

**Summer Training at
Max Super Specialty Hospital, Saket, New Delhi
(April 3 to June 2, 2017)**

- **Study on Fall Risk Assessment for Out Patient Department**
- **Study on Admission and Discharge Criteria for Intensive Care Unit**
- **Study on Pre and Post Parameters During Renal Transplantation**

**By
Shelly Singh**

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

**MBA Hospital & Health Management
2016-2018**


**Institute of Health Management Research
The IIHMR University, Jaipur
2017**

This is to certify that Mr./Ms. Shelly Singh has undergone summer training in (Organization name MAX Super speciality Hospital, Saket / Delhi) from 3rd April to 2nd June 2017.

The candidate herself/himself completed the project assign to his/her during summer training. Her approach to the project was sincere and proactive. This summer training is in partial fulfillment of the course requirement recommended for the award of MBA in Hospital and Health Management.

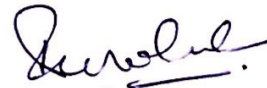
I wish him/her success in all her future endeavors.



Col. (Dr.) Ashok Kaushik

Dean (Academic & Student Affair)

The IIHMR University, Jaipur



Name of the Mentor

Designation Associate Professor



CERTIFICATE OF COMPLETION



This is to certify that

Dr. Shelly Singh

has been associated as an

INTERN

with the department of

MEDICAL ADMINISTRATION

for a period of

3rd April 2017 to 2nd June 2017

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

ACKNOWLEDGMENT

The internship opportunity with Max Super Specialty Hospital, Saket was a great chance for learning and professional development. I am also grateful for having a chance to meet so many wonderful people and professionals who led me through this internship period.

I am highly grateful and would like to express my deepest gratitude and special thanks to my mentor, Dr. Sandeep Mor, (Deputy Medical Superintendent) at Max Super Specialty Hospital, Saket, who in spite of being extraordinarily busy with his duties, took time out to hear, guide and keep me on the correct path and arranging all facilities to make life easier and allowing me to carry out my project at their esteemed organization during my summer internship. I choose this moment to acknowledge his contribution gratefully.

It is my radiant sentiment to place on record my best regards, deepest sense of gratitude to Dr. Tanu Goyal, (Assistant Manager Superintendent), Miss Shikha Sharma, (Programme Manager), and all of the support staff at Max Hospital, Saket, for their careful and precious guidance which were extremely valuable for my study both theoretically and practically. I would Also like to thanks my family and friends for being my support all throughout my internship.

I perceive as this opportunity as a big milestone in my career development. I will strive to use gained skills and knowledge in the best possible way.

Sincerely,

Dr Shelly Singh

Dr. Sandeep Mor

DMS (Deputy Medical Superintendant)

Max Super Specialty Hospital, Saket

Place: New Delhi

Date: 25 May 2017

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ABBREVIATIONS

ABBREVIATIONS	Meaning
ALOS	Average Length of Stay
CMO	Chief Medical Officer
COW	Computer on Wheels
CPRS	Computerised Patient Record System
CTVS	Cardiac Thoracic Vascular Surgery
EMR	Electronic Medical Record
ERCC	Emergency Response Coordination & Communication
ERT	Emergency Response Team
ICS	Incident Command System
IRT	Initial Response Team
ERT	Emergency Response Team
MAMBS	Minimal Access, Metabolic & Bariatric Surgery
MD	Doctor Of Medicine
MDDF	Max Devki Devi Foundation
MLC	Medico-Legal Case
MPH	Masters In Public Health
MSSH	Max Super Specialty Hospital
NABH	National Accreditation Board Of Hospitals
NABL	National Accreditation Board Of Laboratories
PAC	Pre Anaesthetic Clearance
PAHO	Pan American Health Organization
PCP's	Primary Care Physicians
PPE	Personal Protection Equipment
RRT	Rapid Response Team
SCR	Security Control Room
TAT	Turn Around Time

TSSU	Thermal Sterile Supply Unit
TTI	Transfusion Transmitted Infections
WHO	World Health Organisation

OBSERVATIONAL LEARNING

INTRODUCTION

Max Healthcare is committed to the highest standards of medical & service excellence, ‘Patient Centered Care’, scientific knowledge and medical education. The country’s leading comprehensive provider of standardized, seamless and international class healthcare services. 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.



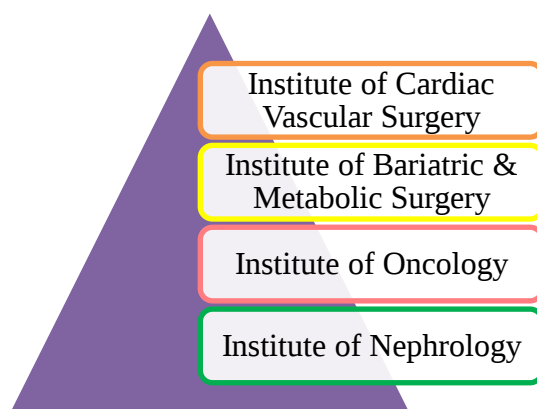
The pillars of this model include:

- 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:



MODE OF DATA COLLECTION

Data collection involved discussions with the Administrative staff, the HODs on the managerial issues, communicating with the other staff and going through the records.

Sources of Data

➤ PRIMARY

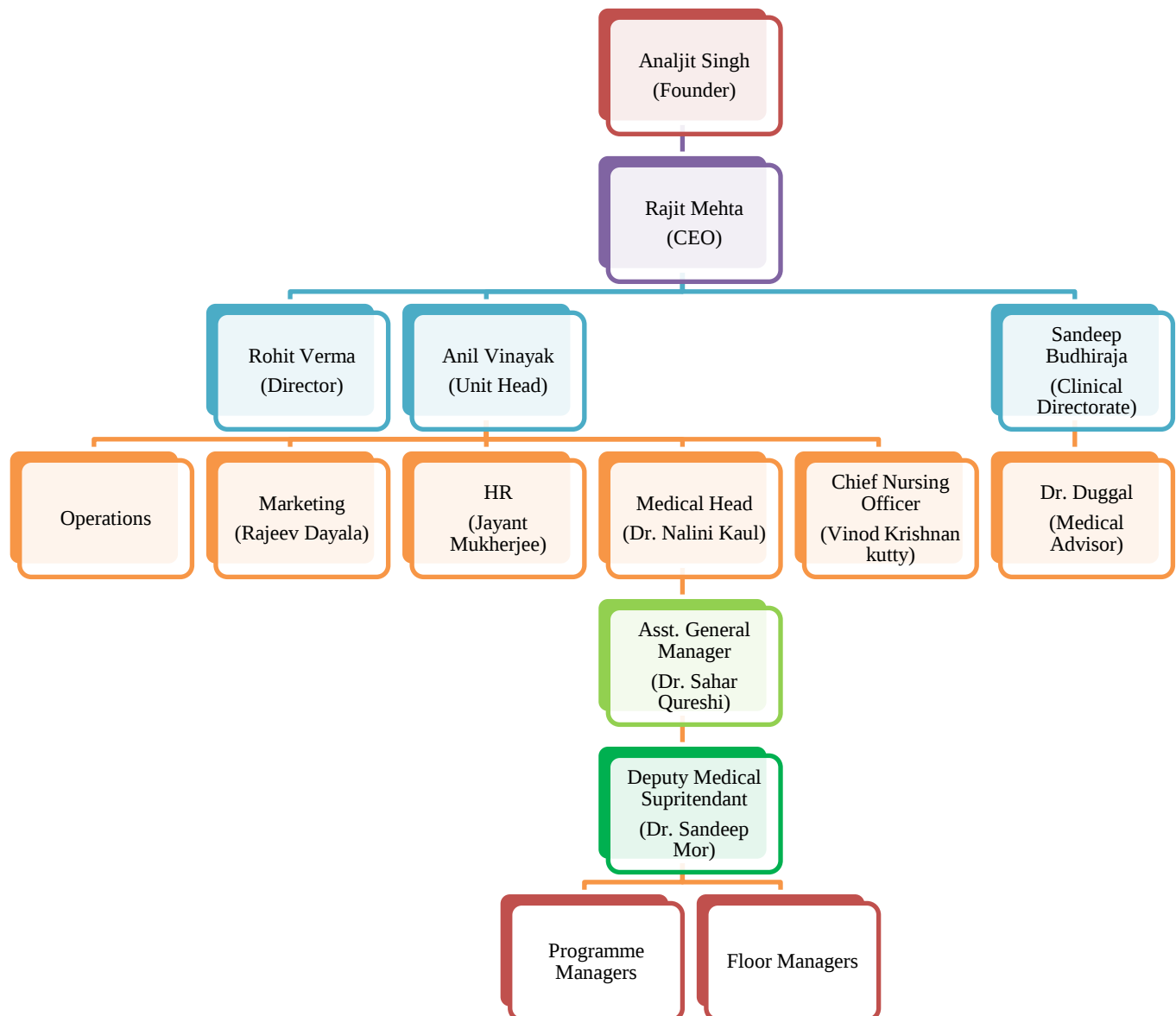
- By interacting with the HODs, executives, Doctors, Nursing staff and other valuable employees of the hospital.
- Through direct observations.

➤ SECONDARY

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

GENERAL FINDINGS

ORGANIZATIONAL CHART



FRONT OFFICE

- **First contact point** between the patients / their attendants coming to the facility.
- Gives directions to them about the locations of various departments.
- 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.
- Helps in planning timely discharge a day before by inquiring about the same from the concerned consultants.

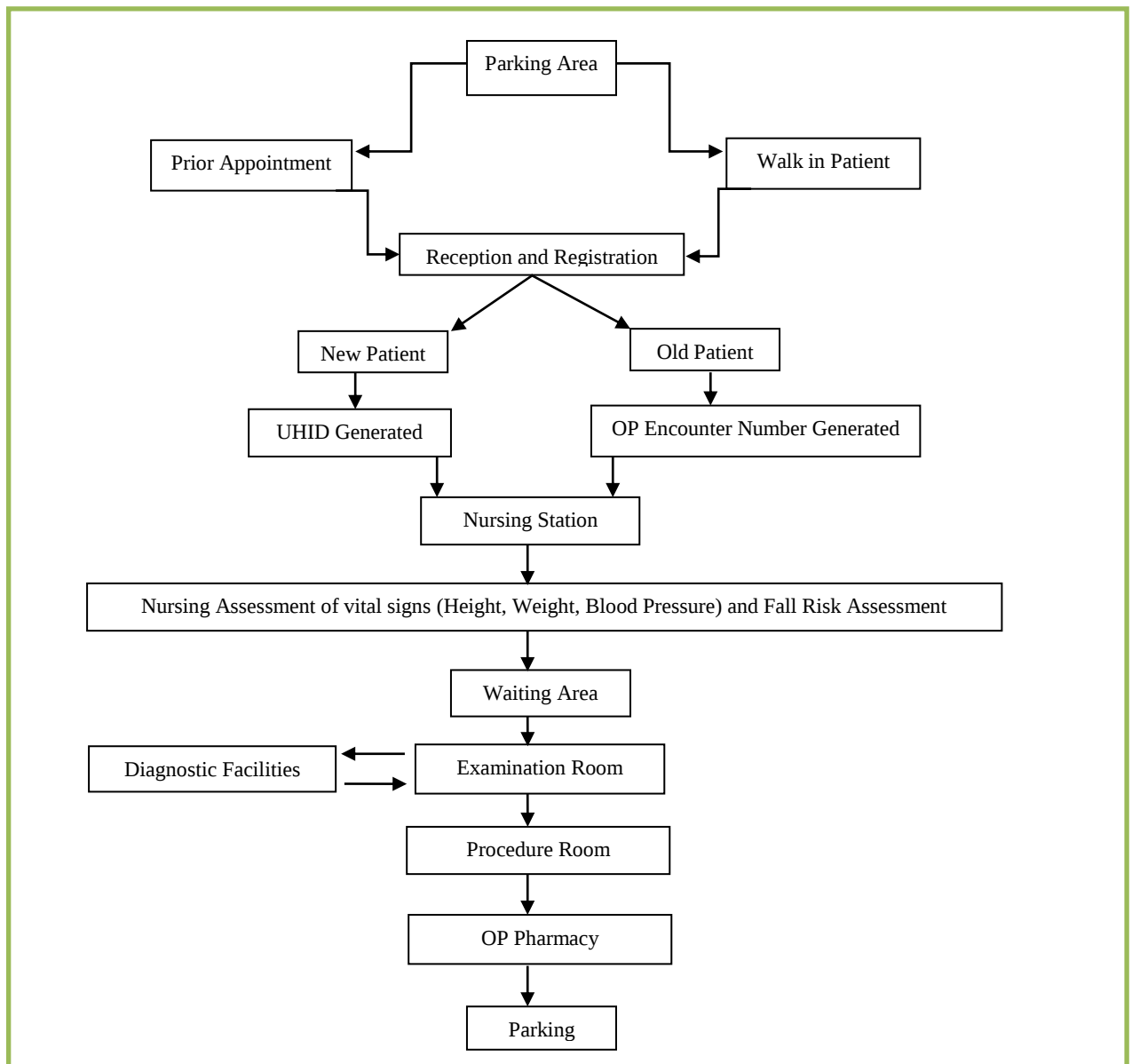
Challenges

- Shortage of staff
- Huge rush during peak hours, 9:00 am-12:00 pm.

OUT-PATIENT DEPARTMENT

- Each INSTITUTE of Max hospital, Saket 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 Chairpersons and senior doctors, a junior doctor does the initial assessment of the patient, which not only reduces the workload of the senior doctors (whose slots are always overbooked), but it also gives the junior doctors an opportunity to learn from the best brains in the industry.

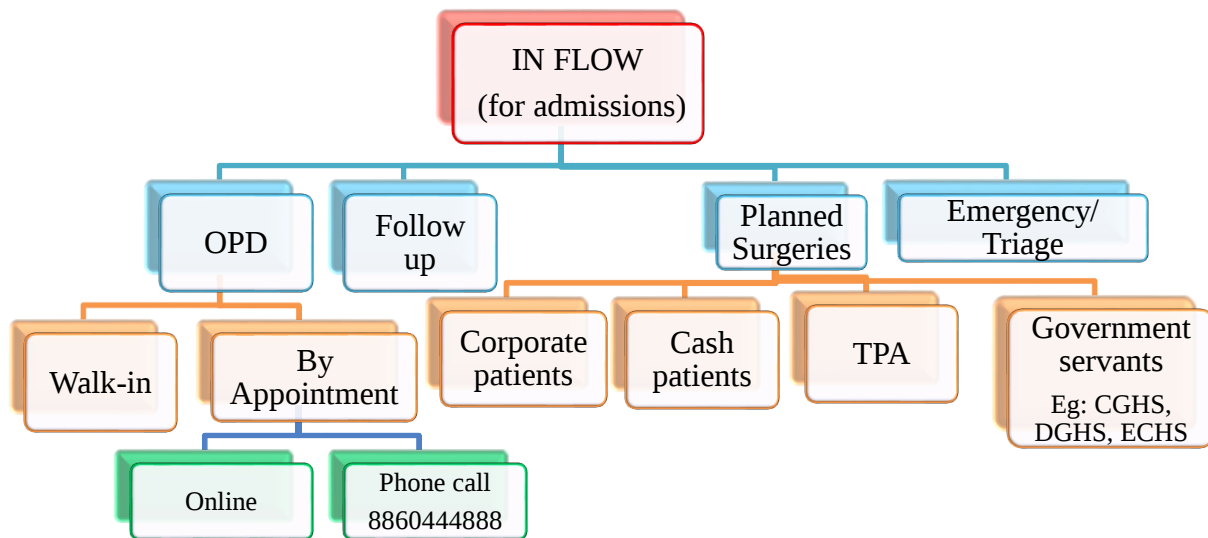
The general process flow that is followed in all the OPDs is as follows:



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 don'ts 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 , double, classic deluxe 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



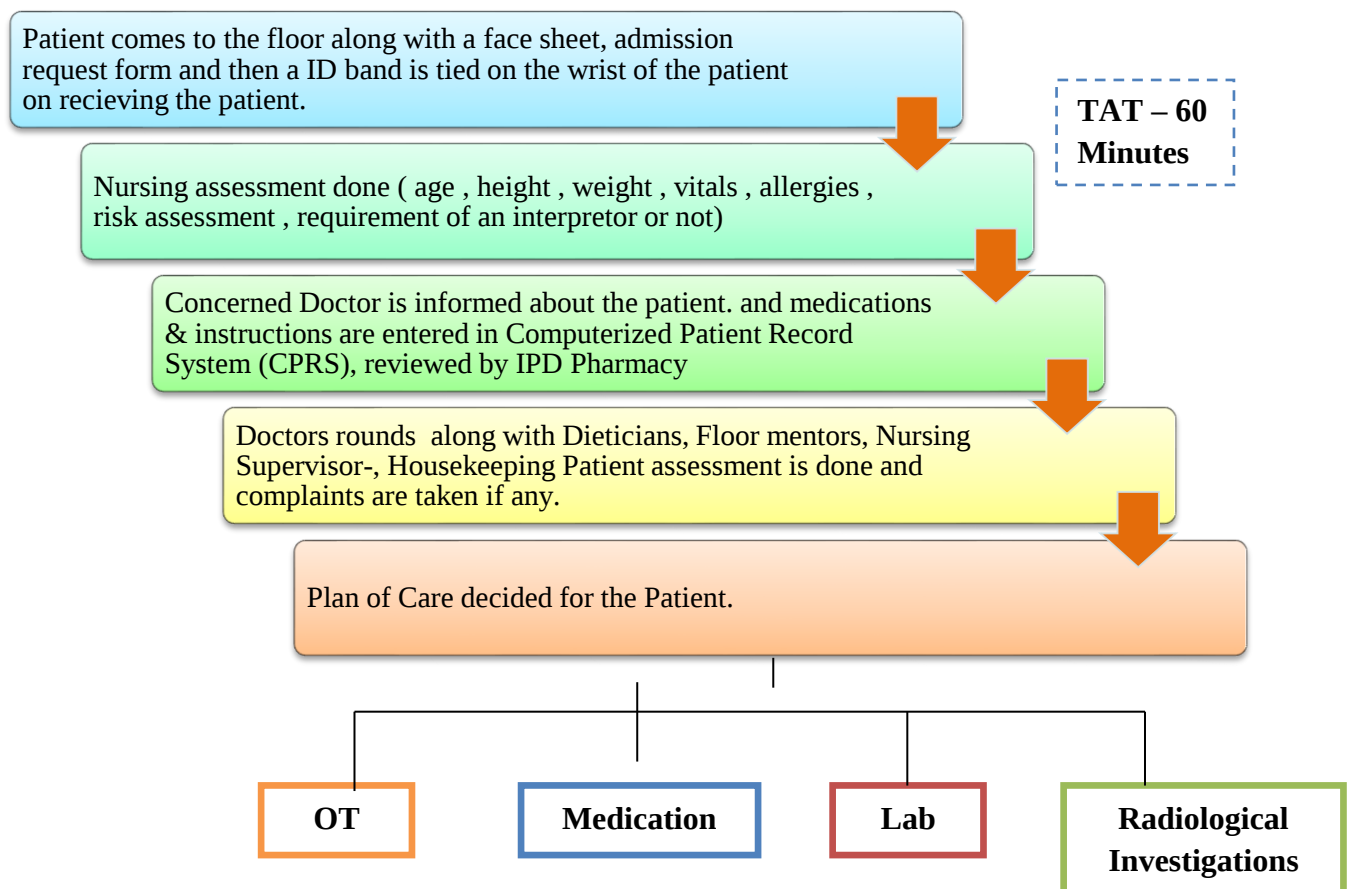
Hierarchy



IN-PATIENT DEPARTMENT (IPD)

- IPD is distributed over Six floors (G.F., 2nd-6th) in the east and Five Floors (2nd-6th) in the west wing of Max hospital including a total number of 312 beds in East & 211 beds in West.
- Every bedside has:
 - Details of Consultant, Nurse and Mentor written at the top of every bed
 - Room equipment checklist – Side rails, Oxygen, Suction, “**Safety First Bell**”
 - Important Instructions
- The rooms available in IPD have the following structure of beds per room:
 - Economy room – 4 beds per room.
 - Double – 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) and allotted Room Numbers.
- 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, Hypoglycemia, Needle stick Injury
- Process of admission of new patient to IPD



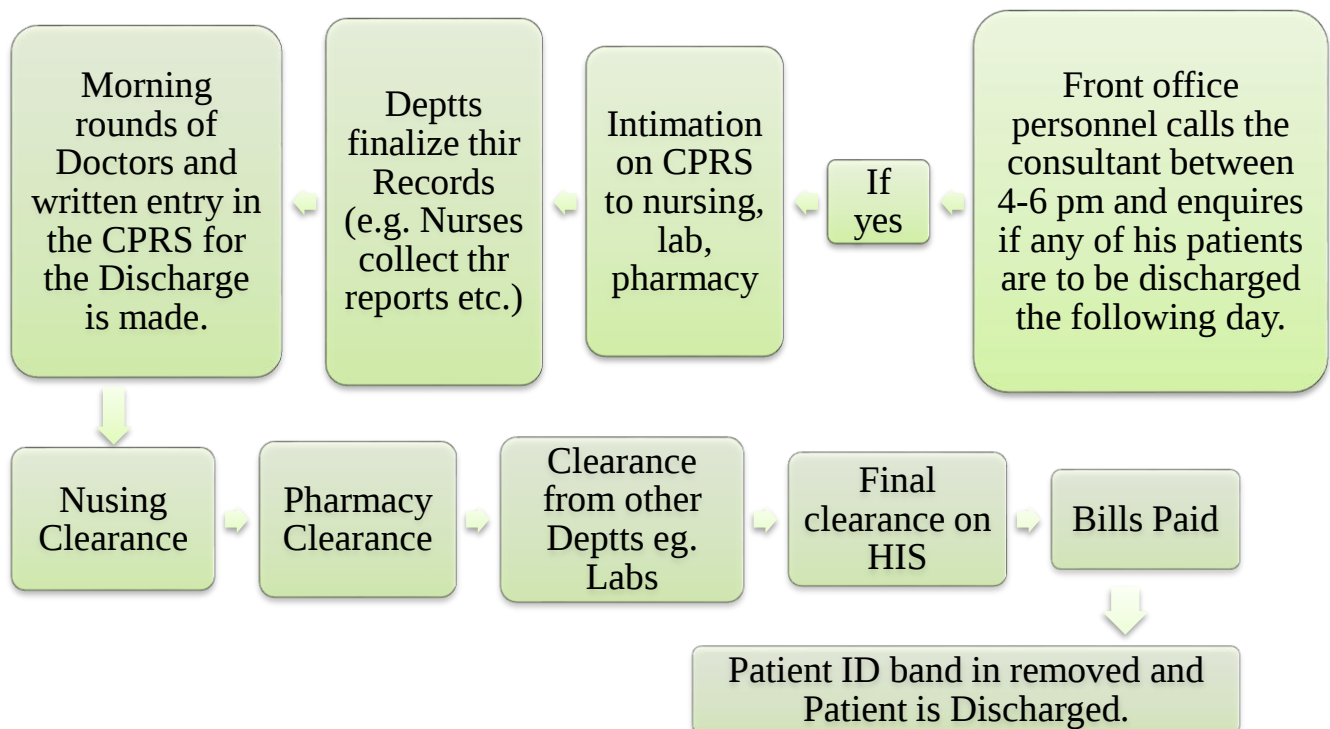
- **BARRIER NURSING-**

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.

- **Discharge** Process flow of patient from IPD



- Documents included in Discharge of a patient- Discharge Slip, In-patient Bill (Summary + Detailed), Discharge Summary, Pre-authentication approval letter (in case of TPA), Doctor's Clarification and reports of the patient.
- Delay in Discharge is seen due to Final Bill clearance, TPA approval, finalizing discharge summary.

EMERGENCY DEPARTMENT

Due to the unplanned nature of patient attendance, this department provides 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 from outside and to inside of the hospital 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 Specialty Hospital, Saket has 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:

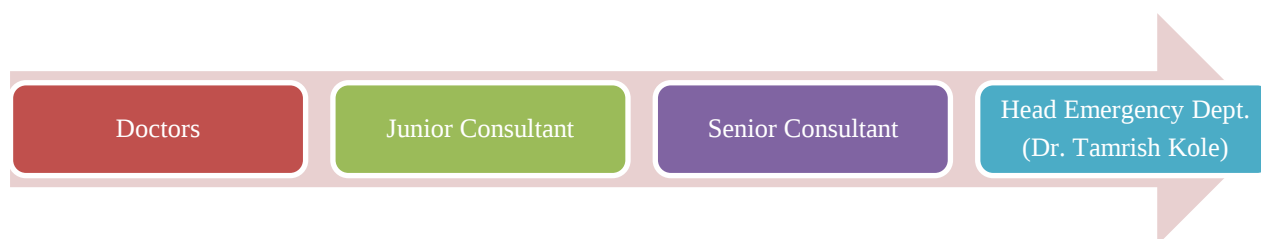
Total 25 bedded

- Resuscitation suite -2 bed
- Urgent care area – 9 beds
- Observation area – 12 beds
- Triage – 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.

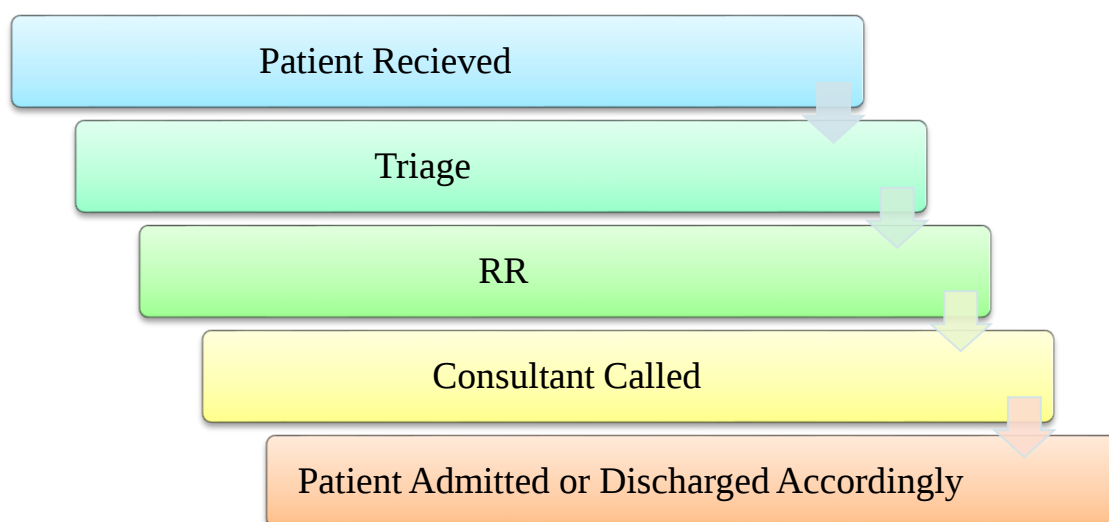
Staffing:

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.

Hierarchy



Process Flow



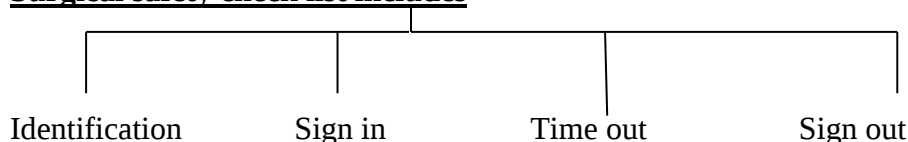
OPERATION THEATER COMPLEX

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, 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, gynaecology, Brain Suite intervention, general and robotic surgeries are performed here. 8th OT was under-construction.

Organization of staff: The staffs of Operation Theatre are organized into four groups: Anaesthetist- Surgeon, Nursing staff, Technician and Supportive staff.

- Nursing Station – 1
- Pre-Op Beds and Recovery Beds – 4 each
- Scrub Station - 2
- Average number of cases done per day – 20-25 in each wing, 15-16 Robotic Surgeries per month
- Temperature - 21 approx
- Humidity – 50-55

- Light – 2000 lux 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, TAT-45mins).
- Staffing ratio- Nurses : patients – 4:1(pre-op) ; 2:1(post-op)
Technicians: patients- 1:1
- OT Utilization – average is 70%
- Max super specialty 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.
- Sterilization is done by ETO (12 hrs); autoclave. Fumigation is done twice a day in the morning and evening.
- Bio medical waste disposal is done every 2 hours.
- 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)

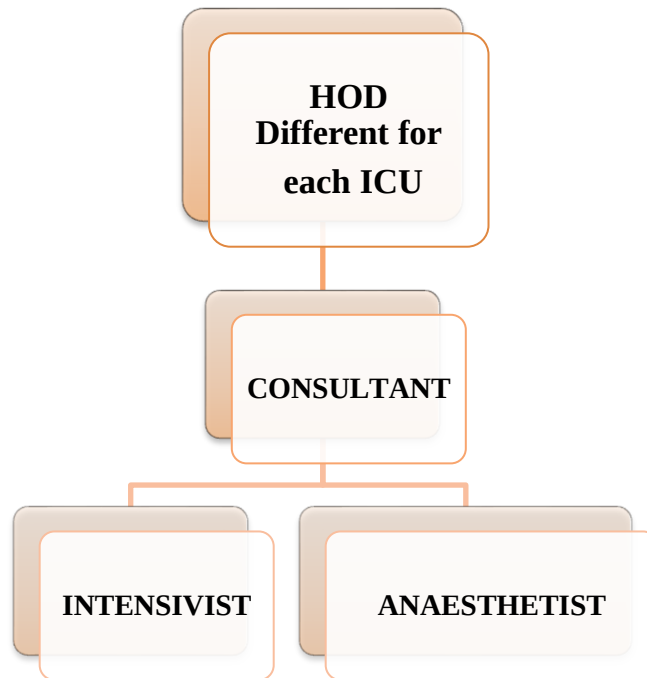
Max Saket has a total of 13 Intensive Care Units and 5 High Dependency Units in the Hospital:

Floor	East	No. of Beds	West	No. of Beds
G.F.	Apex Coronary Care	16		
1 st Floor	CTVS	17	Surgical	11
	Cath Recovery	14	Neuro-Surgical	9
	Paediatric CTVS	11	Neuro-HDU	9
2 nd Floor			ISCU	4
	Onco-Surgical	9	Stroke and Neuro	8
	Onco-Medical	12		
	CTVS- HDU	4		
	Cardiac HDU	4		
3 rd Floor	Medical	8	Neonatal (a)	8
			Neonatal (b)	6
4 th Floor			PICU	8
5 th Floor			Ortho HDU	8
6 th Floor			Medical	8
		95		79

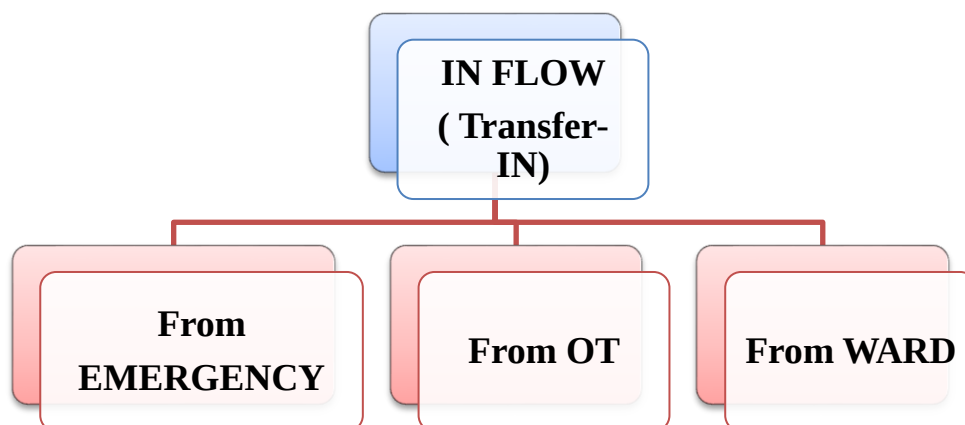
All Intensive Care Units have a 24 hour service of Intensivist and an Anesthetist.

- Each ICU has 1 medication room, 1 Nursing Station, 1 Dr. room

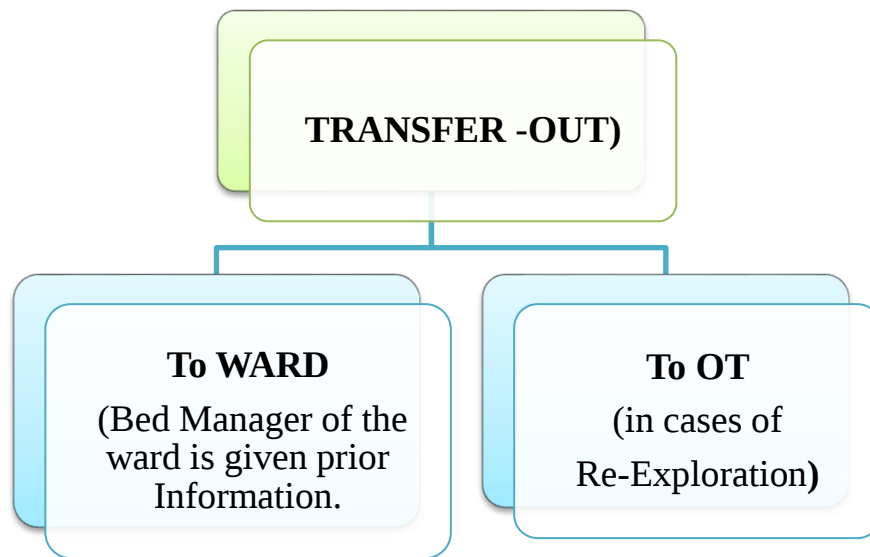
Hierarchy



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; Family Meeting – 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

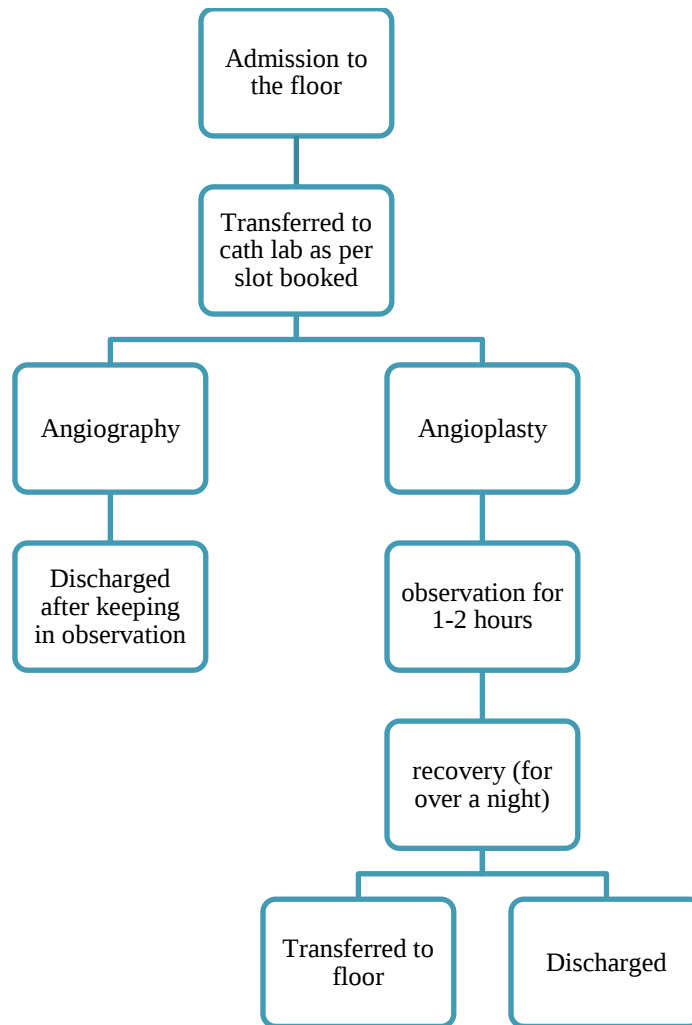
Units of cath lab:

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-3 Beds
8. Instrument washroom

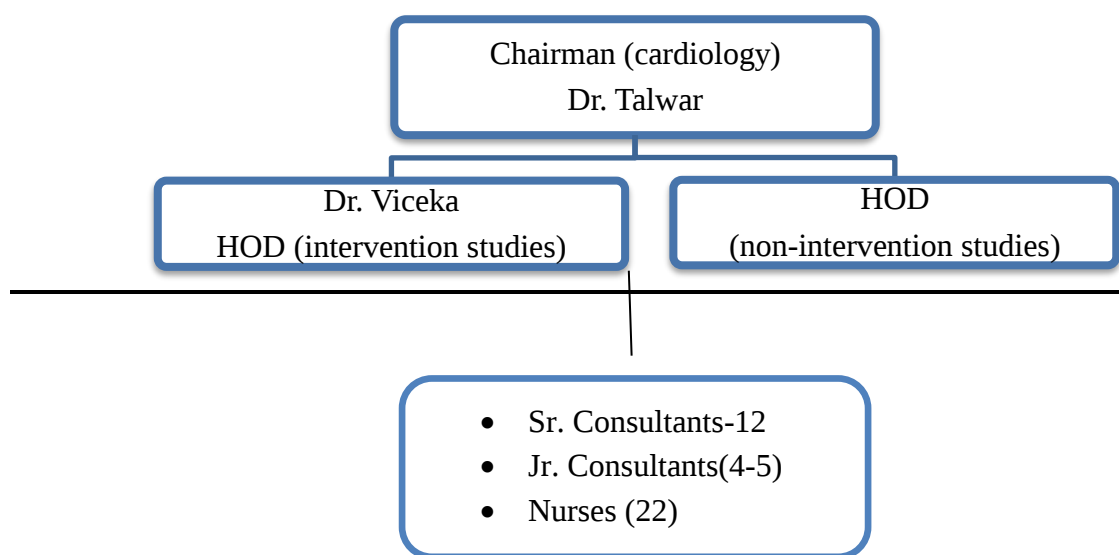
Location: Cath lab is located on the first floor with the vicinity areas as

- Emergency department
- Operation theatre
- Cath recovery-12 Beds
- Coronary care
- CTVS
- SICU
- PICU
- MICU

Process Flow of Patients



Staff



DEPARTMENT OF LAB SERVICES

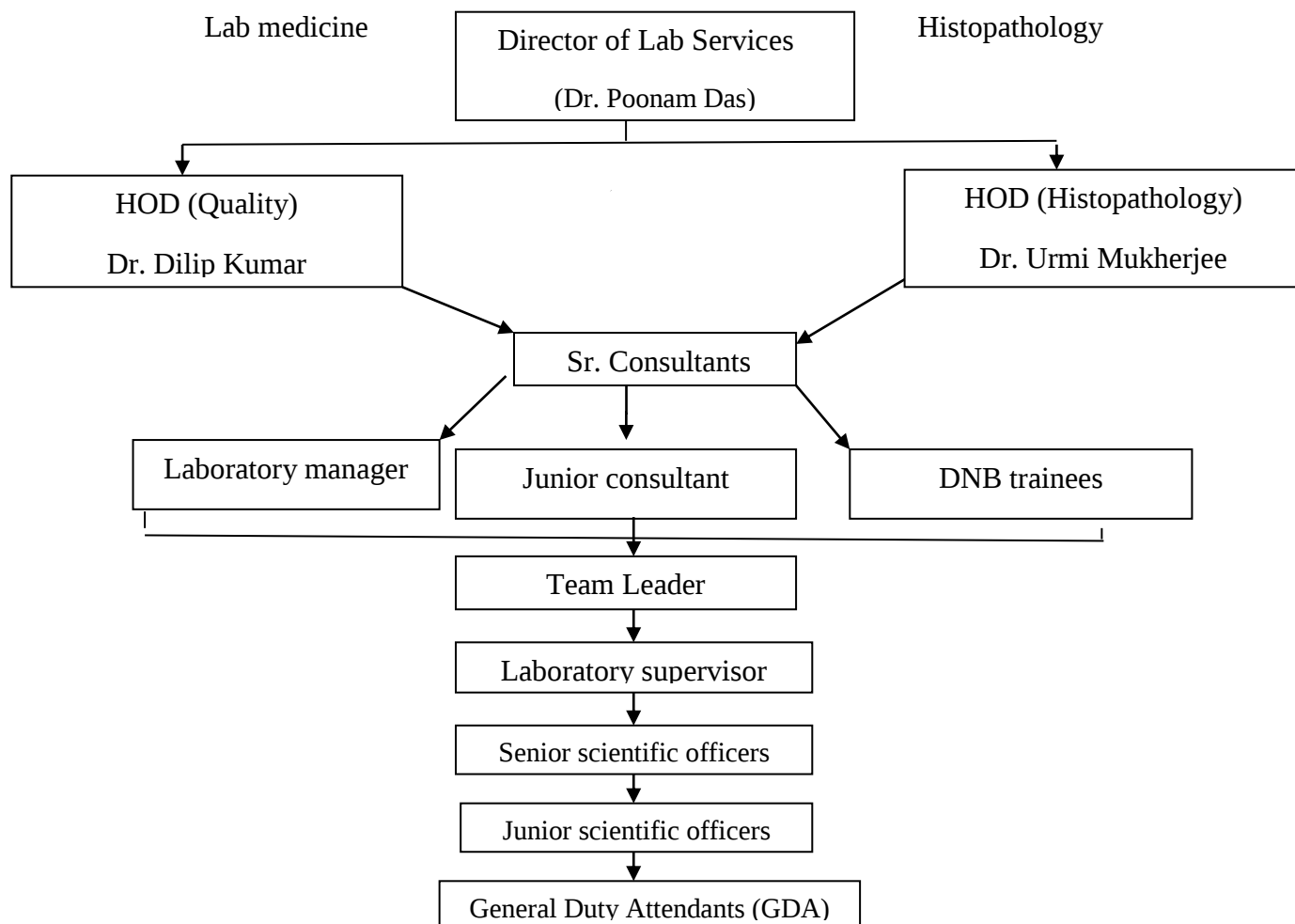
INTRODUCTION-

An ISO: 15189 certified and NABL accredited 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.

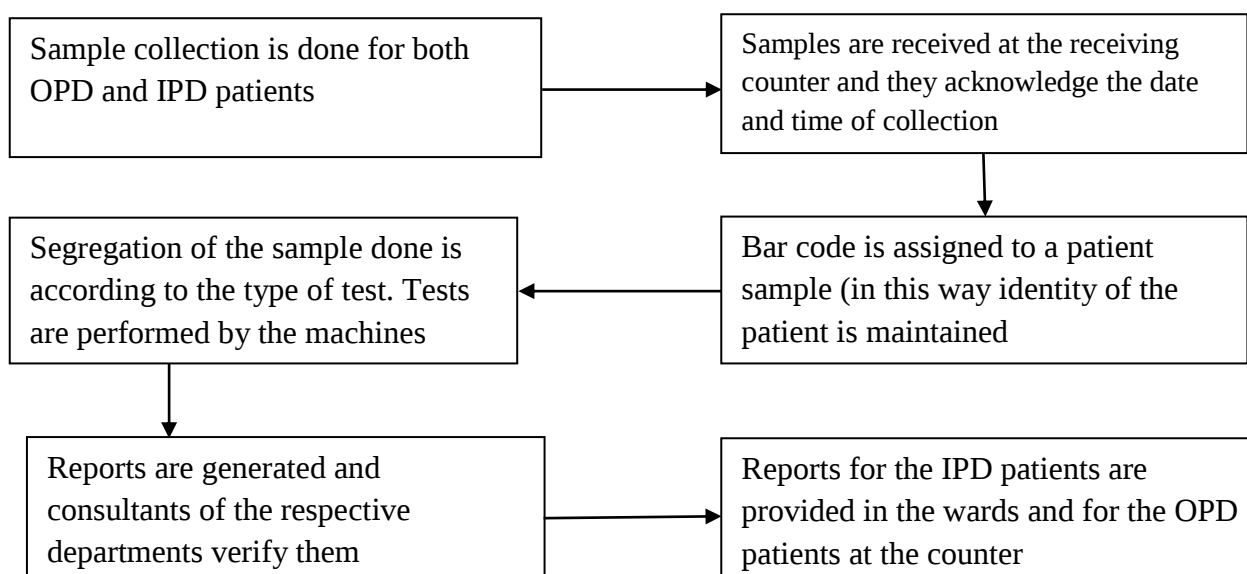
LABORATORY COMPRISES OF THE FOLLOWING DEPARTMENTS-

- Biochemistry
- Hematology
- Immunoassay
- Histopathology
- Clinical pathology
- Serology
- Microbiology
- Cytology

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



PROCESS FLOW-



LABORATORY INFORMATION SYSTEM- It is connected with hospital information system

- Sample received- red color
- Samples acknowledged- yellow color
- Test done- blue color
- Result verified- green color
- Billing done- pink color
- Indemnity Insurance- Insurance policy to protect employees when they are found to be at fault for a specific event such as misjudgment.

RADIOLOGY DEPARTMENT:-

- Situated at the ground floor of the west wing of the hospital.
- The Department is headed by Dr. Sonia Dhal
- 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 & color) e.g. 2 D echo, vascular studies, etc

3) Mammography

4) Dexa scan (Bone Densometry)

5) Special imaging techniques

(a) CT Scan (Computerized Axial Tomography)

(b) MRI (Magnetic Resonance Imaging) - 1.5 Tesla, 3 Tesla

Divided into two parts:-

1) For Ultrasonography, mammography, Dexa scan

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)

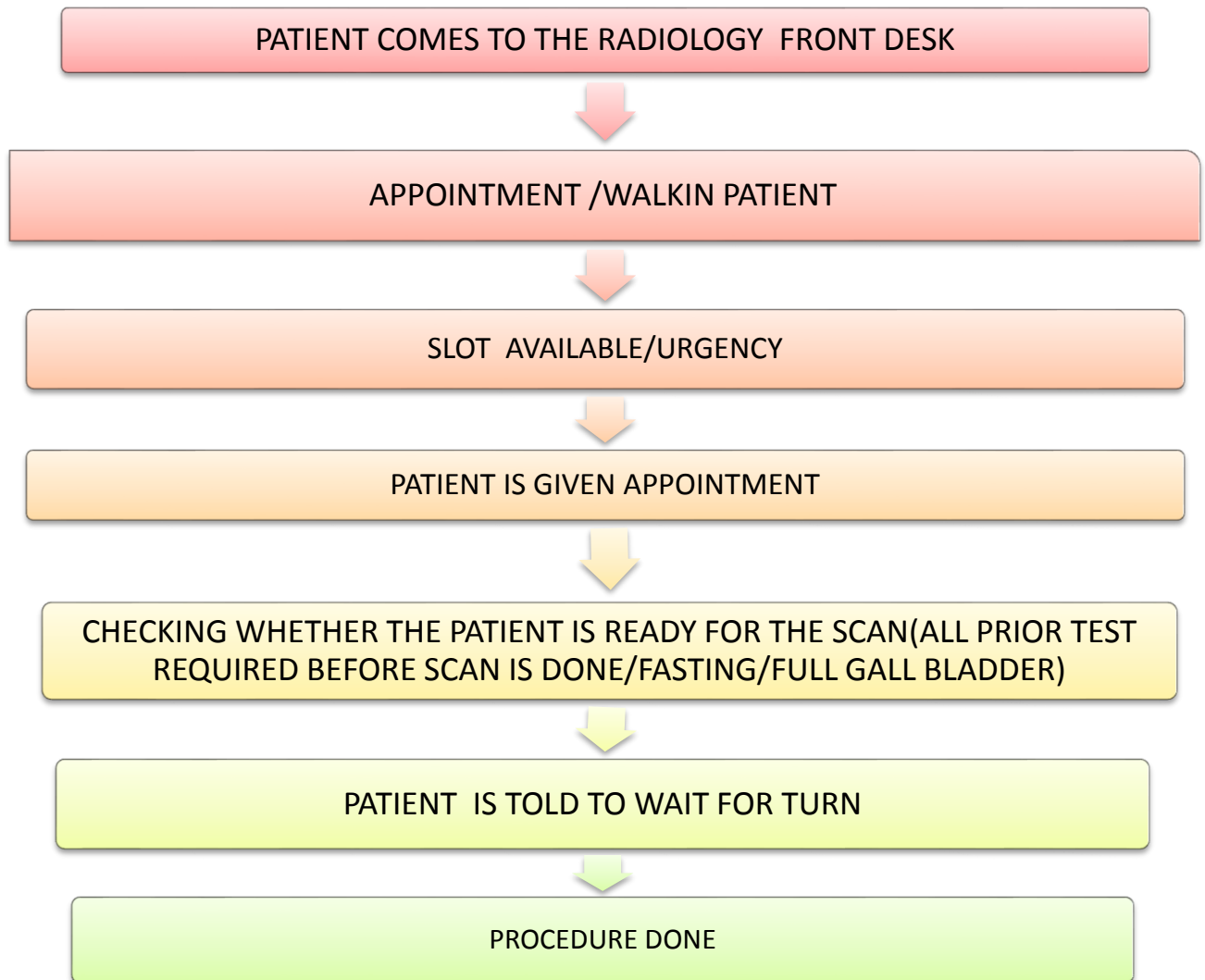


Figure:-Process flow in radiology department for outpatients.

Firstly, the patient comes to the radiology front desk after been prescribed by doctor for the scan; patient is either taken 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 Creatinin level for renal patients). After that the patient is given the appointment and told to wait for his turn. Finally the procedure is performed.

Warning sign with Red light is on when the procedure is going on in the room.

- 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

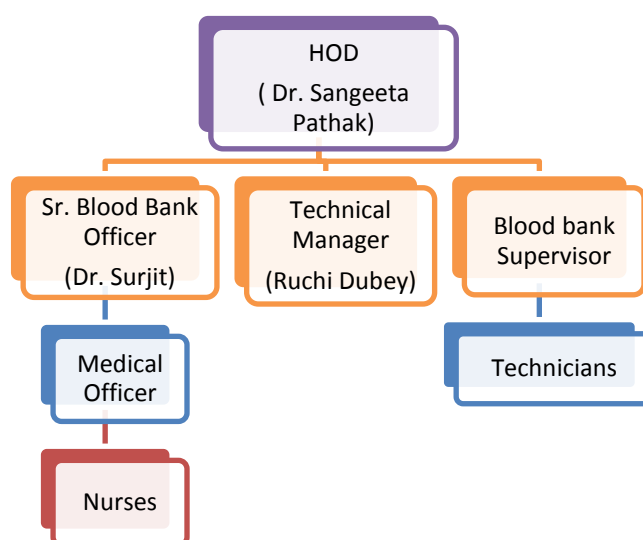
Max super specialty hospital has its own blood bank. All blood groups are available. It is mandatory for the in-patient attendants to donate blood or do replacement of the blood.

Blood bank consists 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 has several components including red blood cells, platelets and Plasma. Donor aphaeresis is a special type of blood donation in which a specific component- platelet is withdrawn from donor.
3. Component room: In component room the whole blood is separated into packed cells (2-6° C), FFP (-80°C) and platelets (22°C). Packed RBC can be stored for 42 days, Platelets for 5 days and FFP for 1 year.
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.
6. Quarantine Area: The untested units are stored in this area for 1 day after component separation. This area is also for nucleic acid testing (NAT)
7. Serology Room- Patient and donor's blood processing is done in this area.
8. Refreshment Area- The donors are provided refreshment after donating blood in this area.

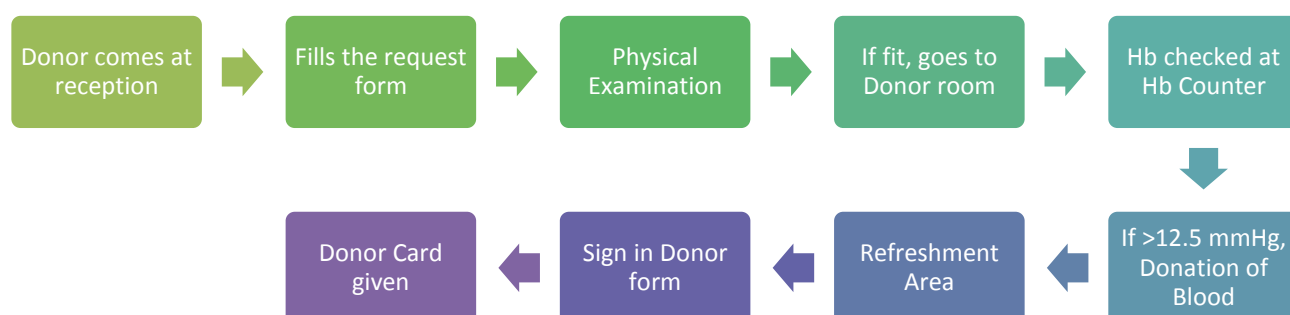
Staff of blood bank consists of 1 HOD, 2 blood bank officer, 1 technician supervisor, 16 technicians, 2 staff nurse, 2 computer executives, 4 GDA.

Hierarchy



- The blood donation timings are from 9am to 5pm. Blood can be donated after every 3 months.

Process Flow



- Voluntary Donor Card is valid for 1 year and Replacement Card is valid for 3 months.
- Record Maintenance – Both manually and digital (Acuren Software)
- Post-Donation Testing is done for and informed to all the donors.
- Report is given only to the patient, if patient cannot come, then the reports are emailed to them.

CENTRAL STERILIZATION SUPPLY DEPARTMENT

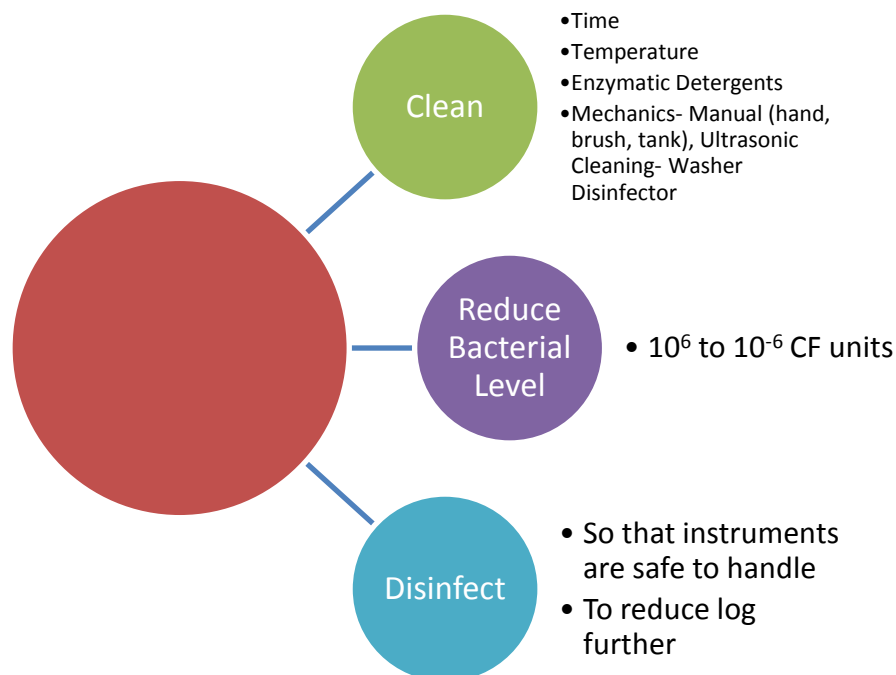
INTRODUCTION-

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} CF Units.

Objective of CSSD:

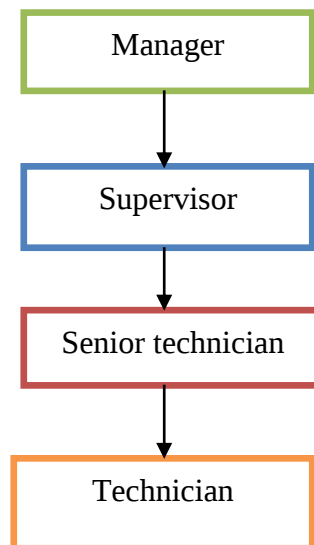


Types of Sterilization-

- Steam- uses saturated steam (heat + water) at 138°C for 4minutes
- Ethylene Oxide
- Plasma

Size of CSSD- should be 10 sq feet per bed, for a 500 bedded hospital.

HIERARCHY OF THE DEPARTMENT-

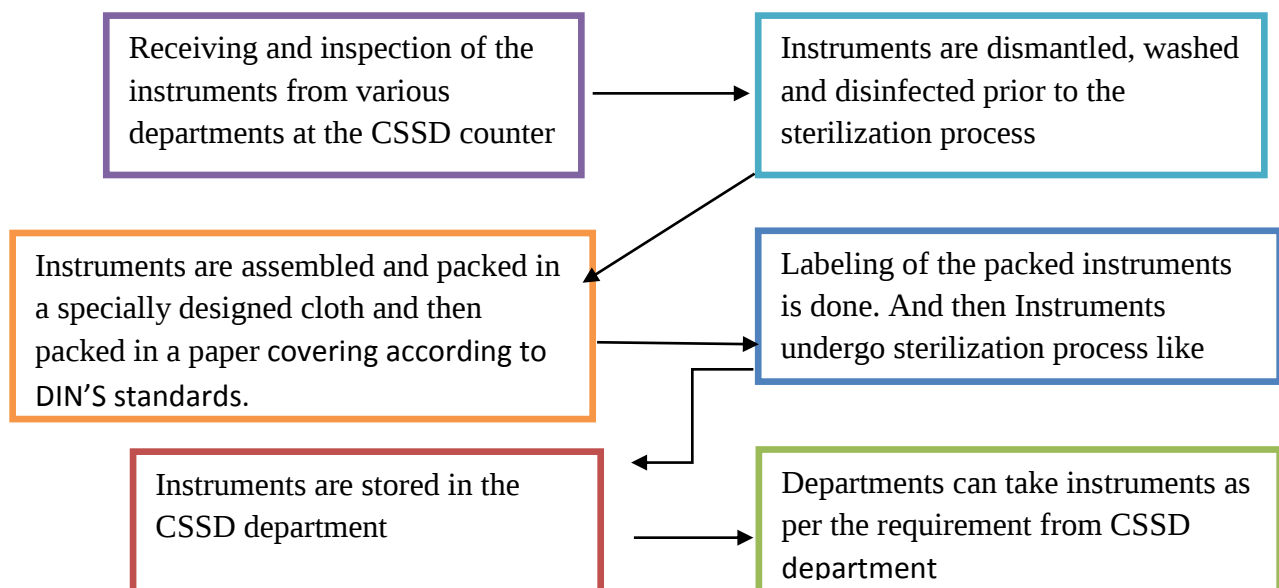


The Department is headed by Dr. Sanjeev Bhatia.

ZONES PRESENT (with color coding)-

- Decontamination Area
 - Clean Zone
 - Sterile Zone- Temperature- 18° to 20° C
- } 18° to 22° C

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 SMS (Stem-Mid-Stem bond) 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.

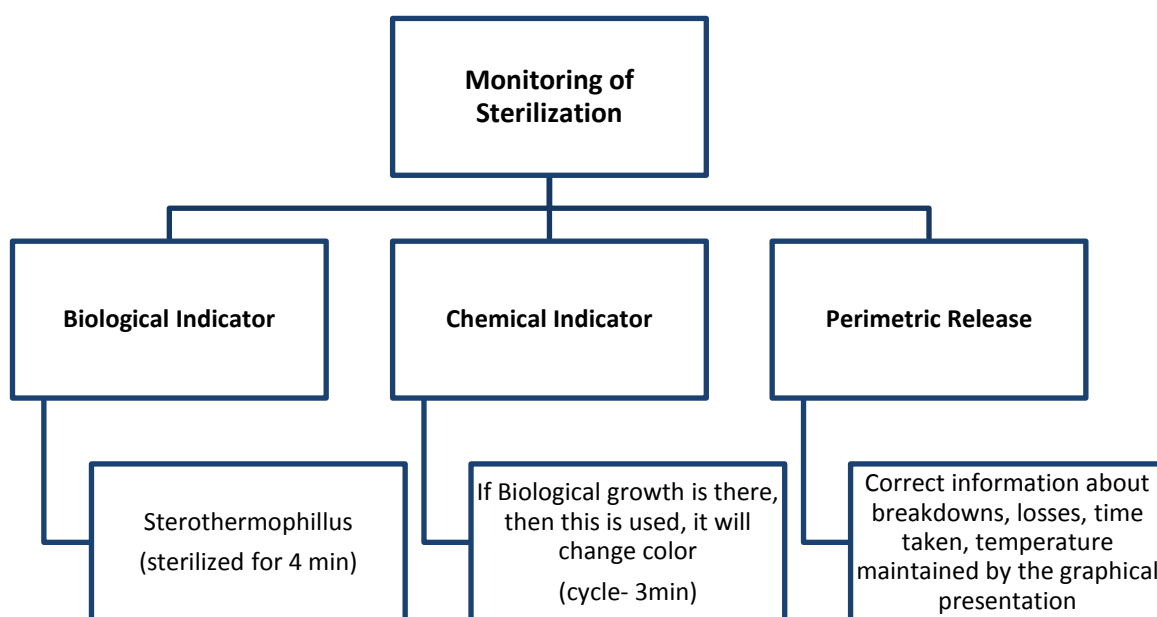
EQUIPMENT LIST-

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

QUALITY INDICATORS-

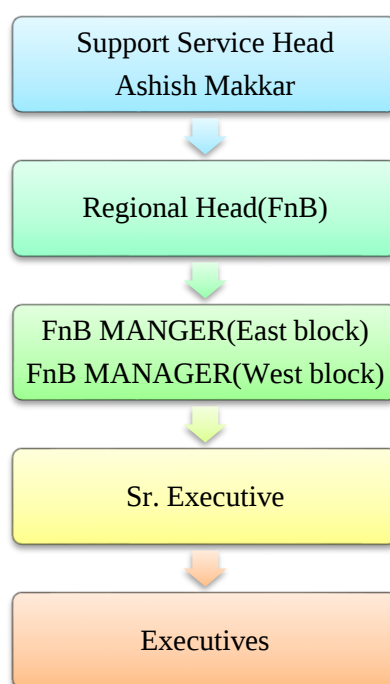
Various quality indicators used in CSSD are-

- **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.
- It is approved by NABH and works on ISO 9000: 2008.
- The department has been outsourced to Sodexo Pvt., ltd., however, the management and supervisory staff is in-house.
- Staff- 230 (outsourced) ; 11 (Max in house)
- Hierarchy

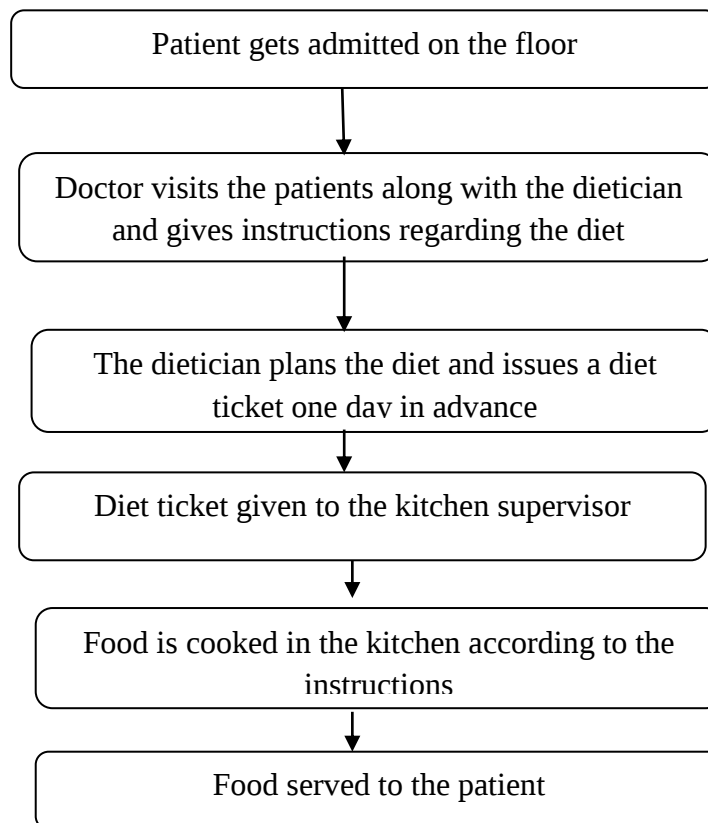


Time table for the diet of the patient: (7 meals/day)

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

- If the patient is on Liquid diet, it is provided every 2 hours, 10 liq. Diet/day.
- 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 wants to have something extra, those can be provided to the patient after consulting dietician and calling on 4030 from their room, no extra charges.

- Different menus offered are:
 - Continental
 - Afghani – for middle east patients
 - No onion and garlic – for middle east patients
 - Indian
- **Process flow** of the department

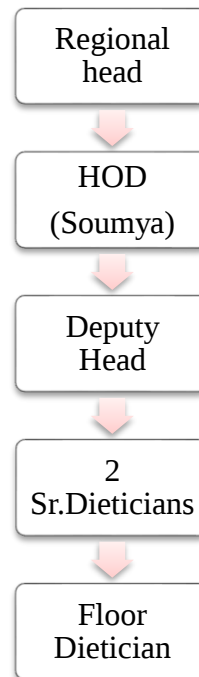


Quality Indicators for F n B department: Food Receiving, Food storage, Staffing

- The raw material is received everyday between 6:30-7am, washed and stored. The cutting is done on color coded chopping boards separately for Veg., Non-Veg. and Sea food.
- The food sample is tested for any infection every 15 days.

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

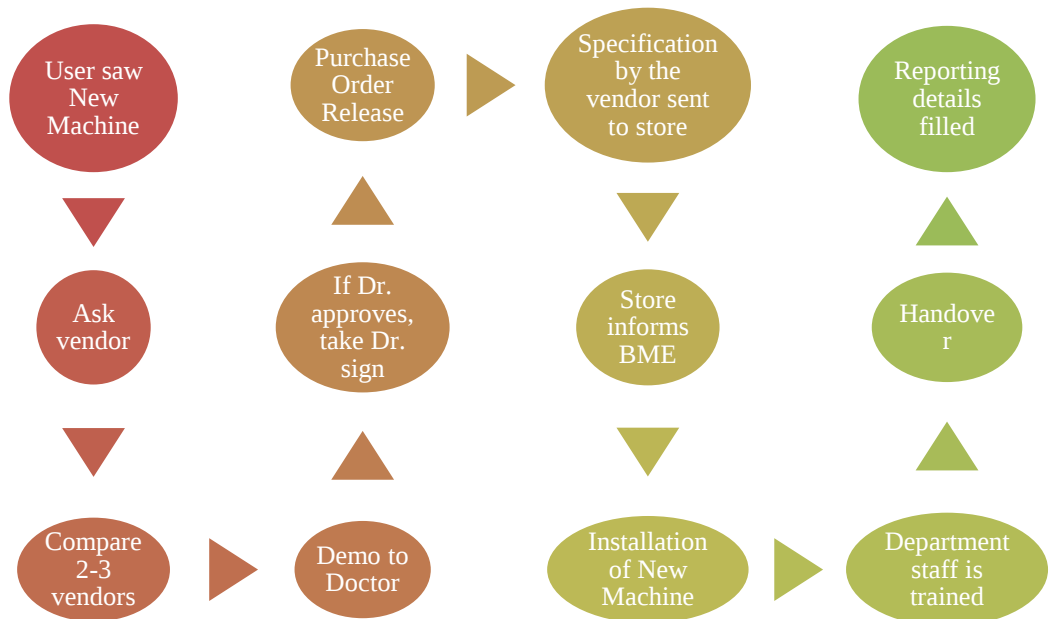


- Dietician: patient – 1:50
- Assessment of each patient to be done within 24 hours of admission and thereafter every 8th day after initial assessment.
- Scoring – Normal, Soft, Liquid Diet
- For enteral nutrition, all commercial supplements for each disease are available.
- Diet Note is put on CPRS on daily basis.

BIOMEDICAL ENGINEERING

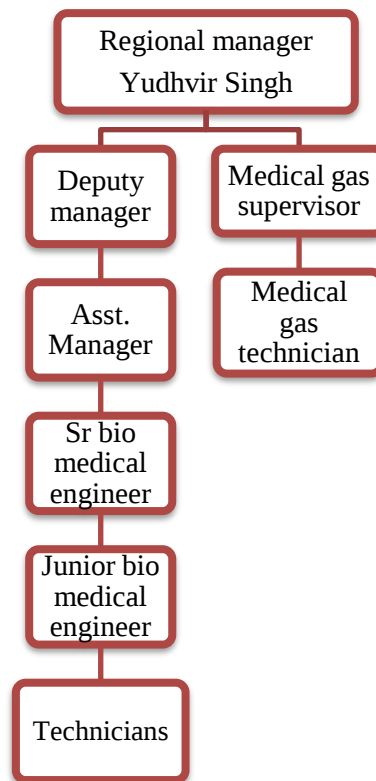
- This department deals with purchase, installation and commissioning, training on operating, handling and maintenance of medical equipment in all departments of the hospital.
- Looks after running equipment and new equipment.
- For Running equipment

- Preventive maintenance (PM) is done – to prevent breakdown, maintenance is done.
- Calibration is done – i.e. to check how accurate an equipment is functioning
There are white stickers on every machine that tells when the last PM and Calibration was done.
- Breakdown call is checked for
- Depreciation is measured
- For new equipment-
 - Installation and commissioning is done.



- Criteria for Up gradation-
 - i. The company supplying the equipment has been obsolete and BME recommends new machine
 - ii. The staff suggests a new machine, BME checks the budget of the department, if budget allows, and then procedure for procurement 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 happened. Thereafter replacement or repair whatever is required is done.

- Organizational chart



- Gas Manifold Department- Gas manifolds are also handled by this department and Max is awarded green OT certificate because of the efficient dispersion of OT gases. It maintains the supply of Oxygen, Air, Vacuum, Suction (-ve pressure).
- Compressors- in basement, for +ve and –ve pressure.

PHARMACY

Max pharmacy is self-owned with Central Pharmacy situated at corporate office, Okhla. There are 2 In-patient pharmacy stores, 2 Out-patient stores and 1 EWS pharmacy 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.

A (mostly used drugs), B (Less used), C (Least Used)

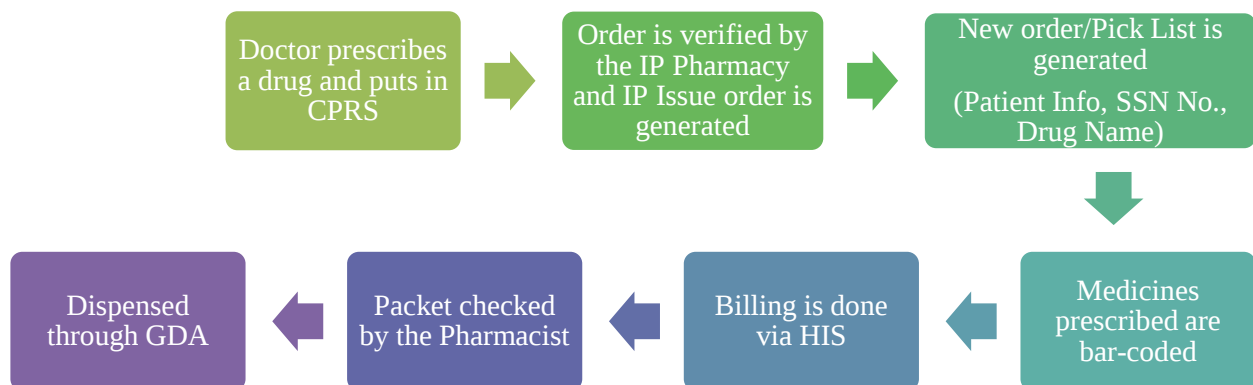
- Weekly requisition is done and vendors take minimum 3 days for delivery of drugs to hospital.

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-



The **Stat orders** required immediately are dispensed within 30 minutes. The **Now order** is dispensed within 1 hour and routine order (White color) is delivered by 1 round per day.

NARCOTICS DRUGS

They are kept in double lock and key system with a label “High Alert Medicines”. 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 colored **sound alike** and pink colored **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.

Licenses 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)

Staff- In-patient pharmacy- 9 (Pharmacist) + 1 (Executive) + 8 GDA, 5 Data Entry Operator

Out-patient pharmacy-

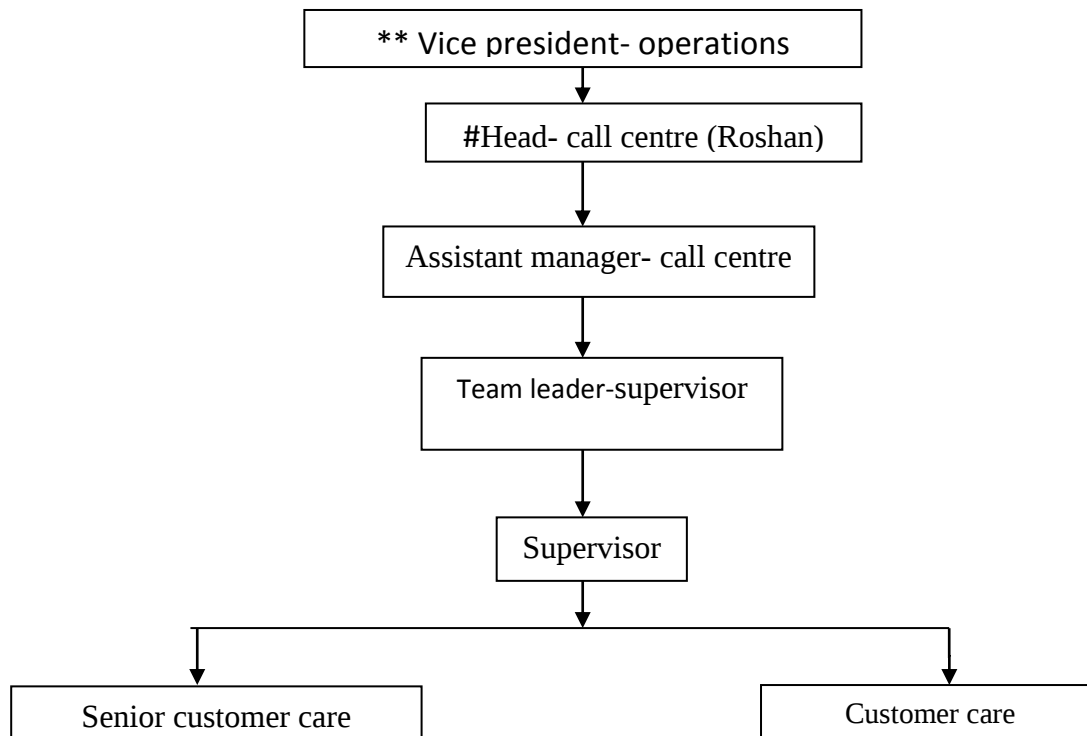
CALL CENTRE (in-house)

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
- Specialty information
- Other department information
- In-patient requests, ext. no. 4000
- It handles internal emergency e.g. at ext. no. "11" -Blue code, RRT, Code Yellow, Code Pink, at ext. no. "14", Code Red, Code Black
- Main board line number is: 26525050
- Ambulance Services

Organization chart:

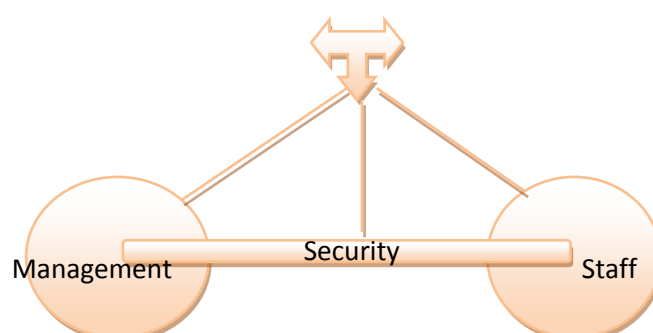


Ticket Process Flow



- If complaint is resolved, it closes automatically in 4 hours.
- Escalation Matrix- If any request is not fulfilled in appropriate time, this matrix enables a message on duty mobile of the department supervisor and so on, i.e. it escalates the unresolved issue to the higher authority concerned.
- All the HODs are messaged daily about the calls and the Turn Around Time (TAT) of the calls.

SECURITY DEPARTMENT



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

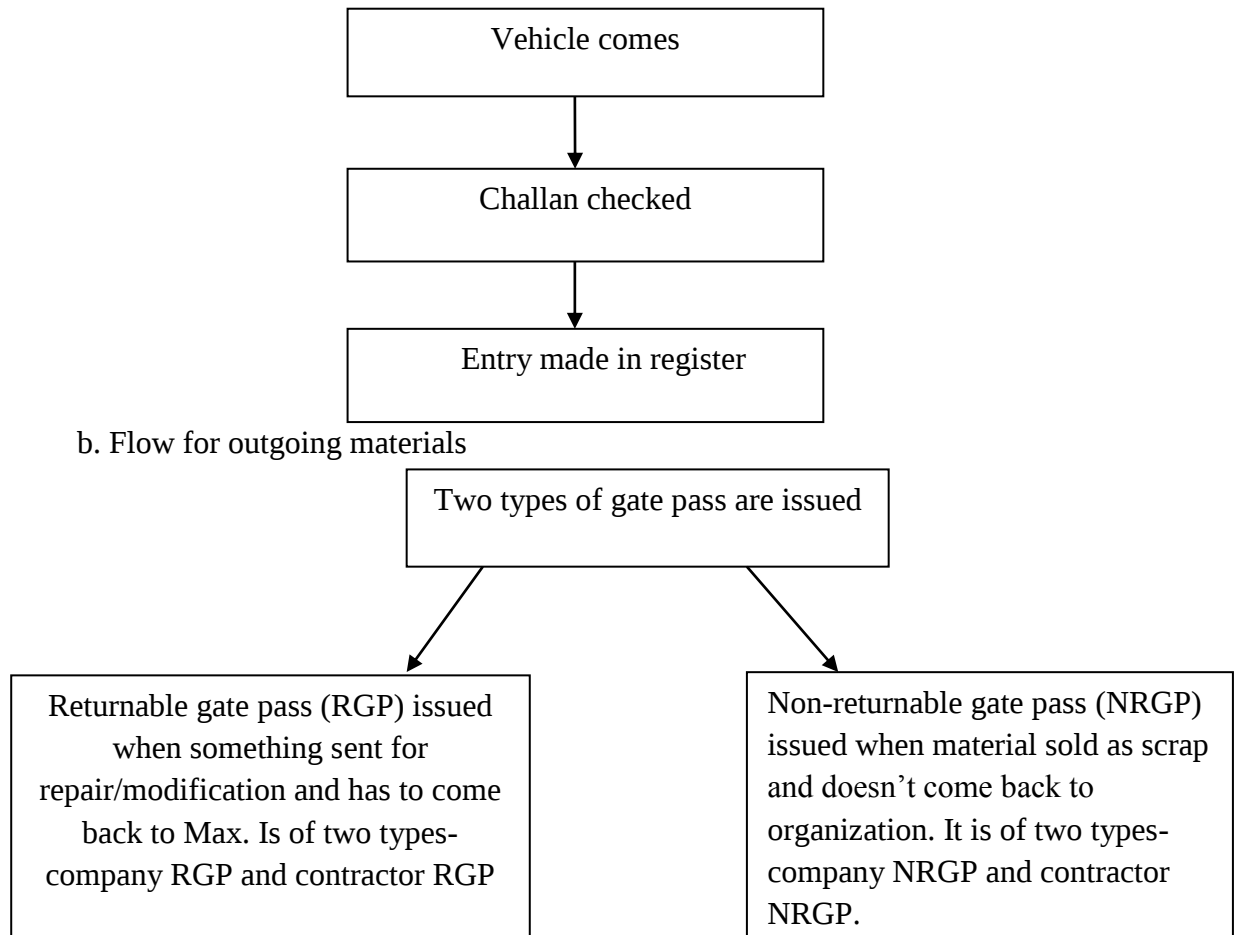
Functions of Security Department:-

1. Security management:-

- Selection of people(guards and supervisors)
 - Deploying of security staff to different floors and departments
 - Checking of people entering hospital- Frisking
 - Turnout and grooming of security staff
 - Death handling
 - Training of security staff
 - MLC handling- filling MLC intimation and re-intimation (if any) form Re-intimation is made when a MLC patient gets admitted again within 10 days of the discharge.
 - Dispute handling
- There are 192 CCTV Cameras recording every action in the hospital premises.
- Two Teams- IRT (Initial Response Team) and ERT (Emergency Response Team)
- ERCC system- Emergency Response Coordination and Communication system sends a voice message (1000 messages on 1 go) on the duty mobile number in an emergency.
- Security divides the RRT in 4 teams to act in an emergency
1. Action taking
 2. Rescue Team
 3. Salvage Team- to remove important documents from that area.
 4. Cordon off Team- to not to allow anybody inside the threat zone.
- If emergency occurs during an occupied OT, Security has put up a provision for OT to run for 45min on UPS, so basic stabilization of the patient can be done.
- There is a secret entry for the VIP security in the hospital.

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:-



1. 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.

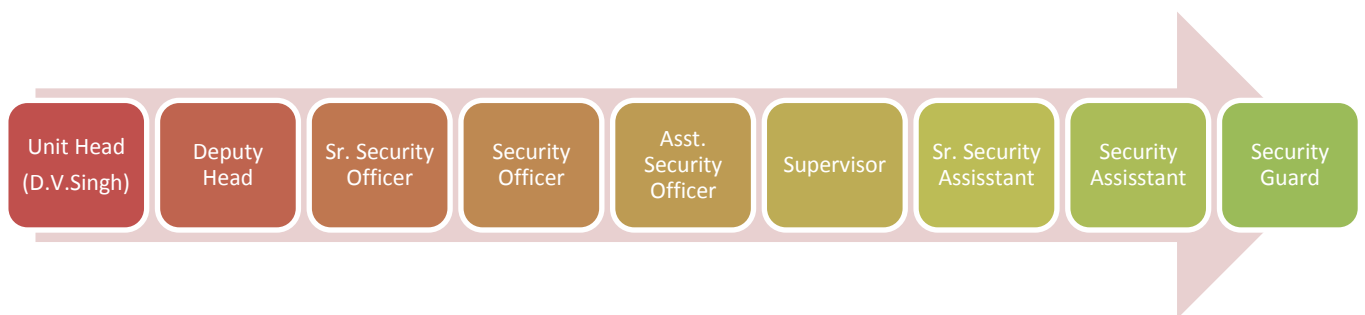
Other disasters include floods, water logging, terrorist attacks.

4. Valet management:-

- Helps internal and external customer 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.

Staffing

The Security department in Max Healthcare, Saket consists of 26 on- roll staff and 144 outsourced staff.



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.

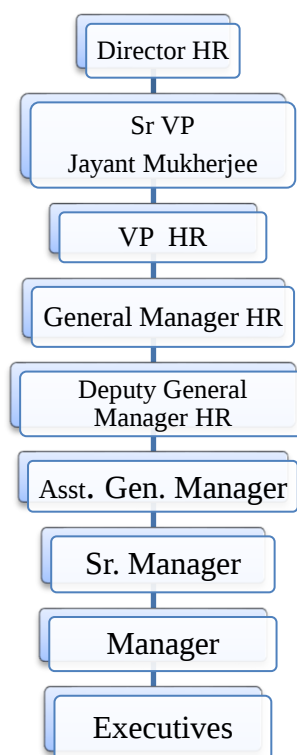
Core Values of HR : Excellence, Credibility and Seva bhavna

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 Hierarchy



Staff- Manpower of 15 staff is handling the HR system of Max Healthcare, Saket



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.

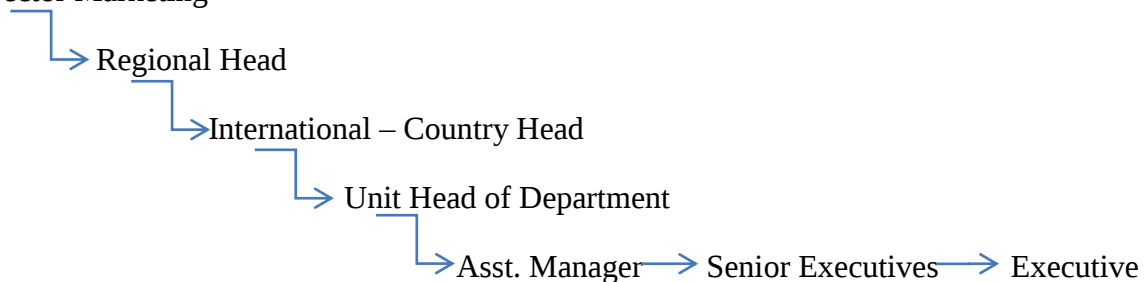
The countries from where patients come to seek treatment most commonly are Afghanistan, Iraq, African countries (Nigeria, Congo), Oman, Uzbekistan, Nepal, and Bangladesh.

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



CONCLUSIVE LEARNING

1. There is an information board on every nursing station which includes all the details of on-duty staff, is updated on daily basis.
2. Some of the Nursing station information board has Positive Thoughts (e.g. MAMBS recovery area, 2nd floor, East wing) and some have Good morning and smiling face smiley (e.g. 4th Oncology department)
3. The Emergency area is not designed within easiest reach, as it is not easily visible from the main entrance of the hospital.
4. The board depicting Emergency department does not has a good contrast background. “Emergency” is written with very light color on a bright background, difficult to read.
5. There are no directions in the hospital to reach Emergency department.
6. The Doctors feel very difficult to put notes in CPRS immediately, as they cannot find any system free. Some doctors also suggested of keeping Transcriptors for the same.

A STUDY ON FALL RISK ASSESSMENT FOR OUT PATIENT DEPARTMENT (OPD)

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INTRODUCTION

Hospitals operate in an environment where safety risks are high. Despite best efforts, unintentional accidents sometimes occur which are called patient safety incidents. These incidents are unintentional and occur due to the complex hospital environment and human factors. As per World Health Organization, no organization has been able to totally avoid such incidents. However, organizations whose leadership is committed to safety have set patient safety as a key strategic priority, and go all out to allocate resources to build safe systems and minimize risks to patients.

A fall is outlined as a happening which ends during a person coming back to rest unknowingly on ground or floor or different lower level. Fall-related injuries could also be fatal or non-fatal. every kind of falls square measure to be enclosed whether or not they result from physiological reasons (fainting) or environmental reasons (slippery floor). this could embrace motor-assisted falls like once a staffer makes an attempt to reduce the impact of fall by easing the patient's descent to the ground or by breaking the patient's fall. Patient safety is AN in progress responsibility of all hospital employees. so as to cut back the patient injuries as a result of a fall, the things can assess and re-assess the patient level of risk of fall. There square measure several risk factors which may be sorted into 2 categories- one. Intrinsic- associated with the person's condition that has factors that address a person's state. 2. Extrinsic-Related to the setting that has factors address the physical setting.

Fall risk assessment based mostly alone on the clinical judgment of the nurse, while not the utilization of a tool/questionnaire, has been shown to vary with the expertise level of the practitioner. employing a reliable and valid fall risk assessment tool is suggested as a result of it permits nurses to form selections relating to the patient's potential for falls during a systematic manner, instead of victimization intuition, and therefore the method of risk assessment are often done faithfully despite changes in personnel and therefore the advance of your time. Over fifty sources of proof forbidden the event, use, and/or validation of fall risk assessment tools that square measure designed to spot patients with physiological conditions that permit one to predict that they might be at exaggerated risk of falling.

Several tools were developed and tested in acute care settings, wherever employee's members were tuned in to the study and were allowed to implement interventions to stop falls from occurring. This reduced the quality of reportable tests of sensitivity and specificity as a result of these values might be affected if speculative patients, World Health Organization square measure foreseen to fall, don't fall owing to the interventions that were used. Fall risk tools square measure usually designed to predict anticipated physiological falls, that represent thirty four to seventy eight % of the falls that occur in acute care. Patients additionally fall owing to special conditions (e.g., seizures, fainting) or accidents. each of those fall varieties square measure usually unpredictable. so as to assess for and style interventions to stop these out of the blue or accidental falls, 3 factors that were known within the review of the literature were planned.

First, the presence of sure special conditions or diagnoses (e.g., syncope, fainting, seizures, or pathologic hip fracture) has been related to out of the blue physiological falls. proof regarding falls associated with these conditions in acute care is lacking. However, in community-based populations, syncope is most typically caused by postural hypotension, vasovagal response, and drugs; serious cardiac-related syncope happens less typically. Community-dwelling elders with postural hypotension or unstable pressure were reportable to own a two-fold increase in risk of falling.

Patients World Health Organization have syncope, postural hypotension, seizure disorder, or viscus arrhythmias, also as patients convalescent from physiological events—such as AN adverse drug

reaction, a procedure, or surgery—can be anticipated to be at exaggerated risk for unstable pressure (hypotension), syncope, and later falling at sure speculative times (e.g., once the event, throughout their initial day out of bed).

Second, sure patient conditions might increase a patient's risk for injury secondary to a fall. for instance, pathologic process bone unwellness and pathology have each been related to exaggerated risk of fracture. Anticoagulant-treated patients World Health Organization fall and knowledge losses of consciousness or intracranial hemorrhage have a high rate of mortality. Use of antiplatelet agents, like acetylsalicylic acid and clopidogrel, in traumatized aged patients has been related to a big increase in risk of mortality associated with intracranial hemorrhage, though low-dose acetylsalicylic acid by itself doesn't seem to extend the speed of hemorrhage. whereas these medicine and conditions don't have an effect on actual fall risk, they are doing increase injury risk from a fall and warrant assessment and applicable interventions to observe for safety and encourage patients to stick to fall interference interventions.

Third, and probably the foremost necessary issue that influences fall risk, is that the degree to that the patient is willing and ready to be concerned within the fall-prevention method. Researchers have documented that a high share of falls occur once the patient isn't within the presence of a caregiver. Patient understanding and active participation square measure essential elements of all ways wont to forestall falling and fall-related injuries, notably in preventing accidental and out of the blue falls that occur within the absence of a caregiver.

Assessing for risks of anticipated physiological falling there are many fall risk assessment tools are use like Morse Fall Scale, John Hopkins Fall Risk Assessment Tool for Home Health Care (JHFART), Fall Risk Assessment Tool (FRAT) and Stopping Elderly Accident, Deaths and Injuries (STEADI). Although Morse Fall Scale is often use more frequently in hospitals.

REVIEW OF LITERATURE

“Development and evaluation of evidence based risk assessment tool (STRATIFY) to predict which elderly inpatients fall by Dr Oliver will found that the risk factors for falling were significantly more prevalent in the patients who had history of fall. These factors were used to construct the risk assessment tool. These were the factors that were readily assessable by ward nurses based on their day to day observation of patients and could be performed shortly after admission to hospital. This conferred the advantage of generating a pragmatic risk assessment tool, taking about one minute per patient per week and requiring no formal measurements, additional training, or equipment.¹

other health care organizations can take steps to prevent falls among their patients by implementing The Johns Hopkins Fall Risk Assessment Tool (JHFRAT) is an evidence-based fall safety initiative. The risk stratification tool is highly effective when combined with a comprehensive protocol, and fall-prevention products and technologies. Hospitals and e JHFRAT toolkit. ²

¹ Development and evaluation of evidence based risk assessment tool (STRATIFY) to predict which

elderly inpatients will fall: Case-control and cohort studies

²

“Risk factors and risk assessment tools for falls in hospital in-patients done by D. Oliver found that a small number of significant falls risk factors emerged consistently, despite the heterogeneity of settings namely gait instability, agitated confusion, urinary incontinence/frequency, falls history and prescription of ‘culprit’ drugs (especially sedative/hypnotics). Simple risk assessment tools constructed of similar variables have been shown to predict falls with sensitivity and spasticity in excess of 70%, although validation in a variety of settings and in routine clinical use is lacking. Effective falls interventions in this population may require the use of better-validated risk assessment tools, or alternatively, attention to common reversible falls risk factors in all patients.”^{3 3}

“Fall: The Accidental Injury in Geriatric Population study done by Mr.Alok Kumar found that Falls in elderly people are a common presenting complaint to emergency departments. Current practice commonly focuses on the injury, with little systematic assessment of the underlying cause, functional consequences, and possibilities for future prevention. Elderly patients should be asked about falls at least once per year because many patients do not volunteer that information. As the population ages, the problems related to falls and fractures are expected to grow and pose an even greater challenge to the health care systems. A majority of falls are predictable and therefore potentially preventable. An interdisciplinary approach to this high-risk population and Multifaceted programs, including exercise, vision correction, medication review and adjustment, and environmental modification can significantly decrease the risk of further falls and limit functional impairment.”⁴

RATIONALE

This Report is intended to find out the Fall Risk Assessment in Outpatient Department of Max Hospital, Saket as main goal is to provide finest patient care. The type of Fall Assessment tool which has been studied is Morse Fall Risk Assessment Tool is one of the major contributing factors that adds to the complete care of the patients which they expect from the hospital. Reducing the patients fall in OPD can lead to significant increase in enhancing the hospital’s image.

OBJECTIVES

1. To gather the perception of provider’s awareness for identifying the vulnerable patients in OPD.
2. To assess the perception of providers and patient’s awareness to the intrinsic and extrinsic fall risk factors.
3. To assess the perception of patient’s for the safety and comfortability with the usage of wheelchairs and stretchers.

RESEARCH METHODOLOGY

Type of study: Observational Descriptive study

Study population: All the Patients and Nursing staffs at Max Super Speciality Hospital, Saket, Delhi

Study area– Outpatient Department Max Super Speciality Hospital, Saket, Delhi (East and West Blocks)

Johns Hopkins Fall Risk Assessment Tool (JHFRAT)

Duration of Study– 3 Weeks

Type of Data- Qualitative

Technique– Structured Questionnaire

Sample size – 120min. (80 patients 40 medical / nursing staffs).

Sampling technique- Purposive sampling.

Data entry- Manually

Data Analysis- Using bar charts, pie charts in Microsoft Excel

DATA ANALYSIS & INTERPRETATION FOR PATIENTS/ATTENDANTS

PROVIDERS PERCEPTION

FIGURE 1

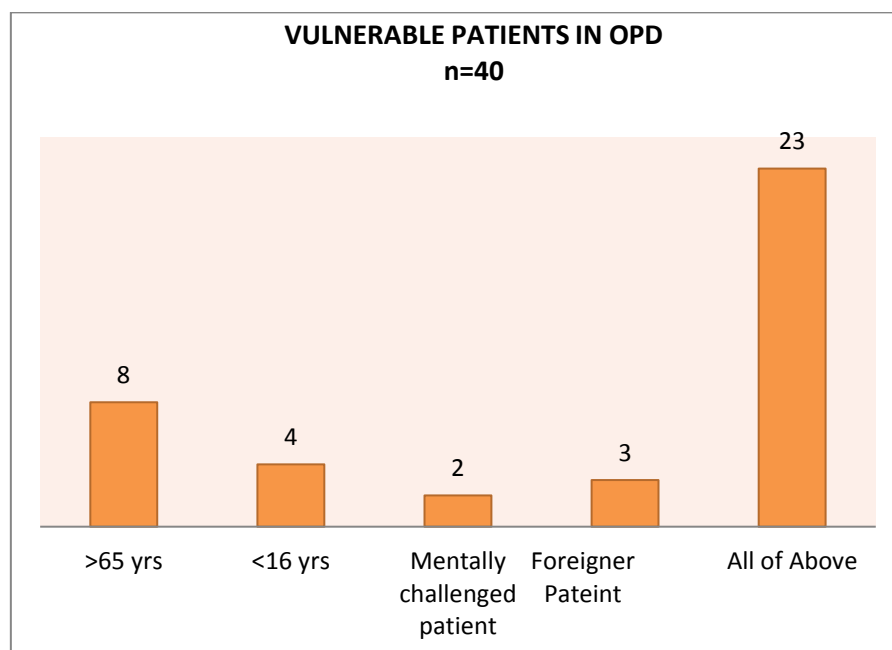
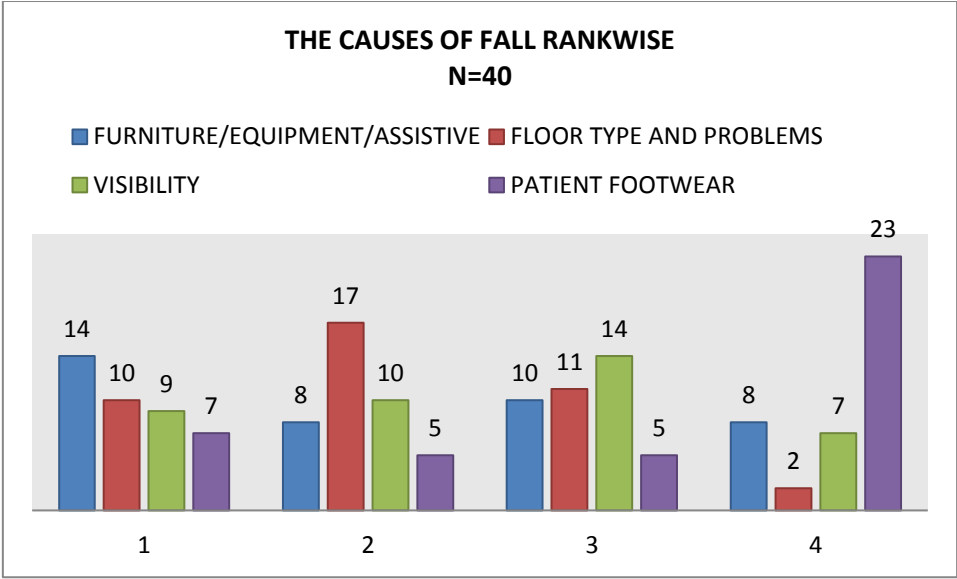


FIGURE 2



PATIENTS PERCEPTION

FIGURE 1

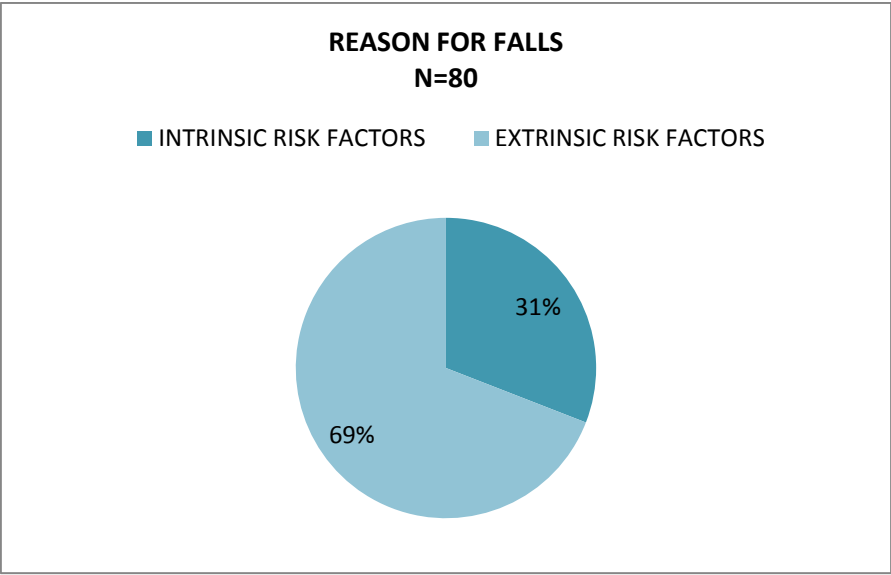


FIGURE 2

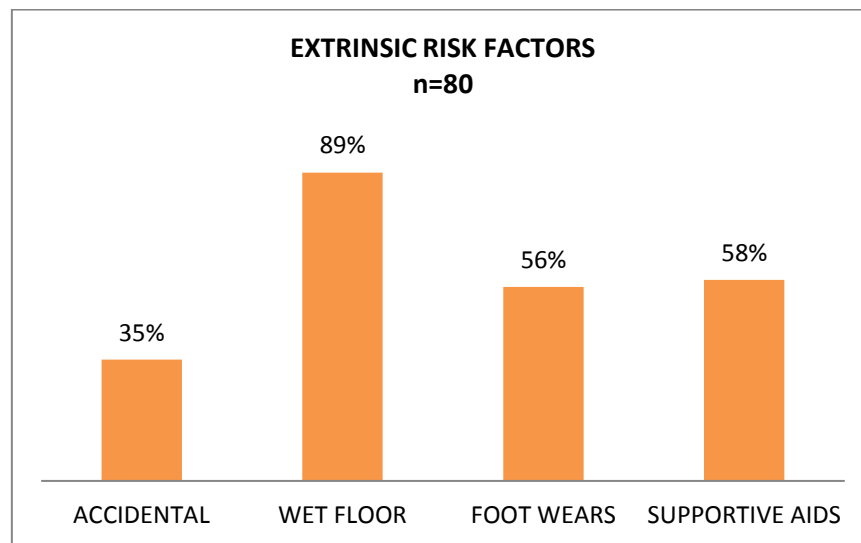


FIGURE 3

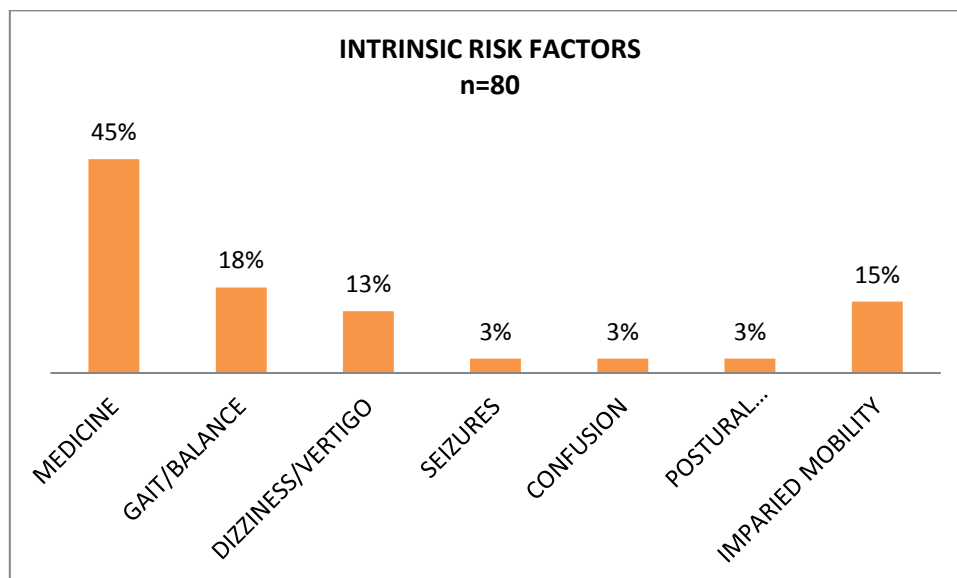
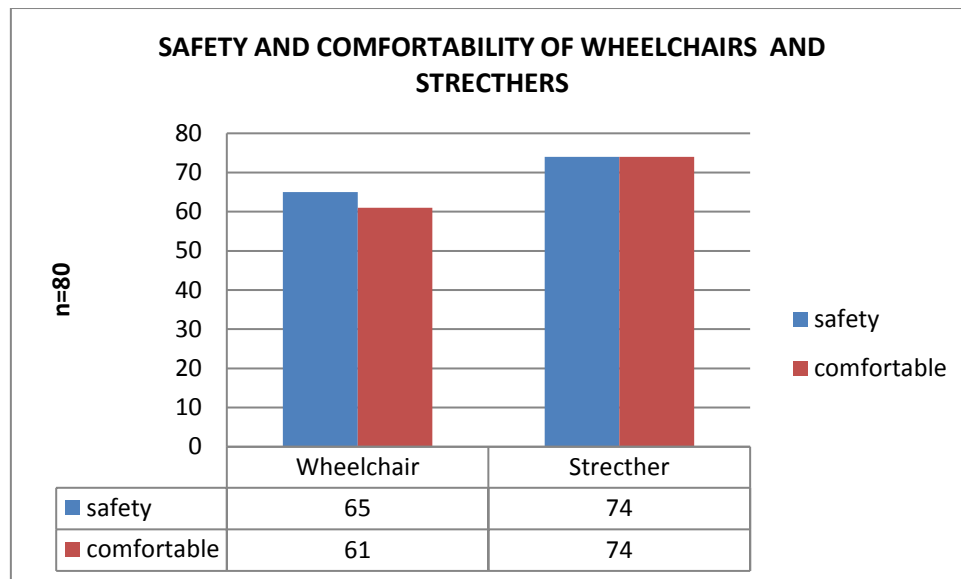


FIGURE 4



OBSERVATIONS AND FINDING

These are the following locations, situations and types of patients in the OPD were observed where patients are prone to fall risk:-

1. Preventive health check up, Day care and Physiotherapy
2. Phlebotomy room in OPD, TMT room.
3. Escalators, Stairs, toilets and bath rooms
4. Situation like patients arriving by ambulance, while transferring the patients from wheelchair or patients through escalators.
5. Patients with the history of syncope, epilepsy, drug/alcohol dependence.
6. Patient with gait or balance disturbances, visual impairments and altered mental status.

These are the following fall prone environmental conditions observed in OPD:-

1. Wet floors.
2. Floors with oil/ grease spills.

3. Thick smoke with poor visibility.
4. Patient transported on wheel chairs and trolleys.
5. Unlocked wheels of stretcher or wheelchair.
6. Inappropriate lighting.
7. Accessibility to bed and call light
8. No use of Side rails and grab bar.
9. Congested and overcrowded area for walkers and quad cane/cane users.
10. No supportive aids in toilets.

These are the following fall prone morbid condition set by hospital.

1. Patient < 12 years and > 65years of age.
2. Frail and poorly nourished patients.
3. Visually and physically handicapped patients
4. Unconscious/ semi-conscious patient.
5. Patient under sedation.
6. Patient on chemotherapy.
7. Irritated/ violent patient.
8. Psychotic patient.
9. Head Injury.
10. Epilepsy.
11. Eclampsia.
12. Stroke, paresis/ paralysis of lower limbs. Intra Cranial Space Occupying Lesions.

These are the following medication taken by patients who are undergone for Fall Risk Assessment in OPD -

1. Antiepileptic
 2. Antihistamines
 3. Antihypertensive/Cardiovascular agent/ B-Blockers/ Hypoglycaemic
 4. Diuretic
 5. Pain medication
 6. Sedative & Benzodiazepine.
- Many of the times Staff Nurse wasn't aware about the Name of the Fall Risk Assessment Tool use for Patients/ Attendants in OPD.

- Language Barrier is one of the major problems between the Nurses & the Patients/Attendants.
- House Keeping staffs do their job properly and take immediate wherever it needs.
- Some of the OPD areas don't have sufficient sitting area for Patient/Attendants.
- All the medical/nursing staffs had undergone for proper training programme regarding Fall Risk Assessment. They always brief about Fall Risk Assessment to Patients/Attendants and take immediate actions whenever it needs.

RECOMMADATIONS

1. Fall risk assessment criteria shall be identified and documented. Based on such criteria, fall risk assessment shall be done for inpatients and outpatients. The assessment shall be based on situation, location and type of patients as identified.
2. Patients will be assessed for fall risk factors during physical examination in OPD.
3. Fall risk assessment shall be done for all patients on their every visit in the outpatient area/ Day Care.
4. Following a fall assessments and periodic reassessments shall include the potential risk associated with the patient's medication regimen.
5. If determined to be at risk, a plan of care for the patient shall be developed proactively that utilizes interventions to reduce the risk of patient harm resulting from falls.
6. Documentation of patient/family education shall be placed in the medical record.
7. Falls Prevention Program requires that the vulnerable patient band be placed on the patient's wrist in OPD area only.
8. A patient who has experienced a fall shall have an immediate physical assessment, Primary Consultant notification, and the event documented on an incident report: including root cause analysis of the same. The reassessment for such patients is done in every shift.

OPD Fall Prevention Measures

1. Ensure adequate lighting
2. Ensure that foot stool is in place, near to examination table
3. Ensure patient is secured with safety belt- wheel chair, stretcher.
4. Instruct patients or attendants to call for help before getting out of wheel chair.
5. Pathway to be kept clear from obstacles and keep toilets floor dry.
6. Teach patient to grab bars.
7. Teach patient and the family to use call bell in the toilet in case of any emergency.
8. Instruct the family members to be with patients always.

9. Provide side rails and grab bar (if applicable).

Documentation:

- Document the patient's fall risk assessment and appropriate interventions in the patient's medical record.
- If patient experiences a fall, document post fall assessment and interventions in the medical record
- Patient/Family Education
- An incident reporting form should be filled.
- Any fall which is resulting in a fracture (temporary or permanent harm) must be reported as a sentinel event.

Monitoring & Evaluation

- Monitoring of compliance with this policy should high priority for the hospital management.
- Apart from regular audit, at local level all incident reports should be discussed with the team at team meetings following an incident and where appropriate a review undertaken, identifying any actions necessary to prevent future errors.

CONCLUSION

It is important that all the Medical/Attendants should know the Fall Risk Assessment and its importance as in the hospital set up there is nothing more important than the patient care. From initiating the assessment of patients/attendants to its closure, every step has its own importance. In primary care-specialty care Fall Risk Assessment is a valuable tool in the quest for improved access to care the patients/attendants at risk of fall at OPD.

All the medical and nursing should take all the precautions for preventions of fall in OPD area. If the incident occurs give support to the patient and take the vitals of the patient and call the consulting doctors to check the condition of the patient. If patient is not responding call the RRT and shift the patient to the emergency for the triage.

ANNEXURE**MORSE FALL SCALE (USE IN OPD)**

ITEM	SCALE	SCORING
1.History of falling, immediate or within 3months	NO 0 YES 25	
2.Secondary diagnosis	NO 0 YES 25	
3.Ambulatory aids(wheelchair, assisted by attendant, cane, walker)	NO 0 YES 25	
4.I.V/ Heparin Lock	NO 0 YES 25	
5.Gait/Transferring (normal, immobile ,weak, impaired)	NO 0 YES 25	
6.Mental Status(Oriented to own ability, forget limitations)	NO 0 YES 25	

SAMPLE RISK LEVELS

RISK LEVELS	MFS SCORE	ACTION
No Risk	0-24	Good basic nursing care.
Low Risk	25-50	Implement Standard Fall Prevention Interventions.
High Risk	More than 50	Implement High Risk Fall Prevention Interventions.

4

REFERENCES

1. <http://www.bmj.com/content/315/7115/1049?linkType=FULL&resid=315/7115/1049&journalCode=bmj>
2. http://www.hopkinsmedicine.org/institute_nursing/models_tools/9_2_16_JHFRAT%20Flyer.3.pdf
3. <http://medind.nic.in/jal/t11/i2/jalt11i2p175.pdf>
4. <http://medind.nic.in/jal/t11/i2/jalt11i2p175.pdf>

⁴ Morse Fall Scale

**A STUDY ON ADMISSION AND DISCHARGE
CRITERIA OF INTENSIVE CARE UNIT (WEST
BLOCK)**

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INTRODUCTION

The Intensive Care Unit (ICU) is an area with medical facility equipped with advanced technologies such as ventilators and personnel trained to provide intensive, advance life-supportive care to critically ill patients. The criteria for admission to Intensive Care Unit (ICU) is based on certain specific parameters which help guide medical and nursing staff to identify patients in need of Intensive Care Unit (ICU) care. The records of patients who are admitted/transferred/discharged to units providing intensive/specialized services contain evidence that they meet the criteria for services. Intensive Care Unit (ICU) admission is also based upon clinical condition as well as the likely benefits of Intensive Care Unit (ICU) treatment and expectation of recovery.

The Intensive Care Unit is an expensive resource area and should be reserved for patients with reversible medical conditions with a reasonable prospect of substantial recovery. Criteria for admission to critical care unit(s) is based on certain specific parameters which help guide medical and nursing staff to identify patients in need of ICU care.⁵

POLICY AND PROCEDURE

1. Criteria for admission to critical care unit(s) is based on certain specific parameters which help guide medical and nursing staff to identify patients in need of ICU care.
2. Doctors from intensive care or specialised units have participated in developing these criteria's.
3. The records of patients who are admitted/transferred/discharged to units providing intensive/specialized services contain evidence that they meet the criteria for admission and discharge.
4. The staff is trained on using entry/admission and exit/discharge criteria. On the job training is provided to doctors and nurses by senior ICU consultants and record is maintained in the OJT registers of the respective ICU's

ADMISSION CRITERIA:

1. ICU admission criteria should select patients who are likely to benefit from ICU care.

⁵ ICU Admission, Discharge, and Triage Guidelines

2. ICU care has been demonstrated to improve outcome in severely ill, unstable patient populations.
3. Resuscitation or admission must not be delayed where the presenting condition is imminently life threatening, (e.g. profound shock or hypoxia).
4. If admission is delayed or impossible due to bed unavailability the ICU staff will discuss and appropriate, assist in the process of alternative specialized care.
5. All admissions will be arranged by consulting the on-call ICU consultant before transferring the patient.
6. Until the patient enters the ICU his/her medical care remains the responsibility of the initial assessing physician.
7. Eligibility for ICU admission is also based upon clinical condition as well as the likely benefits of ICU treatment and expectation of recovery. This will be assessed mutually by treating doctor and ICU in charge as appropriate.
8. In case of conflict regarding admission criteria, the ICU consultant will decide which patient should be given priority.
9. Some patients are admitted to the ICU only under unusual circumstances, at the discretion of the ICU consultant, and they should be discharged if necessary to make room for priority 1 or 2 patients.
10. The ICU admission decision may be based on several models utilizing prioritization, diagnosis, and objective parameters models.

ADMISSION POLICY

1. No patient may be accepted into the Intensive Care Unit without the knowledge and consent of the duty ICU Consultant.
2. Resuscitation or admission must not be delayed where the presenting condition is imminently life threatening unless specific advance directives exist.
3. In general patients should be admitted to the Intensive Care where it is perceived they would benefit in some way as a result.
4. Usually this means patients with actual or potential organ system failure, which appears reversible with the provision of intensive support measures.

PATIENT TRIAGE

ICU admission criteria will select patients who are likely to benefit from ICU care. Patients not admitted should fall into two categories, “too well to benefit” and “too sick to benefit”. Defining substantial benefit is difficult, and no pre-admission model exists to predict outcome in a given patient. Rather than listing arbitrary objective parameters, patients will be assigned to a prioritization model to determine appropriateness of admission

1. The ICU admits adult patients 18 yrs and above.
2. Admissions from Emergency for walk-in patients without a consultant label, the patient will get admitted to the ICU directly under the Consultant ICU Unit on Duty.
3. Admission of patients from another hospital is discussed with the ICU Consultant Before transfer of the patient.

4. Admission is be arranged by the ICU consultant or their nominated deputies provided that a bed is available
5. If admission is delayed or impossible due to bed unavailability, the ICU staff will discuss and if appropriate, assist in the process of alternative specialized care.

DISCHARGE POLICY

1. The status of patients admitted to an ICU should be revised continuously to identify patients who may no longer need ICU care.
2. When a patient's physiologic status has stabilized and the need for ICU monitoring and care is no longer necessary.
3. All discharges must be approved by the on call ICU consultant.
4. Patients are discharged when the reason for admission has resolved.
5. Primary care teams must be informed of all patient discharges and any potential or continuing problems
6. A discharge summary must be completed in the case notes prior to discharge and the Criteria for Discharge Mentioned.

DISCHARGE PROCEDURE

1. Nurses will not send patients to the ward without first checking with the on duty ICU Consultant.
2. All discharges must be approved by the Duty ICU Consultant.
3. The parent team must accept care of the patient, this acceptance must be recognised at ICU consultant and above level, either through their Registrar, or in some cases directly.
4. All other teams involved should be advised, including the pain team, dietician, special pharmacy requirements

A careful plan for the immediate discharge period must be discussed with the accepting team, and be clearly documented in the notes including:

1. Limitation of treatment where appropriate.
2. Non-return orders
3. Clear medical management plan including charting of the following for the next 24hrs:
 - Fluids
 - Feeding
 - Analgesia
4. Documentation to be completed prior to discharge:

Nurses will not send patients to the ward without first checking with the on duty ICU Consultant.

1. The status of patients admitted to an ICU should be revised continuously to identify patients who may no longer need ICU care.
2. Patient can be shifted from the ICU when a patient's physiologic status has stabilized and the need for ICU monitoring and care is no longer necessary.

3. Discharge criteria from Critical Care Units are similar to the admitting criteria for the next level of care such as intermediate care where available. However, not all patients require intermediate care after ICU discharge.

LITERATURE REVIEW

“In acute care hospitals, one can identify a patient population that does not require intensive care but needs more care than that provided on a general ward. These patients may require frequent monitoring of vital signs and/or nursing interventions, but usually do not require invasive monitoring. In a study of 706 surgical and medical ICU patients, this patient population accounted for approximately 22% of all ICU bed days. In a more recent study of 17,440 ICU admissions, 6,180 patients were admitted strictly for intensive monitoring, though they had a less than 10% risk for requiring active treatment based on this monitoring. As a consequence, intermediate care has been proposed as a more appropriate means of resource utilization for these patients. Intermediate care areas can be represented as multipurpose "progressive care units" or as single-organ subspecialty floors such as cardiac telemetry, surgical (thoracic, vascular, etc.) neurosurgical /neurological monitoring areas, or chronic ventilator respiratory care units. In light of the recent emphasis on cost containment, the intermediate care unit concept is suggested as a strategy that promotes greater flexibility in patient triage, increases accessibility to limited intensive care and provides a cost-effective alternative to critical care unit admission, particularly for patients with a low risk of, but potential for, major complications and who have been admitted for routine monitoring. Moreover, patient satisfaction may be increased since an intermediate care environment is less noisy and may have more liberal family”.¹⁶

The number of the Intensive Care Unit (ICU) beds has been increasing all over the world, but it seems that demands for them exceed the supply. On the other hand, as the ICU technology becomes more advanced, its costs rise, as well. Since sources are limited, it is crucial to design a model for ICU admission. In spite of the importance of this issue, few studies have been focused on decision making for ICU admission. Generally, decision making for ICU admission is based on identifying the patients who benefit more from ICU and rejection of those who are too well or too bad to benefit from the unit. Today, there are few guidelines which have identified all the indications for ICU admission of the patients; however, they are not always useful in practice. In some hospitals, especially in developing countries where sources are limited, it is not possible to follow such guidelines. Thus, decision making for ICU admission is performed according to the physicians' opinions rather than a standardized guideline. Therefore, it seems that designing a model which ranks the indications for ICU admission according to their importance could be useful in prioritizing the candidates for ICU admission. Delphi method is a forecasting method used to reach consensus by asking some experts to respond to questionnaires in several rounds.²

RATIONALE

⁶ Guidelines on Admission and Discharge for Adult Intermediate Care Units

This Report is intended to find out the Admission and Discharge criteria of Intensive Care Unit of Max Hospital, Saket as main goal is to provide finest patient care. The Admission and Discharge criteria is one of the major contributing factors that adds to the complete care of the patients which they expect from the hospital. Reducing the delay in Admission and Discharge and high occupancy rate of beds can lead to significant increase in enhancing the hospital's image.

OBJECTIVES

1. To determine the compliance of criteria for Admission to intensive and specialized care units.
2. To determine the compliance of criteria for transfer/discharge from intensive and specialized care units.

RESEARCH METHODOLOGY

Type of study : Descriptive study

Study population : All the Patients at Max Super Speciality Hospital, Saket, Delhi

Study area–Intensive Care Unit Max Super Speciality Hospital, Saket, Delhi (West Blocks)

Duration of Study– 2 Weeks

Type of Data- Qualitative

Technique- Checklist prepared

Sample size – 60Min.

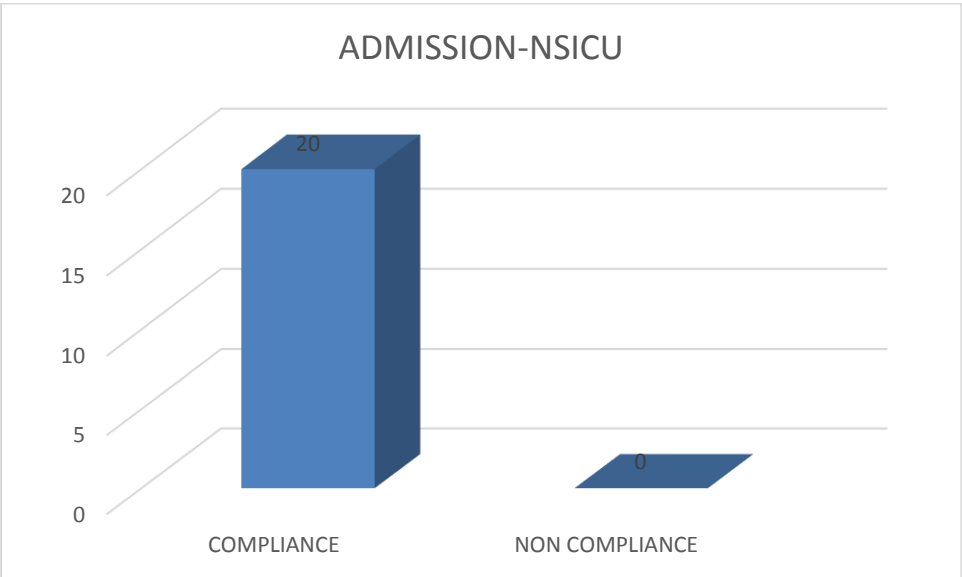
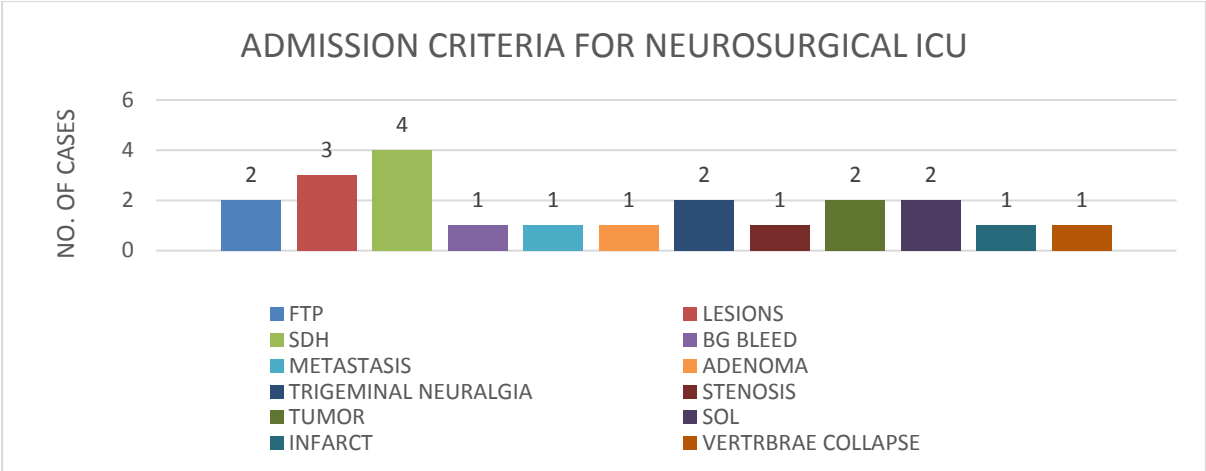
Sampling technique- Non probability sampling

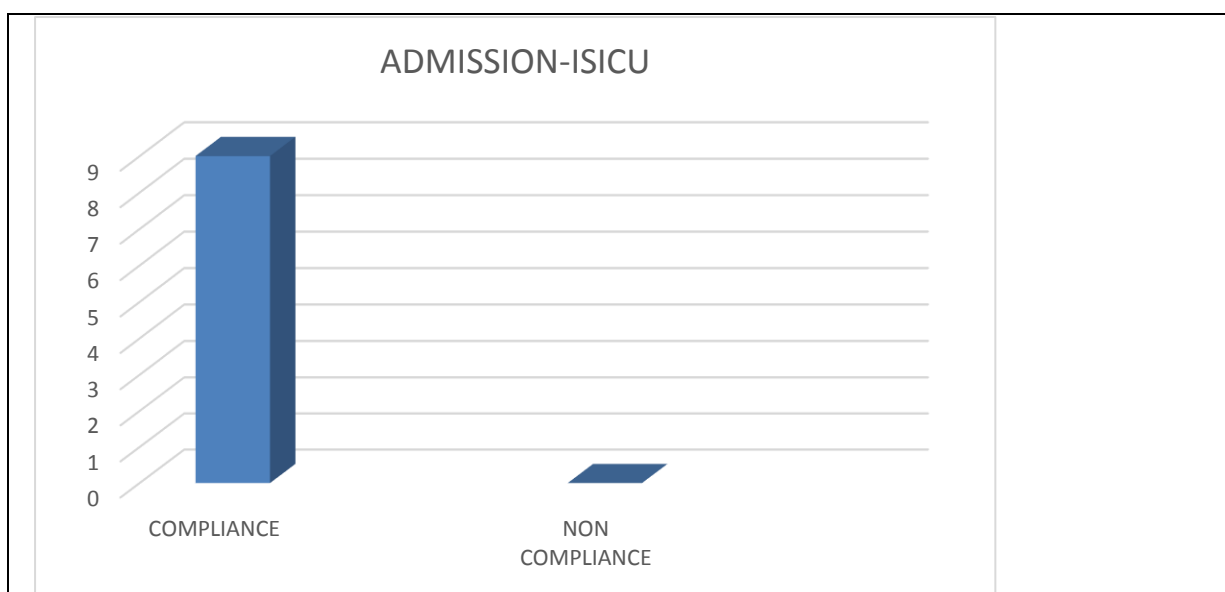
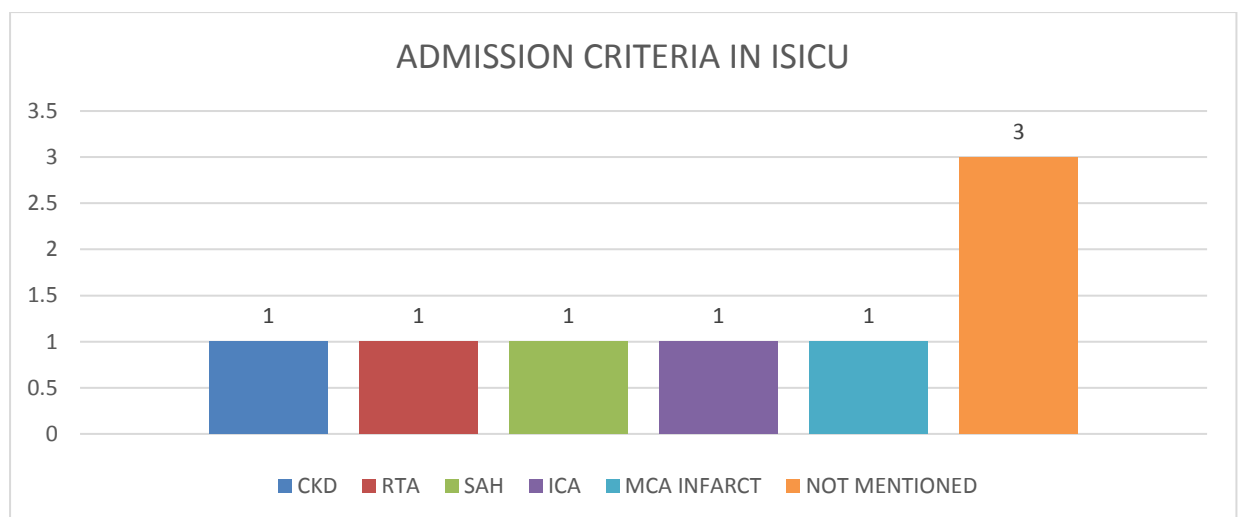
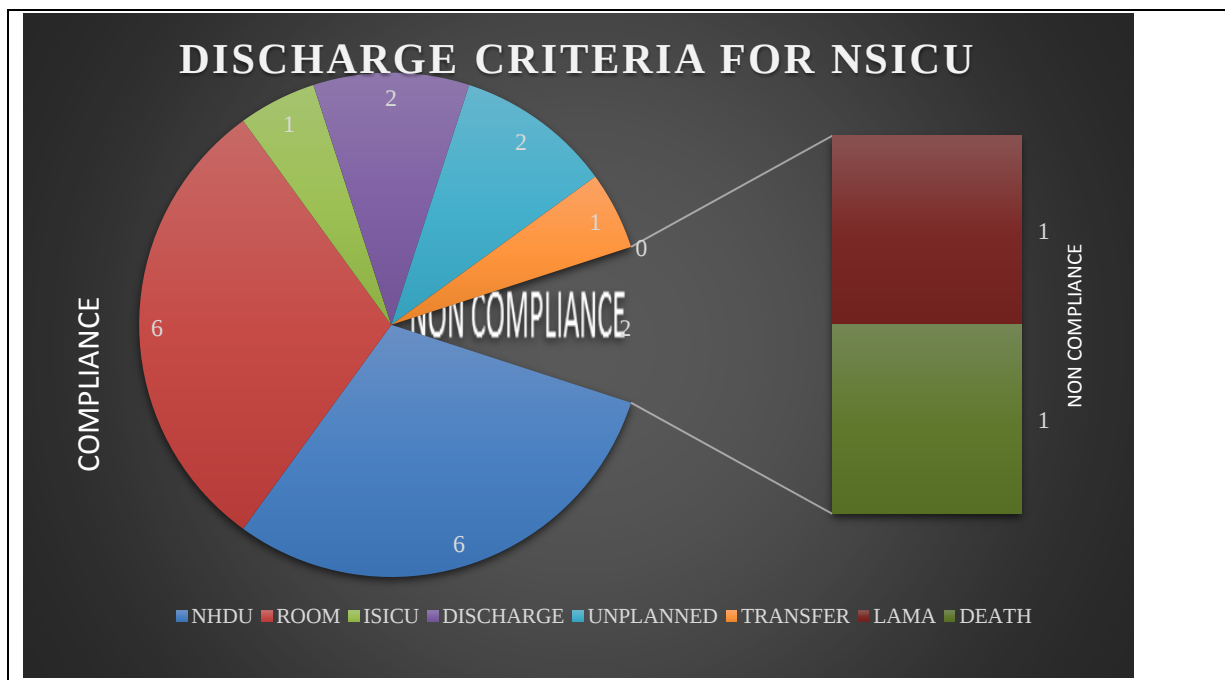
Data collection-Primary and Secondary(2weeks)

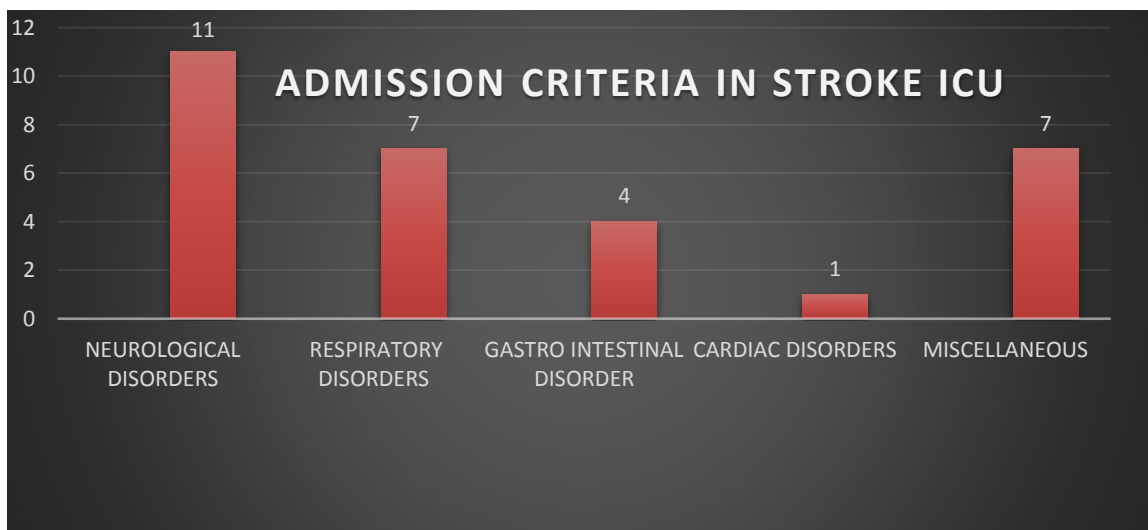
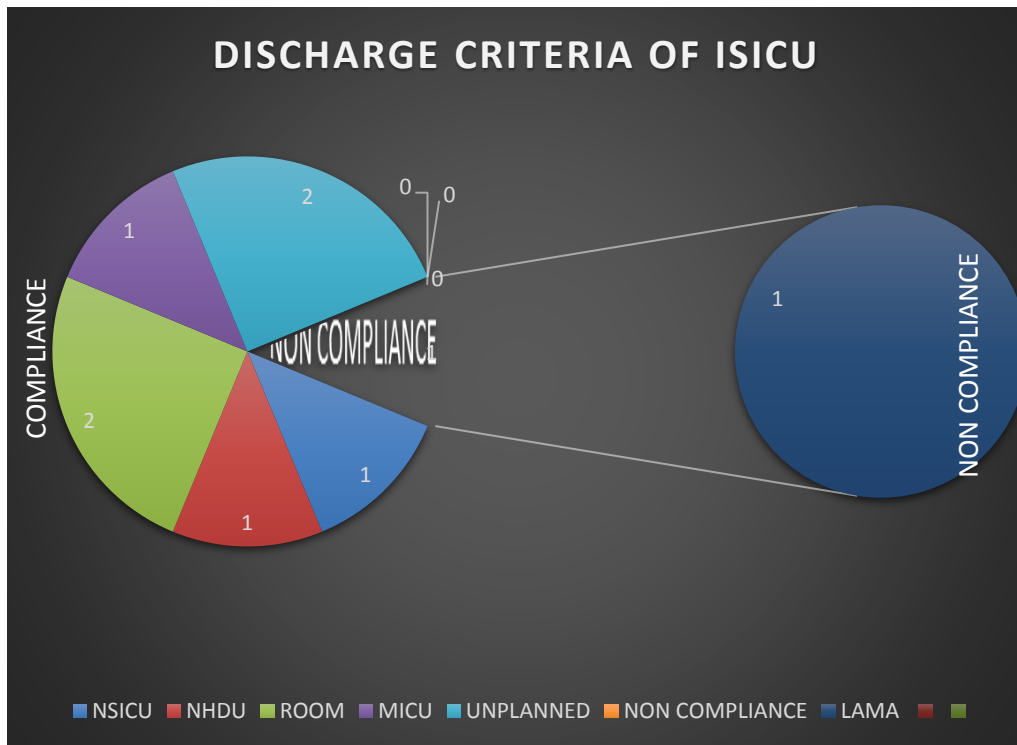
Data entry- Manually

Data Analysis- Using bar charts, pie charts in Microsoft Excel

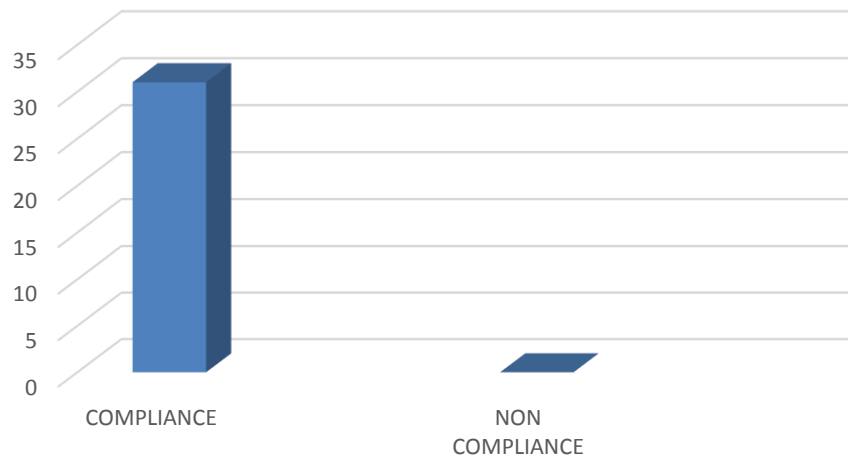
DATA ANALYSIS & INTERPRETATION FOR INTNSIVE CARE UNIT



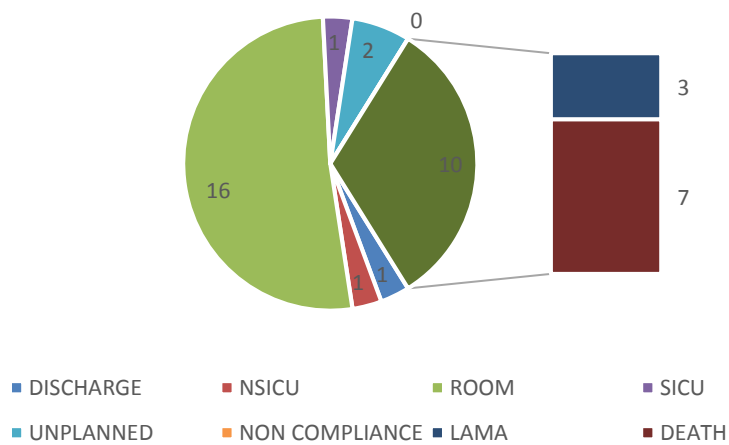


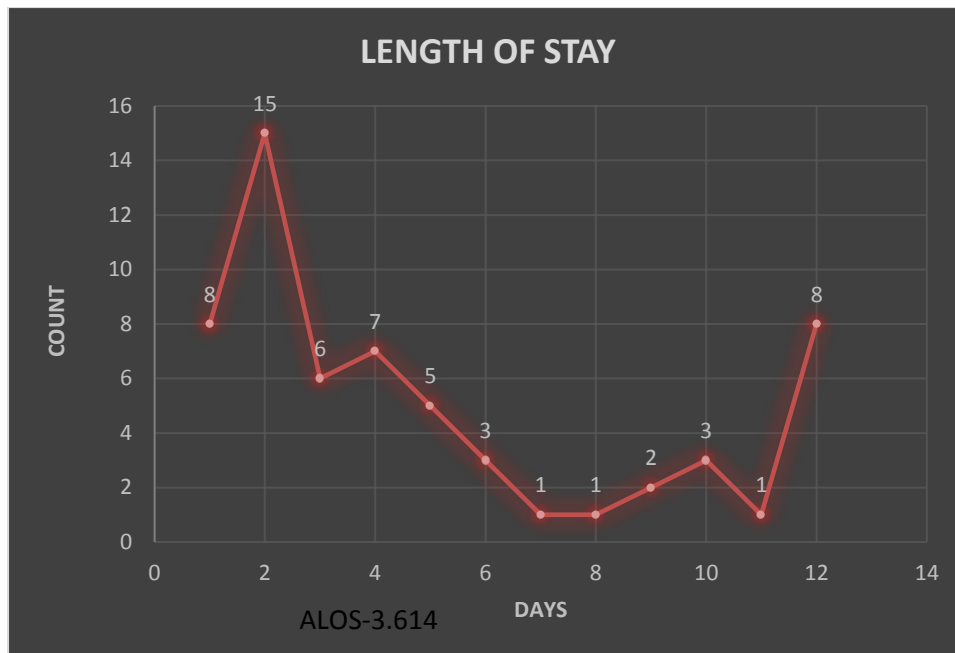


ADMISSION-STROKE ICU



DISCHARGE CRITERIA FOR STROKE ICU





OBSERVATION AND FINDING:

- 1.First and foremost finding was 100% compliance for admission criteria in all three ICU's we studied.
- 2.Non compliance was reported majorly in case of discharge criteria.
 - 5 out of 60 patients leave against medical advice.
 - 8 out of 60 patients admitted to ICU unfortunately expired.
- 3.A proper isolation criterion for vulnerable patients was followed.
- 4.A patient was transferred to different branch of hospital as per need.
- 5.Patients with different diagnosis were admitted in any of these ICU's, may be due to bed unavailability. For the same, the ICU staffs discussed along them as patient need was their priority.
- 6.Proper biomedical waste management was followed.
- 7.Length of stay of the patient was found more in some cases.ICU patients wishes are often unknown, causing health care professional to err on the side more treatment. Additionally the highly technological nature of ICU appears to encourage over treatment.

RECOMMENDATION:

- It is important for ICU's and general wards to communicate and cooperate well, since there is mutual dependency for optimal patient flow between different departments. Interventions that improve the understanding and cooperation between these wards mitigate problems.
- No. of LAMA cases can be reduce by two sources, either by health practitioner or by administrative staff.
Health practitioners must update time to time, the family members of the patient regarding the diagnosis and procedure along with improvement so that the family and the patient satisfy mentally.

Whereas administrative staff must let the family know about the schemes and plan accordingly.

- Proper infection control measures must be followed by the staff and the practitioner, so as to reduce the chances of nosocomial infections. This may help to reduce chances leading to death.
This may be also beneficial in reducing the length of stay of patients that will increase bed availability.
- The specialisations which obtain high number of Critical care patients, should consider establishing individual Intermediate Care units.
 - ❖ The intermediate care unit serves as a place for the monitoring and care of patients with moderate or potentially severe physiologic instability, requiring technical support but not necessarily artificial life support.
 - ❖ The Intermediate Care Unit is reserved for those patients requiring less care than standard intensive care but more than that which is available from ward care.
 - ❖ The intermediate care unit reduces costs, reduces ICU length of stay without increasing hospital length of stay, does not impact negatively on patient outcome and improves patient/family satisfaction by providing a physical environment that is quieter and calmer than the ICU.

CONCLUSION

The nature of ICU environment makes it important for health care professionals to be aware of risk of overtreatment, reflect on why they, what they do, and mindful of a possible negative impact on over treatment on their patient.

ANNEXURE

REFERENCES

1. <https://www.google.co.in/search?q=ADMISSION%2C+DISCHARGE+CRITERIA+AND+TRIAGE&rlz>
2. <https://www.google.co.in/search?q=Guidelines+on+Admission+and+Discharge+for+Adult+Intermediate+Care+Units+Copyright+©&rlz>
3. <https://www.google.co.in/search?q=A+Model+for+Decision+Making+for+Intensive+Care+Unit+Admission+in+Source+Limited+Hospitals&rlz>

A STUDY ON PRE AND POST PARAMETERS DURING RENAL TRANSPLANTATION

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A STUDY ON PRE AND POST PARAMETERS DURING RENAL TRANSPLANTATION IN MAX SUPER SPECIALITY HOSPITAL, SAKET

INTRODUCTION

Kidney transplantation or urinary organ transplantation is that the transplant of a urinary organ into a patient with end-stage urinary organ illness. urinary organ transplantation is usually classified as deceased-donor (formerly referred to as cadaveric) or living-donor transplantation betting on the supply of the donor organ. Living-donor urinary organ transplants are more characterised as genetically connected (living-related) or non-related (living-unrelated) transplants, betting on whether or not a biological relationship exists between the donor and recipient.

The urinary organ Transplant patient Unit is space with a zealous and knowledgeable about employees UN agency concentrate on the care of patients UN agency are getting ready for a urinary organ transplant or UN agency have had a urinary organ transplant. To accommodate vital growth in patient volumes the transplant unit was developed to boost the time of care between pre- and post-transplant patients.

Kidney transplantation is taken into account the most effective treatment for finish stage failure (ESRF) with longer anticipation and superior quality of life compared to qualitative analysis medical aid. There are several attributing factors that influence the end result of the transplanted graft. Donor and recipient age, creatinine clearance, history of high blood pressure, poor human blood corpuscle substance (HLA) matching, reason behind death, ethnicity, the cold ischemic (CI) time and within the case of DCD donors the nice and cozy ischemic insult have all been represented as major determinants of graft performance and graft survival.

AVERAGE LENGTH OF HOSPITAL

The average length of keep for in-patients is calculated from the whole variety of nights spent in hospitals by in-patients divided by the whole variety of discharges. As such, the common length of keep could also be less influenced by coverage problems (insofar because the average length of keep within the establishments excluded from the coverage will be assumed to be almost like that within the establishments that are covered).

There are 2 strategies of calculative average length of keep. The formula for every methodology follows:

METHOD 1: (TOTAL DISCHARGE DAYS / TOTAL DISCHARGES) = AVERAGE LENGTH OF keep (IN DAYS)

METHOD 2: (TOTAL patient DAYS OF CARE / TOTAL ADMISSIONS) = AVERAGE LENGTH OF keep (IN DAYS)

Hospital recovery for a urinary organ transplant is sometimes five to ten days if there are not any complications. The length of keep depends on your medical condition and desires.

COLD ISCHAEMIC TIME ON KIDNEY TRANSPLANT

After surgical removal for transplantation, an excretory organ is kept in cold answer to preserve the viability of its cells. However, cold ischaemia will attenuate however cannot fully stop cellular injury.

Hypothermic preservation is predicated on the principle that cooling AN organ inhibits the accelerator processes. there's a 2-3-fold decrease in metabolism for each 10°C reduction in temperature. This slows the depletion of nucleotide (ATP) and conjointly inhibits the degrading processes (phospholipid hydrolysis).

The impact of CI injury is obvious in real time when transplantation once ventilated blood is re-introduced into the excretory organ. The downstream effects of ischaemia reperfusion (I/R) injury ends up in hollow and tube-shaped structure injury with the impairment of blood flow to the excretory organ and reduced water output when transplantation. The excretory organ will stand up to CI times up to forty eight hours. yet, tries are created to cut back CI injury and on the average the CI time currently falls below twenty-four hours in most transplant centers.

Deceased-donor excretory organ transplants (DDKT) is sometimes accompanied with the immediate nephritic anemia injury attributable to cold ischaemia time (CIT) that usually ends up in reduced deceased-donor homograft perform and survival. Prolonged CIT is additionally a substantial predictor of long graft loss.

TRANSPLANT SURGERY TIME

The transplant surgery is performed below anaesthesia. The operation sometimes takes 2-4 hours. this kind of operation may be a heterotopic transplant that means the excretory organ is placed during a totally different location than the present kidneys. The excretory organ transplant is placed within the front (anterior) a part of the lower abdomen, within the pelvis.

POST excretory organ TRANSPLANT FEVER AND INFECTION

There are four main complications, which might occur following a excretory organ transplant:

1. Infections
2. High vital sign

3. Rejection
4. polygenic disease mellitus

Infections

Immunosuppressive medications facilitate keep the body from rejecting the transplanted excretory organ. However, they conjointly cut back the perform of the present system among the body.

Some of the foremost common infections include:

1. Wound infections
2. plant Infections
3. infective agent Infections

High vital sign

High vital sign may be a quite common disorder, that tends to become a lot of frequent as you age. And whereas some medications will cause high vital sign in individuals, people should take medication to regulate their high vital sign.

Rejection

When there's excretory organ transplant, the new excretory organ is “foreign” to your body. Body's system fights off or destroys (rejects) something foreign to stay it running swish. attributable to this, patient can take immunological disorder medications for the remainder of life to forestall your body from rejecting your excretory organ.

Diabetes Mellitus

Diabetes means that your body has problem in maintaining traditional glucose levels. Symptoms of polygenic disease could include: hyperbolic thirst, hyperbolic frequency of elimination, blurred vision, and confusion.

LITRATURE REVIEW

COLD ischaemia TIME

Pérez Valdivia MA¹, Gentil MA, Toro M, Cabello M, Rodríguez-Benot A, Mazuecos A, Osuna A, professional dancer M in their study Impact of cold ischaemia time on initial graft perform and survival rates in nephritic transplants from deceased donors performed in geographical region showed that The mean and median cold anemia time was seventeen hours. a extended CIT was related to a rise in IGF freelance of the age of each the donor and also the recipient. Our knowledge conjointly instructed that CIT influenced patient and graft survival rates.

AVERAGE LENGTH OF STAY

Gerardo Machnicki,¹ Krista L. Lentine,¹ Paolo R. Salvalaggio,² Thomas E. Burroughs,¹ Daniel C. Brennan,³ and Mark A. Schnitzler¹

Factors most powerfully related to LOS were sort I polygenic disease, cold ischaemia time > thirty six h, swollen criteria donor (ECD) and donation when viscus death (DCD). aside from ECD, every was related to hyperbolic payments. higher respiratory illness, disease, ulceration malady, diabetes, cancer and different diseases were conjointly related to hyperbolic LOS and payments

RATIONALE

To determine gap between the ideal time and proceed time for significant parameters for pre to post transplantation in recipient and donor during renal transplantation.

OBJECTIVES

GENERAL OBJECTIVE:

1. To determine the time related to certain parameters both pre to post transplantation for recipient as well as donor.

SPECIFIC OBJECTIVE:

1. To determine cold ischemic time for recipient patient.
2. To determine surgery time both in recipient as well as donor.
3. To determine post donation and post transplantation infections.
4. To determine average length of stay post donation and post transplantation.

RESEARCH METHODOLOGY

Type of study: Descriptive study

Study population: Patient enrolling for renal transplant (donor and recipient) at Max Super Speciality Hospital, Saket, Delhi

Study area: Renal transplant unit in Max Super Speciality Hospital, Saket, Delhi

Duration of Study: March and April

Type of Data: Qualitative

Technique: Checklist prepared

Sample size: 30

Sampling technique: Simple random sampling

Data collection: Secondary as well as primary data

Data entry: Manually

Data Analysis: Using bar charts, pie charts in Microsoft Excel

DATA INTERPRETATIONS

MARCH

FOR RECEPIENT

FIGURE 1

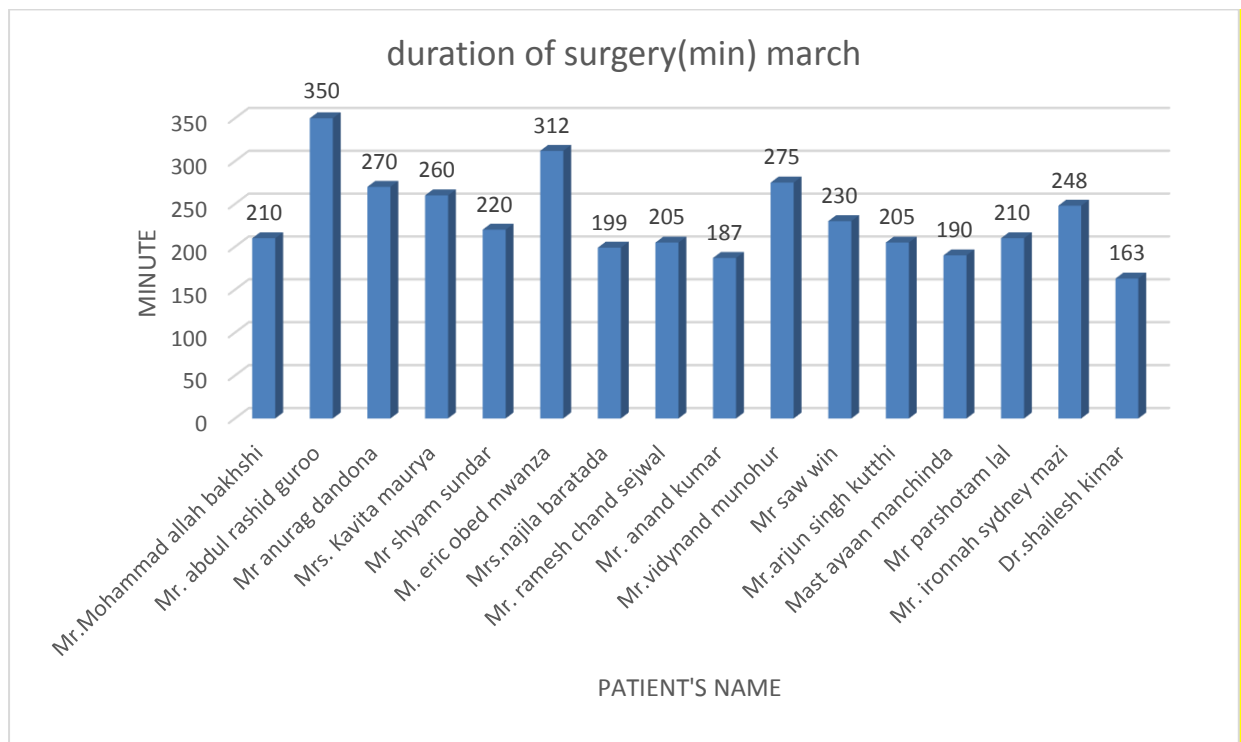


FIGURE 2

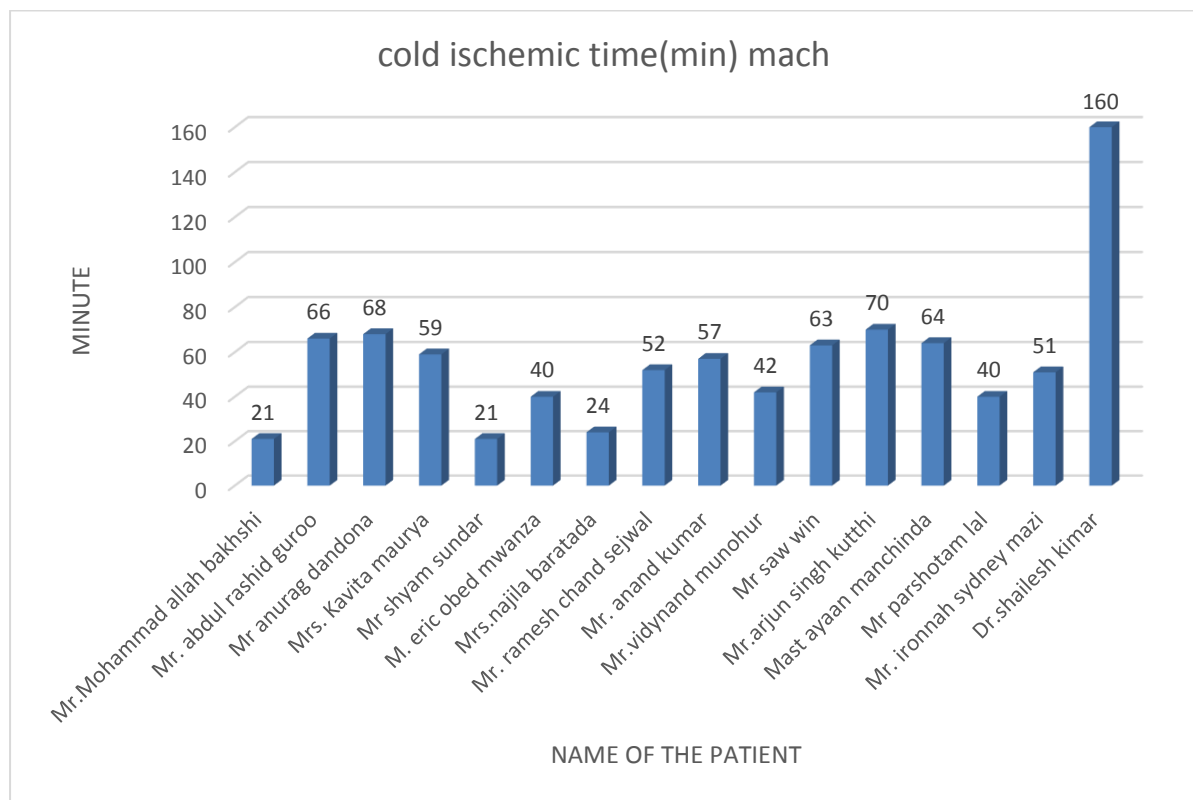
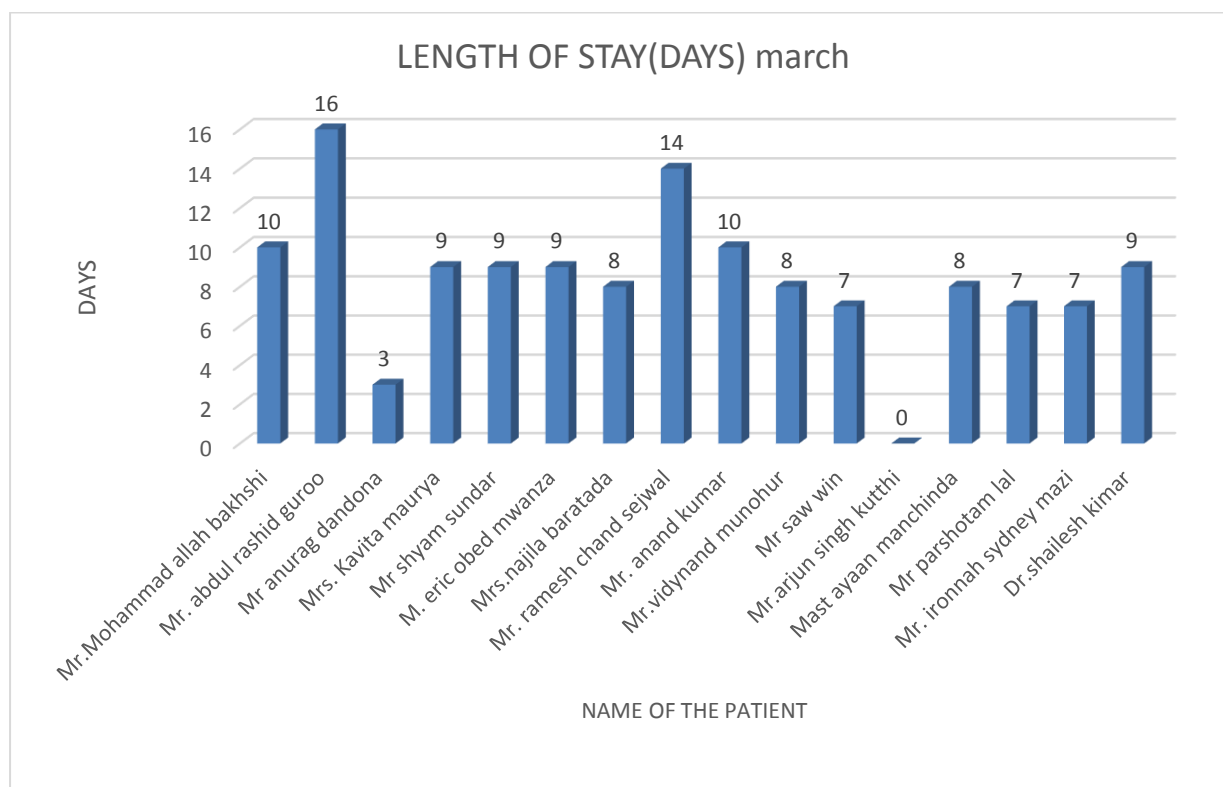


FIGURE 3



FOR DONOR FIGURE 1

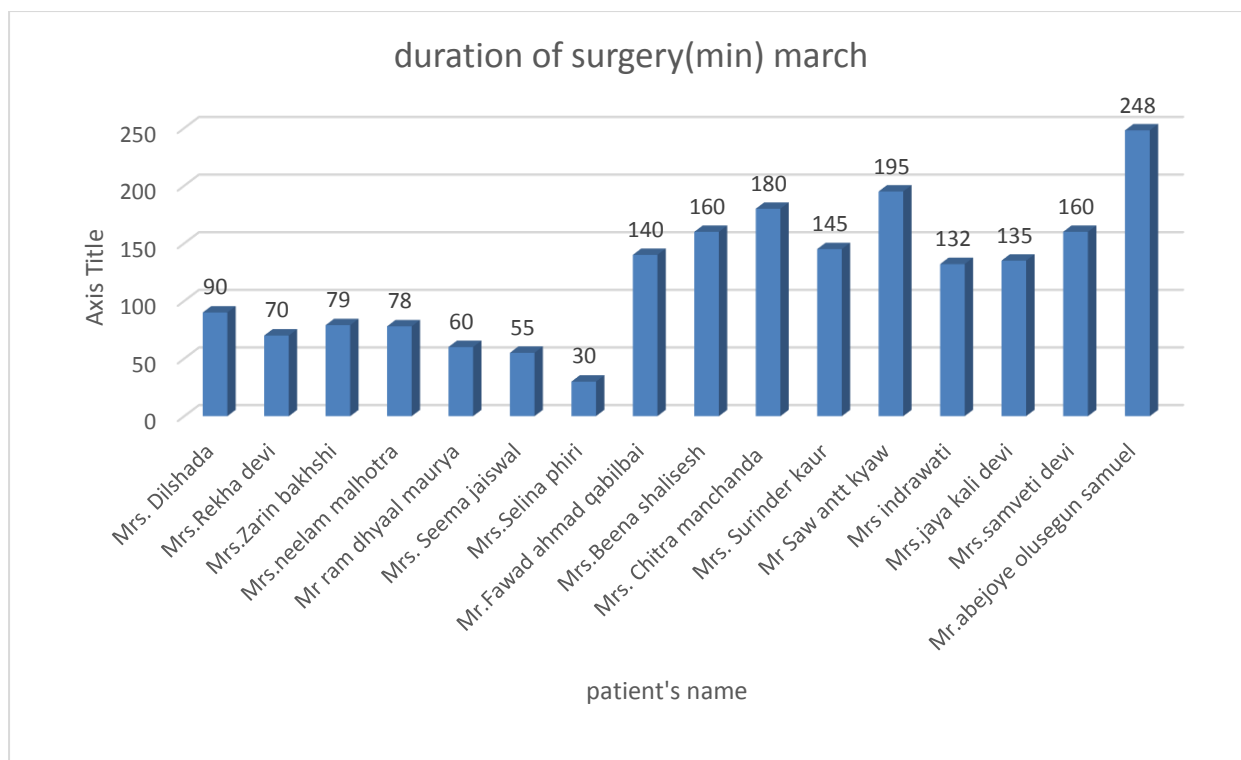
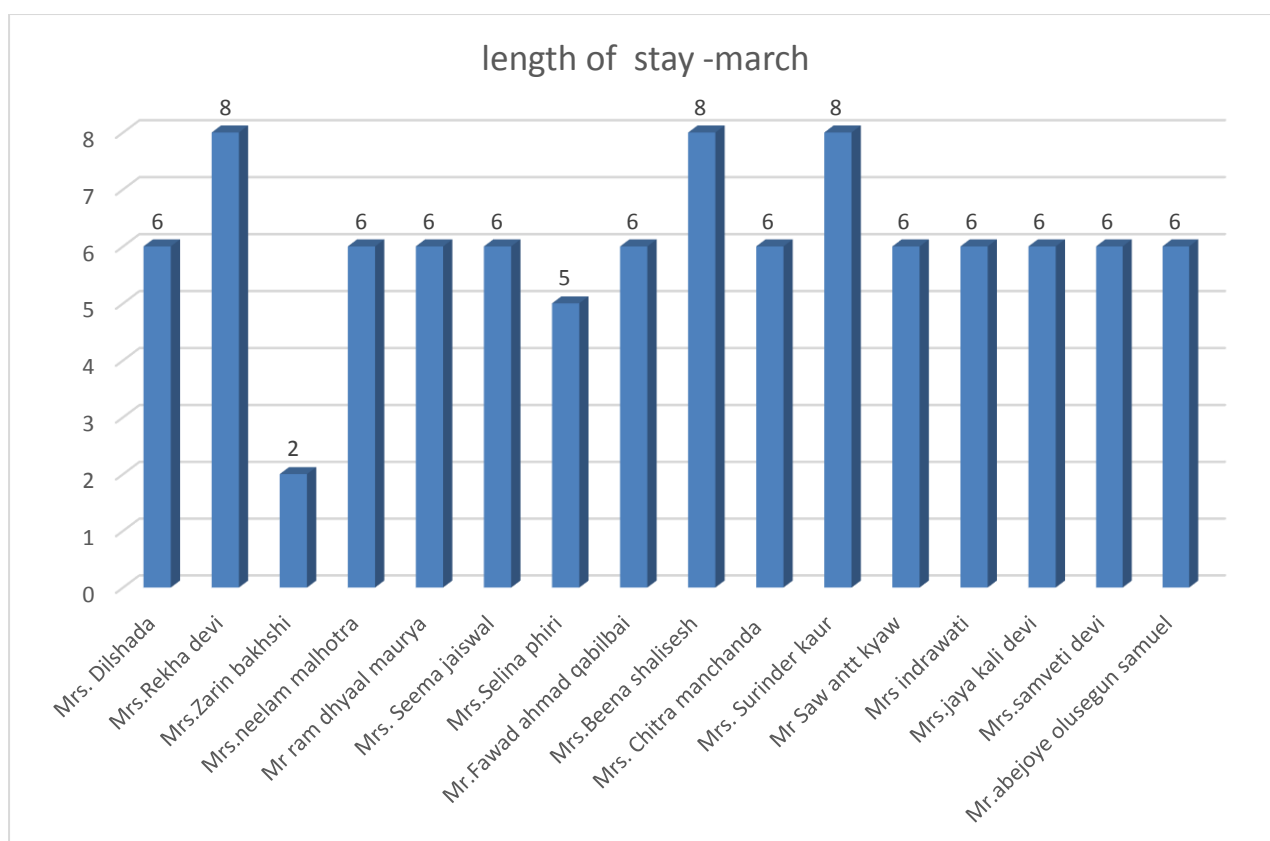


FIGURE 2



APRIL FOR RECEPIENT

FIGURE 1

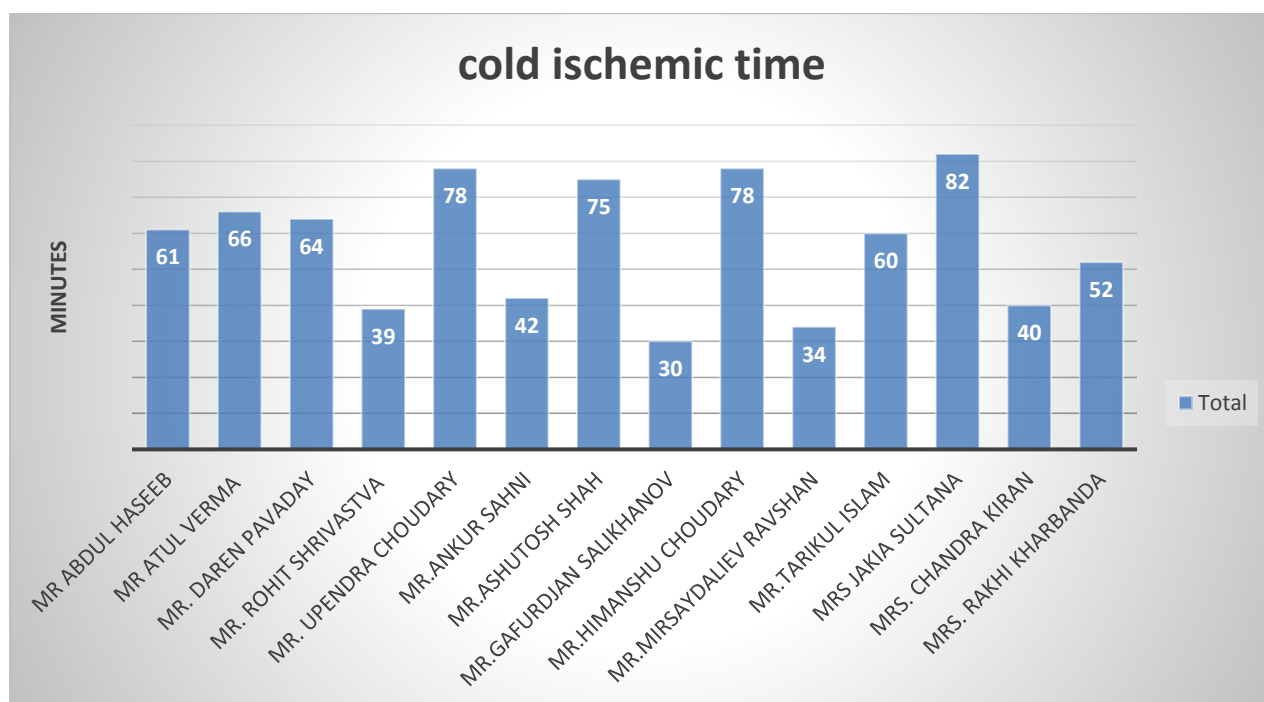


FIGURE 2

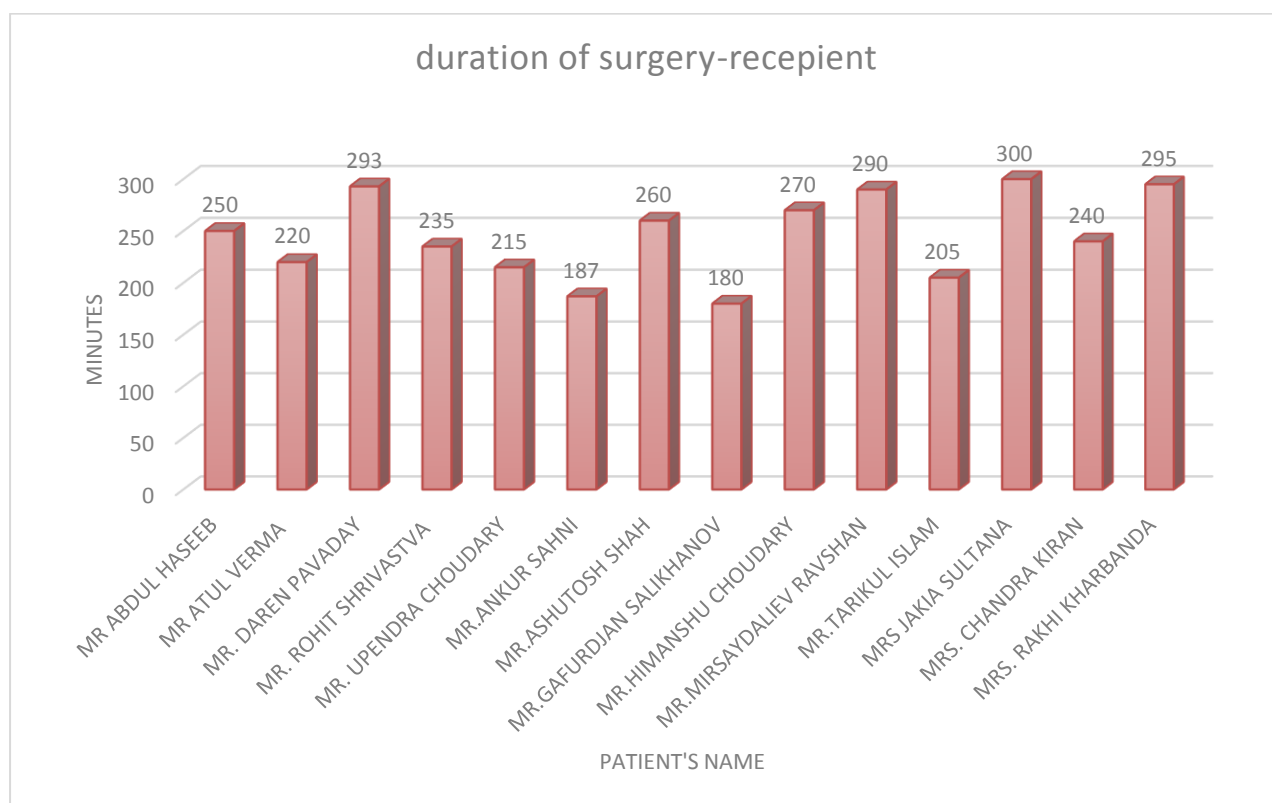


FIGURE 3

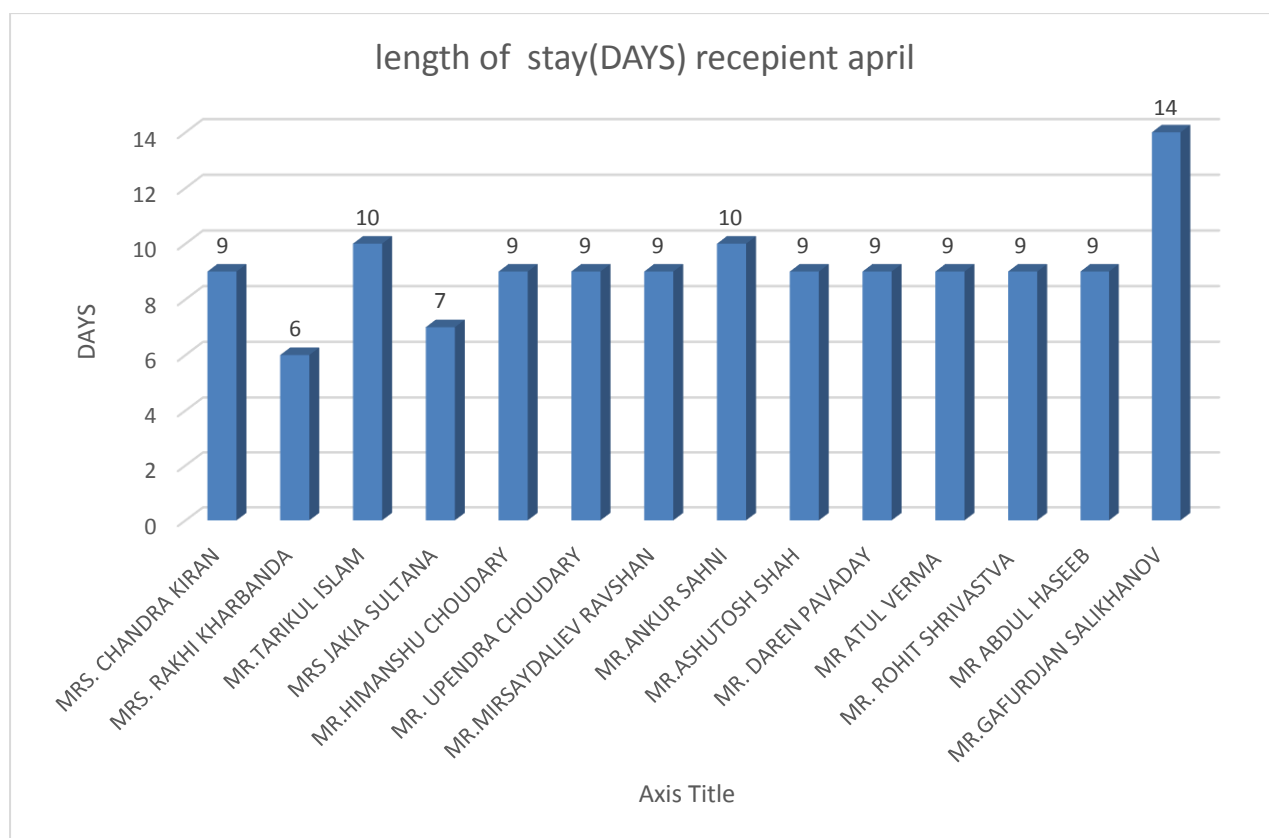


FIGURE 4

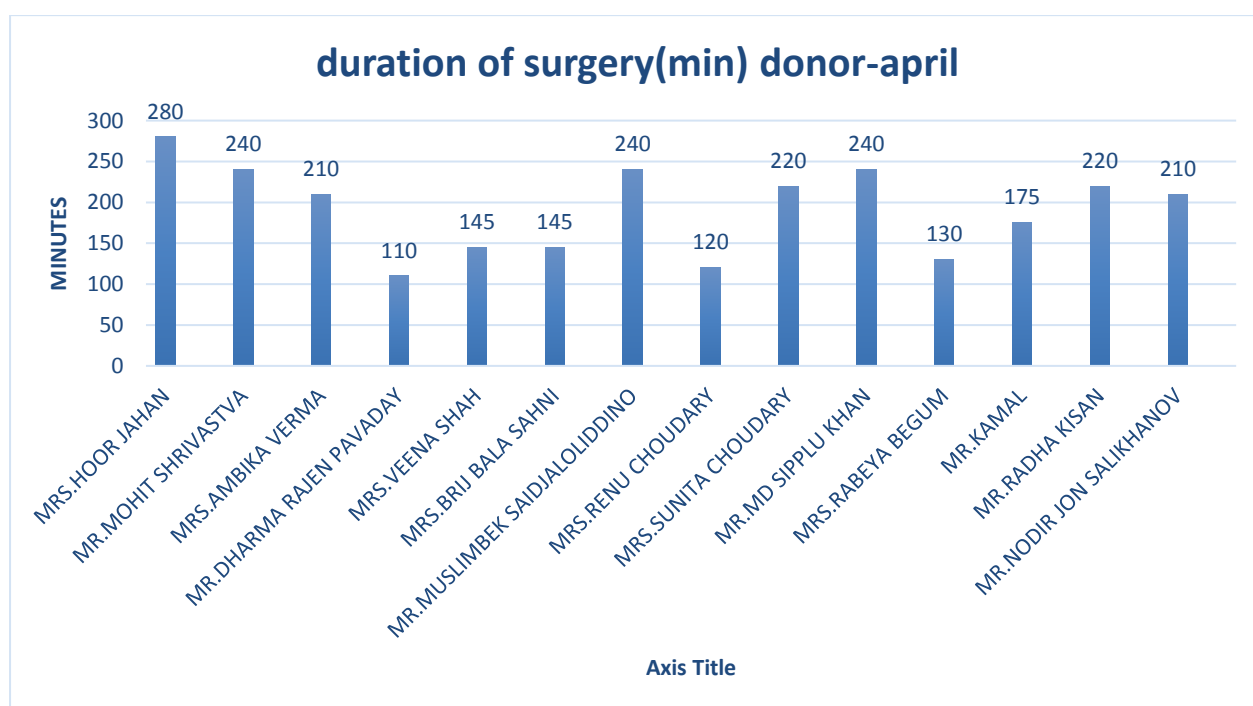


FIGURE 5

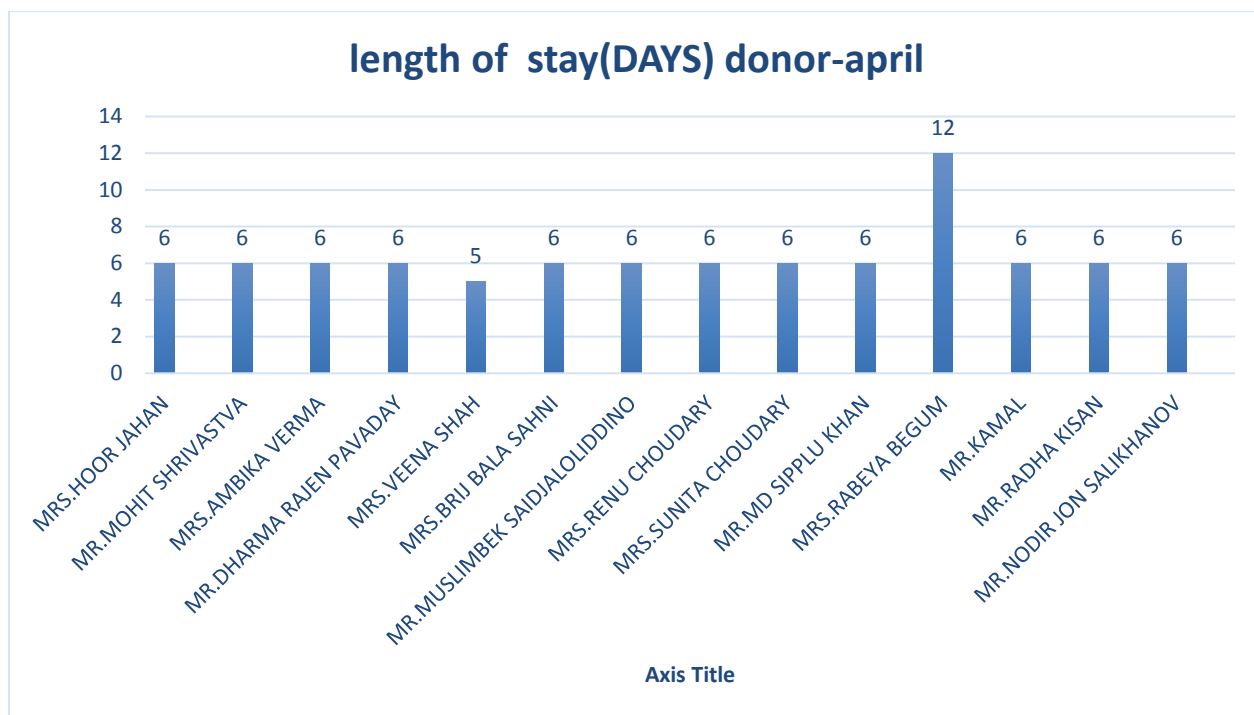


FIGURE 6

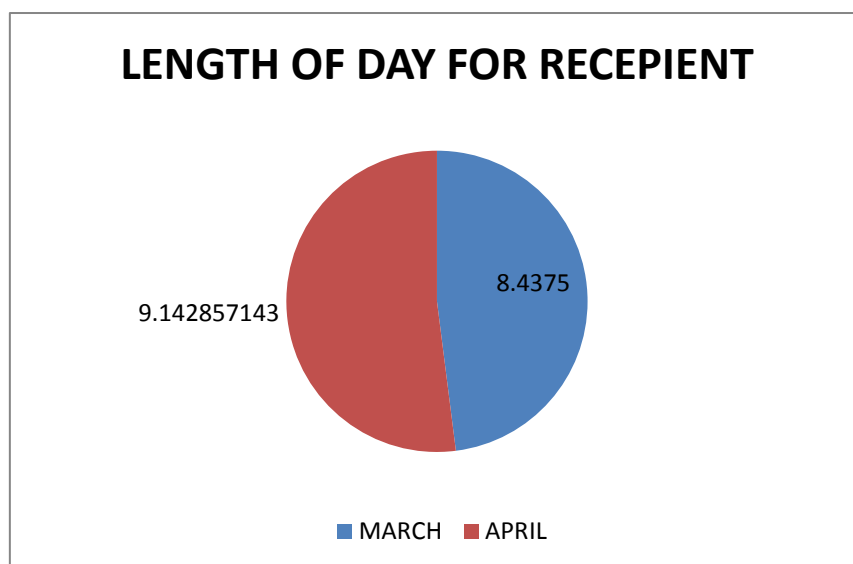


FIGURE 7

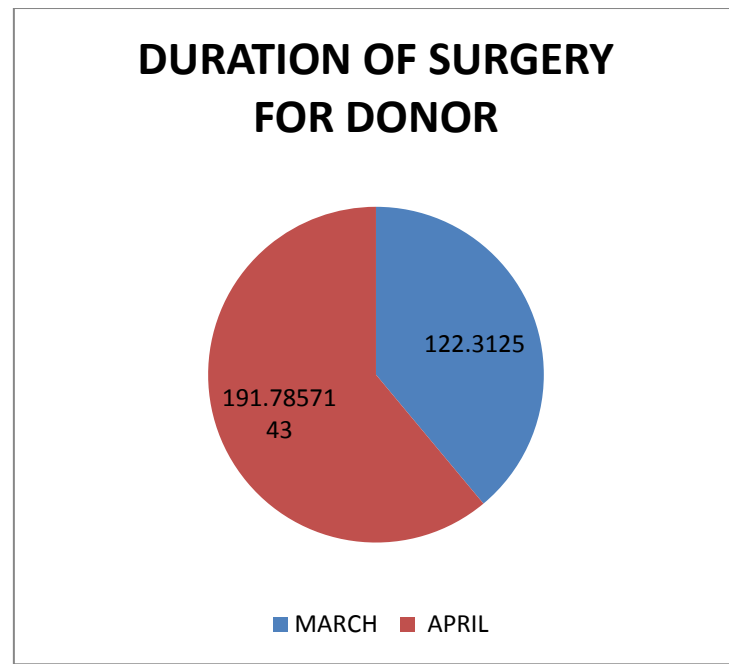
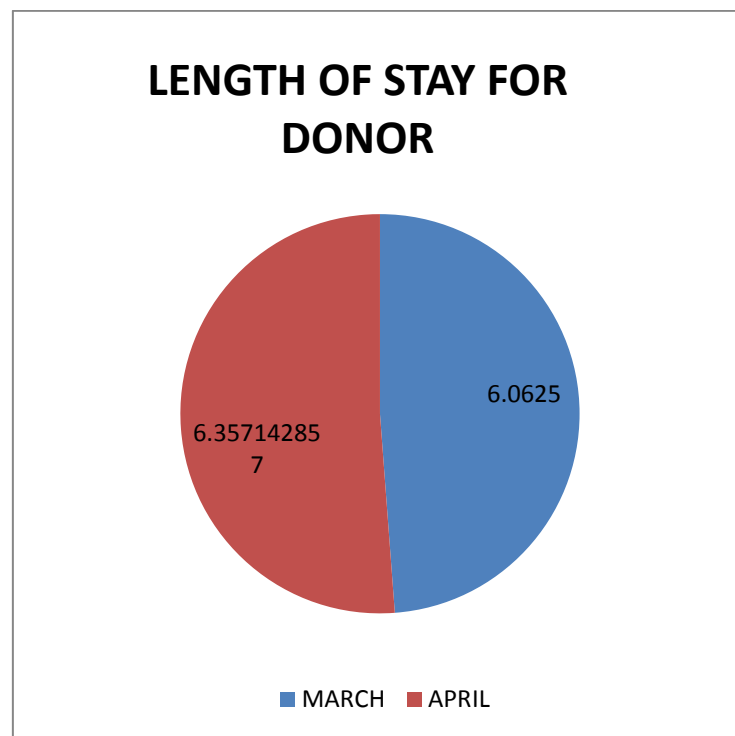


FIGURE 8



OBSERVATION AND FINDING:

1. As per the observation, we found that in some cases the surgical procedure took longer than ideal time. The reason for same were,
 - In some cases, there was iron deficiency anaemia in the patients.
 - ABO incompatibility
 - Presence of 2 vessels for anastomosis
2. From the data, we observed that grafting time for recipient and donor was more than the ideal time. According to urology consultants, cold ischemic time can vary from 60 min. to 24 hrs. depending on the presence of vessels (for anastomosis) and patient specific parameters.
3. Length of stay post operatively in some of the transplant cases was high, varied from patient to patient condition.

It was highest in case of post-operative infection in patient that was for 16 days.

Other reasons for longer stay can be due to

- post-operative surgical complication
- viral infections
- If clinical parameters of the patient were not within normal limits.
- In cases of dual drain.
- If urine output is not within the normal limits.

RECOMMENDATIONS

- Post-operative proper nursing care i.e. 1:1
- It would be suggested that blood group compatibility between donor and recipient during transplantation.
- It is to maintain urine output chart for checking proper functioning of graft.
- Isolation must be done for vulnerable patients.
- To minimise infection rate.
- Diet must be according to patients' blood levels.
- Patient and family education.
- Rehabilitation.
- Follow up.

ANNEXURE

CONCLUSION:

Kidney transplant may be associated with various Nephrological and surgical complication whose treatment requires a multidisciplinary team work. Although at one time point the kidney was supposed to be unsalvageable, the great effort and persistent care invested from

all the multidisciplinary team physician, nurses and the support from patient family, all complications were successfully over passed.

During the study in renal transplant unit, we observed average length of stay, cold ischemic time, duration of surgery, their recommended feed in around 30 cases enrolled in hospital for the same. Compliance in case of duration of surgery was quite less in some cases as there were pre and during surgical complication. In some cases length of stay was longer as patients suffered from post-operative viral and other infections.

- As per the recommendations, the processed time and ideal time can approximately same, if proper infection control measures followed, blood group compatibility done accordingly, maintenance of urine output chart for checking proper functioning of grafts.