

**Summer Training at
Max Super Speciality Hospital,
Saket, New Delhi**

Study on Turn Around Time Analysis in Planned Discharges

**By
Sonali Gupta**

**Under the guidance of
Dr. Neetu Purohit**

**MBA Hospital and Health Management
2015-2017**



**The IIHMR University, Jaipur
2016**

CERTIFICATE

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Dr. Sonali Gupta** student of **MBA Hospital and Health Management** from the IIHMR University, Jaipur has undergone summer training at **Max Super Speciality Hospital, Saket, New Delhi** from 1st April to 31st May, 2016.

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

The internship is in fulfilment of the course requirements.

I wish her all success in all her future endeavours.



Col. (Dr.) Ashok Kaushik
Dean (Academics & Student Affairs)
IIHMR University, Jaipur



Dr. Neetu Purohit
Associate Professor
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CERTIFICATE OF COMPLETION

This is to certify that

Dr. Sonali Gupta

has been associated as an

INTERN

with the department of

MEDICAL ADMINISTRATION

for a period of

1st April 2016 to 31st May 2016

at

Max Super Specialty Hospital,
Saket

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



Head of the Department



Dr. Shubnum Singh

Dean - Nursing, Allied Health, & Wellness Programs
Max Healthcare, New Delhi



Ms. Brigitte Wuethrich
General Manager
Max Institute of Medical Excellence
Max Healthcare

ACKNOWLEDGEMENT

A summer project is a golden opportunity for learning and self development. I consider myself fortunate for having been provided an opportunity to undergo summer training at Max Super Speciality Hospital Saket, New Delhi.

I wish to express my deep gratitude and regard to **Dr.NaliniKaul** (Medical Superintendent) for generously sharing her knowledge and experience with me. I would also like to thank **Dr.SaharQureshi** (Assistant General Manager Operations) who guided me and encouraged me throughout the project. Her valuable inputs made this project possible. I am also very thankful to **Dr.SandeepMor** (Deputy Medical Superintendent) who took time to hear and guide me by giving his valuable comments and advice. A vote of thanks to **Dr.YashiKapoor** (Assistant Manager) without whose guidance this project would not have been possible.

At last I would also like to express my gratitude to my mentor in IIHMR University Jaipur, **NeetuPurohit** (Associate Professor) for her constant guidance and motivation.

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Assistant General Manager Operations

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DECLARATION

I do hereby declare that I am a student of 1st year, MBA in Hospital and Healthcare Management, IIHMR University, Jaipur, Rajasthan session 2015-2017.

I would like to state that I have carried out my Internship on the topic “A study on Turn around time (TAT) analysis in planned discharges ” under the guidance of **Dr. Sahar Qureshi**(Assistant General Manager Operations) at Max Super Speciality Hospital, Saket, New Delhi for the partial fulfillment for the degree of MBA in Hospital and Healthcare Administration.

This project work is my own and has not been submitted to any of the other Institute or University for the purpose of award of any degree or diploma.

Dr. Sonali Gupta

MBA Hospital and Health Management

IIHMR University, Jaipur

(2015-2017)

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ABBREVIATIONS

S.No.	Abbreviation	Meaning
1.	ACLS	Advanced cardiac life support
2.	BCLS	Basic cardiac life support
3.	HIS	Hospital information system
4.	CPRS	Computerised patient record system
5.	CAPEX	Capital Expenditure
6.	UHID	Unique hospital identification number
7.	COW	Computer on Wheels
8.	CTVS	Cardiac Thoracic Vascular Surgery
9.	GDA	General Duty Assistant
10.	IPS	International Patient Services
11.	MSSH	Max Super Specialty Hospital
12.	OPEX	Operational expenditure
13.	PAC	Pre-Operative Assessment Clinic
14.	RRT	Rapid Response Team
15.	TAT	Turn Around Time
16.	ETO	Ethylene oxide

OBSERVATIONAL LEARNING

INTRODUCTION

Max Healthcare follows a core of 'Patient Centred Care'. Widely acknowledged nationally and internationally for its quality patient care. Max has successfully implemented the "Medical Excellence Model" through its clinical team of expert physicians and nurses who work together in an integrated manner, assessing patient needs, ordering tests, planning treatments, scheduling surgeries, monitoring progress and planning for early discharge to home.



The pillars of this model include:

- Clinical governance
- Credentialing and clinical privileging of physicians & nurses
- Use of standardized, evidence based protocols
- Patient and staff safety
- Infection control
- A culture of audit and continuous professional development

Every department of the hospital was observed carefully for its working, staff, hierarchy, physical set up and major challenges faced by them and suggestions were made to overcome those challenges.

The hospital has four key areas of specialties:

- Institute of Cardiac Vascular Surgery.
- Institute of Bariatric & Metabolic Surgery.

- Institute of Oncology.
- Institute of Nephrology.

MODE OF DATA COLLECTION

Data collection involved discussions with the HODs on the managerial issues and talking to the other staff and going through the records.

Sources of Data

➤ Primary

- By interacting with the HODs, executives, Doctors and other employees of the hospital.
- By interacting with the patients and their attendants.
- Through direct observations.

➤ Secondary

- Through registered records
- Through website of the hospital
- Literature available about the hospital like magazines, pamphlets, brochures, CDs, written documents

GENERAL FINDINGS

FRONT OFFICE

- First contact point between the patients / their attendants coming to the facility.
- Gives directions to them about the locations of various departments.
- Helps in planning timely discharge a day before by inquiring about the same from the concerned consultants.
- Performs in patient and out- patient registration.
- Does appointment scheduling of the patients.
- Makes doctors' available summary.
- Insurance management.
- Does registration and scheduling of preventive health check-ups.

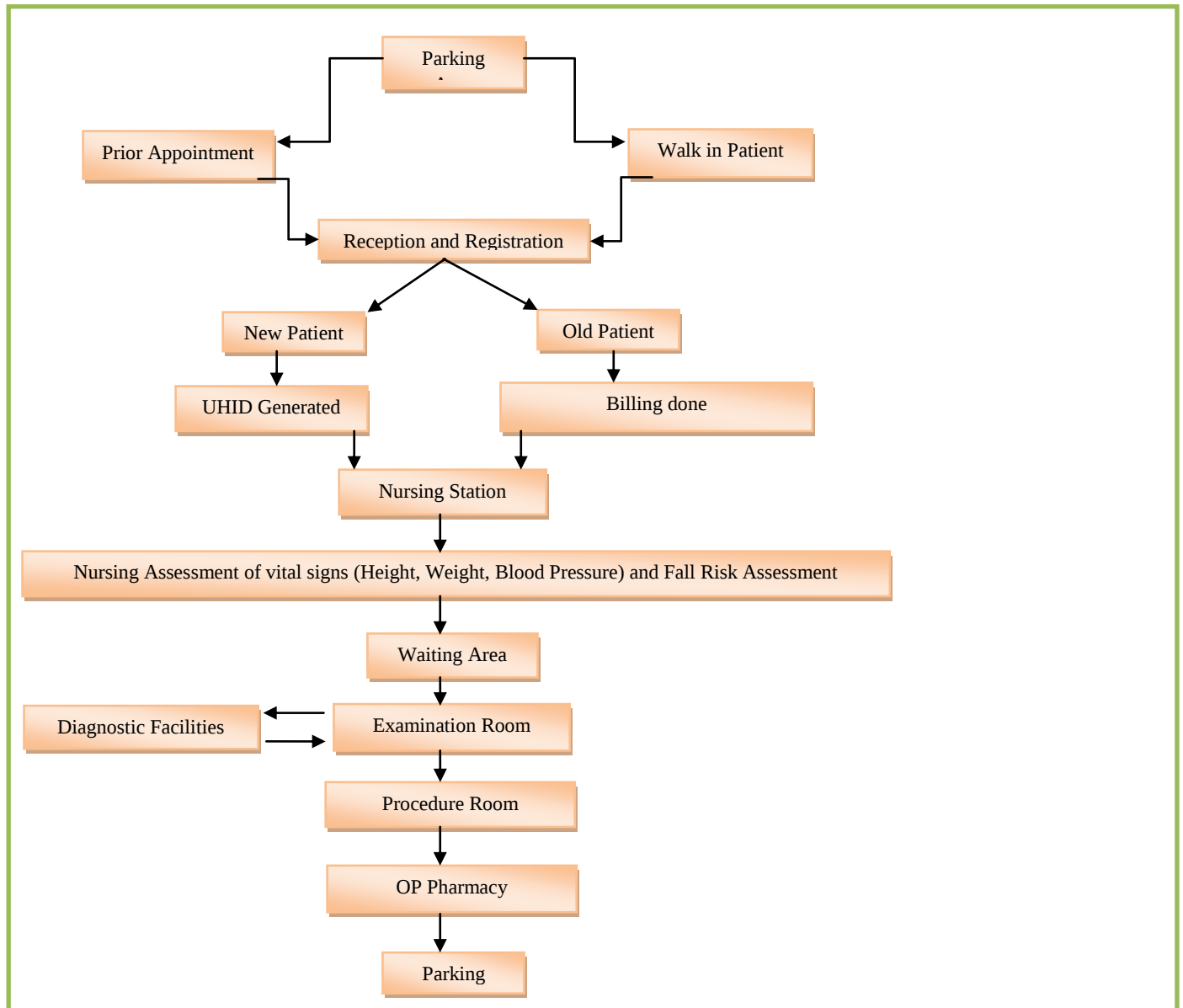
Challenges

- Shortage of staff
- Huge rush during peak hours such as morning.

OUT-PATIENT DEPARTMENT

- Each INSTITUTE of Max Saket hospital has its own OPD area as well as IPD area / day-care area wherever applicable with doctor's chambers and procedure rooms.
- Every OPD has a procedure room and its own Front Desk.
- Appointments are centralized and are recorded on the Hospital Information Management System. As soon as appointments are fixed, a text message is sent to the patient confirming the appointment, and a reminder message is sent on the day before the appointment. No walk-in patient is turned away, and the staffs try to accommodate these patients between the appointments already scheduled for the day.
- Each OPD waiting area has the capacity to handle 70-100 patients waiting.
- In case of a new patient, registration is done which is valid pan-Max and for life time of the patient and a UHID is created which becomes a unique identification for all his health related information.
- For both old and new patients initial assessment is done at the nurse station where patient vitals (height, weight, blood pressure, pulse rate) are measured and then the patient is guided for the doctor's consultation room.

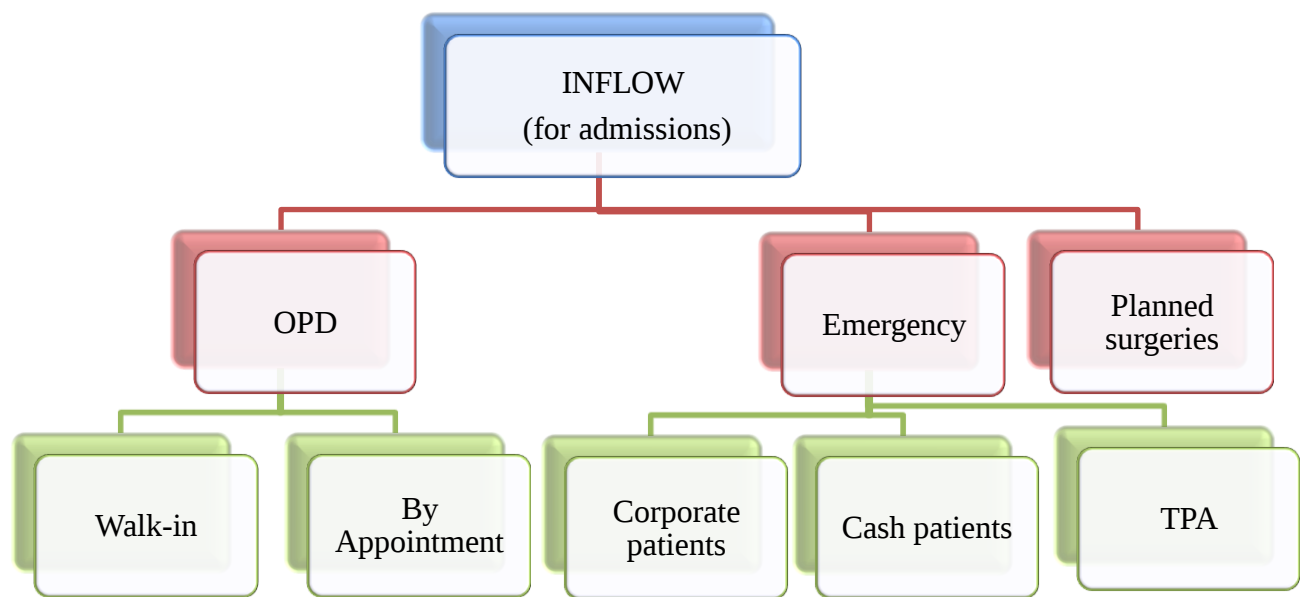
The general process flow that is followed in all the OPDs is as follows:



ADMISSIONS DESK

- If the patient has to be admitted to the hospital , he/she first reports to the admissions desk wherein all the paperwork is completed , do's and dont's as well as patient's rights and duties are explained to him. An initial token amount is deposited here by the patient which is according to his preference of the room (be it economy , single , twin sharing or suite)
- In case of TPA patients, the admission has to be reported to the insurance company within 24 hours.
- STAFF – 70-80;work in shifts with TPA staff working only from 5-5.

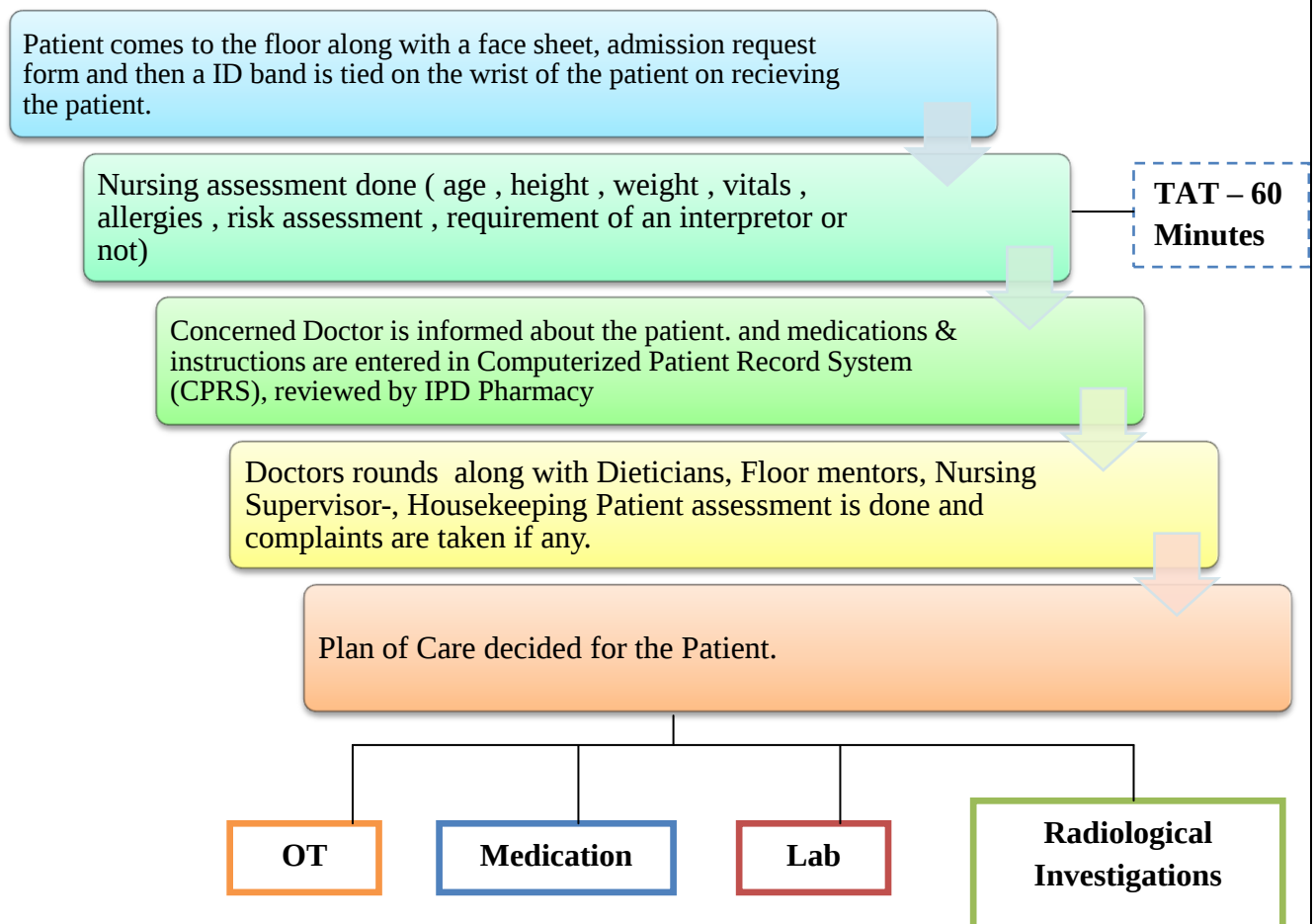
ISSUES- Huge departmentalisation which causes co-ordination problems



IN-PATIENT DEPARTMENT (IPD)

- IPD is distributed over four floors (2nd-6th) in the east wing and over five floors (2nd-6th) of west wing of Max hospital including a total number of 539 beds.
- Every bedside has:
 - Details of Consultant, Nurse and Mentor written at the top of every bed
 - Room equipment checklist – side rails, Oxygen, Suction
 - Important Instructions
- The rooms available in IPD have the following structure of beds per room:
 - Economy room – 4 beds per room.
 - Twin Sharing – 2 beds per room
 - Single Deluxe
 - VIP suite
- Every floor has a central nursing station with
 - Information Board covering:
 - Designation & Contact numbers of
 - Duty doctor
 - Administration Staff

- Floor Mentor
- Support Staff
- Ward Secretary
- Bed Manager
- Nurses' names with shift timing and designation(8-10 nurses per shift)
- Crash Cart parked next to the nursing station
- Computer on wheels (COW) - 4
- Cupboards with forms- down time form, investigation track sheet, blood request form, PAC sheet, informed consent, inventory files and registers
- Medication rooms – 2 ;Pantry – 1
- Records room
- Biomedical Waste Disposal
- Nurse to bed ratio = 1:5 or 1:6
- General Duty Assistants (GDAs) = 2-3 in every shift
- Average Length of Stay (ALOS) for normal Laparoscopic surgeries = 2-3 days
- Quality Indicators are: Patient Fall, Hypoglycaemia, Needle stick Injury
- Process of admission of new patient to IPD



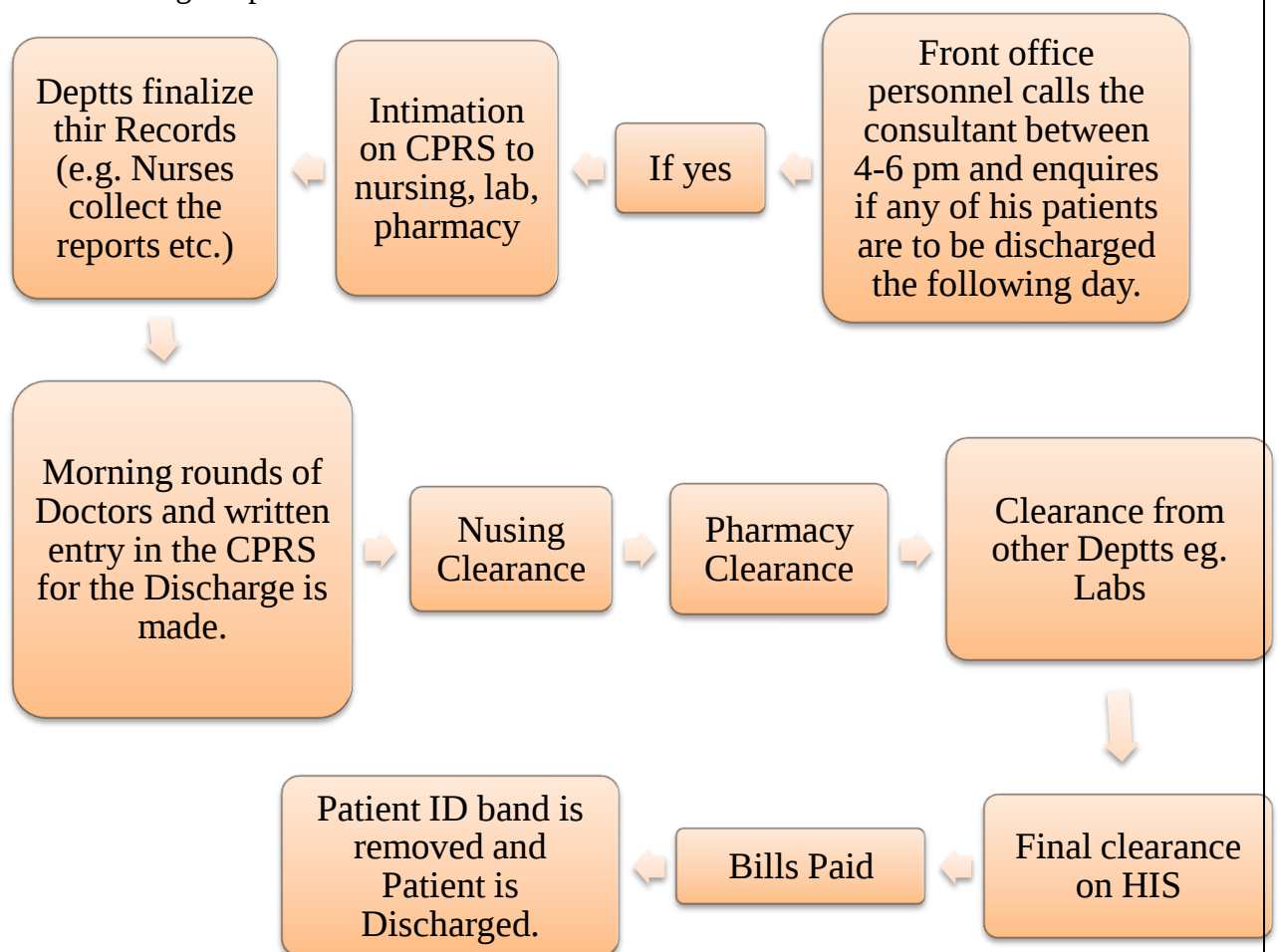
- **BARRIER NURSING-**

Isolation of the patient in case the blood or urine culture of the patient has been tested positive for any infection so that the infection doesn't spread to others .

- **REVERSE BARRIER NURSING-**

Done in cases where patient is immuno compromised so that infection doesn't travel to him from others.

- Process of Discharge of patient from IPD.



EMERGENCY DEPARTMENT

Due to the unplanned nature of patient attendance, this department provide initial treatment for a broad spectrum of illnesses and injuries, some of which may be [life-threatening](#) and require immediate attention, except for major burns. It is located at the ground floor with its own dedicated entrance and operates for 24 hours a day.

Ambulance- 2 ACLS (with CCTV camera for telemedicine, Suction Cardiac Monitor, Defibrillator, Oxygen Pump) and 2 BCLS (Ferno Stretcher, Oxygen Pump)

Patients are either transferred to other departments or are discharged within 4 hours. Max Super Speciality Hospital, Saket had made a world record for management of MI patient in emergency department from entrance to the balloon time in cath lab, in less than 35 minutes.

Response time:

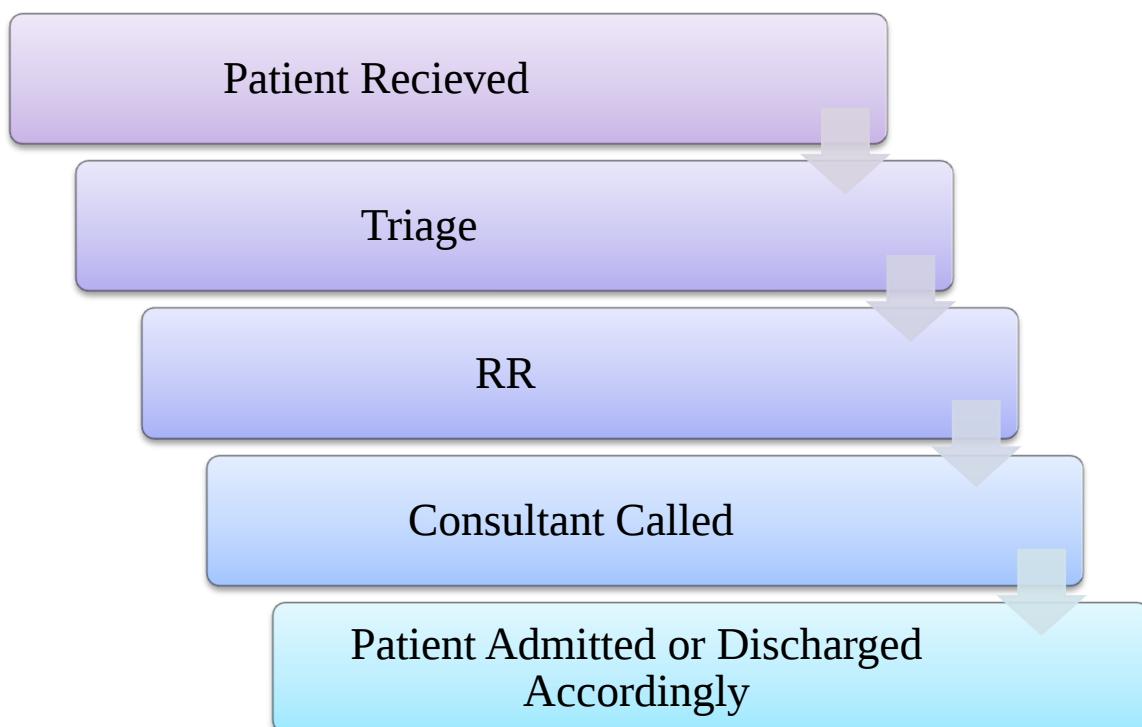
- EMO response time <1 min
- Consultant response time <60 min
- Code blue response time<3min
- Ambulance response time<10 min

Infrastructure:

- Total 16 bedded triage
- Resuscitation suite -1 bed
- Urgent care area – 4 beds
- Observation area – 9 beds
- Clinical decision unit – 2 beds
- Doctors work station-is located in the centre of the urgent care area
- Store room- is located behind the reception. Medications are filled twice a day and stock of two days is kept in advance for Sunday. Narcotics are also available and kept in double lock and key system.
- Hospital information system and CPRS
- COWS(computer on wheels)
- Waiting area for patient's attendants is outside the department.

Staffing:

1. Senior consultant (Emergency medical officer)
2. 4 doctors
3. Team leader
4. Emergency physicians - 3
5. Nurses : 32 (8 nurses per shift)
6. 2 personnel at reception
7. Paramedical staff for ambulance
8. 4 GDA per shift
9. Outsourced staff : security personnel.

Process Flow

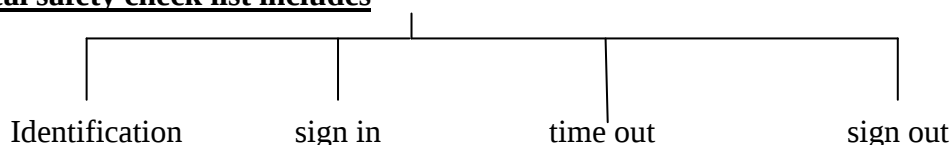
OPERATION THEATER COMPLEX

Operation theatre complex of East wing is located on first and second floor. Operation theatre complex has 11 operation theatre assigned to various departments. Cardiac, oncology , bariatric laparoscopic, gynaecology, ENT and plastic surgeries are performed in these operation theatres. Operation theatre complex of west wing is located on first floor. It has 7 operation theatres for various departments. Orthopaedic, neurology and general surgeries are performed here.

Organization of staff: The staffs of Operation Theatre are organized into four groups:
Anaesthetist and surgeon, nursing staff, technician, supportive staff.

- Average number of cases done per day – 30 in each wing
- Temperature- 21 approx
- Humidity – 50-55
- Light – 2000lux in the centre of OT table and decreases on moving farther
- OT booking is done through online . 2 types of surgeries are performed – *elective*: surgeon gets PAC done and gives an appointment ;*add on*: manual booking of OT in case there is cancellation of the scheduled cases due to any reason.
- Each OT complex has a separate material store and a TSSU(Theatrical Sterile Supply Unit).
- Staffing ratio- Nurses : patients – 4:1(pre-op) ; 2:1(post-op)
Technicians : patients- 1:1
- OT Utilisation – average is 70%
- Max super speciality hospital recently got a GREEN OT certificate which signifies minimal amount of pollution caused by OT gases and acceptable standards of practices being followed here .
- Sterilisation is done by EtO (12 hrs); autoclave. Fumigation is done twice aday in the morning and evening.
- Bio medical waste disposal is done every 2 hours.
- No. Of pre-op beds -3
- No. of post-op beds -4

Surgical safety check list includes



- Quality indicators: wrong patient , wrong surgeon , wrong surgery , return to OT(within 7 days) , waiting time for OT

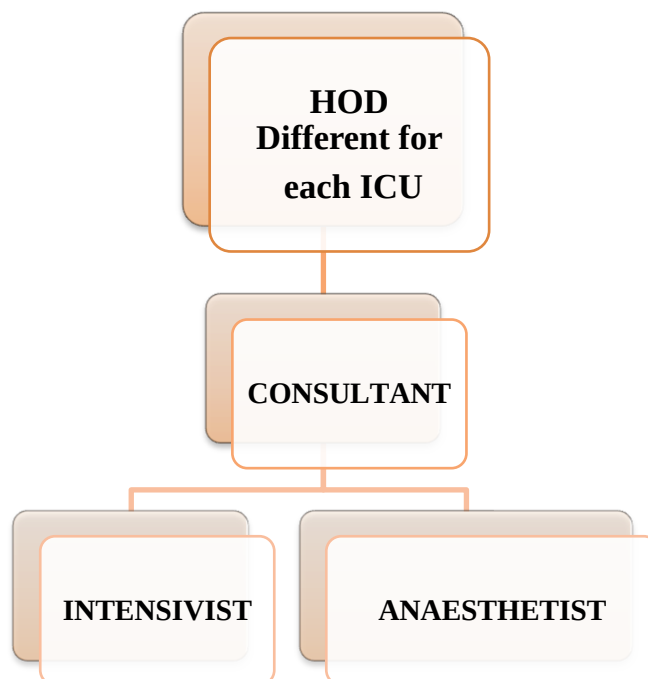
INTENSIVE CARE UNIT(ICU)

Max Saket has a total of 7 Intensive Care Units in the Hospital : 95 ICU beds in East Wing and 79 ICU beds in west wing

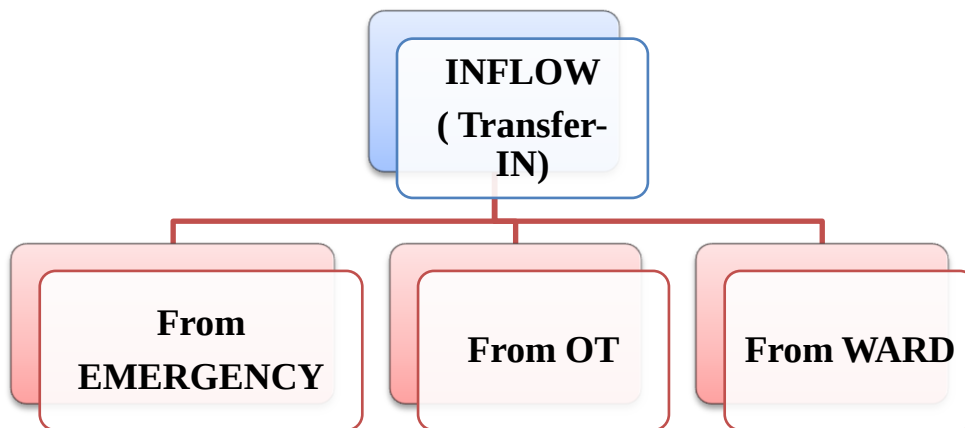
1. Respiratory ICU – 8 Bedded
2. Medical ICU – 8 Bedded
3. Neonatal ICU – 8 Bedded
4. Apex Coronary Care - 16 Bedded
5. Stroke ICU - 8 Bedded
6. Neurosurgical ICU – 8 Bedded
7. CTVS ICU - 17 Bedded

All Intensive Care Units have a 24 hour service of Intensivist and an Anaesthetist.

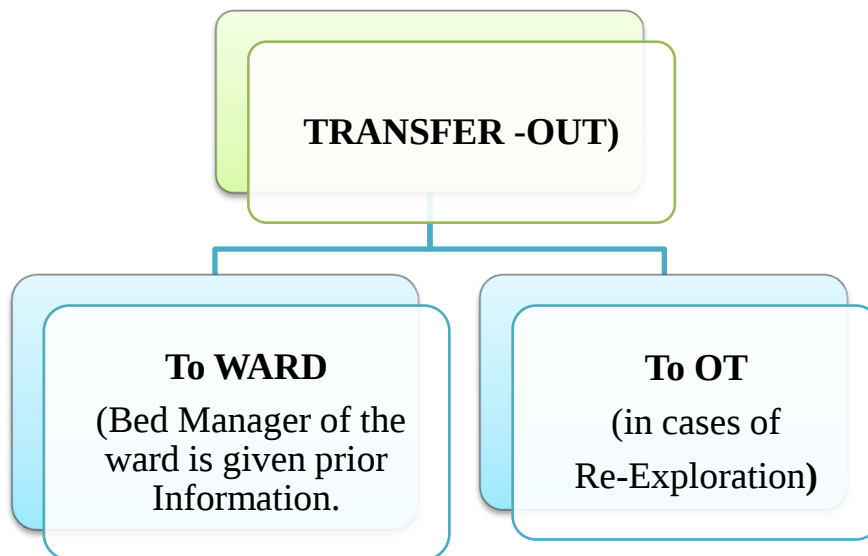
Hierarchy



Patient Flow



Before hand information is given on call to the ICU for *transfer-in* of the patient.



- Patient: nurse – 1:1(for all patients)
- Patient counselling – done throughout the day ; Relative counselling – done twice a day by the Intensivist .
- Protocol for infected patients –
 - Isolation
 - Visitor's policy- no visitor allowed inside the isolation room
 - Aseptic policy
 - Full PPA
 - Separate linen disposal in separate bags
 - Separate dressing trolley
 - Separate housekeeping material- dusters, mops etc

- Quality indicators-
 - Patient falls
 - Bed sores
 - Medication error
 - Nosocomial infections

All the Quality indicators are duly noted in “Quality Flash” and it is audited time to time and measures are taken to reduce the number of incidents.

CATH LAB

Catheterization laboratory or cath lab is an examination room with diagnostic imaging equipment used to visualize the arteries of the heart and the chambers of the heart and treat any stenosis or abnormality found.

Diagnostic procedures performed here are:

- Angiography
- Electrophysiology study(EPS)
- Cath study

Out of these 3 angiography, angioplasty and cath study is done in cath lab 1 and EPS is done in cath lab 2.

Other procedures are:

- Percutaneous Transluminal Coronary Angioplasty
- Peripheral Transluminal Angioplasty
- Radio Frequency Ablation
- Permanent Pacemaker Implantation
- Intra Cardiac Defibrillation
- Cardiac Resynchronisation Therapy Defibrillator Device
- Cardiac Resynchronisation Therapy Pacemaker
- Left and right sided pressure studies
- Closure of some congenital heart defect

Slots are booked for everyday as per the doctors’ and patients’ convenience. About 70% of the slots booked are treated everyday

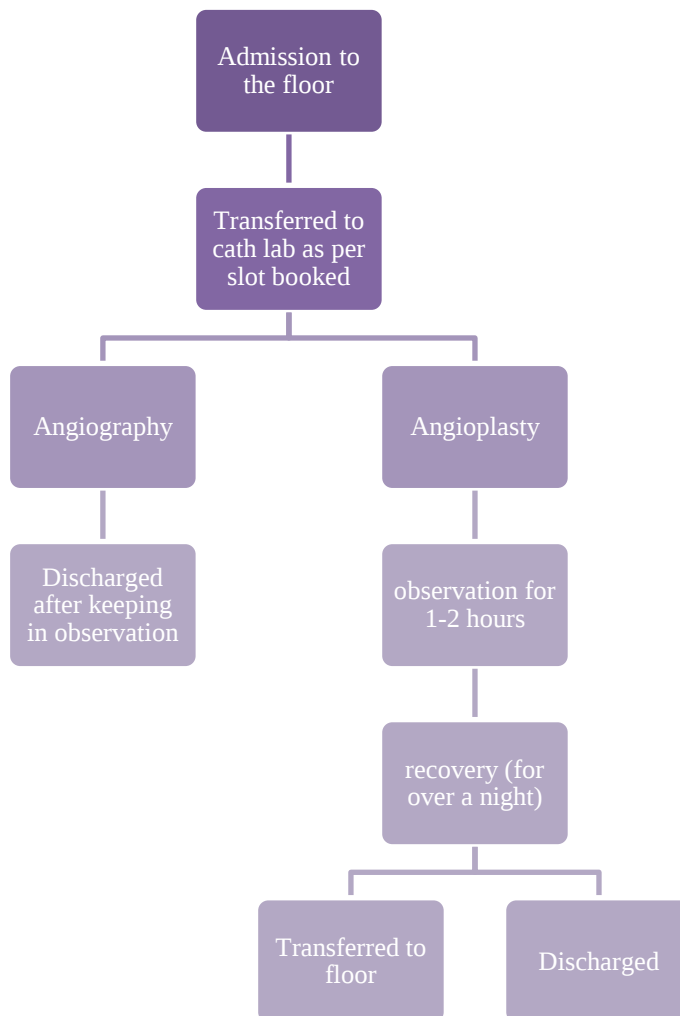
Units of cath lab:

1. Cath lab 1
2. Cath lab 2
3. Technical room
4. Observation area
5. Technician room
6. Store room and utility room
7. Observation area-7 Beds
8. Instrument washroom

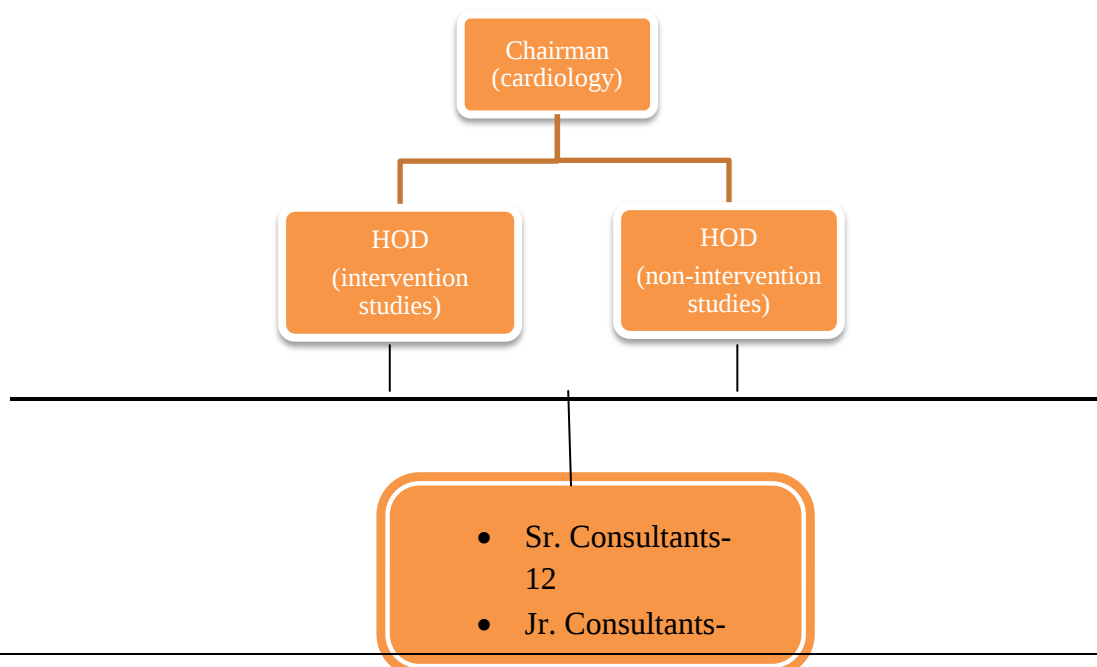
Location: Cath lab is located on the first floor with the vicinity areas as

- Emergency department
- Operation theatre
- Cath recovery-14 Beds
- Coronary care
- CTVS OT
- SICU
- PICU
- MICU

Process Flow of Patients



Staff



DEPARTMENT OF LAB SERVICES

INTRODUCTION-

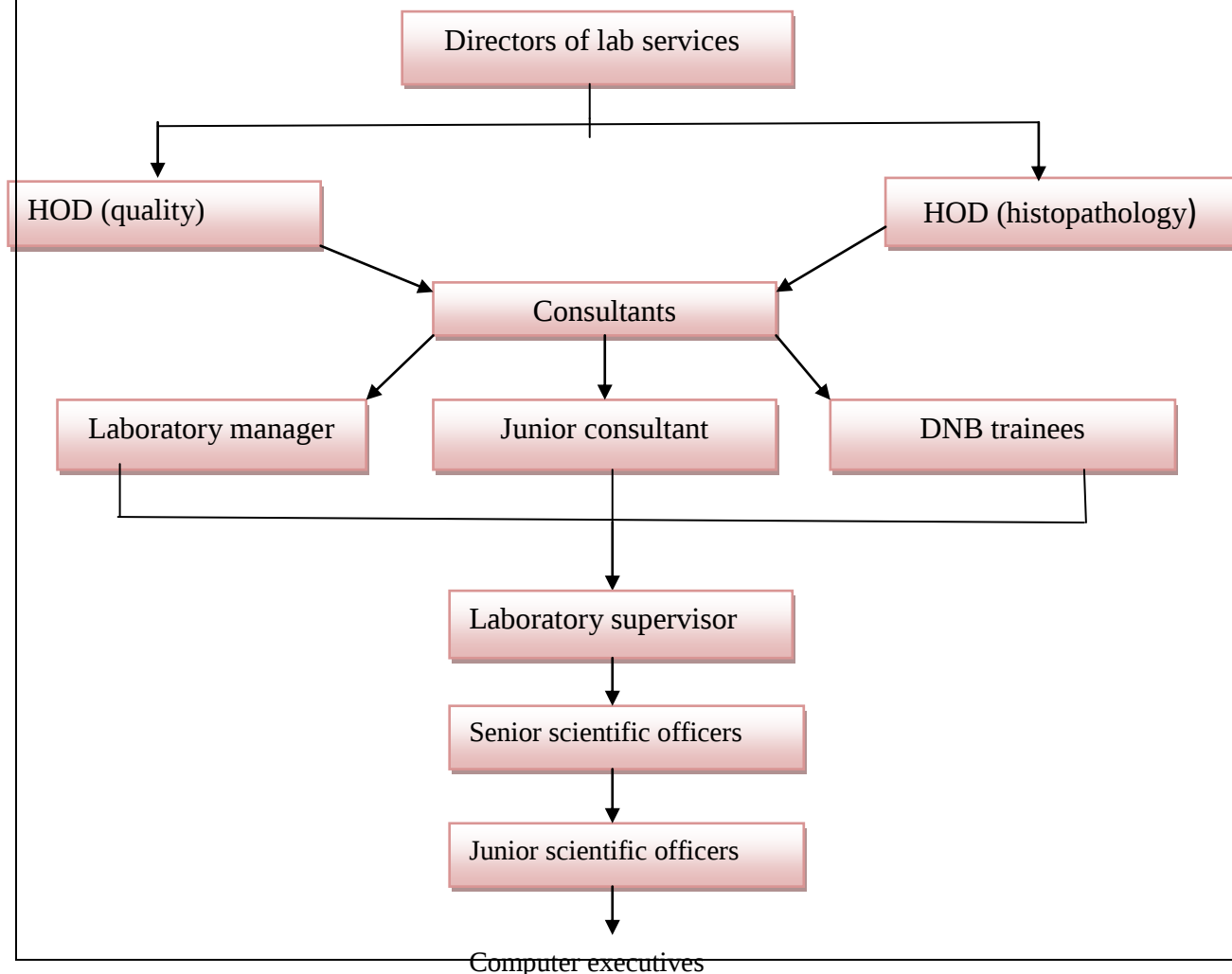
An ISO 9001:2000 certified lab, it is open 24 hrs a day. It's a high-tech lab with fully automated instrument which are directly interfaced with **hospital information system** and **laboratory information system**. Facility of stat tests (emergency) and sample collection from home is also available.

LABORATORY COMPRISES OF THE FOLLOWING DEPARTMENTS-

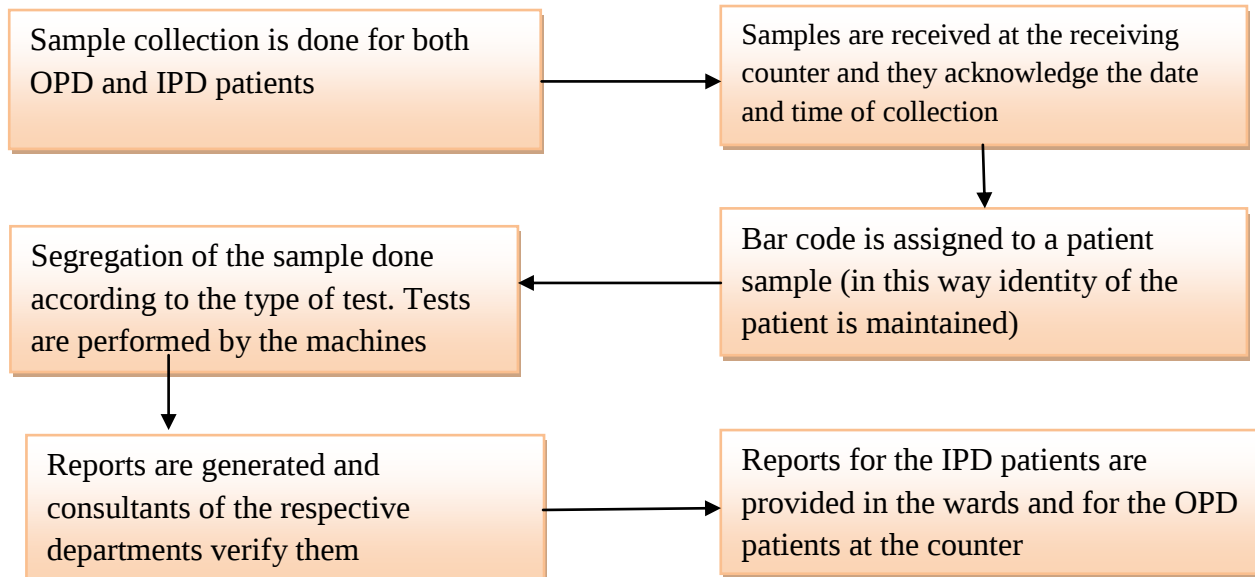
- Biochemistry
- Haematology
- Immunoassay
- Histopathology
- Clinical pathology
- Serology
- Microbiology

HIERARCHY- The Department of Lab Is Broadly Divided In Two Departments

- Lab medicine
- Histopathology



PROCESS FLOW-



LABORATORY INFORMATION SYSTEM-It is connected with hospital information system

- Sample received-red colour
- Samples acknowledged-yellow colour
- Test done-blue colour
- Result verified-green colour
- Billing done-pink colour

RADIOLOGY DEPARTMENT

Situated at the ground floor of the west wing of the hospital.

The total staffs working in the Radiology Department are 60.

Procedures done in the department:-

(1) Routine X-Ray studies

(a) Plain - e.g. chest, spine, etc

(b) Routine fluoroscopic procedures e.g. Barium studies

(2) Routine ultrasound studies

(a) Ultrasonography - e.g. Abdomen, Pelvis

(b) Doppler studies peripheral (B/W & colour) e.g. 2 D echo, vascular studies, etc

3) Mammography

4) Dexascan

5) Special imaging techniques

(a) CT Scan (Computerized Axial Tomography)

(b) MRI (Magnetic Resonance Imaging)

Divided into two parts:-

1) For Ultrasonography, mammography, Dexascan

2) For CT scan, MRI, X-ray, fluoroscopy

Consist of:-

1) Reception:- Counter for appointment and billing

2) Waiting room with general facilities like toilets, drinking water, air conditioning

3) Diagnostic room

4) Counseling room

5) Changing room

6) Film processing room

7) Radiologist office

8) Report collection room

There are two MRI and one CT scan machine in the department.

Timings for OPD patients:- 8am to 8pm

In between this IPD and Emergency patients are also taken.

Main OPD hours: - 8am to 6pm and after 8pm only IPD and Emergency patients are taken

Report collection: - If the scan is done before 12pm, reports are ready by the evening and can be collected in the same evening. And if done after 12pm, report will be delivered next day.

Patient who comes in the radiology department either walks in or takes the appointment.

Appointment patients are given preference whereas walk in patients have to wait. Emergency, doctor's referred patients or ICU patients scan is done as soon as possible.

Process flow in radiology department (OPD)

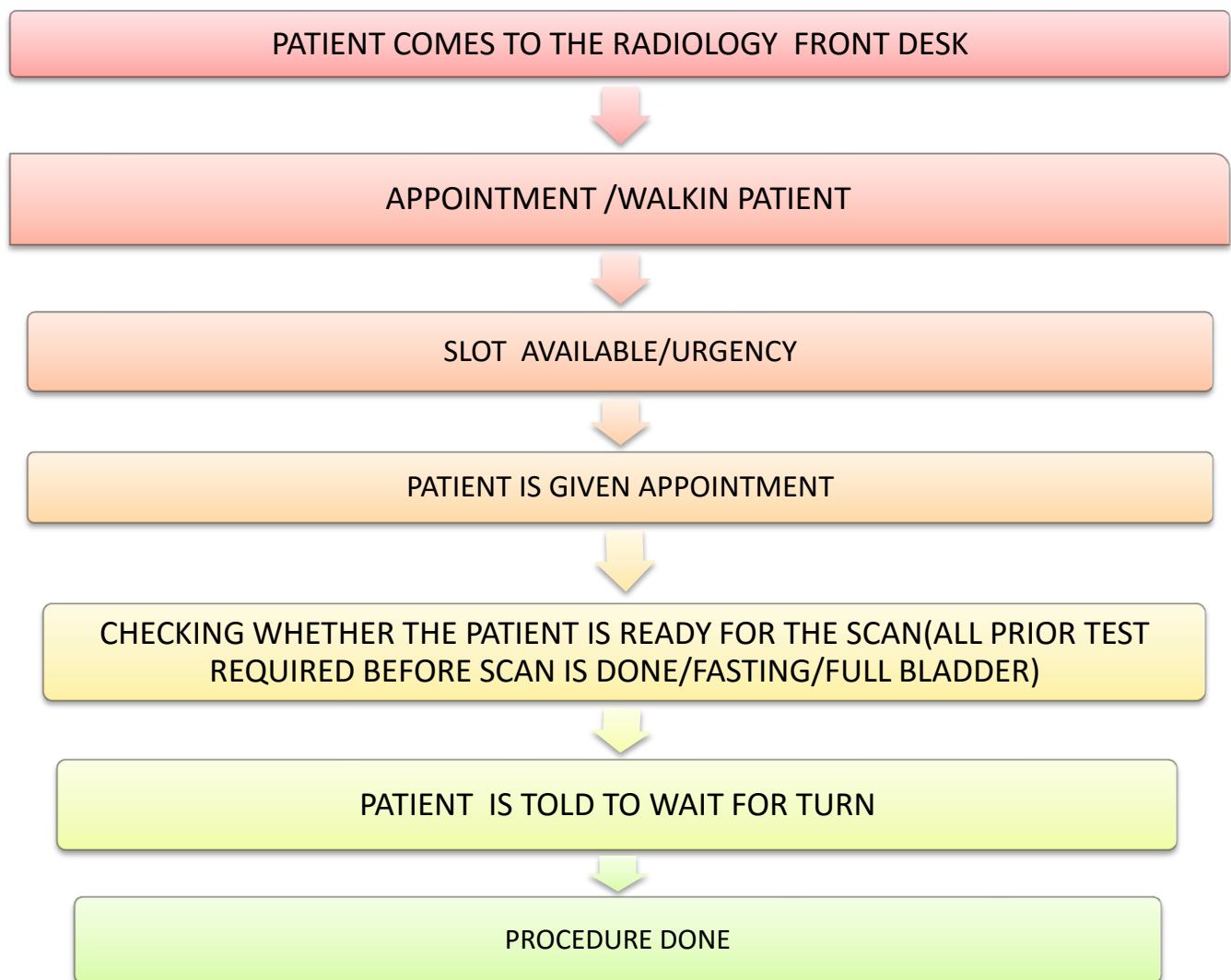


Figure:-Process flow in radiology department for outpatients.

Firstly, the patient comes to the radiology front desk after being prescribed by a doctor for the scan; the patient is either taken as a prior appointment or walk-in patient. The availability of the slot required is then checked for the

walk in patient by the front desk. Once the slot is checked, the requirements for the scan i.e. condition of the patient required to undergo the scan is checked. (E.g. proper creatinine level for renal patients). After that the patient is been provided the appointment and been told to wait for his turn. Finally the procedure is been performed.

- Emergency patients especially with a critical diagnosis – highlighted in the register and the consultant is immediately informed about the findings.
- Procedures wherein contrast is to be given, for example MRI, consent of the patient is taken prior to the procedure.

BLOOD BANK

Max super specialty hospital has its own blood bank. All blood groups are available. But it is preferred that patient arranges blood through his relatives or any friend and should give replacement.

Blood bank consist of

1. Sample collection area / reception area: In reception area a form is given to the attendant of the patient regarding their details before he/ she donates the blood.
2. Aphaeresis area: blood have several components including red blood cells, platelets and Plasma. Donor aphaeresis is a special type of blood donation in which a specific component platelet, plasma is withdrawn from donor.
3. Component room: In component room the whole blood is separated into packed cells, FFP (Fresh frozen plasma) and platelets.
4. TTI room: It is to diagnose transfusion transmitted infections. If donor is detected positive for TTI status it means donor have the potential to transmit the infection to their partner and children.
5. Issue room: This room is to issue the screened blood bags.

Staff of blood bank consists of 1 HOD, 2 blood bank officer, 1 technician supervisor, 16 technicians, 2 staff nurse, 2 computer executives, 4 GDA.

- The Department is headed by Dr.SangeetaPathak and the technical manager is Ms.Ruchi.
- The blood donation timings are from 9am to 5pm and approximately one volunteer comes for donating blood. Blood can be donated after every 3 months.
- The PRBC are stored for 45 days at 2-6 degree Celsius.
- The Platelets are stored for 5 days at room temperature 22± Celsius.
- The FFP (Fresh Frozen Plasma) are stored for 1 year at -40 degree Celsius.

CENTRAL STERILIZATION SERVICE DEPARTMENT

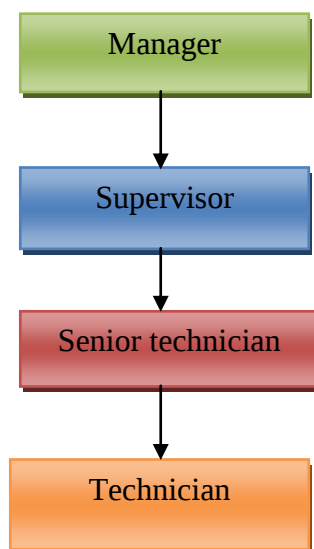
INTRODUCTION-

CSSD is the heart of the hospital infection control and the most important unit of the clinical support services. CSSD role lies in receiving, cleaning, packing, disinfecting, sterilizing, storing and disinfecting instruments as per well-delineated protocols and standardized procedures.

CSSD department in max healthcare, Saket is a centralized department and the location of the department is in the basement

The main aim of the CSSD department is to reduce the level of micro-organisms from 10^6 to 10^{-6} .

HIERARCHY OF THE DEPARTMENT-



The Department is headed by Dr.Sanjeev Bhatia.

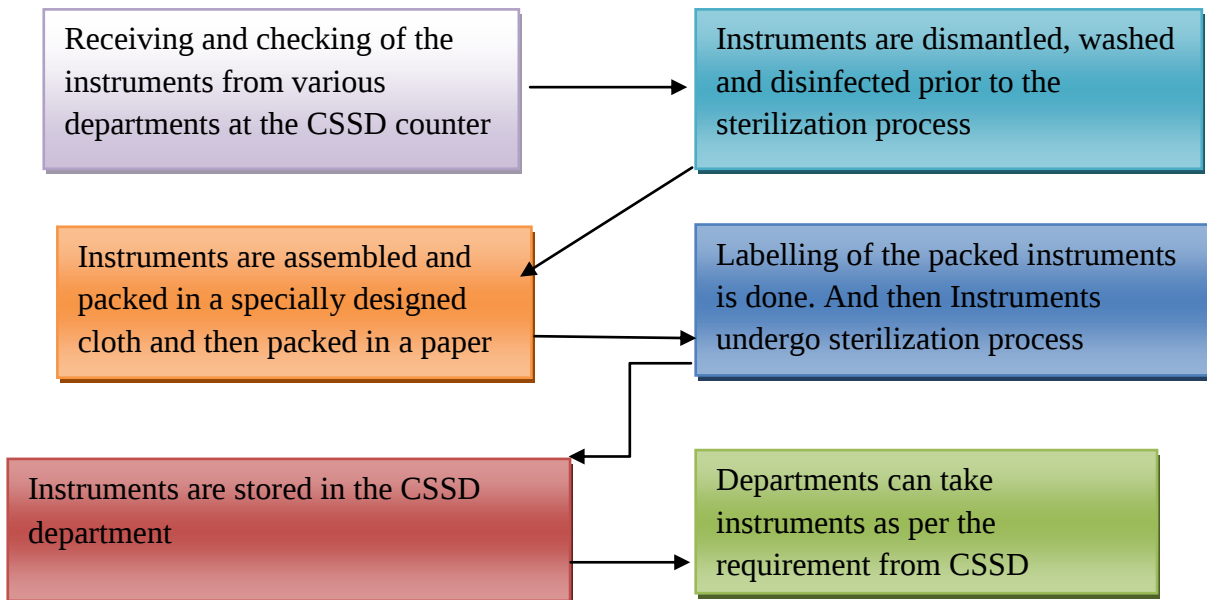
ZONES PRESENT-

- Decontamination
- Clean
- Sterile

Colour coding for the following zones -

- Decontamination area-red colour
- Clean area-blue colour
- Sterile area-green colour

PROCESS FLOW-



- At the time of receiving the instrument at the CSSD department, the instruments are counted, checked for any damage, segregated according to the method of sterilization required for the instrument.
- Instruments used for the washing of the instruments are fully automated and according to the European standards.
- For packing of the instruments medical grade paper and cloths are used which are specifically designed for the purpose(they have a zig -zag pattern)
- Once sterilized and packed instrument can be used within 6 months.

EQUIPMENT LIST-

- Washer
- Autoclave
- Plasma sterilizer
- ETO sterilizers
- Dryers
- Air guns
- Water guns
- Ultrasonic cleaners

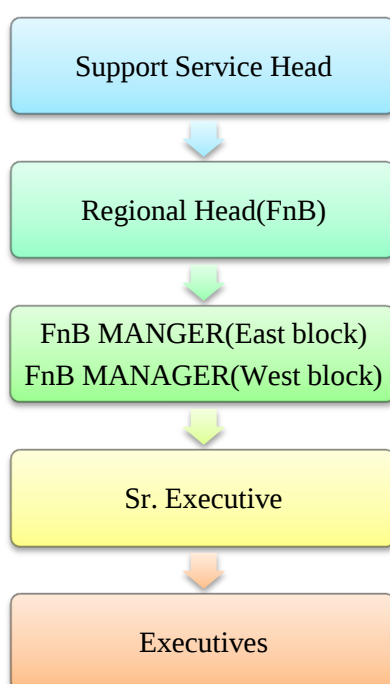
QUALITY INDICATORS-

Various quality indicators used in CSSD are-

- **Batch monitoring strip-** a yellow colored strip which is attached to every lot which on exposure to right temperature and pressure turns black

FOOD & BEVERAGES

- Food & Beverage department is responsible for the supply of food to the in-patients and sometimes their attendants (if required) and also for arranging food during various meetings and conferences in the hospital.
- The department has been outsourced to Sodexopvt, Ltd., however, the management and supervisory staff is in-house.
- Staff- 230 (outsourced) ; 11 (Max in house)
- Hierarchy

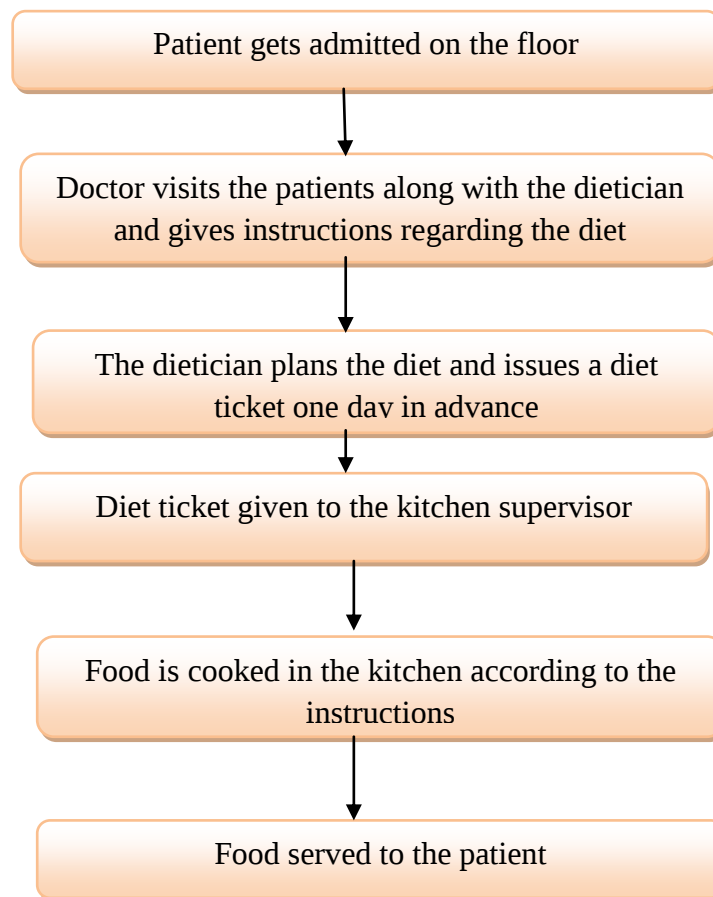


Time table for the diet of the patient

7-8AM	Breakfast
10:30-11:30AM	Soup/Beverages
1-2PM	Lunch
4-5PM	Evening tea
6-7PM	Soup
8-9PM	Dinner

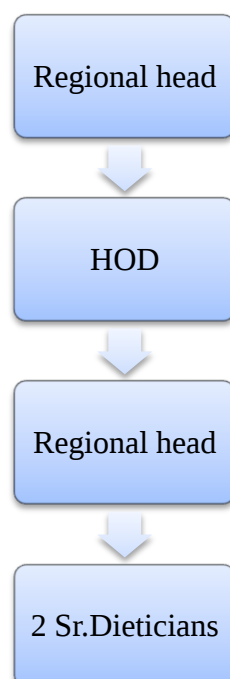
- Dinner of the same day, breakfast and lunch of the next day are decided prior in the evening and diet tickets are issued by the dietician and given to the chef.
- Apart from these if patients want to have something extra, those can be provided to the patient after consulting dietician, but for an extra charge.
- Different menus offered are:
 - Continental
 - Afghani – for middle east patients
 - No onion and garlic – for middle east patients
 - Indian

- **Process flow** of the department



DIETETICS

- The department plans diet for all IPD patients in accordance with the primary consultant's opinion on the same.
- Staff- 13 in total.
- Hierarchy

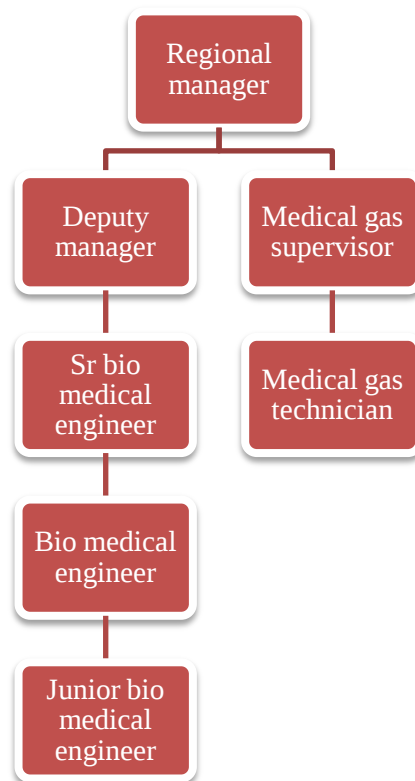


- Dietician: patient – 1:50
- Assessment of each patient to be done within 24 hours of admission and thereafter every 8th day after initial assessment.
- For enteral nutrition, all commercial supplements for each disease are available.

BIOMEDICAL ENGINEERING

- This department deals with purchase, installation and commissioning, training on operating, handling and maintenance of medical equipment in all departments of the hospital.
- Looks after running equipment and new equipment.
- For Running equipment
 - Preventive maintenance is done – to prevent breakdown, maintenance is done.
 - Calibration is done – i.e. to check how accurate an equipment is functioning
 - Breakdown call is checked for
 - Depreciation is measured
- For new equipment
 - Installation and commissioning is done.
- AMC and CMC records are maintained.
- CAPEX(Capital Expenditure) and OPEX(Operating Expenditure) registers are maintained.
- Equipment Incident report is made in case of any physical damage – it is filled mentioning how the damage did happen. Thereafter replacement or repair whatever is required is done.
- Gas manifolds are also handled by this department and Max is awarded green OT certificate because of the efficient dispersion of OT gases.

- Organisational chart



PHARMACY

Max 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.

PURCHASE

Auto purchase requisition is given to central purchasing team which is forwarded to vendor (outsourced). For purchasing the items ABC method is followed. Weekly requisition is done and vendors take minimum 3 days for delivery of drugs to hospital.

STORING OF DRUGS

Medicines are arranged according to VISTA (e-care) in Client patient record system via generic name in alphabetic order in racks, shelves, cupboards and drawers. Oral, parenteral and topical items are stored separately. Near expiry (expiry within 3 months) is stored in separate designated area to expedite the consumptions.

INDENT AND DISPENSE OF MEDICATIONS.

In patient pharmacy-

In CPRS, Medication orders posted by the clinicians is verified by pharmacist on PUTTY System labelled with (patient info, SSN no., drug name,) then the medications are dispatched after Billing via HIS (Hospital information system) and finally handover to GDA to dispense medicines. The Stat orders required immediately are dispensed within 30 minutes. The normal order is dispensed within 1 hour and routine order is delivered by 1 round per day.

NARCOTICS DRUGS

They are kept in double lock and key system. Documentation of narcotic drugs is appropriately maintained.

Narcotics drugs under statutory regulation being used in max hospitals includes: injection and transdermal patch of Fentanyl and injection and tab. of Morphine.

LOOK ALIKE AND SOUND ALIKE DRUGS

Look alike and sound alike medications have high medication error due to similarities in nomenclature and packaging.

In the main pharmacy stores, (SALA Medications) are stored separately in 2 adjacent racks with blue coloured sound alike and pink coloured look alike medications warning stickers to avoid confusion while dispensing.

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.

Licences acquired by Max hospital pharmacy –

- 1) Pharmacist License
- 2) Narcotics License

INVENTORY MANAGEMENT PARAMETERS

I. ABC Class

A Items: 7 days

B Items: 10 days

C Items: 15 days

II. EOQ - economic order quantity

III. LEAD TIME – Time from ordering to delivery of drugs

IV. VED – Vital Essential Desirable (According To move of drugs)

CALL CENTRE

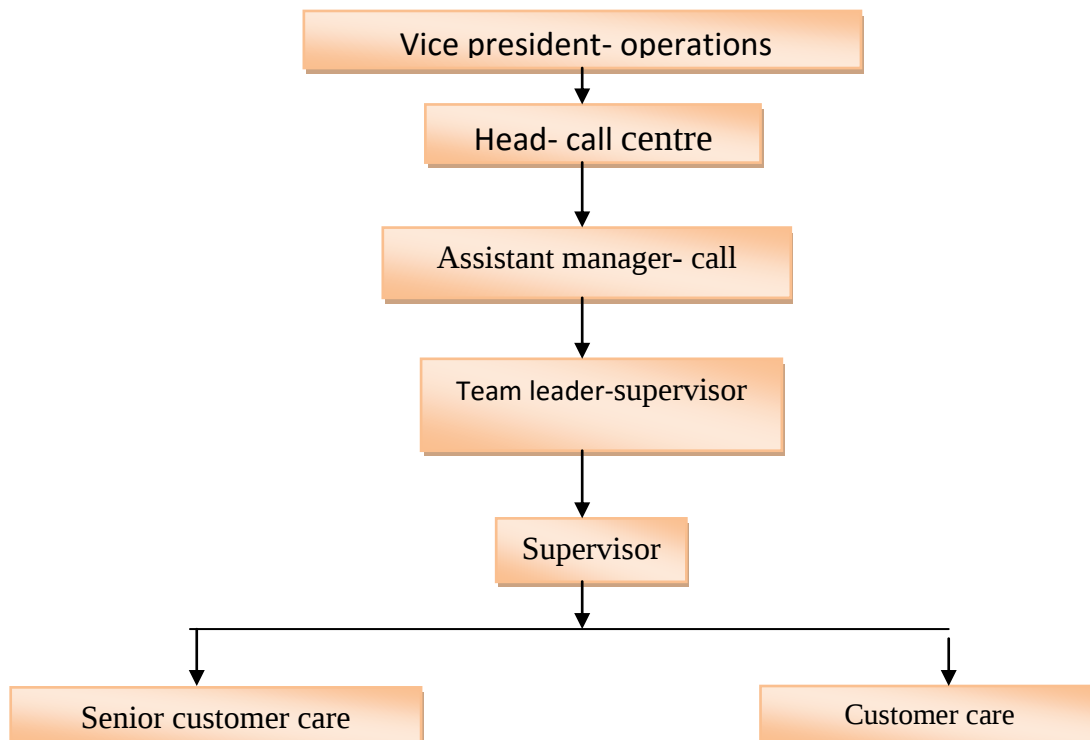
Call centre of Max hospital, Saket operates at 24*7. It is centralized patient contact centre for saket. It can be used as an information centre for all customers.

Call centre deals with:

- Doctor's appointment
- Health check ups
- Radiology and diagnostic appointments
- Patient's information
- Doctor's information
- Employee's information
- Speciality information
- Other department information
- It handles internal emergency e.g. Blue code

Main board line number is: 26515050

Organization chart:



SECURITY DEPARTMENT

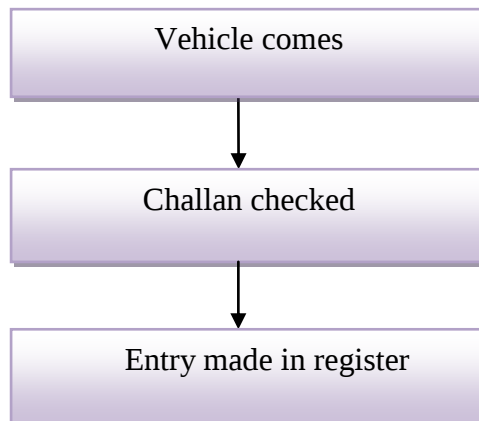
The security department is an eye and ear of every organization acting as a liaison between management and staff. The control room of Security Department is located on B1 (basement) of East Wing, Max Saket. Functions of Security Department:-

1. Security management:-

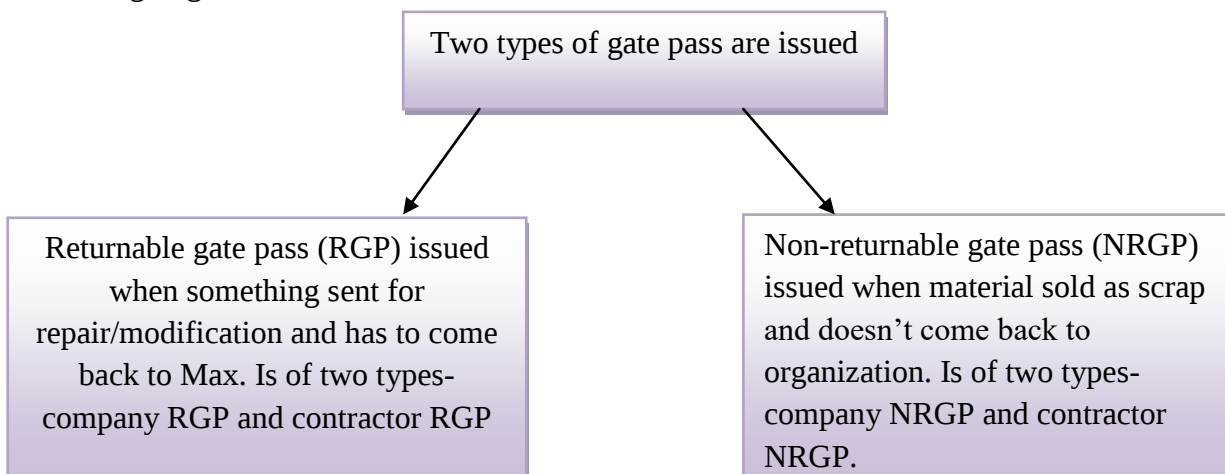
- Selection of people(guards and supervisors)
- Deploying of security staff to different floors and departments
- Checking of people entering hospital
- Turnout and grooming of security staff
- Training of security staff
- MLC handling
- Dispute handling

2. Material management:- It includes management of both incoming and outgoing materials.

a. Flow for incoming materials:-The incoming materials are received either from a company or a contractor to Max. The process flow is as under:-



b. Flow for outgoing materials



3. Disaster management:-

There are six emergency codes:-

1. Red- Fire
2. Black- Bomb threat
3. Blue-Cardiac arrest
4. Yellow- External disaster like earthquake
5. Violet-Violent patient
6. Pink- Missing patient

The SOP's and disaster management plans are prepared by the Security Department. Fire management system includes smoke detectors, sprinklers fitted on ceiling and fire shafts in all corridors.

Walkie talkies are an important source of communication.

Other disasters include floods, water logging, terrorist attacks.

4. Valet management:-

- Helps to optimally utilize the parking space.
- Within a time frame of maximum 7 minutes, vehicle is handed over to customer when asked for in porch.

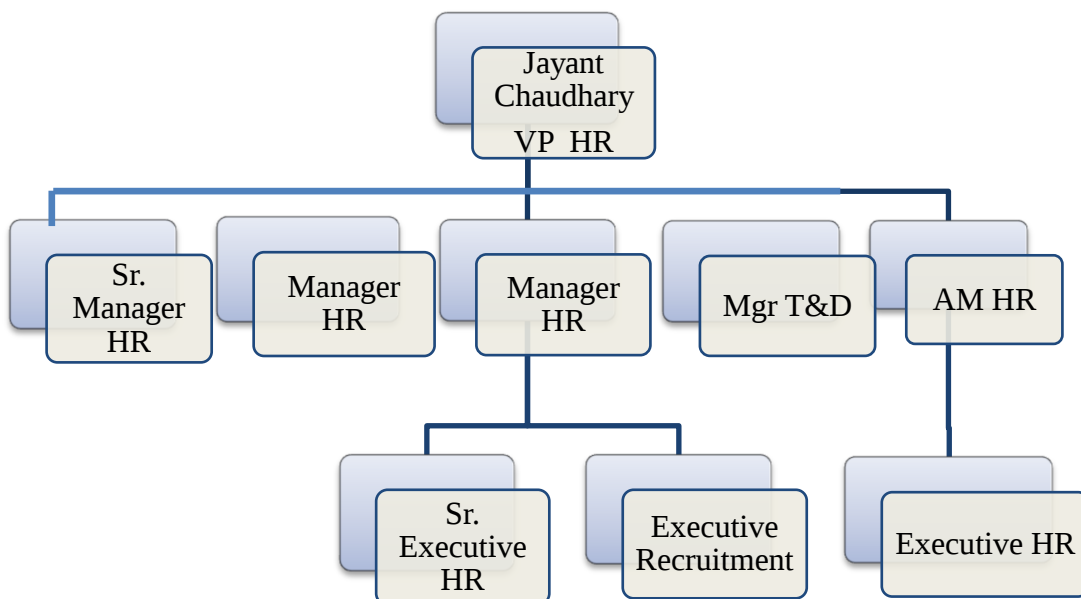
HUMAN RESOURCE MANAGEMENT

Human resource management (HRM or simply **HR**) is a function in designed to maximize employee performance in service of their employer's strategic objectives. HR is primarily concerned with how people are managed within organizations, focusing on policies and systems.

Following are the policies undertaken by the Human Resource Management Department:-

- Human Resource Planning Policy.
- Job Profile Format.
- Recruitment policy.
- Training and development policy.
- Induction and Orientation policy.
- Performance appraisal Policy.
- Complaint & Grievances Redressal Policy.
- Disciplinary Policy.
- Medical Discount Policy.
- Annual Medical Check-up Policy.
- Clinical credentialing and privileging Policy.
- Nursing Credentialing and Privileging Policy.

HR Structure



INTERNATIONAL PATIENT SERVICES (IPS) DEPARTMENT

It takes a lot to be a world-class health care services provider and as per patient registration data, over 11 Lakh overseas patients have been helped to get back to their normal lifestyle. This department, situated in East wing, is exclusively dedicated for the services of international patients.

Contact Procedure:

- Patient sends a query and/or reports
- IPS Team consults the relevant consultant and provides diagnosis, proposed treatment and estimate
- If required, a telephonic meeting may also be arranged
- Patient confirms if he wants to have treatment at Max Healthcare to provide Visa Facilitation Letter
- Patient confirms the arrival date and time
- IPS Team, in the meantime, books room, OT etc. for the patient
- Patient is received at the Airport and then, brought to the Hospital/Guest House/Hotel

Also, another contact procedure is as follows:

- Max hospital conducts free outreach OPDs in other countries, at least 1-2 per year
- Max hospital also has tie ups with different hospitals in these countries

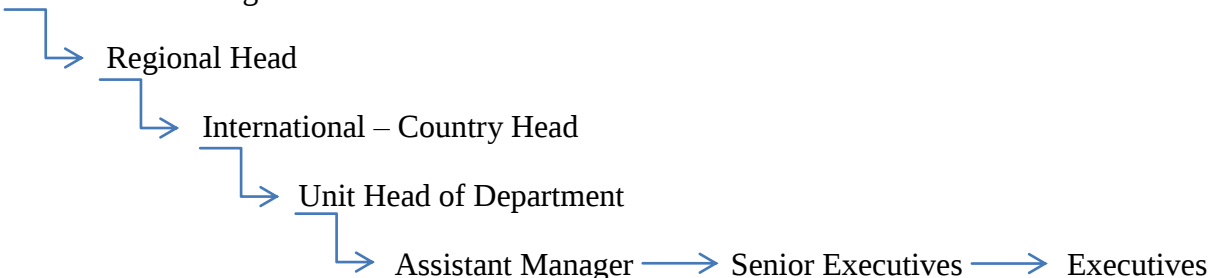
International patients avail treatment in India mainly because these facilities or treatments are not available in their respective countries, and are available at a much cheaper price in India than other countries such as US, UK or European countries. The countries from where patients come to seek treatment most commonly are Iraq, African countries (Nigeria, Congo), Oman, Uzbekistan, Afghanistan, Nepal, and Bangladesh.

The hospital provides:

- Various Regional Translators such as Arabic, Persian, Iraqi, Bangladeshi and Russian (In house interpreter).
- Assistance in ground transportation such as finding a shuttle, hiring a car or choosing any other mode of transportation within the city.
- Relationship Managers, who closely work with over 50 Diplomatic Missions and numerous Expat bodies to ensure that international patients have a comfortable and memorable stay in India.

Staffing:

Director Marketing





A STUDY ON TURN AROUND TIME ANALYSIS IN PLANNED DISCHARGES

AT

MAX SUPERSPECIALITY HOSPITAL, SAKET



Institute of Health Management Research, Jaipur

INTRODUCTION

Hospital discharge process is one of the very lengthy procedures. Discharge time taken by hospitals is one of the quality indicators. . Even if everything else went satisfactorily, as slow, frustrating discharge process can result in low patient satisfaction. Hence, maintaining an acceptable level of discharge time provides competitive edge to the organization. Hospital discharge plan includes clearance from all departments i.e. nursing, pharmacy, bill settlement, and inform patient regarding appropriate post-hospital treatment as per standard documentation.

The patients and their families are eager to return home; whereas, hospital needs to complete all the processes to ensure successful discharge and minimize readmission. Every hospital strives to improve quality through various measures, one of which is reduction in discharge time. The total time consumed in the discharge process is a summation of clearance time consumed by every department along with other factors related to patients and the process. However, discharge time cannot be brought down without analyzing the underlying factors that consume time during discharge process. The present study aims to identify the different factors that determine the total discharge time and identify the measures that can contribute in reduction of the total discharge time.

Mogli defines “discharge as the release of a hospitalized patient from the hospital by the admitting physician after providing necessary medical care for a period deemed necessary”. Sakarkar defines “discharge as the release of an admitted patient from the hospital”. Discharge process is defined as the process of activities that involves the patient and the team of individuals from various discipline working together to facilitate the transfer of patient from one environment to another. Soon after completion of treatment, the patient as well as his or her escorts expects to be relieved off immediately.

The process comprises of clinical, financial, legal and administrative and recordkeeping aspects starts right from writing of discharge orders to settlements of all kinds of hospital bills is a time consuming process; but if executed in an organized way with assistance from trained medical, para-medical and administrative staff, can be completed as per global standards or those prescribed by hospital accreditation boards like NABH at national level.

The time study measures the time required to perform a given task in accordance with a specified method and is valid only so long as the method is continued. Once a new work method is developed, the time study must be changed to agree with the new method. Time study is a direct and continuous observation of a task, using a stopwatch, video camera etc, to record the time taken to accomplish a task.

There are two ways in which a patient can be discharged from the hospital- planned and unplanned discharges. Discharge planning is essential to the concurrent patient care review system conducted as part of the hospital's utilization management effort. If discharge planning is delayed, patient's stay can be unnecessarily extended. Discharge planning is centralized, coordinated effort, to ensure that each patient has a planned program for needed continuing care and followups. When it comes to the discharge subject, it's the moment where the patient pays for the services enjoyed in the hospital and the management receives for the same. This we call Billing, which plays a vital role in the discharge process,

Benefits Of Planned Discharges

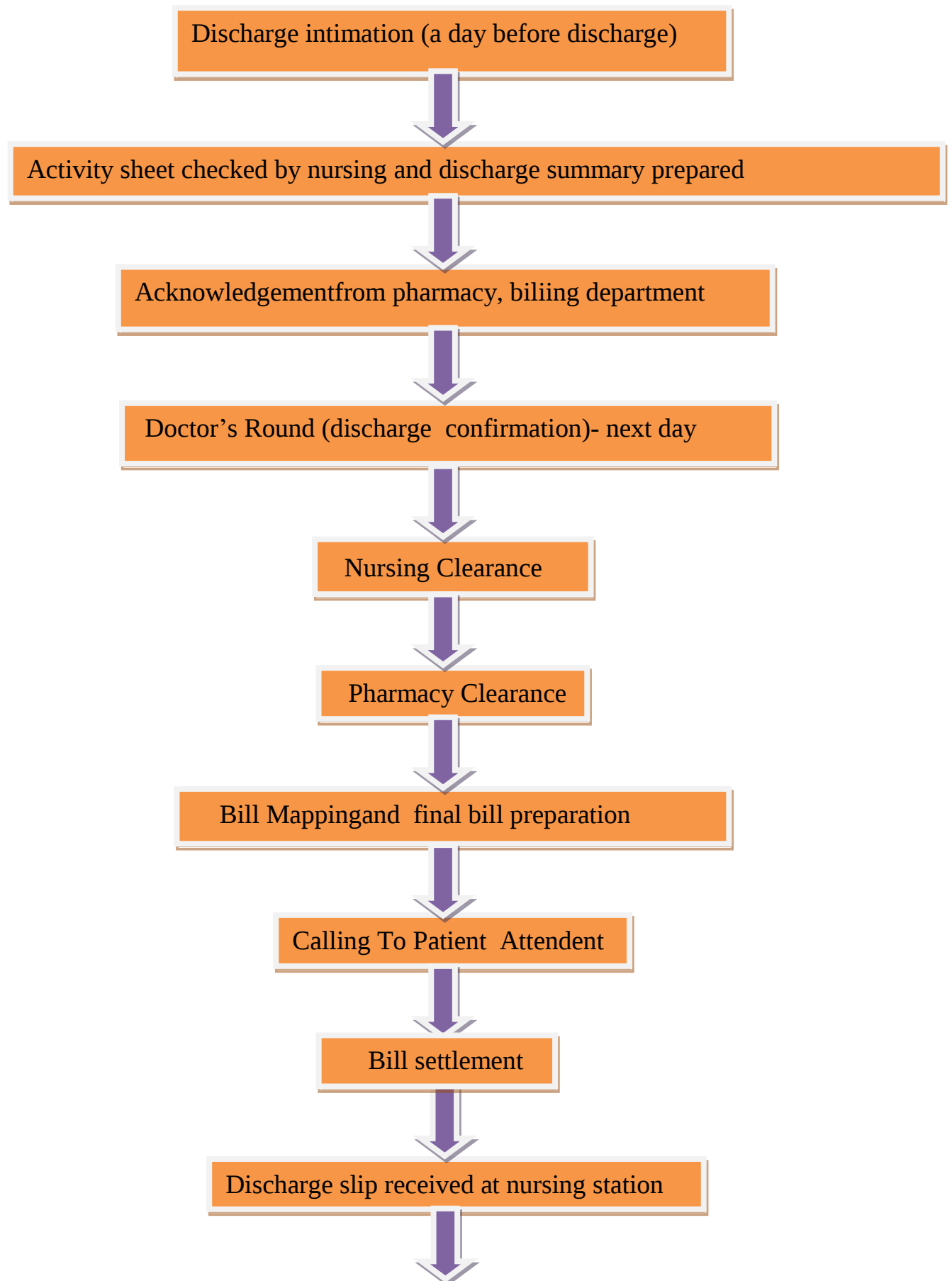
- The patients get discharged much before the new set of admissions take place and the hospital is able to turn around more beds for new admissions.
- The operational efficiency gets increased and as a result the patient satisfaction index will also go up as the hospital will rarely deny an admission due to non-availability of beds. Neither do the patients have to wait for allocation of a bed unless the hospital is completely full.
- The consultants will be happy because their patients will be satisfied and they can focus all their attention towards providing care to their patients.

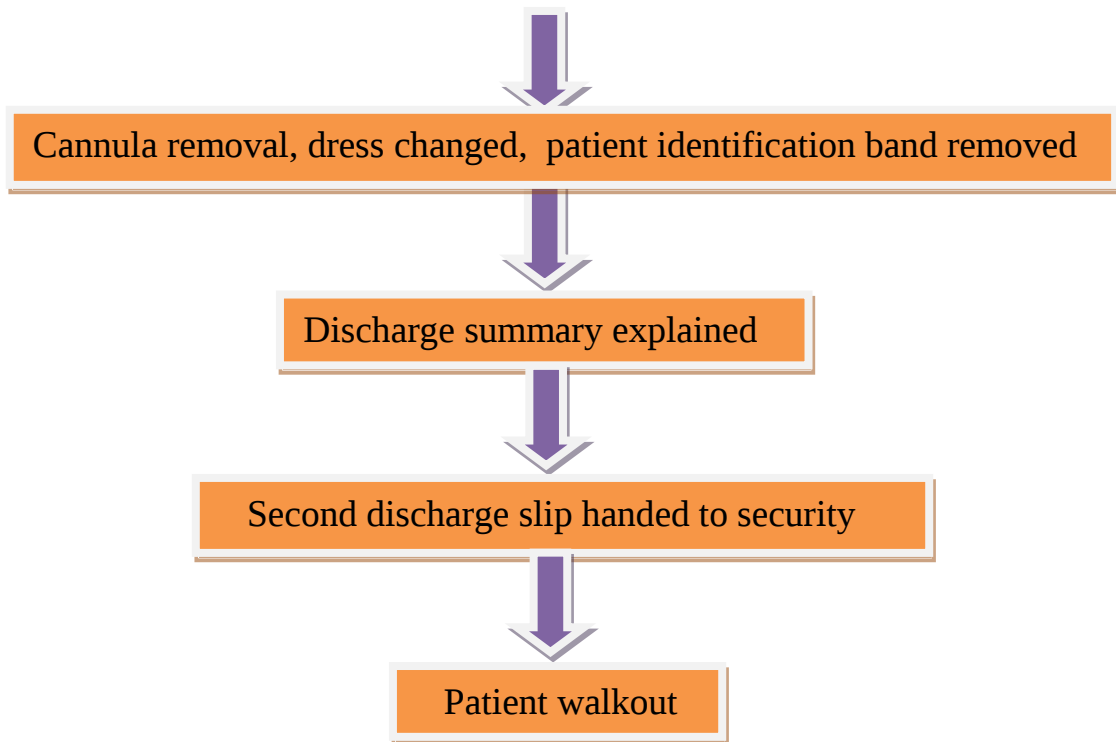
Therefore this study on turn around time of planned discharges is undertaken with the aim of giving better services for the patient satisfaction within the minimum time so that certain recommendations can be made to improve the planned discharge process and ensure a hassle free smooth discharge process. This can be done only with the help of thorough study of time taken for the whole discharge process beginning from Discharge order time till the patient walks out from the Hospital.

DISCHARGE PROCESS

Planned discharge process starts from the discharge intimation put by the floor mentor a day before and completes the next day with the final walkout of the patient. In planned discharges the activity sheet is checked and discharge summary is prepared a day before only. The pharmacy and billing also acknowledge the discharge intimation a day before. Next day the process starts from discharge confirmation by the doctors during doctors round and continues upto the patient walkout.

Below is the flowchart depicting step by step planned discharge process.





Thus, this time motion study was carried out on the 3rd floor East Wing of Max Superspeciality Hospital Saket with the following objectives:

- To observe and record the time needed for completion of discharge process for planned discharges
- To propose recommendations based on the study findings.

Third floor was chosen for this study because it is one of the largest floor with all major specialities and so has maximum number of admissions and discharges as well.

REVIEW OF LITERATURE

Many articles have been reviewed before carrying out this study of TAT improvement in planned discharges. Nagaraju (2005) defines the patient discharge process as ‘the final step of the treatment procedure during a patient’s length of stay’, and timely discharge as ‘when the patient is discharged home or transferred to an appropriate level of care as soon as they are clinically stable and fit for discharge’.

A comparative time motion study of all types of patient discharges in a hospital by Tak, Kulkarni, and More states that any hospital needs to work on finer aspects of the discharge process, to make it more patient friendly and less time consuming as it directly connects to patient satisfaction. This time motion study recorded the time needed for completion of discharge process for all type of discharges. Turn Around Time(TAT) or Time motion study is a direct and continuous observation of a task, using a stopwatch, video camera etc, to record the time taken to accomplish a task. It concluded that tedious discharge process contributes to patient dissatisfaction.

Another study on time management of discharge and billing process in tertiary care teaching hospital by Janita Vinaya Kumari aimed at ascertaining average time taken for the patient to be discharged.

This article on role of discharge planning and other determinants in total discharge time by Mehta, Nair, Rao and Shukla established discharge time, as a crucial quality indicator and presented measures to control the discharge time. The study concluded that planning the discharges reduced the total time of discharge process. Departmental clearance and patient-related factors also impact the discharge time. Hence, an effort should be made to plan as many discharges as possible to enhance the discharge flow process.

Failure to synchronize admissions and discharges commonly results when discharges are not managed efficiently. Creating a more consistent and predictable discharge schedule can help improve flow.

Traditionally, hospitals have attempted to "batch" discharges by establishing a set time for all patients to be discharged; however, this approach has been largely unsuccessful. Scheduling the discharge creates a continuous flow process, spreading discharge times throughout the day. This approach streamlines the process, better addresses the needs of patients and families, and helps coordinate the placement of patients who are admitted and transferred with discharges that occur throughout the day.

Hence, maintaining an acceptable level of discharge time provides competitive edge to the organization. Hospital discharge plan includes clearance from all departments, bill settlement, and inform patient regarding appropriate post-hospital treatment as per standard documentation. Every hospital strives to

improve quality through various measures, one of which is reduction in discharge time. The total time consumed in the discharge process is a summation of clearance time consumed by every department along with other factors related to patients and the process. However, discharge time cannot be brought down without analyzing the underlying factors that consume time during discharge process.

Health care processes are difficult to define because of their complexity. Assessing time definitions in clinical processes can help to analyse workflows in hospital information systems (HIS) and to identify weak points

RATIONALE

This study is indented tooobserve and record the turn around time (TAT) for planned discharges of the patient and to propose reccomendations based on the study findings.

It also finds out the reason for delay in discharges, how the bed management is affected in shifting a patient out from the ICU and for new admissions of the patients at Max Saket Super Speciality Hospital. If the discharge of patients from wards is delayed than shifting the stable patient from ICU to ward and admitting new patient into the hospital becomes difficult since the beds are not available. Furthermore, discharge time taken byhospitals is one of the quality indicators. Hence,maintaining an acceptable level of discharge timeprovides competitive edge to the organization.

PROBLEM STATEMENT

The discharge process is often complex and inconsistent, resulting in patient complaints, extended Turnaround Time (TAT) for discharge. The delay in discharge leads to poor bed management, difficulty in getting patients shifted out from ICU and difficulty in admitting new patients as well.

RESEARCH QUESTIONS

1. What are the reasons for delay in bed allocation
2. What are the causes for delay in discharges
3. What was the reason for delay in billing

OBJECTIVES

1. To observe and record the time needed at each interfacefor completion of discharge processfor planned discharges
2. To identify the gaps and area of maximum delay.
3. To analyse TAT (turn around time) difference between TPA and cash/corporate patient discharges.

METHODOLOGY

- ***Type of study*** - Cross-sectional observational
- ***Study population*** - Patient's admitted in Max Super Speciality Hospital, Saket, Delhi
- ***Study area*** – Third Floor Max Hospital, East wing, Saket, Delhi
- ***Duration of Study***- 3 weeks from 20th April to 10th May 2016
- ***Type of Data*** – Quantitative
- ***Technique*** – Direct Observation of Discharge process and followup of patients
- ***Tool*** – Discharge format
- ***Number of patients tracked*** - 164
- ***Inclusion criteria-***
 - Planned Discharges of Patients admitted on Third Floor at Max Hospital, East wing, Saket.
 - Protocols Followed by Floor Mentor, Doctors, Nurses, Billing, Pharmacy for planned discharges at Max Saket Hospital.
- ***Exclusion criteria-***
 - Unplanned discharges on third floor of East wing.
- ***Data collection*** - Primary and Quantitative (3 weeks)
- ***Data entry-*** Manually
- ***Data Analysis-*** Using bar charts. The observed values for each activity is noted down and then the average values for each activity for the day is taken out separately for TPA patients and cash/corporate patients. The mean values are compared using bar charts.

○ **OBSERVATIONS AND FINDINGS**

Discharge process at Max Superspeciality Hospital Saket is comprised of few parameters like:

Doctors' Round: This was to declare that the patient was fit for discharge. This was the main driver for the entire discharge process. The doctors generally came for rounds at their respective times morning , afternoon and evening. All the processes related to discharge started only after the confirmation of the primary doctor that the patient should be discharged .

Nursing clearance: After checking the nursing activity sheet nursing clearance is given by the nurses. The activity sheet updation starts soon after the intimation for discharge has been put up by the floor mentor. So, in case of planned discharges it is done by the nurses a day before discharge i.e. the day on which the discharge for the next day is planned.

Pharmacy Clearance: All the unused medications are returned to the pharmacy a day before the planned discharge. Only one morning dose of medication is kept for the patient for the next day. After nursing clearance pharmacy acknowledges it, the amount of unused medication is removed from the bill and pharmacy clearance is given

Time taken by billing: After pharmacy clearance, billing department acknowledges it. Bill mapping is done and then the final bill is prepared. Billing activity of the TPA patients takes more time than cash or corporate patients because TPA patients requires approval from the insurance company. After this the billing gives two discharge slips to the patient attendant.

Patient walkout: After the discharge slip is received on the floor by the nurses patient cannula is removed, dress is changed, patient identification band is removed. Discharge summary is explained to the patient attendant by the doctor and then the second slip is handed over to the security and then final patient walkout occurs.

DATA ANALYSIS

Figure 1:

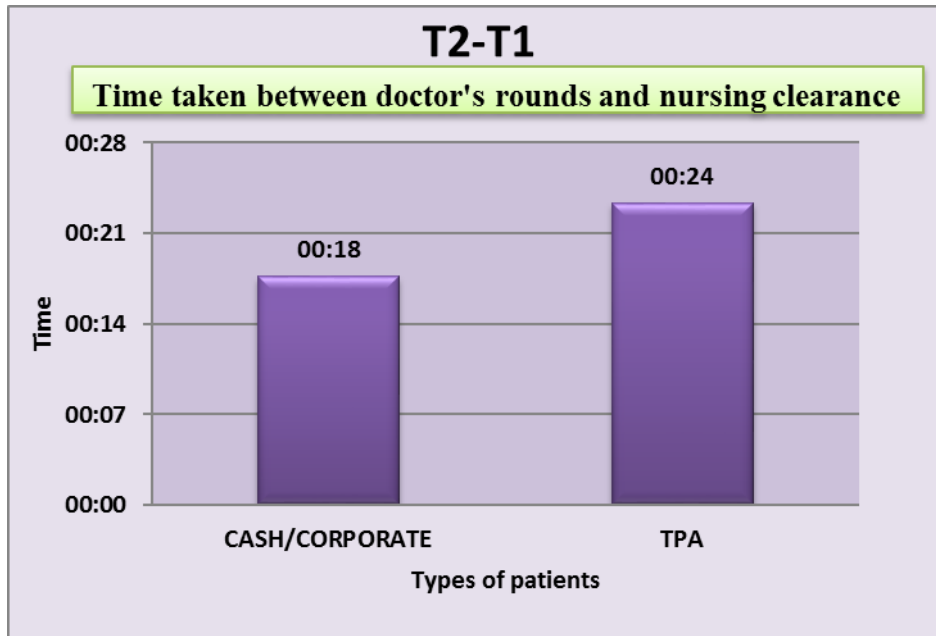


Figure 1: Average time taken between doctor's round and nursing clearance is 18 minutes for cash/corporate patients and 24 minutes for TPA patients. As soon as the doctor declares that the patient is fit for discharge, nursing clearance starts. This is the main driver for the entire discharge process.

Figure 2:

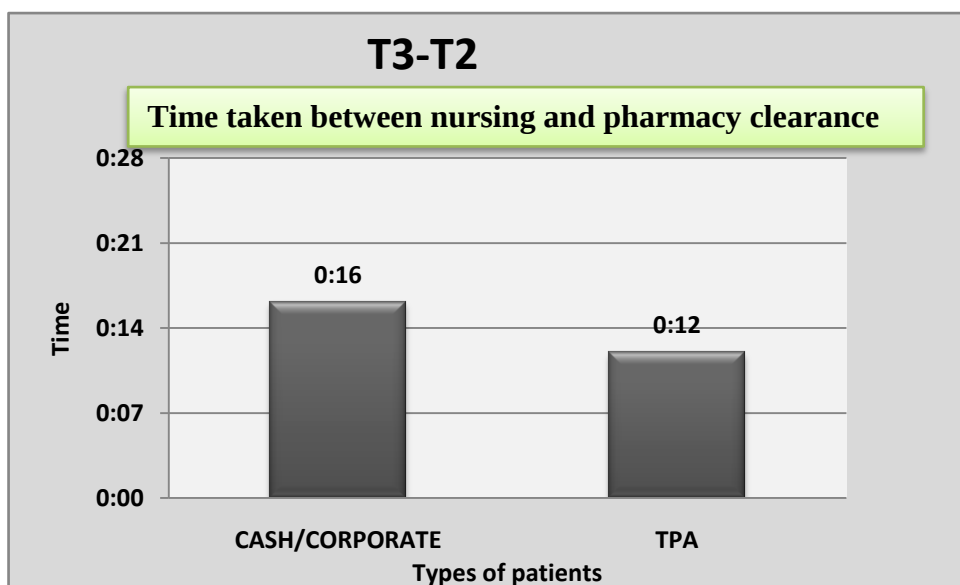


Figure 2: Average time taken between nursing and pharmacy clearance is 16 minutes for cash/corporate patients and 12 minutes for TPA patients. As soon as the nursing clearance occurs pharmacy acknowledges it and the pharmacy clearance is given.

Figure 3:

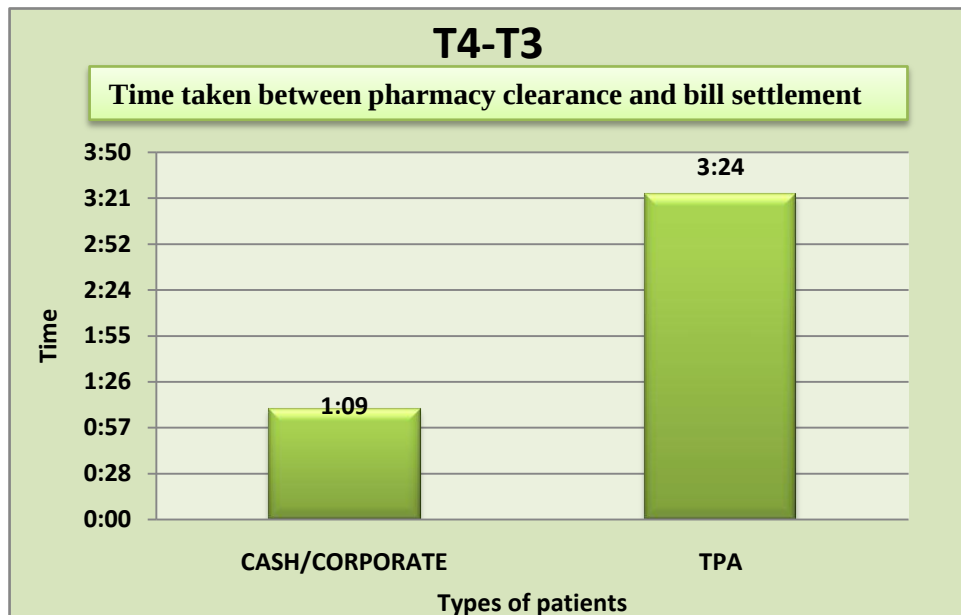


Figure 3: Average time taken for the bill settlement in cash/corporate patients is 1 hour and 9 minutes whereas in case of TPA patients it is as high as 3 hours and 24 minutes.

Figure 4:

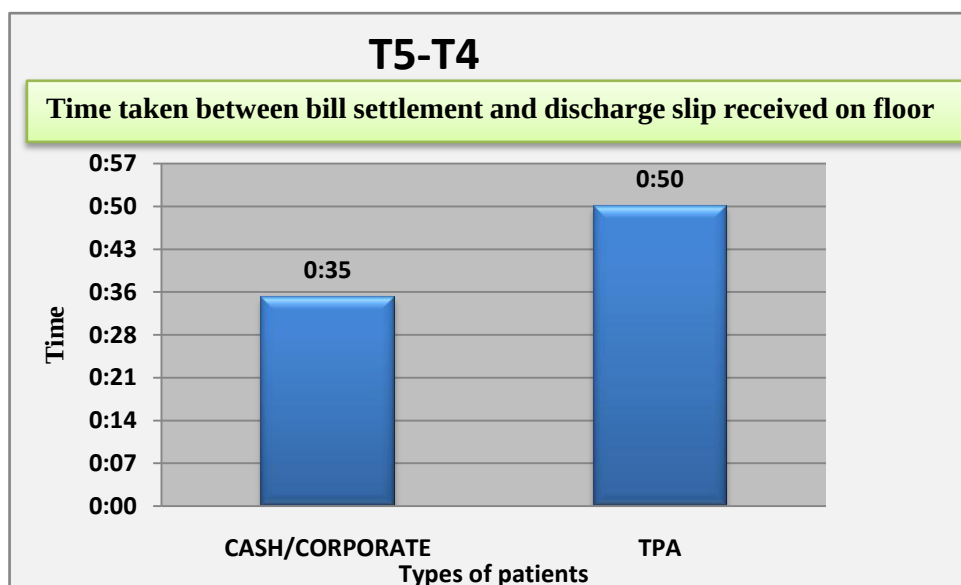


Figure 4: Average time taken for the discharge slip to receive on the floor is 35 minutes for cash/corporate patients and 50 minutes for TPA patients.

Figure 5:

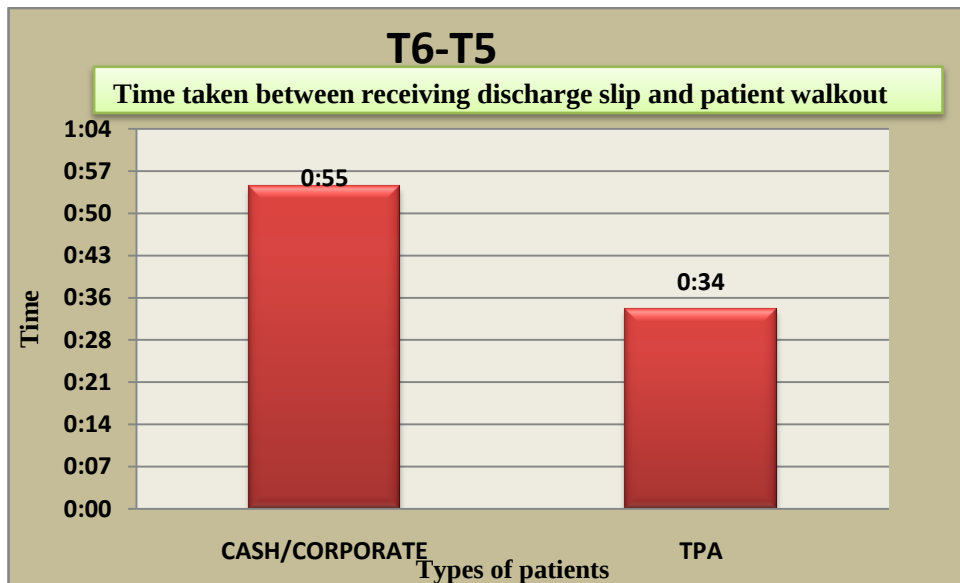
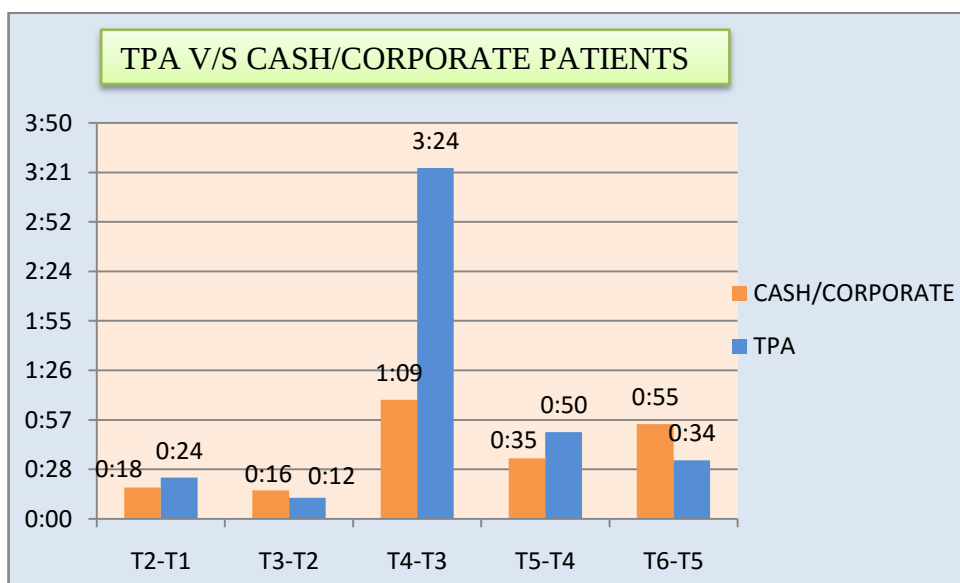


Figure 5: Average time taken for patient walkout after receiving the discharge slip on the floor is 55 minutes for cash/corporate patients and 34 minutes for TPA patients.

TIME MOTION OF TPA PATIENTS VERSUS CASH/CORPORATE PATIENTS



- We have assigned the following activities as:

Doctors round as T1

Nursing Clearance as T2

Pharmacy Clearance as T3

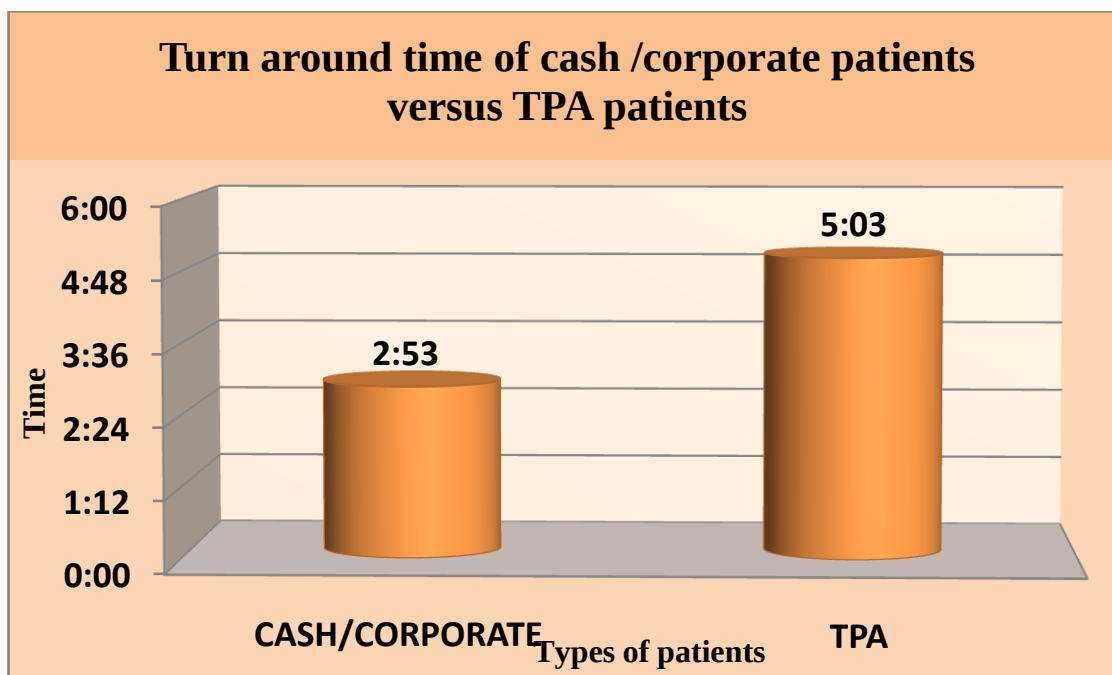
Bill Settlement as T4

Discharge slip received on floor as T5

Patient walkout as T6

- It is observed that the maximum time lapse is in T4-T3 stage (i.e. the time taken for the bill settlement) in the case of TPA patients. The average comes out to be as high as 3 hours and 24minutes which is nearly approx to three times of the time required by cash/corporate patients.
- Whereas the average time required for cash/corporate patients bill settlement comes out to be only 1 hour and 9 minutes.
- The maximum variation occurs in the stage of bill settlement only and that too is maximum for the TPA patients because they are waiting for the approval from the insurance company.
- It is clearly visible from the graph that in the other stages of discharge process the variations between cash/corporate and TPA patients is not much significant.

TAT OF TPA PATIENTS VERSUS CASH/CORPORATE PATIENTS

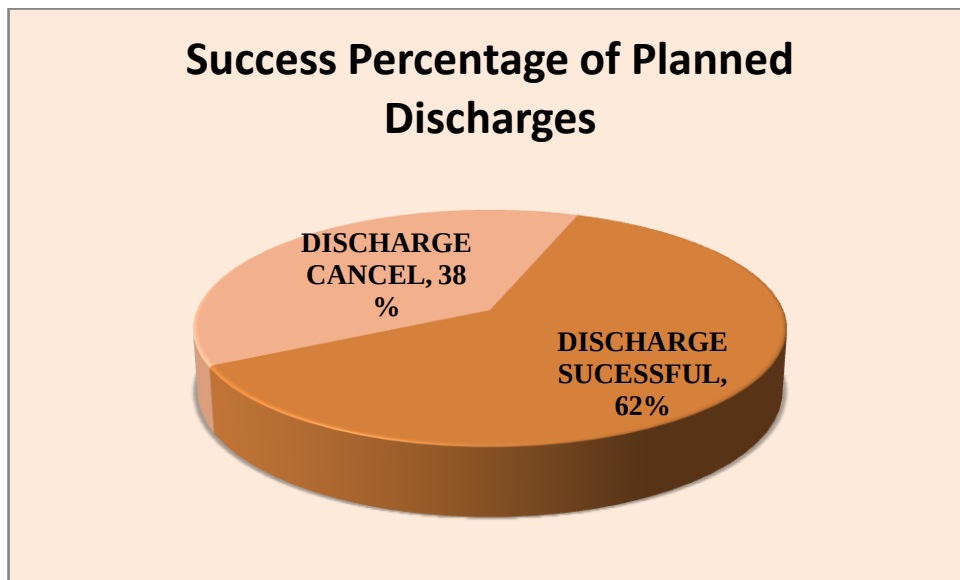


- The total turnaround time (i.e. the time from the nursing clearance to the patient walkout)comes out to be **2 hours and 53 minutes** in cash/corporate

patients and **5 hours and 3 minutes** in the case of TPA patients.

- The total turn around time is approximately double in the case of TPA patients which is why the discharge of TPA patient is a major challenge .
- The bill settlement in the case of TPA patients take much of the time .This motion time from pharmacy clearance to the bill clearance raises the total turn around time of the TPA patients by manifold.

SUCCESS PERCENTAGE OF PLANNED DISCHARGES



- Out of **164** planned discharges**101** were successful and 63 were cancelled.
- The success rate of planning comes out to be 62%.
- So, it could be said that planning discharges a day before was useful as it brought about satisfactory results.

RECOMMENDATIONS

- If the Doctor's round are late the entire planning of discharge is affected. Third floor is a mixed floor it has patients from all the specialities and so it becomes difficult for doctors to look after the OPD aswell as perform the rounds. So, the positive points of timely discharge should be explained to doctors. They should be made aware of the dissatisfaction caused to the patient when another days room rent is added to their bill if the discharge is not done by 12 noon.
- At times the delay in nursing clearance is their because of communication gap between doctors and nurses or the HIS is slow. The nursing should check the activity sheet on daily basis and it should be complete a day before discharge and should maintain the reports file to be given to the patient on discharge.
- For the investigations which are to be done just before the discharge, a prior planning should be done and an appointment should be fixed so that there is no delay in it.
- For Pharmacy clearance the unused medication which is returned a day before should be removed from the bill and any drug returns and consumption should be acknowledged as early as possible.
- Maximum time lapse occurs in the bill settlement stage because the bill is not known to the attendant so after the planned discharge list comes, call the patient attendant and tell them about the interim bill and that tomorrow is discharge so that they can arrange the money. The floor mentor should tell the patient attendant to meet the people in billing so that the bill can be settled as fast as it can be.
- In case of TPA patients the non-payable items should be clarified by the TPA department to the attendant as these items will be charged.
- After the bill settlement there is a color change observed on the HIS which indicates that the patient has already payed the bill. In the mean time the discharge file of the patient should be finalised. The billing should make a call to the nursing informing the same so that the cannula is removed, dress is changed, patient identification band is removed and sidebyside the discharge summary should also be explained to the patient by the doctor and nurse. So, that the patient could be made to walk out in time.

CONCLUSION

The study revealed that the Turn around time for discharge was higher in the case of TPA patients than in the case of cash/corporate patients. It revealed that the area of maximum delay was billing. It also showed that the planning of discharges a day before gave good result for the facility. The planning of discharges can be improved further by incorporating new ideas and creating awareness among the staff about how it affects patient satisfaction thus acting as a quality indicator for organization. Better communication between the doctors, nursing and floor mentor can further improve the TAT for planned discharges. Thus, by maintaining an acceptable level of discharge time will provide competitive edge to the organization.

ANNEXURE

DISCHARGE FORMAT

[illegible]

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3. Kumari JV, A study on time management of discharge and billing process in tertiary care teaching hospital. Elixir Int J Mgmt Arts 2012;52:11533-5.