

**STUDY ON
CONVERSION OF OPD PATIENTS TO RADIOLOGY: A
STUDY ON FINDING REVENUE LEAKAGES IN
RADIOLOGY DEPARTMENT**

at

CK BIRLA HOSPITALS RBH, JAIPUR

Dissertation Submitted to



The IIHMR University, Jaipur

for the partial fulfilment for the award of the degree of

Master of Business Administration (MBA)

in

Hospital and Health Management

(2021-2023)

by

Shubhangi Golecha

Under the Supervision and Guidance of

Anoop Khanna

2023

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DECLARATION BY STUDENT

I hereby declare that this dissertation titled is “**STUDY ON CONVERSION OF OPD PATIENTS TO RADIOLOGY: A STUDY ON FINDING REVENUE LEAKAGES IN RADIOLOGY DEPARTMENT**” bonafide record of my original researchwork. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

(Signature)

Shubhangi Golecha

Date:

CERTIFICATE

This is to certify that the dissertation title “**STUDY ON CONVERSION OF OPD PATIENTS TO RADIOLOGY: A STUDY ON FINDING REVENUE LEAKAGES IN RADIOLOGY DEPARTMENT**” is a record of the research work undertaken by (Shubhangi Golecha) in partial fulfillment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and her approach to the research study has been sincere, scientific, and analytical.

Faculty Guide

IIHMR University, Jaipur

Date:

School Dean

IIHMR University, Jaipur

Date:

ABSTRACT

Background

The OPD is regarded as the hospital's entrance. Patients arrive at the hospital from many places and for a variety of services. Patients not staying overnight are treated and diagnosed in hospital's Out Patient Department. These patients don't stay overnight at the hospital.

Patients can request hospital services at a variety of touchpoints, or service touchpoints as we like to call them.

The number of patients who are really converted from the outpatient department to the radiology department will be determined by the conversion data that who all patients availed the radiology services.

The following stage would be to determine the number of non-conversions, or patients who did not availed the radiology services despite being advised to do so, and the reasons for this.

Research Questions

- What is the percentage of patients converted from OPD to radiology department (advised to availed) ?
- What are the top 5 specialities with highest conversion rates in March, April and May ?
- What are the reasons for non-conversions ?

Objectives

- To identify the number of patients advised for radiology investigation from the out-patient department.
- To calculate the conversion rate of OPD patients to the radiology department that who all availed the services.
- To determine the reasons for non-conversions.

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LIST OF ABBREVIATIONS: -

S No.	Abbreviations	Meaning
1	OPD	Out patient department
2	PCS	Patient care services
3	Saarthi	Doctor coordinator
4	IP	In-patient
5	OP	Out-patient
6	RBH	Rukmani Birla Hospital
7	MIS	Management information system
8	MS-Excel	Microsoft excel
9	ENT	Ear nose throat
10	HIS	Hospital Information System

11	Ortho	Orthopaedics
12	Gastro	Gastrology
13	Obs & Gyn	Obstetrics & gynaecology
14	Neuro	Neurology

CHAPTER – 1: INTRODUCTION

The OPD is regarded as the hospital's entrance. Patients arrive at the hospital from many places and for a variety of services. Patients who don't need to stay overnight are diagnosed and treated in a hospital's outpatient department. Patients can request hospital services at a variety of touchpoints, or service touchpoints as we like to call them.



Figure- 1.1: OPD Area & Radiology Department

The number of patients who are really converted from the outpatient department to the radiology department will be determined by the conversion data from the outpatient department to the radiology department.

The following stage would be to determine the number of non-conversions, or patients who did not avail the radiology services despite being advised to do so, and the reasons for this.

Aim

To study the Conversion of OPD Patients to Radiology department and to find out the revenue leakages in radiology department.

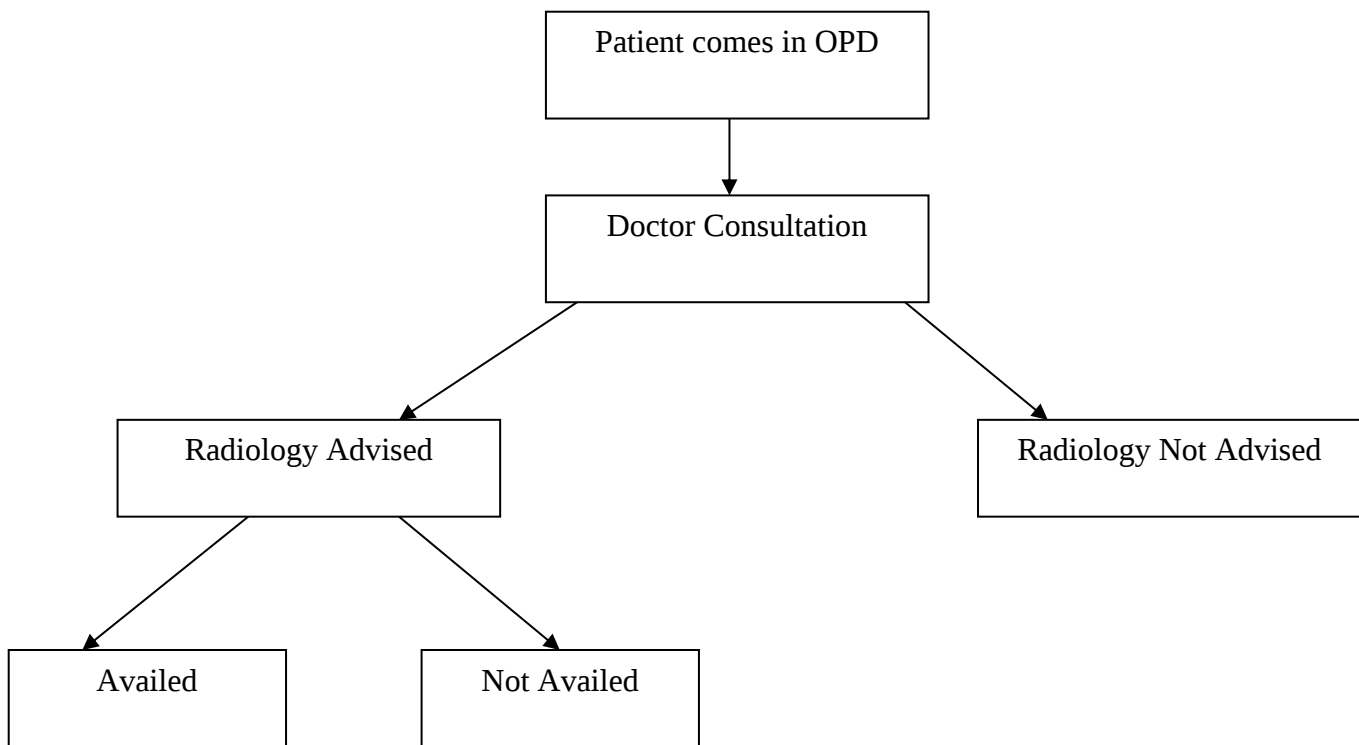
Objectives

- To identify the number of patients advised for radiology investigation from the out-patient department.

- To calculate the conversion rate of OPD patients to the radiology department that who all availed the services.
- To determine the reasons for non-conversions.

Process Brief

Figure 1.3 : Conversion process



Teams Involved in the Discharge Process

- Billing (PCS)
- Consultant
- Saarthi (Doctor Coordinator)
- Radiology Technician
- Medical Administration

Importance of maintaining Conversion:

(1) Prevents Revenue Leakage: Higher the conversion rate, lesser will be the chance of revenue leakage. As, maximum conversion rate shows that the hospital tried to cater maximum number of patients.

(2) **Patient satisfaction:** Higher levels of patient satisfaction can be attributed to a prompt and effective process. The more the patient will be satisfied, it becomes your regular customer for further follow-ups.

(3) **Hospital Efficiency:** Improving hospital efficiency for hospitals to run effectively as all radiology equipments and manpower will be contributing to their maximum hence increasing hospital efficiency.

General Problems of Conversion:

(1) **Radiologist Shortage:** This is an issue that leads to mismanagement at workplace, the work is hampered and leading to lesser conversion rate and patient satisfaction.

(2) **Long Waiting Time:** Long waiting queues for radiology investigation leads to the denial of patient response.

-

(3) **Limited resources:** Hospitals may struggle to successfully control because of lack of manpower and equipments.

(4) **Social and financial hindrances:** Patients may have social or financial hindrances, some people are not that financially sound to afford to the costly investigations and prefer to places having cheaper rates than other corporate hospitals.

(5) **Chances of human error:** As saarthis data is not a system generated data and is collected manually so there are chances of human errors.

CHAPTER -2: LITERATURE REVIEW

For hospitals to remain profitable there are two major obstacles to overcome. First and first, they must constantly work to draw in new patients, and secondly, one of the most crucial factors is to maximise revenue from each patient visit to their facilities. Due to inherent restrictions, the second step is important but also the least understood.

OPD functions as a sort of first-arriving point for patients at multi- or super-specialty hospitals. Patients can either use diagnosis, pharmacy, or IP services at the hospital or from others who offer similar services outside, depending on the treatment plan shown on OPD records, which are primarily prescriptions. Every lead represents a prospective new client.

As healthcare managers, it is imperative that we convert those leads into contented, loyal clients. The patient's journey begins with the first time they interact with the organization and concludes with them becoming a satisfied patient.

Previous studies have shown that higher conversion rates can lead to increased revenue generated from radiology department, increasing diagnostic precision, and improved patient care in general. Factors that affect radiology conversion rates are long waiting time, affordability and scope of services offered.

CHAPTER – 3: METHODOLOGY

Research Questions

- What is the percentage of patients converted from OPD to radiology department (advised to availed) ?
- What are the top 5 specialities with highest conversion rates in March, April and May ?
- What are the reasons for non-conversions ?

Research Design:

Hospital conversion is a conversion which shows patients that actually availed the services at radiology department after being advised by the consultant, which may be measured using a cross-sectional research design.

For this kind of study, information was gathered from all at once who had been advised for radiology services from the hospital and who all availed the radiology services through MIS (Management Information System) and made in MS-Excel.

Study setting: The study is conducted at CK Birla Hospital RBH, Jaipur

Study population: The study population will consist of patients of all age groups who are advised for the radiology investigations from the hospital in the month of March, 2023 to May, 2023.

Inclusion Criteria:

- All age groups (pediatrics to geriatrics).
- All the cash and Insurance patients.
- All the departments namely – (ENT, cardiology, internal medicine, pulmonology, neurology, neurosurgery, gastroenterology, gynecology, spine surgery, nephrology, endocrinology, pediatrics, vascular surgery, internal medicine, urology, orthopedics, oncology)

Exclusion Criteria:

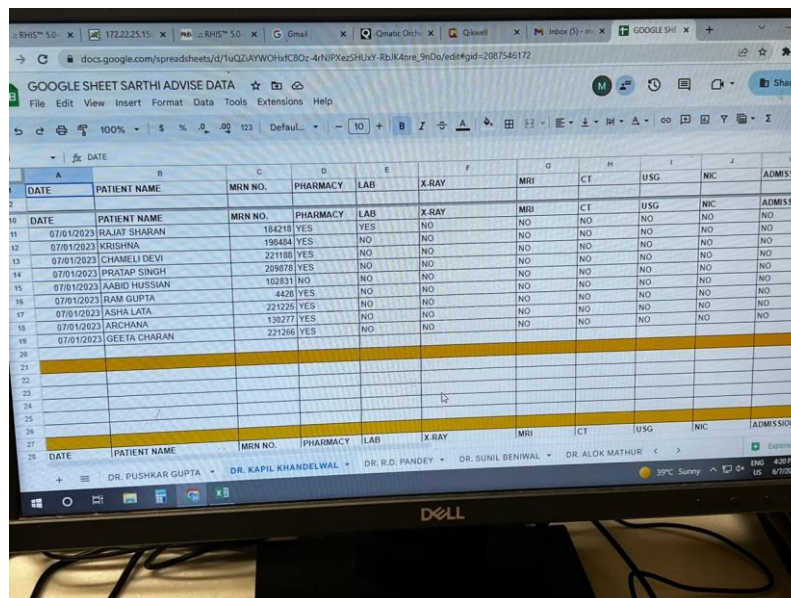
- Situations requiring urgent radiology intervention.

Operational Definitions:

- **Diagnostic effectiveness:** The percentage of patients who, following conversion to radiology, receive a prompt and accurate diagnosis.
- **Conversion:** Patients that actually availed the services at radiology department after being advised by the consultant.

Data Collection Procedure:

Data will be collected from doctor coordinators through google sheet and prescription as well as manually during the whole process.



DATE	PATIENT NAME	MRN NO.	PHARMACY	LAB	X-RAY	MRI	CT	USG	NIC	ADMISSION
07/01/2023	RAJAT SHARAN	184218	YES	YES	NO	NO	NO	NO	NO	NO
07/01/2023	KRISHNA	196484	YES	NO	NO	NO	NO	NO	NO	NO
07/01/2023	CHAMELI DEVI	221188	YES	NO	NO	NO	NO	NO	NO	NO
07/01/2023	PRATAP SINGH	209872	YES	NO	NO	NO	NO	NO	NO	NO
07/01/2023	AABID HUSSIAN	102033	NO	NO	NO	NO	NO	NO	NO	NO
07/01/2023	RAM GUPTA	4428	YES	NO	NO	NO	NO	NO	NO	NO
07/01/2023	ASHA LATA	221225	YES	NO	NO	NO	NO	NO	NO	NO
07/01/2023	ARCHANA	138277	YES	NO	NO	NO	NO	NO	NO	NO
07/01/2023	GEETA CHARAN	221266	YES	NO	NO	NO	NO	NO	NO	NO

Figure 3.1 : Google sheet (Saarthi)

The data will also be cross verified by HIS (Hospital Information System).

Ethical Considerations

Data security and confidentiality are upheld throughout the study; patient information, such as IP numbers, names, and diagnoses, is not displayed. Additionally, patient confidentiality is upheld by protecting information about the types of investigations performed on patients.

CHAPTER – 4: RESULTS

Analysis of the months from March, 2023 to May, 2023 in which total advised by the consultant and total availed by the patients data is shown in Table 4.1.

Table 4.1: Total advised and total availed

MONTH	ADVISED	AVAILED
MARCH	1033	781
APRIL	1295	1127
MAY	1011	898

- This table shows that total number of patients advised in the month of march are 1033 out of which 781 availed the radiology services.
- In the month of April, total advised was 1295 out of which 1127 availed the services.
- In the month of May, total advised was 1011 out of which 898 availed the services.

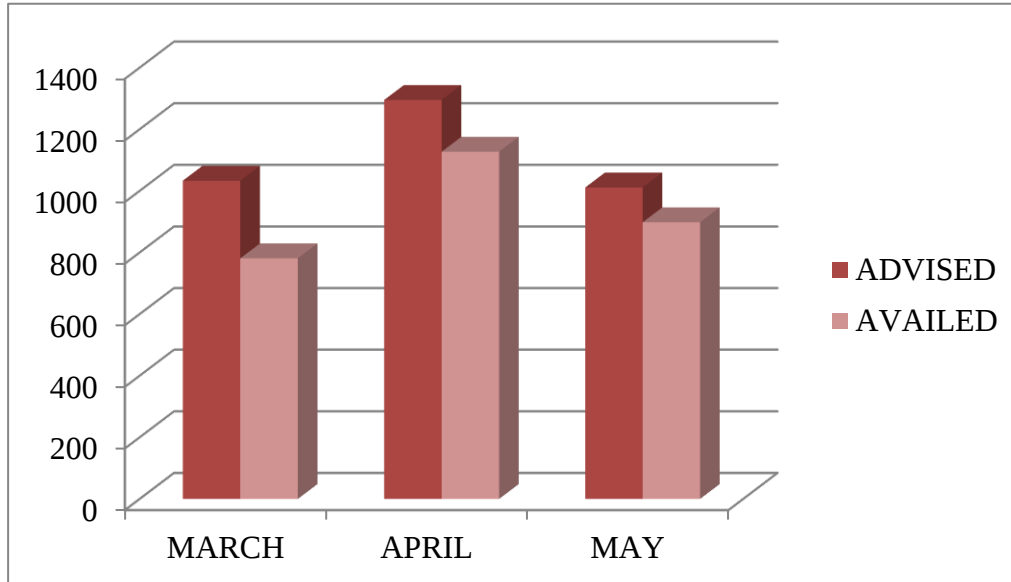


Figure 4.1: Total advised and total availed

Analysis on the basis of top 5 specialities contributing maximum to the conversion rate are

as follows:

(1) In the month of March

Table 4.2: Top 5 specialities in March

Speciality	Conversion Rate
Urology	131%
ENT	100%
Ortho	99%
Internal Medicine	76%
Gastro	75%

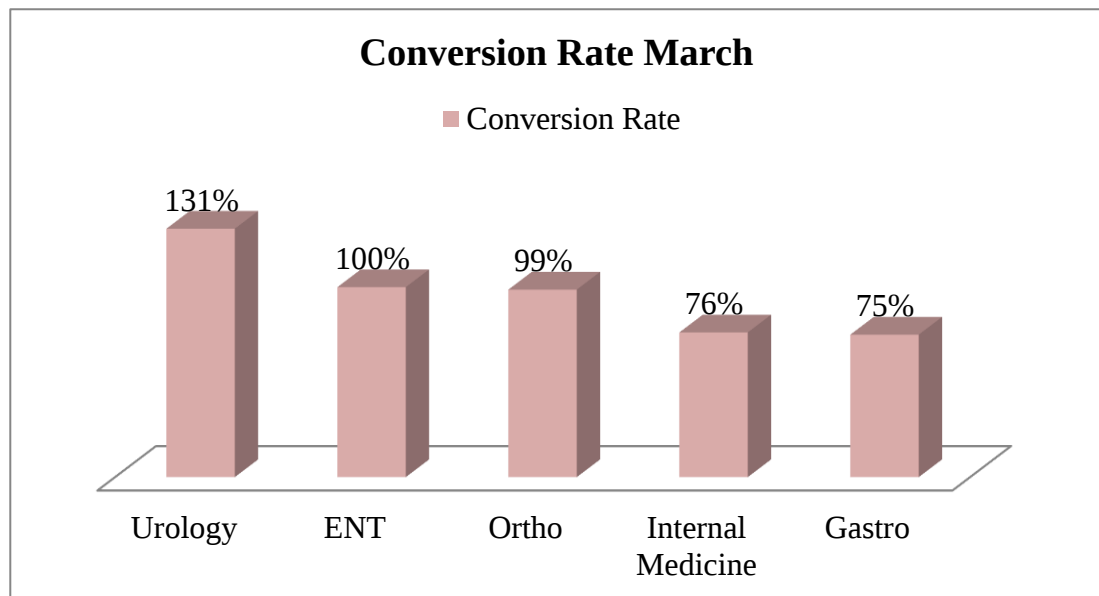


Figure 4.2 : Top 5 specialities in March

(2) In the month of April

Table 4.3: Top 5 specialities in April

Speciality	Conversion Rate
Cardiology	133%
Internal Medicine	113%
Pulmonology	102%
Urology	101%
ENT	100%

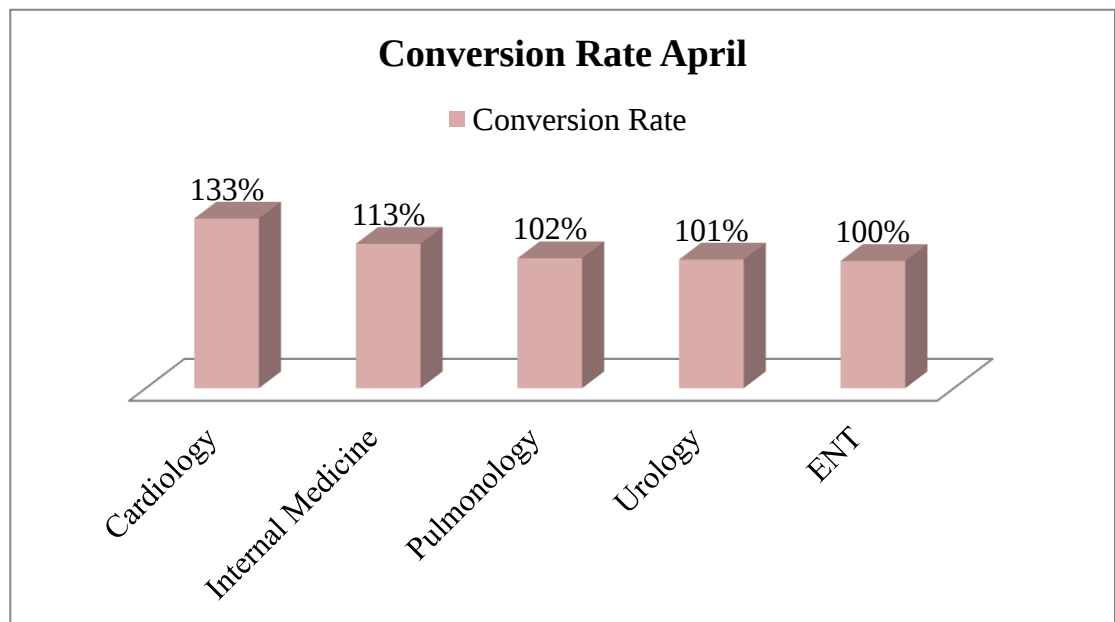


Figure 4.3 : Top 5 specialities in April

(3) In the month of May

TABLE 4.4 : Top 5 specialities in May

Speciality	Conversion Rate
Endo	108%
Ortho	88%
Obs & Gyn	87%
Interal Medicine	86%
Neuro	80%

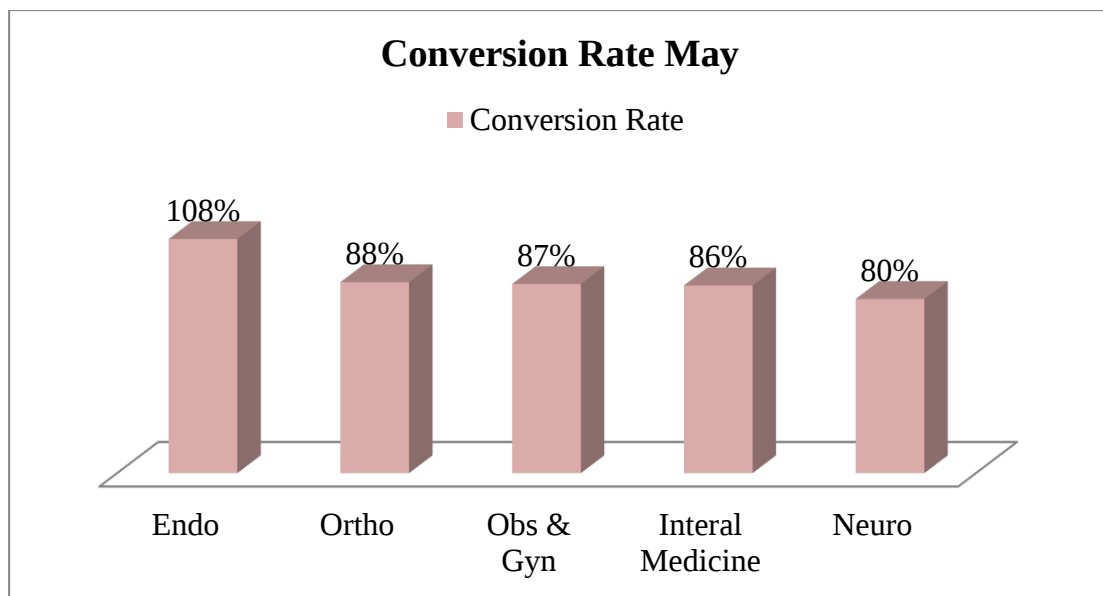


Figure 4.4 : Top 5 specialities in May

If we compare conversion from the first month to the third month, we have come across a long way in terms of increasing overall conversion rate.

Table 4.5 : Conversion rates

Month	Conversion Rate
MARCH	76%
APRIL	87%
MAY	89%

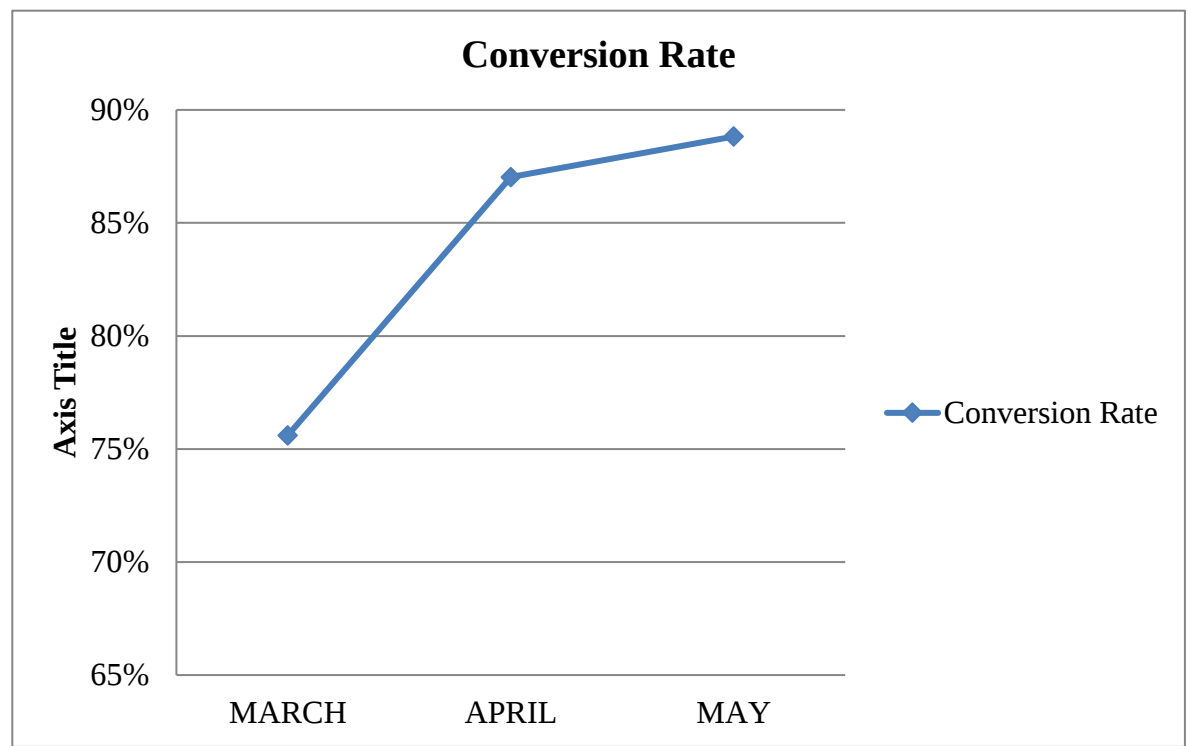


Figure 4.5 : Conversion rates

This trend line clearly states that there is a good increase in conversion rate from march to may. In march the conversion rate was 76%, then the whole team started working more vigilantly and was more alert and soo increased the conversion rate and decreased the revenue leakages of the organization.

CHAPTER – 5: DISCUSSION

All the patients that came in OPD are recorded here in the month of march to may.

The patient first comes in OPD for consultation or regular follow-up. Either doctor advises for radiology investigations or not. If doctor advises then patient has two options either to avail it or not to avail it.

If the patient avails the radiology services then it is called as conversion of OPD patients to Radiology department.

Main purpose of conversion is to reduce revenue leakage of the organization and to cater maximum number of patients.

As we can see in last three months we have come across a good number of converted patients to radiology. In march it was 76% of the total advised and in may it was 89%.

Other specialities which was not having a good conversion rate has also increased in rate from last 3 months.

Reasons for non-conversion were also found :

- Financial issues related to patients
- Long waiting time for investigations
- Resources are limited

The study serves as a baseline for any further interventions with the process by the corporate or by an educational team to undertake projects to improve process efficiency.

CHAPTER – 6: CONCLUSION

Operational Suggestions

- Conduct regular training sessions and workshops for saarthis involved in the process.



Figure 6.1 : Team of saarthis

- Implement a google sheet that caters the information of all non-conversions, so that a better monitoring can be done regarding the non-conversions.
- There should be a good bonding between saarthis, billing department and the radiology team to avoid confusions or delays.

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