	HIMS	Hospital Information Management System
5	ICD	International Classification of Disease
6	IIHMR	International Institute of Health Management Research
7	IP	In Patient
8	OP	Out Patient
9	RCM	Revenue Cycle Management
10	STG	Standard Treatment Guidelines
11	TAT	Turn Around Time
12	TUH	Thumbay University Hospital

ABOUT THUMBAY UNIVERSITY HOSPITAL

With Hospitals and Medical Centres in Ajman, Fujairah, Sharjah and Dubai, Thumbay Chain of Hospitals is one of the largest health care providers in the region. The group focuses on three pillars Education, Health care and Research.

Thumbay University Hospital is the largest private academic hospital in the Middle East region, with 350 beds. It is a state-of-the-art family healthcare destination having a dedicated 100-bed long term care and rehabilitation unit, Centre for Oncology equipped with PET-CT scan, 10 modern surgical suites for all major specialities, Centre for Imaging, Cath Lab, ICU/CCU/NICU/PICU, 10-bed dialysis unit, etc. The Hospital has a dedicated floor for the mother and Child program including 10 Labour & Delivery Rooms, NICU, SCBU and Well Baby Unit. The hospital offers Marhaba Services – personalized fast track services for patients – as well as Presidential Suite Rooms, VIP Rooms, Private Rooms, etc. We have a 'Therapeutic Garden' for better relaxation and holistic recovery of in-patients.

Amenities for patients and visitors include a multi-restaurant food court, movie theatre, coffee shops, health club, 1000+ free parking spaces, etc. We are part of the academic hospital network of Thumbay Group, which has a professional workforce of 30 different nationalities serving patients in 50 different languages and serving patients from over 175 nationalities.

Thumbay Hospital prides itself on being the largest network of private academic

hospitals in the region. This is one of the most important aspects which differentiate Thumbay Hospitals from the other healthcare providers in the region. In the UAE alone, GMU and its network of pioneering teaching hospitals train around 20 percent of the doctors and 60 percent of the total healthcare professionals.

As the largest private academic hospital in the region, Thumbay University Hospital stands out a remarkable facility in the region's healthcare map. Combining state-of-the-art technology and innovation with world-class expertise, the hospital boasts unparalleled patient convince and luxury.

Furthermore, located at Thumbay Medicity – the futuristic hub of medical education, healthcare and research, the hospital forms a crucial part of the Gulf Medical University Academic Health System (GMUAHS).

The hospital upholds the basic mission of the Thumbay Hospital network; to provide extraordinary care and to transform the country and the region into a global medical tourism destination. As the pioneers of providing world-class healthcare at affordable costs, Thumbay Group's healthcare establishments have always been regarded as sources of pride by the region's healthcare sector. We strive to care for each patient as though they are family – by giving each patient the individual time and care they deserve.

Thumbay University Hospital would constantly endeavour to serve the community upholding the highest standards of excellence, trust and transparency, touching and transforming the lives of people, in continuation of the tradition of compassionate healing and trust built by Thumbay Group's healthcare establishments

Thumbay Hospitals are committed to integrate latest trends in education to produce competent healthcare professionals who are sensitive to the cultural values of the clients they serve. We will strive to attain the highest of quality and accreditation standards.

CLINICAL SERVICES

Our Hospitals houses the departments of Anesthesiology, Cardiology, Internal Medicine, General Surgery, Obstetrics and Gynecology, Pediatrics, Orthopedics, Ophthalmology, Dermatology, E.N.T. Psychiatry, Urology and Special Clinics like Diabetics Clinic, Well Woman Centre and Well Baby Clinic. Specialized services include a medical imaging department with state-of-the-art equipment like multislice CT scan, mammography, ultrasound, Color Doppler Ultrasound and radiography. An advanced laboratory caters to the requirements ofall the clinical departments and is equipped for regular and advanced investigations in biochemistry, clinical pathology, and serology and hormone studies.

OPERATION THEATRES
Our modern operation theatres have been specifically designed for operative procedures in an ultra-clean environment. Their construction features include stainless steel walls and ceiling, which allow for easy cleaning and maintenance.

OUT-PATIENT SERVICES
The outpatient services function from 9:00am to 1:00pm and from 5:00pm to 9:00pm every day except on Fridays. Emergency services and pharmacy work are available round the clock on all days.

PATIENT AFFAIRS DEPARTMENT
Affordable quality health care is not only a requirement of the community, but also the principle of the hospital. The Patient Affairs Department takes special care in ensuring that appropriate care is extended to all sections of the patient population.

STUDENT SUPPORT SERVICES
The hospital has a library, lecture halls and seminar rooms providing excellent academic environment for the students, internet facilities, video conferencing and other modern tools for medical education add to the learning facilities. Journal Club and Clinical Society meetings are held regularly during which academically interesting clinical cases are discussed in detail by different departments. This is a forum where clinical and pre-clinical faculty interact providing students an insight into important clinical conditions.

Mission
To provide patient centred care of the highest quality in an academic set up.

Vision
To be the leading network of academic hospitals in the Middle East.

Core values
Excellence – Provide clients with a consistently high level of service through benchmarking and continual improvement.

Trust – Ensure trust, compassion, dignity and mutual respect for colleagues and clients through open communication and dialogue.
Client centered – Always be guided by the needs of our patients and clients.
Ethics – Always follow ethical practices that emphasize honesty, fairness, dignity and respect for the individual.
Continuous learning – always keeping abreast with new technologies and evidence based clinical practice.

Teamwork – always working together as a team and drawing strength from our diversity to serve the community.
Integrity – Committed to personal and institutional integrity, make honest commitments and work consistently to honour them.

Network of Hospitals

- Thumbay Hospital, Dubai

- Thumbay Hospital, Ajman
- Thumbay Hospital, Fujairah
- Thumbay Medical & Dental Specialty Centre, Sharjah
- Sharjah Charity Medical Centre – Kurfakhan, Managed by Thumbay Hospital

Dental Centre's are available in Dubai, Ajman, Fujairah and Sharjah

SECTION- 1

INTRODUCTION

Overview of Health Insurance

Health insurance is a critical component of modern healthcare systems, providing financial protection against the high costs of medical care. It functions as a contract between the insurer and the insured, where the insurer agrees to cover the cost of specific medical expenses in exchange for a premium paid by the insured. The primary purpose of health insurance is to reduce the financial burden on individuals and families, ensuring that they can access necessary medical services without incurring overwhelming debt.

Types of Health Insurance Plans:

There are various types of health insurance plans, each offering different levels of coverage and flexibility.

> **Employer-Sponsored Health Insurance** is one of the most common forms, where businesses provide health insurance benefits to their employees as part of their compensation package. These plans often offer comprehensive coverage and can be more affordable for employees due to the employer's contribution to the premium costs.

> **Individual health insurance** plans are another option, available for purchase directly by individuals or families. These plans can be tailored to meet specific needs and budgets, but they may come with higher premiums compared to employer-sponsored plans. The Affordable Care Act (ACA) in the United States has made individual health insurance more accessible by providing subsidies to eligible individuals and families based on their income levels, as well as mandating essential health benefits that all plans must cover.

> **Public health insurance** programs, such as Medicare and Medicaid in the United States, play a crucial role in providing coverage to specific populations. Medicare primarily serves individuals aged 65 and older, as well as some younger individuals with disabilities. Medicaid, on the other hand, is designed to assist low-income individuals and families, offering comprehensive coverage at little or no cost to the beneficiaries. These programs help bridge the gap for those who may not have access to employer-sponsored or affordable individual plans.

Cost-Sharing Mechanisms in Health Insurance

Health insurance plans typically include a range of cost-sharing mechanisms, such as deductibles, co-payments, and coinsurance.

A **Deductible** is the amount the insured must pay out-of-pocket before the insurance coverage kicks in.

Co-payments are fixed amounts paid for specific services, such as doctor visits or prescription medications.

Coinsurance is a percentage of the cost of covered services that the insured must pay. These mechanisms are designed to share the cost of care between the insurer and the insured, encouraging responsible use of medical services.

Preventive care is a key focus of many health insurance plans, recognizing that early detection and treatment of health issues can lead to better health outcomes and lower overall costs. Services such as vaccinations, screenings, and annual check-ups are often covered at no additional cost to the insured, promoting a proactive approach to health management.

Challenges in the Health Insurance System

Despite its benefits, the health insurance system faces several challenges. Rising healthcare costs, driven by factors such as advanced medical technologies, an aging population, and chronic disease prevalence, put pressure on insurers and policyholders alike. Balancing the cost of premiums with the need for comprehensive coverage is a constant challenge. Additionally, disparities in access to health insurance and healthcare services remain a significant issue, particularly for marginalized and under served populations.

In conclusion, health insurance is a vital tool for managing healthcare costs and ensuring access to necessary medical services. It offers financial protection, promotes preventive care, and provides a safety net for various populations through public programs. However, ongoing efforts are needed to address the challenges of rising costs and unequal access to achieve a more equitable and efficient healthcare system.

Denial management is the systematic process of finding, assessing, and addressing the causes behind claim denials by insurance. A claim denial happens when an insurance company declines to pay for a service or procedure for a variety of reasons, including coding errors, insufficient documentation, services not covered by the policy, or a lack of previous authorization. Effective denial management strives to reduce these incidents while also ensuring that healthcare professionals are properly reimbursed for their services.

Relationship Between Denial Management and Health Insurance

In the healthcare system, denial management and health insurance are closely related, with both being essential to guaranteeing that patients receive the care they require and that healthcare providers are paid for their work. It is imperative for patients, providers, and insurers to comprehend the dynamic relationship between these two components.

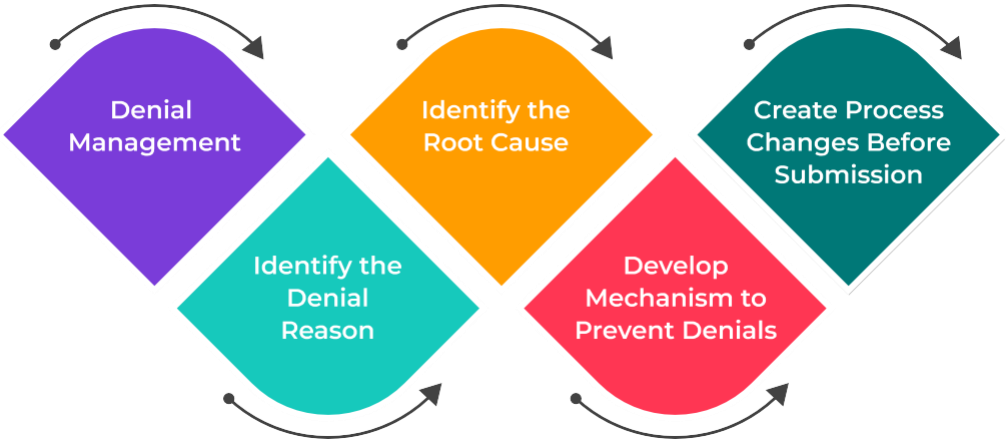

Figure 1: Stages of Revenue Cycle Management

The lifecycle of a RCM are as follows: -

> **Registration of the patient** that deals to register patient to the facility and collecting the information about the insurance

> **Pre-authorization** refers to the approval by the payer towards certain services

> **Coding** refers to the assignment of special alphanumeric character against the disease and procedures rendered to the patients

> **Chargeables** means that all the bills will be finally captured against the services codes

> **Submission** means that the coded services are sent in a documented for called claims to the payer in electronic or paper format

> **Account receivable Management (AR)** these referred to as the process of managing the payment and taking follow-ups on the outstanding balance from the payers and patients

> **Denial Management** involves the management of the denied claims due to error like duplication, non-approvals or coding issues that are manages (6).

Healthcare Reforms in United Arab Emirates

Expenditure on healthcare can reach to a catastrophic state which may pose a serious challenge in minimizing the out-of-pocket expense on individuals (1). With the market value of $10.51 billion in 2024 and with the various reforms in healthcare sector UAE is expecting the growth of $18.83 billion in year 2029 resulting in more reformed healthcare delivery system in the entire nation. The federal structure of UAE allows the emirates to have their own programs along with the national level. Covid-19 has contributed to a potential way in awareness people about the importance of health insurance (2). In an attempt to achieve the target of reducing the economic burden due to heavy investment in the health sector by the individual UAE in all its emirates have strengthen the reforms in accessible and affordable healthcare system through an integrated public-private partnership (3).

With the union of the seven emirates that formed UAE in 1971 the various reforms in healthcare have allowed the private insurance to boom the health sector throughout the emirates (4).

SECTION- 2

RATIONALE

Denial management assessment is an important topic for a dissertation thesis since it has a substantial impact on the financial health and operational efficiency of healthcare providers. Claim denials result in significant income loss and higher administrative costs, as providers must modify and resubmit claims. By thoroughly evaluating rejection patterns and core reasons, healthcare organizations can establish focused initiatives to reduce denials and improve revenue cycles.

Effective denial management not only enhances financial stability, but it also increases operational efficiency by reducing billing and coding operations. Furthermore, it assures compliance with complicated regulatory standards, lowering the likelihood of audits, fines, and legal challenges. The project can investigate the relationship between denial management and regulatory compliance, providing insights for adhering to payer policy and healthcare legislation.

Moreover, denial management has a substantial impact on patient satisfaction. Claim denials can result in unanticipated out-of-pocket payments and billing conflicts, reducing patient trust. By enhancing denial management techniques, healthcare professionals can improve patient communication and minimize financial stress, resulting in better patient outcomes.

This dissertation topic is applicable to finding best practices, optimizing revenue cycles, and using data analytics to promote continuous improvement. Addressing these difficulties can result in more effective healthcare delivery and better financial outcomes, making it an important topic of research in healthcare management.

OBJECTIVE

Primary Objective:

The assessment of the denials of health claims rendered against the health services provided to all the facilities for the active payers empanelled with the Organization.

Secondary Objective:

> Assessment of the frequency of the type of denial codes for the health claims rendered against the services in the most rejected payer.

> Categorization of the types denials that are OP or IP rejected against the health claims for the most rejected payer.

SECTION - 3

Review Of Literature

A study conducted by (Anetoh et al. 2017) highlights the National Health Insurance Scheme (NHIS), which offers top-notch medical treatment to students in Nigerian higher education institutions, includes the Tertiary Institutions Social Health Insurance Programme (TISHIP). The degree to which healthcare practitioners implement this plan and the students' knowledge and awareness of it both play a role in its success. Therefore, the purpose of this study was to evaluate the degree of TISHIP implementation among health workers at Nnamdi Azikiwe University Medical Centre as well as the students' understanding and attitude toward it. Techniques 420 undergraduate students at Nnamdi Azikiwe University in Awka were asked to complete a modified and validated questionnaire instrument to gauge their general awareness and opinion of TISHIP using a stratified random selection technique. Next, the degree of scheme implementation was evaluated among 50 employees of the University Medical Centre were chosen at random. Version 20 of the Statistical Package for Social Sciences (SPSS) was used to evaluate the data that were gathered. Outcomes Although the majority of the students shown a high degree of TISHIP awareness, over half of them (56.3%) reported never having benefited from the program, and 52.8% expressed dissatisfaction with the caliber of care provided under the program. Still, a resounding majority of students—87.9%—thought the program should go on. However, the University Medical Center staff's reactions demonstrated a good execution of the program. In summary Students at Nnamdi Azikiwe University had a terrible attitude and a satisfactory level of TISHIP awareness, according to the study. In addition, the medical staff at University Medical Center demonstrated a great dedication to the program's goals.

Another study conducted by (Chua and Cheah 2012) pointed Creating an efficient framework and management system for health financing is one of the obstacles to advancing the goal of universal coverage and an equitable healthcare system. Global experiences with various health financing systems indicate that in order for health systems to protect the poor, a strong public role in health finance is necessary, and that health systems with the strongest state engagement are probably the most egalitarian and produce better overall health results. This article aims to assess Malaysia's progress and ability as a middle-income nation in providing health financing for universal coverage while also highlighting some of the major underlying health systems problems. framework to assess the extent to which the population is covered by the Malaysian healthcare finance system, and the Malaysian National Health Accounts (2008) offered the most recent health spending statistics available in Malaysia. With total health spending close to 5% of GDP (4.75%), out-of-pocket spending less than 40% of total health spending (30.7%), extensive social safety nets for vulnerable populations, and a tax-based financing system that essentially functions as a national risk-pooled

scheme for the populace, Malaysia performed credibly when measured against the four target indicators outlined.

However, in a comprehensive systems framework, the financial component works in concert with other domains of the health system. Outmigration of public health professionals, especially specialists, is still a problem in Malaysia, hence funding plans must urgently include a thorough. technique for worker compensation aimed at enhancing the skill mix of the health staff. Data on health spending is consistently gathered, but getting input from the private sector is still difficult. In terms of service delivery, it is necessary to improve financial capacity in order to increase the availability of preventive care and better manage the rising costs of healthcare that are linked to the growing trend of non-communicable illnesses. In order to properly control the acquisition of new medical equipment and supplies, cost-effectiveness must be incorporated into health finance strategies. In the end, adequate public health spending, maintaining the public's focus on universal coverage, and increasing healthcare financings accountability to the public—especially with regard to inefficiencies and better use of public funds and resources—require strong governance and leadership.

It is essential to attain universal health coverage (UHC) in order to promote equity, enhance health, and shield households from financial ruin. Which is been highlighted by (Kodali 2023)The advancements achieved toward primary health aims were halted by the COVID-19 epidemic. Reviewing the policy obstacles to achieving UHC in a post-pandemic environment is the goal of this paper.A narrative analysis of 118 pieces of grey and peer-reviewed literature was done. A bibliographic search of pertinent literature and an electronic search in PubMed and Scopus yielded a total of 77 published papers. An additional 41 reports, websites, blogs, news items, and statistics were gathered by hand from government agencies, non-governmental organizations, and international organizations (WHO, World Bank, IMF, FAO, etc.).

The difficulties were noted and examined in relation to five main conclusions: I Inadequate public health care networks iv) The difficulties in creating resilient health systems, iii) financial risk management and health care finance, iv) difficulties related to population and epidemiology, and v) leadership and governance.

Achieving UHC by 2030 will provide major hurdles for LMICs in South Asia and Africa. To assure progress toward UHC, major expenditures and innovations are required as nations recover from the pandemics aftermath. It is necessary to mobilize resources effectively through resource sharing, international collaboration, and internal accruals.

(Forse et al. 2024) conducted a study Ten districts in Hanoi and Ho Chi Minh City, Vietnam, were the subject of a mixed-method case study between November 2018 and January 2022, employing a convergent parallel design. Through a pilot intervention designed to make SHI enrolment easier for uninsured

TB patients, quantitative data were gathered. We computed descriptive statistics. Thirty-four participants, who were purposefully picked for maximal variance, participated in qualitative interviews. Themes were found using framework analysis and an inductive approach to the examination of qualitative data. Three sources of data—quantitative and qualitative—were combined.
76.5% of the 115 uninsured TB patients we tried to enroll in SHI were successful. Obtaining a SHI card took an average of 34.5 days and cost USD 66 per household. The concepts presented identified obstacles to SHI enrolment included a lack of awareness, expensive annual premiums, and the household-based registration requirement. The participants indicated that in order to attain full population coverage with SHI in urban areas, alternative enrolment options and increased procedural flexibility are necessary, especially for individuals without legal status.

The global health agenda has designated universal health coverage (UHC) as a priority. With the goal of achieving universal coverage of basic healthcare by the end of 2020 as per the study conducted by(Tao et al. 2020), the Chinese government started a new phase of healthcare reform in 2009. In order to analyse the overview of UHC in China with respect to financial protection, coverage of health care, and the stated coverage of the WHO and the World Bank UHC indicators, we combined a literature review with an analysis of secondary data. Among the outcomes are the following: In China, out-of-pocket costs as a percentage of total health expenditures fell sharply from 60.13% in 2000 to 35.91% in 2016; the country's overall population's health insurance coverage increased from 22.1% in 2003 to the under-5 mortality rate decreased from 36.8 to 9.3 per 1000 live births, the average life expectancy increased from 72.0 to 76.4, the average life expectancy dropped from 59 to 29 per 100,000 live births, the neonatal mortality rate decreased from 21.4 to 4.7 per 1000 live births between 2000 and 2017, and so on. Our research indicates that although China seems to be making good progress toward UHC, there are still discernible gaps in service quality and a need for continued strengthening of financial safeguards. A number of significant obstacles still need to be addressed, including the disparate and broken health care system and the growing need for high-caliber, value-based service delivery. Considering that China has pledged to attain UHC.

METHODOLOGY

Study Design

A retrospective Cross-sectional study conducted to assess the denials of all the active empanelled payers, the frequency of various denial codes and type of rejection of claims and pathway of claim errors.

Study Population

The total patient population of 3 months for 2024 was evaluated, these are the services provided against the monitory coverage rendered by the insurance Payer for its specific beneficiary.
There no sampling rather total enumerations data is captured for all the insured patient of year 2024.

Site

The study will be done at the Head Office of RCM for Thumbay Group located Thumbay University Hospital Complex at Al Jurf, Ajman, UAE that caters the central team of RCM which manages the Denials of across all the facilities of Thumbay group.

Duration of the study

The initial review of literature was started in has already started the study took place from 15 th May to 15 th June

Inclusion Criteria

> All the active payers are included in the study that are empanelled.
> Rejection from all the tertiary care, clinics and daycare centre.
> Only three month data is included in the study.
> Data of the health Insured patients are included.

Exclusion Criteria

Travel health insurance and medical tourism patient are excluded from the study.

Data Collection Method

Secondary system generated data be collected through the HIMS of facility in the form of rejection report in an encrypted excel. Direct observation, record review and interview will be taken from the executives at all level for the data triangulation and understanding the barriers and enablers for a smooth claim processing.
The data will be collected in English language.

Data Collection Tool
The data collected will be in the form of excel tool named rejection report which will have various indicators that are: -

Claims Rejection report	
Sr no	Indicators
1.	Facility name
2.	Claim ID
3.	Member ID
4.	Invoice NO
5.	Rejected amount
6.	Rejected CPT codes
7.	Denial code/codes
8.	Denial rejection Description
9.	Doctor Name
11.	Status

Table 1.1 : Claim Rejection Report Tool

Statistical analysis

The IBN SPSS version 2.2.2 and MS-Excel 2019 will be used to analyse the data. The variables used will described using the frequencies, proportions, mean, Standard deviation and range.

SECTION - 4

RESULTS

Identification of denials against the active payers

Insurance Company	Denial Count
DAMAN INSURANCE COMPANY	5262
ALMADALLAH INSURANCE	4811
NAS INSURANCE	8682
NEXTCARE INSURANCE	5621
ADNIC INSURANCE	1531
MEDNET INSURANCE	2070
ALICO INSURANCE	601
AAFIYA Medical Billing	925
HEALTHNET BASIC NETWORK	963
NEURON INSURANCE - ENAYA	1153
AXA INSURANCE	549
FMC GN Network	444
INAYAH TPA (LLC)	228
LIFE LINE INSURANCE	1

Table 1.2: Insurance Companies and their Denial Count

High Denial Rates:

- **NAS Insurance** has the highest number of denials with 8,682.
- **Next care Insurance** follows with 5,621 denials.
- **DAMAN Insurance Company** and **Almadallah Insurance** also have substantial denial counts at 5,262 and 4,811, respectively.

Moderate Denial Rates:

- **ADNIC Insurance** has 1,531 denials.
- **Mednet Insurance** reports 2,070 denials.
- **Neuron Insurance - Enaya** has 1,153 denials.
- **Health Net Basic Network** and **AAFIYA Medical Billing** have relatively lower denials at 963 and 925, respectively.

Low Denial Rates:

- **ALICO Insurance** has 601 denials.
- **AXA Insurance** has 549 denials.
- **FMC GN Network** shows 444 denials.
- **Inayah TPA (LLC)** has 228 denials.
- **Life Line Insurance** reports only 1 denial, indicating extremely efficient denial management or low volume of claims.

The table highlights a significant variation in denial counts among different insurance companies. Addressing these discrepancies through targeted strategies can lead to improved claim approval rates, better financial performance for healthcare providers, and enhanced patient satisfaction.

Category of type of Denial

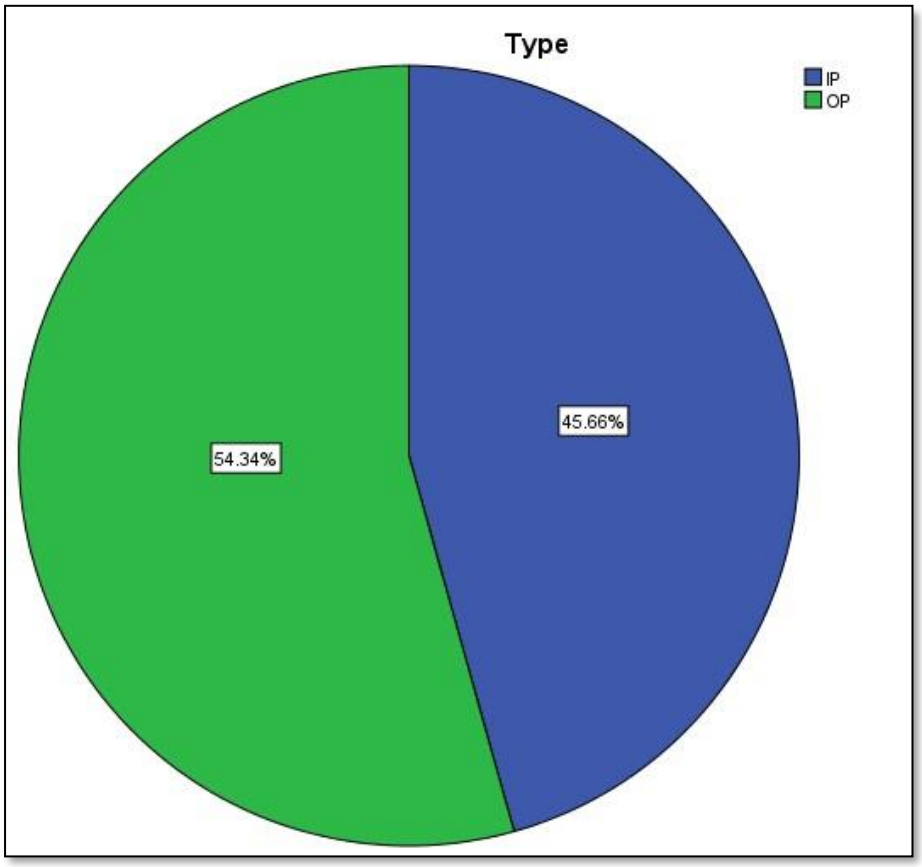

Figure 2: Classification of Denials on basis of In-patient & Out-Patient

The data provided categorizes insurance claims based on the type of service: Inpatient (IP) and Outpatient (OP)Services. Out of a total of 37,591 claims, 54.3% are for outpatient services, accounting for 20,428 rejected claims. Inpatient services constitute the remaining 45.7%, with 17,163 rejected claims. This indicates that a majority of the claims are for outpatient services which are rejected and need to be more focused.

- **Focus on Outpatient Services**: With a higher proportion of outpatient claim denials, healthcare providers should examine their outpatient billing and coding processes more closely. This could involve more rigorous verification and documentation practices before claims are submitted.

- **Inpatient Process Review**: Even though inpatient claims have a lower denial rate, they often involve higher costs. Ensuring accuracy and compliance in inpatient claims is critical to avoid significant financial impacts.

Since OP services constitute a larger portion of denials, healthcare providers might need to adjust their revenue cycle management strategies to focus more on

outpatient services, ensuring faster resolution of denials and improving cash flow.A detailed analysis of the cost implications of denials in both categories can help in allocating resources effectively. High-cost inpatient denials might require a different approach compared to frequent, low-cost outpatient denials.

Frequency of Type of Denial Code

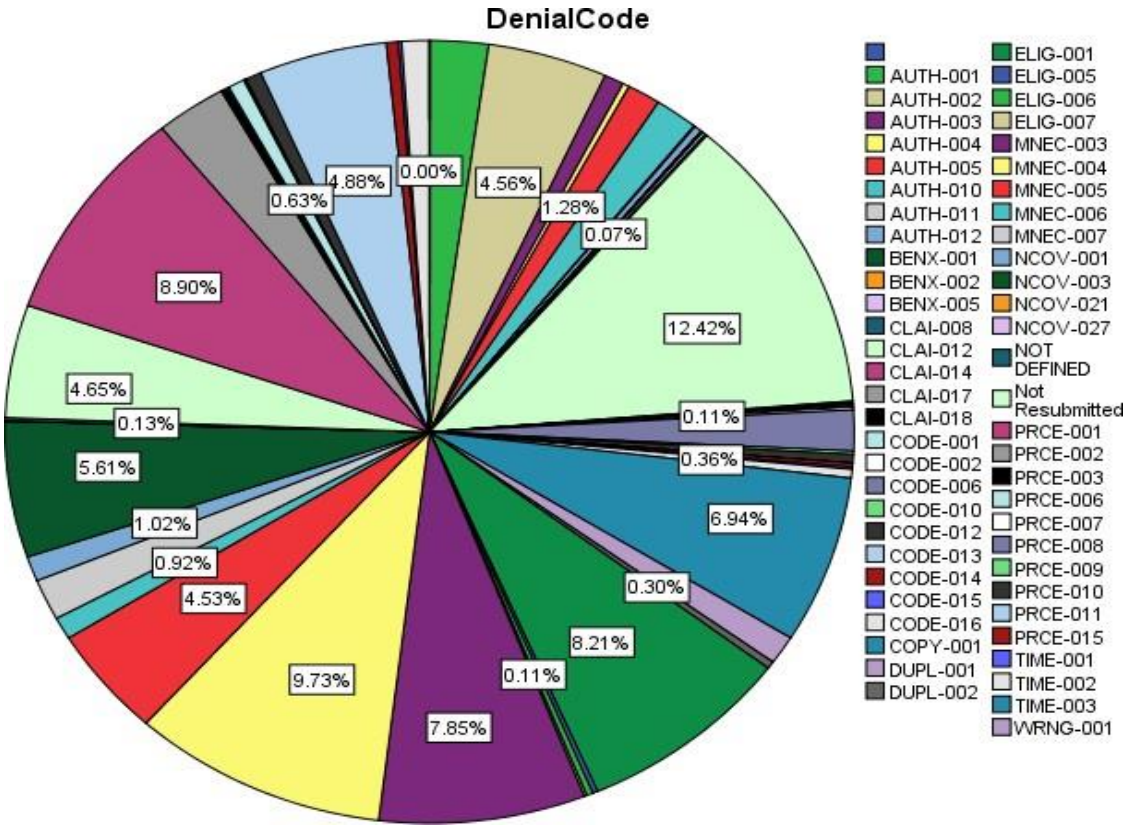

Figure 3: Classification of Types of Denial Codes

The data set details 37,591 insurance claim denials, categorized by specific denial codes. The most common denial code is CLAI-012 (Services performed are inconsistent with authorized or approved services), accounting for 12.4% of denials. Other frequent codes include MNEC-004 (services performed are not medically necessary as per the coverage criteria defined by the payer）(9.7%), PRCE-001 (Procedure Code Is Invalid）(8.9%), and ELIG-001(patient is not eligible for the services provided) (8.2%).

Authorization issues, represented by AUTH-002 and AUTH-001, account for 4.6% and 2.2% of denials, respectively. Medical necessity denials (e.g., MNEC-003) are at 7.8%, and pricing denials (e.g., PRCE-001) are at 8.9%.

Less frequent codes include DUPL-001 (1.2%), CODE-006 (1.7%), and NCOV-003 (5.6%). The data highlights varied reasons for denials, such as eligibility, duplicate claims, and incorrect coding.

The high percentage of claim-related denials indicates a need for improved claim submission processes. Healthcare providers should focus on ensuring all required documentation is complete and accurate. A significant portion of denials is due to medical necessity issues. Providers should ensure that services meet the medical necessity criteria set by insurers and that proper documentation is provided to justify the necessity of services. Denials related to pricing indicate a need for better alignment between the charges submitted and the allowable amounts by insurers. Providers should review their pricing strategies and ensure accurate billing practices.

The substantial percentage of eligibility-related denials highlights the importance of verifying patient eligibility before services are provided. Implementing robust eligibility verification processes can reduce these denials. Authorization denials suggest that providers need to improve their processes for obtaining and documenting prior authorizations. Streamlining these processes can help reduce the incidence of these denials. Although less frequent, denials due to coding errors and duplicate claims still represent areas for improvement. Regular training for coding staff and audits can help minimize these issues.

MOST COMMON REASON FOR DENIALS

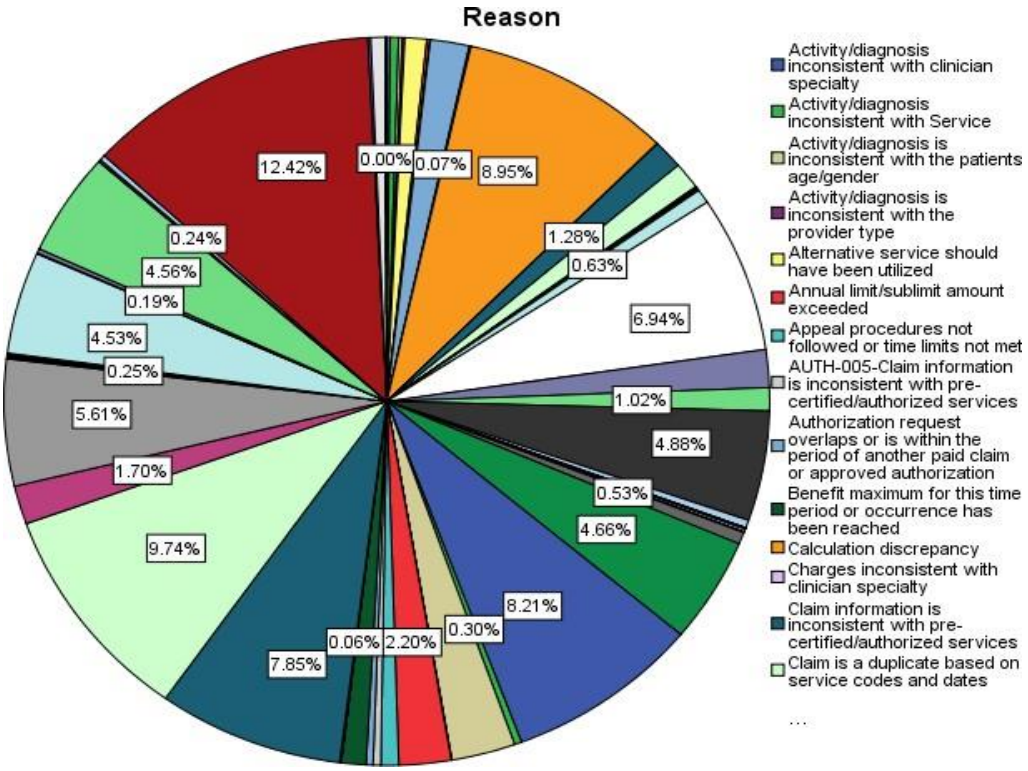

Figure 4: Classification of Reasons for the Denials

The data details 37,591 insurance claim denials, highlighting various reasons.

The most frequent reason, at 12.4%, is "Submission not compliant with contractual agreement between provider & payer." Other common reasons include "Service is not clinically indicated without additional documentation" (9.7%), "Calculation discrepancy" (8.9%), and "Patient is not a covered member" (8.2%). Significant reasons also include "Service not clinically indicated" (7.8%) and "Deductible/co-pay not collected" (6.9%).
Less common reasons involve "Authorization request overlaps" (1.6%), "Diagnosis inconsistent with procedure" (1.7%), and "Requested additional information not received on time" (1.0%). This data illustrates the varied and complex nature of insurance claim denials.

- **Submission not compliant with contractual agreement between provider & payer (12.4%)** :

This is the most common denial reason. It suggests a significant number of claims are not meeting the agreed-upon terms between providers and payers. This could be due to misunderstanding of contract terms, inadequate training, or oversight in adhering to contract stipulations.

- **Service is not clinically indicated without additional documentation (9.7%)**:

  Many claims are denied because they lack necessary documentation to justify the clinical need for the service. This highlights the importance of thorough and accurate documentation to support the necessity of provided services.

- **Calculation discrepancy (8.9%):**

  Calculation errors in claims can lead to significant denials. This may involve incorrect billing amounts, errors in charge entries, or discrepancies between billed amounts and allowed amounts.

- **Patient is not a covered member (8.2%):**

  A notable portion of denials is due to patients not being covered under the insurance plan for the services provided. This underscores the need for rigorous eligibility verification before rendering services.

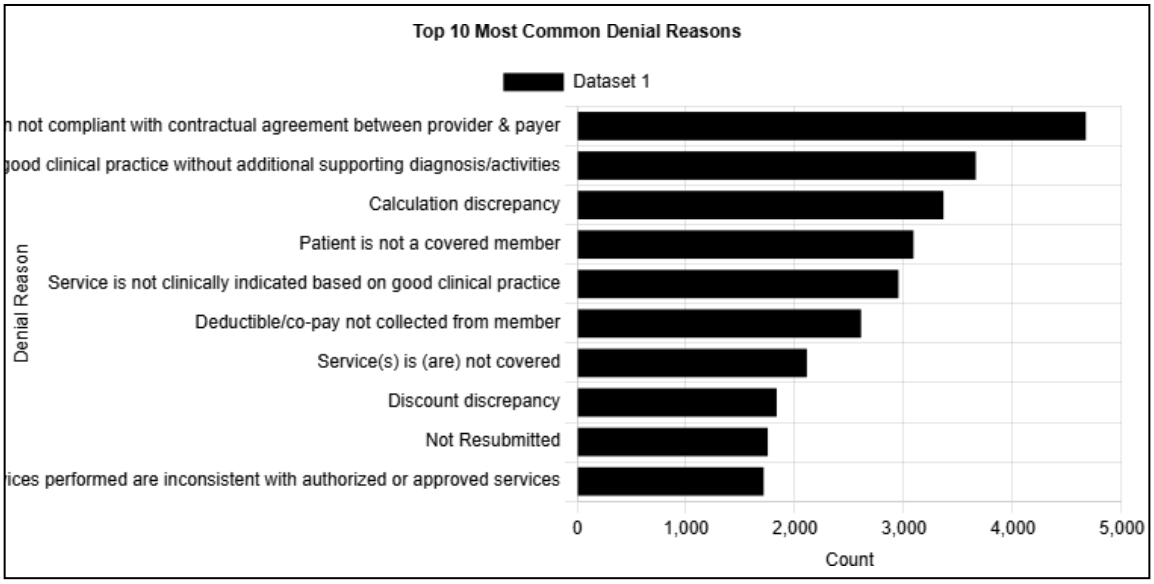

Figure 5: Most Common Denials

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The analysis of the 37,591 insurance claim denials highlights a variety of reasons, ranging from non-compliance with contractual agreements and lack of clinical documentation to calculation discrepancies and eligibility issues. Addressing these areas through improved documentation, accurate billing, rigorous eligibility verification, and streamlined authorization processes can significantly reduce the number of denials and enhance the efficiency of the revenue cycle management.

SECTION - 5

DISCUSSION

> Revenue cycle Management is one of the major departments in the payer-provider model, especially in the facility where the insurance and other third parties constitute more than the 75% of the total revenue, thus a major factor in the healthcare financing.

While the people are more concern about the monitory aspect of the healthcare to reduce the burden on the annual income more towards the insurance aspect.

Countries like USA and UAE have adopted the system of the billing through the medical coding which is an alpha numeric/ numeric unique code assigned to the diagnosis and the services that are billed against the patient.

> The payers in return approve or reject the services against the special codes called denial codes which elaborates the reason for the rejection of the medical services in term with the agreement of the facility.

> The denial management is the most important and integral aspect of the healthcare payer=provider model as it analyses how much revenue is been approved and how much is rejected and the strategies designing the way to retrieve those revenues.

> A Denial management process first analyses the **active payer and the frequency the rejection** as in our case efforts should focus on companies with high denial rates, such as NAS Insurance and Next care Insurance. Investigating the causes of high denial rates can reveal systemic difficulties with claim submissions or specific policy requirements that must be addressed.

It is necessary to identify the payers as we need to understand the nature of the rejection they provide; it also helps to strategies how to plan next slot of submission. Analysing the types of denials from these companies can help identify patterns, whether they stem from coding errors, documentation issues, or policy compliance problems.

Healthcare providers may need additional training to meet the specific requirements of high-denial insurers. Understanding each insurer's policies and common reasons for denials can reduce these numbers.

Companies with moderate to low denial rates can benefit from analysing their denial policies and processes to get insights into best practices that can be applied to insurers with greater denial rates. Using modern claim management systems with automated inspections for typical refusal reasons can help decrease errors and streamline the claims process.

Addressing these disparities through focused measures can result in increased claim acceptance rates, better financial performance for healthcare providers, and higher patient satisfaction.

> There are different approaches in **Outpatient services and In-patient services** like lack of approval needed, dental claims going for in-patient services, mandatory approval for special cases, the denial categorization in IPD and OPD helps us to understand, what approaches we need to modify and understand the

gap in patient OP services, admission and discharges. Healthcare providers should take a closer look at their outpatient billing and coding procedures in light of a larger percentage of denied outpatient claims. This can entail stricter documentation and verification procedures prior to the submission of claims.

Despite having a lower denial rate, inpatient claims frequently incur larger expenses. For inpatient claims to not have a major financial impact, accuracy and compliance are essential. Employees providing outpatient services could require further training to address typical denial causes, such as incomplete or incorrect documentation, incorrect coding, and missing prior authorizations.

Regularly auditing outpatient claims can assist in locating problems and fixing them before they result in denials. Given the nature of the services, this proactive strategy may also be used to inpatient claims, albeit maybe with a different emphasis. It is imperative to guarantee that insurance regulations and paperwork standards are met by both inpatient and outpatient services. This could entail updating and reviewing compliance policies on a regular basis.

Operational adjustments, enhanced training, and leveraging technology can help reduce the frequency of denials. Financial planning and regular compliance reviews are essential to optimize revenue cycle management and ensure efficient healthcare delivery.

> The **Frequency of Denial Codes** indicates that the large proportion of denials pertaining to claims (CLAI-012) suggests that the procedures for submitting claims need to be improved. Healthcare professionals should concentrate on making sure all necessary paperwork is precise and comprehensive.

Concerns about medical necessity (MNEC-004, MNEC-003) account for a sizeable percentage of denials. Providers are responsible for making sure that services fulfil the insurers' requirements for medical necessity and that the appropriate paperwork is submitted to support the need for the treatment.

Pricing-related denials (PRCE-001) suggest that there needs to be greater coordination between the charges that are presented and the amounts that insurers approve. Providers need to check their pricing tactics and make sure that their billing procedures are correct.

The significant portion of eligibility-related denials (ELIG-001) emphasizes how crucial it is to confirm a patient's eligibility prior to providing treatment. These denials can be decreased by putting strong eligibility verification procedures in place.

Authorization denials (AUTH-002, AUTH-001) indicate that providers should enhance the way they obtain and record past authorizations.

> The **Reasons for the Denials indicates that the large** proportions of denials reasons were Submission not compliant with contractual agreement between

provider & payer. It implies that a sizeable portion of claims do not adhere to the conditions set forth by payers and providers. This can be the result of misinterpreting the terms of the contract, receiving insufficient training, or failing to follow the requirements of the agreement. Due to a lack of supporting paperwork demonstrating the therapeutic necessity of the service, many claims are rejected. This emphasizes how crucial it is to have complete and precise documentation to back up the need for the services rendered.

Significant denials of claims can result from computation errors. This could include disparities between allowed and billed amounts, inaccurate charge inputs, or inaccurate billing amounts. Emphasize how crucial it is to have precise and thorough documentation to back up the services' clinical necessity. Regular audits and the use of comprehensive documentation procedures can help to mitigate these problems.

An array of causes, from non-compliance with contractual agreements and lack of clinical documentation to calculation inconsistencies and eligibility concerns, are highlighted by the examination of the 37,591 insurance claim denials. By taking care of these issues—better billing records, strict eligibility verification, efficient authorization procedures, and better documentation—denials can be considerably decreased, and revenue cycle management effectiveness can be raised.

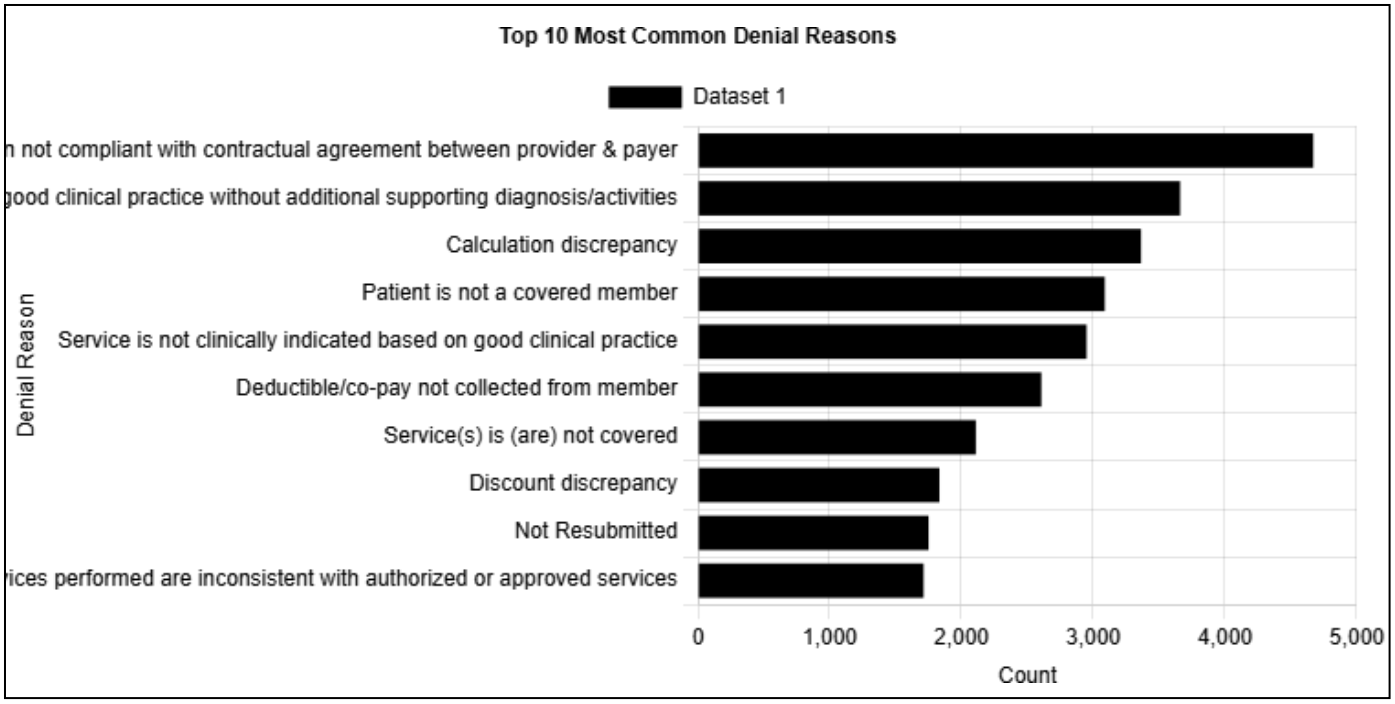
> Type of denial code is the most important part in the Revenue Cycle assessment and denial management. This stage helps us to understand which services whether medical, technical or billing is been rejected most thus helping us to analysed whether we are over investigation to generate revenue, there is billing issue or the technical issues like wrong Post-Office submission’ further we can also analyse the stage of the claim which could have been bypassed.

> The reason of the rejection is processed against the denial codes while here there was approx. 12% rejection was done due non-resubmittable services. While calculation discrepancy contributing to 8.5%. Thus, requiring an immediate attention towards the current billing issues in the facility

CONCLUSION

The assessment of 37,591 insurance claim denials highlights the complex issues with healthcare revenue cycle management, specifically with regard to proper billing and coding, adequate documentation, and payer compliance. According to the study, there are notable differences between various insurers; NAS Insurance and Next care Insurance have the highest denial rates. To increase claim acceptance rates, specific strategies are required in light of these disparities. Notably, a higher percentage of denials relate to outpatient services, highlighting the necessity of strict documentation and verification procedures in this area. By improving training, making operational changes, and utilizing technology, it is possible to lessen the impact of common denial reasons like calculation discrepancies, inadequate clinical documentation, and non-compliance with submission requirements. Additionally, it is important to have strong eligibility verification and efficient authorization processes to decrease denials linked to patient coverage and prior authorizations. Healthcare providers can improve revenue cycle management, boost financial performance, and ultimately enhance patient satisfaction through implementing these targeted measures. The results emphasize the need for ongoing monitoring and adjustment of billing and coding methods to adhere to insurer guidelines, promoting a streamlined and successful healthcare system.
The data underscores the complexity of the insurance claim process, with varied denial reasons, emphasizing the critical role of denial management in healthcare financing. Identifying high-frequency denial reasons helps in strategizing and improving the revenue cycle, particularly in facilities where insurance constitutes over 75% of total revenue.

Effective denial management involves analysing payer patterns and refining submission processes, especially for outpatient and inpatient services, to address gaps and reduce revenue loss due to billing and technical issues.Healthcare providers can greatly increase claim acceptance rates, improve financial health, and boost patient satisfaction by fixing gaps and using technology to enhance billing and documentation practices.


Top 10 Most Common Denial Reasons
Dataset 1
n not compliant with contractual agreement between provider & payer
good clinical practice without additional supporting diagnosis/activities
Calculation discrepancy
Patient is not a covered member
Service is not clinically indicated based on good clinical practice
Deductible/co-pay not collected from member
Service(s) is (are) not covered
Discount discrepancy
Not Resubmitted
rices performed are inconsistent with authorized or approved services
Denial Reason
0
1,000
2,000
3,000
4,000
5,000
Count

RECOMMENDATIONS -

- IMPLEMENTATION OF KPIs - Implementation must be done to assess the compliance related to rejections wrong submissions, spelling mistakes, andsubmission of same comments, TAT, should be implemented check on indicators, revert queries.

- Orientation of the doctors regarding functioning of the insurance, how doctors are essential part of it, exclusions, regarding documentation.

- Transaction management system rather than hims. integrated system for payer provider model - we have single portal for all things, u can track path of claims , stores data, retrieve data at all levels. (Artificial intelligence (ai)) which is absent in hims.

- DENTACOM INTEGRATED TMS SYSTEM (specialized software platform designed to streamline and manage various aspects of dental practices) must be implemented for all dental claims - currently used by cigna healthcare, kings' medical college, and united healthcare Minnesota (integrates **several functions related to dental practice management, including patient information, appointment scheduling, billing, Insurance claims, and overall financial management, inventorymanagement.**)

- The system supports the electronic submission of insurance claims, helping to reduce paperwork and streamline the reimbursement process. It includes features for tracking claim statuses, managing denials, and ensuring that claims are compliant with insurance policies.

- Regular audits at all levels - billing audits as per insurance needed denial managers, billing audits, mrd audits, admission audits (to deal with billing errors)

- Must be periodic audits and evaluation of registration and billing to reduce the compliance related to technical rejections these audits must be strictly done by RCM officials and result of these must be analyzed for quality improvement of technical errors (to deal with registration errors)

- **AUTOFLAGGING OF HIGH PAYMENT CLAIMS** must be auto reminder for users before submission (FLAGGING SYSTEM) these flags alert practice staff to proceed with caution (to deal with high payment claims)

- Error-free claims on the front end means fewer denials on the back end

(Must have mandatory check system to go into next step
To make sure all the information is filled not missing
(to deal with missing documentation)

- Central team on denials must be incorporated at one place for better co-ordination and co-operation and to reduce compliance

- Developing more eligibility related edits can help track and identify denials in advance by comparing when eligibility begins versus the date of service.

- The quality improvement must be utilized through periodic training and counselling sessions by understanding the barriers enablers and barriers in the workflow
some cases need constant follow-ups

- Updating the whole staff regarding the new policy guidelines of insurance company whether posting in group because everyone is looking that group chats ex. hba1c and lipid profile - documentation from insurance company regarding the guidelines
(to deal with policy compliance problems)

- Timely checking/ verification of pt. insurance on each visit to avoid later denial or if there is change in the persons insurance.

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