

**Internship / Dissertation Training at Thumbay Hospital, Ajman, UAE**



By

**Devyani Marwaha**

**PGDHM**

**2014 - 2016**



**International Institute of Health Management Research**

**New Delhi**

**Internship / Dissertation Training At Thumbay Hospital, Ajman, UAE**

**“A study on Rejection Rate of High-risk Insurance companies using Six-Sigma DMAIC Tool”**

**By**

Devyani Marwaha

**Under the guidance of**

Dr. B.S. Singh

Associate Professor

Post Graduate Diploma in Hospital and Health Management

2014 - 2016

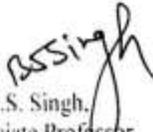


**Institute of Health Management Research, New Delhi**

**Certificate from Dissertation Advisory Committee**

This is to certify that **Ms. Devyani Marwaha**, a graduate student of the **Post-Graduate Diploma in Health and Hospital Management** has worked under our guidance and supervision. She is submitting this dissertation titled "**A study on Rejection Rate of High-risk Insurance companies using Six-Sigma DMAIC Tool**" at **Thumbay Hospital, Ajman, UAE** in partial fulfillment of the requirements for the award of the **Post - Graduate Diploma in Health and Hospital 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.

  
Dr. B.S. Singh,  
Associate Professor,  
IIMR, New Delhi

  
Dr. Nada Omar  
HOD Insurance Department  
Thumbay Hospital, Ajman

24/5/16

## FEEDBACK FORM

Name of the Student: Deryani Marwaha

Dissertation Organization: Thumbay hospital / Ajman

Area of Dissertation: Insurance department.

Attendance: Good

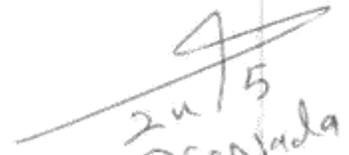
Objectives achieved: Learnt how to take approvals, manage patients and follow up.

Deliverables: Good

Strengths: High satisfactory

Suggestions for Improvement: Satisfactory.

N

  
24/5  
Dr. Nada

Signature of the Officer-in-Charge/ Organization Mentor (Dissertation)

Dr. Yasmeen Jume

Date: 24/5/16 Issue: myer

Place: Ajman / UAE





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**To Whom It May Concern**

This is to certify that **Ms. Devyani Marwaha** holder of Indian Passport Number N5488734 was working in our institution as Management Trainee from 2nd March 2016 till 24<sup>th</sup> May 2016, as a part of dissertation of her P.G.D.H.M program. She has completed the assigned project.

We wish her all the best.

For Thumbay Hospital, Ajman



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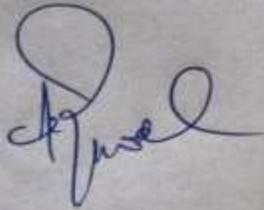
**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that **Devyani Marwaha** student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from International Institute of Health Management Research, New Delhi has undergone Dissertation training at **Thumbay Hospital, Ajman, UAE** from 2<sup>nd</sup> Mar'2016 to 24<sup>th</sup> May'2016

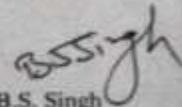
The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfilment of the course requirements.

I wish her all success in all her future endeavors.



Dr. A.K. Agarwal  
Dean, Academics and Student Affairs  
IIHMR, New Delhi



Dr. B.S. Singh  
Associate Professor  
IIHMR, New Delhi

### Certificate of Approval

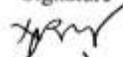
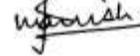
The following dissertation titled **"A study on Rejection Rate of High-risk Insurance companies using Six Sigma – DMAIC tool"** at **Thumbay Hospital, Ajman, UAE** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Health and Hospital 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.

Dissertation Examination Committee for evaluation of dissertation.

Name

Dr. Nishikant Bele  
Dr. Manish Priyadarshi

Signature

**INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH,  
NEW DELHI**

**CERTIFICATE BY SCHOLAR**

This is to certify that the dissertation titled **A study on Rejection Rate of High-risk Insurance companies using Six Sigma – DMAIC tool** and submitted by Devyani Marwaha Enrollment No. PG/14/019 under the supervision of Dr. B.S. Singh for award of Postgraduate Diploma in Hospital and Health Management of the Institute carried out during the period from 2<sup>nd</sup> March to 24<sup>th</sup> May 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 or other similar institution of higher learning.

  
Signature

## **ABSTRACT**

**Author: Devyani Marwaha**

### **BACKGROUND**

The emergence of Healthcare technology and various healthcare reforms have led to a sudden increase in the cost of medical care which has subsequently necessitated the exploration of health financing options which can manage healthcare problems arising due to high healthcare cost. Hence, Medical Insurance is emerging fast as an important mechanism to finance healthcare needs of people. Further, the uncertainty of disease or illness is accentuating the need for insurance system that works on the basic principle of pooling of risks of unexpected costs of persons falling ill and needing hospitalization by charging premium from a wider population base of the same community.

Standards of healthcare in the UAE are considered to be very high. Without a comprehensive medical insurance plan is not only risky, but can be very costly. Identified as a priority sector by the UAE government, the UAE health sector has displayed extraordinary growth and significant progress in medical insurance of their population. The health insurance industry has assumed a new dimension of professionalism with TPAs.

It is very important for the healthcare providers to be able to swiftly and economically process claims with this exponential expansion of health insurance in UAE. Therefore quantification of the denial rates by the healthcare providers is critical to calculate the effectiveness of their revenue cycle management processes and medical reimbursement. The denial rate represents the percentage of claims denied by payers during a given period. A low denial rate indicates cash flow is healthy, and fewer staff members are needed to maintain that cash flow. A 5% to 10% denial rate is the industry average; keeping the denial rate below 5% is more desirable as per the American Academy of Family Physicians.

Unexpected uptick in denials and rejections of medical claims are a major cause of lost revenue for healthcare providers in UAE. Maintaining a high clean claims rate requires attention to detail at every step of the patient journey, and having good medical billing tracking HIMS for a positive difference. Finances obtained from the medical claims are the major source of income in UAE health sector and hence the reflection of functioning of insurance department in the hospital.

Thumbay Hospital, Ajman is a world-class medical institution offering quality and affordable specialized superior medical care complemented by a warm and personalized human touch to the members of most of the insurance companies in UAE.

The department is staffed by a team of expert professionals who assist in administering to the needs and queries of patients holding insurance cards.

Insurance companies on direct billing:

- Aafiya

- ADNIC
- Al Buhaira Insurance Company
- Al Khazna Insurance Company
- ALICO
- Amity
- Al Madallah
- Axa Insurance
- Al Dhafra National Insurance
- Dubai Insurance
- Daman Insurance
- FMC
- GLOBE MED
- Global Net TPA
- Aetna Health Service "Goodhealth"
- Healthnet Insurance
- Interglobal
- Inayah
- Mednet
- MSH Dubai
- NAS Admin Services
- Neuron
- Next Care
- Oman Insurance
- Pentacare
- WapMed
- WHealth
- SAAICO

### **AIM**

To develop an understanding of the process flow of insurance department, the claim management and analysis of rejection rate for high risk insurance companies and five departments namely, Emergency, Internal Medicine, Obstetrics and Gynecology, Pediatrics and Dermatology for a quarter i.e. Aug – Oct 2015 using Six Sigma DMAIC tool.

### **RESEARCH QUESTION**

- What is the level of Rejection rate in high risk insurance companies in the specified clinics in Thumbay Hospital, Ajman?

- To identify reasons for rejection of medical claims by insurance companies?

## **OBJECTIVES**

- To understand thoroughly the process flow of a health insurance claim in Thumbay Hospital, Ajman.
- To examine the issues and challenges faced by the insurance department of hospital using DMAIC tool.
- To suggest ways to reduce the rejection rate of medical claims.

## **METHODOLOGY**

### **Study area**

Thumbay Hospital, Ajman is rendering third party payment facilities to the patients who are the health insurance policy holders.

### **Study design**

A Qualitative Retrospective Observational Study was carried out in the insurance department & claims processing of the patients who have the health insurance policy for out-patient services.

### **Sample size**

All rejected medical claims from August to October 2015.

### **Source of data**

Secondary data of medical claim processed and medical claims rejected will be collected from accounts department and HIMS of Thumbay Hospital, Ajman.

### **Data analysis**

The collected data will be analyzed manually as well as by using statistical methods.

### **Conclusion**

The secondary data was collected and analyzed to calculate Rejection rate among high-risk insurance companies and five clinics with maximum rejection rate was chosen. Analysis was also done on the basis of the reasons for rejection by the insurance companies. Six Sigma-DMAIC tool was used to analyze the Rejected claims for a quarter i.e. Aug – Oct 2015. The total process flow was made and analyzed through Value Stream Mapping, Various gaps were figured and improvements were suggested.

**KEY WORDS : Insurance, DMAIC Tool, Root Cause Analysis, Rejection Rate, Value Stream Mapping**

## ACKNOWLEDGEMENT

“A Great achievement solution dawns with an idea, grows with our effort and attains fulfillment with our will power”. In our effort towards the realization of my project work, I have drawn on the guidance of many people for which I’m glad to acknowledge.

I got the opportunity to pursue my dissertation from Thumbay Hospital, Ajman. It was an opportunity to work with one of the best health care service providers & 1<sup>st</sup> JCI Accredited hospital of Ajman.

I would like to thank my mentor & guide **Dr. Nada Omar** , Head of Department, Insurance Department, Thumbay Group of Hospitals for providing an opportunity to carry out the project work and utilizing the facilities available. Without her valuable guidance and consistent support, this project would not have got underway.

I’m thankful to **Dr. Manvir Singh**, Director Operations and quality, Thumbay Hospitals Group for being my mentor and project guide for the entire period of my dissertation, for helping me improve the quality of my work and for helping me identify areas where I lack and work upon them.

I also express my special thanks to my senior & colleagues Mr. Diwakar, Dr. Harsh Sood, Dr. Ankita Kohli, Dr. Rajesh Pathania, Dr. Astha, Dr. Shubhangi Joshi and Dr. Nabila who helped me develop better understanding of Insurance, Process flow and Healthcare Revenue Management, which has helped me a lot in successful completion of my project.

I’m grateful to my guide **Dr. B.S. Singh**, Associate Professor, IHMR, Delhi, our Director **Dr. A.K. Khokkar** and our Dean **Dr. A.K. Agarwal** for their co-operation, help and wholehearted encouragement. Their assistance enabled me to overcome many obstacles during the work of my project study.

I’m also thankful to my family, my friends and all those who have directly or indirectly encouraged me to complete this project.

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## **PART A – INTERNSHIP REPORT**

### **Objectives and Purpose of the Internship**

It is imperative in the field of management to do internship at the end of class room teaching. As a part of the curriculum of Post Graduate Diploma in Healthcare Management, I was supposed to undergo 3 months of internship with a healthcare organization to learn various management processes. It allows having hands on experience that is sometime missing in theoretical knowledge.

It is crucial to conduct an independent project / analysis during internship. It also gives a value addition to the respective organization. The fundamental objectives of the internship are:

- To understand and get involved in day to day operations in the organization and its various departments/ services.
- To comprehend the interdepartmental coordination.
- To find an area in the organization where improvement is required and where management knowledge and skills can be imparted.
- To efficiently carry out the projects/ special responsibilities assigned to me in insurance department.

### **Routine or general management**

I was given an opportunity to work in various parts of insurance department i.e. Out-patient approval, In-patient approvals, Admission approvals, Claim Processing, E Claims, First Verification, Final verification and reconciliation .

### **Introduction**

What started in 1998 with the establishment of the Thumbay Group at Ajman, UAE by its founder, a visionary and third generation entrepreneur from India, Mr. Thumbay Moideen, blossomed into a diversified group with operations in Education, Healthcare, Medical Research,

Diagnostics, Retail Pharmacy, Health Communication, Retail Optical, Wellness, Nutrition Stores, Hospitality, Real Estate, Publishing, Trading, and Marketing & distribution. Today, the Thumbay Group is a symbol for superior service, quality and innovation.

Venturing into new avenues of service with missionary zeal, the Thumbay Group has over the past decade spread its wings of excellence in various fields of social and business endeavors. The Thumbay group of Hospitals, the constituent teaching hospitals of Gulf Medical University, is one of the largest healthcare services providers in U.A.E serving patients from more than 175 countries. Similarly, Gulf Medical University attracts a student cohort of over 67 nationalities and faculty and staff from over 22 countries.

Apart from being an acknowledged leader in the health sector, Thumbay Group operates a reputed pharmacy chain – ‘Thumbay Pharmacy’, Diagnostic centers – “Zo and Mo Optical”, multi-brand retail outlets, world-class wellness centers – “Body and Soul”, a prestigious chain of coffee shops – “Blends and Brews”, popular health & lifestyle publication, to name a few. An academic and entrepreneurial powerhouse, the Thumbay Group takes its strength from an empowered and loyal employee group exceeding two thousand and two-hundred people, which has enabled Mr. Thumbay Moideen to emerge as a personality of eminence in the Arabian Gulf.

## **Hospital Profile**

**Thumbay Hospital Ajman, Dubai, Sharjah & Fujairah** are full-fledged multi-specialty hospital providing quality care at affordable prices. Thumbay Group of Hospitals is one of the largest health care providers in the region. The group focuses on three pillars Education, Healthcare and Research.

Thumbay Hospitals aims to provide exceptional quality of care with latest technology, highly skilled medical work force from 20 nationalities, speaking more than 50 languages, treating guests from more than 175 nationalities worldwide with warm Arabian Hospitality.

Thumbay Hospital is managed by qualified professionals with wide ranging experience in Hospital Management and is well equipped to meet the challenging task of running a state of the art medical facility. Its goal is to build lasting relationship with people and medical professionals in the region.

### **Vision**

“Our vision is to make Thumbay Hospital a world class tertiary healthcare center and teaching hospital that is committed to patient safety and emerge as a trustworthy healthcare provider in academic settings in the region.”

### **Mission**

“Healing through Knowledge and Wisdom” The mission of the Thumbay Hospital, Ajman is to provide comprehensive healthcare services of high quality and health education to the Community imparts excellent educational opportunities for students in a stimulating environment and promotes relevant bio-medical research.

### **Thumbay Hospitals Overview**

**Thumbay Hospital, Dubai** is a 150 bed multispecialty Hospital with cutting edge technology and is located at Al Qusais, Dubai. It is established to cater to the ever increasing need for quality healthcare for the people of the UAE and will be functional by mid-2014.

**Thumbay hospital, Ajman** is a 250 beds multi-specialty Hospital with cutting edge technology having over 40 outpatient departments and is located in the heart of Ajman with easy access to patients from Dubai, Sharjah, UAQ and RAK apart from the local residents of Ajman. The multi-

specialty hospital was established to cater to the ever increasing need for quality healthcare for the people of the UAE. Thumbay Hospital Ajman is the first hospital in the Middle East to receive International Accreditation from the Joint Commission International (JCI).

**Thumbay Hospital, Fujairah** is a 60 bed multi-specialty hospital providing quality care at affordable prices. The hospital is equipped with various specialty departments and services supported by highly qualified and experienced doctors, technicians and trained nurses.

**Thumbay Medical and Dental Specialist center Sharjah** is a modern satellite clinic consisting of departments like internal medicine, orthopedics, Radiology, Pediatrics, Obstetrics and Gynecology, Dental and in-house Pharmacy.

**Departments visited / associated with:**

- **Accident and Emergency Department** - Emergency Department assesses and treats patients who have suffered a recent injury or accident, or who have developed a sudden illness. Manned by General Practitioners and Junior Specialists who are constantly on hand to treat life-threatening illnesses and critically injured patients, working 24X7. To ensure timely treatment and patient flow, the department utilizes a triage:

- The Main Emergency Department (ED) has 8 ED beds which cater to patients belonging to the less severe categories of patients.
- The department also has three beds for trauma and two beds for resuscitation.
- Two clinic rooms serve as the central node where doctors can work from.

It is associated with insurance department for emergency approvals and claim management.

- **MRD** - MRD of the hospital is very impressive. The files are maintained in a proper way with a checklist on each file to ensure if all the documents are present or not. They also update information of every patient from the files on the HMIS which provide a great help to the insurance department in replying to the queries of insurance companies.
- **Insurance Department** - Thumbay Hospital is pleased to provide Cashless Medical Insurance (Mediclaim) & Reimbursement services to patients who have health insurance policies. Thumbay Hospital has tied up with various insurance companies and third party administrators (TPA) to provide cashless service. This Department is staffed by a team of expert professionals who assist in administering to the needs and queries of patients holding insurance cards. This Department is internally divided into Out Patient and In-Patient teams. It was an honor to be the part of the team and working in it.
- **Patient Affair Department** - Patient Affairs Department (PAD) basically works for all Out patients as well as Inpatient activities, coordinating with all related things right from the Counseling, Admission, Inpatient Care till the Discharge of the Patient. Department services are made available by a group of very experienced team members. The Department is working round the clock seven days a week to cater the needs of the patients.

### **Organization Profile**

Thumbay Hospital, Ajman, a tertiary care hospital, is recognized as center of excellence for providing medical care, and research facilities of high order in the field of medical sciences. It is the *First JCI Accredited hospital in Ajman*. Thumbay Hospital, Ajman is the first private and constituent teaching hospital of GMU with a capacity of 250 beds, housed with ultra-modern facilities. The hospital is centrally air-conditioned having state-of-the-art operation theatres and intensive care beds. Thumbay Hospital, Ajman is continuously growing by setting examples not only in the field of clinical excellence, training and research but also in the field of management expertise.

Thumbay Hospital is a growing healthcare chain, with state-of-the-art facilities and an unparalleled commitment to patient care. Thumbay Hospital is founded on the vision of becoming an integrated Healthcare Delivery Organization driven by quality, excellence, technology and compassionate care. It focuses on cardiac sciences, dental sciences, neurosciences, renal sciences and gastrointestinal diseases, Obstetrics and Gynecology, Pediatrics. Besides, the hospital also provides services in mother and childcare, orthopedics and a complete range of multi-specialty services in all disciplines.

Thumbay Hospital has dedicated facilities for comprehensive care of trauma patients and others in need of emergency care including an emergency operation theatre (OT) and a 10-bedded medical intensive care unit (MICU). GMC Hospital is the first amongst the proposed multi super specialty hospitals to be set up in the Emirate of Ajman, with the mission to bring quality medical care at doorstep.

Multi Specialties - Orthopedics and Joint Replacement, Diabetes and Endocrinology, Dermatology, Internal Medicine, Pulmonary, Medicine, Ophthalmology, Dietetics, Physiotherapy and Preventive Health Check, General Surgery, Dental, Cosmetic and Plastic, Surgery, ENT, Gynecology and Obstetrics, Pediatrics and Neonatology.

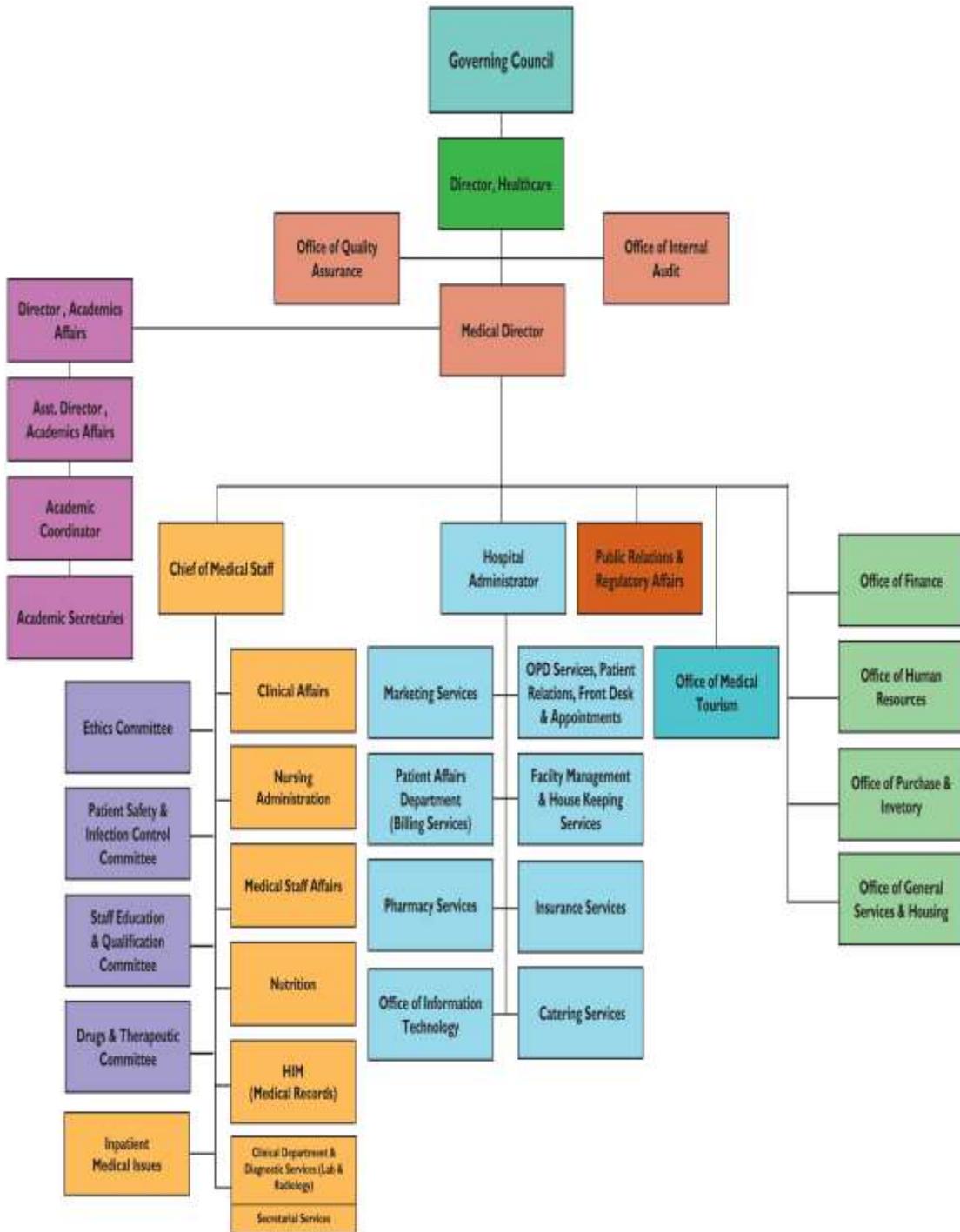
**History:**

- First JCI Accredited Hospital in Ajman, UAE
- It is the First Private University Teaching Hospital in U.A.E.
- GMC Hospital and Research Centre affiliated to Gulf Medical University became operational on 17th October 2002.
- First dedicated Patient Affairs Department in the private sector in the country.
- GMC Hospital and Research Centre changed its name to Thumbay Hospital from 1<sup>st</sup> April 2016.

**Location:**

Thumbay Hospital is located in Ajman, one of the 7 emirates of U.A.E.

# Organizational Structure:



## **PART B – DISSERTATION REPORT**

### **CHAPTER- 1**

#### **BACKGROUND OF THE STUDY**

##### **1.1 INTRODUCTION**

Healthcare is among the priority sectors identified by the UAE government and, as a result, the UAE healthcare industry has displayed extraordinary growth and significant progress in the past few years. The government's focus on healthcare is aimed not only to diversify the oil-reliant economy but also to develop unprecedented healthcare infrastructure to ensure that adequate services are provided in the Emirates. Healthcare is regulated at both the Federal and Emirate level. Federal level legislation dates back to the 1970s and 1980s and there are pending legislative reform initiatives in order to facilitate the development of the healthcare industry.

##### **PRINCIPLE REGULATORY AUTHORITIES**

Public healthcare services are administered by different regulatory authorities in the United Arab Emirates. The Ministry of Health (MOH), the Health Authority-Abu Dhabi (HAAD), the Dubai Health Authority (DHA), and the recently formed Emirates Health Authority (EHA) is the main authorities.

##### **Ministry of Health (MOH) and Emirates Health Authority (EHA)**

The UAE Ministry of Health (MOH) was established to license companies and individuals providing healthcare services build and manage health facilities and regulate various areas of healthcare, including the practice of medicine, dentistry, nursing, pharmaceuticals and laboratories. According to Cabinet Resolution No. 10 of 2008, the Ministry is to provide UAE citizens with healthcare, prepare health, preventive and training programs, organize the practicing of healthcare professions and establish, manage and supervise health facilities.

### **Health Authority Abu Dhabi (HAAD)**

In 2001, the Abu Dhabi government established GAHS, the General Authority of Health Services, with a mandate to oversee all public healthcare institutions in the Emirate of Abu Dhabi. In 2007, GAHS was split into two organizations, HAAD (Health Authority of Abu Dhabi), the regulatory body of healthcare in Abu Dhabi, and SEHA (Abu Dhabi Health Services Company), the operator of public healthcare assets.

HAAD was established to provide the highest levels of medical and health insurance services and to develop the health sector and related policies in Abu Dhabi. HAAD is also responsible for, among other things, monitoring and regulating the healthcare industry in Abu Dhabi, and overseeing the process to upgrade the hospitals and clinics in the Emirate of Abu Dhabi in accordance with accredited international standards.

### **Abu Dhabi Health Services Company (SEHA)**

SEHA owns and manages, either directly or indirectly, public health facilities and is expected to implement the policies, projects and strategies approved by HAAD to develop the healthcare industry in the Emirate of Abu Dhabi.

SEHA's website states that it owns and operates 12 hospital facilities, 2,644 licensed beds, and more than 40 Ambulatory and Primary Healthcare Clinics. According to its website, SEHA is currently collaborating with a number of healthcare groups.

**Dubai Health Authority (DHA)** - DHA was created in June 2007, pursuant to Law No. 13 issued by His Highness Sheikh Mohammed bin Rashid Al Maktoum, the Ruler of Dubai, as the strategic health authority for the Emirate of Dubai, DHA's principle objectives include healthcare planning and promotion of healthcare investment in Dubai, improving healthcare quality through information systems and standards, regulating healthcare services in Dubai, developing a comprehensive healthcare insurance and funding policy, public health promotion, developing medical education and research, and owning and operating Dubai government healthcare facilities.

## **1.2 HEALTH INSURANCE LAW – MANDATORY INSURANCE TO ALL**

The Dubai Health Authority (DHA) enacted a health insurance law (No. 11, 2013) in November 2013 that mandates coverage for all residents and visitors in Dubai, the largest Emirati state, with a population of around three million. This move has been under consideration since 2009. Dubai is following the lead of other nations in the Middle East; workers in Abu Dhabi and Saudi Arabia have long been required to have health insurance, and in June 2013, Qatar enacted a health insurance law that mandates coverage for all Qatari nationals and visitors.

### **Key Details**

Implementation of the law was phased in gradually, starting in 2014, and is expected to be completed by June 2016 as follows:

- Employers with over 1,000 workers must comply by the end of October 2014.
- Employers with between 100 and 999 workers must comply by the end of July 2015.
- Employers with less than 100 workers must comply by the end of June 2016.
- All workers' spouses and dependents must be covered by the end of June 2016.

Starting January 1, 2014, insurers, brokers, third-party administrators and health care providers are required to register with and obtain a permit from the DHA. Insurers will not be allowed to deny individuals coverage due to preexisting health conditions.

The new law applies to all residents (including offshore zones) and visitors. Compliance with the health insurance requirements will be a prerequisite to applying for residency or a visitor's visa. Noncompliance could lead to stiff penalties for the employer.

### **Employer Implications**

Health insurance for employees must be provided and paid for by employers. At a minimum, a prescribed basic health plan must be provided, although it will be permissible to offer richer plans. The basic health plan includes coverage for dental, hearing and vision, and includes deductibles and coinsurance; visits to a specialist are subject to a referral system. Coverage for spouses and dependents is the responsibility of the employee, although we expect that some employers may elect to provide it.

The UAE government spends almost \$10 billion on health care annually. According to the World Health Organization, this is 75% of the total spend on domestic health care — 25% is covered by the private sector. The new rules are intended to shift more of this burden from the government to the employer.

#### **1.4 AIM**

To develop an understanding of the process flow of insurance department, the claim management and analysis of rejection rate for high risk insurance companies and five departments namely, Emergency, Internal Medicine, Obstetrics and Gynecology, Pediatrics and Dermatology for a quarter i.e. Aug – Oct 2015 using Six Sigma DMAIC tool.

#### **1.5 OBJECTIVES**

- To understand thoroughly the process flow of a health insurance claim in Thumbay Hospital, Ajman.
- To examine the issues and challenges faced by the insurance department of hospital using DMAIC tool.
- To suggest ways to reduce the rejection rate of medical claims.

## CHAPTER- 2

### REVIEW OF LITERATURE

Comparatively Health insurance coverage is high in developed countries like USA, UAE, Canada, but there are very few reports and work done on the rejection rate and process improvement of Health Insurance claim processing.

A reporter of Kiser Health news (Galewitz P) through his report has given overview of rejection rates of different insurance companies in America - Kentucky, Columbia. The findings are the denial rates of different insurance companies, comparison between the policies, reasons for the variations in rejection rates, as per the report the reason for variation is difference in claims process adopted between the payers and providers.

A similar study conducted in 2011 (Carmel P.W) gives details about the denial rates, comparative data of before and later stages, and the reason of betterment in America. The key findings of report are health insurers 'shows that claim denial rates in 2011 are dramatically lower than in previous years. Billions of dollars per year are saved by eliminating administrative waste, by processing the claims timely, accurately and specifically. Health insurers' claims-payment processes are still littered with inaccuracies and inefficiencies. Claim process campaign was introduced; campaign's goal is to spur improvements in the industry's billing process.

Accumed Pm is a TPA; it works on the gap between healthcare providers and service payers. The report made by Accumed pm says the gap between health care providers and service payers has been well established and clearly defined in the US, Canada and Europe, this relationship has yet to mature in the Middle East. The result is lost money and poor business management. As per the report In the UAE it is estimated that up to 15% of claims submitted to insurance companies by private practices are rejected. Another 15% of claims are delayed because of inappropriate processing of claim forms and supporting documents. The average claim payment cycles are between 90 and 120 days. The report works on medical coding, billing, insurance validation, financial and business management through assisting healthcare providers.

A report (by Xerox) made aggressive 75 days study with data capture services of over 250000 claims per week. Report gave solution through a smart system to auto-adjudicate claims, processing cycle time was accelerated by 75 percent, from 10 days to 60 hours. Report worked on Implementation of state-of-the-art technology to perform all claims processing services, including full mailroom services, data entry, storage and retrieval, digital imaging, x-ray processing, online updating and Intelligence Queue/Data Cleansing.

## **CHAPTER- 3**

### **METHODOLOGY**

**3.1 STUDY DESIGN:** A Qualitative Retrospective Observational Study was carried out in the insurance department & claims processing of the patients who have the health insurance policy for out-patient services.

**3.2 TIME PERIOD:** 2<sup>nd</sup> March to 25<sup>th</sup> May 15

**3.3 LOCATION OF STUDY:** Thumbay Hospital, Ajman Insurance Department

**3.4 STUDY SUBJECTS:** All rejected mediclaims from Aug to Oct 2015

**3.5 SAMPLE SIZE:** 5600 rejected medical claims

**3.6 SOURCE OF DATA:** Secondary data of medical claim processed and medical claims rejected will be collected from accounts department and HIMS of Thumbay Hospital, Ajman.

**3.7 ETHICAL CONSIDERATION:** The confidentiality of records was maintained and not shared elsewhere. It was taken only for study purpose and no information of hospital will be revealed elsewhere other than the academic purposes.

## CHAPTER 4

### ANALYSIS AND RESULTS

#### *DMAIC tool was applied for analysis*

The Six Sigma DMAIC (Define, Measure, Analyze, Improve, and Control) methodology can be thought of as a roadmap for problem solving and product/process improvement

D – Define Phase: Project goals were defined and insurance flow chart was explained for better understanding.

M – Measure Phase: Secondary data collected was measured and analyzed to determine current performance; quantify the problem. This is the KPI of the insurance department.

A – Analyze Phase: Analyze and determine the root causes of the defects.

I – Improve Phase: Improve the process by eliminating defects.

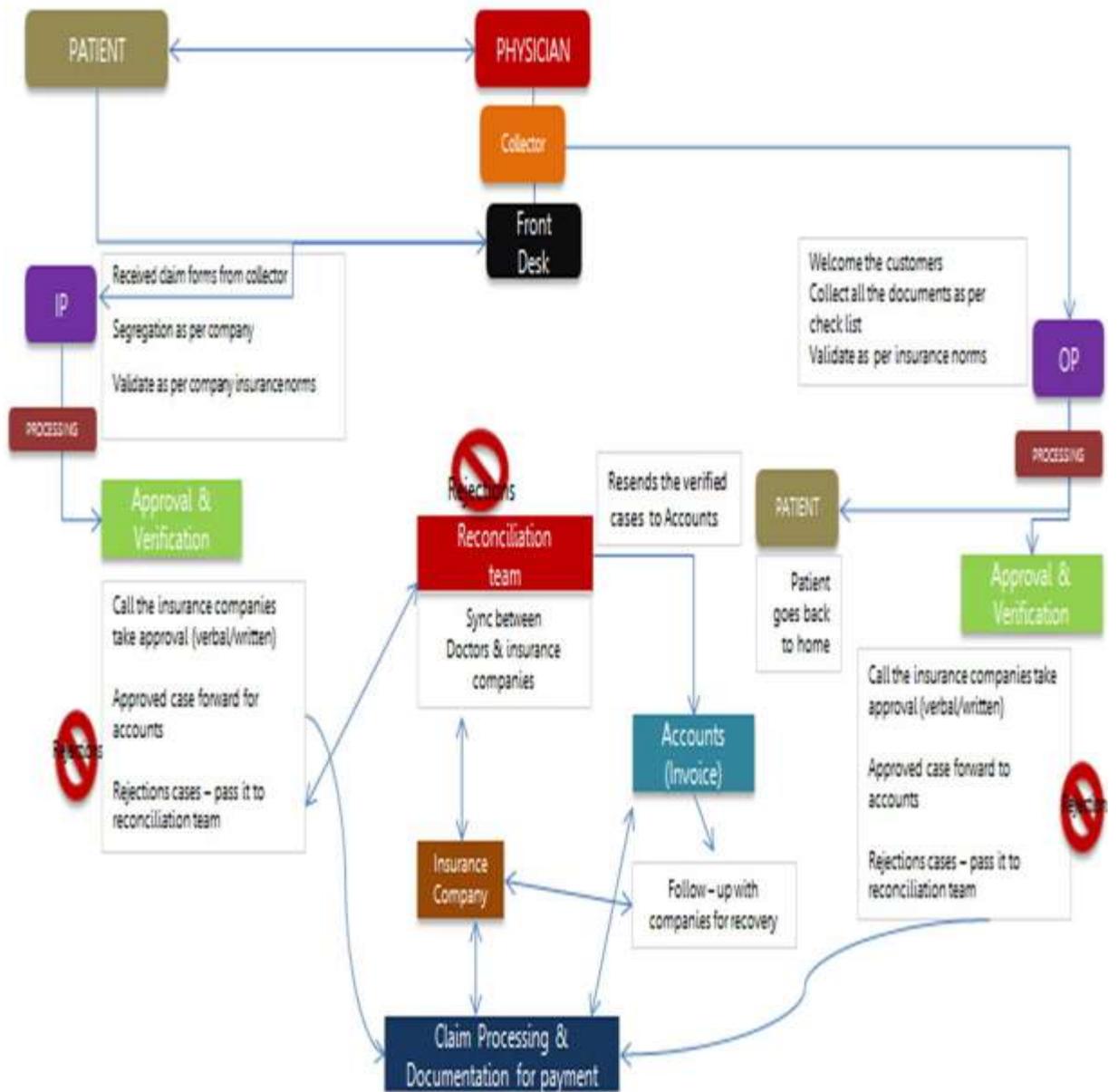
C – Control Phase: Suggestive ways to control future process performance.



# A. DEFINE

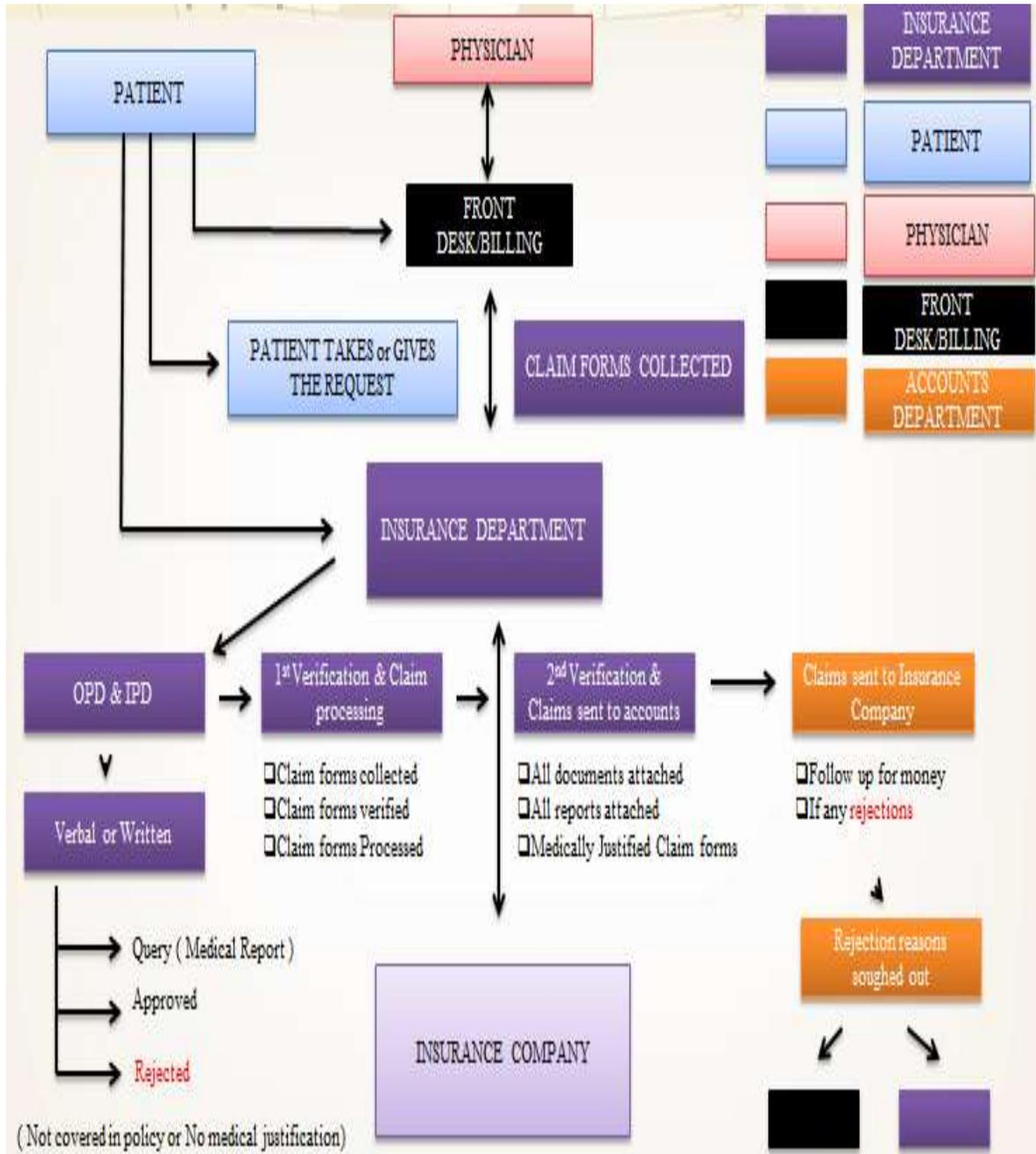
## 4.1 Drafting of Process Map

After the in depth understanding and observational tracking of the system a process map was drafted to clearly visualize the process flow and services.



## 4.2 Drafting the Process Flow

After obtaining the process map the process flow was drafted.

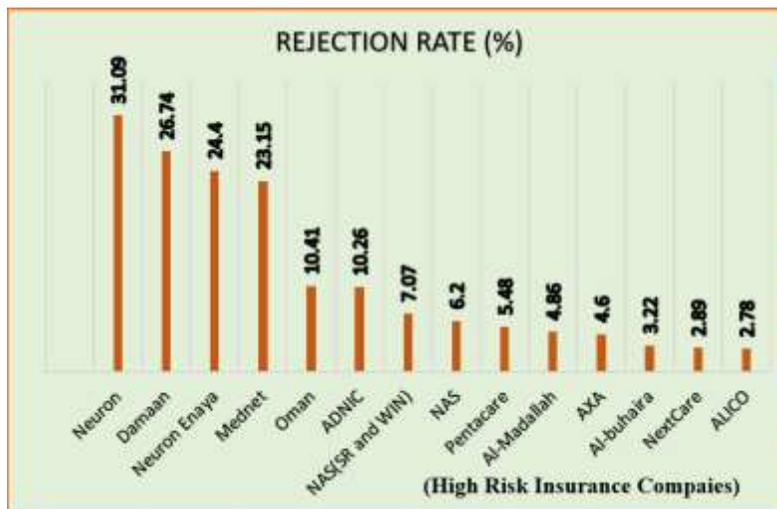


### 4.3 Calculations of overall Rejection Rate

All the processed claims and settled amount was compared from the received amount to calculate the rejection rate.

Months	August '15	September '15	October '15
Net Amount	1204087.25	1951445.9	1874062.73
Rejected Amount	236325.54	605995.43	539076.43
Rejection Rate	19.63%	31.05%	28.77%

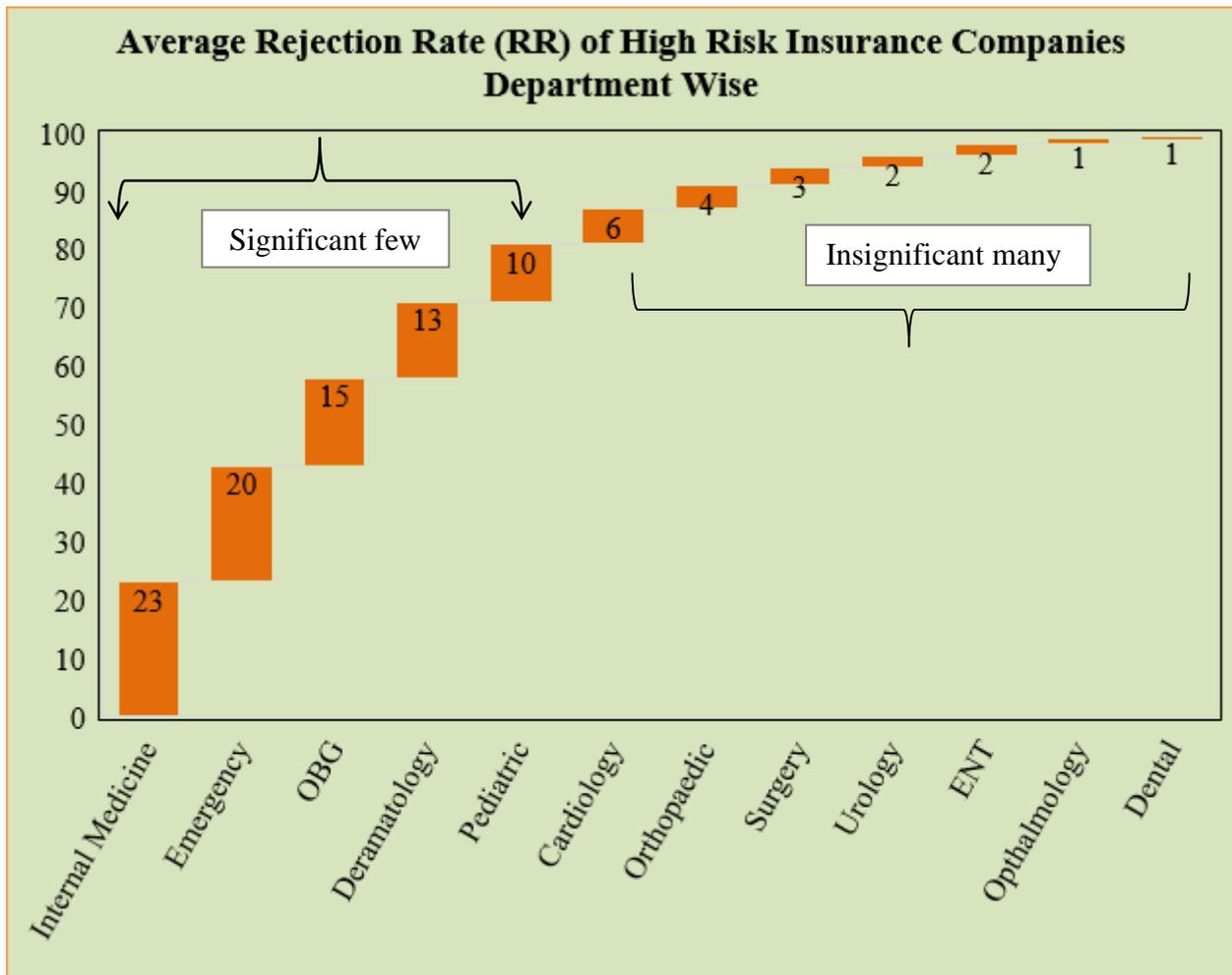
### 4.4 Rejection rate of high risk insurance companies



Rejection rate of insurance companies is a Key Performance Indicator (KPI) for the insurance department and should always be < 6% (Ideal). For 2015 these 10 companies have had the highest rejection rate causing maximum financial loss to the hospital. Although, companies like

Pentacare, Al-Madallah, AXA, Al buhaira, Nextcare and ALICO have Rejection Rate <6% but this is an average, if calculated department wise the Rejection Rate is >6%. Hence, department wise rejection rate for all 10 companies was calculated.

**4.5 Department specific Rejection Rate of high risk insurance companies was calculated.**

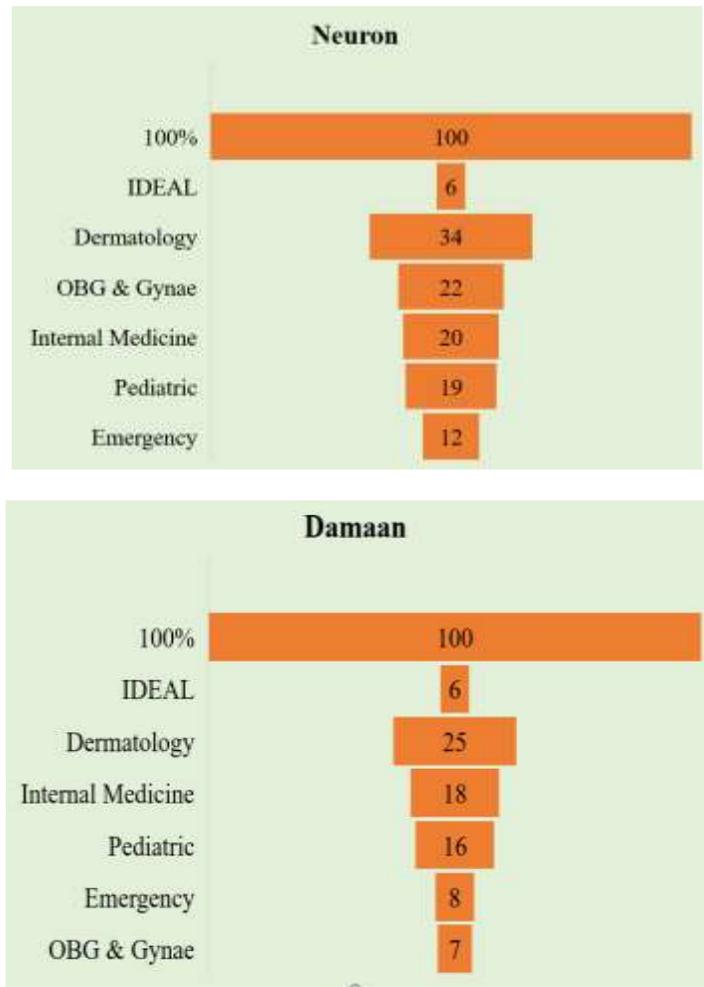


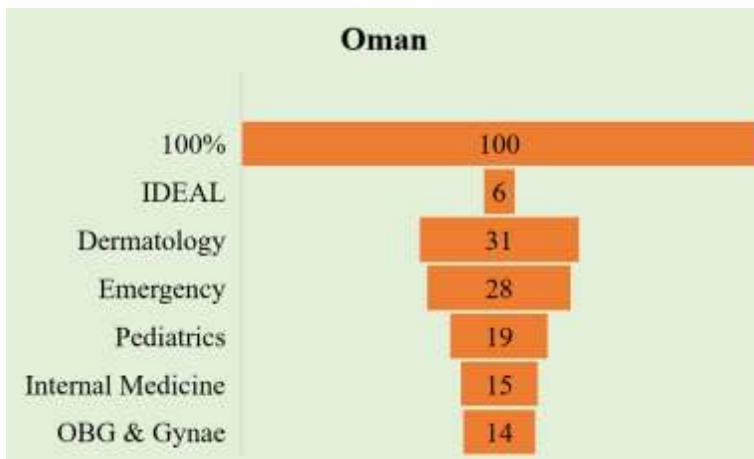
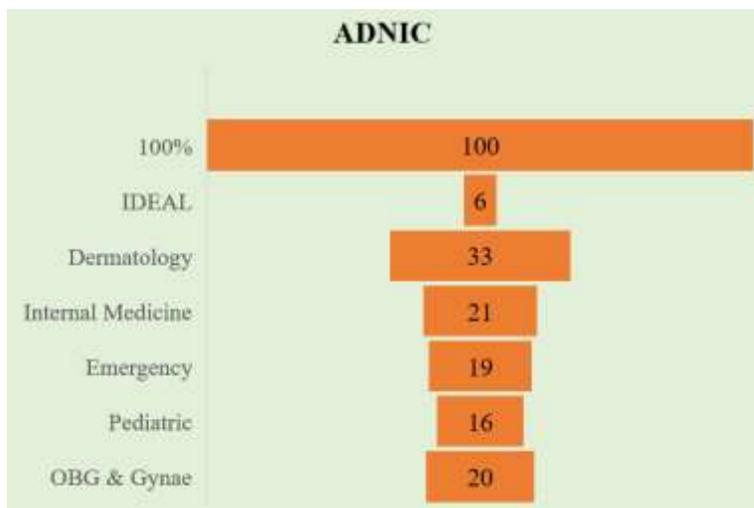
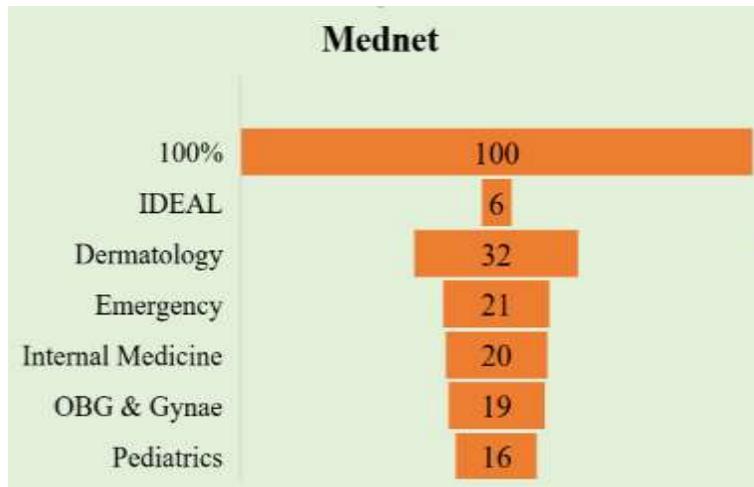
After calculating the department wise Rejection Rate for August to October 2015 we inferred that even if the Rejection Rate of insurance companies on an average is <6% it is important to calculate it department wise to know the actual Rejection Rate in each department of the hospital so that department specific corrective measures can be taken.

Pareto tool with the concept of 80-20 was applied to find the few significant departments which had alarming results i.e. had Rejection Rate >10% and required immediate attention. Departments with Rejection Rate <6% were in considered. Department specific Rejection Rate was calculated for the first time.

**B. MEASURE**

Department specific rejection rate was calculated taking an average of all the three months i.e. August, September, and October 2015





From the above analysis we inferred that maximum rejections were being faced in Dermatology and Emergency. Calculation of department specific analysis was done for the first time in the hospital. It helped the insurance department to understand the critical departments which need to be taken care of during approvals. After knowing the critical departments, it was important to

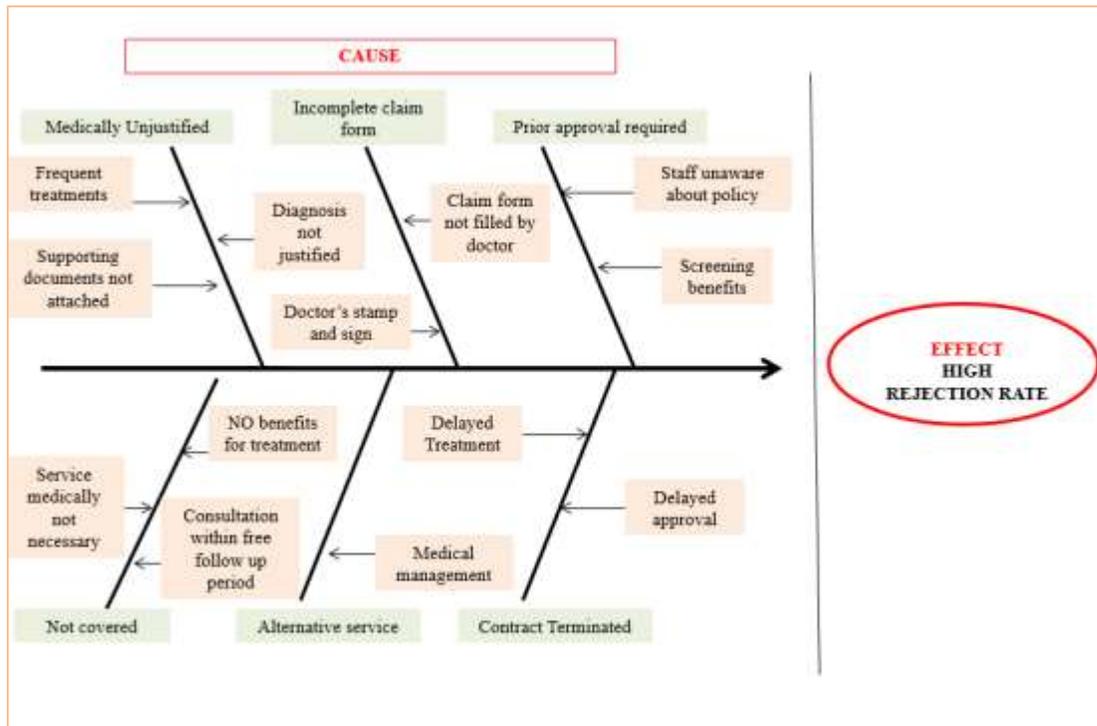
know the reasons for high rejection in these departments, specially dermatology and emergency. Hence, further in the study data of all insurance companies for these 5 departments was analysed and segregated on the basis of reasons of rejection.

### C. ANALYSIS

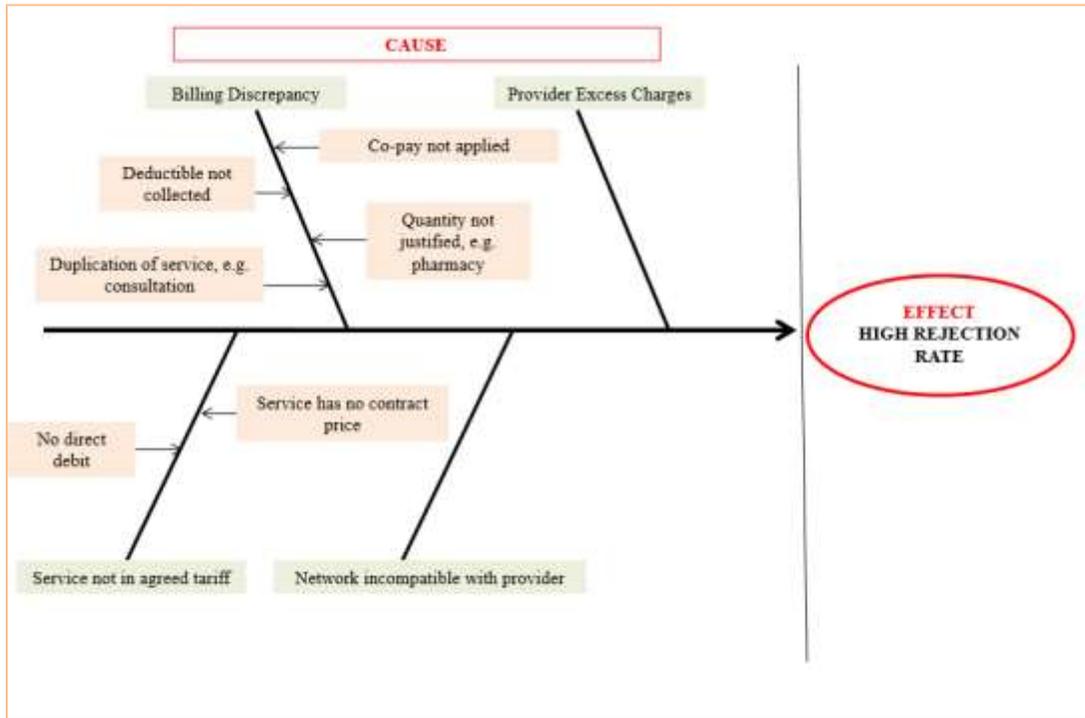
After the evaluation of claims and before reimbursing to the hospital all insurance companies issue statements of rejection or denial for all doubtful or unjustified cases. The reconciliation team of the insurance department of the hospital has to justify the claimed amount for reimbursement. According to these statements of rejection issued by the insurance companies, reasons for rejection were analysed for all the cases.

After linking the RR with the specific departments it is important to analyse the cause of Rejection also department wise so that corrective measures can be taken. Hence, using the Fish Bone Diagram assessment of the causes of rejection was done. They were further sub-classified: Administrative and Clinical.

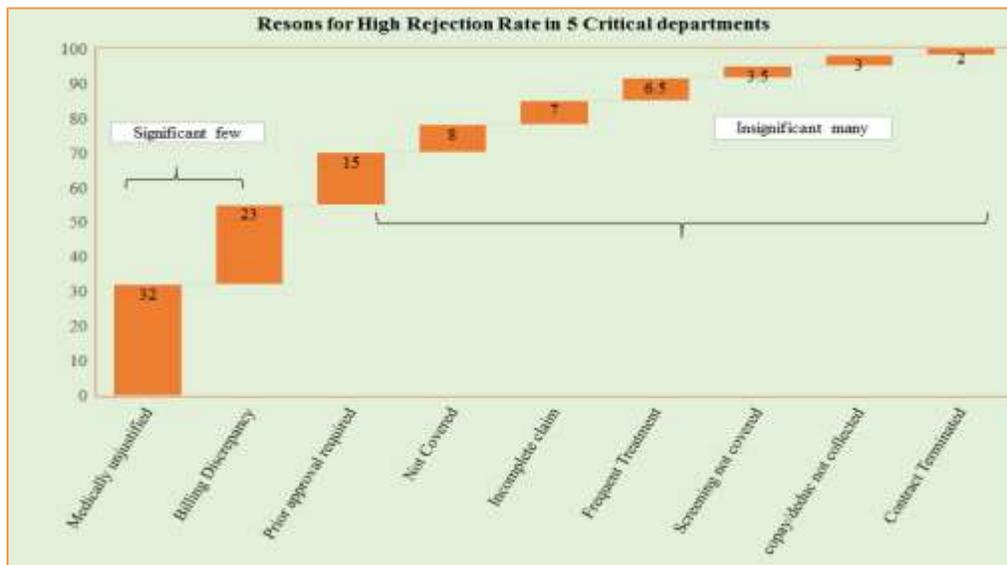
#### Clinical causes of rejection



## Administrative causes of rejection



Using the Pareto tool these causes were further analysed to know the critical factors of rejection (significant few). It was then found that major rejections in all departments were because of medically unjustified and billing discrepancy. By knowing the two major reasons we know the corrective measures to be taken for each department.



## D. IMPLEMENTATION

For corrective measures, upgradation in HIMS was suggested. These upgradations have been shown below:

### SUGGESTED UPGRADATIONS

The need to have a single updated portal for easy access and submission.

The screenshot shows a web browser window displaying the 'HOSPITAL INFORMATION & MANAGEMENT SYSTEM' interface. The main section is titled 'APPROVAL REQUESTS'. It includes a header with fields for Hospital ID (178300), Patient Name (AMRUD MOHAMMED SALEH), Mobile (003-945922), Doctor (Muhammad Hanady Ibrahim), Company (AL KHALIFA INSURANCE), and Family ID. Below this, there are several colored buttons for different request types: Medical records (red), Claim forms (blue), Requested service (green), Lab reports (pink), Radio reports (red), and Other documents (blue). Each button is followed by an input field and an 'ADD' button. At the bottom, there is a 'SUBMIT' button.

The need to have a status button for HIMS

The screenshot shows a web browser window displaying the 'Service Approval' form. The form has a table with columns: FormNo, Service, Remark, Approved, Remark/DocNo, and File. The table contains two rows of service requests. Below the table, there is a 'CURRENT STATUS' dropdown menu that is open, showing options: Received, Processed, Query replied, Pending, and Handed over. There are also 'SUBMIT' and 'SAVE' buttons. The form also includes a section for 'List of Services Requested for this Patient' with a table showing DeptName, Service, and NetA. The table shows two rows of services from the DENTAL department.

FormNo	Service	Remark	Approved	Remark/DocNo	File
1	Composite Filling - 2 surface	Appr. Required	Status		Browse...
1	Molar Complete Procedure(Root Canal)	Appr. Required	Status		Browse...

(List of Services Requested for this Patient)

DeptName	Service	NetA
DENTAL	DENT->Root Canal-> endodontic therapy, molar (excluding final restoration)[D3330 ]	561.00 Appr. Req
DENTAL	DENT->Fillings p-> resin-based composite - two surfaces, posterior[D2392 ]	186.75 Appr. Req

The need to have a medical report button for HMIS for sending various replies to queries of insurance companies.



The need to have a discharge intimation button in HMIS for saving the discharge turnaround time.



The proper process requirements and delays were taken into account while the consideration for upgradation of HMIS.

### ***E. CONTROL***

Following the implementation recommendations, it is important to regularly check or control them so that the process is sustainable. The following measures are suggested to control the rejection denial rate:

- A proper revenue control check should be done timely to calculate and analyze the revenue losses and check for loop holes.
- The financial results after final claim rejection should be discussed for every quarter where the reasons are justified.
- All approval team members should be periodically updated with the changing policies and direct billing tariff list
- A proper first verification team should be there to check for all the claim approvals and documentation claims for all departments. This should be done within 24 hours of approvals.
- A regular up-gradation of the HMIS system should be done periodically.

## CHAPTER 5

### SUGGESTIONS AND RECOMMENDATIONS

- Inclusion and exclusion policies of every insurance company must be incorporated in HMIS.
- Training of Doctor's on awareness of general inclusion and exclusion policies for various diagnoses so that medically unjustified diagnosis and symptoms could be avoided.
- Request for approval must be send along with the previous medical history.
- A medical team for first verification must be set up in the department for verification of claims within 24hrs of the approval.
- MRD section must be incorporated in HMIS so that the approval team can refer and send the request along with all relevant documents.
- On the basis of GOP, Claims of all maternity related approvals should be sent at the time of delivery. Rejected amount to be paid by the patient.
- A mandatory column for diagnosis and other relevant clinical information must be incorporated in HMIS which should be filled by the treating doctor so as to avoid rejection on the basis of diagnosis not justified.
- Administrative staff must be properly trained so as to avoid any billing discrepancies leading to high rejection rate.

## REFERENCES

1. Deming, W. E. 1994. *The New Economics*. 2nd ed. SPC Press.
2. Brennan, T. A., L. L. Leape, N. M. Laird, et al. 1991. "Incidence of Adverse Events and Negligence in Hospitalized Patients: Results of the Harvard Medical Malpractice Study I." *New England Journal of Medicine* 324: 370–76.
3. Damodarmata., *Health insurance, Medical Insurance Dubai*, 2009, P. 63
4. Michael Bihari, MD, *Fighting a Health Insurance Claim Denial - Sometimes You Win, and Your Health Plan Has to Pay All or Part of Your Claim*, 2010, P.134
5. Latham & Watkins, *Healthcare system, Healthcare regulation in UAE*, 2012, P.78
- 6 By Phil Galewitz, *Kaiser Health News* (2011), *Health insurance denial rates routinely 20%*, 2011
- 7 PETER W. CARMEL, MD, *Annual report, AMA (American Medical Association): Health insurers' denial rates are down, but error rates are up*, 2011, P.14
- 8 Thomas, E. J., D. M. Studdert, H. R. Burstin, et al. 2000. "Incidence and Types of Adverse Events and Negligent Care in Utah and Colorado." *Medical Care* 38(3):261–71
- 9 AccuMEDPM , *Health insurance rejections and delayed process – a challenge for healthcare*
- 10 Xerox, *A health insurer needed more intelligent claims processing. We brought our IQ to the table*, 2012, P.42
- 11 *Insurance Regulatory and Development Authority* Available on [http://en.wikipedia.org/wiki/Insurance\\_Regulatory\\_and\\_Development\\_Authority](http://en.wikipedia.org/wiki/Insurance_Regulatory_and_Development_Authority)
- 12 *Health insurance* Available on [http://en.wikipedia.org/wiki/Health\\_insurance](http://en.wikipedia.org/wiki/Health_insurance)

