Summer Internship
at

Max Hospital, Saket (New Delhi)

(April 8-June 7, 2013)

A Report

Dr. Varun Joshi

Post-graduate Programme in Hospital Management

2012-2014

IIHMR JAIPUR

Institute of Health Management Research, Jaipur

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CERTIFICATE

This is to certify that Dr.Varun Joshi, student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from Institute of Health Management Research, Jaipur, Batch 17th has undergone summer training in MAX Hospital, Saket (New Delhi) and has done following projects on :

1. Turn Around Time in Discharge Process in IPD.
2. Turn Around Time in Discharge Process in Day-Care.
3. Time and Motion Study in Medical Oncology OPD.
4. Auditing of Discharge Summary and Chemo Performa.
5. Assisted in Hospital based Data Collection of Cancer Registry Programme.

The candidate has successfully carried out the mentioned studies assigned to him during the summer training from 8th April 2013 to 7th June 2013 and his approach to the study has been sincere, scientific and analytical.

I wish him success in all his future endeavors.

Dr. Monika Chaudhary
Associate Professor
Faculty and Mentor
IIHMR, Jaipur

Dr. Ashok Kaushik
Dean, Academic and Student Affairs
IIHMR, Jaipur

MAX HEALTHCARE
Caring for you... for life

CERTIFICATE OF COMPLETION

MAX INSTITUTE OF MEDICAL EXCELLENCE

This is to certify that

Dr. Varun Joshi

has been associated as an

INTERN

with the department of

Quality

for a period of

8th April 2013 to 7th June 2013

at

Max Super Speciality Hospital,
Saket, New Delhi

"The Internship course is a Max certified course not affiliated to any National/International society".

Head of the Department
DR. ARATI VERMA
SR. VP, MEDICAL QUALITY

Dr. Shubnum Singh
Dean – Nursing, Allied Health, & Wellness Programs
Max Healthcare, New Delhi

ACKNOWLEDGEMENT

It is indeed a privilege to have got the opportunity to work in a prestigious organization such as Max hospital, Saket (New Delhi). My two month training has been nothing short of extensive learning of the co-ordinated working of a hospital. The exposure I have got on the functioning of various clinical and non clinical departments has been tremendous and has left me with an urge to learn more.

I would like to take the opportunity to thank **Dr. Arati Verma, Vice President ,Medical Quality Max Hospital** for giving me the chance to do my internship at Max Hospital,Saket. I would also like to thank **Dr. Neha Chandra, Senior Manager, medical quality**, for believing in my capabilities and pushing me to the next level.

I am thankful to **Dr. Anupma Hooda Nehra, Director Medical Oncology, Max Hospital**, for giving me permission to do the projects in the Hospital and she kindly allowed me to do project related work in Oncology Day Care centre and Oncology OPD.

I am highly obliged to **Mr. Vijay Pratap Raghuvanshi (Assistant Professor, IIHMR),** and to my mentor **Dr. Monika Chaudhary (Associate Professor, IIHMR)**in the institute for crafting my interest in this stream, providing necessary suggestions and guiding me to complete this report.

I am indebted to **Dr. Shalini Chibber, DMS Max hospital** and **Mr. Shishir Ranjan, Duty Manager Max Hospital** for their keen interest, encouraging appreciation and solemn advice throughout the projects.

I would like to thank all Day care clinician and supportive services staff,Oncology OPD staff and Medical Records Department Staff for their timely help throughout my project.

Last but not least, I offer my regards and blessings to all those who supported me in any way during my training.

Dr. Varun Joshi

IIHMR,Jaipur

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ABBREVIATIONS

ALOS - Average length of stay

HAI - Hospital Acquired Infections

PCC - Patient Care Co-ordinator

CPRS - Computerized Patient Registration System

HIS - Hospital Informatics Services

TPA - Third Party Administrator

GDA - General Duty Assistant

IPD - In Patient Department

OPD - Out patient department

MoU - Memorandum of Understanding

NCRP - National Cancer Registry Programme

INTRODUCTION TO MAX HOSPITAL, SAKET

MAX AT A GALANCE

Caring for you... for life

Max Super Specialty Hospital is a 490 bedded Hospital and is a part of Max India Limited which is a public limited company founded in 1985 by its current chairman, **Analjit Singh** Its major shareholders include Singh and the private equity firm Warburg Pincus. Max Super Specialty Hospital under the name Max Healthcare commenced operations in 2001 with the intention to provide comprehensive and world-class healthcare services in India. Max Super Specialty Hospital is the country's first comprehensive provider of standardized, seamless and world-class healthcare services. It is committed to the highest standards of medical and service excellence, patient care, scientific and medical education. Max super specialty operates eight centers in Delhi & NCR, offering services in over 30 medical disciplines. Max Super Specialty Hospital has state of the art tertiary care facilities at saket in South Delhi, secondary care hospitals at Pitampura, Patparganj, Gurgaon and Noida and an out patient facility, the Max Med centre and a Specialty centre focused on Eye and Dental care at Panchsheel Park. Max Super Specialty Hospital is located in serene environment of South Delhi, 15 km away from New Delhi railway station and 12 km from domestic airport. It is also easily reachable from satellite town of NCT, Delhi.


Passion
Build Trust
Vision
Deliver international class healthcare with a total service focus, by creating an institution committed to the highest standards of medical & service excellence, patient care, scientific knowledge, research and medical
Mission
Create unparalleled standards of medical & service excellence
• Create exceptional standards of Medical & Service Excellence
• Care provider of FIRST CHOICE
• Principal Choice for Physicians
• Ethical Practices
MAX
HEALTHCARE
Caring for you... for life


NABH


NABL


ISO 9001


ISO 14001


FICCI Healthcare Excellence Awards

I. Max Healthcare is **ISO 9001:2000 & ISO 14001:2004** certified organization.

II. Medical Quality Performance Standards Surpassed International Benchmarks in **Nosocomial infection**.

III. India's first fellowship in Emergency Medicine Established in conjunction with **George Washington University**.

IV. American Heart Association recognizes MHC as a training centre.

V. "**Best Managed Healthcare Program**" awarded at the National level at Express Healthcare Excellence Award.

VI. Max Institute of Minimal Access recognized as Centre of Excellence in APAC.

VII. FICC Award for operational Excellence in Healthcare delivery.
FICC Healthcare awards.

VIII. NABH accreditation for Transfusion Medicine Department.

IX. NABH accredited hospital.

X. DL Shah national Awards on "Economics of Quality".

Various Specialities offered by Max Hospital , Saket are

I. **Aesthetic & Reconstructive Surgery**

II. **Audiology & Speech Therapy**

III. **Cardiac Sciences**

IV. **Dental Care**

V. **Dermatology**

VI. **Ear Nose Throat**

VII. **Endocrinology & Diabetes**

VIII. **Eye Care**

IX. **Gastroenterology**

X. **General Surgery**

XI. **Internal Medicine**

XII. **IVF**

XIII. **Mental Health and Behavioural Sciences**

XIV. **Minimal Access, Metabolic and Bariatric Surgery**

XV. **Nephrology**

XVI. **Neurosciences**

XVII. **Nutrition & Dietetics**

XVIII. **Obstetrics and Gynaecology**

XIX. **Oncology / Cancer Care**

XX. **Orthopaedics & Joint Replacement**

XXI. **Paediatrics**

XXII. **Physiotherapy & Rehabilitation**

XXIII. **Podiatry**

XXIV. **Pulmonology**

XXV. **Urology**

OBSERVATIONAL LEARNING IN VARIOUS DEPARTMENTS:

- **OPD**

Every specialty has a decentralized OPD. New patients need to get themselves registered by paying a sum of Rs.100. The registration is done only once and is then valid for lifetime. Registration is done for patient identification by issuing a unique Id and easy retrieval of patient records.

- **IPD**

IPD rooms are available on 2nd, 3rd, 4th and 5th floor of east wing and 2nd, 3rd, 4th, 5th and 6th floor of west wing. There are 5 types of in-patient rooms available depending on patient's choice of stay. The types of rooms are:

- Economy: One room has 4 beds and 2 washrooms
- Twin sharing: 2 patients share one room and there is one washroom
- Single
- Suite
- Deluxe

4th floor of east wing has 2 reverse barrier nursing rooms with positive pressure for immune-compromised patients. Also every nursing station has its own crash cart for emergency purposes.

To prevent medication errors Bar coded medication administration (BCMA) software is used. The software ensures 5 rights of administration which are Right patient, right drug, right dose, right time and right documentation.

Also to ensure easy identification of vulnerable patient the patient file is of green colour with a violet sticker on it. Also the door of the patient's room had a red colour sticker.

- **EMERGENCY**

25 bedded Emergency comprises of Observational area and Resuscitation area and 1 Resuscitation room. Since Cardiology is a major specialty hence the Emergency is directly connected to ACC (Apex Coronary Care) ICU.

STAFF**:** 2 Senior Doctors, 4 PG Doctors, 6-8 Nurses and 5-6 GDA's

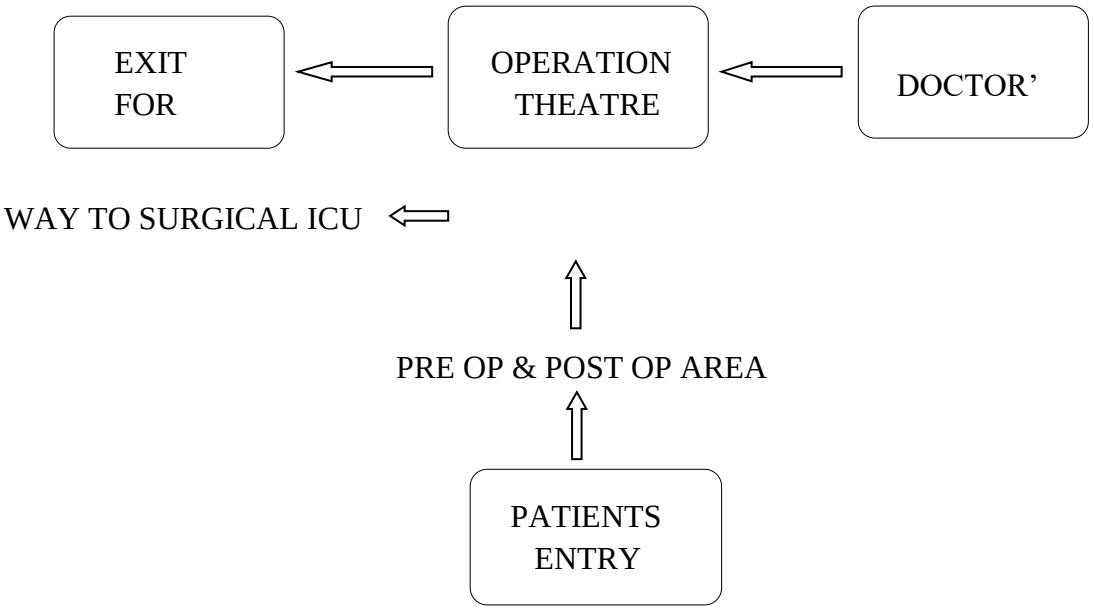
AMBULATORY SERVICES: All the Hubs of PAN MAX are planning to have a centralized ambulatory service centre which promises to provide an ambulance within 30min of call for request in the NCR region. There are 2 types of ambulances ACLS and BLS. Max Saket has 2 ACLS Ambulances and 5 BLS Ambulances.

The health condition of the patient is enquired over the phone and depending upon the severity the required ambulance is sent. In case the requirement is within the NCR region, the ambulance leaves within 5min of receiving call but in case of an outstation requirement, the ambulance leaves within an hour.

- **OPERATION THEATRE**

There are 20 Operation Theatres in Max, Saket. West Block comprises of 1OT complex which has 7OTs on 1st Floor and 1 Labour OT on 3rd Floor. East Block has 12 OTs. West Block OT caters to the specialities like Neurology, Orthopaedics, Paediatrics, Urology, Laproscopy, Gyanaecology, Eye and ENT. East Block OTs caters to the specialities like Cardiology, Minimal Access Metabolic Bariatric Surgery, Plastic Surgery and Oncology. For neurology there is a special OT Brain Suite with Installed MRI Machine.

OT LAYOUT**:**



Process flow for Planned Surgery:

DOCTOR RECOMMENDS SURGERY

⇩

INFORM CO-ORDINATOR

⇩

NEXT DAY SCHEDULE PREPARATION

On the day of surgery : CO-ORDINATOR

⇩

IP WARD FOR PATIENT PREPARATION

(Like surgical site marking, prophylactic antibiotics)

⇩

20 minutes before surgery

PATIENT FETCH SERVICES TEAM

⇩

PATIENT BROUGHT TO OT COMPLEX (on OT trolley)

⇩

DOCUMENT VERIFICATION

(Patient Identification, nursing assessment, CPRS notes)

⇩

PRE OP AREA

⇩

ANAESTHESIA INDUCTION

⇩

SURGICAL SAFETY CHECKLIST VERIFICATION

⇩

SIGN-IN in OT

⇩

SURGERY

⇩

TIME OUT BEFORE ANAESTHESIA

⇩

SIGN-OUT of OT

⇩

POST OP AREA (45min)

⇩

SHIFT OUT FROM OT COMPLEX

Disinfection of OT:

- In between 2 cases (20 minutes)
- End of Day
- Weekly
- 6 Months
- Annually

Culture Swabs are collected weekly to keep a check on OT sterilisation.

There is also a BONE BANK and a Mini Pantry within the OT Complex.

Instrument sterilization**:** After surgery, preliminary washing of instruments is done by nurses and the instruments are sent to CSSD. Sterile instruments are supplied from CSSD to Sterilization room in OT complex. There is also 1 TSSU (Theatre sterile supply unit) which has 2 autoclaves and in case of emergency sterilization is done in there.

Material management**:** The OT Complex has an individual material store for OT consumables.

Training – conducted weekly for nursing staff, GDAs.

- **INTENSIVE CARE UNIT**

There are 99 beds for ICU in East and South wing and 77 beds in West wing. Every ICU is specialized like CTVS Adult-17 beds, ACC-16 beds, CTVS pediatric- 9beds, Medical ICU, Surgical ICU, Oncology Medical ICU and Surgical ICU, Respiratory ICU, Pediatric ICU, Neonatal ICU.

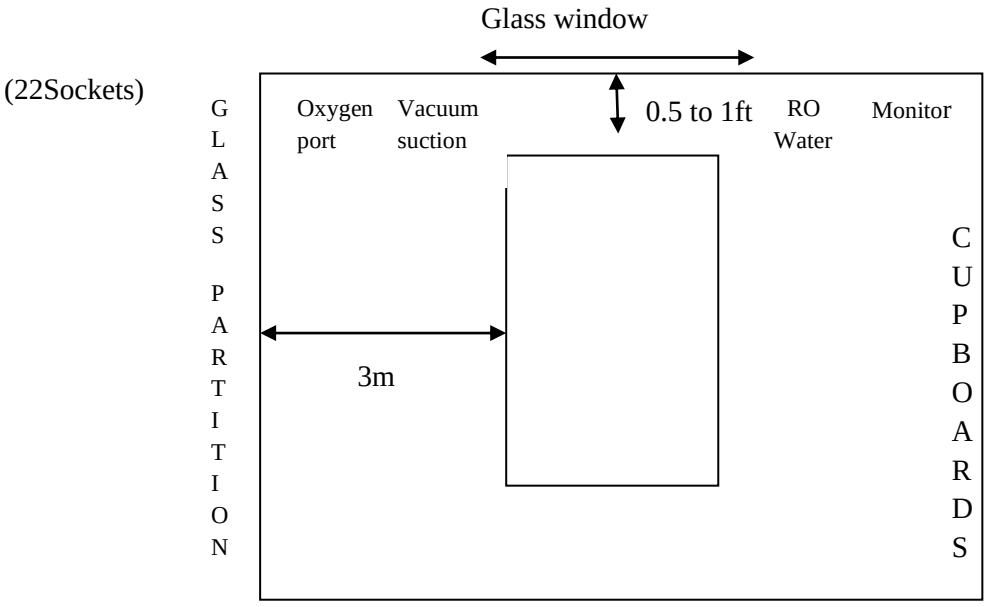
Every ICU has an Isolation Room apart from onco medical ICU. The beds types include alpha beds, nimbus beds, excel beds and normal beds. Every cubicle has a monitor, oxygen pipelines, vacuum line, a Computer on Wheels (COW) and 22 electric sockets. Ventilators are available on demand. The ICUs have syringe pumps.

Areas: Nursing Station, dirty utility room , medication storage room, washroom, clean utility room and pantry.

Nurse: Bed Ratio is maintained as 1:2 normally and 1:1 for critically ill and ventilator supported patients. 2 duty doctors are available in each shift. Visits by consultants and physiotherapists are made as per requirement.

The material is managed by 2 rounds per day by the ICU GDA to and from CSSD.

Layout of ICU Cubicle :



- **PHARMACY**

The pharmacy is self-owned with Central Pharmacy situated at corporate office, Okhla. There are 2 In-patient pharmacy stores and 2 Out-patient stores in the hospital. The number of narcotic drugs to be issued to the hospital is sanctioned by the Government of Delhi according to the bed occupancy, number of surgeries occurring and other factors.

Inventory is maintained according to categories of ABC Analysis as:

- A Items: 7 days
- B Items: 10 days
- C Items: 15 days

IP Pharmacy maintained inventory of 9 days and OP pharmacy maintained that of 17-20 days. Turnover for IP pharmacy is 6-7 crores per month and OP pharmacy is 2 crore per month.

Medication Dispensing: Orders for medicine dispensing are fed in CPRS. The Stat orders required immediately were dispensed within 30 minutes. The normal order is dispensed within 1 hour and routine order is delivered by 1 round per day. Narcotics are dispensed on

indent raised by nursing staff through indent form along with return of broken ampoules of used drugs.

Medication Recall: If a drug is found to be defective, it is reported to the Okhla office where the records for that particular series of drugs dispensed is checked and verified for medication recall.

Room temperature is maintained at 15-30^{0}C and refrigerator temperature is 20^{0}C for medication storage.

- **CENTRAL STERILE SUPPLY DEPARTMENT**

The department is centralized for the hospital and situated in an area of 1500 sq. feet in basement 1 of east wing. The aim is to achieve microbial count in range of 10^6 to 10^{-6} to ensure sterilization.

Process flow: Dirty trays are dismantled ⟶ mechanical cleaning done ⟶ ultrasonic washing in washers for 1 hour ⟶ rinsing ⟶ thermal disinfection (hot water wash) ⟶ packaging done with different materials (medical grade paper, linen, SMS paper) in the clean area ⟶ materials are differentiated ⟶ transferred to sterile area (with positive pressure) ⟶ sent to issue area.

CSSD has a plasma sterilizer. There was no software or IT involvement for counting of instruments. Bowie Dick Test batch monitoring is followed.

- **LABORARTORY**

There were different equipments for various tests, with a back up for almost every equipment. Most of the equipment is rented from the companies. The reagents used for testing are marked-up

- Biochemical immunological tests – Equipments with a capacity of 1700 tests per hour. 6-7 parameters tested in 45 seconds. There are 4 stat positions in the equipment for emergency cases.
- Hematology
- Coagulation
- Serology
- Flowcytometry
- Thalassemia testing
- Microbiology labs - BSL-II & III

Manpower: Number of staff = 76

Each sample received in the laboratory is checked to have a bar code, generated in sample collection rooms and a copy of bar code slip is labeled on every sample collection tube of the patient.

Quality check is carried out after every 100 samples. Regular quality checks also carried out after 1 month. An internal audit every 6 months and external audit once in a year is also carried out.

- **RADIOLOGY**

The radiology department is divided into 2 sections:

One section has a reception counter, 4 ultrasound rooms, 1 mammography room, 1 bone densitometry room, reporting room and conference room.

The reporting room has computer systems for the doctors to study images and reports are hand-written by the radiologists in the reporting room. These reports are then sent to the typists and final printed reports are delivered to the patients from the dispatch window. The reports for an x-ray done in morning till 12pm are dispatched in evening and those done in afternoon are delivered next day morning.

Second section has reception counter, X-ray room, MRI room along with a change room and waiting area, interventional radiological suite, fluoroscopy room and CT Scan room.There are 2 MRI machines – 1.5 Tesla and 3 Tesla and 2 fixed and 2 portable X-ray machines.

- **BLOOD BANK**

Location – 5th Floor in the East Wing

Services offered (24*7) to – Emergency, OT, ICU, IPD, Day Care.

Manpower– 20 in number

On an average 40-50 units of blood is collected per day.

Records:

- Blood donor records are maintained both manually and on computer (software used is Acquana)
- Issue Records are also maintained.
- Transfusion Adverse Reaction records are also maintained.
- There is **Serology Lab** – Here blood grouping is done.
- Storage of blood is done here in three refrigerators – 1 has storage capacity of 150 bags and 2 has storage capacity of 280 bags. Temperature is maintained from 2 to 8 degree Celsius.
- There is **T.T.I room** (Transfusion transmitted infection room) – Here blood is tested for
- HIV , Hepatitis C , HbsAg , Hbc in addition to malaria and VDRL.
- Blood and Blood components not suitable for use are autoclaved and then discarded
- In case need arises in any department after cross matching blood is sent within 40 minutes.
- If it is case of emergency like RTA then without cross matching O-ve blood is sent within 3-5 minutes.

Quality Indicators:

All instruments are standardised and calibrated before initial use every day.

- **HOUSE KEEPING**

The manpower in housekeeping is outsourced with a number of 230, of which 6 are in-house employees. Service level agreement is followed i.e. the out sourcing company charges the hospital for per square feet of area. The department has a nerve centre, which is a centralized system for complaints concerning housekeeping. Any patient complaint is closed within 15 minutes. If it is not possible to solve the complaint within this time, the patient is communicated about the delay.

➢ SECURITY

The department is outsourced with permanent and contract-based employees:

7-8 persons per shift are permanent employees and 56 persons per shift are contract based. Total number of permanent employees is 28.

Material control is applied at the main gate for both the blocks to restrict entry of unwanted items. 2 types of gate passes can be issued to a visitor – Returnable Gate Pass (RGP) and Non- Returnable Gate Pass(NRGP).

Security codes are designated by color and announcement of a particular is made by the call center on happening of the particular incident:

Code Red – Fire. To control a fire accident, Emergency Response Team (ERT) formed by a duty manager, security person, nursing staff and a floor coordinator, is responsible.

Code Blue – Cardiac arrest. Rapid Response Team is activated in case of code blue.

Code Yellow – External disaster

Code Pink – Patient or attendant missing

Code Black – Bomb threat

Code Violet – Violence with patient or attendant

A mock drill for each code is conducted by the department twice in a year.

Staff training sessions are held every day at the end of each shift, concerning a new topic daily.

A total of 125 cameras are fixed in the 3 blocks. Footage of one week is available in record for every camera. The cameras put outside the main premises are night vision cameras.

Security is actively involved in medico-legal cases, regarding the communication with police.

➢ MATERIAL STORE

There are total 5 stores in both the wings.

More than 1600 items are managed based on ABC analysis. Inventory of 14 days is maintained.

Process flow: Department raises indent through HIS ⟶ print out taken ⟶ material is picked from the store on First- In First- out (FIFO) basis ⟶ person from the department receives the indent ⟶ a receipt is signed by the team leader at the nursing station or department ⟶ the signed receipt is deposited back with the store.

In case of requirement of a new item, a request form is filled by team leader or clinician and signed by head of the department (HOD). It is then sent to the administration for approval and forwarded to finance department for quotations and then to the purchase department for final procurement.

Monthly audit is done for 80% value saving.

- **INFORMATION TECHNOLOGY**

IT department supports operations by assisting employee and patient management through the following soft wares:

- HRIS – Human Resource information System generates an employee code for every employee of the hospital.
- HIS – Hospital Information System is used for material management, billing, pharmacy management and other purposes.
- CPRS – Computerized Patient Record System is the software for electronic health records of the patients used for maintaining records of all the activities of the patient from the time of arrival to hospital till the discharge of patient. It is integrated with HIS.
- PACS – Picture Archived Communication System is used for storage n transfer of images.
- Software integrated with hospital website for online appointment
- Software for storage of images in Cath Lab.
- SPARSH – is the software for service quality which ha thresholds for cost estimates, that are compared with the actual bills generated.
- Feedback management system is in the pipeline.

Manpower: 25 on-roll employees and 20-25 outsourced employees.

All the servers are interconnected for all hubs of the hospital.

- **MEDICAL RECORDS DEPARTMENT**

Location – Service Floor (MRD for IP records)

Basement 1 (For Oncology OPD records)

Manpower – 13

Types of medical records – For OPD, IPD

Arrangement of medical record by UHID

Process Flow for Receiving Files: –

File receiving time is within 72 hours from patient discharge

⇩

GDA brings file to MRD

⇩

In MRD file is reviewed to ensure various documents along with signatures (consultants or patients) are in place.

⇩

For reviewing files an INPATIENT CHECKLIST is maintained and followed.

In case of any discrepancy ward secretary is informed via e-mail and he is required to get file complete

Retention of Files –

- Files are kept for a week in MRD then they are handed over to an outsourced Vendor OMAX
- MLC and DEATH case files to be retained permanently
- General cases destroyed in 3 years

Retrieval –

In case a file is to be retrieved Rs.200 per file is to be paid.

➢ ENGINEERING DEPARTMENT

The engineering department is a support department that coordinates with patient care indirectly, through the nursing, housekeeping and food and beverages departments.

It contributes to the following functionalities of hospital:

- Electrical maintenance
- Mechanical maintenance
- Infrastructure
- Plumbing
- Medical quality

Water Storage

Total storage capacity is 1100 Kilo Litres. Water consumption per day is 400-500 Kilo Litres.

There are 4 types of water storage facilities:

i. Raw Water: used for fire and safety
ii. Soft Water: used for patients and staff for external use
iii. Reverse Osmosis Water: used for drinking and hand wash in critical areas as CSSD, dialysis, blood bank and dental wing
iv. Recycled (or STP) Water: used for air-conditioning and washrooms only in the South wing.

- STP Plant: is located in back side of the west wing of hospital. It treats the waste water and recycled water is supplied for use. The plant capacity is 1-2 Lakh Kilo LiItres. Activated Carbon filters and water softeners are used
- Effluent Treatment Plant: is used for disposal of effluent waste generated in departments like OT and dialysis.
- RO Plant: has a capacity of 2000 Litres.
- Boilers for hot water supply are installed.
- Centralized Cooling Plant: 3 plants of capacity 300 TR. Gas is used to condense water and the chilled water is circulated in the building through Air Handling Units (AHUs), which are 56 in the west wing.
- Fire treatment plant: comprises of sprinkler pump, hydrant pump, jockey pump and fire engine.

Electrical Maintenance

The supply of electricity is from following sources:

- Sub-station of State electricity board
- Power system (Diesel generated system)
- UPS – for critical services

Low Tension (LT) Room: is located in basement 1 in west wing. It maintains all the UPS systems.

A complaint tracker system is functional, in which a complaint is registered at the help desk and corrected within 30 minutes. For a breakdown at larger scale, the maximum time to correct the problem is 6-24 hours.

PROJECT - 1

TURN AROUND TIME IN DISCHARGE PROCESS IN IPD

INTRODUCTION

Discharge Process – The discharge process is deemed to have started when the consultant formally approves the discharge and ends with the patient leaving the clinical unit.

It is imperative to have a timely discharge. A delayed discharge has an impact on the physical, mental, emotional, and psychological status of the patient and also has negative financial implications on the hospital. A patient staying longer than the stipulated time is responsible for unnecessary utilization of the hospital resources

"A good discharge experience leaves the patient with positive emotions and strong affinity for returning to the facility" – Paul Clark.

Delayed discharge (sometimes referred to as **delayed transfer** or **bed blocking**), refers to the situation where a patient is deemed to be medically well enough for discharge, but, where the patient is unable to leave hospital due to slowing down of the entire process.

The development and improvement in the discharge process requires a detailed insight into the discharge process being followed and the understanding of the reasons for delay in the hospital.

RATIONALE

It is in the interest of the hospital to hasten the discharge process as –

- It will reduce the chances of HAI for the patient.
- Better experience as the patient leaves.
- Reduce anxiety and restlessness of patient and the family.
- The bed is made ready for the next patient who is in more need.
- Better and apt utilization of resources per bed.

OBJECTIVES

1. To study the discharge process
2. Identify areas in the discharge process resulting in delay.
3. Compare the total discharge time with the benchmark time.

METHODOLOGY

The study conducted focused on the following activities:

- Discharge process currently followed in the hospital
- Flow chart depicting the discharge process
- Time taken at each step
- Analysis of the process and time taken at various steps involved in the discharge process

i. Discharge Confirmation
ii. Discharge Summary
iii. Discharge Intimation
iv. Final Billing
v. Patient Walk out

The approach for the project involved 3 steps

- Project design
- Data collection
- Data Analysis

PROJECT DESIGN

To identify the areas responsible for delay in the discharge process, it was first important to understand the discharge process being followed in the hospital. Hence a process map was developed and a track of the activities and the time at which the activity was done was noted.

Study design : Cross – sectional study

Study area : In Patient Department (4th Floor, South Block) in MAX Hospital, Saket.

Sampling : Non–probability purposive sampling

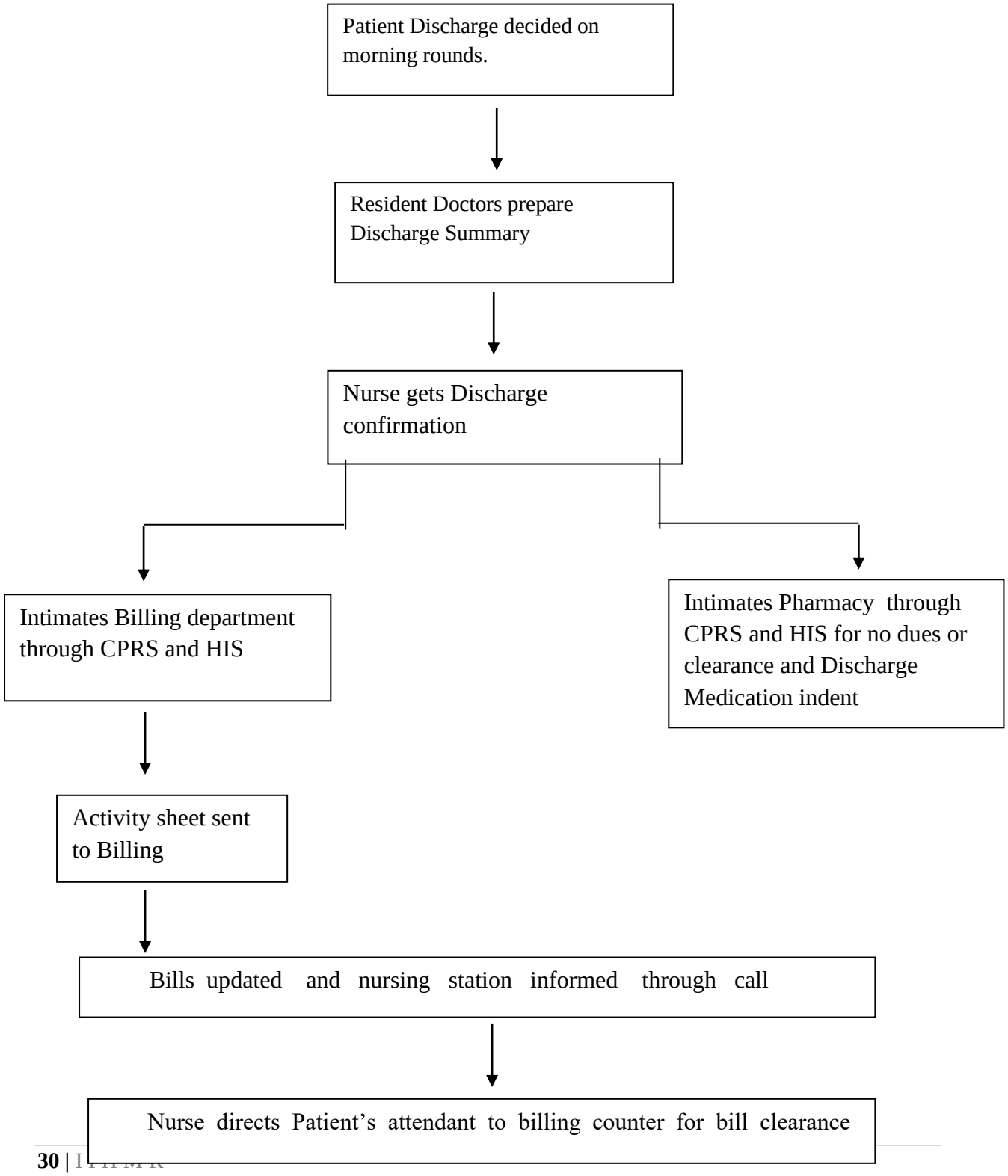
Sample size : 108 patients due for discharge.

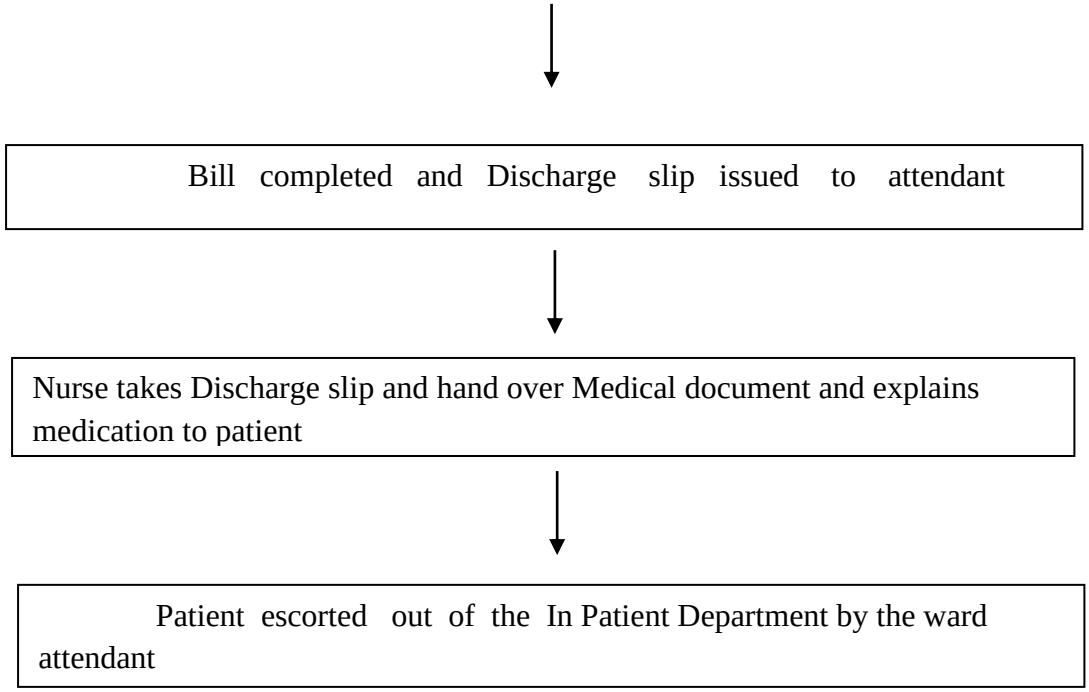
Duration of study: 3 Weeks (13.05.13 to 1.06.13)

Inclusion criteria: All patients admitted in IPD based upon on the criteria defined in the admission policy of MAX Hospital.

Exclusion criteria: Day-Care admissions.

DISCHARGE PROCESS IN IPD:-




Bill completed and Discharge slip issued to attendant
Nurse takes Discharge slip and hand over Medical document and explains medication to patient
Patient escorted out of the In Patient Department by the ward attendant

DATA COLLECTION METHOD

A time motion study was conducted to observe and analyze the movements made by the staff who were involved in the discharge process. 5 times were identified and followed (as explained below).

Discharge Confirmation time is the expected time of discharge which the doctor enters when they feel the patient is ready for discharge now. After the doctor's advice the patients discharge process begins.

1. Discharge Confirmation
2. Discharge Summary
3. Discharge Intimation
4. Final Billing
5. Patient Walk out

Source of data :

Primary source of data

- Direct observations
- Interaction with the nursing and billing staff.
- Participation in a few discharge processes for getting accurate data.

Secondary source of data

- Time extracted from HIS and CPRS

DATA ANALYSIS

TIME TAKEN FOR DISCHARGE PROCESS IN ALL CASES

Below is graphical representation of the study sample showing the time taken for completion of discharge process- i.e. starting from the time the doctor Confirms discharge, till the final Walk out of the Patient, represented as T1 and T5 respectively.

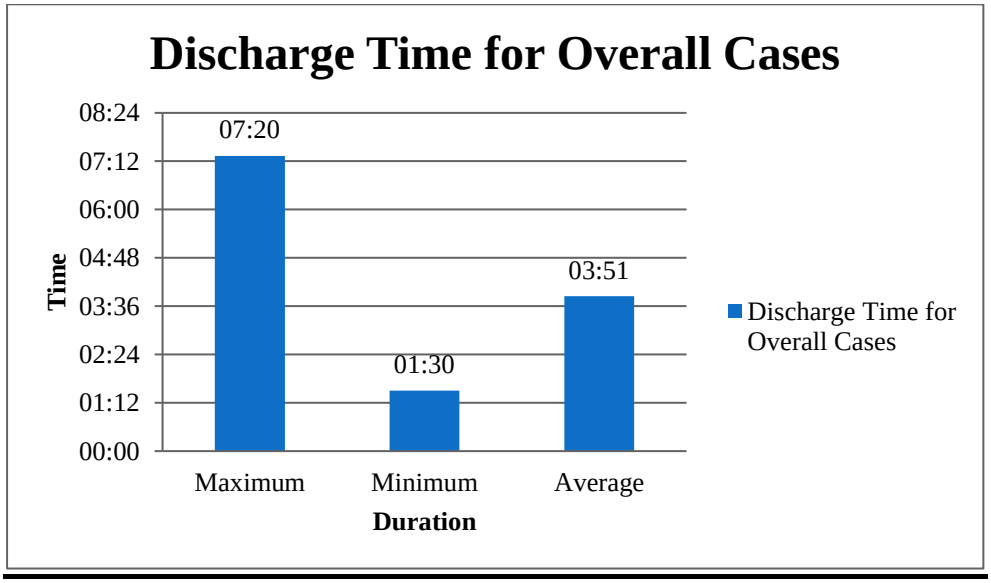


Figure 1

In the 108 cases of discharge processes included in the study, it was noted, that the **maximum time** taken for discharge process was **7 hours 20 minutes**. This value is much higher than the desired value. It was observed that in some cases, delay in discharge was because the patient was advised tests like ECHO, or X-Rays after the discharge summary had been made. Hence changes were required to be made in the billing and in the discharge summary after the necessary test or procedure was completed.

On an **average**, time taken for discharge process was **3 hours, 51 minutes** which is relatively more than our desired discharge time of 3 hours for TPA patients and 1 hour for cash patients.

TIME TAKEN BETWEEN DISCHARGE CONFIRMATION TO PREPARATION OF DISCHARGE SUMMARY

Graphical representation of the time difference between Discharge Confirmation by the doctor (T1) and the time at which the Discharge Summary is ready (T2).

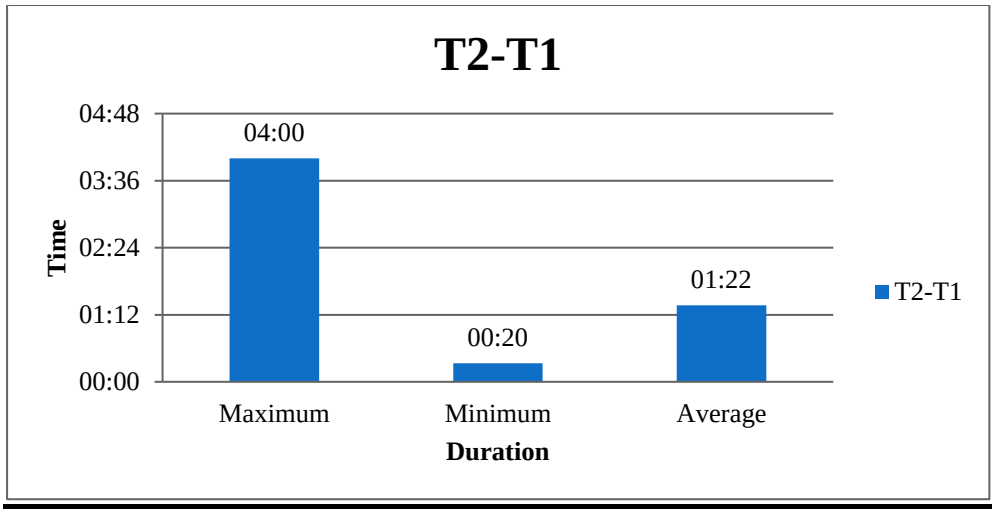


Figure 2

Maximum time taken to prepare Discharge Summary after Discharge Confirmation was **3 Hours and 51 Minutes**

Minimum time taken to prepare Discharge Summary after Discharge Confirmation was **20 Minutes**

Average time taken to prepare Discharge Summary after Discharge Confirmation was **1 Hour 22 Minutes.**

TIME TAKEN FOR FINAL BILLING FROM THE TIME OF INTIMATION TO BILLING

The following graph represents the time taken for final billing (T4) from the time of Billing Intimation (T3)

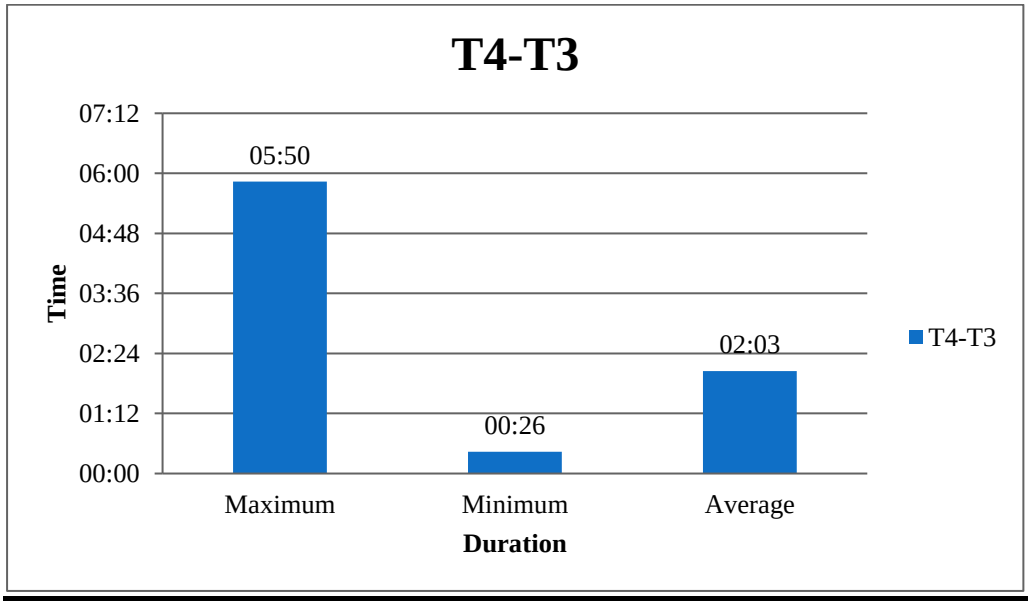


Figure 3

Maximum time taken for final billing from time of intimation is **5 Hours and 50 Minutes**

Minimum time taken for final billing from time of intimation is **20 Minutes**

Average time taken for final billing from time of intimation is **1 Hour and 22 Minutes**

TIME TAKEN FOR PATIENT WALK OUT FROM FINAL BILLING

The following graph represents the time taken for Patient walk out (T5) from the time of Final Billing (T4)

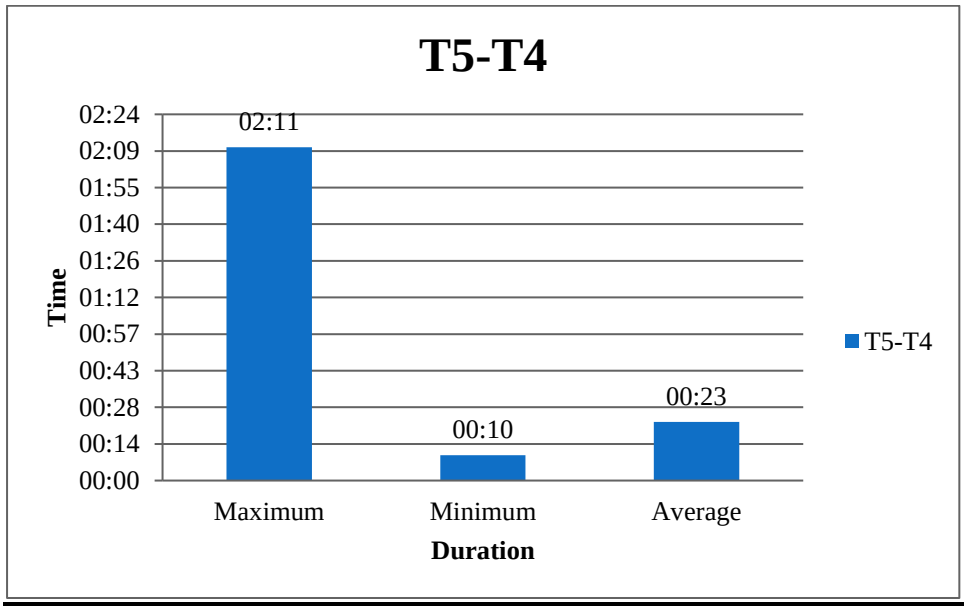


Figure 4

Maximum time taken for Patient walk out from Final Billing was **2 Hours and 11 Minutes**

Minimum time taken for Patient walk out from Final Billing was **8 Minutes**

Average time taken for Patient walk out from Final Billing was **23 Minutes**

TIME TAKEN FOR DISCHARGE – FOR TPA PATIENTS

The following graph represents the time taken for Patient walk out (T5) from the time of Discharge Confirmation (T1), for TPA patients

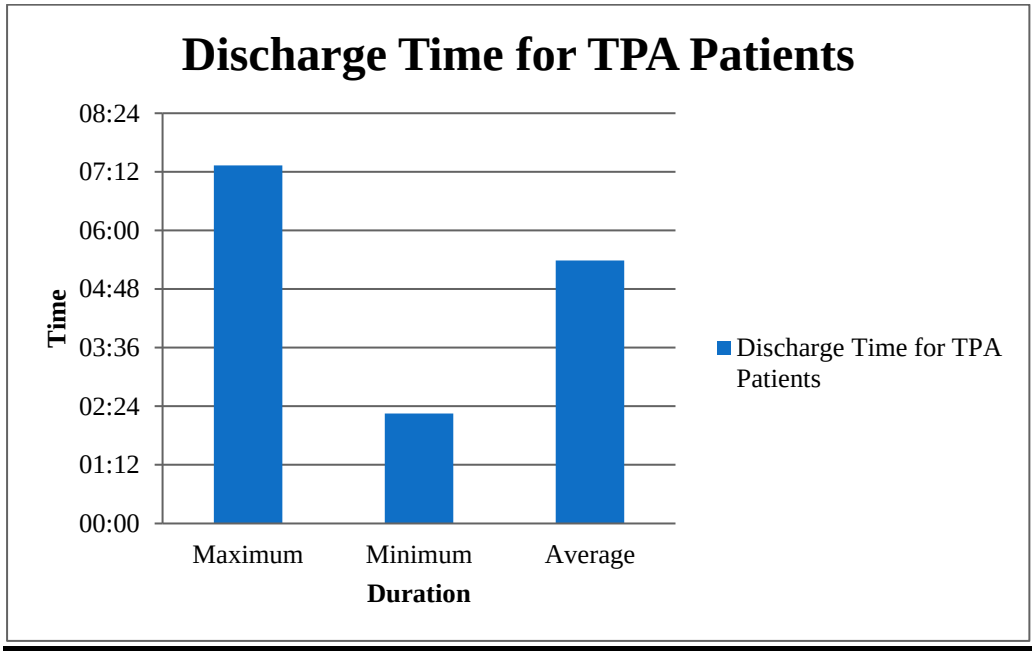


Figure 5

Maximum time observed was **7 hours 20 minutes**, and **minimum time** observed was **2 hours and 15 minutes**.

An **average time** of **5 hours, 23 minutes** was noted for the completion of discharge process for patients who paid through insurance.

TIME PATTEN FOR TPA DISCHARGE

TIME INTERVAL	NUMBER OF DISCHARGES	%
2-3 Hours	2	8
3-4 Hours	2	8
4-5 Hours	7	28
5-6 Hours	2	8
6-7 Hours	7	28
7-8 Hours	5	20
	25	

Table 1

As seen in Table 1, maximum discharges are falling between 4-5 hours and 6-7 hours.

TIME TAKEN FOR DISCHARGE – FOR CASH/CORPORATE PATIENTS

The following graph represents the time taken for Patient walk out (T5) from the time of Discharge Confirmation (T1), for CASH/CORPORATE patients

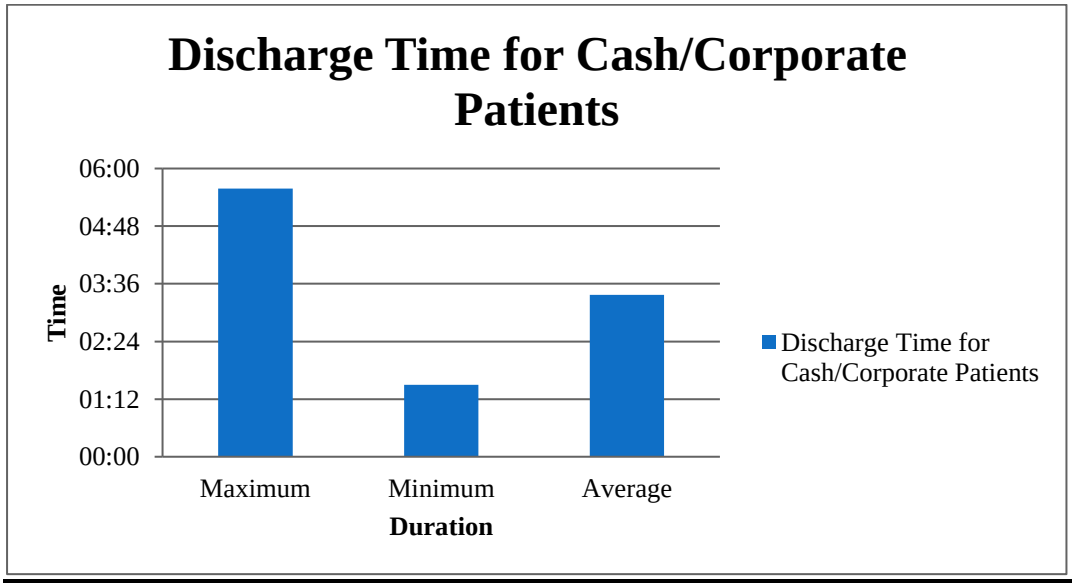


Figure 6

Maximum time observed was **5 hours 35 minutes**, and **minimum time** observed was **1 hour and 30 minutes**.

Average time for discharge observed for patients paying by cash was **3 hours and 22 minutes**.

TIME TAKEN FOR DISCHARGE PROCESS – CASH/CORPORATE PATIENTS

TIME INTERVAL	NUMBER OF DISCHARGES	%
1-2 Hours	15	18.07
2-3 Hours	20	24.09
3-4 Hours	23	27.71
4-5 Hours	16	19.27
5-6 Hours	9	10.84
	83	

Table 2

As seen in Table 2, maximum discharges are falling between 3-4 hours for overall cases.

TIME TAKEN FOR DISCHARGE PROCESS – OVERALL CASES

TIME INTERVAL	NUMBER OF DISCHARGES	%
1-2 Hours	15	13.88
2-3 Hours	22	20.37
3-4 Hours	25	23.14
4-5 Hours	23	21.29
5-6 Hours	11	10.18
6-7 Hours	7	6.48
7-8 Hours	5	4.62
	108	

Table 3

As seen in Table 3, maximum discharges are falling between 3-4 hours for overall cases.

OBSERVATIONS

OBSERVED CAUSES OF DELAY

1. **Delay in preparation of discharge summary**.
2. **Delay in the pharmacy clearance**. The workload in the pharmacy is high. A lack of manpower is a contributing factor noticed in the delayed discharge.
3. **Delay in the billing process**. The delay was noticed primarily due to delayed TPA approval.

   In some of the observed cases, TPA rejected the approval. In such cases, changes were to be made in the discharge summary and the entire process for approval had to be repeated.
4. Billing issues from the patients end. If patient is not satisfied by the summation / distribution of the billed amount.
5. **Disturbance at the billing counter**. – Often, patients attendants come to the billing desk asking for routine information eg.– 'how much time will the billing take? as the person at the billing counter is continuously distracted and is unable to focus on the billing task.
6. **Delay due to changes in discharge summary** due to changes in the treatment plan or requirement of additional investigations eg. ECHO, X-rays or emergency situations.

CONCLUSION

From this study it can be concluded that discharge delays creates an upstream tidal wave of patient flow constraints which negatively impacts the patient satisfaction, safety, hospital capacity, and financial performance.

It has been noted that there is a significant difference in the discharge time as compared to the benchmark time of 3 hours for TPA and 1 hour for cash patients.

	OVERALL CASES	**CASH**	**CORPORATE**	**TPA**
	Average Time	Average Time	Average Time	Average Time
T2-T1	1:22	1:23	1:32	1:09
T4-T3	2:03	1:20	1:53	3:41
T5-T4	0:23	0:19	0:26	0:28
T5-T1	3:51	3:11	3:44	5:23

Table 4

Constant facilitation and monitoring of interrelationships and of the people involved in the discharge process will maintain the process according to the norm/benchmark and continue to delight the patients and benefit the hospital in terms of hospital capacity and financial performance.

SUGGESTIONS FOR OVERCOMING THE DELAYS

1. **Effective discharge begins during admission**. At the time of admission of the patient, the physician, based on the patient's condition and severity of his disease, charts out a treatment plan and following that if a discharge plan is identified up front for each patient it shortens the discharge time. This may include the type of room required by the patient, diagnostics tests required by him, etc. The effective orchestration of these resources will have a direct positive impact and lead to a more efficient length of stay of the patient and thus there will be an overall increase in the patient satisfaction and hospital capacity management.

2. If doctors can enter '**anticipate discharge'** orders at least 24 hours ahead of discharge. This way the discharge process would be initiated earlier and thus finish earlier. Giving discharge orders before 9 am on the day of discharge would also be beneficial

3. If questions such as – **'Who is ready to go home today?'**
'Who is likely to go home tomorrow?' (At the end of the rounds)
can be included in the common patient list of the floor, the doctor concerned can make a note of it. Having questions such as these can hasten the process.

4. Medicines can be collated by nurses on the floor the previous night and sent to the pharmacy store once confirmed.

5. **Enclosed billing counter** – It was observed that a constant disturbance exists at the billing counter, since a number of patients usually come to the billing counter for giving constant reminders for their bill updates, or enquiries for personal nurses etc.

6. **Shifting of Patient's to Waiting lounge** – Once discharge is confirmed and the process has started, the patient along with the attendant can be shifted to Waiting

lounge, till the time the formalities regarding the same are under progress. With this concept, the bed can be prepared to cater to the next patient who requires it more. The hospital resources can then be utilized for treating the new patient.

This lounge includes basic amenities like,

Waiting area with comfortable recliner chairs for patient and attendant.

A pantry with provision of beverages, snacks, health foods.

Magazines, and Television facility.

This will be of great relevance especially for patients who come from far off areas. The cost of availing this facility will be lesser than the room tariff and the hospital resources of the relieved bed will be channelized for a new patient who requires it more.

7. Should have an **MoU** between the **hospital** and **TPA** companies thus hastening the entire TPA approval and thereby the discharge process.

PROJECT – 2

TURN AROUND TIME IN DISCHARGE PROCESS IN DAY-CARE

INTRODUCTION

Discharge – The discharge process is deemed to have started when the consultant formally approves the discharge and ends with the patient leaving the clinical unit.

It is imperative to have a timely discharge. A delayed discharge has an impact on the physical, mental, emotional, and psychological status of the patient and also has negative financial implications on the hospital. A patient staying longer than the stipulated time is responsible for unnecessary utilization of the hospital resources

"A good discharge experience leaves the patient with positive emotions and strong affinity for returning to the facility" – Paul Clark.

Delayed discharge (sometimes referred to as **delayed transfer** or **bed blocking**), refers to the situation where a patient is deemed to be medically well enough for discharge, but, where the patient is unable to leave hospital due to slowing down of the entire process.

The development and improvement in the discharge process requires a detailed insight into the discharge process being followed and the understanding of the reasons for delay in the hospital.

RATIONALE

It is in the interest of the hospital to hasten the discharge process as –

- It will reduce the chances of HAI for the patient.
- Better experience as the patient leaves.
- Reduce anxiety and restlessness of patient and the family.
- The bed is made ready for the next patient who is in more need.
- Better and apt utilization of resources per bed.

OBJECTIVES

1. To study the discharge process
2. Identify areas in the discharge process resulting in delay.
3. Compare the total discharge time with the benchmark time.

METHODOLOGY

The study conducted focused on the following activities:

- Discharge process currently followed in the hospital
- Flow chart depicting the discharge process
- Time taken at each step
- Analysis of the process and time taken at various steps involved in the discharge process

vi. Discharge Confirmation
vii. Discharge Summary
viii. Discharge Intimation
ix. Final Billing
x. Patient Walk out

The approach for the project involved 3 steps

Project design

Data collection

Data Analysis

PROJECT DESIGN

To identify the areas responsible for delay in the discharge process, it was first important to understand the discharge process being followed in the hospital. Hence a process map was developed and a track of the activities and the time at which the activity was done was noted.

Study design : Cross – sectional study

Study area : Daycare in MAX Hospital,Saket

Sampling : Non–probability purposive sampling

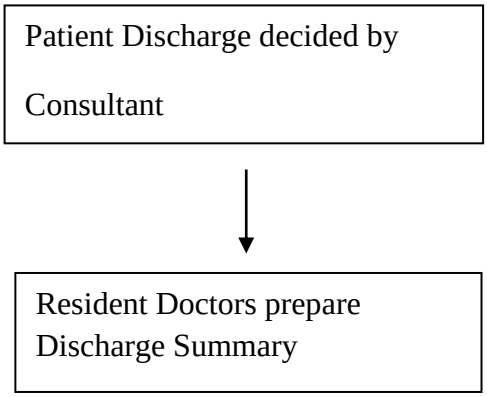
Sample size : 121 patients due for discharge

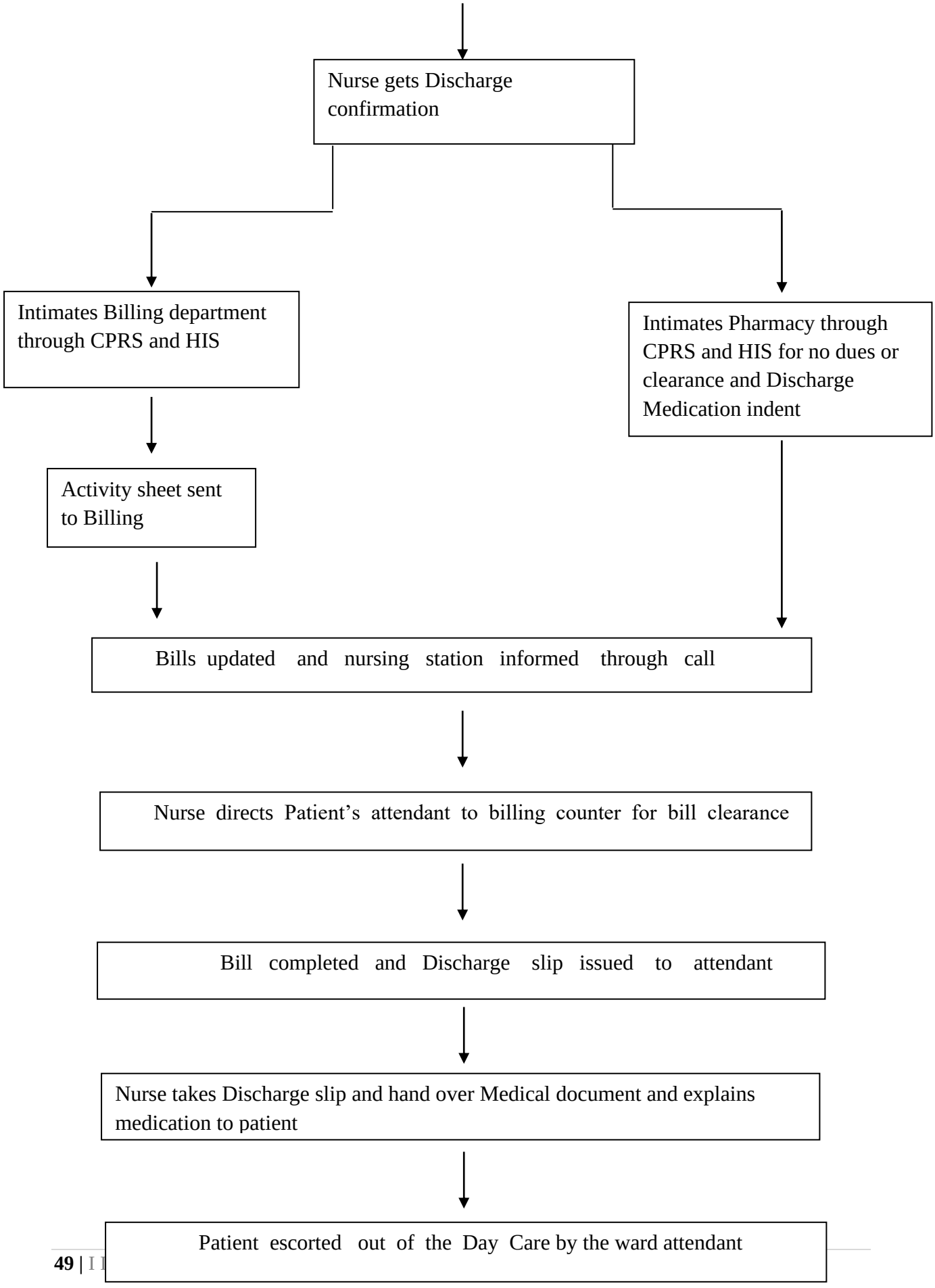
Duration of study: 17 Days (30.04.13 to 16.05.13)

Inclusion criteria: All patients admitted in Day Care based upon on the criteria defined in the admission policy of MAX Hospital.

Exclusion criteria: IPD admissions.

DISCHARGE PROCESS IN DAY CARE:-




Nurse gets Discharge confirmation
Intimates Billing department through CPRS and HIS
Intimates Pharmacy through CPRS and HIS for no dues or clearance and Discharge Medication indent
Activity sheet sent to Billing
Bills updated and nursing station informed through call
Nurse directs Patient's attendant to billing counter for bill clearance
Bill completed and Discharge slip issued to attendant
Nurse takes Discharge slip and hand over Medical document and explains medication to patient
Patient escorted out of the Day Care by the ward attendant

DATA COLLECTION METHOD

A time motion study was conducted to observe and analyze the movements made by the staff who were involved in the discharge process. 5 times were identified and followed (as explained below).

Discharge Confirmation time is the expected time of discharge which the doctor enters when they feel the patient is ready for discharge now. After the doctor's advice the patients discharge process begins.

1) Discharge Confirmation
2) Discharge Summary
3) Discharge Intimation
4) Final Billing
5) Patient Walk out

Source of data :

Primary source of data

- Direct observations
- Interaction with the nursing and billing staff.
- Participation in a few discharge processes for getting accurate data.

Secondary source of data

- Time extracted from HIS and CPRS

DATA ANALYSIS

TIME TAKEN FOR DISCHARGE PROCESS IN ALL CASES

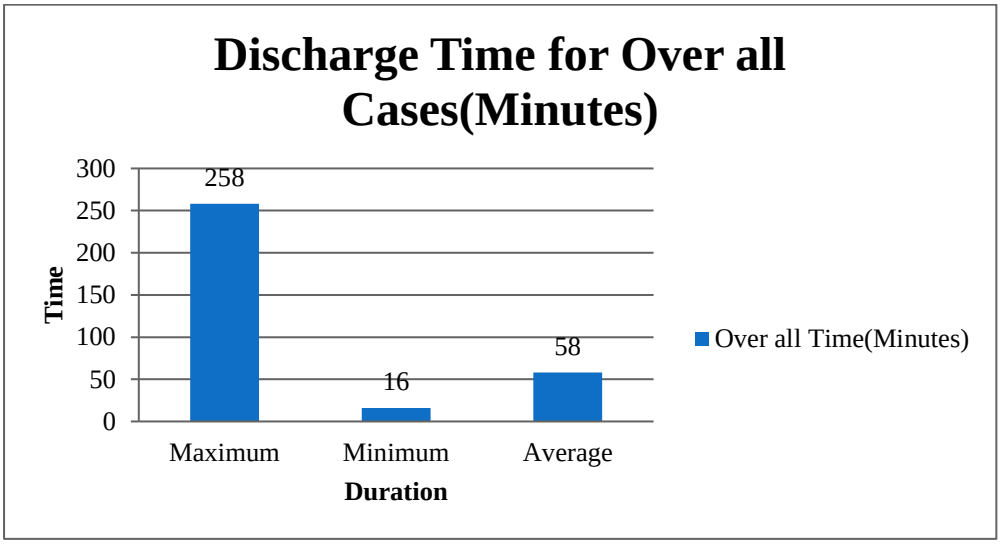


Figure 7

In the 121 cases of discharge process included in the study, it was noted, that the **maximum time** taken for discharge process was **258 Minutes i.e. 4 Hours and 18 Minutes**. This value is higher than the desired value. It was observed that in some cases, delay in discharge was because there were queries from TPA side and thus time was taken to revert them back and thus billing was automatically delayed.

On an **average**, time taken for discharge process was **58 Minutes** which is in desired range for TPA patients but was on higher side as far as cash patients are concerned.

OVERALL PATIENT DISCHARGE PATTERN TIME

TIME INTERVAL	NUMBER OF DISCHARGES	%
0 – 30 Minutes	20	16.5
30 Minutes – 1 hour	70	57.8
1 hour – 1.30 hours	13	10.7
1.30 hours – 2 hours	8	6.6
2 hours – 2.30 hours	5	4.1
2.30 hours – 3 hours	2	1.6
3 hours – 3.30 hours	2	1.6
3.30 hours – 4 hours	1	0.8
4 hours – 4.30 hours	1	0.8
	121	

Table 5

From Table 5, it is clear that majority Discharges i.e. 57.8% took place between 30 Minutes to 1 Hour.

TIME TAKEN FOR DISCHARGE – FOR TPA PATIENTS

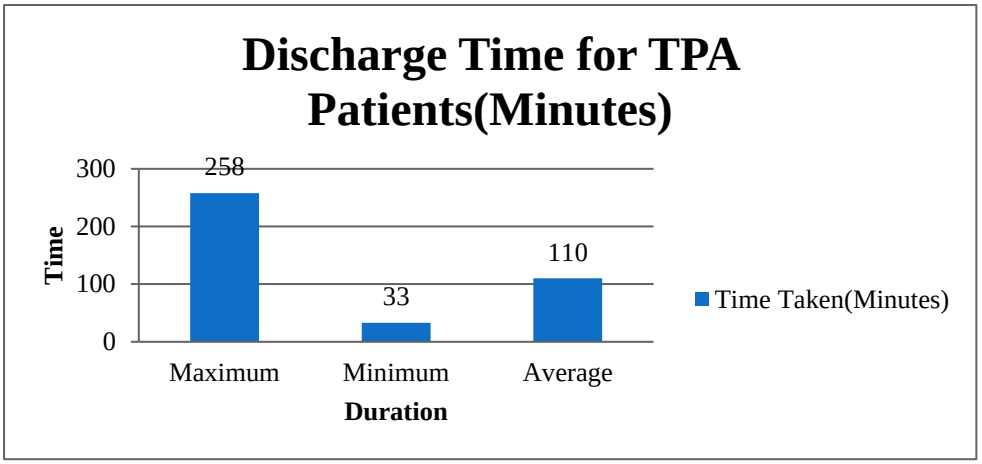


Figure 8

An **average time** of **110 Minutes i.e. 1 Hour and 50 Minutes** was noted for the completion of discharge process for patients who paid through insurance.

Maximum time observed was **258 Minutes i.e. 4 Hours and 18 Minutes**, and **minimum time** observed was **33 minutes**.

TPA PATIENT DISCHARGE PATTERN TIME

TIME INTERVAL	NUMBER OF DISCHARGES	%
30 Minutes – 1 hour	7	31.8
1 hour – 1.30 hours	2	9.1
1.30 hours – 2 hours	3	13.6
2 hours – 2.30 hours	4	18.1
2.30 hours – 3 hours	2	9.1
3 hours – 3.30 hours	2	9.1
3.30 hours – 4 hours	1	4.5
4 hours – 4.30 hours	1	4.5
	22	

Table 6

From Table 6, it is clear Maximum discharges i.e.31.8% took place within 30 Minutes – 1 Hour and 4.5% took place within 3.30 – 4 hours and 4 – 4.30 Hours each.

TIME TAKEN FOR DISCHARGE PROCESS – CASH PATIENTS

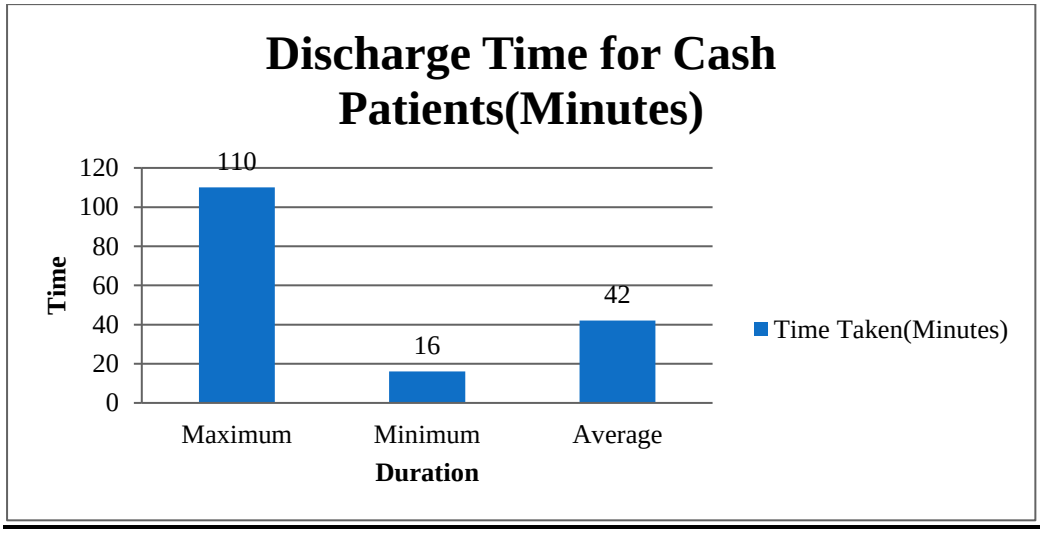


Figure 9

Average time for discharge observed for patients paying by cash was **42 Minutes.**

Maximum time observed in these cases was **110 Minutes i.e. 1 Hour and 50 Minutes**. In this particular case observed cause of delay was found that patient's attendant had to arrange for money,so that's why process of billing got delayed. ;

and the **minimum time** observed was **16 Minutes.**

CASH PATIENT DISCHARGE TIME PATTERN

TIME INTERVAL	NUMBER OF DISCHARGES	%
0 – 30 Minutes	19	30.1
30 Minutes – 1 hour	34	53.9
1 hour – 1.30 hours	6	9.5
1.30 hours – 2 hours	4	6.3
	63	

Table 7

From Table 7, it is clear that Maximum discharges i.e. 53.9% takes within 30 Minutes to 1 Hour,whereas only 6.3% discharges takes place within 1.30 Minutes to 2 Hours.

TIME TAKEN FOR DISCHARGE PROCESS – CORPORATE/PSU PATIENTS

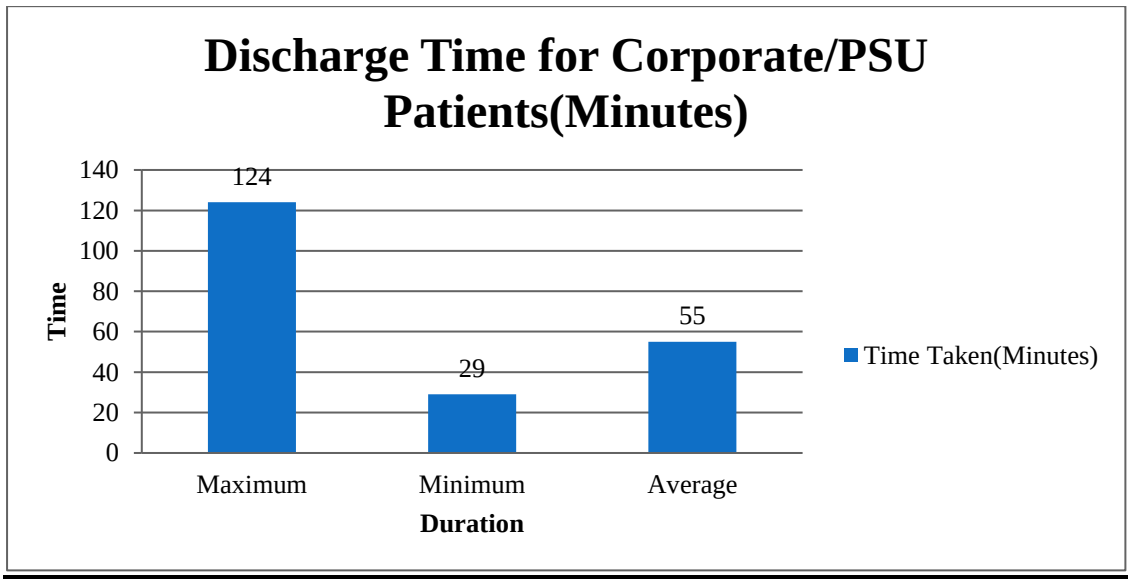


Figure 10

Average time for discharge observed for patients paying by cash was **55 Minutes.**

Maximum time observed in these cases was **124 Minutes i.e. 2 Hours and 4 Minutes** ; and the **minimum time** observed was **29 Minutes.**

CORPORATE/PSU PATIENT DISCHARGE PATTERN TIME

TIME INTERVAL	NUMBER OF DISCHARGES	%
0 – 30 Minutes	1	3.2
30 Minutes – 1 Hour	24	77.4
1 Hour – 1.30 Hours	5	16.1
1.30 Hours – 2 Hours	0	0
2 Hours – 2.30 Hours	1	3.2
	31	

Table 8

From the Table 8,it is clear that maximum discharges i.e. 77.4% takes within 30 minutes to 1 hour, while only 3.2% took within 2 Hours to 2.30 Hours

OBSERVED CAUSES OF DELAY

1. **Delay in the pharmacy clearance**. The workload in the pharmacy is high.

2. **Delay in the billing process**. The delay was noticed primarily due to delayed TPA approval. In some of the observed cases, TPA sent queries back so time was taken to revert back those queries

3. **Disturbance at the billing counter**. – Often, patients attendants come to the billing desk asking for routine information eg.– 'how much time will the billing take?' and often new patient's attendant will enquire 'In how much time they will get bed' . This is a major cause of delay as the person at the billing counter is continuously distracted and is unable to focus on the billing task.

4. Sometimes Patient's attendants are not available when the bill is ready, as they had gone to take refreshment, or even out of hospital in some cases.

5. In certain cases it was found that Patient's attendant were arranging for money which resulted in delayed discharge.

CONCLUSION

		TPA		Cash		CGHS/PSU		Total
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
TAT	110 mins	66 mins	42 mins	21 mins	55 mins	19 mins	58 mins	40 mins

Table 9

It has been noted that there is a significant difference in the discharge time as compared to the benchmark time of 30 minutes for cash patients.

Benchmark Time for TPA patients is 2 hours and average time is within range as it is 1 hour 50 minutes.

SUGGESTIONS FOR OVERCOMING THE DELAYS

1. **Enclosed billing counter** – It was observed that a constant disturbance exists at the billing counter, since a number of patients usually come to the billing counter for giving constant reminders for their bill updates, or enquiries for personal nurses etc.
2. **Shifting of Patient's to Waiting lounge** – Once discharge is confirmed and the process has started, the patient along with the attendant can be shifted to Waiting lounge, till the time the formalities regarding the same are under progress. With this concept, the bed can be prepared to cater to the next patient who requires it more. The hospital resources can then be utilized for treating the new patient.

   This lounge includes basic amenities like,

   - Waiting area with comfortable recliner chairs for patient and attendant.
   - A pantry with provision of beverages, snacks, health foods.
   - Magazines, and Television facility.

   This will be of great relevance especially for patients who come from far off areas. The cost of availing this facility will be lesser than the room tariff and the hospital resources of the relieved bed will be channelized for a new patient who requires it more.

3. Hospital should have a **MoU** between the **hospital** and **TPA** companies thus hastening the entire TPA approval and thereby the discharge process.

PROJECT – 3

TIME & MOTION STUDY IN MEDICAL ONCOLOGY OPD

INTRODUCTION

An Out Patient is one who receives medical attention at a hospital without getting admitted to Indoor patient department (IPD), he/she does not have to spend a night in the hospital. Designated place where these services are being provided in the hospital is called OUT PATIENT DEPARTMENT (OPD).

Outpatient service is the an important service provided by all the hospitals as it is the point of contact between a hospital and the community. Outpatient Department in any hospital is considered to be shop window of the hospital.

Many patients gain their first impression of the hospital from the OPD. In other words, the first impression will have lasting effects. A neat and clean hospital with necessary information displays and proper directions generally provide good image.

Out-patient services are an important service provided by all the hospital as it provides services to a large number of patients and costs are generally lower than that of IPD and day-care patients. Successful and efficient management of OPD can lighten the burden on the patient wards.

Oncology OPD is located on 1st Floor of South Block. The unit consists of Central Hall with seating arrangements for Patients, Registration, Billing counter, Consultation Rooms, Treatment Rooms, and Tea/Snacks stall for waiting Patients and attendants.

RATIONALE

This focus of the study is to assess

- The time from Patient first seen in OPD to the time of Diagnosis.
- The time from Advice of treatment to Start of treatment.
- The time taken to see the specialist to see the Patient if Patient was referred.
- Giving recommendations for improvement of the same.

OBJECTIVES

- **General Objective-**

➢ To assess the turn around time for Medical Oncology OPD.

- **Specific Objectives-**

➢ To assess the turn around time to establish diagnosis.
➢ To assess the turn around time to start Treatment.
➢ To assess the turn around time for the specialist to see the patient.
➢ To use the findings to make recommendations on the improvement of turn around time for Medical Oncology OPD.

METHODOLOGY

- **Study Design** –Cross-sectional ,Descriptive Study

- **Study Area -**Medical Oncology OPD in Max Hospital.

- **Sampling Technique -**Convenience Sampling

- **Sample size** : 40 First time Patients.

- **Duration of study**: 2.5 Months

.

- **Inclusion criteria**: Those Patients who came to Medical Oncology OPD and also took up Chemotherapy procedure were included in the sample.
- **Exclusion criteria**: IPD admissions.

Tool used for the study is in **Annexure 3**

Source of data :

Primary source of data

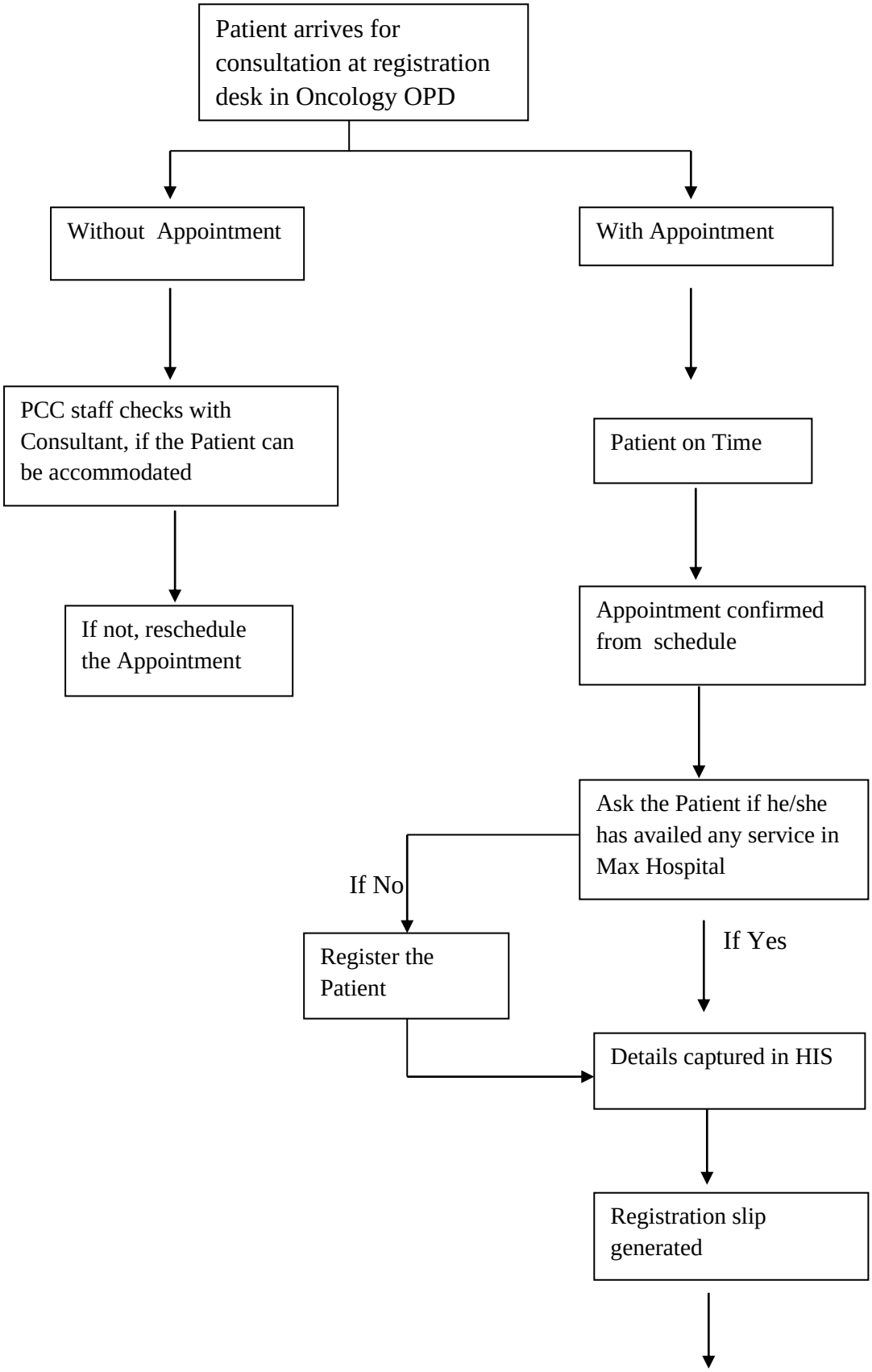
- Direct observations
- Interaction with the Patients,their attendants and Medical Oncology Consultants.

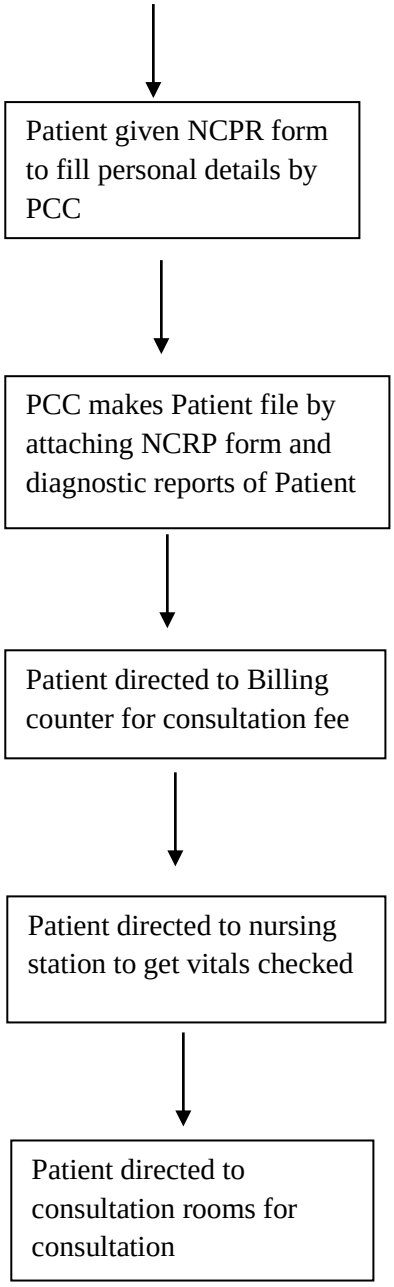
Secondary source of data

- Time extracted from Patient Files from MRD.

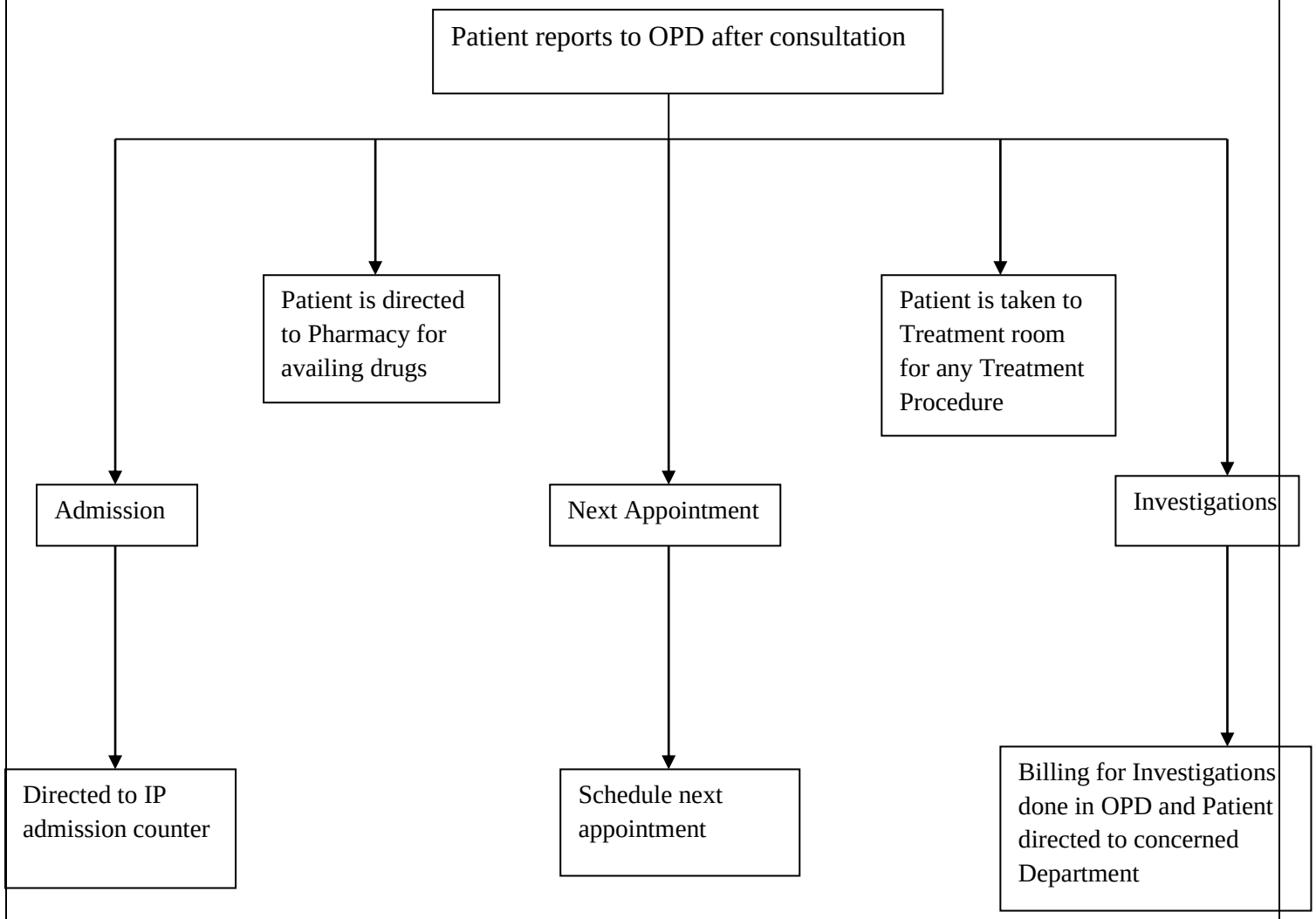
PROCESS FLOW FOR MEDICAL ONCOLOGY OPD

FOR CONSULTATION

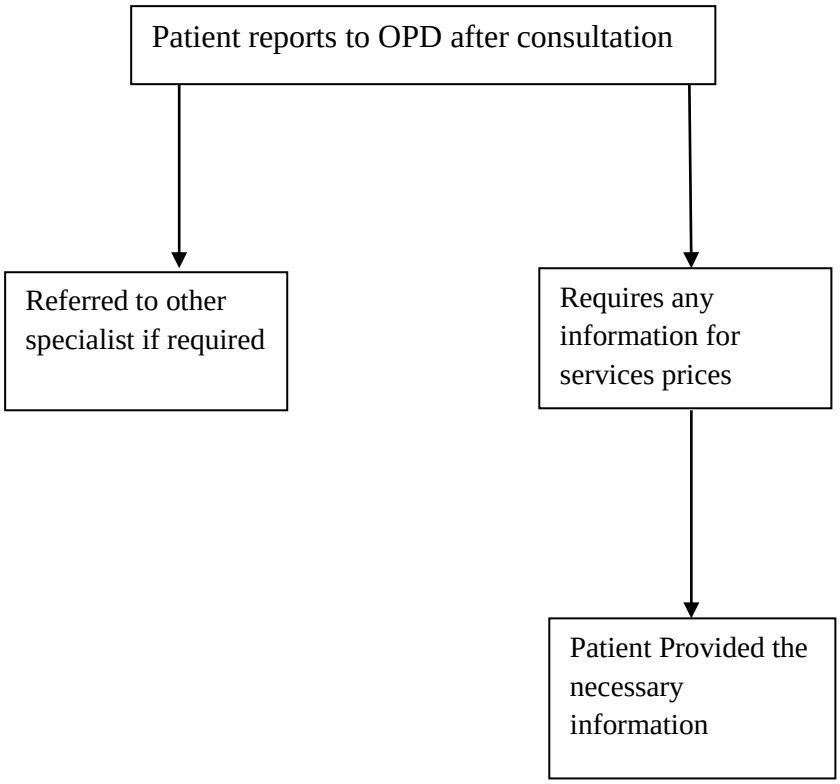



Patient given NCPR form to fill personal details by PCC
PCC makes Patient file by attaching NCRP form and diagnostic reports of Patient
Patient directed to Billing counter for consultation fee
Patient directed to nursing station to get vitals checked
Patient directed to consultation rooms for consultation

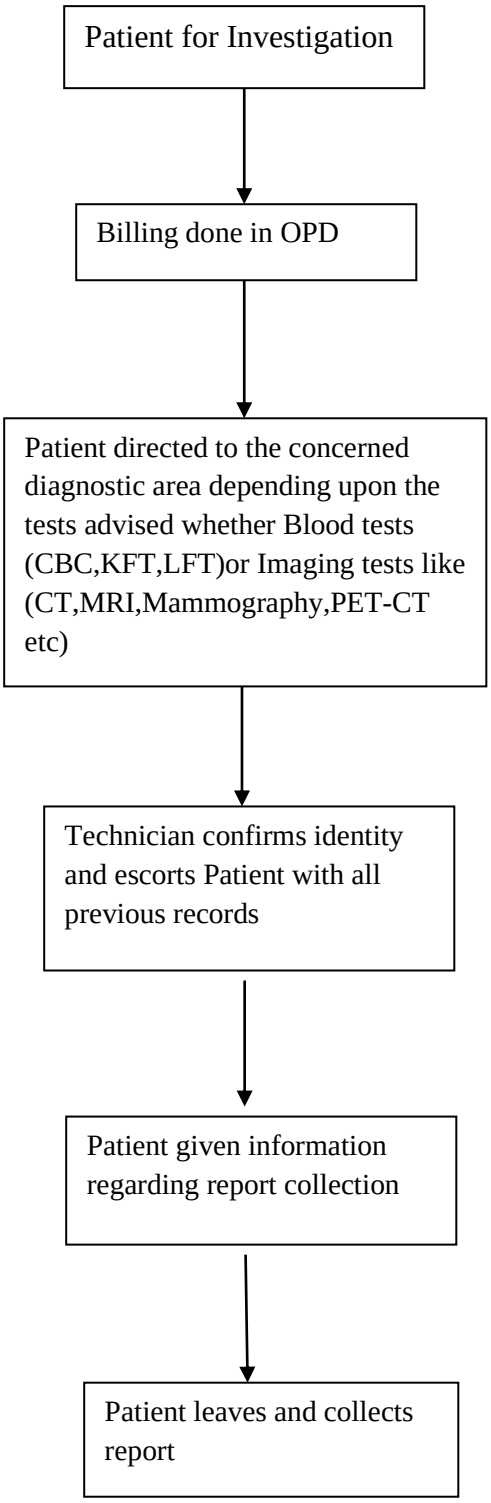
POST CONSULTATION



POST CONSULTATION(Continued from)

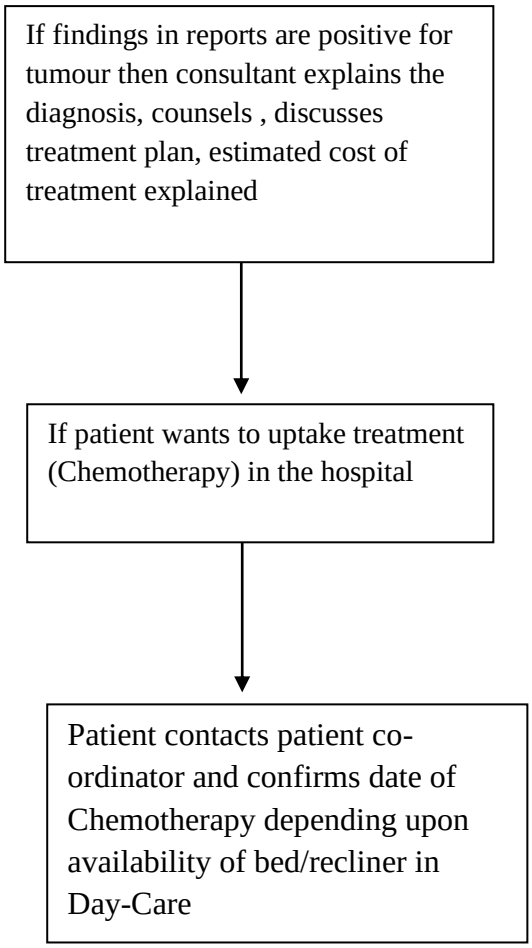


DIAGNOSTICS



After report collection Patient again has to take appointment and the process for consultation is followed again

If findings in reports are positive for tumour



DATA ANALYSIS AND FINDINGS

Time taken to establish the diagnosis, after Patient comes to Medical Oncology OPD –

- Only 2 cases out of sample of 40 could meet the criteria as their diagnosis was established in Medical Oncology OPD in MAX Hospital.

In one case time taken was – 6 days

In other case time taken was – 7 days

- Reason for this much time taken was that the Patient's were advised diagnostic tests like Biopsy, PET-CT, Ultrasound. Especially in case of Biopsy reports come after 3-4 days. After getting reports for the tests done they again had to take appointment and show the results to the consultants.

Time taken from the Treatment Advised to Uptake of the Treatment(Chemotherapy).

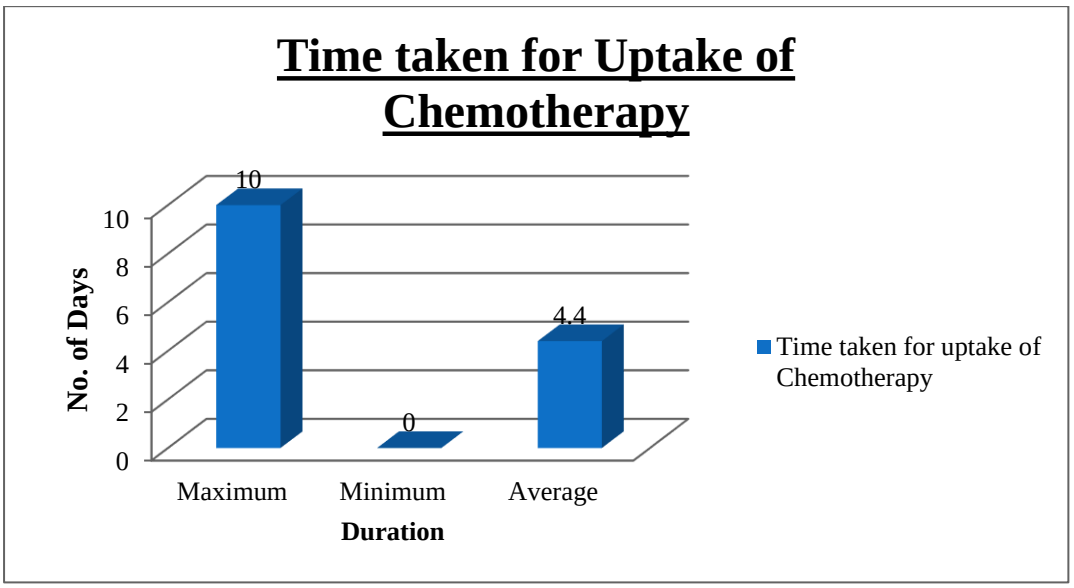


Figure 11

As depicted in the Graph above, **Maximum time** taken for the uptake of Chemotherapy was 10 Days and it was noted in 2 cases out of 40,

In one case reason for the delay was patient had come with diagnosis already established and Treatment already started from another hospital, So gap of 10 days was given for the next cycle of Chemotherapy.

In second case the patient had to be re-scheduled for Chemotherapy as there was no bed or recliner available in Day-Care, but re-scheduled date was not suitable for the patient. So then Patient contacted the co-ordinator got the bed booked for Day-Care.

Minimum time taken for uptake of Chemotherapy was on the same Day.

Average time for uptake of Chemotherapy came out to be 4.4 Days.

Out of all the cases,30% of sample was of those patients who first came to the Radiation Oncology OPD, they up took treatment there and were then Planned for Radiation and Concurrent Chemotherapy. Timings for these cases are as follows

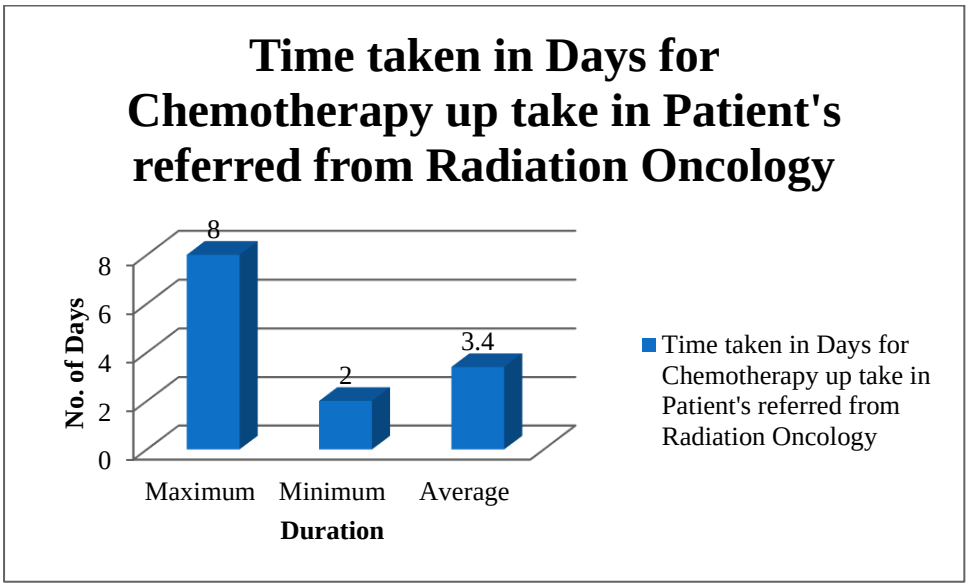


Figure 12

As depicted in the Graph above, **Maximum time** taken for uptake of Chemotherapy in the patient's referred from Radiation Oncology to Medical Oncology was 8 Days, reason was that treatment was planned in Radiation Oncology that the Patient would up take Chemotherapy.

Minimum time for uptake of Chemotherapy in the patients referred from Radiation Oncology to Medical Oncology was 2 Days.

Average time for uptake of Chemotherapy in the patients referred from Radiation Oncology to Medical Oncology was 3.4 Days.

Out of all the cases,10% of sample was of those patients who first came to the Surgical Oncology OPD, they up took treatment there and were then Planned for Chemotherapy. Timings for these cases are as follows

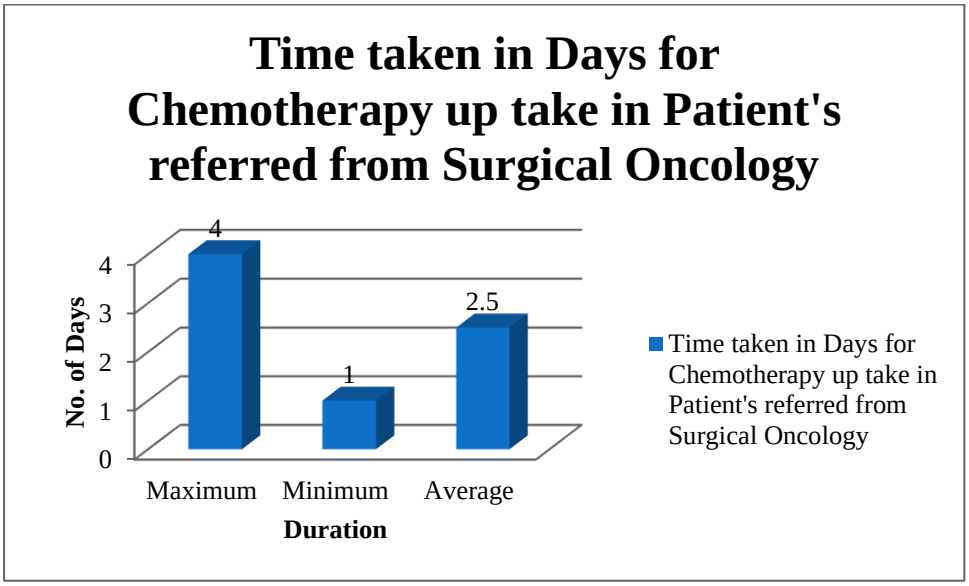


Figure 13

As depicted in the above Graph, Maximum time taken for uptake of Chemotherapy for Patients referred from Surgical Oncology was 4 Days.

Minimum time taken for uptake of Chemotherapy for Patients referred from Surgical Oncology was 1 Day.

Average time taken for uptake of Chemotherapy for Patients referred from Surgical Oncology was 2.5 Days.

Out of all the cases, 60% sample was of those Patient's who directly came to Medical Oncology OPD. Timings for Chemotherapy uptake for these cases are as follows.

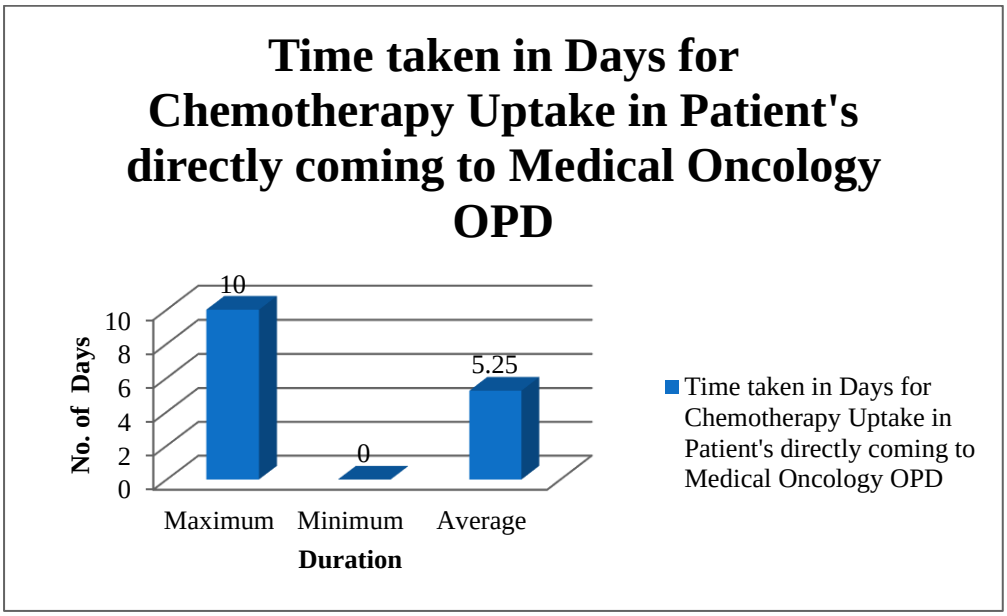


Figure 14

As depicted in the above Graph, Maximum time taken for uptake of Chemotherapy for Patients directly coming to Medical Oncology OPD was 10 Days.

Minimum time taken for uptake of Chemotherapy for Patients directly coming to Medical Oncology OPD was same day.

Average time taken for uptake of Chemotherapy for Patients directly coming to Medical Oncology OPD was 5.25 Days

Frequent causes of delay from the Time treatment advised to uptake of Chemotherapy treatment are

- Unavailability of bed or recliner in Day-Care
- Medical reasons – Patient may not be medically fit to have Chemotherapy(TLC or Hb may be low)
- Patients who are empanelled with CGHS or who have tie ups with TPA have to get clearance or completion of formalities with their respective tie ups
- Given date of Treatment not suitable for the Patient

Time taken for other specialist (Radiation or Surgical Oncologist) to see the Patient, if patient was referred to the Specialist.

Out of all the cases 25% of cases who came to Medical Oncology OPD were referred to Radiation or Surgical Oncology OPD. It was noted that in all these cases Patient was seen on the same Day whenever Patient was referred to the other Specialist.

Out of all the cases 30% of cases were referred from Radiation Oncology OPD to Medical Oncology OPD and 10% of cases were referred from Surgical Oncology OPD to Medical Oncology OPD. It was noted referred Patients were seen on the same Day by the Specialist.

CONCLUSION AND DISCUSSIONS

TIME TAKEN TO ESTABLISH DIAGNOSIS AFTER COMING TO MEDICAL ONCOLOGY OPD

	No. of Patients	Average Time(Days)
Patients coming to Medical Oncology OPD	2	6.5

- Only two cases out of sample of 40 could meet the criteria as their diagnosis was established in Medical Oncology OPD in MAX Hospital.
- Reason for this much time taken was that the Patient's were advised diagnostic tests like Biopsy, PET-CT, Ultrasound. Especially in case of Biopsy reports come after 3-4 days. After getting reports for the tests done they again had to take appointment and show the results to the consultants.

TIME TAKEN FROM THE TREATMENT ADVISED TO UPTAKE OF THE TREATMENT (CHEMOTHERAPY).

	No. of Patients	Average Time(Days)
Patients directly coming to Medical Oncology OPD(without being referred from other specialist)	24	5.25
Patients referred from Radiation Oncology OPD to Medical Oncology OPD	12	3.4
Patients referred from Surgical Oncology OPD to Medical Oncology OPD	4	2.5
All Patients coming to Medical Oncology OPD	**40**	**4.4**

From the above table it is clear that

When Patients are coming directly Medical Oncology OPD (without being referred from other speciality) **Average Time** taken from the Treatment advised to uptake of Chemotherapy was **5.25 Days,**

which is relatively on higher side as compared to all Patients coming to Medical Oncology where **Average Time** taken from the Treatment advised to uptake of Chemotherapy was **4.4 Days.**

Reasons for such variations are that

When Patients come directly to Medical Oncology OPD after taking their History, Investigations are advised, results for the investigation come, on the basis of findings of investigations, Stage of tumour and its advancement, treatment plan is made then the Treatment plan along with the cost estimates is discussed with the Patient, after taking all these issues into account Patient decides if he/she wants to uptake Chemotherapy. Hence more time is taken for start of Chemotherapy if Patients come directly to Medical Oncology OPD.

On the other hand, **Patients who are referred from Radiation or Surgical Oncology OPD**, for such Patients investigations have already been done, Radiation and Surgical Treatment going on or completed and then they were planned for the Chemotherapy treatment. So **time taken was relatively less** in these Patients.

SUGGESTIONS FOR IMPROVEMENT

For improving Time taken for establishing diagnosis.

Reports for investigations can be made available online for Patients , So that they can take next appointment as soon as they receive investigation reports in this manner some of time can be saved.

For improving Time taken from the Treatment Advised to Uptake of the Treatment(Chemotherapy).

- For those Patients who have their medication completed for Chemotherapy and are waiting for billing to be completed (especially for TPA Patients) they can be shifted to 'Waiting Lounge' so that Bed is not blocked and effective utilization of resources can be made.
- Increasing number of beds in Day-Care can help solve the issue of delay due to unavailability of beds.

PROJECT – 4

AUDITING OF CHEMO PERFORMA AND DISCHARGE SUMMARY

INTRODUCTION

Discharge Summary – It is defined as a clinical report prepared by a physician or other health professional at the conclusion of a hospital stay or series of treatments. It outlines the patient's chief complaint, the diagnostic findings, the therapy administered and the patient's response to it, and recommendations on discharge.

OUTLINE FOR DISCHARGE SUMMARY IN Day-Care

1. Name of patient and Hospital ID
2. Age/sex.
3. Name of the Consultant in charge.
4. Dates of admission and discharge.
5. Principal Diagnosis
6. Staging is documented
7. Cycle given on day of admission- Chemotherapy cycle number, drugs and dosage of Chemotherapy drugs administered.
8. Next Chemo cycle and Plan of treatment documented- Next Chemotherapy cycle number, date on which to be given, drugs and dosage of Chemotherapy drugs administered.
9. Brief Summary of which includes current status of his illness.
10. Significant Findings: Diagnostic work-up and findings, abnormal lab and X-rays.
11. Past Medical/Surgical History.
12. Allergies History.
13. Hospital Course: description of

    i. Medications given during Chemo.
    ii. Patient's response to medications.

14. Medications at discharge
15. Instructions to Patient
16. Emergency Contact Information
17. Names of referring physicians.

OUTLINE FOR CHEMO PERFORMA

1. Patient's Name
2. Diagnosis
3. Staging
4. Date of start of chemo
5. Treatment Planned
6. Total cycles planned
7. Special instructions/Monitoring – which requires to obtain Lab tests for CBC, KFT, Chest X ray, Echo etc.(whichever is applicable).
8. Pre-Chemotherapy Protocols –
   Standard Antiemetic protocol : Dosage and Time of administration along with signature of nurse/Team leader documented.

RATIONALE

This study focuses on whether documentation in Discharge Summary and Chemo Performa is complete.

OBJECTIVES

4. To determine whether consent for chemo is signed if patient has First Chemo cycle.
5. To determine whether Staging on performa and Discharge Summary documented.
6. To determine whether plan of treatment documented on Discharge Summary.
7. To determine whether Next Chemo date mentioned on Discharge Summary.

METHODOLOGY

The study was carried out with help of a Performa, outline for which is as follows:

1. Patient Name.
2. Hospital ID of Patient.
3. Consent for Chemo signed in case of First cycle.
4. Staging on Chemo Performa and Discharge Summary.
5. Chemotherapy Cycle given Documented.
6. Next Chemotherapy cycle Plan Mentioned.

Study design : Cross – sectional study

Study area :Daycare in MAX Hospital,Saket

Sampling : Non–probability purposive sampling

Sample size : 200 patient files reviewed

Duration of study: 3 weeks.

Inclusion criteria: All patients admitted in Day Care based upon on the criteria defined in the admission policy of MAX Hospital.

Exclusion criteria: IPD admissions

Source of data :

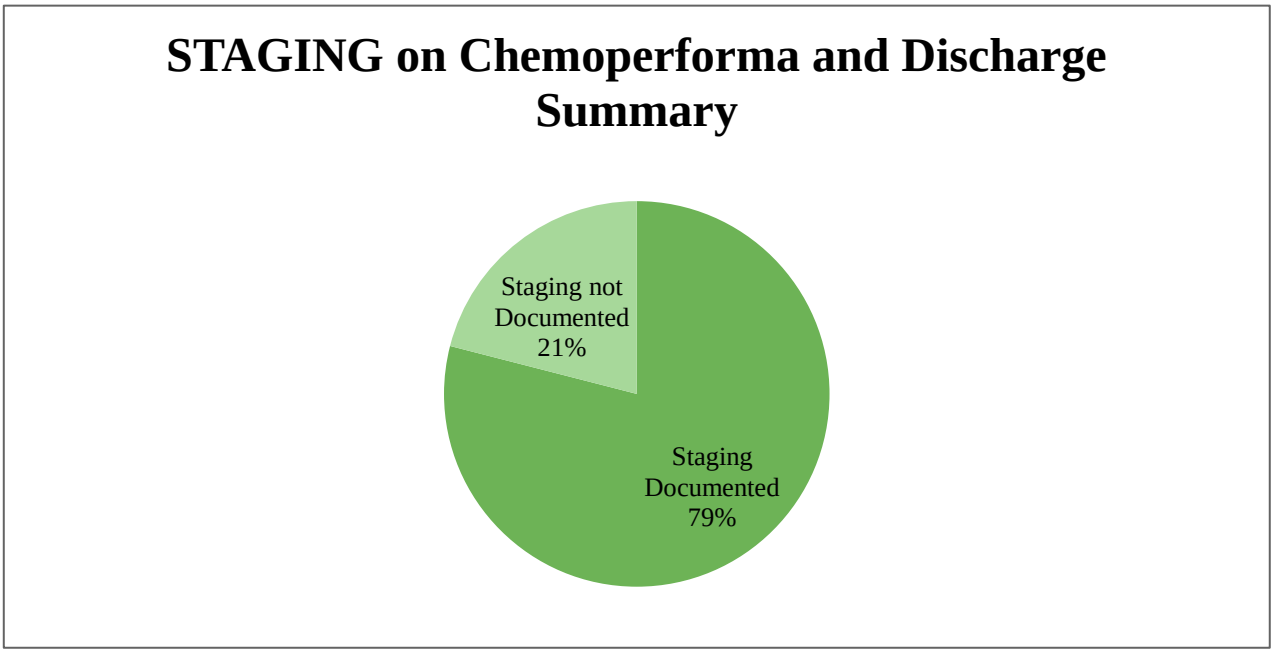
Primary source of data

Data extracted from Patient files.

DATA ANALYSIS AND FINDINGS :

1. **CONSENT SIGNED FOR CHEMO** –

   Out of 200 files reviewed 7 files were of patients who came for the First cycle and in all 7 consent was signed by patient and the document was also signed by concerned consultant



. **Figure 15**

2. **STAGING ON CHEMO PERFORMA AND DISCHARGE SUMMARY.**

As depicted in the pie diagram above

Staging was documented in 158 files i.e. 79%

Staging was not documented in 42 files i.e. 42%

CASES in which Staging was documented

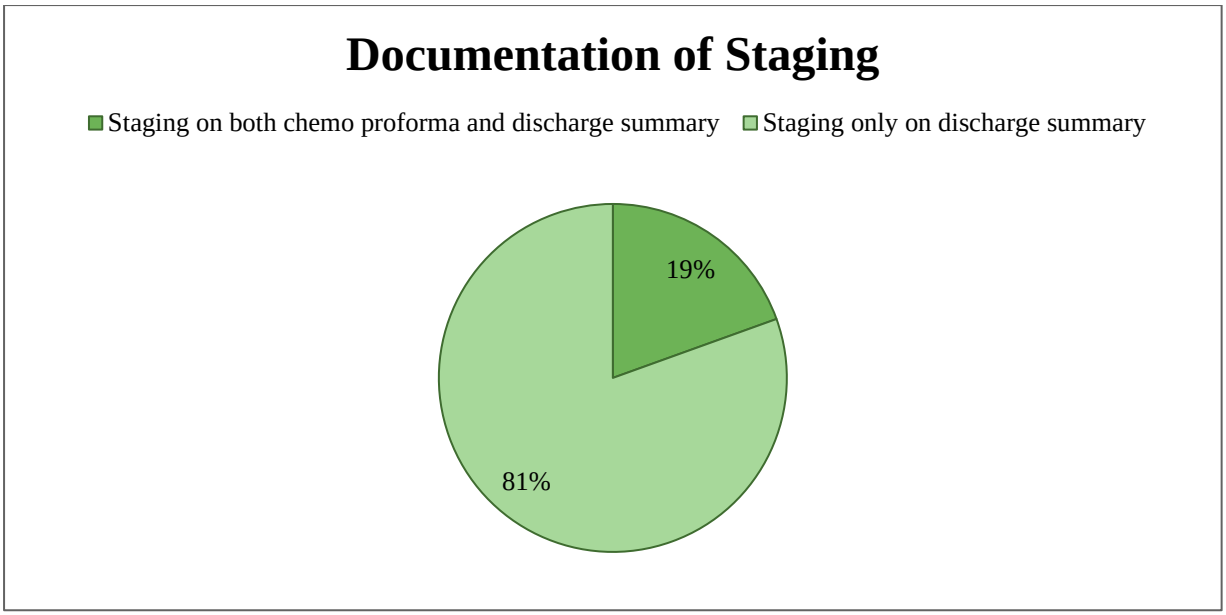


Figure 16

It was noted that out of all cases in which staging was documented

STAGING was documented in both Chemo performa and Discharge Summary only In 30 files i.e. 19% cases.

STAGING was documented in only Discharge Summary in 128 files i.e. 81% cases.

3. **CHEMOTHERAPY CYCLE GIVEN ON DAY OF ADMISSION DOCUMENTED –**

   It was noted that documentation of cycle given i.e. Chemotherapy cycle number, drugs and dosage of Chemotherapy drugs administered was **100%** for **200 files reviewed.**

4. **NEXT CHEMOTHERAPY CYCLE PLAN MENTIONED –**

It was noted that documentation for next chemotherapy cycle plan i.e. Next Chemotherapy cycle number, date on which to be given, drugs and dosage of Chemotherapy drugs administered was **100%** for **200 files reviewed**.

CONCLUSION

	PERCENTAGE (%)
Consent for Chemotherapy Signed	100
Staging on Chemo Performa and Discharge Summary	79
Chemotherapy cycle given on day of Admission documented	100
Next Chemotherapy cycle plan mentioned	100

Table 10

It was noted that **discrepancy** was noted in documentation of **Staging** on Chemo Performa and Discharge Summary – only in 79% cases.

SUGGESTIONS FOR IMPROVEMENT

1. Despite knowing the importance of documenting the Staging by the Consultants still discrepancy is there, so this issue should be brought to the notice of HOD.
2. Corrective action should be taken by weekly Audit of Chemo Performa and Discharge Summary.
3. With the help of IT team changes can be made in the CPRS wherein filling up the Stage blank becomes mandatory, failing which you cannot proceed further.

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ANNEXURE 1

S. NO	NAME/ IP NO	DATE & TIME OF PLAN D/S WRITTEN	RECEVIED DISCHARGE SUMMARY TIMES.	DIS INTIMATION IN HIS/ CPRS	TIME OF BILL SETTELEMENT OF BILL	TPA/ SELF	PATIENT WALK OUT FROM FLOOR	reasons for delay	T2-T1	T4-T3	T5-T4	T5-T1

ANNEXURE 2

S.No.	Patient Name	Date	Bed No.	Discharge confirmation	Discharge summary	Discharge Intimation	Final Billing	Walk Out	TAT	TPA/CGHS/CASH

ANNEXURE 3

Tool used for the study was

1. Patient Name
2. Max ID
3. Patient seen in OPD on
4. Whether patient came with reports of positive findings of Tumour — YES NO

4.1 If Yes ,when was the diagnosis established

4.2 If No,then diagnosis established in MAX on

5. Staging DONE / NOT DONE — YES NO
6. Time taken to establish the diagnosis
7. Whether patient came with treatment already started — YES NO

7.1 If Yes,When was the treatment started

8.When was the treatment advised in MAX

9.Time taken to start treatment

10.Was patient referred to any other specialist YES NO

11.How long did it take for the specialist to the see the patient

ANNEXURE 4

Patient Name	Patient seen in OPD on	Whether patient came with reports of positive findings of tumour	If yes,when was diagnosis established in Max	If no,then diagnosis established in Max	Staging Done/Not done	Time taken to establish the diagnosis treatment	Whether patient came with treatment already started	If yes,when was the treatment started	When was the treatment advised in Max	Time taken to start treatment	Was patient referred to any specialist	How long did it take for the specialist to see the patient

ANNEXURE 5

Patient Name	Date	Max ID	Consent for Chemo Signed if this is the First Cycle	Staging on the Proforma and Discharge summary Documented	Plan of treatment documented on discharge summary	Next Chemo date mentioned on discharge summary