Develop Risk Reduction Strategies of the Operational Risks Identified at Out Patients Department of Thumbay Hospital Day Care - Rolla, Sharjah

By

Anuja Deb

Dissertation submitted in partial fulfillment of the requirements of the degree

MBA Hospital and Health Management

Academic year, 2017-2019

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TO WHOMSOEVER MAY CONCERN

This is to certify that Anuja Deb student of MBA Hospital and Health Management from The IIHMR University, Jaipur has undergone internship training at Thumbay Hospital Day Care, Rolla, Sharjah from 24th February to 20th May, 2019

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 fulfillment of the course requirements.

I wish her all success in all his future endeavors.

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This is to certify that Ms. Anuja Deb holder of Indian Passport Number H5468440 has undergone internship in our organization from 24th February 2019 till 20th May 2019, as a part of dissertation of her MBA in Hospital and Health Management program. She has completed the assigned project.

We wish all the best for her future endeavor.

For **Thumbay Hospital Daycare, Sharjah**

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Abstract

Risk Management system is of great importance in the efficient functioning of a healthcare service provider. Risk management system helps reduce adverse events in a hospital and thus increase work efficiency, patient outcomes, better management and patient satisfaction. Risk register helps in quantifying the risks and systematically developing mitigating strategies of the risk. The operational risks help in increasing operational efficacy resulting in better financial, service and patient outcome.

It is important for hospital to have almost all the necessary medical specialty to serve the patients better. Identifying the departments essential for the hospital had to be identified in this study to develop an action plan for the identified risk which required the addition of medical specialty. Cardiology, Urology, Neurology and Dermatology were the four departments that were found to be the most required departments in the hospital to serve the patients in more efficient manner.

Furthermore, the other risk that was identified was errors caused in medical claims submission. Various reasons and errors leading to insurance rejection were identified in this study to mitigate this risk.

Hospitals in this era have shown to have a lot of difficulties in managing the time. Patient waiting time is a major problem almost every hospital faces. Therefore, it becomes very important for the hospital to save up as many resources as possible and bring down the wastage of time and effort. Increase in no shows, identified as the other operational risk was another factor that became an important aspect to look into. Making reminder calls to the patients showed improvement in the no show rate. Other methods were suggested in this study to reduce to no show rates.

Looking into these aspects of operational risk management would be important to reduce the errors caused in the day to day operational functions of the hospital and be prepared for any future risks that could further reduce the occurrence of risks in the hospital.

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List of Abbreviations

OPD - Outpatients Department

THDCR- Thumbay Hospital Day Care, Rolla

UAE- United Arab Emirates

D&C- Dilation & Curettage

OT- Operation Theatre

COO- Chief Operating Officer

HR- Human Resource

ENT- Ear, Nose, Throat

GP- General Practitioner

HIMS- Hospital Information Management System

R1- Risk 1

R2 – Risk 2

R3 – Risk 3

NA – Not Applicable

1. Introduction to the Hospital

1.1 About the Organization

Thumbay Group of Hospitals is one of the largest private healthcare providing group in UAE. Thumbay Group has hospitals across Dubai, Ajman, Sharjah, Fujairah in UAE. The hospital caters to patients from around 175 countries and has close to around 5000 employees. It runs under the leadership of its Founder President, Dr. Thumbay Moideen.Thumbay Hospital Day Care- Rolla, Sharjah is a multi-specialty facility which offers treatments and procedures to patients for a wide range of services. The Day Care offers various day care procedures and surgeries including D&C, Arthroscopy, Hernia repair surgery, Hemorrhoidectomy, Appendectomy and many more. Well – equipped phlebotomy and radiology services with ultrasound and X-ray is available at the hospital. The Hospital had one OT and three post-operative care units are present at the hospital. The facility is located at the centre of Sharjah City.

1.2 Organogram of THDCR, Sharjah

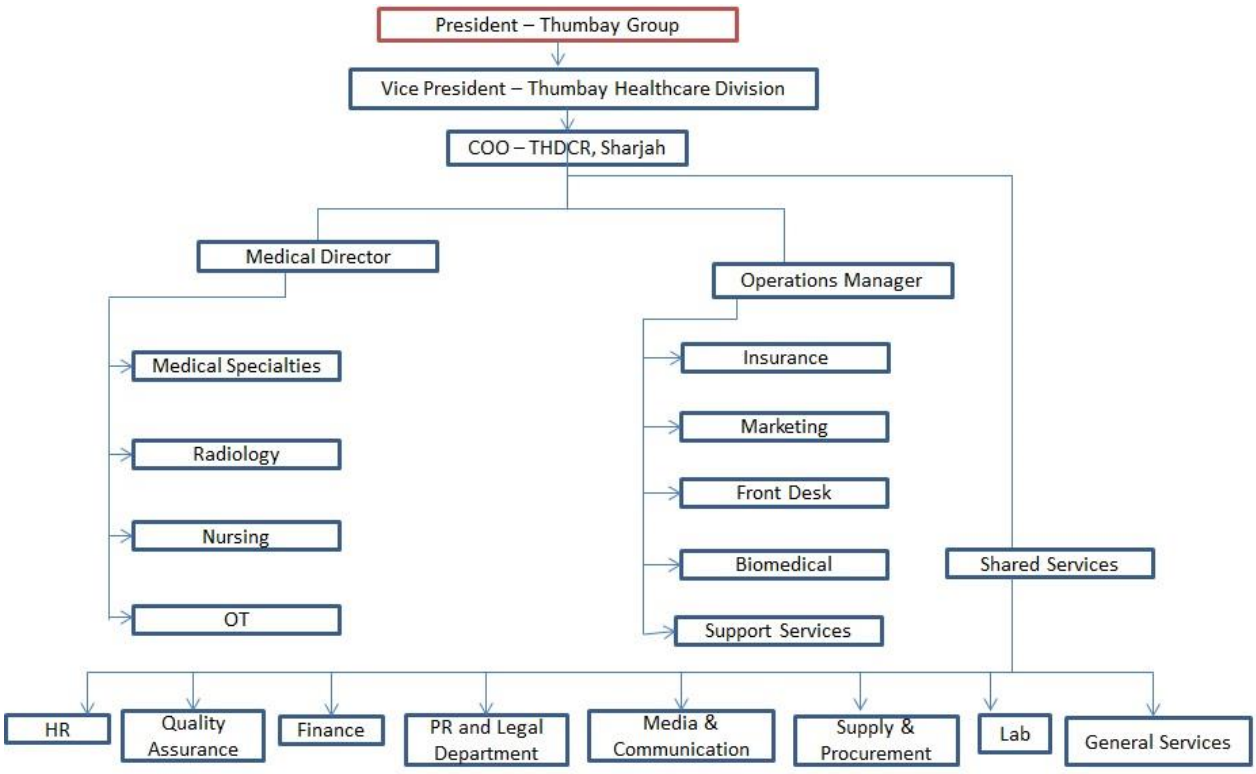

Figure (1): *Organogram of the THDCR*

2. Introduction

In this robust and competitive world, it has become very important to deliver safe and high-quality healthcare services. The health care services not only have to be safe and of high quality but another major factor that contributes in era of global economic decline, is cost effectiveness. However, hospital services in itself is a risky business, therefore maintaining and implementing risk management strategies have become a necessity.

One of the components of a risk management system is the introduction of a risk register in a hospital which allows to identify the potential/Actual risks to get control of adverse events. Developing strategies and controls will lead to reduction in the likelihood and impact of the identified risks and thus result in reduction in errors leading to improved quality, safe care and patients' outcomes.

A **Risk** is a probability of loss, damage or injury that are caused due to internal or external vulnerabilities which can be avoided if necessary preventive actions are taken within the right time.

Operational Risk at a hospital are all the risks that may cause any kind of damage, loss or hindrance to the functioning of the hospital leading to reduced patient satisfaction, work efficiency and outcome.

A **Risk Register** is a tool used for assessing, analyzing and documenting risks for the development of strategic action plans to respond to the risks in order to control the occurrence of the risks in the future.

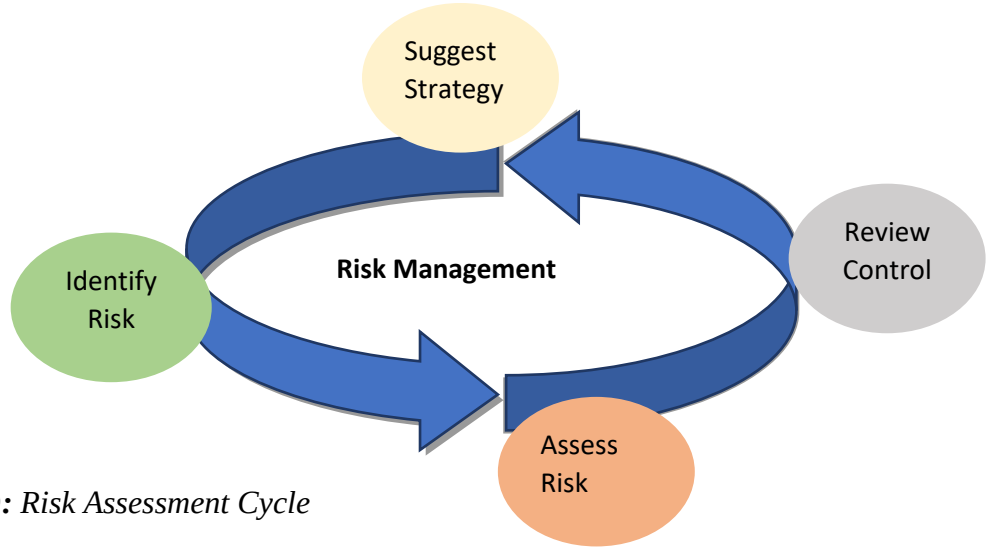

Figure (2): *Risk Assessment Cycle*

The study analyzed the three major risks identified at the out patients department of the hospitals at operations level and helped develop action plans to reduce or prevent the occurrence of those risks.

The three identified risks were –

1. Medical Claim Rejection
2. No Shows at the OPD
3. Need of additional medical specialties

Medical Claim Rejection are the medical claims that do not meet the specific data requirement and are rejected by the insurance companies due to errors in the input of different types of patient or insurance details. The insurance rejection percentage thus increases to a great extent when these errors occur. Therefore, monitoring of medical claim errors and its rectification plays a great role in improving patient satisfaction, work efficiency and outcome.

No shows in OPD emerge when patients fail to attend to the appointments scheduled by them for a consultation or a review leading to longer waiting time and loss of clinical resources and time of physicians and other healthcare practitioners. No show also significantly affects the effectiveness and efficiency of patient care services.

Need of additional medical specialties – For better patient's outcome, patient satisfaction and potential work efficiency it is important for the hospitals to have medical specialties to cater the needs of the patients. When a hospital does not have a particular medical specialty, the physicians of the hospital refer the patients to other hospitals when required. In THDCR, the patients were referred to other specialties when need through group referral system.

Group referral is the referral of patients to another unit of the same hospital group by the physicians of the hospital, to meet the health needs of the patients. Group referrals have to be taken for the consumers when there is unavailability of specialty departments or treatment facility in the hospital.

3. Aim

To improve the operational efficiency of the out patients department of Thumbay Hospital Day Care – Rolla, Sharjah

4. Objective

1. To illustrate the work flow of the OPD of THDCR
2. To study the incidents of no shows at the OPD of THDCR
3. To identify the errors in medical claims submission resulting in medical claim rejection
4. To identify the medical specialties to be added to the hospital for increasing better operational outcome

5. Rationale

Hospital Industry, like aviation, military, transport and other industries is a high-risk hospital. However, the impact of risk is the maximum in hospital industry. Occurrence of adverse events continue to increase globally leading to possible loss or injury to the patients, staff or the hospital itself. Media coverage and expectations of the public have led to the hospitals to put in place a robust risk management system to control and avoid, risks and adverse errors. When considering the global economic downfall, adverse events in terms of finance has also become alarming. Operational risks leading to serious impact in patient's outcome are causing a stressful financial burden to the healthcare providers across the world.

In this study, the identified operational risks were reasons for decrease in work efficiency and patient outcomes. Analyzing the risks helped in identifying the factors directly or indirectly causing the risks. Developing action plans helped the hospital be aware of the risks and ways to handle and reduce the risks. Thus, overall outcome of the study helped in increasing work efficiency, efficacy, and better outcomes and improve patient satisfaction.

6. Review of Literature

1. Dylan Attard, Bertha Grech et al. (2019) in their study "**A prospective audit examining non-attendance at a surgical outpatient's clinic in Mater Dei Hospital, Malta, after the introduction of a text-messaging reminder system**" mentioned that nonattendance at hospital OPD had shown to have caused serious problems with respect to patient management and in-patient outcomes. Although introduction of text messages had decreased not attendance rates to a certain degree and expected to further decrease if patients had registered contact numbers in the hospital management information system.
2. Chandio A*, Shaikh Z et al. (2018) in their study "**Can "no shows" to Hospital Appointment be Avoided?"** stated that Nonattendance is a very common source of inefficiency in wasting time & resources, health services, increased patient suffering and so on. The study indicated how risk analysis could identify who were unlikely to attend again after one missed appointment but as there were no identifiable predictor of non-attendance, so any intervention to improve the nonattendance were unlikely to be significantly fruitful. Although telephonic calling by clinic receptionists were very effective in increasing attendance in some hospitals.
3. Alexandra Wilson Pecci (2019) in her article "**How Automating Patient Insurance Verification reduced Denials"** said that eliminating manual tasks of insurance verification could reduce denials and AR days at an orthopedic clinic, also getting more staff face to face time with patients. Doing manual eligibility insurance verification was a burdensome process. The automated system had made a significant difference in patient outcomes by four main ways, viz. reduced denials, fewer days in accounts receivable, freed staff, decrease in waiting time for walk in patients.
4. Khalid Mohamed, Amira Mustafa et al. (2016) in their study **"A Quality Improvement Project to Reduce the 'No Show' rate in a Pediatric Neurology Clinic"** stated that increase in no shows resulted in increase in waiting time for new patients and waste of clinical resources for the clinic. The international benchmark for no shows in multispecialty healthcare set-ups had shown to be higher as compared to primary healthcare clinics. The patient's reasons to not show were of various reasons including, logistic reasons or lack of suitable attendant. There were also appointment

related issues like scheduling, communication and timing of the appointment. A flexible appointment system better communication between administration and clinical team resulted in reduction in no show rate.

5. Capline Dental Services (2019) in the article "**Common Errors Spotted during Eligibility Verification**" wrote that claim denials in billing not only does upset the patients but also affects the revenue, cash flow and efficiency as insurance verification process could be one of the most integral parts of a billing process. Errors identified leading to insurance rejection were inappropriate patient information, submission of patient's inactive insurance card, sending duplicate claim and incomplete documentation. Simplification of the process can reduce the incidents of claims rejection.
6. The American Medical Association's (2015) in the report "**National Health Insurer Report Card**" published that 5 major reasons for denied medical claims are 1. Missing information like missing modifiers, wrong plan codes etc., 2. Duplicate claim for service - when claims were submitted more than once for the same service provided, same beneficiary, same date, etc., 3. Service was already adjudicated - Benefits for a service were included within another service or procedure, 4. services not covered by payer- before providing services, eligibility to be checked or payer called to determine coverage requirements, 5. limit for filing was expired - there are a set number of days following service for claim to be reported to the payer. If outside of that time period, the claim was denied.
7. Siobhan Milliken in the study (2014) "**Introducing and populating Risk Registers in Four Clinical Units in a Teaching Hospital – A Quality and Safety Initiative**" stated that risk management is critical in the reduction in the use reducing adverse events in hospitals. Risk Register is one such tool that helps in the reduction of risks in the work place and its introduction would further support a multidisciplinary approach to hospital wide introduction

7. Research Question

What actions should the Operations team of Thumbay Hospital Day Care – Rolla, Sharjah take to reduce and control the operational risks of its OPD?

8. Methodology

8.1 Research Title: Develop Risk Reduction Strategies of the Operational Risks Identified at Out Patients Department of Thumbay Hospital Day Care - Rolla, Sharjah

8.2 Research Method – Documentary Analysis

8.3 Study Duration – 1st March – 30th May

8.4 Study Area – Out Patients Department, Thumbay Hospital Day Care – Rolla, Sharjah.

THDCR is a Day Care Surgery Hospital serving patients from diverse backgrounds. The hospital has one well equipped OT with three post-operative day care unit. The OPD has different specialties including –

General Surgery	Pediatrics	Ophthalmology	Orthopedics
Internal Medicine	Gynecology	GP Services	
ENT	Anesthesiology	Radiology	

The OPD has 19 clinics with 15 medical doctors, one radiographer and 17 nursing staff. The OPD services begin and from 7 am to 11 pm from Saturdays to Thursday and from 2pm to 10pm.. The OPD caters to approximately 150 patients every day.

8.5 Data Source – HIMS – THDCR

8.6 Data Analysis Tool

Risk Assessment Template: A risk assessment template is a tool that is used to identify risks and develop controls. It identifies risks by systematic examination to assess the severity of the risks. The likelihood and consequences are measured and control measures are developed to reduce the prevalence and incidence of the identified risks.

Microsoft Excel: It is a spreadsheet developed by Microsoft featuring calculations, graphing tools and pivot tables.

Pareto Chart: A pareto chart is a type of chart that helps in analysis of data. It uses both bar and line graph where values are represented in descending order in bars and line graph represents cumulative total.

Cause and Effect Diagram (Fish bone Analysis): This method helps in identifying cause of various events. It helps in identifying potential factors causing an effect.

8.7 Study Method

8.7.1 No shows

All the patients who booked appointments through website/call centre/direct contact but did not show up at the OPD were identified. Each patient was identified and no-show calls were made to the patients. The improvement in no show after the no show calls was analyzed by calculating the percentage improvement and effectiveness of no-show calls was interpreted.

Inclusion Criteria: All the patients who booked appointments for Outpatient Services of the Hospital

Exclusion Criteria: Patients who booked appointments for one department on the same day more than once.

8.7.2 Errors in Medical Claims

All the medical claims were scanned on the next day of claim and thoroughly scanned for identification of error. The errors were identified by comparing the entered data with the scanned insurance cards or the billing details. A checklist was prepared to identify and analyze the errors.

Inclusion Criteria: All the medical claim forms which had potential/actual errors

Exclusion Criteria: Error caused due to technical breakdown of the card scanning machines

8.7.3 Need of additional medical specialties

All the patients who were referred to any other Thumbay Hospital were identified. The referral hospital, the referring doctor and the referred department where the patients were referred were identified. Analysis of the data was done to identify the specialty which was the most required by patients visiting THDCR.

Inclusion Criteria: All the referrals to other Thumbay Hospitals due to lack of medical specialties.

Exclusion Criteria: Referrals to already existing departments of the hospital and the referrals to accident and emergency department.

9. Result

9.1 Risk Assessment

S. No.	*Risk Owner*	*Risk type*	*Risk description*	*Actual or Potential risk?*	*Consequences*	*Likelihood*	*Risk Rating*
R1	***Manager (Operations)***	***Operational Risk***	***Risk of increased waiting time and decrease in work efficiency due to no shows***	***Actual***	***3***	***4***	***12 (High Risk)***
R2	***Manager (Operations)***	***Operational Risk***	***Risk of insurance rejection due to errors in medical claim***	***Actual***	***4***	***3***	***12 (Extreme Risk)***
R3	***Manager (Operations)***	***Operational Risk***	***Risk of losing patients due to lack of certain medical specialties***	***Actual***	***4***	***5***	***20 (Extreme Risk)***

Table (I) *– Operational Risks Assessment*

9.2 OPD Process Map

R1: Patient books appointment but does not show up

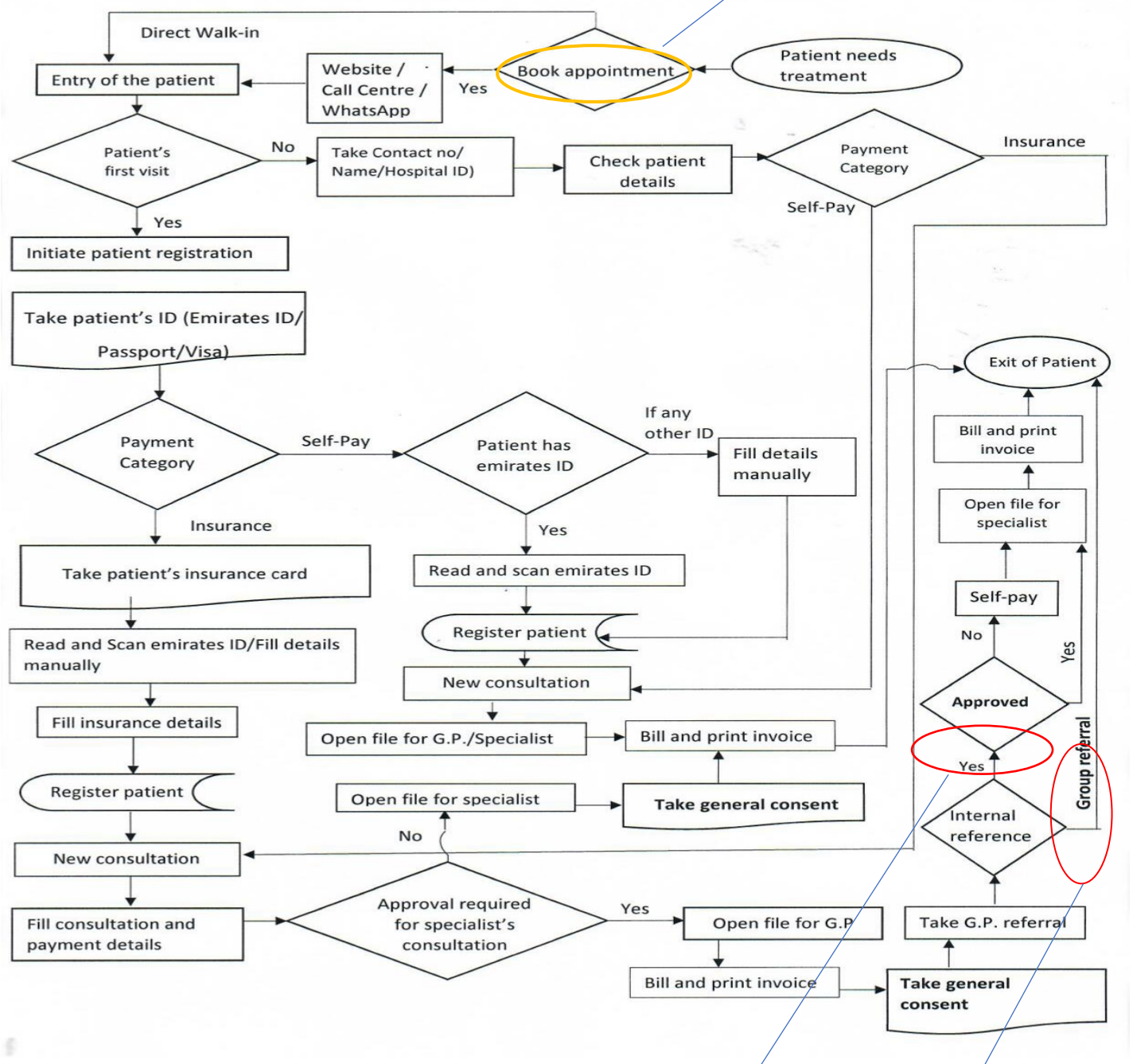

Figure (3) *– OPD Process Flow*

R2: Insurance rejected because of error in submission of medical claim

R3: Patient referred because of absence of certain medical specialty

9. 3 No Shows at OPD

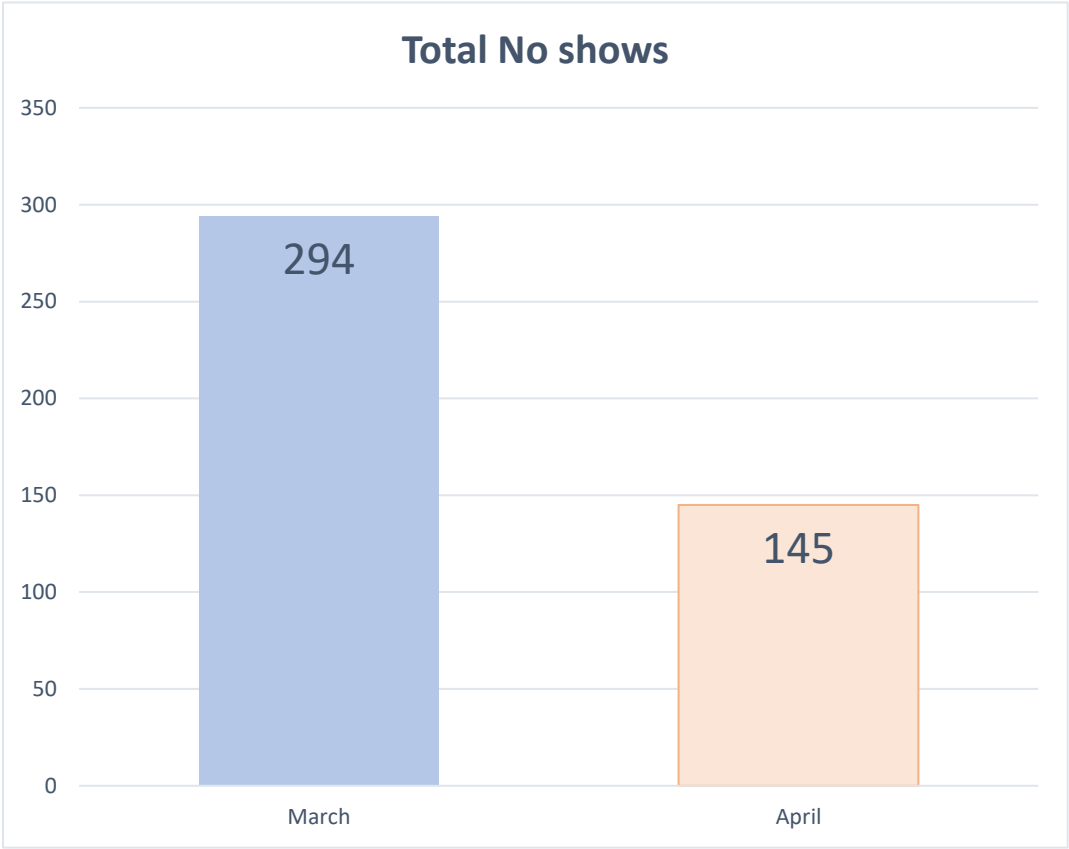

Figure (4) *- Total no. of no shows in March & April*

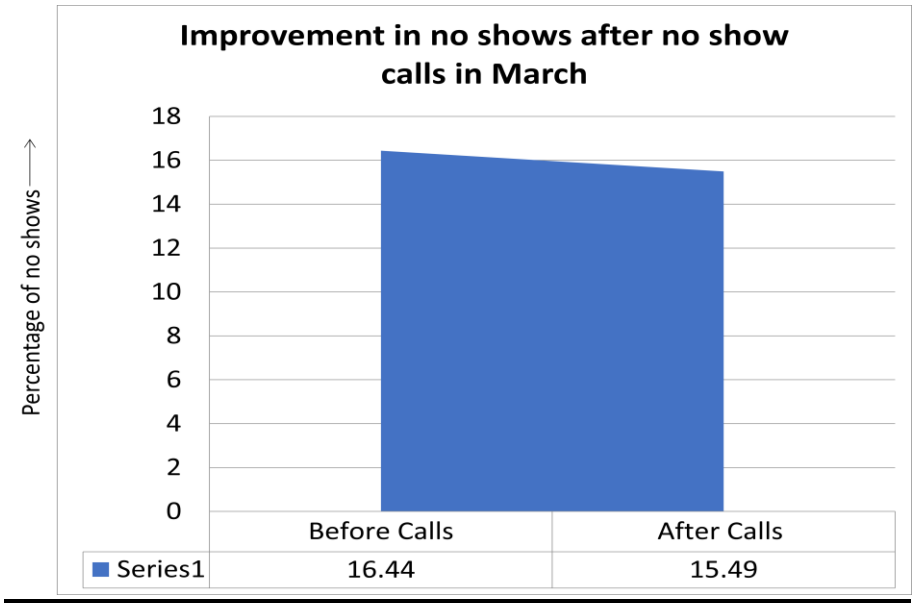

Figure (5) *– Improvement in the no shows after reminder calls to the patients in March*

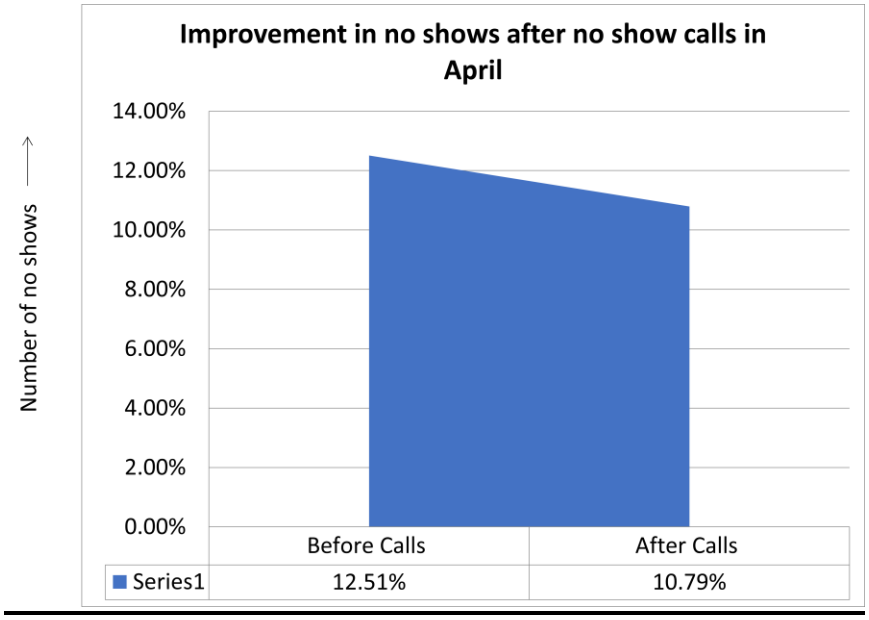

Figure (6) *– Improvement in the no shows after reminder calls to the patients in April*

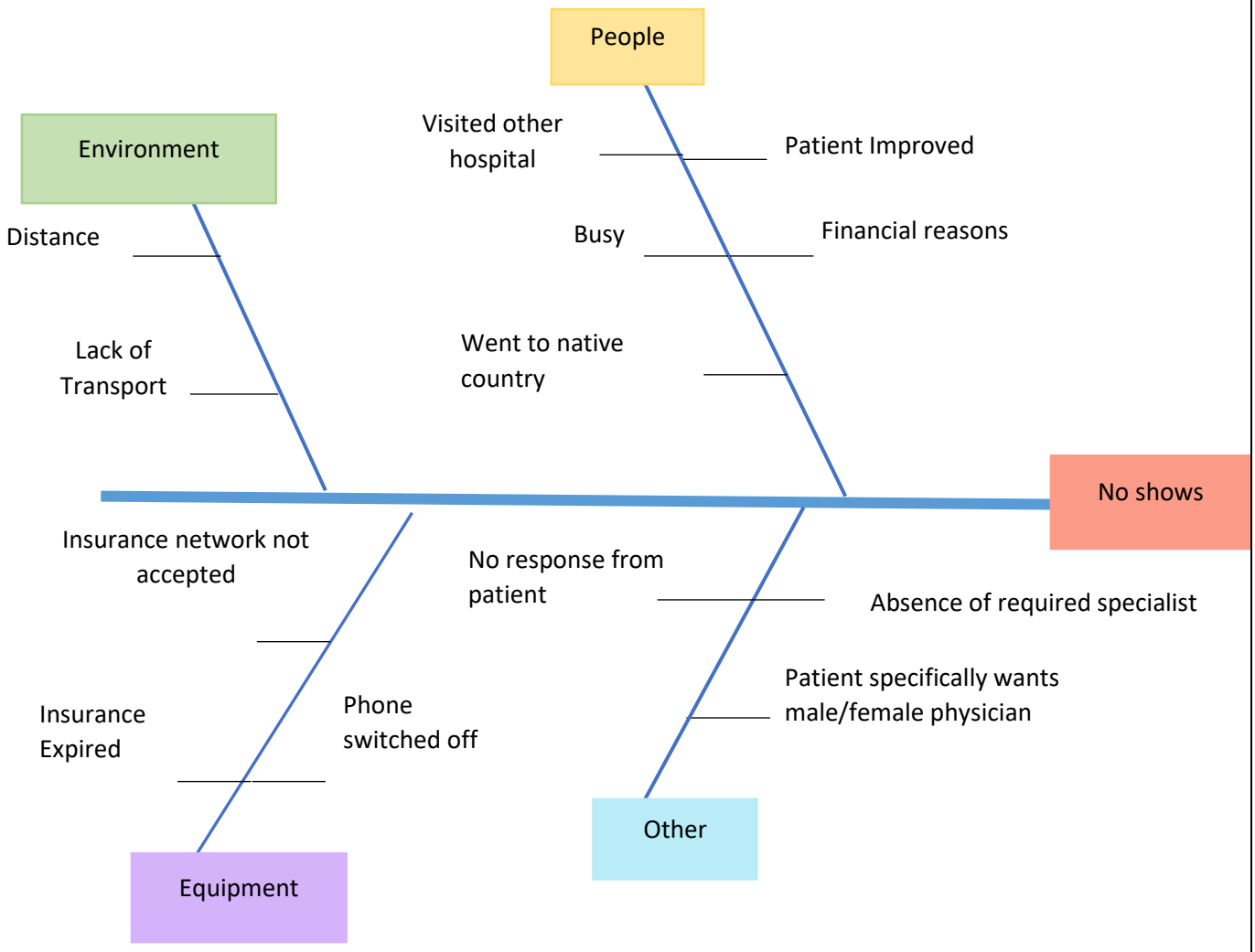

Figure (7) *– Cause and Effect Diagram (Fish Bone Analysis) of No shows at the OPD*

9.4 Errors in Medical Claims

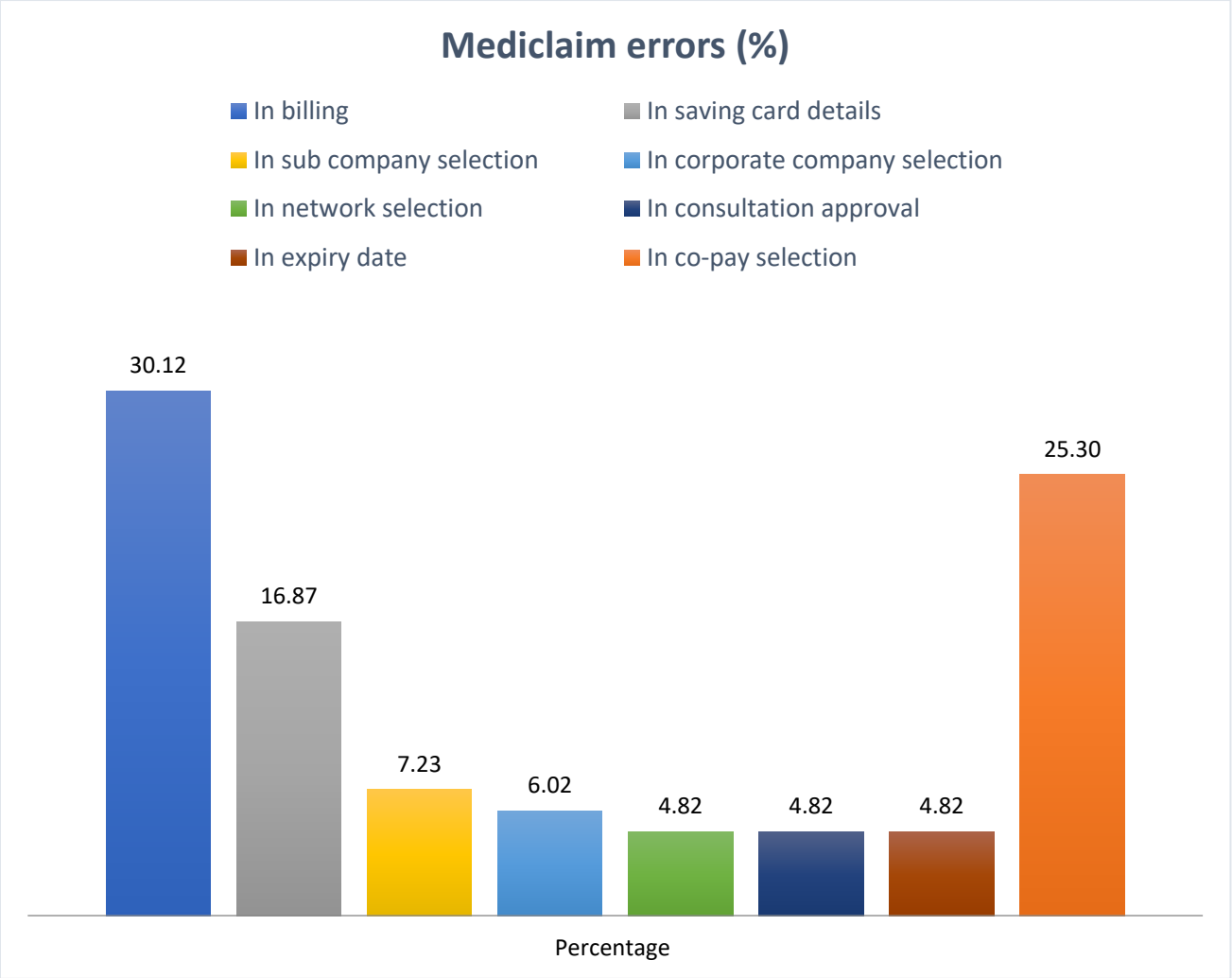

Figure (8) *– Reasons of Medical claim Errors*

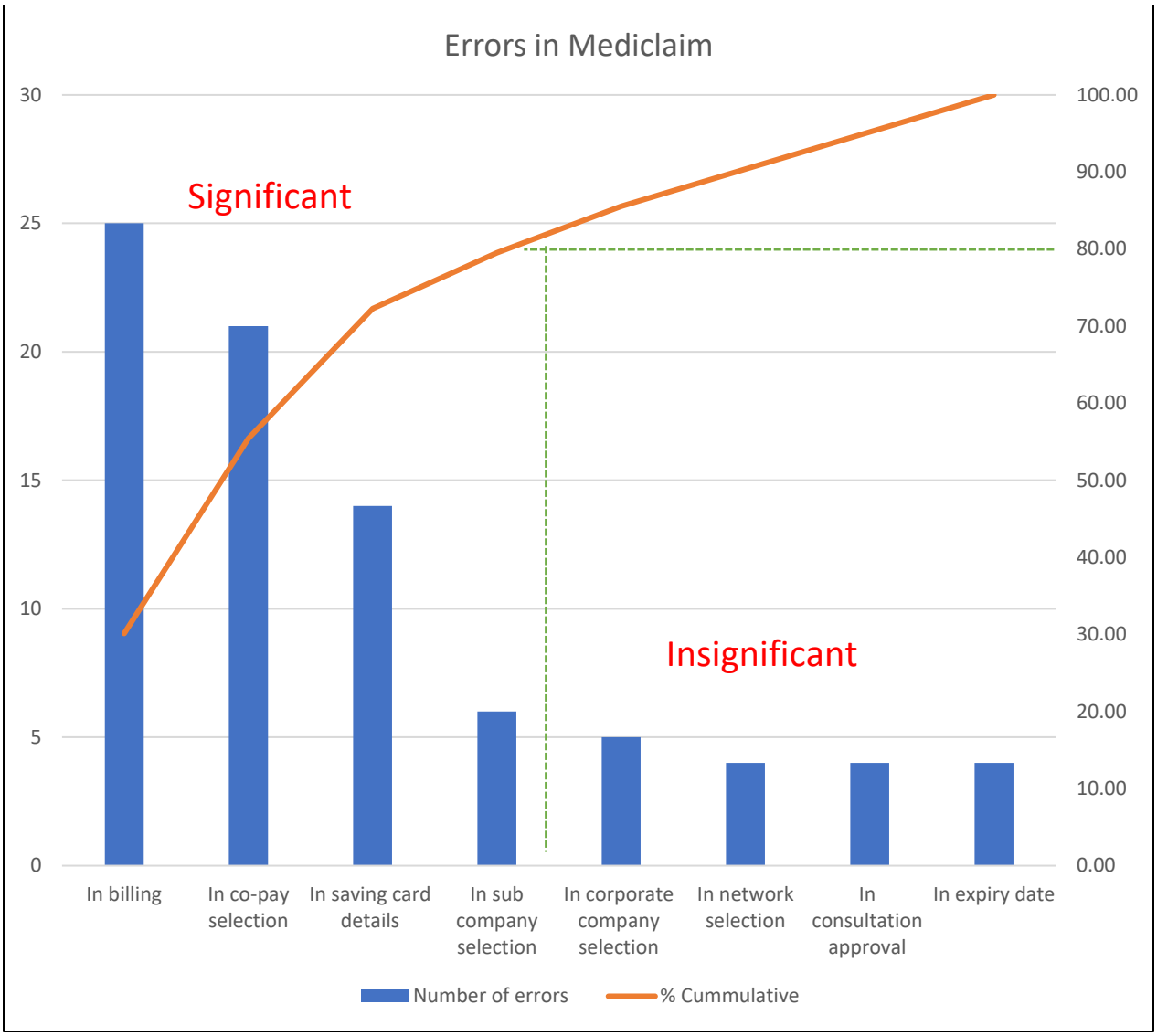

***Figure (9)**: Pareto Chart (Errors in Medical Claims)*

9.5 Additional Medical Specialties required

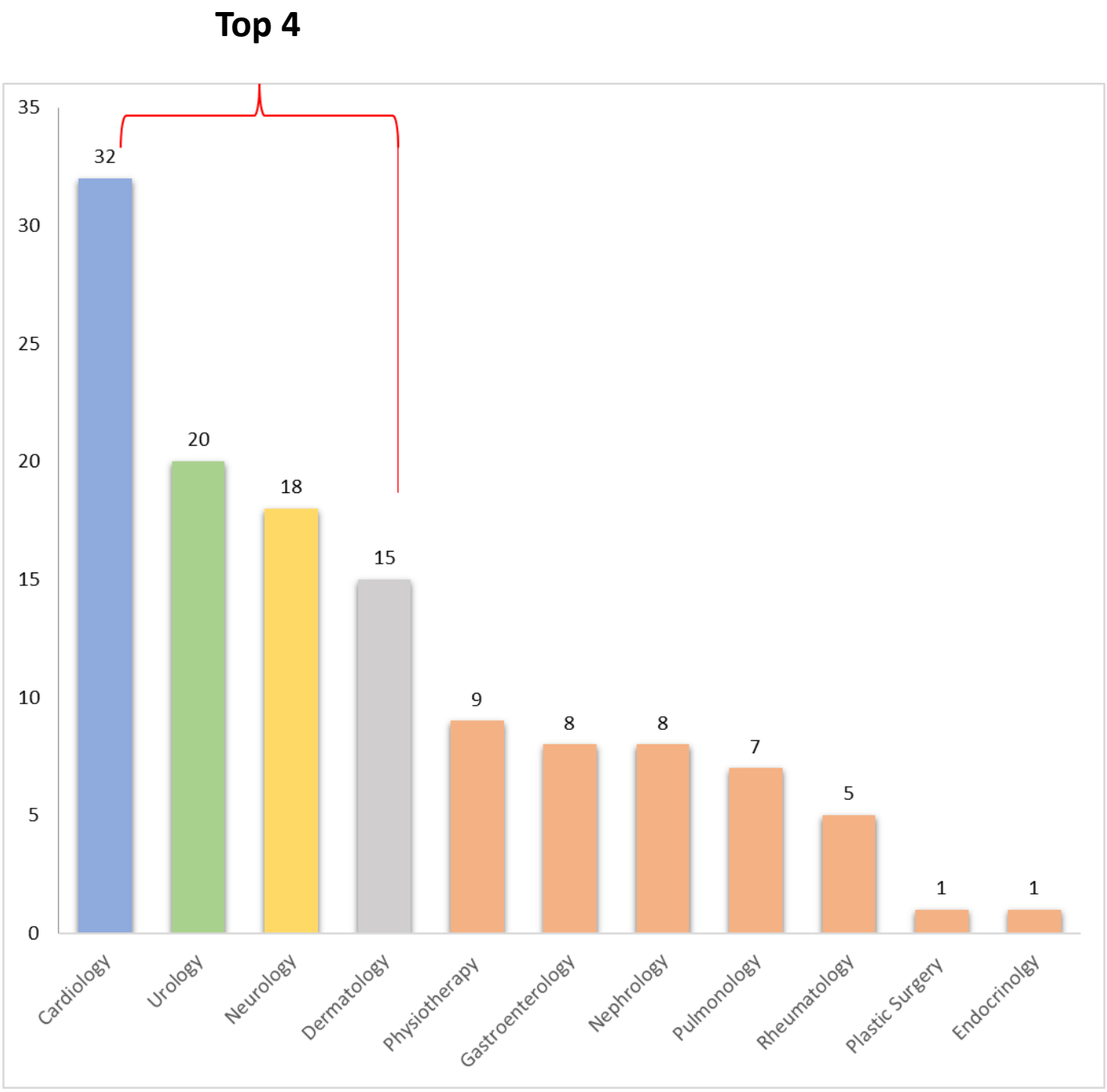

Figure (10) *– Additional medical specialties required*

9.6 Risk Reduction Strategies

R1: Risk of increased waiting time and decrease in work efficiency due to no shows

Strategy R1.1: Advance reminders to patients who booked appointments, preferably one day prior – The hospital practices sending confirmation to the patients once the appointments were booked but it has been seen in numerous studies that sending automated or manual reminders via text messages to patients helped in decreasing no show rates. This practice will also help the hospitals to establish a personal connection with the patients which would make it less likely for the patients to not show up next time.

Strategy R1.2: Additional option to confirm the booked appointments - In instances many studies also suggested that sending the reminders also didn't suffice the purpose of reducing the no shows. In addition to the reminders, an option to confirm the appointments by the patients could to a more strategic method to reduce the no shows. The patients on receiving the reminders would be given an option to confirm or cancel their appointments. This would be effective if in cases the patients need to cancel the appointments.

Strategy R1.3: Keeping a wait list: In cases, there is no confirmation from the patients a wait list to fill up the gaps in rush hours would be helpful in reducing resource wastage and slots of the hospital. The patients in the wait list could be sent a confirmation of their appointments on the day of their appointments, no show arises.

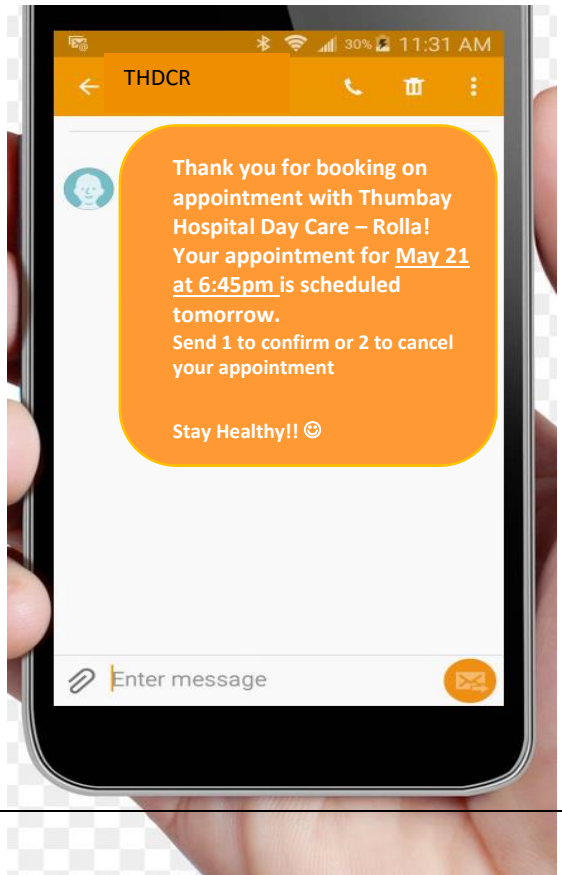

Figure (11): *Appointment Reminder Message Sample*

R2: Risk of insurance rejection due to errors in medical claim

Strategy R2.1: Staff Education - Staff education is essential to reduce the incidence of errors in medical claims submission. Monthly training for the staff handling insurance approvals to handle rejections and denials quickly.

Strategy R2.2: Daily audits of data with a checklist - Scheduling daily chart audits for data and documentation quality of claims submission. At the end of every shift the staff, handling insurance if audit the data and document using a checklist can reduce the no of errors and reduce insurance rejection to a great extent. The errors commonly can be added to the drop box for easy selection.

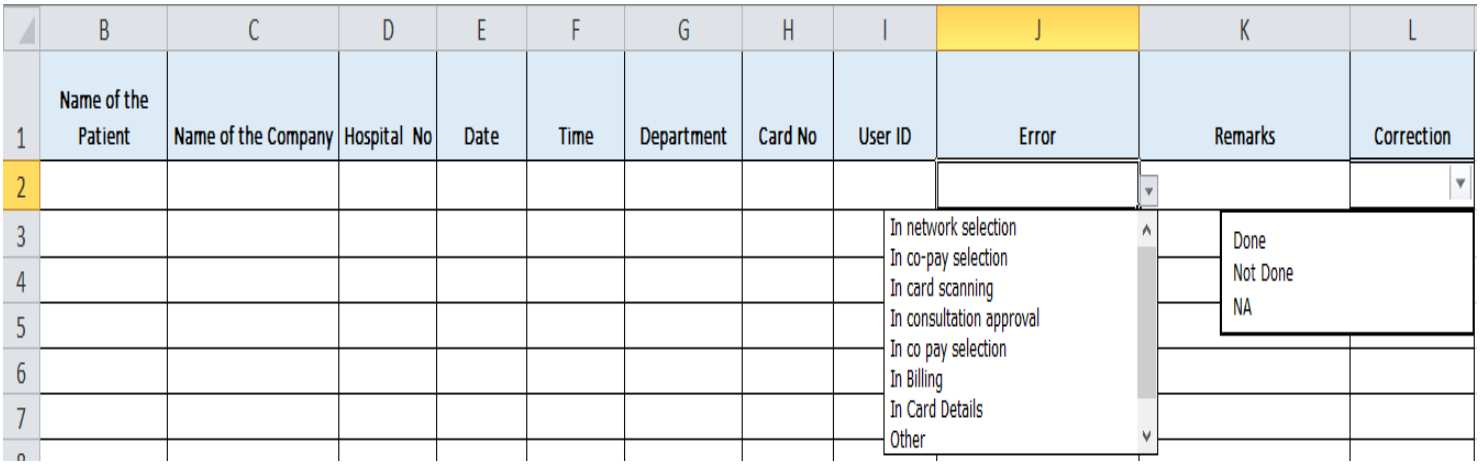

Figure (12): *Checklist of Claims Submission Audits.*

R3: Risk of losing patients due to lack of certain medical specialties

R3.1: As shown figure (X), the top 4 departments as per the bar graph are cardiology, urology, neurology and dermatology. Adding these specialties in the hospital would reduce the risk of losing a big section of patients. This will improve financial as well as patient outcome.

9.7 Suggested Operational Risk Register

S. No.	Risk Owner	Risk type	Risk description	Actual or Potential risk?	Consequences	Likelihood	Risk Rating	Risk Reduction Strategies
R1	Manager (Operations)	Operational Risk	Risk of increased waiting time and decrease in work efficiency due to no shows	Actual	3	4	12 (High Risk)	R1.1 R1.2 R1.3
R2	Manager (Operations)	Operational Risk	Risk of insurance rejection due to errors in medical claim	Actual	4	3	12 (Extreme Risk)	R2.1 R2.2
R3	Manager (Operations)	Operational Risk	Risk of losing patients due to lack of certain medical specialties	Actual	4	5	20 (Extreme Risk)	R3.1

Table (II) : *Proposed Operational Risk Register*

10. Discussion

In Table (I) the identified risk were rated as per the risk assessment template. There was one high and two extreme operational risks that were identified and rated.

Figure (III) shows the work process flow of the OPD of THDCR. The identified risks were marked. The area marked in yellow is the high risk area and the areas marked in red shows the areas of extreme risk as per the risk assessment tool. R1 – High Risk – No shows after appointment, R2 – Errors in Medical Claims submission leading to rejections of insurance R3 – Lack of medical specialties.

Figure (IV) shows the total number of no show calls in the month of March and April which was 294 and 145 for the month of March respectively.

In Figure (V) it is seen that the no show have reduced from 294 to 277 in the month of March and in figure (VI) the no show reduced from 145 to 129 after reminder calls were made to the patients who did not show up in the hospital after booking the appointments. The improvement in the month of April was better than March as in the month of April. The improvement was 5.78 % and 11.03 % in the month of March and April respectively. This data thus depicts that merely calling the patients and reminding the patients of their missed appointments were not enough to reduce the no shows at the OPD.

The Cause and Effect Diagram, Figure (VII), shows the root causes of the no shows in the hospital. The major factors identified were People, Environment, Equipment and Others. The causes related to People were patient visited other hospitals, patients were busy on the day of the appointment, unavailability of the patients, patient improved and did not require the service anymore and financial reasons, Under Environment the major causes identified were lack of transport and distance. In the Equipment factor, the causes were expiry of insurance, non- acceptance of insurance and when the patients were not been able to be contacted. There were other causes like there was no response from the patients, no required specialist was available or requirement of gender specific physicians.

In Figure (VIII) the common errors in medical claim submission were identified and were Error in billing (30.12%), Error in sub company selection (7.23%), Error in saving card details (16.87%), Error in corporate company selection (6.02%), Error in network selection (4.82%), Error in consultation approval (4.82%), Error in selection of expiry date (4.82%) and error in co pay selection (25.30%).

In Figure (IX) the Pareto chart of medical claims submission data is shown. With the help of 20:80 methods, the significant and the non-significant errors were identified. The significant errors were Errors in Billing, Error in co-pay selection, Error in saving card details and Error in sub company selection and the rest were identified as non- significant.

In Figure (X), the most required were identified based on the data of group referrals. The department identified was Cardiology, Urology, Neurology, Dermatology, Physiotherapy, Gastroenterology, Nephrology, Pulmonology, Rheumatology, Plastic Surgery and Endocrinology. Out of the identified departments, the top departments were Cardiology, Urology, Neurology and Dermatology.

11. Conclusion

Risk management in extremely important in the business of healthcare as it is fraught with risk. Ensuring a robust risk management is central to preventing adverse events. Operational Risk reduction ensures effective patient care and outcome in terms of finance and work efficacy. Global documents and data suggest there are even deaths occurring in the hospital workplace due to the emergence of sudden risk when not controlled thus controlling the risks is an essential task in the hospitals. Risk management is the responsibility of all the employees of the hospital from top level managers to every other staff of the Hospital at all times to all the people who come to the hospital to get quality care as the patients lie all their on the hospital for the betterment of their health.

“It is vital to patient, public and staff confidence and morale that at the most challenging of times, the healthcare system performs to its highest standard. It is imperative therefore, that we continue to strengthen policy and practice in respect of patient safety and in particular our capacity to learn lessons derived from monitoring and analysis of adverse events”. (Holohan, 2014)

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