

**Summer Training at  
Santokba Durlabji Memorial Hospital cum Medial  
Research Institute (SDMH), Jaipur  
(April 1-May 31, 2014)**

**Calculation of TAT of the Discharge Process**

**By  
Aditi Joshi and Lalita Mandia**

**Under the guidance of  
Dr. S.D. Gupta and Mr. Laxman Swaroop Sharma**

**MBA- Hospital & Health Management (MBA-HM)  
2013-2015**



**The IIHMR University, Jaipur  
2014**

**INSTITUTE OF HEALTH  
MANAGEMENT RESEARCH**

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**CERTIFICATE**

This is to certify that Dr. Aditi Joshi has undergone her summer training in Santokba Durlabhji Memorial Hospital cum Medical Research Institute, Jaipur, Rajasthan from 1st April, 2014 to 31 May, 2014. The candidate herself carried out all the studies related to her summer training. Her approach to the study has been scientific and analytical. This summer training is partial fulfilment of course requirement is recommended for the award of post graduate diploma in hospital management.

I wish her success in all her future endeavours.



Dr. Ashok Kaushik

Dean(Academic & Student Affairs)

IIHMR Jaipur



Dr. S.D Gupta

Director

IIHMR Jaipur



## Santokba Durlabhji Memorial Hospital cum Medical Research Institute



Your Ref. :

Our Ref. :

No. 421

Date.....

June 04, 2014

### **TO WHOMSOEVER IT MAY CONCERN**

This is to certify that **Dr. Aditi Joshi** student of IIHMR, Jaipur has successfully completed her two months summer training from 01.04.2014 to 31.05.2014 at Santokba Durlabhji Memorial Hospital Cum Medical Research Institute, Jaipur. She did her training with the various departments of SDMH and done her projects on the following:-

- A project on calculation of the TAT of the discharge process
- A project on Nurse:Patient Ratio

During her association with us, her work and conduct were good.

I wish her success in future.

  
**LT. COL. BADAL VERMA**  
**CHIEF ADMINISTRATOR**

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## CERTIFICATE

This is to certify that Dr.Lalita Mandia has undergone her summer training in Santokba Durlabhji Memorial Hospital cum Medical Research Institute ,Jaipur, Rajasthan from 1st April, 2014 to 31may, 2014.The candidate herself carried out all the studies related to her summer training. Her approach to the study has been scientific and analytical. This summer training is partial fulfilment of course requirement is recommended for the award of post graduate diploma in hospital management.

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Dr. Ashok Kaushik

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Our Ref. :

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Date.....

June 04, 2014

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## **Acknowledgement**

The study has been a novel experience as being a first exposure to hospital industry. This study helped in understanding and learning the hospital setup , its various departments , their function and their interrelation .However none of this would ever have been possible without the priceless support of several people .We wish to take this opportunity to express our deepest gratitude to all of them who have made this endeavour possible.

We would remiss if we do not specifically mention some individuals who supported us. We would like to thanks specially to Lt.Col. Badal Verma(Chief Administrator), Ms.Heena(Assistant Medical Superintendent) for their help and guidance.

We would like to extend our thanks to the management, medical ,paramedical staff of Santokba Durlabhji Memorial Hospital for giving us all information and support required to complete our summer training.

Our deepest gratitude to our mentors Dr.S.D Gupta, the Director of IIHMR,Jaipur and Dr.L.P Singh ,Dr. Vijay Pratap Raghuvanshi who have always been a source of encouragement and guidance which enabled us to do a good job in SDMH, Jaipur.

We would like to thanks to all others who left their mark in the projects and helped us insipte of their busy schedule and hectic work hours.

Last but not least ,we acknowledge the moral support of our parents, family members and friends during my summer training.

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## **ACRONYMS/ ABBREVIATIONS**

- SDMH – Santokba Durlabhji Memorial Hospital
- ED – Emergency department
- CSSD- Central Sterile Services Department
- CT- Computerized Topography
- CTVS- Cardio Thoracic Vascular Surgery
- ECG- Electrocardiogram
- ED- Emergency Department
- FMS- Facility Management and safety
- F&B- Food & Beverages
- HAZMAT- Hazardous Material
- HR- Human Resource
- ICU- Intensive Care Unit
- IPD- In-patient Department
- IT- Information Technology
- MICU- Medical Intensive Care Unit
- OPD- Out-patient Department
- OT- Operation Theatre
- DICOM-Digital Imaging and communication in medicines
- EMR- Electronic Medical Record
- PHC-Preventive Health Checkup

## **SECTION 1**

### **INTRODUCTION OF SUMMER PLACEMENT REPORT**

The following report is an effort to put into words the learning during our summer training in SDMH. During our training we carried out the study of various departments in hospital. The main purpose of the study is to get orientation towards the functioning and management of various departments and to complete the assigned task which includes our respective projects.

Objective of Summer Training:-

- To get an overview of the hospital and functioning of various departments.
- To get practical exposure to hospital administration.

## **Section 2**

### **1.0 HOSPITAL PROFILE**

#### **1.1 History**

Santokba Durlabhji memorial hospital is a trust managed, autonomous, fee for service, not for profit, multidisciplinary, private hospital, which conceptualized by vulnerable family patriarch, the late Padamshri Khailshanker Durlabhji. He had passion and compassion to deliver affordable health-care to the people of rajas than which would be second to none in the country. The hospital was established in 1971 and was inaugurated by late Smt. Indra Gandhi. It is located in the heart of pink city, spread over landscape 7.3 acres situated at Bhawani Singh road, Jaipur. It is self contained campus with staff residences, a bank, a post office, medical stores, diary booth, in patient attendant complex (dharamshala) and other living facilities.

#### **1.2 Location and area**

The hospital is spread over 90 acres of land on a prime location of Jaipur. This hospital is unique of its kind and it is also certified by ISO 900: 2000 with bed capacity of 450.

#### **1.3 Catchment area**

The catchment area is whole Jaipur city along with other parts of Rajasthan and other states like Haryana, UP and overseas nations.

#### **1.4 Targeted population**

The main targeted population is middle and upper middle class. It provides free services to terminally ill patients at Avedna Ashram. The camps are been organised throughout year in various districts of Rajasthan.

#### **VISION**

SDMH shall be an integrated quaternary healthcare hub for delivery of affordable quality medical care in an economically viable, regionally, nationally and internationally positioned institutional environment.

#### **MISSION**

The hospital cares. SDMH is committed to providing quality health care at the most affordable rates to all sections of society, irrespective of caste, creed or color. Towards making this possible, we pledge to dedicate all our efforts and all our energies.

#### **QUALITY POLICY**

With a view to establish a system of clinical excellence, patient centricity, service delivery and ethical practices, team SDMH, through adherence to establish standards of healthcare delivery; will apply medical science and technology in such a way so as to maximize benefits to health without concomitant risks.

## **2.0 SCOPE OF SERVICES**

### **CLINICAL SERVICES**

- Cardiology
- Cardiothoracic Surgery
- Dentistry
- Dermatology
- Dietetics and Nutrition
- ENT
- Executive health check up
- Gastroenterology
- Gastro Intestinal Surgery
- General Medicine
- General Surgery
- Nephrology
- Neurology
- Neuro Surgery
- Obstetrics and Gynecology
- Ophthalmology
- Orthopedics
- Pediatrics and Neonatology
- Pediatric surgery
- Pediatric Neurology
- Physiotherapy
- Plastic surgery
- Psychiatry
- Pulmonary Medicine (Chest & T.B)
- Rehabilitation
- Speech Therapy & Audiology
- Urology
- Vitreo Retinal

### **24-Hour Service**

- Emergency Services
- Ambulance Services
- Pharmacy Services
- Laboratory Services and Imaging Services for IPD
- Blood Bank

## **Diagnostic Services**

- X-ray
- Ultra Sonography
- Mammography
- Bone Mineral Densitometry
- CT Scan
- MRI
- Endoscopy
- Cardiac Catheterization Laboratory
- Neuro Diagnostic Labs like EEG, EMG, EV
- Audiometry & Speech Therapy Testing
- Cardiac Test includes:
  - Electrocardiogram
  - Echocardiography
  - Trans esophageal Echocardiography (TEE)
  - Holter Monitor
  - Stress Testing
- Pathology
  - Including all pulmonary test e.g. Sleep Study Test

## **Utility services**

- Dharmshala
- Avedna Ashram
- Union Bank and ATM facility
- Sarv Dharam Temple
- Utility Shops
- Book Shops
- Mobile Chargers
- Telephone Booth
- Post-office
- Cafeteria
- Salon
- Mortuary
- Diary

## **INTENSIVE CARE UNIT (ICU)**

- Cardiac Medical-I
- Cardiac Medical – II
- Cardiac Surgical
- Medical ICU
- Neuro ICU
- Surgical ICU
- Paediatric ICU
- Neonatal ICU (IPU & PCU)

## **SERVICES NOT AVAILABLE**

- Medico legal Cases (MLC)
- Burns Case when burns are >20%
- Organ Transplantation

## **OUT PATIENT DEPARTMENT**

Outpatient department is defined as a part of the hospital with allotted physical facilities and medical and other staff in sufficient number with regularly scheduled hours, to provide care for patients who are not registered as in patient. The OPD facilities provide the main linkage of the hospital with the community.

### **Main purpose of OPD**

Ambulatory medical care is provided to patient who are not confined to bed can be provided at a general practitioners clinic specialized clinic, a health centre or a hospital, which are part of a hospital such care is called outpatient care. This care is provided through the OPD'S for fabricating of good health to patients.

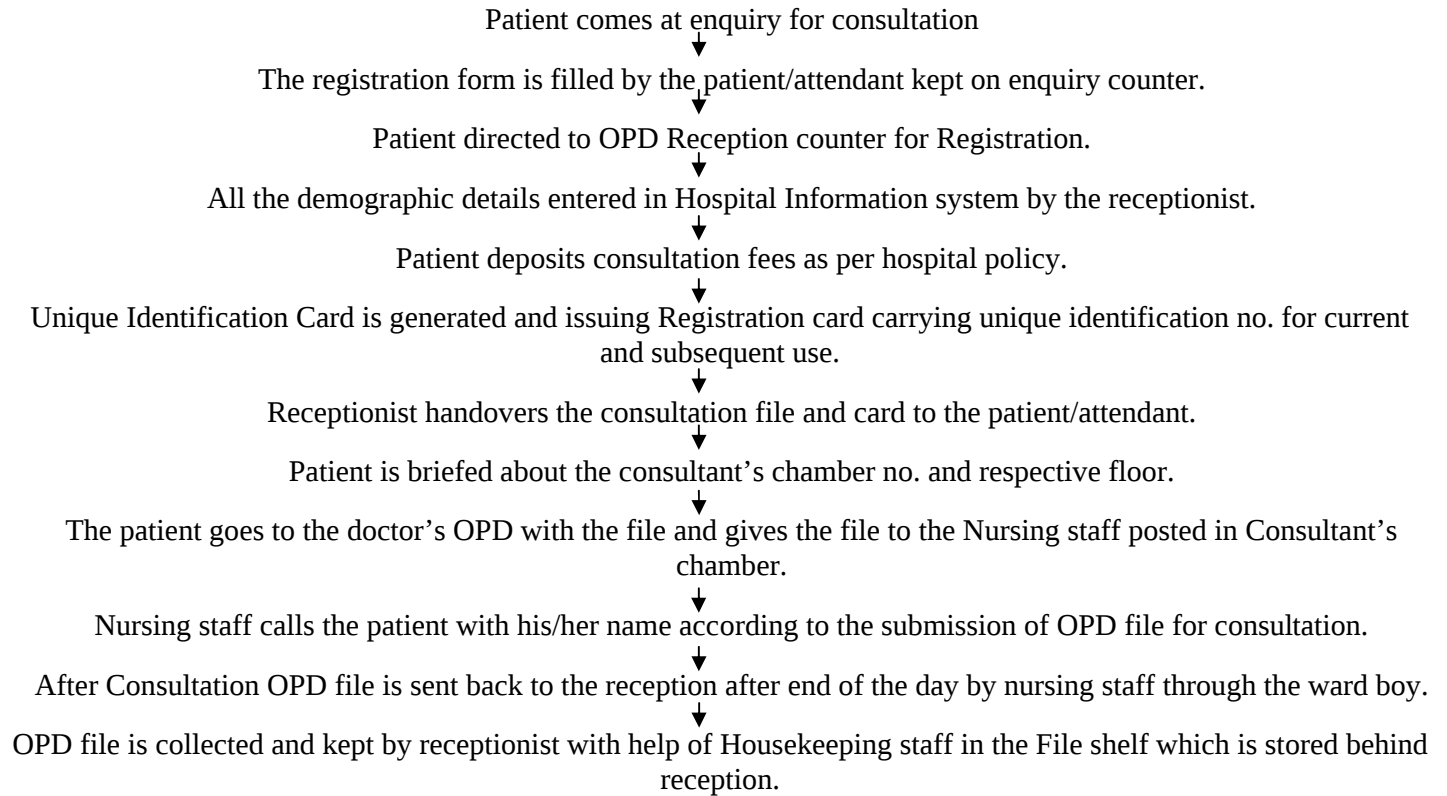
## **REGISTRATION**

In order to avail the services offered at the hospital, the patient should be registered himself/herself at the main reception. The IPD registration is done round-the-clock and the form for the same is to be filled up and handed over at the counter itself. Please make sure that you provide accurate information in this form.

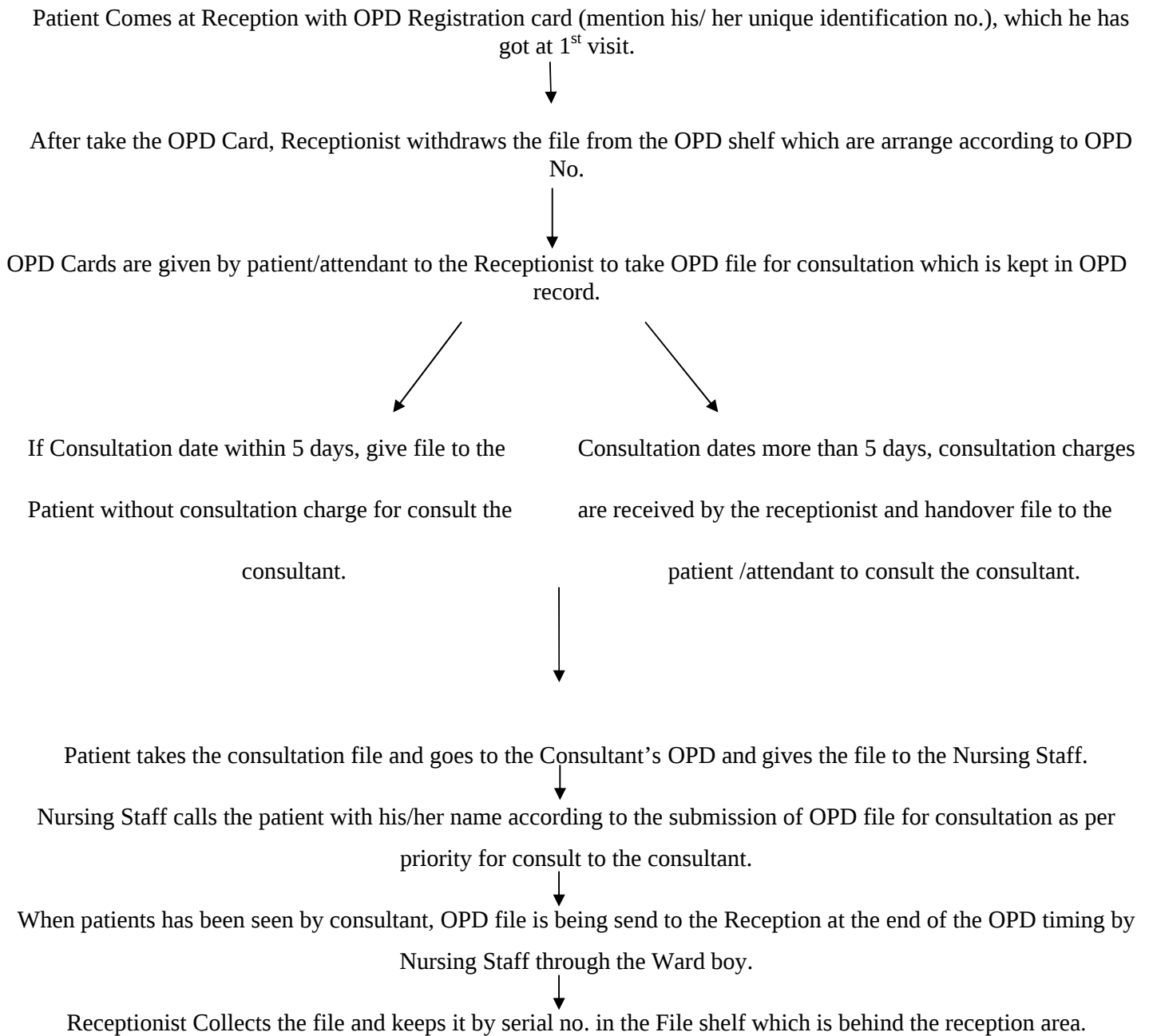
It is highly recommended to write your details as per legal documents to avoid inconvenience especially for medical reimbursement / LIC purpose. Please carry the OPD Registration card and patient file on every hospital visit. Your Unique Hospital Identification Number (UHID) is important to make sure that you receive timely services

## OPD PROCESS FLOW

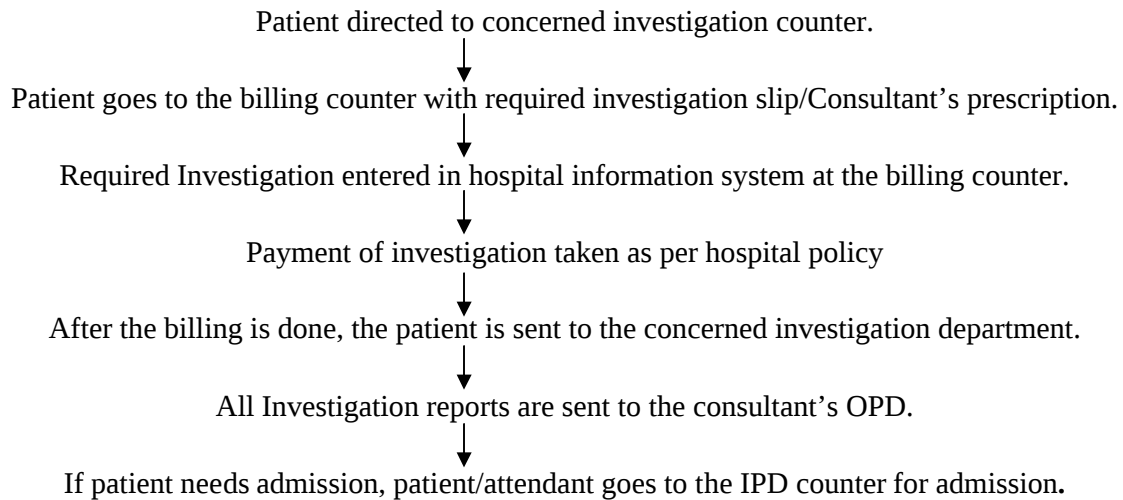
### For New Patient



## For Old Patient

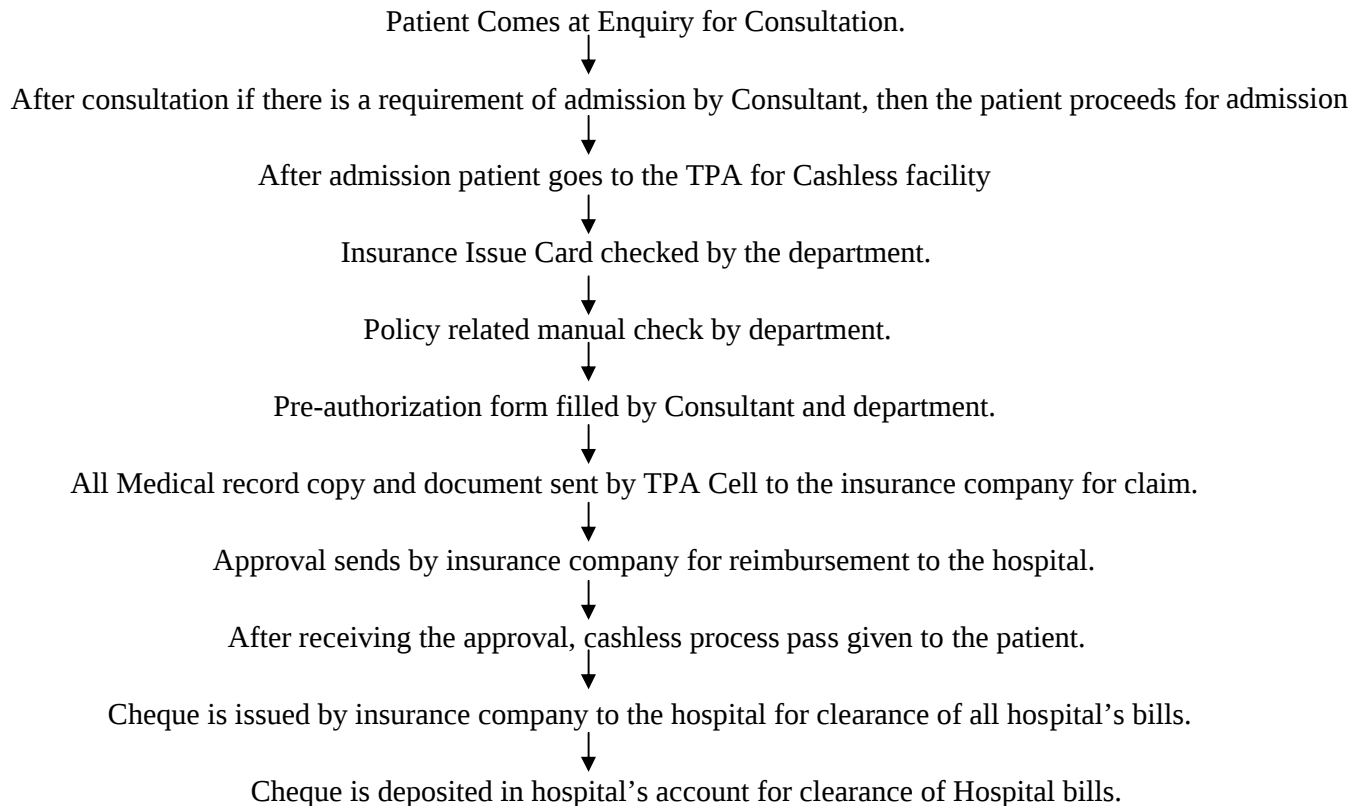


### **Process flow if investigation required**



### **INSURANCE CLAIM**

#### **PROCESS FLOW (For TPA Insurance claim)**



## **CORPORATE ADMISSION**

- Corporate clients are required to submit their company's credit letter on the date of admission. In case of emergency admissions, the credit letter has to be submitted within 12 hrs of admission.
- A letter is issued which states that the patient is deemed as a cash patient and an initial deposit is to be deposited. The same would be refunded (at the time of discharge) against the submission of the company's credit letter.
- Patient opting for a room/bed category higher than their entitled category are required to pay the difference in charges arising thereafter. Charges for investigations, operation theatre charges, and the doctor's fees are subjected to change in accordance with the particular room category chosen.

## **CREDIT FACILITY**

- Credit facility is offered only to the patient from Corporate & Insurance. TPA's having a tie up for patient covered under Medical Insurance, It is mandatory to get approval for cashless facility from TPA before patient gets admitted however if the patient gets admitted in emergency, then this approval for cashless facility must be produced before the discharge.
- In case there is a delay in authorization, patient authorization or denial of authorization from the insurance/TPA hospital cannot be held responsible & 100% of estimated cost or the difference cost to be deposited at the time of admission or before the surgery.

## **EXECUTIVE HEALTH CHECKUPS (EHC)**

SDMH also provide preventive health care services in the form of executive health checkups .It includes different health packages for different group of people on reasonable charges like:

- Child health check-ups,
- Senior citizen health checkups,
- Well women health checkups (below 40 years & above 40 years),
- Executive health check ups
- Whole body health checkups
- Pre-employment health checkups, routine medical health checkups, diabetic health checkups, comprehensive cardiac health checkups etc.

**IN PATIENT DEPARTMENT** :In Door Patient Department caters the services for patients who require continues observation and supervision of experts, acute & intensive medical care and emergencies. In SDMH there is separate IPD Building which has four floors and a basement. Floor wise distribution is as follows:

Table 1 : Floor wise distribution of IPD

|                     |                                          |
|---------------------|------------------------------------------|
| <b>Basement</b>     | Administrative Block/Offices             |
|                     | Laboratory services                      |
|                     | Library                                  |
|                     | Radiology services                       |
| <b>Ground floor</b> | Inquiry                                  |
|                     | Admission Counter                        |
|                     | Ambulance Enquiry                        |
|                     | Pharmacy Shop                            |
|                     | Emergency                                |
|                     | Security desk                            |
|                     | Billing counter                          |
|                     |                                          |
|                     | Male private Ward                        |
|                     | Nurses sick Room                         |
|                     | Staff Sick Room                          |
|                     | General Deluxe Ward-3                    |
|                     | General Deluxe Ward-5                    |
|                     | Medical Intensive Care Unit              |
|                     | Steep Down ICU-1                         |
| <b>First Floor</b>  | Female Private Ward                      |
|                     | Old Operation Theatre (Cardio. + Neuro.) |
|                     | Cath. Lab                                |
|                     | New Operation Theatre                    |
|                     | Surgical Critical Care Unit              |
|                     | Medical Critical Care Unit-1             |
|                     | Medical Critical Care Unit-2             |
|                     | General Deluxe Ward-4                    |
|                     | New Private Room                         |
|                     | Maternity Ward                           |
| <b>Second Floor</b> | Labour Room                              |
|                     | Paediatric Intensive Care Unit           |
|                     | Pre-mature Care Unit(PCU)/Neonatal ICU   |
|                     | Labour Delivery Rooms                    |
|                     | Chairman Room                            |
|                     | Paediatric Ward                          |
|                     | Surgical ICU                             |
|                     | Transit Ward                             |
|                     | Urology Ward                             |
|                     | Super Deluxe Rooms                       |
|                     | Semi Deluxe Rooms                        |
|                     | Dialysis Unit                            |
|                     | Nephrology Ward                          |
| <b>Third Floor</b>  | Orthopaedic Ward(KMO)-1                  |
|                     | Orthopaedic Ward(KMO)-2                  |
|                     | Terrance Operation Theatre               |
|                     | Neuro-Science ICU                        |
|                     | Central Sterilization Room(CSR)          |
|                     | Neuro Science ward                       |
|                     | General Deluxe Ward-1                    |
|                     | General Deluxe Ward-2                    |
| <b>Fourth Floor</b> | New Deluxe Rooms                         |
|                     | Colour Master Ward                       |
|                     | Convalescent Ward-Medicine               |
|                     | Convalescent Ward-Gastro.                |
|                     | Convalescent Ward-Surgery                |
|                     | New Medicine Ward                        |

## **Infrastructure of IPD Building:-**

### **Connectivity of Floors**

- **Lifts:** - There are total five lifts in the hospital building which has different capacity. Three of them have capacity of 15 persons at a time, one of them have capacity of 11 peoples at a time and remaining one has capacity of six persons at a time.
- **Stairs:** - There are two staircases to go up from ground floor and one staircase go on basement.
- **Ramp:** - There is one ramp from ground floor to other floors.
- **Foot Way/Connecting Bridge:-**There is ramp connectivity from OPD building to IPD building from first floor.

### **Fire Safety Equipments**

There are various types of fire safety equipments in IPD & OPD building which includes:

- Water Neel Rope: - it is used in general fire.
- Foam Cylinders: - it is used to come up with electrical fire.
- Sprinkler System
- Smoke sensors
- Fire Alarms
- Emergency fire exits

### **Gas pipe lines**

There are different colour pipe lines are there for different gases for Wards, ICU's and OT's.

- Yellow pipe with white band: oxygen line
- Yellow pipe with blue band: nitrous oxide line
- Yellow pipe with black band: Vacuum line
- Blue pipe with white band: Air line

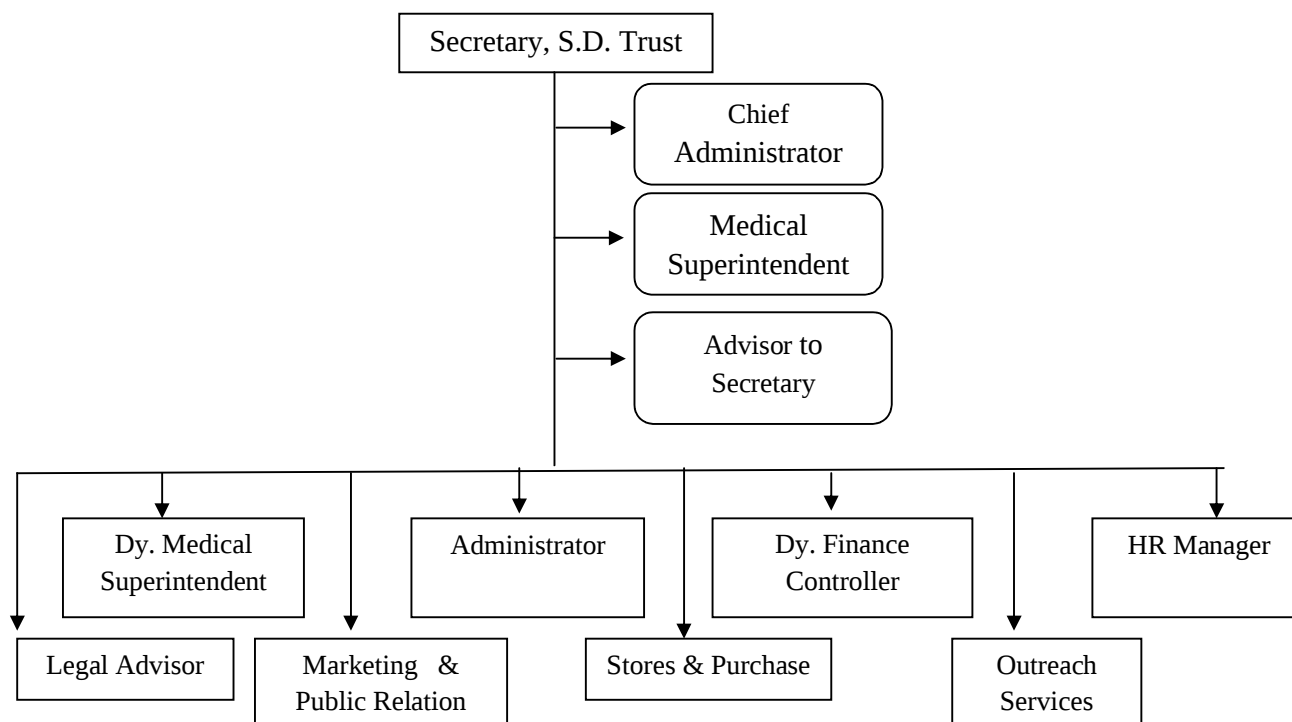
### **Waiting Area**

Every ward and ICU have waiting area attached with them which has open space as well as some fixed chairs and attached washrooms.

### **Cafeterias**

It is an outsourced service. Every floor has one cafeteria in waiting lounge which provides snacks, tea and coffee. Only one or two of whole building are opened 24\*7 and rest of them are running from **Morning:** 6.00am to 11.00pm.

**Administrative Block:** The administrative block is located in the basement of IPD building. Their description as follows:



### Library-

The library is situated in the basement of the IPD building. It is fully Air conditioning. Timing of this is from 9.00Am to 7.00Pm. there is attached computer room for students and faculty that have internet facilities. There is various type of the medical books, international & national journals are there.

### Radiology Services –

Radiology services like Digital X-ray and Ultra-Sonography Rooms are available in the campus for IPD patients. The charges for these services are not collected cash here but it will be noted down on patient Charge Sheet which is with the patient's file and collected accordingly at Bank or Admission counter. There are three X-ray rooms and two Sonography rooms for IPD patients.

### Laboratory Services:-

The laboratory services like Pathology, Biochemistry, Histopathology and Haematology are available here for both in and out patients. For in patients, samples which are collected in wards sent to lab with housekeeping staff and Bar codes are generated by LIS (Lab Information System). For outpatients, samples which are collected in OPD also taken for further process.

**Table 2 : Lab Equipment list**

| S.N. | Biochemistry                             | Haematology       | Histopathology          | Microbiology            |
|------|------------------------------------------|-------------------|-------------------------|-------------------------|
| 1    | Vitros 5,1 FS                            | STA-ART-4         | Tissue processor        | BACTEC-9050             |
| 2    | Vitros-250drychemistry                   | STA-Compact       | Cytostate machine       | Microplate ELISA Reader |
| 3    | Blood gas/electrolyte(B)bayer            | SysmexXT-1800i    | pH meter                | Vitros ECI              |
| 4    | (Bio red)D-10 (Glyco-Hb)                 | Vasmatic-20       | Microscope              | Vitros -3600            |
| 5    | Laser Nephelometer                       | Clinitek-Advantus | Fluorescence microscope | Vitek-2 Compact         |
| 6    | Nephelometric Analyser                   |                   | STAT Spin Cytofuge2     | BACTEC-9120             |
| 7    | ERBA-Chem-5 plusv2<br>(Semiautoanalyser) |                   | Leica Embedding Station |                         |
| 8    | Genio-S                                  |                   | Microtome               |                         |
| 9    | Cardiac Marker Analyser                  |                   | Microwave               |                         |

**Table : Lists of Tests done**

| S.N. | Department               | Type of Tests |
|------|--------------------------|---------------|
| 1    | Biochemistry             | 81            |
| 2    | Harmones/Marker          | 25            |
| 3    | Stool Examination        | 7             |
| 4    | Haematology              | 38            |
| 5    | Immunology(Serology)     | 85            |
| 6    | Microbiology             | 30            |
| 7    | Histopathology& Cytology | 16            |
| 8    | Blood Bank & Transfusion | 47            |
| 9    | Urine Analysis           | 30            |

### Marketing Services of hospital

There is no as such core marketing activities in hospital as hospital having its Brand name. It is regulated by a trust which is running on no profit strategy. Catchment area of hospital is Jaipur city, Jaipur Rural and adjoining districts like Sikar, Ajmer, Dausa, Jhunjhanu, Makrana and Narnol etc.

As a part of promotional activities some are there:

- Publication of Clinical Success Stories in News paper.
- Sports awareness campaign.
- Regular CME's (Continuous Medical Education).
- Rural Health Camps
- Public Awareness programmes.
- Free Medical facilities to International Airport at Sanganer, Jaipur.
- Organizing the Youth Soccer League (YSL).

Hospital has tie up with 40 of the corporate organization as well as various Government Agencies for regular health checkups and pre employment health checkups

## **Computer/IT Department**

This department is situated at ground floor of the IPD Building. There are total 10 employees in IT department of hospital distribution of all as follows: -

- System Analyst
- Programmer
- Hardware engineer
- Operator

There are total 220 computers in hospital campus all are attached with a Client Server Architecture System which has data storage capacity of 260 GB.

There are four basic requirements for developing a programme/module for HMIS:-

1. Data Base: - Oracle as a data base is used in SDMH.
2. Operating System: - Windows 2003 operating system is used right now.
3. Hardware: - Client Server Architecture System of HP is used.
4. Language: - Visual basic language is used to develop programmes.

There is LAN connection which is Lease line of 5Mbps.

## **Human Resource Department**

Human Resource Department is headed by HR manager who directly report to Chief Administrator. This department works from recruitment to retirement of an employee. There are total Approx 1200 employees in the hospital which includes Administrative Staff, Consultants, Residents, DNB Students, and Housekeeping & Security Staff.

There are three types of the employees in the hospital:

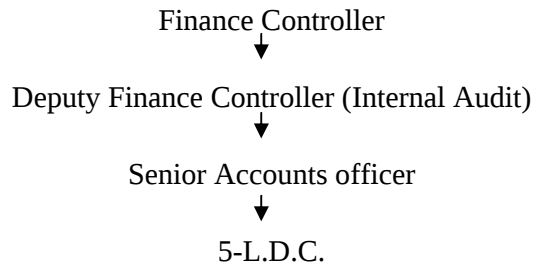
- Hospital Grade
- Wages
- Contractual man power

There is provision of (Policies of HR Department):

- Annual increment of approx.10-12% depending upon individual performance.
- Total 40 annual leaves along with leave encashment up to 20 leaves in special circumstances.
- Daily allowance which is refined twice a year once in April and then October.
- Exit interview by the next superior authority at the time of leaving the organisation.
- 360<sup>0</sup> Performance appraisal of every employee at the end of financial year.
- Stipend to the DNB student

## Finance Department

Finance Department is headed by Finance Controller and Deputy Finance Controller is directly reporting to Secretary to SDMH trust.



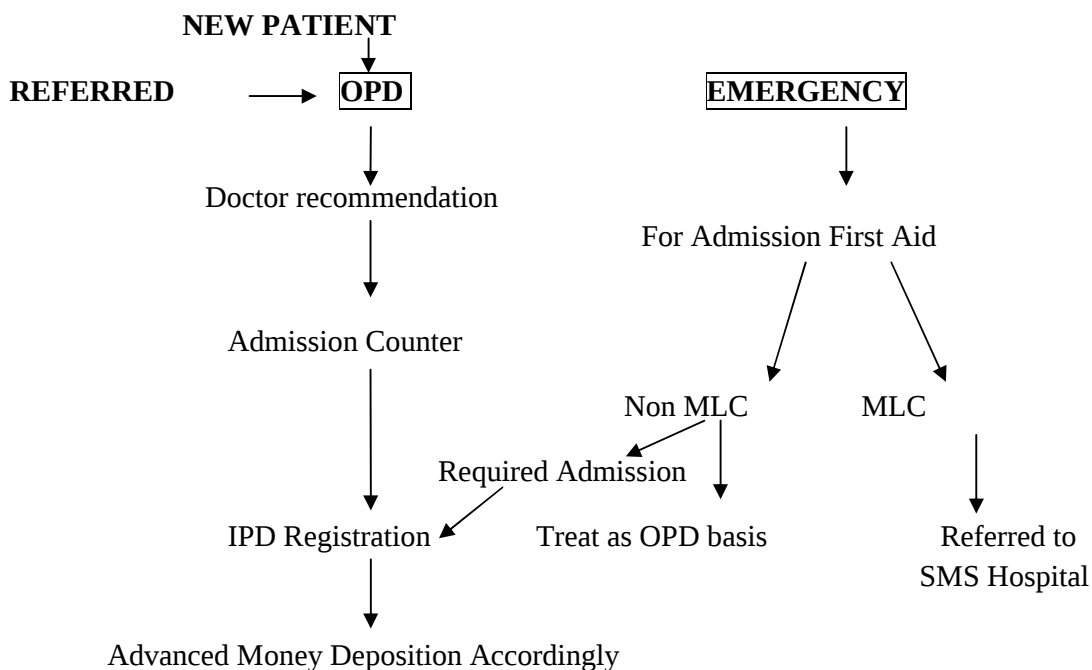
Duties of finance department to generate revenues minimize the costing of procedures, internal auditing the departments and arranging the external audit at the end of financial year.

There are two types of revenues in hospital that is medical like OPD, IPD, Investigations, Procedures and OT fees another is non medical like from MOU's, Outsourced departments and Rent.

Internal auditing is done to check the manipulations. There are various types of auditing in hospital that are as follows:-

- Cost audit like Per bed costing
- Man power audit
- Department audit
- Per day revenue audit
- Observational audit

### Flow of Patient in IPD



## DISCHARGE

- The discharge process is initiated only after the patient's consultant deems him/her fit for discharge.
- Discharge timing is before 12:00 p.m.
- In case a patient does not wish to continue his/her stay at the hospital, he can, in consultation with his doctor, ask for the Leave Against Medical Advice (LAMA)
- Before leaving, the patient's attendant needs to check his/her room carefully for any personal belongings, hospital is not liable for their belongings.
- To avail an ambulance/transport facility, the patient can put in a request at the nursing counter/ reception counter.
- When you are being discharged from the hospital, your doctor and nurse, dietician, pharmacies will explain the treatment plan which you should follow.
- For nutritional queries dietician can be consulted.

| S.No | CSSR Items              | Cup Board Items                    | Trolley Items        | Floating Items                | Almeria Items            | Emergency Tray              |
|------|-------------------------|------------------------------------|----------------------|-------------------------------|--------------------------|-----------------------------|
| 1    | Scissors                | B.P. Instruments                   | Tongue Depressor     | Motor with Piston             | Enema Can                | E.T.Tube No.6.5,7,7.5,8,8.5 |
| 2    | Suture Cutting Scissors | Stethoscopes                       | Ambu Bag             | Cool Jug                      | Hot Water Beg            | airway                      |
| 3    | Ophthalmic Scissors     | Thermometers                       | Dyna -Plaster        | Weight Machine                | SS(Big)                  | Megaforcep                  |
| 4    | Bowl Set                | Hammer                             | Laryngo Scopic Plate | Extension Board               | Nebulisation Machine     | Ambubag                     |
| 5    | Dressing Set            | Torch                              | Vaculaince holder    | Patient Trolley with Mattress | Pulse Oxy meter          | Nasal prong                 |
| 6    | L.P. Tray               | Inch Tape                          | Needle Destroyer     | O <sub>2</sub> Cylinder       | Syringe Pump             | High Conc. Mask             |
| 7    | Aspiration Tray         | Scale                              | Medicine Tray        | Wheel Chair                   | Drug Tray                | Wenflone No.20,18           |
| 8    | Cut Down Tray           | Stapler                            | Plastic Kidney Tray  | IV stand                      | Water Mattress           | Torniquetes                 |
| 9    | Eye Tray                | Tailor Scissor                     |                      | Cardiac Table                 | Induction Plate          | Suture 3.0,4.0              |
| 10   | Cotton Roll Tray        | Glucometer                         |                      | File Folder                   | Home Theater             | Tegadern                    |
| 11   | Eye Swab Tray           | Stamp Pad                          |                      | Suction Set                   | Injections               | Zylocaine jelly             |
| 12   | Catheter Tray           | Micro Drip Set                     |                      | Urinal                        | Laryngoscope Blade       | Drip Set                    |
| 13   |                         | Blood Set                          |                      | Bed Pan                       | ECG Lead                 | Ring                        |
| 14   |                         | 3-Way                              |                      | Stool Pan                     | O <sub>2</sub> Cyllinder | Sterlile Gloves             |
| 15   |                         | Wenflone No.22,20,18               |                      | Laundry Beg                   | Torch                    | Suction Set                 |
| 16   |                         | Marker Pen                         |                      | Plastic Box                   |                          | T-piece                     |
|      |                         | Nasal Prong                        |                      | Mug                           |                          | Nebulization Mask           |
|      |                         | Gluko Strips                       |                      | Plastic Bucket                |                          | O <sub>2</sub> mask         |
| 17   |                         | O <sub>2</sub> Mask                |                      | Pillows                       |                          | Medicine Box                |
| 18   |                         | Air Way                            |                      | Height Scale                  |                          | Rubber Suction              |
| 19   |                         | Folleys Catheter                   |                      | Walkers                       |                          | Micropore with Cutter       |
| 20   |                         | Uro Bag                            |                      | ECG Machine                   |                          | ET shelle                   |
| 21   |                         | Paid O <sub>2</sub> Mask& Drip Set |                      | Medicine Box                  |                          |                             |
| 22   |                         | Doctors Seal                       |                      | Laundry Items                 |                          |                             |
| 23   |                         | Surgical Gloves                    |                      | Patient Gown                  |                          |                             |
| 24   |                         | T-piece                            |                      | Hand Towel                    |                          |                             |
| 25   |                         | Punching Machine                   |                      | Blanket                       |                          |                             |
| 26   |                         | Nebulisation Mask                  |                      |                               |                          |                             |
| 27   |                         | B-D Syringe                        |                      |                               |                          |                             |

**Table 3: Types of Wards and Bed Strength**

| Type of Ward       | Bed Strength |
|--------------------|--------------|
| General Ward       | 299          |
| Private Ward       | 21           |
| Deluxe             | 15           |
| LDR                | 2            |
| Critical Care Area | 63           |
| PICU               | 7            |
| PCU                | 20           |
| Trustee room       | 1            |
| NSR                | 2            |
| SSR                | 2            |
| Total              | 432          |

Note: Avedna Ashram which caters services for terminally ill patient has 82 beds.

### Equipment list of Wards

There are various types of equipments in wards which are listed in Table 6.

**Table 4 : List of equipments**

**Note: There is Nurse Call Systems for Private Rooms to cater better services in private rooms.**

### 10.12 Cath. Lab

- Cath.lab is situated at first floor of IPD Building adjacent to Cardiac O.T. It is a certified Lab for Invasive Radiology.
- This is one of the oldest Cath.lab in Jaipur which installed before 40 years. It had renovated in 2009 with new Phillips equipments.
- Maintenance of this is seen by company persons in every 6 months.
- It has three rooms: Outer room is Computer room &Registration room; adjacent to this room is scrub & changing room; inner room is procedure room.
- Timing of Cath.lab is 9Am to 11Pm.in emergencies technician is called it off.

| O.T. Name            | O.T. Room No.   | Type of Surgery performed                |
|----------------------|-----------------|------------------------------------------|
| <b>Old O.T.</b>      | Old O.T.-1      | Cardiac Surgeries                        |
|                      | Old O.T.-2      | Neuro-Surgeries                          |
| <b>New O.T.</b>      | New O.T.-1      | Gynaecology Surgeries                    |
|                      | New O.T.-2      |                                          |
|                      | New O.T.-3      |                                          |
| <b>Terrance O.T.</b> | Terrance O.T.-1 | Infected Surgeries including Gen & ortho |
|                      | Terrance O.T.-2 |                                          |
|                      | Terrance O.T.-3 | Clean General & Ortho.Surgeries          |
|                      | Steel O.T.      | Joint Replacement Surgeries              |
| <b>Urology O.T.</b>  | Urology O.T.-1  | Urology-surgeries                        |
| <b>Eye O.T.</b>      | Eye O.T.-1      | Ophthalmology Surgeries                  |

- Total no of staff is 10 in which two of were Cath. Lab technicians.
- Average 5-6 cases are coming per day in cath.lab.
- All consumables and emergency medicines requirement send by monthly indent to store in last week of every month and this will be delivered in first week of next month.

### 10.13 Operation Theatre

There are total five Operation Theatres in Hospital which has 11 Operation rooms.

Table 5: Description of O.T

| S.N. | Cardiac OT              | General surgery OT           | Joint Replacement (Steel) OT | Urology OT             | Neurosurgery OT        | Eye OT                 |
|------|-------------------------|------------------------------|------------------------------|------------------------|------------------------|------------------------|
| 1    | OT Table                | OT Table                     | OT Table                     | OT Table               | OT Table               | OT Table               |
| 2    | OT Light                | OT Light                     | OT Light                     | OT Light               | OT Light               | OT Light               |
| 3    | Cauty Machine           | Cauty Machine                | Cauty Machine                | Cauty Machine          | Cauty Machine          | Cauty Machine          |
| 4    | Multipara Monitor       | Multipara Monitor            | Multipara Monitor            | Suction Machine        | Multipara Monitor      | Multipara Monitor      |
| 5    | Monitor Arterial        | Pulse Oxy meter              | Automatic Tourniquet System  | Pulse Oxy Meter        | Colour Video Printer   | Pulse Oxy meter        |
| 6    | Heart Lung Machine      | Electronic Endoflator        | C-Arm                        | C-Arm                  | C-Arm                  | Micro diathermy        |
| 7    | Anaesthesia Ventilator  | Anaesthesia Ventilator       | Anaesthesia Ventilator       | Anaesthesia Ventilator | Anaesthesia Ventilator | Anaesthesia Ventilator |
| 8    | Boyles Apparatus        | Boyles Apparatus             | Camera                       | Boyles Apparatus       | Camera                 | Boyles Apparatus       |
| 9    | Anaesthesia Workstation | Anaesthesia Workstation      | Cutter Control Knee Joint    | Lithotripter           | VCR                    | Phaco emulsifier       |
| 10   | Steam Sterlizer         | Camera                       | Steam Sterlizer              | MPM                    | Operating Microscope   | Operating microscope   |
| 11   | Light Source            | Light Source                 | Light Source                 | Light Source           | Light Source           | Cold Light Source      |
| 12   | Air Purifier            | ESU                          | Fluid Warmer                 |                        | Air Purifier           | Cryo Machine           |
| 13   | Defibrillator           | Unidrive GYN                 | Body Warmer                  |                        |                        | Virectomy              |
| 14   | Haemotherm-CSZ          | Harmonic Scalpel             |                              |                        |                        | ENT Micro motor        |
| 15   | ACT-Machine             | ATS                          |                              |                        | Drill Machine          | ENT drill              |
| 16   | Sternal Saw Cutter      | Tourniquets                  |                              |                        |                        |                        |
| 17   | Syringe Pump            | Syringe Pump                 |                              |                        |                        |                        |
| 18   | Steel Wire Cutter       | Xenon Light Source 300W      |                              |                        |                        |                        |
| 19   | TEE Probe               | 30 <sup>0</sup> HD Endoscope |                              |                        |                        |                        |
| 20   | Cardio Plesia Monitor   |                              |                              |                        |                        |                        |

## Table 6: Equipment list for Operation Theatre

### 10.14 Wrist Band Colour Coding:

A band is tied on patient wrist which has general information of patient like patient name, IPD no., ward name in which patient admitted and date of admission. This is tied only for following admitted patients:

Table 9: Wrist Band Color Coding

|        |                                                    |
|--------|----------------------------------------------------|
| Blue   | Surgical Patient (Patient Going for any Surgery)   |
| Pink   | Newly born baby and delivered mother               |
| Orange | Vulnerable patients (65years>Patient Age< 14years) |

### “Nanhi Chaan”:- Save the Girl Child Campaign

Every mother who had delivered girl child has given a small plant (Tulsi, ) at the time of discharge. The concept behind this is to care that plant as their child.

Outside labor room blue balloon for newly delivered male child while pink balloon for newly delivered female child.

### 10.15 Security

Security Service of SDMH IPD building is outsourced. The contract is renewed every year. There are three duty rosters of security persons which as follows:

Table 7: Security Timings

| Shift   | Timing            | No. of Security guards |
|---------|-------------------|------------------------|
| Morning | 6.00Am to 2.00Pm  | 18                     |
| Evening | 2.00Pm to 10.00Pm | 10                     |
| Night   | 10.00Pm to 6.00Am | 7                      |

There are total 35 security guards in IPD building amongst which maximum of them are present during the morning shift because of maximum no. of visitors are in morning hours and minimum no is required during night time .

Every patient is provided single attendant pass during admission. Only for neurological cases or special recommendation by concerning consultant the extra attendant pass is provided to the patient with extra payment of 100 Rs at admission counter in which 90Rs is refundable at the time of discharge.

**10.16 Critical Care Area** There are total 63 beds in critical care areas of the hospital. The occupancy is much higher in that area of hospital which is approximately 95%. Distribution of critical care area has given below:-

Table 8: No & strength of critical care unit

| Name of ICU                       | Bed Strength |                                                      |
|-----------------------------------|--------------|------------------------------------------------------|
| Step Down ICU-1                   | 11           | It also known as High Dependency Unit(HDU).          |
| Medical Critical Care Unit-1      | 10           | It also known as Step Down ICU-2.                    |
| Medical Critical Care Unit-2      | 10           |                                                      |
| Surgical Critical Care Unit       | 7            | It caters the services for cardiac surgery patients. |
| Paediatric Intensive Care Unit    | 7            |                                                      |
| Surgical Intensive Care Unit      | 8            |                                                      |
| Neuro-Science Intensive Care Unit | 10           |                                                      |

### Equipment List of ICU

- Multipara Monitor
- Defibrillator
- ECG Machine
- Syringe Pump
- IABP
- Blood Storage Cabinet
- Temp. Pacemaker
- Ventilator
- Bi PAP
- Patient Blanket
- Pulse Oxy meter

There are Specific equipments that required in Neonatal and paediatric ICU as follows:

- Radiant Heat Warmer
- Digital Weighting Scale
- Nebulizer
- Infant Ventilator
- Incubator

### **10.17 Emergency**

Department of Emergency is located at ground floor of IPD building. It caters 24\*7 services. Patient coming at emergency required to deposit Rs.200 as file charge or registration charge at admission counter. From there patient get their unique identity no.

There are three duty rosters in each shift with one doctor and three staff nurse. In emergency doctors are ACLS/BLS certified. Training for this conducted by hospital time to time.

There are four beds in emergency normally 30-35 patients visit per day in this department. Frequently coming emergencies are fall injuries, Cardiac emergencies and poisonous intake etc.

There is minor OT in emergency department for suturing and other minor procedures. In minor OT there is an OT table, High Mask Light and Emergency Medicines are there.

List of Equipment in Emergency Department

- Crash cart
- Defibrillator
- ECG Machine
- Pulse Oxy meter
- Suction

### **10.18 Ambulance Services**

There are total 8 ambulances in SDMH. Two of them are critical care ambulances amongst which one is fully equipped with life saving equipments like ventilator, defibrillator, O<sub>2</sub> cylinder, and emergency medicine...etc one of them are donated by State Bank of Bikaner & Jaipur.

### **10.19 Hospital Management Information System**

The hospital has own management information system. It covers the following arena.

- Blood Bank management Information System
- IPD Management Information System
- Medical Record Management Information System
- OPD management Information System
- Operation Theatre Utilization information System
- Pay Roll information System
- Pharmacy Retail Chain Management Information System
- Ward Management Information System
- Lab information System

### **10.20 Central Sterilization Room**

- It caters the services for Wards and ICU etc.
- Separate autoclave is present in OT's.
- Autoclave machine and ETO is present for sterilization.
- There is separate entry and exit door in CSR.
- Replacement system is been followed.
- Bow dick's test is done to check the sterilization.
- Human resources: total no of staff is four in which two are trained in sterilization procedures.
- The items are packed before coming to CSR to prevent mixing of items.
- Sterilized items were issued for ward at particular time in morning between 7.30Am to 7.45Am and in Evening between 2.30Pm to 3.00Pm.

### **10.21 Dietary Services**

- Dietary services of hospital are on contract basis which is renewed every year. For IPD patients' contractor has payee by hospital on per plate basis.
- A dietician is appointed by hospital to prepare the diet schedule of every patient according their requirement. Dietician takes round on every morning and take note on the patient required diet.
- Diet charges are included in Bed/Room/Ward charges .Normally 5 meals are given to the patients in wards while in private rooms 7 meals are given to the patient.
- There are different diets for patients with Diabetes Mellitus, Hypertension, Renal disease or cardiac disease.
- Food trolleys temperature is kept at 50 degree Celsius.
- Weekly scheduling of diet is done by hospital appointed dietician as well as canteen own employed dietician. In absence of hospital dietician canteen employed dietician has to work.
- There is a separate arrangement of food preparation for patient which require more hygiene and for attendants.

## **10. OTHER SERVICES**

### **11.1 AVEDNA ASHRAM**

It is a charitable based hospice of 82 beds, where it provides a home for patients with terminal illness. It provides free shelter, food and care to terminally ill patients mainly suffering from cancer and pelagic patients of Rajasthan and neighbouring states.

## **Human Resources**

- 4 Volunteering Nuns + 1 Nursing Aid + 1 Ward Boy

Avedna Ashram comprises of three floor comprising of:

### **1<sup>st</sup> Floor**

- Female ward- 21 Beds
- Male ward- 21 Beds
- Central ward- 10 Beds

### **2<sup>nd</sup> Floor**

- Male private rooms- 9 rooms- 11 Beds
- Female private rooms- 7 rooms- 9 Beds
- Central ward- 10 Beds
- 1 Common TV Room

### **3<sup>rd</sup> Floor**

- Coordinator Room
- Staff staying room
- Trustee Member Meeting Hall
- Prayer Room

## **Services**

- Free palliative, medical and nursing care to terminally ill cancer patients with free boarding and lodging.
- Osteotomy care services.

## **11.2 ANANTH BHANDHARI DAY CARE CENTRE**

It mainly looks after the spiritual, academic, intellectual and creative needs of the senior citizens through yoga, medication, music, reading lectures etc. They also provided with subsidized lunch and free tea and snacks.

### **Services**

- Care of body, mind and soul through religious prayers and programmers etc.
- Common prayer room is provided for patients in Avedna Ashram and senior citizens at day care centre.

### 11.3 MORTUARY

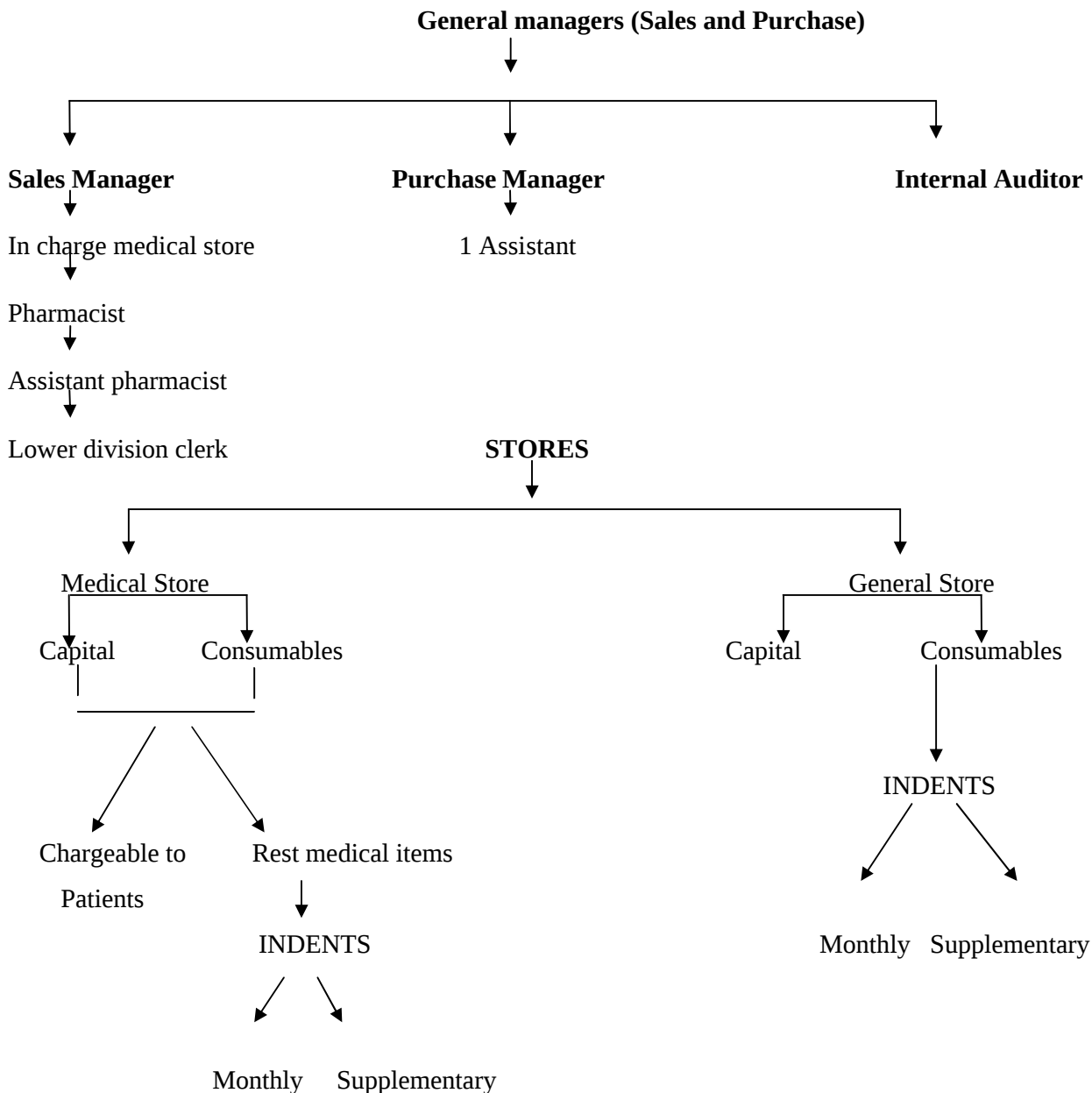
It is one of the support services of a hospital. Here the dead bodies of patients who die in the hospital are kept. They are kept either due to delay in their funeral or due to any medico legal reasons.

It is located in the basement of Avedna Ashram. A single insulated room where dead body is kept in the room. At a time 3 dead bodies can be kept in the room.

- Last rites services according to written request of the patients.
- AC mortuary services.

### 11.4 STORES & PURCHASES

This department is primarily responsible for inviting quotations, negotiating, purchasing and issuing desirable medical /general, capital/consumables to various departments of hospital.



#### **11.4.1 Process of procuring Capital Items for new items:**

It includes both medical and general capital items-

Step 1- Order is received from respective department during the specific period i.e. beginning of calendar year.

Step 2- Quotations are being invited on the above requirement.

Step 3- All the quotations are shown to the head of the department as per their requirement.

Step 4- Items are purchased as per the head's direction.

Step 5- After the procurement items are sent directly to the respective department.

Step 6- After the assurance of the item up to the mark, payment is being made by accounts departments.

#### **Important points:**

- List of new items to be procured is being made at the beginning of the financial year
- Purchase department can take decision regarding capital items of up to Rs. 20,000 only i.e. controller of stores.
- Further the capital purchase of more than Rs. 20,000 the decision is being taken by capital purchase committee.
- Advisor to secretary is head of this department.

#### **11.4.2 Process for Replacement of capital items:**

If an equipment is replaced then,

Step 1- department fills the breakage form

Step 2- the form is sent to MS.

Step 3- MS further directs the BMW and engineering service department to check and verify the request.

Step 4- on the above approval the new equipment is ordered in a planned manner.

#### **Important point**

- Medical equipments – bio medical workshop
- Other all equipments- engineering service department

#### **11.4.3 Process involved in obtaining and supplying consumables**

Consumables are supplied to every department through indents. These indents are of two types monthly and supplementary. This is applicable for both medical and general consumables.

#### **11.4.4 Monthly Indents**

- Every department send their requirement in specific format i.e. monthly indent.
- The indents are being filled and send between 25<sup>th</sup> to last date of each month.
- On the basis of indents collected order of each department is being placed.
- The indents are been supplied to respective departments in first week of next month according to allotted dates.

#### **11.4.5 Supplementary indents**

In certain cases, if monthly indents fall short for any department then they send supplementary indent which includes the name and quantity of indent.

#### **Important point:**

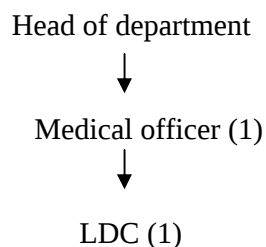
- There is list of standard indent according to respective department per bed. The quantity always remains fixed only price varies. This indent helps in keeping a control check on the consumption of consumables per bed in each ward.

### **11.5 MEDICAL RECORD ROOM**

The key functions of the department are:

- To keep the record of IPD patients and discharges from the hospital
- To maintain the IPD records of deaths
- To provide the records whenever requested as per the law and also to dispose of the old records according to the law.
- Bills verification for the government employees.

#### **Human resources**



#### **Equipments**

Computer

#### **Physical facility**

Rooms available

## Activity flow

### IPD Records

Patients discharge → Filling up charge sheet → Nurse enter it in ward register → Files comes to MRD → Entry in computer/ manually in register → Arranging file according to serial number.

#### (a) To get the file (Patients/ Attendant)

Application to MS → On approval of application → Photocopy of file is handed over

#### (b) For disposing of records

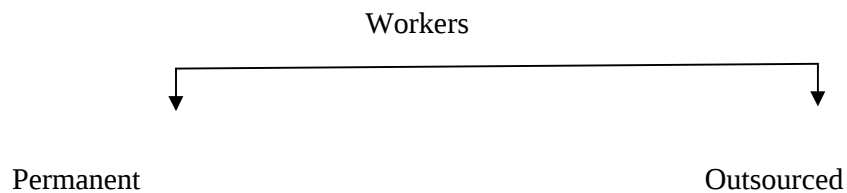
Report committee meeting is called and order is passed on the basis of unanimous decision of this committee. For disposal of records laws has to be followed

### Important points

- Birth and death records are available here from the year 1971- till date.
- Discharge records for
- Report committee comprises of MS, legal advisor and doctor.
- Insurance company has to pay Rs 500 for obtaining records of a patients
- SDMH has also municipality computer and employee for issuing birth and death certificate.

## 11.6 HOUSEKEEPING

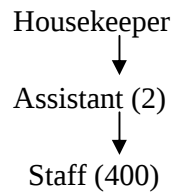
It is the in house department with a working staff of 400 and if and when required workers are outsourced.



### Key functions

- To ensure the cleanliness of the hospital.
- To get cloths from wards to the laundry and make an entry and supply it back to wards.
- To make arrangement for various other function, conferences and camps.
- To collect the post and distribute it.

## Human resources



**Note:** Staff includes sweepers, ward boys, ward ladies and drivers

### 11.7 MAINTENANCE DEPARTMENT

The maintenance department mainly includes workshop of:

- Carpenter
- Painter
- Mechanical
- Plumber

#### Human Resources

The total no of employees working in the department are 22.

- Maintenance: 4
- Carpenter: 4
- Painter :4
- Mechanical:6
- Plumber:4

#### Activity flow

Receive complain from respective department → Handed over to Maintenance supervisor → complaint is handed over to respective workshop for repair/Maintenance/construction → first line of repair/ maintenance is done by maintenance staff, if not then send it outside.

### 11.8 BIO MEDICAL ENGINEERING (BME) DEPARTMENT

#### Key functions

The main functions of the department are as follows:

- First line of repair and maintain all the Bio Medical Equipments of the hospital.
- Inventory management of instruments.
- Medical gas room maintenance

For maintenance of equipment in OT, ICU and wards AMC and CMC are given.

## Human resource

Bio Medical Equipment- 1 Assistant → 1 Technician

Medical Gas Room- 3Staff member/ 1 Reliever

## Equipments

All basic and necessary tools related to their work.

## Activity flow

Receive complain from department → estimate the budget for repair and followed by comment of the respective doctor → Handed over to GM, Purchase →DMS → MS → Parcel is send to company workshop for repair receive the parcel from company → functioning of equipment is checked by respective doctor →if satisfactory,→ payment is done.

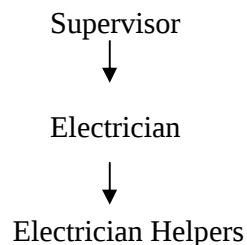
## 11.9 ELECTRICITY DEPARTMENT

The main function of electricity workshop department is as follows:

- Electricity supply including emergency supply.
- Maintenance of AC and air cooling.
- Maintenance of central suction
- OT cautry wire
- Maintenance of hydraulic table- OT
- Oxygen pipelines
- Maintenance of centrally dry air compression
- Soft water processor

## Resources available

### ➤ Human resources



### ➤ **Duties**

- **Roaster**

- Mainly deals with the maintenance part of instruments
- Functional 24\*7

- **Workshop**

- It mainly deals with the maintenance part of heavy instruments like vacuums
- Functional for 8 hours daily

- **Equipments**

- Generators AC plants
- Digi sets Air compressor
- UPS (Uninterrupted Power Supply) Ducting system

### **11.10 BANK**

- The hospital has a branch of a Union Bank as well as Bank's ATM inside the hospital campus.
- There is a direct transaction of monthly salary of hospital staff from hospital accounts section to the employee bank account.

### **11.11 POST OFFICE**

- Post office SDMH branch is present inside the hospital campus.

### **11.12 IN PATIENT ATTENDANT (IPA) BLOCK**

- It is a 50 bedded dharamshala providing accommodation facility for the attendants of the IPD patients.

### **11.13 CRECHE**

- Extended services in the form of crèche i.e. room with a pantry is present inside the hospital campus.
- It is mainly for the staff's children under 5 years of age.
- 4 helping staff is hired to take care of toddlers.

### **11.14 RECREATIONAL ROOM**

- Keeping in mind the health of the resident doctors and staff quarter's a recreation room namely GYM is present.
- It is open during morning and evening time.

### **11.15 LAUNDRY**

- The laundry services in SDMH are outsourced and the contract is renewed annually.
- The cost per cloth is pre decided and monthly the payment is done on those bases.

## **Human Resources**

Total – 10 workers

## **Equipments**

- 3 Machines are soaking the soiled and untainted linen.
- 3 Washing machines are present for washing purposing.
- 3 Blow dryer machines are present to dry the linen.
- 1 roller for ironing is present.

## **11.16 BIO MEDICAL WASTE**

This department is outsourced by the hospital. The waste is collected on the bases of colour coding which is as follows:

**Blue:** Glass, needle syringes and solid waste

**Black:** Municipality waste

**Red:** solid waste, plastic bags, mouth mask and head caps

**Yellow:** Cotton, gauze pieces etc

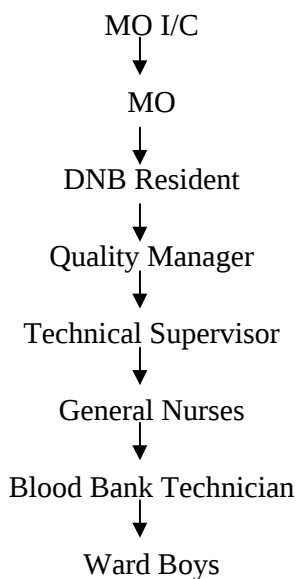
## **Important Points**

- The waste is been collected in the morning and further the waste is been taken by the contractor on the basis of weight.
- There is a separate exist of the waste to be disposed off.
- Currently the sewerage plant is under construction which will help in treating the contaminated water and further using it for additional purpose.
- There are 3 water harvesting system present inside the hospital campus, help in maintaining the water level and further used for gardening, washing and cleaning.

## **11.17 BLOOD BANK**

The blood bank of SDMH was established in 1973, initially designed to meet the needs of in-house SDMH patients, but later converted to a state of the art multi-component blood bank and transfusion service by 2003. It is regulated by “Drug and Cosmetic Act”.

## Human resources



## STAFFING

These many above personnel are mandatory according to the act. Other than the minimum obligation, personnel available

- Medical Social Worker
- Accountant
- Store I/C
- Computer Programmer
- Helper

## Facilities and services

### Names of component

- Whole blood
- Paediatric/ Divided RBC units
- Red Cell Concentrate
- Fresh Frozen Plasma
- Platelet Concentrate
- Old Frozen Plasma
- Single Donor Platelet concentrate
- Cryoprecipitate concentrate
- All components with Anti- HBc (Total) Tested
- All components of NAT (Nucleic Acid Amplification) Tested
- Tested Performed
- Blood Group ABO- Rh

- Rh- Antibody titre
- Coombs Direct test
- Coombs Indirect test
- Cold Agglutination
- HbA2 (Haemoglobin 2) Electrophoresis
- Rh phenotype and Kell (Antibody Screening)
- Complete Irregular Antibody Identification

### **Important Point**

- Charges are set by joint decision of Hospital Transfusion committee, RSACS, and Health Directorate.
- It is basically a not for profit department therefore only cost is covered.
- Fund collected goes to hospital's account but have a separate sub account.

### **Process**

**Step1:** Donor form → Medical social worker → Pre donation counselling

**Step2:** Hb test, it should be more than 12.5

**Step 3:** MO screening → General physical examination → Nucleic Acid Test

**Step 4:** Donors Room → Donation Completes → Refreshment Room

**Step 5:** TTD lab → Kept as whole blood → Components Preparation

**Step 6:** Components Preparation → RBC & Plasma → Platelets & Plasma Serums

**Step 7:** Labelling and storage

**Step 8:** Request come from patient with sample

**Step 9:** Sample → Serological lab → forward group test (Cell Grouping)/Reverse Group Test (Serum Grouping)

**Step 10:** Cross matching → minor (Serums)/ Major (Cells)

**Steps 11:** Coomb's Test (To find out unregulated anti bodies)

**Steps 12:** Compatible → Issue

**A Project**

**On**

**Calculation of TAT of the Discharge Process**

## **Literature Review:**

### Importance of discharge process:

Discharge can be broadly defined as ‘the processes, tools and techniques by which an episode of treatment and/or care to a patient is formally concluded by a health professional, health provider organisation or individual’ It should be noted that the process of being discharged following an episode of care most frequently occurs as a result of formal communication from a health professional but can also arise as a result of self-discharge (often contrary to medical advice) or technically as a result of patient mortality. Discharge arising from a change in the type of care provided or transfer to another institution/facility is referred to as a ‘statistical discharge’ (Australian Bureau of Statistics 2010; Australian Institute of Health and Welfare 2008). Discharge from hospital is a process and not an isolated event. It should involve the development and implementation of a plan to facilitate the transfer of an individual from hospital to an appropriate setting. The individuals concerned and their carer(s) should be involved at all stages and kept fully informed by regular reviews and updates of the care plan. Effective and timely discharge requires the availability of alternative, and appropriate, care options to ensure that any rehabilitation, recuperation and continuing health and social care needs are identified and met.

( <http://www.wales.nhs.uk>)

Driscoll (2000) stated that discharge planning is a process where patients’ needs are identified and a plan formed for a smooth transfer from one environment to another.

**TYPES OF DISCHARGE:**

- Planned Discharge
- Unplanned Discharge
- Discharge on request
- Discharge against medical advice

**BENEFITS OF PLANNED DISCHARGE PROCESS:**

- It prepares the patient and family for transition from the health care setting to another which includes assessing patient needs at discharge, making arrangements and referrals for follow up care and coordinating the various professional and volunteer services.
- It needs to be initiated on admission to the hospital and then continues as an ongoing process throughout the hospital stay.”

According to Rorden and Taft (1990), Discharge planning is NOT just:

- Limited to concern about the physical transfer of the patient.
- Focused only on the physical care needs of the patient.
- An activity that is done to or for the patient without his active involvement.
- The responsibility of a discharge planning specialist alone.

However, Discharge planning; IS a process that:

Begins with early assessment of anticipated patient care needs.

- Includes concern for the patient’s total well being.
- Involves patient, family and caregivers in dynamic, interactive communication as planning processes.
- Prioritizes collaboration and coordination among all involved health care professionals.
- Results in mutually agreed upon decisions about the most economic and appropriate options for continuing care.
- Is based on thorough, update knowledge of available continuing care resources.

**The benefits of effective discharge planning are:**

*For the patient*

- Needs are met;
- Able to maximise independence;
- Feel part of the care process, an active partner and not disempowered

*For the carer(s)*

- Feel valued as partners in the discharge process;
- Consider their knowledge has been used appropriately;
- Are aware of their right to have their needs identified and met;
- Feel confident of continued support in their caring role and get support before it becomes a problem;
- Have the right information and advice to help them in their caring role;
- Are given a choice about undertaking a caring role;
- Understand what has happened and who to contact

*For the staff*

- Feel their expertise is recognised and used appropriately;
- Receive key information in a timely manner;
- Understand their part in the system;
- Can develop new skills and roles;
- Have opportunities to work in different settings and in different ways;
- Work within a system which enables them to do so effectively

*For organisations*

- Resources are used to best effect;
- Service is valued by the local community;
- Staff feel valued which, in turn, leads to improved recruitment and retention;
- Meet targets and can therefore concentrate on service delivery;
- Fewer complaints;
- Positive relationships with other local providers of health and social care and housing services;
- Avoidance of blame and disputes over responsibility for delays.

## **FACTORS ASSOCIATED WITH DELAYED DISCHARGE:**

### *Individual factors*

- Personal choice,
- Age,
- Delay due to unavailability of transport.

### *Organisational factors*

- Delay in doctor's rounds.
- Delay in preparation of discharge summary
- Delay due to unavailability of nurses at the nursing station.
- Delay due to unavailability of ward boys.
- Wait for diagnostic test results.

## **OBJECTIVES:**

- Understand the entire discharge process.
- To know the average time consumed in the entire process.
- Identify the reasons for delays.
- To give recommendations to improve the process.

## **STUDY DESIGN:**

Study Type: Observational

Study Location: Neurology ward, medicine ward (SDMH ,Jaipur)

Target population: Planned and un-planned discharge patients.

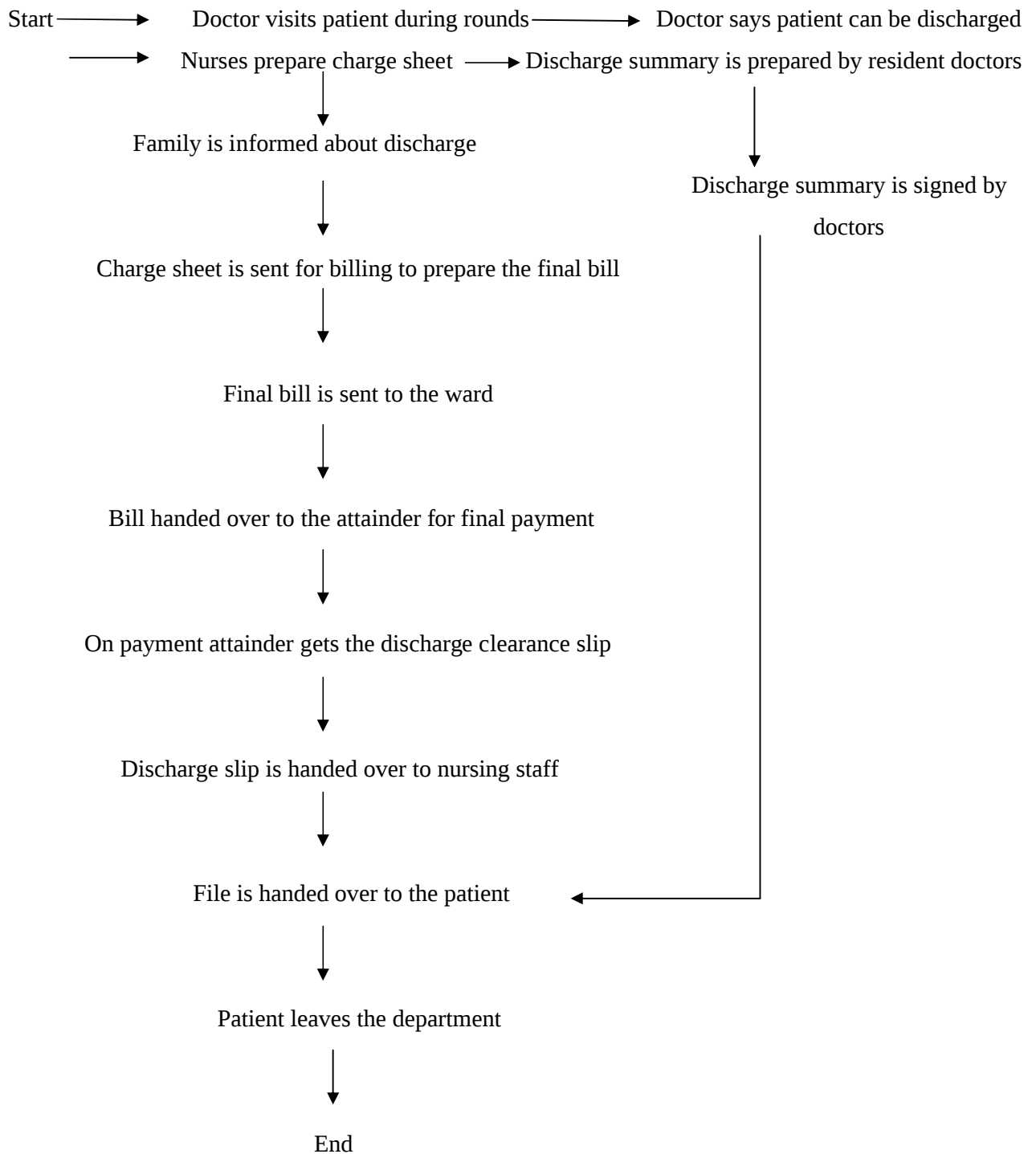
Sampling Technique: Convenient sampling

Sample Size: 100

Duration: 10<sup>th</sup> April to 25<sup>th</sup> May.

Check list was prepared for each patient actual timing for each patient was taken down.

## DISCHARGE PROCESS



### Findings:

| S.no | Process                                    | Result    |
|------|--------------------------------------------|-----------|
| 1    | Total no. Of discharges                    | 100       |
| 2    | Average no. Of discharges                  | 3 per day |
| 3    | Average time consumed in the whole process | 3.5hours  |
| 4    | Total no. Of delay                         | 93        |
| 5    | Percentage of delay                        | 93%       |

Graph:

Hourly Distribution of discharges

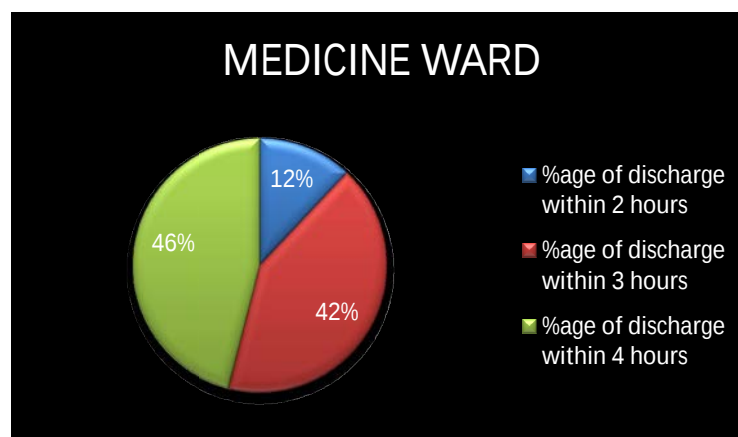
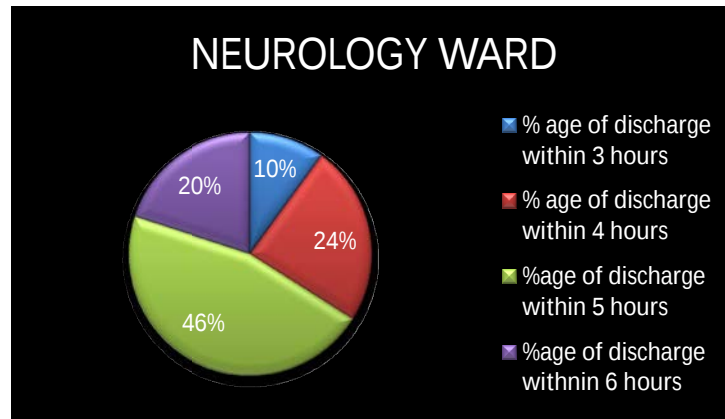
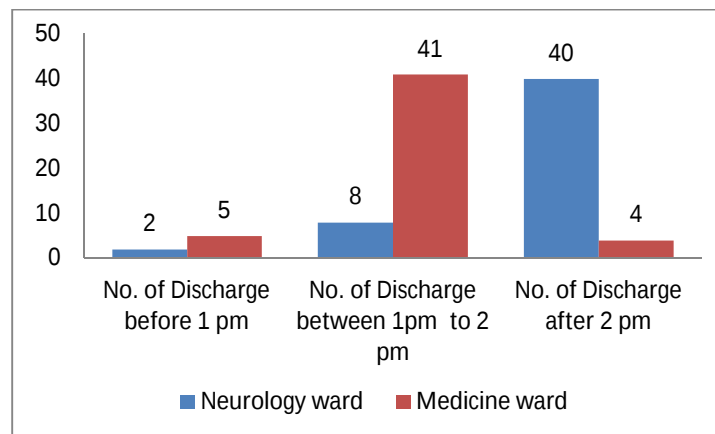


Table:

**NO. OF DISCHARGES IN EACH TIME PERIOD:**

| Wards          | Discharge before 1 pm | Discharge between 1 to 2 pm | Discharge after 2pm |
|----------------|-----------------------|-----------------------------|---------------------|
| Neurology ward | 2                     | 8                           | 40                  |
| Medicine ward  | 5                     | 41                          | 4                   |



**RECOMMENDATIONS:**

*Advance Information to the nurses:*

Nurses should be trained to confirm the date of discharge from the treating consultant during his rounds every day. "The doctors have a fair idea a day in advance, but the whole problem was communication

*Advance Information to other stakeholders:*

Once the date of discharge is confirmed by the doctor (to be the next day), steps that should take place 12 hours before the day of discharge. "All stakeholders involved should be informed of the planned discharges. Unused medication of the patient should be returned the previous night. The patients' attendants should be informed, so that they can make the required financial and logistic arrangements.

*Daily Updating of Bills:*

To speed up of the billing process and to ensure quick turnaround of the final bills, all bills should be audited and updated every night to ensure minimum time is taken on the day of discharge. The aim is to complete all the discharges before 11am every day, so that the same beds can be made ready for the new admissions

### *Discharge Summary:*

The discharge summary should be typed from the day the patient is admitted, and should be updated on a daily basis and on the day of discharge, only minor additional information should be added. "The summary is to be checked and signed by the consultant during his morning visit to the patient on the day of discharge,

### *Daily Payment:*

It is not easy to ensure that the attendants are ready with the balance of the payment and logistic arrangements. "So, whenever there is a credit from the patients' side, the attendant is asked to pay the amount on a daily basis, so that in the end there is not a bulk of payment to be made,".

### *Doctors' Round:*

This was to declare that the patient was fit for discharge. The final nod was the main driver for the entire process. The doctors generally came for rounds at 10 AM. All the processes related to discharge starts late. The nod would come by 11 AM and then the patient would get discharged only by evening. Doctor's visit time need proper scheduling.

### *Proper Number of nursing staff:*

Lack of nurses in the ward often leads to unavailability of nurses at the nursing station which leads to various problems such as delay in sending of charge sheet, delay in receiving billing file and handling it to the patient's attainer for final payment.

## **LIMITATIONS:**

- Study was conducted in a limited time period.
- TPA patients were not included in the sample.
- Study was time consuming as it requires following of all the discharge patients.

**A PROJECT**  
**ON**  
**NURSE: PATIENT RATIO**



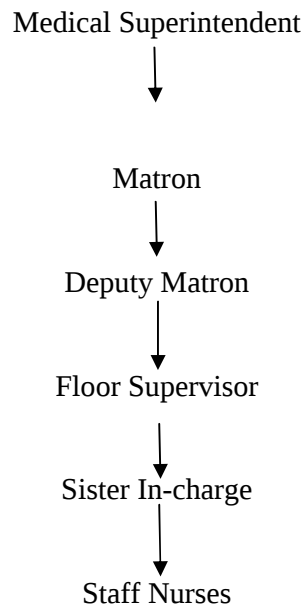
## INTRODUCTION

A shortage of registered nurses, in combination with increased workload, has the potential to threaten quality of care. Increasing the nurse to patient ratios has been recommended as a means to improve patient safety. Increased nursing staffing in hospitals was associated with lower hospital-related Mortality , failure to rescue, and other patient outcomes. Greater nurse staffing was associated with better outcomes in intensive care units and in surgical patients.

General Objective:

- To access the Nurse to Patient ratio in Ward, ICU's, ICCU's and other specialities, and in OT's of Santokba Durlabhji Memorial Hospital.
- To identify whether there is excess or shortage of nurses in the above mentioned departments.

## NURSING ORGANOGRAM IN SDMH



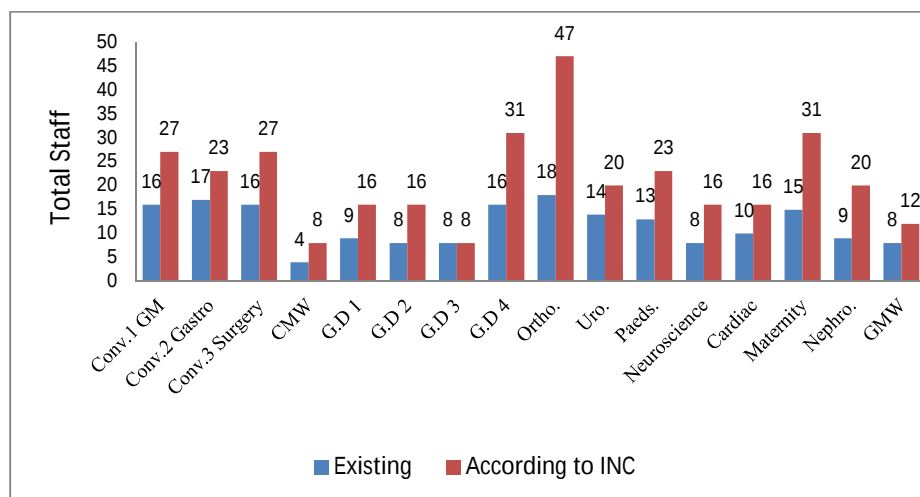


### Standard Norms and INC (Nurse: Patient ratio):

1. General Wards
  - 1:3(hospital attached with school or college of nursing).
  - 1:5 (hospital not attached with school or college of nursing).
2. ICU, ICCU and other speciality areas 1:1 for 24 hours.
3. Labour room 4 in each shift.
4. Operation theatre 3for 24 hours per table.
5. Outpatient department 1 in each clinic room of the OPD.
6. Casualty and emergency 1:1 in each shift.
7. Paediatric unit 1:2 beds.
8. Additionally, 30 percent reserve posts of staff nurses to be kept ready.

## GENERAL WARDS NURSE: PATIENT RATIO

| GENERAL WARDS                     | BEDS | Existing staffing pattern in SDMH |               |               |             | Staffing pattern according to INC(1:3) |               |               |             |
|-----------------------------------|------|-----------------------------------|---------------|---------------|-------------|----------------------------------------|---------------|---------------|-------------|
|                                   |      | TOTAL STAFF                       | MORNING SHIFT | EVENING SHIFT | NIGHT SHIFT | TOTAL STAFF                            | MORNING SHIFT | EVENING SHIFT | NIGHT SHIFT |
| Convalescent-1 (General medicine) | 20   | 16                                | 5(1:4)        | 4(1:5)        | 3(1:7)      | 27                                     | 7             | 7             | 7           |
| Convalescent-2 (Gastro)           | 17   | 17                                | 5(1:3)        | 4(1:4)        | 3(1:6)      | 23                                     | 6             | 6             | 6           |
| Convalescent-3 (Surgery)          | 20   | 16                                | 5(1:4)        | 4(1:5)        | 3(1:7)      | 27                                     | 7             | 7             | 7           |
| Colormasters Ward                 | 7    | 4                                 | 2(1:4)        | 1(1:7)        | 1(1:7)      | 8                                      | 2             | 2             | 2           |
| G.D -1                            | 13   | 9                                 | 2(1:7)        | 2(1:7)        | 2(1:7)      | 16                                     | 4             | 4             | 4           |
| G.D -2                            | 12   | 8                                 | 2(1:6)        | 2(1:6)        | 2(1:6)      | 16                                     | 4             | 4             | 4           |
| G.D -3                            | 7    | 8                                 | 2(1:4)        | 2(1:4)        | 2(1:4)      | 8                                      | 2             | 2             | 2           |
| G.D-4 (NEURO)                     | 23   | 16                                | 5(1:5)        | 4(1:6)        | 4(1:6)      | 31                                     | 8             | 8             | 8           |
| Orthopaedic                       | 37   | 18                                | 5(1:7)        | 4(1:9)        | 4(1:9)      | 47                                     | 12            | 12            | 12          |
| Urology                           | 16   | 14                                | 3(1:5)        | 3(1:5)        | 3(1:5)      | 20                                     | 5             | 5             | 5           |
| Paediatric                        | 17   | 13                                | 3(1:6)        | 3(1:6)        | 3(1:6)      | 23                                     | 6             | 6             | 6           |
| Neuroscience                      | 12   | 8                                 | 2(1:6)        | 2(1:6)        | 2(1:6)      | 16                                     | 4             | 4             | 4           |
| Cardiac                           | 12   | 10                                | 2(1:6)        | 2(1:6)        | 2(1:6)      | 16                                     | 4             | 4             | 4           |
| Maternity                         | 25   | 15                                | 4(1:6)        | 3(1:8)        | 2(1:13)     | 31                                     | 8             | 8             | 8           |
| Nephrology                        | 14   | 9                                 | 2(1:7)        | 2(1:7)        | 2(1:7)      | 20                                     | 5             | 5             | 5           |
| General Medicine                  | 10   | 8                                 | 2(1:5)        | 2(1:5)        | 2(1:5)      | 12                                     | 3             | 3             | 3           |



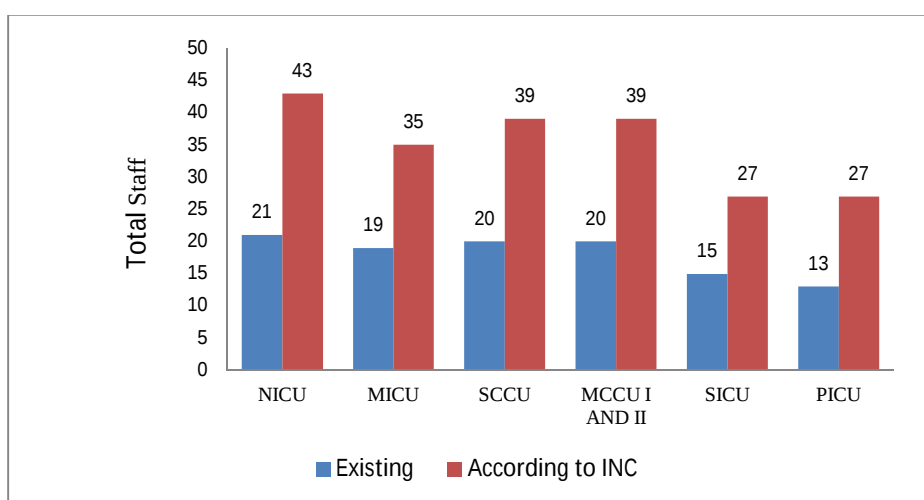
### GAPS IN THE STAFFING PATTERN:

#### i. GENERAL WARDS

- There is a significant gap in the existing staffing pattern (General wards) in SDMH.
- Only G.D 3 has the same number of nurses according to the INC guidelines.
- Orthopaedics ward shows the maximum gap in the staffing pattern.

### ICU'S, ICCU'S AND OTHER SPECIALITIES NURSE: PATIENT RATIO.

|               |     | Existing staffing pattern in SDMH |               |               |             | Staffing pattern according to INC(1:1) |               |               |             |
|---------------|-----|-----------------------------------|---------------|---------------|-------------|----------------------------------------|---------------|---------------|-------------|
| ICU'S         | BED | TOTAL STAFF                       | MORNING SHIFT | EVENING SHIFT | NIGHT SHIFT | TOTAL STAFF                            | MORNING SHIFT | EVENING SHIFT | NIGHT SHIFT |
| NICU          | 11  | 21                                | 5(1:2)        | 5(1:2)        | 5(1:2)      | 43                                     | 11            | 11            | 11          |
| MICU          | 9   | 19                                | 5(1:2)        | 4(1:2)        | 6(1:2)      | 35                                     | 9             | 9             | 9           |
| SCCU          | 10  | 20                                | 6(1:2)        | 6(1:2)        | 6(1:2)      | 39                                     | 10            | 10            | 10          |
| MCCU I AND II | 10  | 20                                | 5(1:2)        | 5(1:2)        | 4(1:3)      | 39                                     | 10            | 10            | 10          |
| SICU          | 7   | 15                                | 4(1:2)        | 4(1:2)        | 3(1:2)      | 27                                     | 7             | 7             | 7           |
| PICU          | 7   | 13                                | 4(1:2)        | 3(1:2)        | 3(1:2)      | 27                                     | 7             | 7             | 7           |

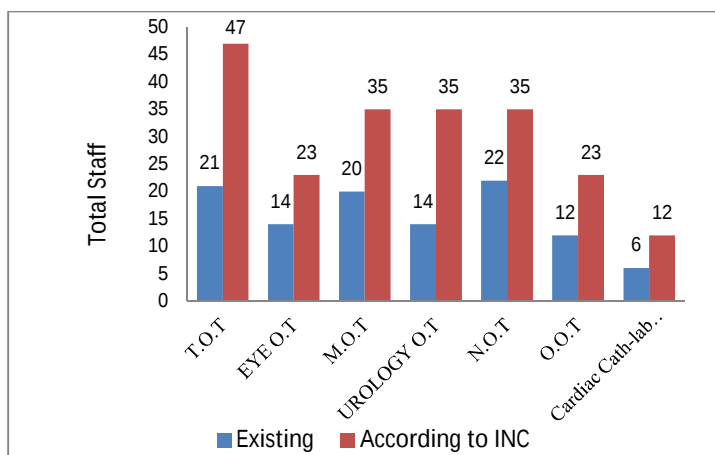


#### i. ICU'S, ICCU'S AND OTHER SPECIALITIES:

- The existing ratio in the ICU'S and ICCU's is 1:2 and the ratio according to INC is 1:1.

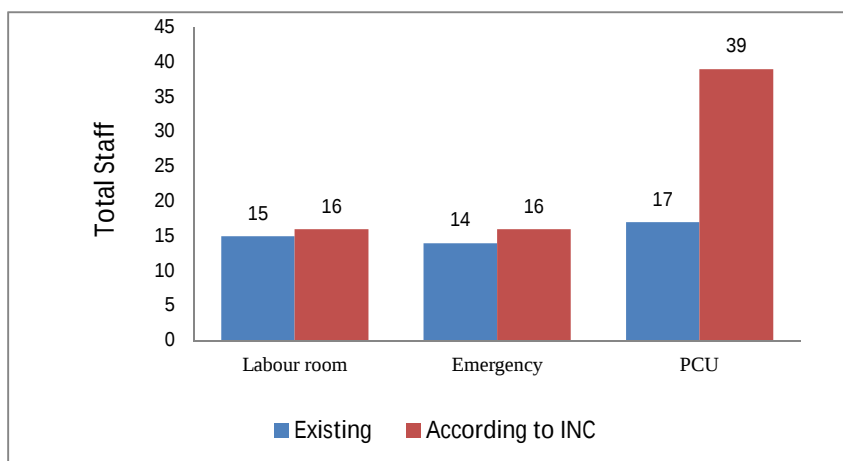
### OT'S NURSE: PATIENT RATIO.

|                          |      | Existing staffing pattern in SDMH |               |               |             | Staffing pattern according to INC(3:1) |               |               |             |
|--------------------------|------|-----------------------------------|---------------|---------------|-------------|----------------------------------------|---------------|---------------|-------------|
| OT'S                     | BEDS | TOTAL STAFF                       | MORNING SHIFT | EVENING SHIFT | NIGHT SHIFT | TOTAL STAFF                            | MORNING SHIFT | EVENING SHIFT | NIGHT SHIFT |
| T.O.T                    | 4    | 21                                | 12(3:1)       | 5(1:1)        | 3(1:1)      | 47                                     | 12            | 12            | 12          |
| EYE O.T                  | 2    | 14                                | 3(2:1)        | 3(2:1)        | 3(2:1)      | 23                                     | 6             | 6             | 6           |
| M.O.T                    | 3    | 20                                | 1(1:3)        | 1(1:3)        | 1(1:3)      | 35                                     | 9             | 9             | 9           |
| UROLOGY O.T              | 3    | 14                                | 3(1:1)        | 3(1:1)        | 3(1:1)      | 35                                     | 9             | 9             | 9           |
| N.O.T                    | 3    | 22                                | 7(2:1)        | 6(2:1)        | 2(1:1)      | 35                                     | 9             | 9             | 9           |
| O.O.T                    | 2    | 12                                | 7(3:1)        | 2(1:1)        | 1(1:2)      | 23                                     | 6             | 6             | 6           |
| Cardiac Cath-lab and O.T | 1    | 6                                 | 2(2:1)        | 2(2:1)        | 2(2:1)      | 12                                     | 3             | 3             | 3           |



➤ Table shows problem in the staffing pattern of M.O.T and Urology O.T

|                              | BEDS | Existing staffing pattern in SDMH |               |               |             | Staffing pattern according to INC |               |               |             |
|------------------------------|------|-----------------------------------|---------------|---------------|-------------|-----------------------------------|---------------|---------------|-------------|
|                              |      | TOTAL STAFF                       | MORNING SHIFT | EVENING SHIFT | NIGHT SHIFT | TOTAL STAFF                       | MORNING SHIFT | EVENING SHIFT | NIGHT SHIFT |
| Labour room(4 in each shift) | 4    | 15                                | 4             | 5             | 3           | 16                                | 4             | 4             | 4           |
| Emergency(1:1)               | 4    | 14                                | 4             | 3             | 3           | 16                                | 4             | 4             | 4           |
| PCU(1:2)                     | 20   | 17                                | 5(1:4)        | 5(1:4)        | 4(1:5)      | 39                                | 10(1:2)       | 10(1:2)       | 10(1:2)     |



➤ Table shows shortage of staff

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