

Summer Placement
In
Bombay Hospital, Indore
(April 1st to May 31st, 2015)

A Report

By
Dr. Sneha Gupta

MBA Hospital and Health Management

2014 – 2016



Institute of Health Management Research, Jaipur

CERTIFICATE

This is to certify that Dr. Sneha Gupta has undergone her summer training at Bombay Hospital, Indore from 1st April 2015 to 31st May 2015. The candidate has successfully carried out the tasks assigned to her during the training and her approach to the work has been scientific and analytical.

The summer training is in partial fulfilment of the course requirement.

I wish her success in all her future endeavours.

Dr. Shilpi Mishra Sharma
Assistant Professor
IIHMR University, Jaipur

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



Bombay Hospital - Indore

NABH Accredited

Mark of Excellence



INTERNSHIP COMPLETION CERTIFICATE

To Whom So Ever It May Concern

This is to certify that Dr. SNEHA GUPTA, a student of IIHMR University, Jaipur (Rajasthan) has successfully completed 2 months internship (from 1st April 2015 to 31st May 2015) at BOMBAY HOSPITAL, INDORE in the Administrative Department. During the period of her internship programme she has worked on the following 3 projects-

- General Administration in ICU, OPD & Diagnostics.
- Assessment of inpatient satisfaction in General Ward.
- Management of a communicable disease (H1N1).

She was punctual and found to be sincere. Her performance during the internship was satisfactory.

DR. DILEEP SINGH CHAUHAN
Medical Superintendent
Bombay Hospital, Indore

Dr. Dileep Singh Chauhan
Medical Superintendent
Bombay Hospital, INDORE

PREFACE

Summer internship is an integral part of MBA-HM curriculum. As a part of the course, the students of first year are required to undergo summer placement at any reputed organization to get in depth exposure to various departments of the organization and understanding of health care delivery system and its functions.

The major objectives of the summer internship are as follows:

1. To understand and learn day to day operational management of a Hospital/ Health Care organization and its service contents.
2. To identify issues/problems with certain operational areas.
3. To acquire more knowledge on roles and responsibilities of key players and stakeholders in the hospital.
4. To gain perspective in the functions of various departments by interaction with key stakeholders, policy makers, academicians and researchers.
5. To work on a Project assigned by the summer training organization.

During the training, I had an overview of several departments of the hospital. The following projects given by the mentor in the organisation were undertaken by me during the summer training;

1. General Administration in ICU, OPD & Diagnostics.
2. Management of H1N1 cases in Bombay Hospital.
3. Assessment of inpatient satisfaction in General ward.

ACKNOWLEDGEMENTS

I extend my sincere gratitude to **Dr. Dileep Singh Chauhan**, Medical superintendent, for giving me the opportunity to do my internship and undergo the process of learning at Bombay Hospital, Indore. I appreciate the guidance provided by him on my projects.

I would also like to thank **Mr. Ravi Makhija (OSD)**, **Dr. Yagyesh Pauranik (OSD)** and **Dr. Mayank Jain (OSD)** for giving me the valuable information, helping me during the course of my learning and constant support.

I am also very grateful to all the staff of the hospital for their cooperation and providing me with the necessary information for my learning and projects.

I would take this opportunity to extend my sincere thanks to **Dr. S.D. GUPTA**, Director, IIHMR University, Jaipur and **Dr. Shilpi Mishra Sharma** (Faculty and Mentor), IIHMR University, Jaipur for their valuable contribution and support.

However, I accept the sole responsibility for my possible error of omission and would be extremely grateful to the readers of this project report if they bring such mistakes to my notice.

Dr. Sneha Gupta
IIHMR University, Jaipur

CONTENTS

1. Abbreviations.....	viii-ix
2. Hospital Profile	
a. Bombay Hospital Trust.....	1
b. Bombay Hospital – Indore.....	1
c. Vision, Mission, Motto.....	1
d. Infrastructure of Hospital.....	2
e. Academic Activities.....	2
f. Corporate Social Responsibility.....	2
g. Milestones.....	2
h. Quality Goals.....	2
i. Organisational Hierarchy.....	3
j. Nursing Hierarchy.....	4
k. Roles & Responsibilities.....	4-6
l. Scope of Services.....	6-7
m. Floor Wise Distribution.....	7-10
n. OPD Patient Flow.....	10
o. IPD Patient Flow.....	11
p. Emergency & Casualty Patient Flow.....	11
q. Discharge Process.....	12
3. Tasks assigned during the training.....	12
4. Major learning during summer training.....	12-13
5. Projects	
a. General Administration in ICU, OPD & Diagnostics in.....	14-30
Bombay Hospital, Indore	
b. Management of H1N1 cases in Bombay Hospital, Indore.....	31-40
c. Assessment of In-patient Satisfaction in General Ward.....	41-51
in Bombay Hospital, Indore	
6. References.....	52
7. Annexure: Patient Feedback Form (English, Hindi).....	53-54

LIST OF FIGURES

Fig 1: Organisational Hierarchy.....	3
Fig 2: Nursing Hierarchy.....	4
Fig 3: OPD Patient Flow.....	10
Fig 4: IPD Patient Flow.....	11
Fig 5: Emergency & Casualty Patient Flow.....	11
Fig 6: Discharge Process.....	12
Fig 7: ICU Hierarchy.....	16
Fig 8: NICU Hierarchy.....	16
Fig 9: OPD Hierarchy.....	21
Fig 10: Radiation & Imaging Hierarchy.....	24
Fig 11: Lab Services Hierarchy.....	27
Fig 12: H1N1 Patient Flow.....	34
Fig 13: Category wise H1N1 cases.....	37
Fig 14: Prognosis of Referred H1N1 cases.....	38
Fig 15: Prognosis of Direct Hospital H1N1 cases.....	39
Fig 16: Percentage of Death of H1N1 cases.....	40
Fig 17: Services provided in Wards.....	42
Fig 18: Patient Satisfaction for Medical Care.....	44
Fig 19: Patient Satisfaction for Consultants.....	44
Fig 20: Patient Satisfaction for Junior Doctors.....	45
Fig 21: Patient Satisfaction for Nursing Care.....	45

Fig 22: Patient Satisfaction for Diagnostic Department.....	46
Fig 23: Patient Satisfaction for Pharmacy.....	46
Fig 24: Patient Satisfaction for Housekeeping.....	47
Fig 25: Patient Satisfaction for Laundry Services.....	47
Fig 26: Patient Satisfaction for Food Services.....	48
Fig 27: Patient Satisfaction for Security & Lift Services.....	48
Fig 28: Patient Satisfaction for Maintenance.....	49
Fig 29: Patient Satisfaction for Admission Services.....	49
Fig 30: Patient Satisfaction for Discharge Services.....	50

LIST OF TABLES

Table 1: Scope of Services.....	6-7
Table 2: OPD Manpower.....	22
Table 3: Radiology & Imaging Manpower.....	25
Table 4: Lab Services Manpower.....	28
Table 5: Lab Reports Turnaround Time.....	28
Table 6: Norms for H1N1 cases.....	36
Table 7: Category wise H1N1 cases.....	36
Table 8: Referred H1N1 cases.....	37
Table 9: Direct Hospital cases of H1N1.....	38
Table 10: Percentage of Death of H1N1 cases in the Hospital.....	39
Table 11: Probable Reasons for Difference in Prognosis.....	40

ABBREVIATIONS

- AERB: Atomic Energy Research Board
- AFP: Alpha-Feto Protein
- AKU: Artificial Kidney Unit
- ALS: Advanced Life Support
- BARC: Bhabha Atomic Research Centre
- BHI: Bombay Hospital Indore
- BHT: Bombay Hospital Trust
- BLS: Basic Life Support
- CEA: Carcinoembryonic Antigen
- CME: Continuous Medical Education
- CMO: Casualty Medical Officer
- CSF: Cerebro Spinal Fluid
- CSSD: Central Sterilisation & Supply Department
- CT: Computed Tomography
- DNB: Diplomat of National Board
- EBM: Evidence Based Medicine
- ECG: Electro Cardio Gram
- ECHO: Echocardiography
- EDP: Electronic Data Processing
- EEG: Electro Encephalogram
- EHS: Executive Health Scheme
- EMG: Electro Myography
- ENT: Ear Nose Throat
- FNAC: Fine Needle Aspiration Cytology
- GM: General Manager
- GI: Gastro Intestinal
- HBsAg: Hepatitis B Surface Antigen
- HCV: Hepatitis C Virus
- HIV: Human Immunodeficiency Virus
- HOD: Head Of the Department
- HR: Human Resource
- ICU: Intensive Care Unit
- ICCU: Interventional Critical Care Unit

- IDCCM: Indian Diploma In Critical Care Medicine
- IDSP: Integrated Disease Surveillance Programme
- IP: In-patient
- IPD: In-patient Department
- IT: Information Technology
- IV: Intravenous
- KTR: Kidney Transplant Recovery
- MLC: Medico- Legal Case
- MOU: Memorandum Of Understanding
- MRI: Magnetic Resonance Imaging
- MS: Medical Superintendent
- NABH: National Accreditation Board For Hospital and Healthcare service providers
- NICU: Neonatal Intensive Care Unit
- NS: Nursing Superintendent
- OP: Out-patient
- OPD: Out-patient Department
- OSD: Officer on Special Duty
- OT: Operation Theatre
- PGDCC: Post-graduate Diploma in Clinical Cardiology
- PFT: Pulmonary function Test
- PPE: Personal Protective Equipment
- PSA: Prostate-Specific Antigen
- RMO: Resident Medical Officer
- RR: Recovery Room
- TFT: Thyroid Function Test
- TLD: Thermo Luminescent Dosimeter
- TRF: Test Requisition Form
- USG: Ultra Sonography
- VTM: Viral Transport Media

HOSPITAL PROFILE

BOMBAY HOSPITAL TRUST

- Considered the premiere private trust hospital in India.
- Set up in 1952 by philanthropist Dr. Rameshwar Das Birla.

BOMBAY HOSPITAL, INDORE

- Bombay Hospital, Indore was started in October 2003.
- Bombay Hospital is the largest trust hospital and only NABH accredited hospital in Madhya Pradesh.
- It has all functional departments and very comprehensive support services & engineering services.
- It is planned as a 600 bedded tertiary care hospital (235 functional) with 65 beds providing class 1 intensive care, 5 operating rooms organised in surgical suites, 1 minor OT for emergency services, with all being Zero bacteria operating rooms.
- It is a centre for DNB training (Diff. Specialities like anaesthesia, radio, medicine) PGDCC, IDCCM and also has a school of Nursing.
- It is one of the best hospitals in Central India.
- It provides world class medical facilities and infrastructure.

VISION: To render the same level of service to the poor as the rich will get in a good hospital.

MISSION: "Hospital shall provide the best possible medical treatment delivered most efficiently in the shortest possible time, at minimum cost to all sections of the society irrespective of caste, creed or religion".

MOTTO:

- A patient is the most important person in our hospital.
- He is not an interruption to our work; he is the purpose of it.
- He is not an outsider in our hospital; he is a part of it.

We are not doing him a favour by serving him; he is doing a favour by giving us an opportunity to do so.

INFRASTRUCTURE OF HOSPITAL

- Covered area – 4 lakh square feet
- Plot Size – 9 acres
- No. of floors – 12
- No. of basements - 2
- Parking space – around the entire hospital
- No. of lift – 5
- No. of staircase – 2
- No. of building – 2

ACADEMIC ACTIVITIES:

- DNB
- PGDCC
- IDCCM
- Bombay Hospital College of Nursing, Indore

CORPORATE SOCIAL RESPONSIBILITY:

- Free OPD
- General ward – free bed and diet charges.

MILESTONES:

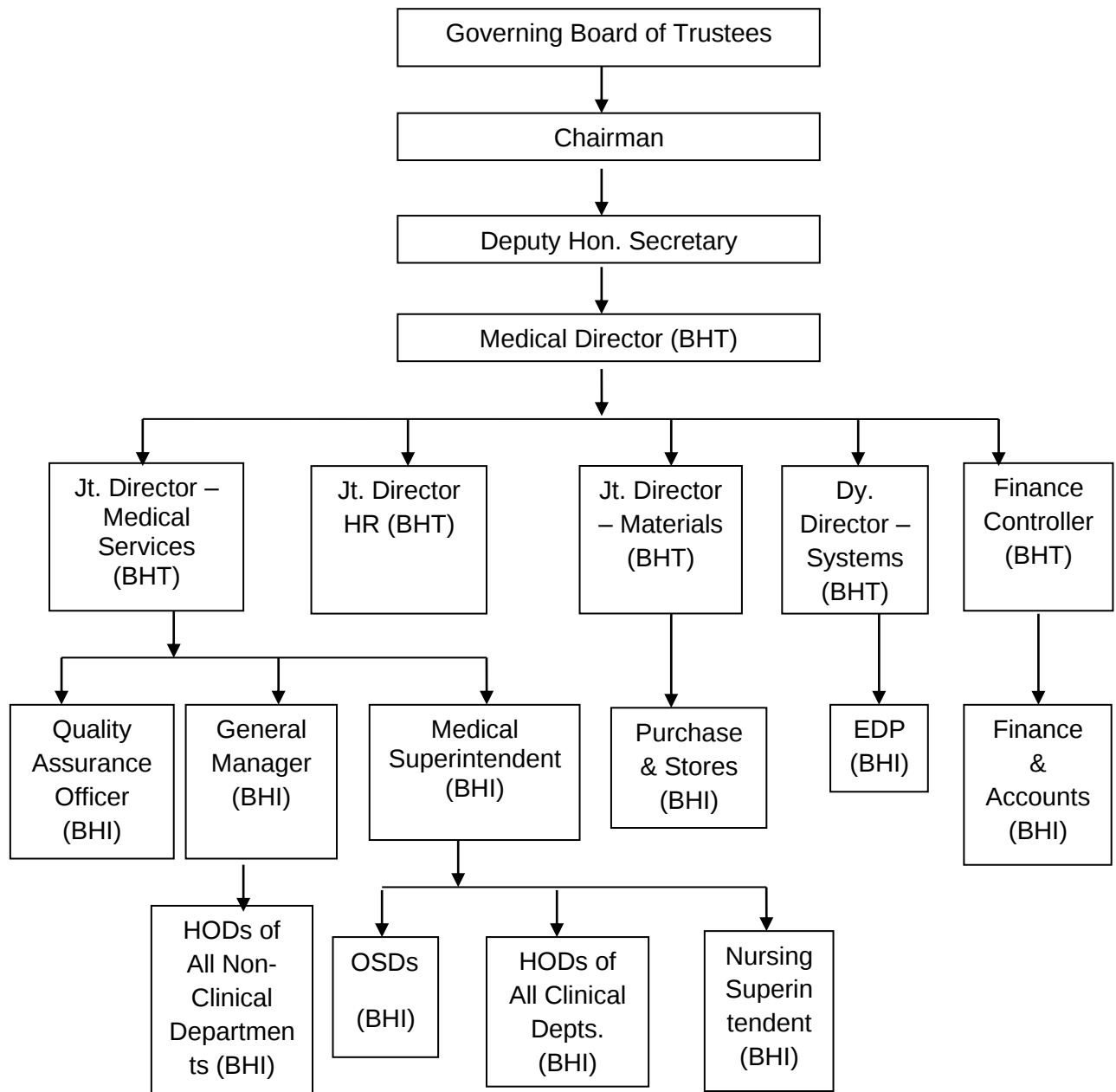
- Ranked 1st by 'The Week' magazine, November 2011.
- ICICI Lombard Award
- NABH Accreditation

QUALITY GOALS:

- To establish the quality objectives and key quality indicators for all departments.
- To undertake daily surveillance of the high risk areas and procedures to ensure lower infection rates.
- To capture all the requisite quality indicators, analyse them and implement the necessary corrective and preventive actions to mitigate the risks.

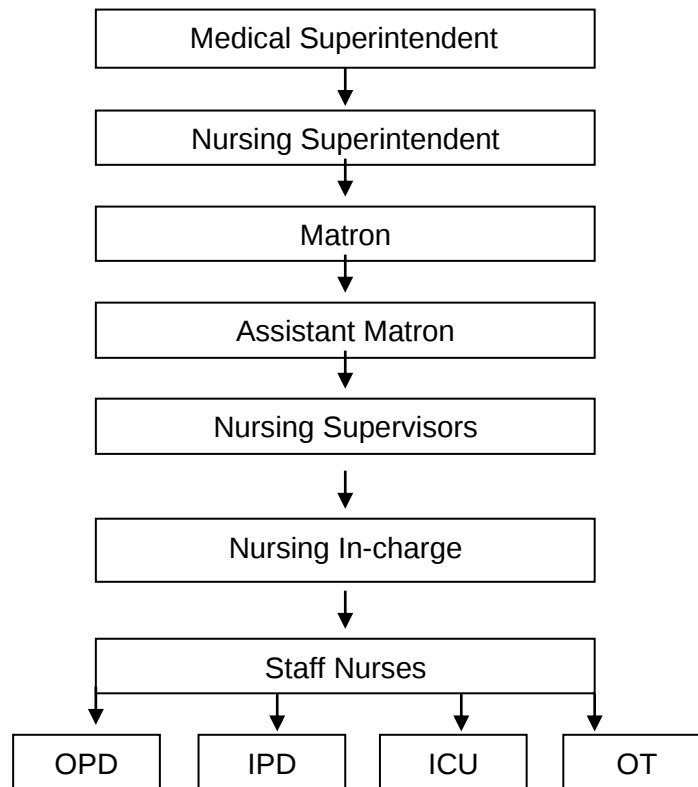
ORGANISATIONAL HIERARCHY

Fig 1: Organisational Hierarchy



NURSING HIERARCHY

Fig 2: Nursing Hierarchy



ROLES & RESPONSIBILITIES

General Manager (BHI):

- Responsible for the non-clinical services such as Engineering Services, Marketing & Public Relations, Security and Housekeeping.

Medical Superintendent (BHI):

- To supervise Emergency Department, admission process and discharge process.
- To guide the Diagnostic Departments – blood bank, radiology, endoscopy and dialysis etc.
- To recruit Consultants.
- To recruit Resident doctors
- To recruit, select and appoint and ensure placement of nursing staff.
- To see the attendance, leaves of consultants and medical officers.

- To take part in the Multi-disciplinary facility rounds.
- To arrange for the appointment of necessary doctors and consultants in consultation with the Board of Directors.
- To look after duty rota of consultants and medical.
- To supervise the functioning of all Medical officers, junior doctors and night doctors in the hospital.
- To oversee the practice of evidence-based medicine, safety initiatives, quality assurance, Improve clinical performance and implementation of NABH standards in medical staff.
- To coordinate activities of the Hospital's Infection Control and safety Programs.
- To keep track of admission, discharge, leave against medical advice discharge, medico legal and deaths on a daily basis.
- To look into the IT Systems – quality related issues.
- To oversee the functioning of the Clinical (Biomedical) Engineering department.
- To oversee the Pharmacy operational aspects, except procurement.

Nursing Superintendent:

- Responsible and overall In-charge of nursing services in the hospital.
- To bring to the notice of medical director all the matters, untoward incidents and happenings in relation to patient care this includes patients complaints, medication related issues, medical officers, medical equipment, furniture and nurses grievances.
- Responsible for implementing hospital policies among various nursing units.
- To ensure safe and efficient care rendered to patients in various wards.
- To ensure that all nurses deal with patients in a courteous manner and are soft spoken with empathy with the patients and their relatives.
- To educate nursing staff of all categories by conducting awareness programme on universal precautions, ALS, BLS and CME's.
- To ensure to maintain discipline and punctuality among all the nursing staff.
- To assist MS in recruiting nursing staff.
- To investigate all complaints regarding nursing care and personnel and take suitable corrective action.
- To ensure all the records and registers are maintained properly in the wards by nursing staff.
- To carry out regular ward rounds of the hospital including surprise checks.
- To accompany medical superintendent while making hospital rounds.
- To attend hospital meetings and conferences when advised so.

- To recommend personnel and material requirement of the hospital wards and nursing services.
- To be a member of procurement and condemnation of linen and other materials of the wards.

SCOPE OF HOSPITAL SERVICES

The departments provide the following types of services:

- Outpatient Services
- In patient Services
- Intensive care services
- Emergency ,High dependency services
- Operation theatre services

The following is there list of various departments in Bombay Hospital, Indore:

Table 1: Scope of Services

Medical Specialties	Surgical Specialties
General Medicine	General surgery
Obstetrics and Gynaecology	Orthopaedic surgery
Paediatrics	Otorhinolaryngology
Anaesthesiology	Ophthalmology
Dermatology	Surgical gastroenterology
Radiology	Neurosurgery
Chest Medicine	Plastic surgery
Gastroenterology	Urology
Neurology	Cardiac Surgery
Nephrology	Onco Surgery
Cardiology	
Oncology & Haematology	
Psychiatry	
Endoscopy	

Related Services Ambulance Physiotherapy Executive Health Check-Up Nursing Housekeeping Kitchen & Dietary Laundry Security & Fire Safety	24 hour services Emergency Ambulance Operation theatre services Haemo and Peritoneal Dialysis Laboratory Radiology & Imaging – X-Ray, CT Scan, MRI Blood Bank
Administrative services Medical administration Engineering Services Human resource Material management Marketing & TPA claims Accounts & Finance Quality management IT department Medical Record Department Biomedical Engineering	24 Hour Managerial services Front Office Billing Facility maintenance & Management Security Diagnostic Services Pathology Laboratory Radiology & Imaging-X-Ray,CT Scan,MRI Blood Bank Electroencephalography(EEG) Echocardiography & Tread mill test (Echo-TMT) Ultra-sonography (USG) (24 hours) Pulmonary Function Test(PFT) Colposcopy

FLOOR WISE DISTRIBUTION

Basement

- X-Ray
- CT, MRI
- Physiotherapy
- Blood Bank
- Laundry
- Store Room

Ground Floor

- Admission Counter
- Bank
- Casualty
- Minor OT
- Pathology
- Cafeteria
- Pharmacy
- Free OPD
- Pharmacy

First Floor

- Medical Records Department
- Consultancy Rooms
- IT Department
- Ophthalmology Department
- E.H.S.
- GI Endoscopy
- USG
- Echo/TMT
- EMG
- EEG
- Colposcopy
- Conference Room
- Nutrition
- Administrative Block
 - Medical Administration
 - Marketing
 - Accounts
 - Biomedical Engineering
- MS's Room
- NS's Room
- GM's Room

Second Floor

- OT
- ICU (RR)
- CSSD

Third Floor

- Mess

Fourth Floor

- New ICU
- ICCU
- Cath lab

Fifth Floor

- Labor Room
- NICU
- General Ward
 - Male Ward
 - Female Ward

Sixth Floor

- Nursing College

Seventh Floor

- Hostel for Student Nurses

Eighth Floor

- Hostel for Staff Nurses

Ninth Floor

- Hostel for RMOs, DNBs, PGDCC students.

Tenth Floor

- Economic Wards
- Dialysis Unit & KTR

Eleventh Floor

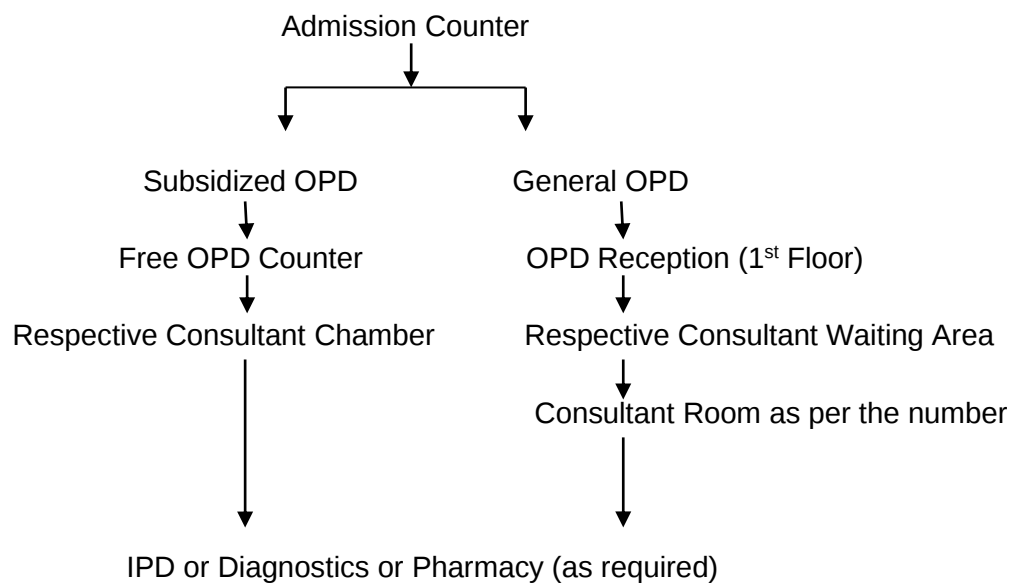
- Non AC Private Rooms
- Semiprivate Rooms

Twelfth Floor

- 1st Class AC Rooms
- Deluxe Rooms

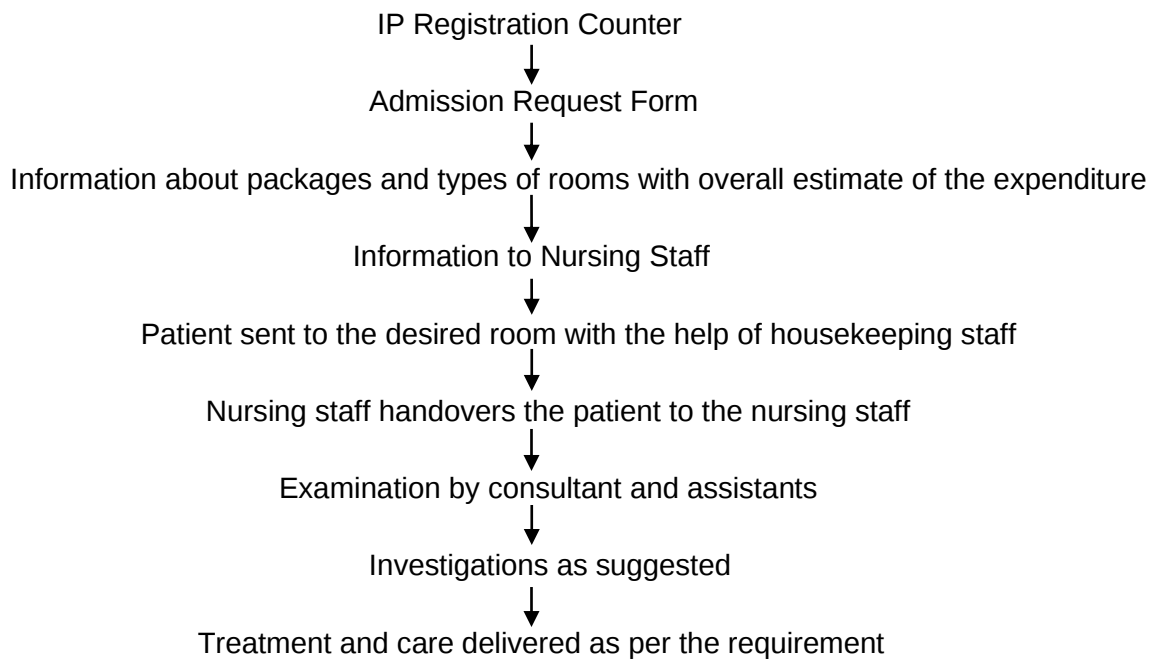
OPD PATIENT FLOW

Fig: 3: OPD Patient Flow



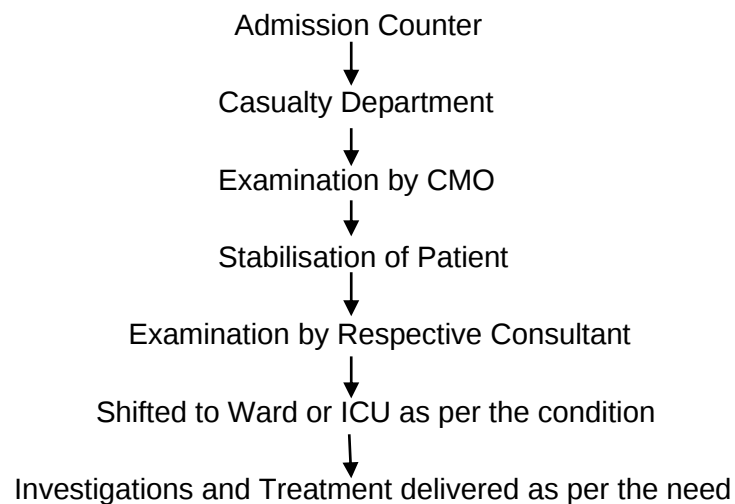
IPD PATIENT FLOW

Fig 4: IPD Patient Flow



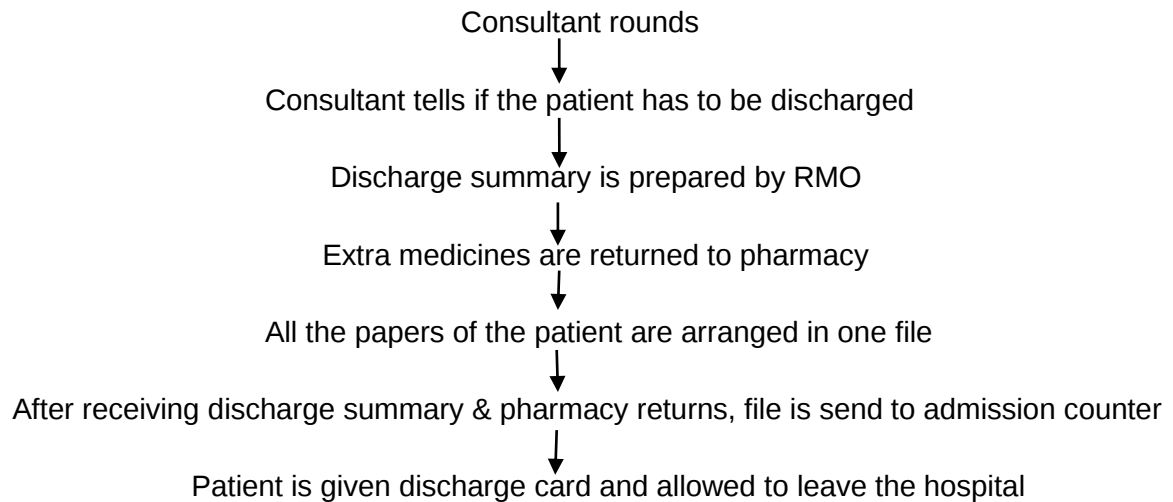
EMERGENCY & CASUALTY PATIENT FLOW

Fig 5: Emergency & Casualty Patient Flow



DISCHARGE PROCESS

Fig 6: Discharge Process



TASKS ASSIGNED DURING THE TRAINING

- Maintenance of H1N1 patient records and sharing information with IDSP Bhopal.
- Morning ICU, OPD & Diagnostics round including reporting from nursing incharge about daily patient status.
- Compilation of forms & formats used in various departments.
- ICU duty roaster preparation for May 2015.
- Distribution of TLD badges.
- Patient feedback from General Ward.
- Assisting the OSDs.

MAJOR LEARNINGS DURING SUMMER TRAINING

- Manpower management, which includes duty roaster preparation, and taking care of absenteeism.
- Prescription auditing – Keeping a check on the inpatient records maintained in the wards and ICU and proper filing of patient files according to NABH guidelines.
- Maintenance of registers and quality indicators which includes recording all the major events occurring in the various departments like admissions, discharges, deaths, fumigation, fridge cleaning, sentinel events, drug reactions etc. in the respective registers and filling the quality indicators of each department daily.

- IDSP surveillance incase of H1N1 patients which includes sending of daily patient records and drug requirements to State IDSP and coordinating with them for the reports and supply of medicines and VTM.
- Licenses required in a hospital for all the activities like medical care, nursing, food services, pharmacy, diagnostics, ambulance etc. and taking care of their upgradation and renewal.
- Biomedical waste management – the colour coding system and its importance.
- Forms & formats required in all departments.
- Basic Life Support - CPR, CBA.
- Maintenance system of TLD badges and communication with AERB.
- Administrative protocol and documentation for kidney transplant including complete paperwork and legal documents required from the donor and the recipient prior to the surgery.
- Calculation of discharge time.
- Documentation required for NABH reassessment like monthly quality indicators, valid licenses, proper forms and formats, important letters, departmental registers, audit papers, etc.
- Standard operating procedure for the codes in the hospital i.e. required manpower, time management, equipments and process for:
 - Code Orange - Spillage
 - Code Blue - Cardiac arrest / emergency
 - Code Pink - Child abduction
 - Code Red - Fire

SUMMER TRAINING PROJECTS

During the summer training 3 projects were assigned:

1. General Administration in the ICU, OPD & Diagnostics which includes their types, manpower management, quality management, maintenance, waste management, infection control, etc.
2. Management of H1N1 cases in the hospital which includes IDSP surveillance, maintenance of H1N1 patient records, following the IDSP norms & audit of death cases.
3. Patient satisfaction in General Ward which includes analysis of feedback forms filled by the patients.

PROJECT 1

“General Administration in ICU, OPD & Diagnostics in Bombay Hospital, Indore”

INTRODUCTION:

Hospital administration is a field relating to leadership, management and administration of health care delivery in various departments of the hospital. The various departments in a hospital include OPD, ICU, OT, Laboratory services, Radiology & Imaging services, blood bank, emergency department, Wards, Dialysis unit, etc. The general administration in a department includes mainly, manpower and quality management.

Bombay Hospital has very well functioning ICUs, OPD & Diagnostic departments. Each department has different hierarchy, manpower management system, scope of services, working hours, quality objectives, quality indicators and training needs.

OBJECTIVE:

To observe the general administration in ICU, OPD & Diagnostics(Radiology & Imaging, Laboratory Services).

METHODOLOGY:

- **Study Area-** ICU, OPD, Radiology and imaging Department, Laboratory Services Department in Bombay Hospital, Indore
- **Study Duration-** 1 month (April 2015)
- **Study Design-** Descriptive , Observational type of study
- **Type of Data-** Both Primary and Secondary data
- **Tools & Techniques for data collection-**
 - Primary Data through observation and discussion with staff.
 - Secondary Data from hospital manuals.

OBSERVATIONS:

ICU

Definition: Care given to patients whose condition is life- threatening and needs constant close monitoring and support from equipment and medication to keep normal body functions going, is known as Intensive Care. This level of care is given in Intensive Care Unit (ICU).

Location: Bombay Hospital, Indore has 4 ICUs-

- RR- Recovery room located in the West wing of the 2nd floor of the building.
- New ICU located in the East wing of the 4th floor of the building.
- ICCU- Interventional Critical Care Unit or Cardiac ICU located in the East wing of the 4th floor of the building
- NICU- Neonatal ICU located in the East Wing of the 5th floor of the building (near Labor Room).

Beds:

- RR - 26 beds
- New ICU - 21 beds
- ICCU - 10 beds
- NICU - 5 beds

Scope of the Department: Medical Intensive Care unit for all patients, especially those who are critically ill and require intense and continuous care with sophisticated equipment to support the failing organ systems. Services provided:-

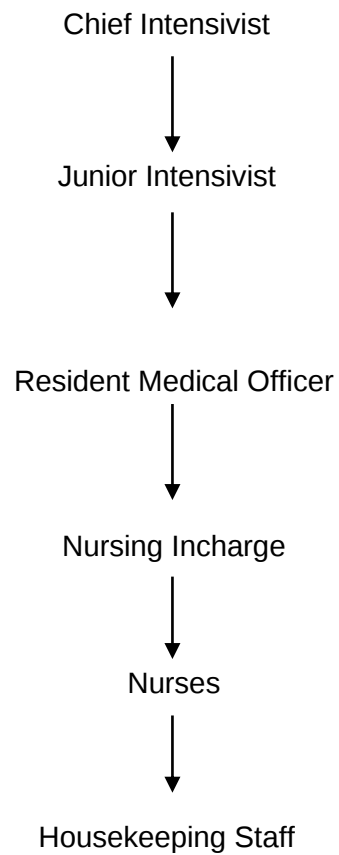
- Basic life support
- Advanced Cardiac life support
- Ventilation- intubations
- Monitor, Defibrillation – Dc shock
- Inotropic supports
- Tension Pneumothorax – ICD

NICU: Neonatal Intensive care Department functions to provide relief of ailment to the neonates with medical problems. Patients could be in or outpatient.

In addition to care of diseases, we aim at primary prevention of disease, offering comprehensive clinical examination and screening for silent diseases, and provide appropriate advice.

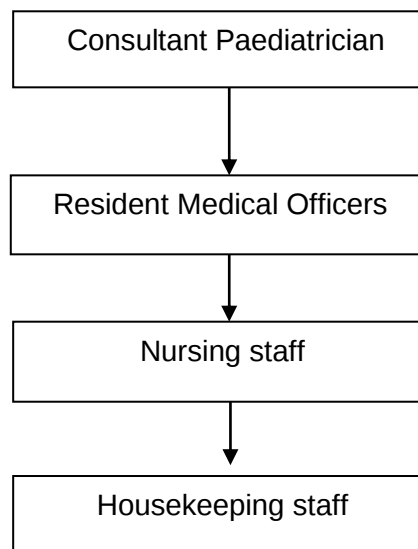
Departmental Hierarchy:

Fig 7: ICU Hierarchy



NICU:

Fig 8: NICU Hierarchy



Manpower: The department operates with 3 shifts 24 hours a day.

Number of Staff:

Doctor – 08.00am – 04.00pm
12.00pm – 08.00pm
08.00pm - 08.00am

} each shift one Doctor

Nurse – 07.00am – 03.00pm
01.00pm – 09.00pm
09.00pm - 07.00am

} three in each shift

Housekeeping Staff – 08.00am – 04.00pm
12.00pm – 08.00pm
08.00pm - 08.00am

} four in each shift

ICU duty Roaster Preparation Guidelines

- Coordination on phone with the Intensivists of the respective ICUs for sending the proposed Roaster for the upcoming month.
- Incase of delay, a follow up is done with the Intensivists (Phone or Email).
- The proposed Roaster is received firstly through email, secondly through hardcopy.
- The Roaster details are transferred from the proposed sheet to the final Roaster format.
- A head count of the duties, off & leaves of each RMO is made and entered in the headcount sheet.
- Incase of discrepancy in duty allotment or off (atleast 4 in a month), the respective Intensivist is consulted.
- Intensivists Roaster (RR & New ICU): equal distribution of morning, evening and night duties to each, 4 off (mostly Sundays)
- Intensivists Roaster (Cardiac ICU): Assign duty on alternate days to each (2 Intensivists).
- A head count of the duties, off & leaves of each Intensivist is made and entered in the Intensivist headcount sheet.
- DNB Anaesthesia, DNB Medicine, PGDCC Doctors duties: 1 night duty to each in a week in the New ICU or RR (no duty on Sunday), total 4 duties to each in a month.
- Their duty dates and departments are entered in the sheet about "other distribution".

- Approved and signed (by the medical superintendent) hardcopy of each of the final Roaster is sent to the respective ICU.

Monitoring & Control:

- Quality Objectives
 - Holistic approach to patient care.
 - Patient satisfaction
 - To aim for low levels of morbidity and mortality.
 - To reduce the Infection rate and To keep constant check on Hospital Acquired Infections by implementing proper Hand wash, Antibiotic policy etc.
 - To strictly follow Evidence Based Medicine (EBM) and follow management strategies on par with International Standards.
 - Streamlined approach in treating the patients with infectious diseases to minimize the drug resistance.
 - to take care of the patient and avoid medical errors
 - Reduction in Readmission rate
 - Strict adherence to barrier nursing procedure
 - To ensure adequate nurse patient ratio.
- Biomedical Waste Disposal
 - Segregation –

Plastic tubes, IV sets, disposable syringes, catheters, urine bags, Ryle's tubes, gloves and other plastic materials are disposed in red container/ Bag.

Material contaminated with blood, cotton, dressings, infectious materials are disposed in yellow container/bag.

General waste – paper, wrappers, non- infectious wastes are disposed in black container/bag.

Needles, blades and other sharp materials are disposed in white puncture proof container which contains 1% sodium hypochlorite solution.
 - Transportation –

Housekeeping staff collects the bags twice daily. Bags are tied at the mouth and handled carefully without mixing of segregated waste. They are carried in large tubs to the central waste receiving terminal.
 - Temporary storage –

The waste is then stored temporarily in the central waste receiving terminal in the ground floor of the premise near the parking area.

The area is well-ventilated, secured, locked, with no access to unauthorized personnel.

- Final disposal –

The waste is collected by Safeviron which is authorized and has biomedical waste treatment facility.

➤ Quality Indicators: The mandatory NABH clinical indicators are captured, analyzed and acted upon. The data for the indicators is recorded by the staff nurse daily, the indicators are calculated monthly.

- ICU mortality and morbidity rates
- In-Patient satisfaction index (survey)
- Average number of days and ICU stay – Reduction
- Return to ICU within 48 hours
- Re-intubation rate
- Incidence of bed sores after admission
- Incidence of unexpected complications
- Time for initial assessment of emergency patient (Average time)
- Urinary tract infection rate
- Pneumonia rate
- Bloodstream infection rate
- Surgical site infection rate
- Percentage of patients with care plan documentation
- Percentage of patients with care plan counter signed by in-charge consultant
- Percentage of in patients where initial nursing Assessment has been completed within 30 min
- Percentage of cases wherein screening for nutritional needs has been done.
- Percentage of accidental removals of Endo tracheal tubes
- Percentage of medication chart with illegible writing over a given period
- Percentage of medical records having incomplete or improper consent
- Number of sentinel events reported, collected and analysed within the defined timeframe.
- Percentage of medication errors
- Percentage of incidence of adverse drug reactions
- Percentage of patients receiving high risk medications developing adverse drug event.
- Time taken for discharge (average time)
- Nurse-patient ratio for ICUs and wards

- Incidence of needle stick injuries
- ICU: Equipment utilization
- ICU Utilisation Rate: Bed utilization
- Percentage of incidence of haematoma at puncture site
- Incidence of falls
- Percentage of near misses
- Incidence of blood body fluid exposures
- Training:
 - All new joining staff is oriented to the department by the Head of the department.
 - Training needs of the staff are assessed by the head of the department based on the performance of staff.
 - Every year staff posted in the High risk areas are updated on Infection control practices and various other procedures based on hospital policy.

OPD

Definition: A patient who attends a hospital for treatment without staying there overnight.

The OPD of Bombay Hospital, Indore, is categorized into 2 sections:

- Free OPD
- Consulting OPD

Location: 1st floor of the building

Scope: All out-patients coming to the hospital for consulting the doctors, undergoing investigations and any other services offered at the OPD level.

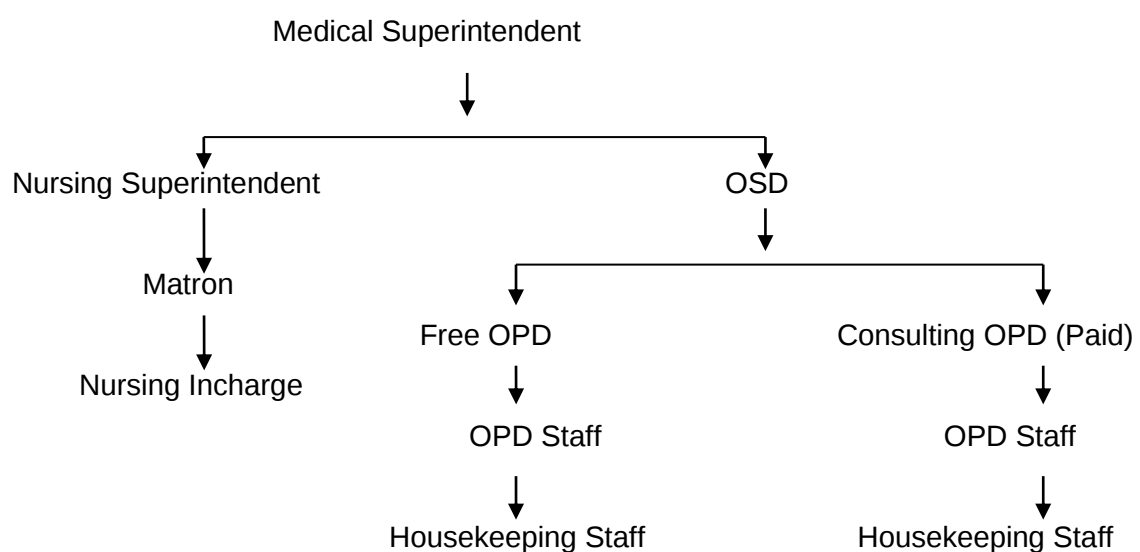
OPD Services provided:-

1. Cardiology
2. Cardio, Thoracic & Vascular Surgery
3. Neuro & Spine Surgery
4. Neurology
5. Nephrology
6. Urology
7. Gastroenterology
8. General/ G.I./ Laproscopy Surgery
9. General Medicine & Critical Care

10. E.N.T.
11. Orthopaedics & Joint Replacement
12. Plastic Surgery
13. Cancer Surgery
14. Ophthalmologist
15. Chest Medicine
16. Obstetrics Gynaecologist/ Gynaec Laproscopy Surgeon
17. Paediatrics
18. Surgical Pathology & Cytology
19. Radiologist CT/MRI
20. Pathology
21. Medical Microbiologist
22. E.H.S.
23. Physiotherapy
24. Visiting Medical Oncologist
25. Haematology & Haemato-Oncologist
26. Paediatrics Surgery
27. Visiting Dermatologist
28. Visiting Psychiatrist
29. Dietician

Departmental Hierarchy:

Fig 9: OPD Hierarchy



Manpower:**Table 2: OPD Manpower**

Sl. No	Designation	Number of persons
1.	Consultants (Free OPD)	38
2.	Consultants (Consulting OPD)	38
3	Ward boy / Ward lady	2
4	Staff Nurses	5

DEPARTMENT WORKING HOURS:

- Free OPD working hours : 9 a.m. to 5 p.m.
- Consulting OPD working hours : 9 a.m. to 7 p.m.

Monitoring & Control:

- Quality Objectives:
 - Timely assessment of all OP patients by the Consultants.
 - Timely screening of all Patients by the dietician.
 - Completion of OP medical records with respect to date, time, name and sign.
 - Completion of OP medical records with respect to the patients' demographic and clinical details.
 - Ensure collection of feedbacks from all OP patients.
 - Ensure safety and comfort of all OP patients.
- Quality Indicators: The mandatory NABH clinical indicators are captured, analyzed and acted upon. The data for the indicators is recorded by the staff nurse daily, the indicators are calculated monthly.
 - Time for initial assessment of out-patient
 - Percentage of cases wherein screening for nutritional needs has been done.
 - Percentage of medication chart with illegible writing over a given period
 - Percentage of medical records having incomplete or improper consent
 - Out-patient satisfaction index(Percentage)
 - Waiting time with reference to doctor appointment
- Training:
 - All Doctors, Nurses, Technicians, shall be trained regularly regarding the management of patients in the OPD.

- All new joining staff shall be oriented to the department by the Head of the department.
- Training needs of the staff is assessed by the head of the department based on the performance of staff.

DIAGNOSTICS

RADIOLOGY & IMAGING

- The medical imaging department was started along with the inauguration of the hospital on 15.10.2003.
- The department is today equipped with the following facilities:
 - 2 X-ray units, one with houroscopy.
 - 2 mobile X-ray units.
 - 3 ultrasounds with Colour Doppler units.
 - 1 Portable Colour Doppler unit.
 - 64 Slice CT unit spiral.
 - 1.5 Tesla MRI

Definitions: It is that branch of medicine that makes diagnostic images of anatomic structures through the use of electromagnetic radiation or sound waves.

- X-ray- Use of x-rays, which are a kind of electromagnetic radiation, to produce images of the inside of a person's body and a special film captures the images.
- USG (Ultrasonography)- The ultrasound image is created by first transmitting the sound waves into the body and then interpreting the intensity of the reflected echoes.
- Colour Doppler- Colour Doppler uses standard ultrasound methods to produce a picture of a blood vessel. Also, a computer converts the Doppler sounds into the colours that are overlaid on the image of the blood vessel and that represent the speed and direction of blood flow through the vessel.
- CT Scan (Computed Tomography) - The CT scanning equipment produces cross-sectional images of the area under examination.
- MRI (Magnetic Resonance Imaging) - It uses a magnetic field of a great magnitude (measured in Tesla), to obtain images of the inside of a person's body. The waves are sent to a computer that processes images the signals create.

Location:

- X-ray unit is located in the East wing of the basement of the building.
- CT/MRI unit is located in the West wing of the basement of the building.
- USG unit is located in the East wing of the 1st floor of the building.

Scope:

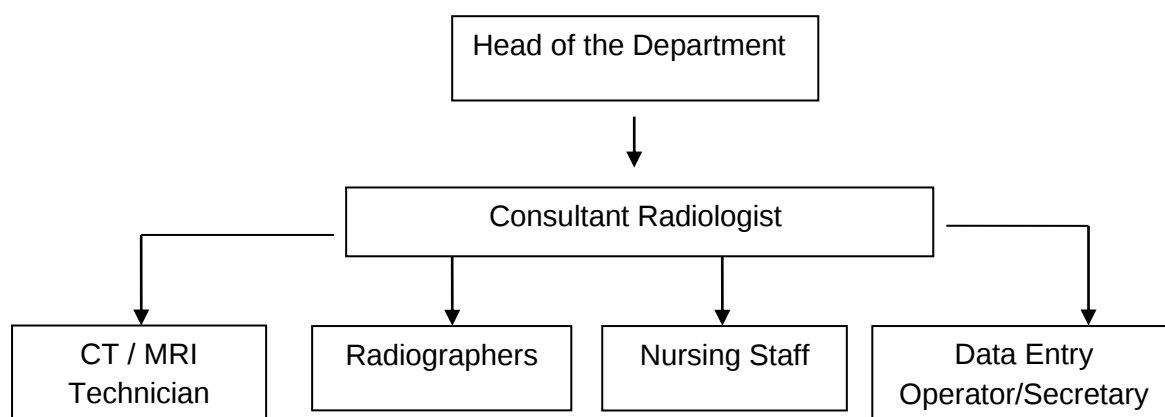
- Medical imaging services support investigation of patients that provides imaging information of diseases and the treatment.
- The imaging modality caters to both Out patients and Inpatients of the hospital.

Services provided-

- Computerized Radiography
- Mobile Radiography
- Ultrasound & Colour Doppler
- CT Scan
- MRI

Departmental Hierarchy:

Fig 10: Radiology & Imaging Hierarchy



Manpower:**Table 3: Radiology & Imaging Manpower**

Sl. No	Designation	No. of staff
1	Consultants	5
2	Sonologist	1
3	Radiographer	4
4	Radiographer	6
5	Nurse	4
6	Secretary	3

There are 3 shifts of staff.

Each shift duty is of 8 hrs.

Monitoring & Control:

- Regulatory Compliances -
 - AERB/BARC approval for imaging unit.
 - Licenses are displayed in respective areas.
 - All workers of imaging services have the TLD badges.
 - Proper sign posting in Radiology department.
 - Patient shall come with the requisition slip for the required investigation from the treating doctor.
 - For MLC cases, police will accompany the patient along with the requisition slip from the court.
 - Requisition slips from other hospital doctors are also accepted for CT scan services.
 - For contrast studies, a date shall be given for the same.
 - Training of department staff.
 - MOU agreement for outsourcing of tests.
 - Radiology quality assurance programme.
 - External quality check.
 - Radiation safety programme.
 - For procedures done before 1 p.m., reports are dispatched after 5 p.m. the same day.
 - For procedures done after 1 p.m., reports are dispatched after 10 a.m., the next day.
 - Emergency reports are dispatched within 1 hour of the procedure.

- The concerned personnel is intimated about the critical reports.
- Turnaround Time
 - X-ray - 4 hours.
 - Ultrasound Scans - 4 hours.
 - CT Scans (Routine) - 5 hours.
 - CT Angio - 6 hours.
 - MRI Scan - 5 hours.
 - Investigations done afternoon session, the reports are given at 10.00 am on the next day.
- Quality Assurance-
 - Monitoring & Maintenance- Monitoring the 4 key components of X-ray system: Film processing, basic performance characteristics of X-ray unit, cassettes & grids, view boxes.
 - Training
 - Maintenance of equipment
 - Radiation safety programme
- Quality Indicators- The mandatory NABH clinical indicators are captured, analyzed and acted upon. The data for the indicators is recorded by the staff nurse daily, the indicators are calculated monthly.
 - Equipment Break down time
 - Number of reporting errors per 1000 investigations
 - Percentage of re-dos
 - Percentage of reports correlating with clinical diagnosis
 - Percentage of adherence to safety precautions by employees working in diagnostics
- Training –
 - All new joining staff shall be oriented to the department by the Head of the department.
 - Training needs of the staff is assessed by the head of the department based on the performance of staff.
 - The following are the training topics:
 - Induction training
 - Radiology safety

LABORATORY SERVICES

Definition: A medical laboratory or a clinical laboratory is a unit where tests are done on clinical specimens in order to get information about the health of a patient as pertaining to the diagnosis, treatment and prevention of diseases.

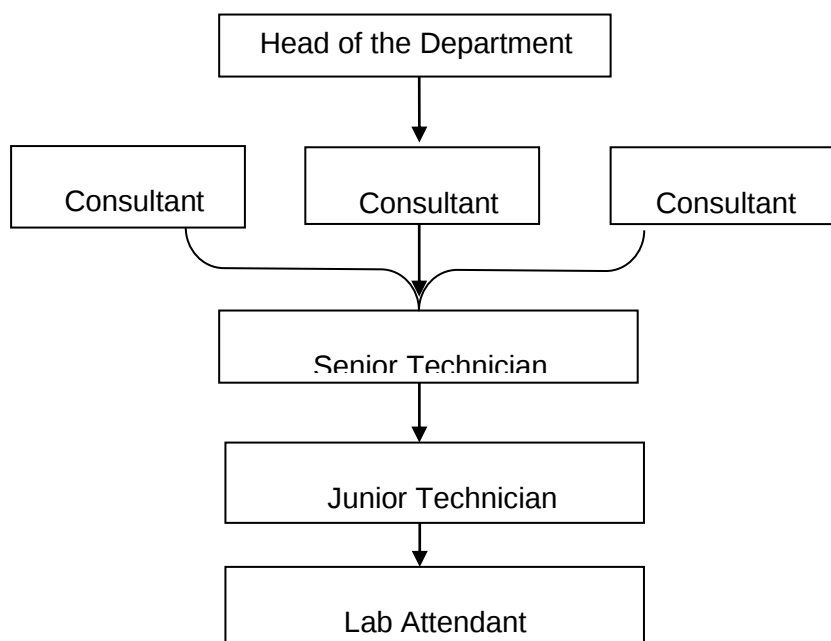
Location: The laboratory services are located in the basement of the building.

Scope of Services:

- Laboratory service for out patients & inpatients in different branches of laboratory medicine.
- Clinical Biochemistry- Here the serum is tested for chemicals present in the blood, such as lipids, blood sugar, enzymes and hormones.
- Haematology- It works with whole blood to do full blood counts and blood films as well as many other specialized tests. (blood clotting time, coagulation factors, etc.)
- Microbiology- It is mainly concerned with cultures, to look for suspected pathogens in any clinical specimen, including swabs, faeces, urine, blood, sputum, cerebrospinal fluid, synovial fluid, as well as possible infected tissues.
- Serology- Uses the concept of antigen-antibody interaction as a diagnostic tool. Compatibility of transplanted organs is also determined.
- Clinical Pathology- It involves complete analysis of the urine, stool, semen, synovial fluid, CSF, pleural fluid, hormones, etc.
- Histopathology- It processes solid tissue removed from the body (biopsies, FNAC, etc.) for evaluation at the microscopic level.

Departmental Hierarchy:

Fig 11: Lab Services Hierarchy



Manpower: Each shift duty has the following staff on duty.

Table 4: Lab Services Manpower

S. No.	Designation	Working hours
1.	Lab Incharge	8 hours
2.	Microbiologist	8 hours
3.	Lab Technician	8 hours
4.	Lab Assistant	8 hours
5.	Cleaning Staff	8 hours

Monitoring & Control:

➤ Turnaround time- **Table 5: Lab Reports Turnaround Time**

INVESTIGATIONS	TIME OF REPORTING	DAY OF REPORTING
HAEMATOLOGY (Individual test)	30 mins to 4 hrs From the time of sample collected	Same day
BIOCHEMISTRY (individual test)	45 mins to 4 hrs From the time of sample collected	Same day
CLINICAL PATHOLOGY (Individual test)	30 mins to 4 hrs From the time of sample collected	Same day
PROFILES	2 to 4 hours From the time of sample collected	Same day
MICRO BIOLOGY (Stains) Samples received before 4:00pm	Between 6 : 30 & 7 : 00 pm	Same day (Except Sunday)
MICROBIOLOGY (Cultures) Samples received before 04: 00p.m	Between 6 : 30 & 7 : 00 pm at the end of 48 hours after inoculation	After 48 hours
	BLOOD CULTURE :	After 72 hours
	At the end of 72 hours	(Except Sunday)
CYTOLOGY & SMEAR STUDY - Samples received before 04: 00p.m	Between 6 : 30 & 7 : 00 pm	Same day (Except Sunday)
HISTOPATHOLOGY(Biopsy study) specimen received before 04: 00p.m	Between 6 : 30 & 7 : 00 pm	5 th day (Except Sunday)
TFT, CEA, AFP, PSA Samples received before 01: 00p.m	Between 6 : 00 & 6 : 30 pm	Same day (Except Sunday)
HEPATITIS MARKERS	Between 6:30 & 7:00 p.m.	Except Sunday
ELISA BASED TESTS (HIV, HBs Ag, HCV)	According to the Lab (B.B) Schedule	Except Sunday
SENDOUT INVESTIGATIONS	According to the Ref. Lab Schedule	Except Sunday

➤ Biomedical Waste Disposal

○ Segregation –

Plastic tubes, disposable syringes, gloves and other plastic materials are disposed in red container/ Bag.

Human anatomical waste (organs/body parts), material contaminated with blood, cotton, dressings, lab items like cultures , infectious materials are disposed in yellow container/bag.

General waste – paper, wrappers, non- infectious wastes are disposed in black container/bag.

Needles, blades, broken test tubes, slides and other sharp materials are disposed in white puncture proof container which contains 1% sodium hypochlorite solution.

○ Transportation –

Housekeeping staff collects the bags twice daily. Bags are tied at the mouth and handled carefully without mixing of segregated waste. They are carried in large tubs to the central waste receiving terminal.

○ Temporary storage –

The waste is then stored temporarily in the central waste receiving terminal in the ground floor of the premise near the parking area.

The area is well-ventilated, secured, locked, with no access to unauthorized personnel.

○ Final disposal –

The waste is collected by Safevicon which is authorized and has biomedical waste treatment facility.

➤ Quality Indicators - The mandatory NABH clinical indicators are captured, analyzed and acted upon. The data for the indicators is recorded by the staff nurse daily, the indicators are calculated monthly.

○ Number of reporting errors/1000 investigations

○ Percentage of re-dos.

○ Percentage of reports correlating with clinical diagnosis.

○ Percentage of adherence to safety precautions by employees working in diagnostics.

○ Incidence of blood body fluid exposures

➤ Training –

Every new employee appointed in the laboratory has been given department induction training about departments of laboratory, department procedures, department services and quality policies of laboratory etc. The employees are trained in phlebotomy procedures about-

- Receiving and verifying the Test Requisition Form (TRF).
- Allotting lab ID and properly labeling.
- To use PPE.
- Sample collection (sample type and quantity required).
- Safe transportation of samples to the main lab.
- Issuing lab reports.
- Training regarding safety is provided periodically to staff as necessary.

FINDINGS As observed -

- Long waiting time in OPD, this may be due to miscommunication between the personnel at the admission counter and the patient, as the consultants reach the OPD at 11am and before that they are on ICU and ward rounds between 10 - 11 am.
- The turnaround time for reports is long in some cases.
- Language barrier between staff nurses and in patients in ICU.

CONCLUSION

The Bombay Hospital, Indore has well facilitated ICUs, OPD and Diagnostic services, well defined hierarchy and staff responsibilities, well managed biomedical waste disposal system, and periodic quality assurance and training programmes.

Long waiting time in OPD is a major concern.

RECOMMENDATIONS

- The calls at the admission counter for OPD should be transferred to the specific consultant OPD reception so that proper timings can be communicated.
- Turnaround time for reports should be reduced by increasing coordination between the technicians and nursing staff to manage the work overload.
- Periodic training sessions should be conducted for nurses with special emphasis on basic words of Hindi language needed for communicating with the patients.

PROJECT 2

“Management of H1N1 cases in Bombay Hospital, Indore”

INTRODUCTION

Communicable diseases constitute a significant disease burden and are a major cause of morbidity, mortality and long-term severe mental and physical disabilities. Many of these diseases are epidemic prone. Epidemics are public health emergencies. Epidemics can disrupt routine health services and are a major drain on resources. The course of an epidemic is dependent on how early the outbreak is identified and how effectively specific control measures are applied.

Communicable diseases spread from one person to another or from an animal to a person. The spread often happens via airborne viruses or bacteria but also through blood or other body fluid. Some of the communicable diseases are Bacillary Dysentery, Viral Hepatitis, Malaria, Dengue, Measles, Chicken Pox, Pneumonia, Cholera, Influenza (H1N1), etc.

ABOUT SWINE-FLU

Influenza is an acute viral infection caused by an influenza virus. There are three types of seasonal influenza – A, B and C. Type A influenza viruses are further divided into subtypes according to different kinds and combinations of virus surface proteins. Among many subtypes of influenza A viruses, currently influenza A (H1N1) and A (H3N2) subtypes are circulating among humans. In June 2009, the WHO declared the new strain of swine-origin H1N1 (swine-flu) as pandemic. It is a seasonal influenza.

Signs & Symptoms-

- Sudden onset of high fever
- Cough (usually dry)
- Headache
- Muscle and joint pain
- Severe malaise (feeling unwell)
- Sore throat
- Runny nose

It can cause severe illness or death in people at high risk.

Categories of H1N1 patients

- Cat. A – Mild fever plus sore throat with or without body ache, headache, diarrhoea and vomiting.
- Cat. B – Signs and symptoms mentioned under Cat. A with high grade fever and severe sore throat, and, individuals with high risk conditions, children with mild illness but predisposing high risk factors, pregnant women, chronic disease like CKD, Immuno-suppressive disease, Diabetes, TB, Organ Transplant, old age, etc.
- Cat. C – Along with signs and symptoms of Cat. A and B, if the patient has one or more of the following- breathlessness, chest pain, drowsiness, fall in BP, sputum mixed with blood, bluish discolouration of nails.

Who is at risk?-

Yearly influenza epidemics can seriously affect all age groups, but the highest risk of complications occur among children younger than age two, adults age 65 or older, and people of any age with certain medical conditions, such as chronic heart, lung, kidney, liver, blood or metabolic diseases (such as diabetes), or weakened immune systems.

Transmission-

It spreads easily and can sweep through schools, nursing homes or business area and towns. When an infected person coughs, infected droplets get into the air and another person can breathe them in and be exposed. The virus can also be spread by hands infected with the virus. To prevent transmission, people should cover their mouth and nose with a tissue when coughing, and wash their hands regularly.

Seasonal epidemics-

Influenza epidemics occur yearly during autumn and winter in temperate regions. Illnesses result in hospitalizations and deaths mainly among high-risk groups (the very young, elderly or chronically ill).

Worldwide, these annual epidemics result in about three to five million cases of severe illness, and about 250 000 to 500 000 deaths. Most deaths associated with influenza in industrialized countries occur among people age 65 or older.

In some tropical countries, influenza viruses circulate throughout the year with one or two peaks during rainy seasons.

Disease effects-

It causes serious public health and economic problems. In developed countries, epidemics can result in high levels of worker absenteeism and productivity losses.

In communities, clinics and hospitals can be overwhelmed when large numbers of sick people appear for treatment during peak illness periods. While most people recover from influenza, there are large number of people who need hospital treatment and many who die from the disease every year.

RATIONALE:

H1N1 Influenza is a communicable and fatal disease. It occurred as a pandemic disease in 2009 – 2010 creating a state of panic not only in India, but in the whole world. The clinical picture seen with H1N1 is different from the seasonal influenza involving healthy young adults. Critical care management of such patients imposes a challenge for the health care service providers, the government and the society.

OBJECTIVES

- To observe the management of H1N1 patients in Bombay Hospital.
- To analyze the prognosis of H1N1 patients in referred cases and direct cases in the hospital.

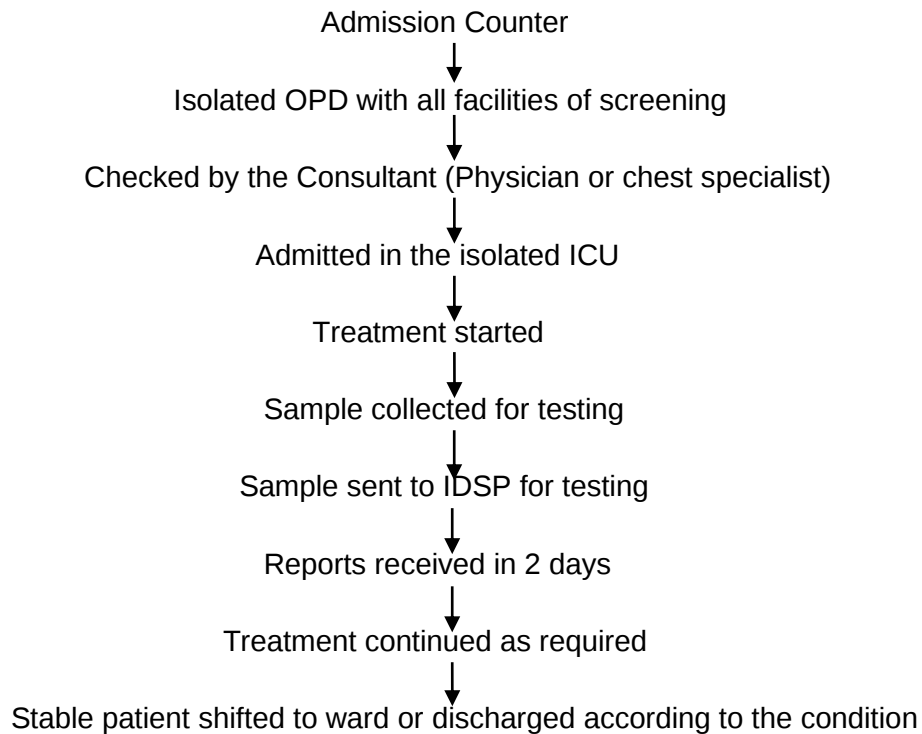
METHODOLOGY

- **Study Area:** Inpatient area, Bombay Hospital, Indore
- **Study Duration:**
 - For management of H1N1 patients – 1st April 2015 to 30th April 2015
 - For percentage of death– January 2015 to March 2015 (3 months)
- **Study Design-** Descriptive, Retrospective
- **Type of Data-** both primary and secondary data
- **Tools & Techniques for Data Collection-**
 - Observation and discussion with the staff
 - Records of H1N1 patients admitted in the hospital from January 2015 -March 2015.
- **Sample Size-** 161 H1N1 cases in the hospital
- **Sampling Technique-** census of all the H1N1 cases in the hospital

OBSERVATIONS

Management of H1N1 patients in Bombay Hospital:

Fig 12: H1N1 Patient Flow



Standard Operating Procedures:

- H1N1 patients are kept in the isolated wing of the ICU where beds are kept one meter apart.
- Infection control precautions are reinforced, eg. all those entering the room have high efficiency mask.
- Number of visitors is restricted.
- Antiviral prophylaxis and PPE kit is provided to health care personnels managing the H1N1 cases (PPE kit contains high efficiency mask, gloves, cap, goggles, gown, shoe cover).
- Biomedical waste is properly disposed in sealed impermeable bags.

Sample testing:

- Sample is collected by the nursing staff and kept in the Viral Transport Media (VTM).
- The necessary form is filled and signed first by the consultant, then by the concerned OSD in admin block.

- Sample is sent to IDSP office for testing.
- Reports are received in 2 days through email.

Treatment:

- Tablet Temiflu is started and given for 5 days.
- Patient is kept on ventilator or bipap if critical.
- Supportive therapy is given – IV fluids, parenteral nutrition, etc.
- Stable patient is shifted to ward.
- Adult patient is discharged 7 days after symptoms have subsided.
- Children are discharged 14 days after symptoms have subsided.

Surveillance by IDSP

Integrated Disease Surveillance Project (IDSP) is a decentralized disease surveillance project initiated by the Government of India in November 2004 with funding support from World Bank. It is intended to generate and detect early warning signals of impending outbreaks and help initiate an effective response in a timely manner. An important component in this regard is strengthening hospital based disease surveillance in the country for the priority diseases as identified by the project. Some of those diseases are Dengue, Cholera, Influenza (H1N1), etc.

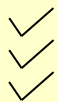
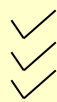
Surveillance in its simplest form is collection of information for action. Disease surveillance is the ongoing systematic collection and analysis of data, converting into and the provision of information which leads to action being taken to prevent and control a disease. Surveillance keeps a close watch on health events occurring in the community and detects outbreaks that may be occurring so that corrective action can be taken immediately.

In H1N1 cases-

- The medicine, VTM for sample collection, PPE kit are provided by the government.
- Daily H1N1 cases records have to be updated and sent by the hospital to the IDSP office through email.
- Daily Drug Requirements have to be updated and sent to the IDSP office for demanding the required number of PPE kits, VTM, medicines, etc.
- Samples of the suspected H1N1 cases have to be sent to the IDSP office for testing.
- The concerned person in the IDSP office mails the reports to the hospital.

- The positive patient records (treatment, discharge or death) are maintained in the IDSP office.

Table 6: Norms for H1N1 Cases

Norms	Status
Provision by IDSP to Hospital • Medicines • VTM • PPE Kit	
From Hospital to IDSP • Mailing daily H1N1 cases records. • Mailing daily drug requirements. • Timely sending samples for H1N1 tests.	

ANALYSIS

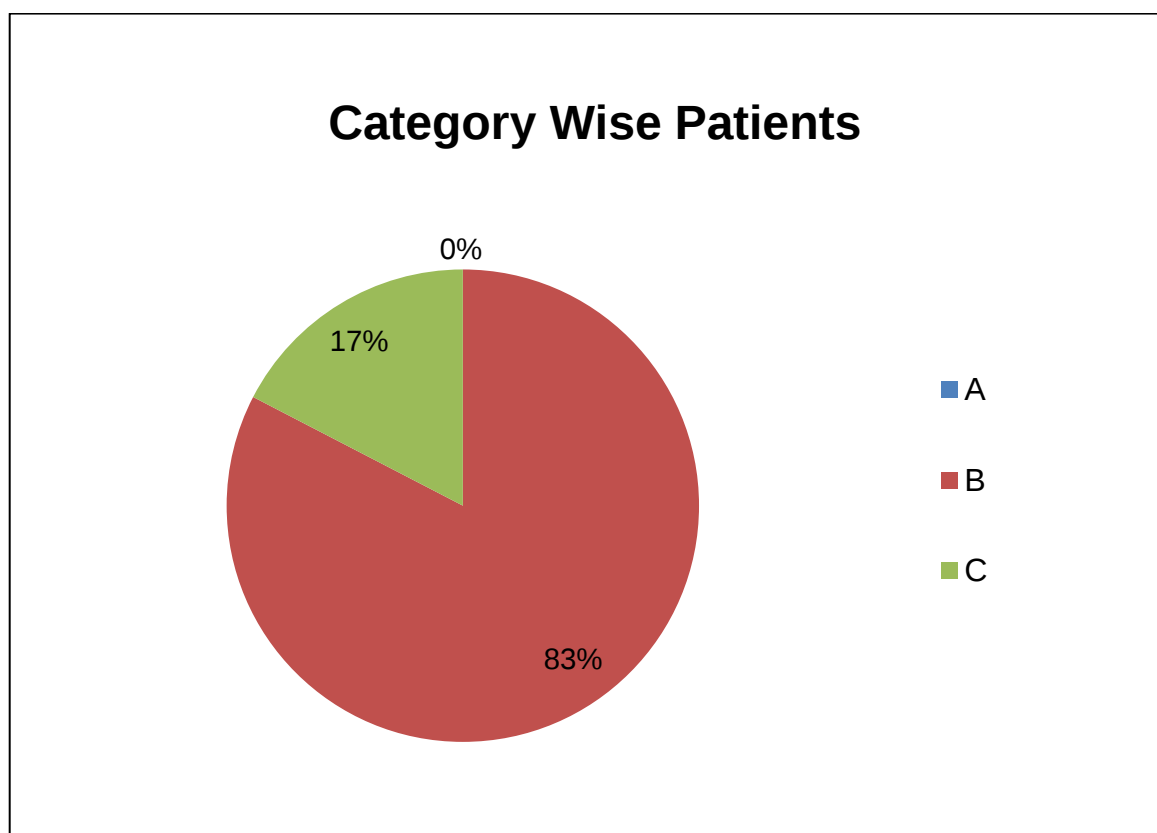
161 H1N1 patients were admitted to Bombay Hospital, Indore from Jan- Mar 2015.

Out of these 19 patients expired.

Table 7: Category wise H1N1 Cases

S.No.	Category	Total patients
1	A	0
2	B	133
3	C	28

Fig 13: Category wise H1N1 cases



REFERRED CASES

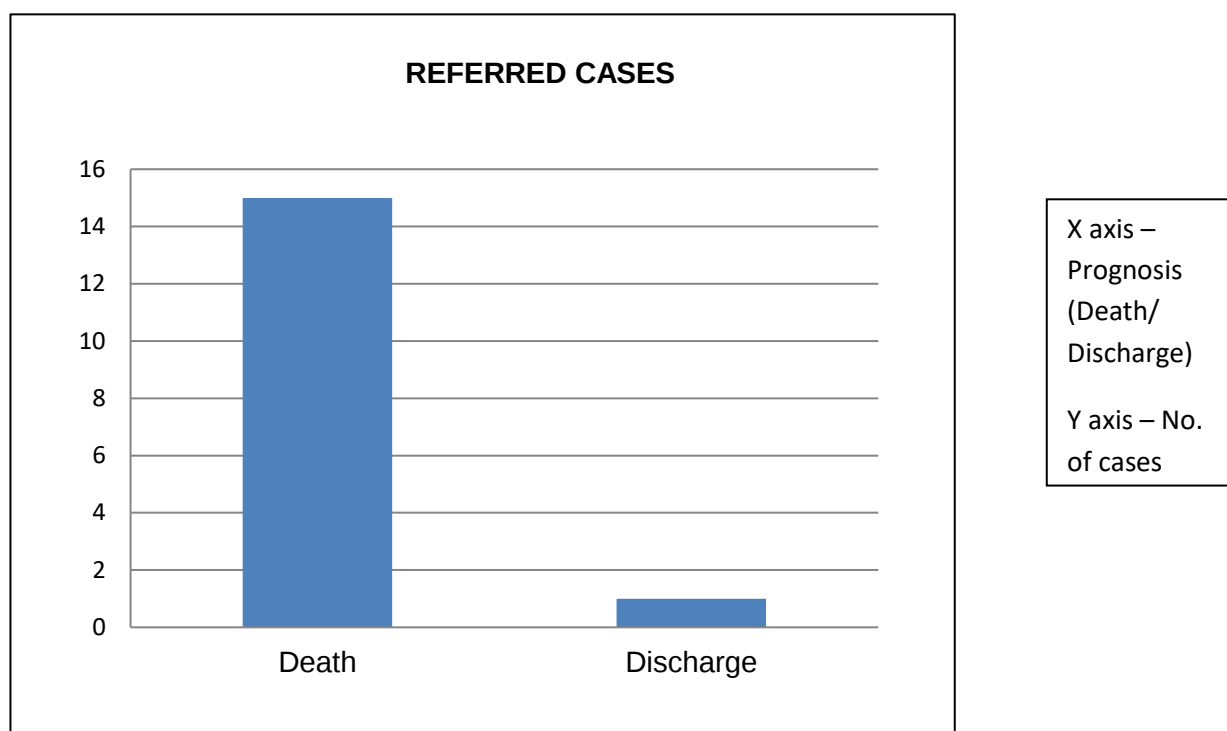
H1N1 Positive Patients referred from other Hospitals

- Total no. of ref. Positive patients :- 16
- Total Deaths of ref cases :- 15
- Percentage of Deaths in ref. cases :- 93.75 %

Table 8: Referred H1N1 cases

Patient	Death	Discharge
Referred Patient	15	1

Fig 14: Prognosis of referred H1N1 cases



DIRECT HOSPITAL CASES

H1N1 Positive Patients Admitted Directly in Bombay Hospital, Indore

Total Direct Hospital case Positive Patient :- 57

Total Death (Direct Cases):- 4

Percentage of Deaths (Direct Cases):- 7.02 %

Table 9: Direct Hospital Cases of H1N1

Patient	Death	Discharge
Hospital case	4	53

Fig 15 : Prognosis of direct hospital cases of H1N1

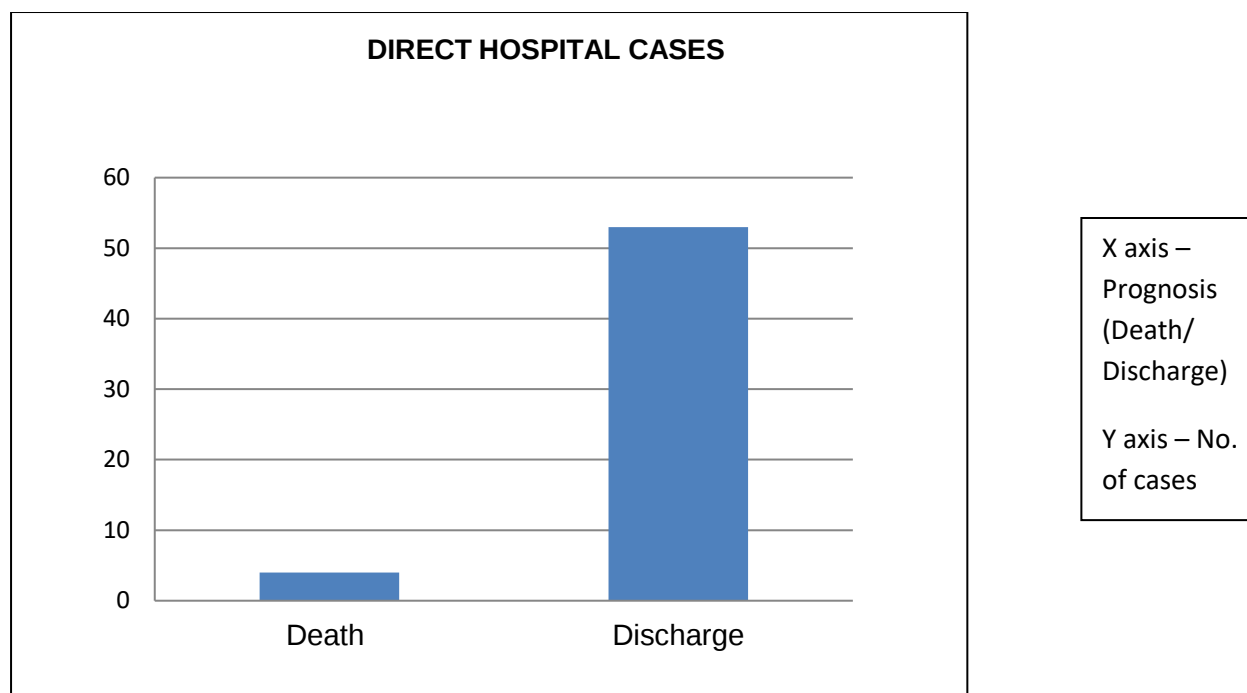
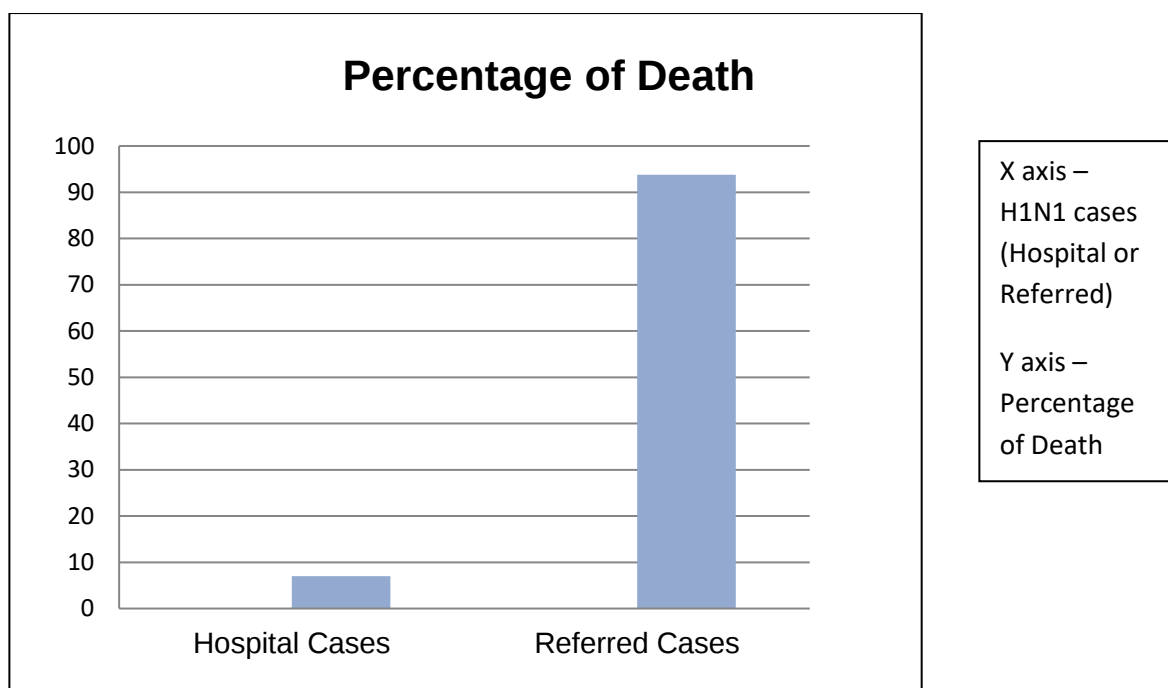


Table 10: Percentage of Death of H1N1 cases In Hospital

S.No	Case Type	Death (%)
1	Direct Hospital Cases	7.02
2	Referred Cases	93.75

Fig 16: Percentage of Death of H1N1 cases



FINDINGS

The prognosis of H1N1 cases admitted directly in Bombay Hospital, Indore is much better than those who were referred from other hospitals. Probable reasons for difference in prognosis

Table 11: Probable reasons for difference in prognosis

Direct Cases	Referred Cases
• Early Diagnosis • Proper Treatment • Quality Nursing Care • Effective Infection Control	• Delay in diagnosis • Delay in referral • Lack of information to patients about hospitals having IDSP surveillance.

SUGGESTIONS

- Hospital should promote public awareness through camps, posters, banners, etc.
- Visual and print media should be used for mentioning the list of hospitals having the IDSP surveillance.

PROJECT 3

“Assessment of inpatient satisfaction in General Ward in Bombay Hospital, Indore”

EXECUTIVE SUMMARY

Patient satisfaction surveys are one of the established yardsticks to measure success of the service delivery system functional at hospitals. Also awareness about patient satisfaction is relevant in the sense that satisfied patients are more likely to abide by the treatment advised, to continue using medical services and to promote referrals, thereby increasing the service volumes.

The objective of the study was to measure the satisfaction of the patients attending IPD (General ward) at Bombay hospital, Indore. The data was collected for duration of 15 days using a preformed feedback form. 200 patients were asked to fill the form after taking consent from them. The questionnaire covered questions related to medical care, and consultation with doctor, nursing care, diagnostic care, pharmacy, Housekeeping, laundry services, food services, security and lift services, maintenance, admission and discharge services. The data analysis was done using Microsoft excel. The reasons behind the dissatisfaction for various services were analyzed and recommendations were given accordingly.

INTRODUCTION

Patient Satisfaction: It means fulfilment or meeting of expectations of a patient from a service or product. Although, a patient's main expectation is getting cured and going back to work, but there are other factors, which affect his/her satisfaction eg. Laundry services, food services, lift services, etc.

Patient as a Consumer: Consumers make their decision about utilization of services on the basis of their perception of the service rather than the reality and hence marketing and patient satisfaction have become of paramount importance as mouth-to-mouth publicity and personal referral is the most common and influential cause of using a particular health facility. Healthcare facility is very difficult to measure; hence, it is a challenge to a healthcare provider to influence a patient's perception of quality of care. A patient's satisfaction may not be totally influenced by the quality of physician available, but it reflects how the medical care has been delivered. To provide highest level of satisfaction that is profitable to both the patient and the provider, management must control both the perception of expectation and the quality of delivery of the healthcare services.

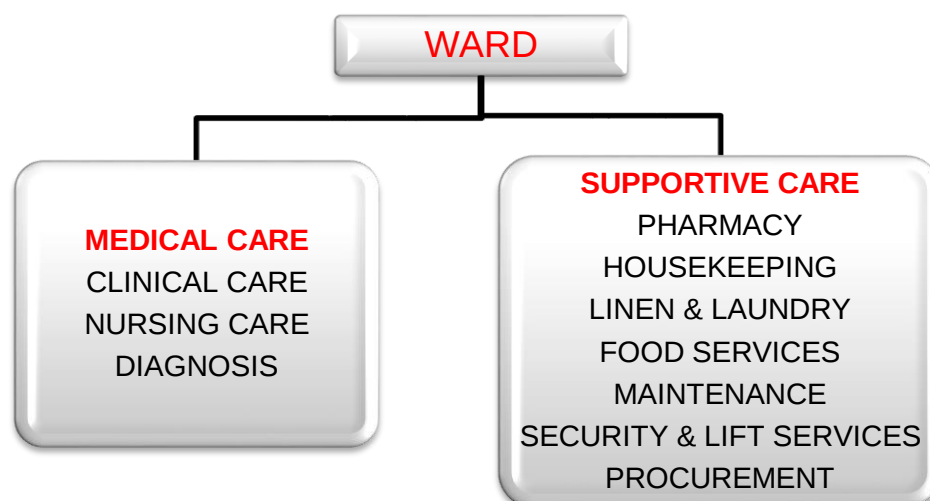
Inpatient Area: An inpatient area is that part of the hospital which includes the nursing station, the beds it serves, storage and public areas needed to carry out nursing zone. It requires holistic planning and designing to suit the requirements of seekers and providers of patient care.

General Ward: Highly subsidized inpatient services meant for all, inclusive of bed charges, food services, medical services, etc.

General Ward in Bombay Hospital, Indore:

- Male General Ward
 - Location - 5th floor
 - Beds- A side hall - 34 beds
B side hall - 22 beds
Total beds - 56 beds
- Female General Ward
 - Location - 5th floor
 - Beds - 24 beds (3 beds in 1 room)
- Facilities
 - Free bed
 - Free food services

Fig 17: Services provided in Wards



RATIONALE

Patient satisfaction is at the core of patient centered medicine. Improved patient satisfaction not only leads to an enhanced patient experience, something every sick or injured patient deserves, it is also associated with improved treatment outcomes. Hospitals need to show the community that they are interested in quality care, and they need to find ways to improve in order to remain competitive. Patients are our customers, and as customers, they have the right to choose where to go for their medical care. Patients are easier to serve if they feel their needs are being met. This results in happier staff and patients.

OBJECTIVES

- To study the level of patient satisfaction at Bombay Hospital.
- To study the different factors affecting patient satisfaction.
- To suggest measures for improvement of services leading to better patient satisfaction.

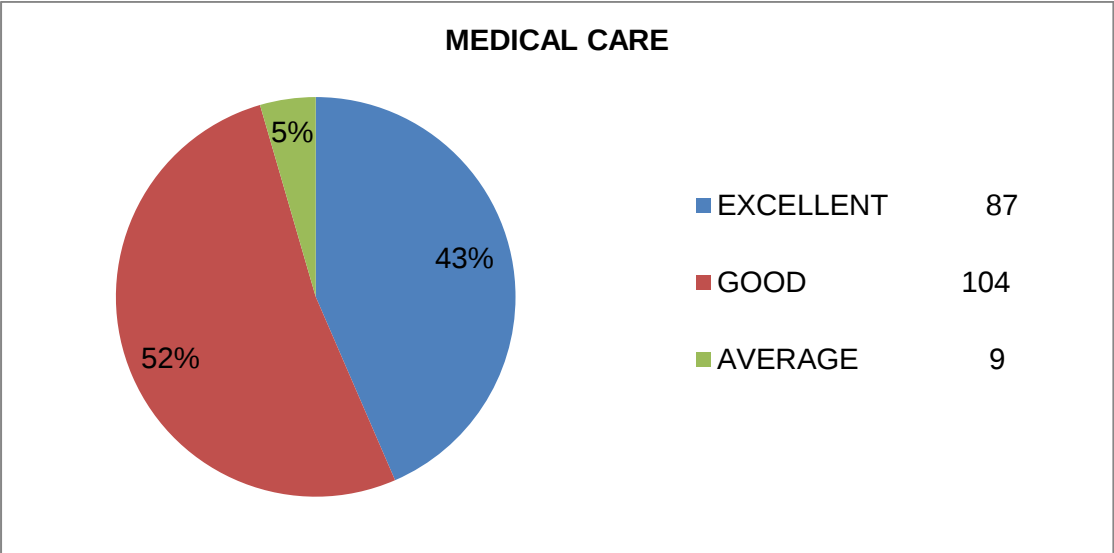
METHODOLOGY

- **Study Area-** General ward (Bombay Hospital, Indore)
- **Study Duration-** 15 days (1st May 2015 to 15th May 2015)
- **Study Design-** Analytical, Cross- sectional study
- **Type of Data-** Primary data
- **Tools & Techniques for Data Collection-**
 - Preformed inpatient feedback form filled by the patient or his/her relative.
 - English (Annexure 1)
 - Hindi (Annexure 2)
 - Observation of services and quality of care provided to the patient.
- **Population-** IPD patients in General Ward
- **Sample Size-** 200
- **Sampling Technique-** Simple Random Sampling

ANALYSIS & RESULTS

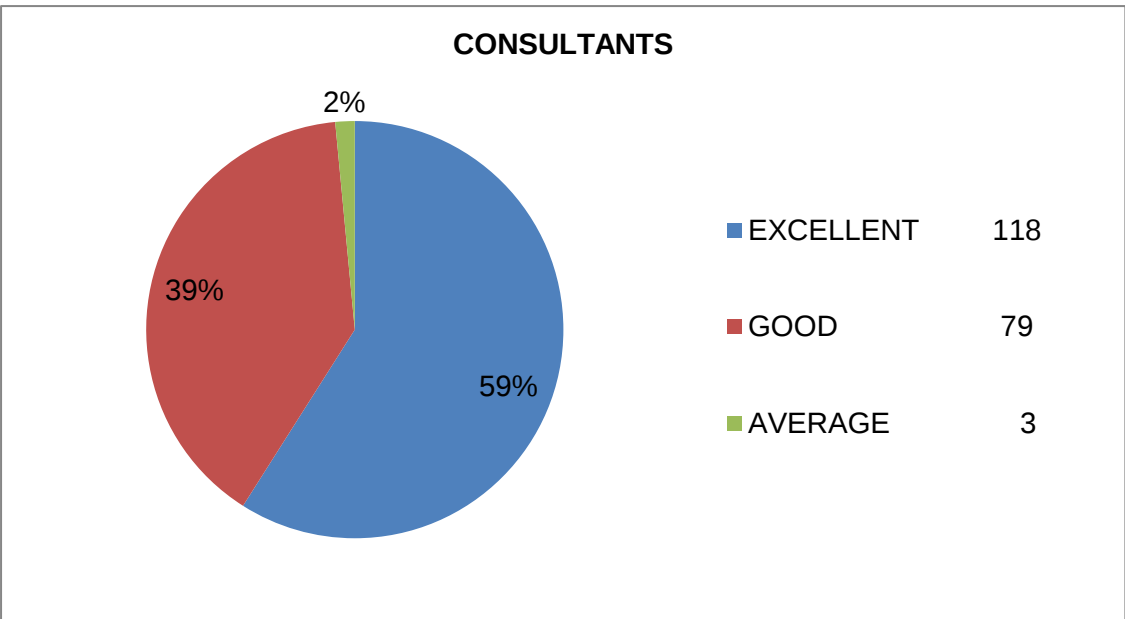
For the analysis of patient satisfaction, the Response of patients/ relatives for all the categories in the form has been converted into pie charts for knowing the percentage of people satisfied or dissatisfied with the services.

Fig 18: Patient Satisfaction for Medical Care



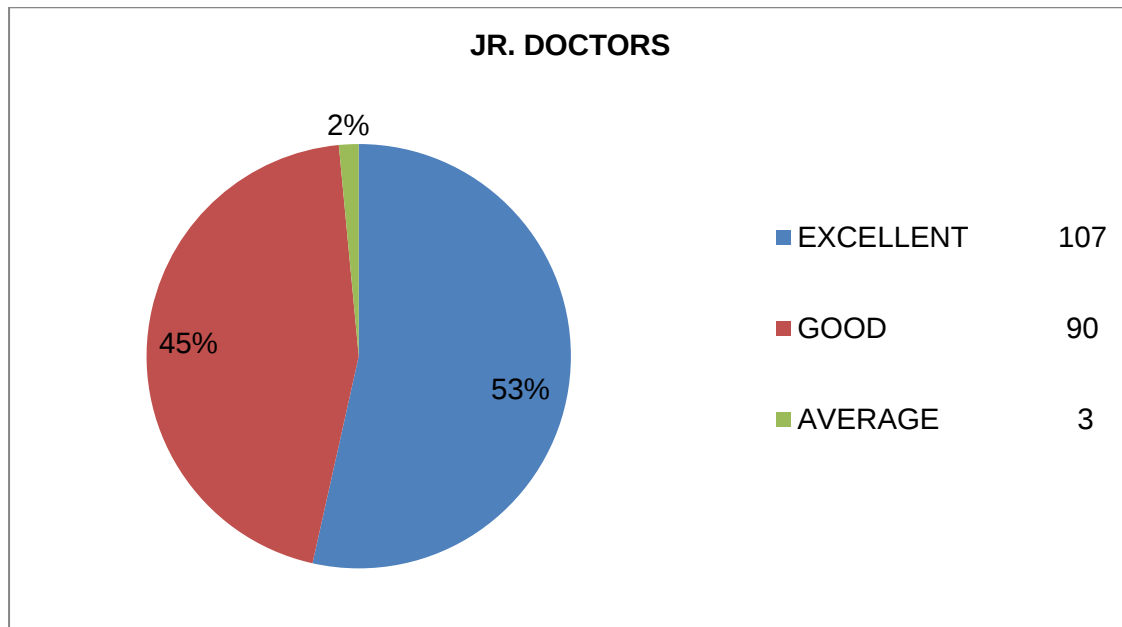
The above pie chart suggests that most of the people are satisfied with the medical care delivered in the hospital and it should be continued in the same manner without any discrepancy, only 5% of patients rated it as average due to overall impact of supportive services.

Fig 19: Patient Satisfaction for Consultants



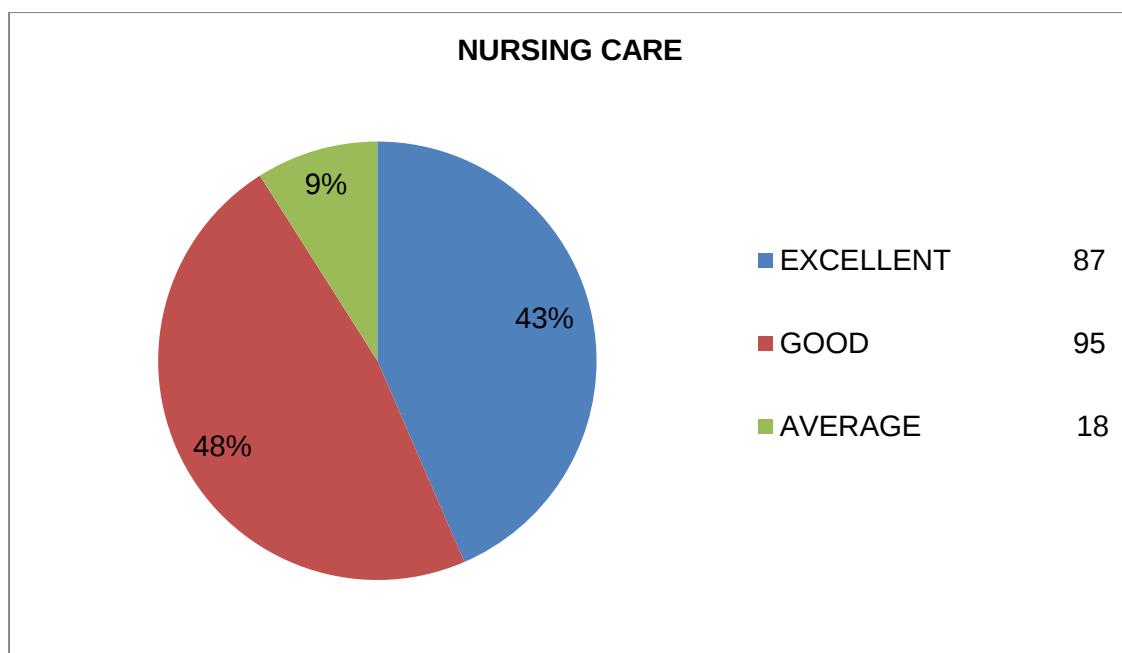
The above pie chart suggests that almost all the people are contended with the consultants, their way of handling the patients and providing clinical care with expertise.

Fig 20: Patient Satisfaction for Junior Doctors



The above pie chart suggests that almost all the patients are satisfied with the Junior doctors, their behaviour and their coordination with the consultants in delivering medical care.

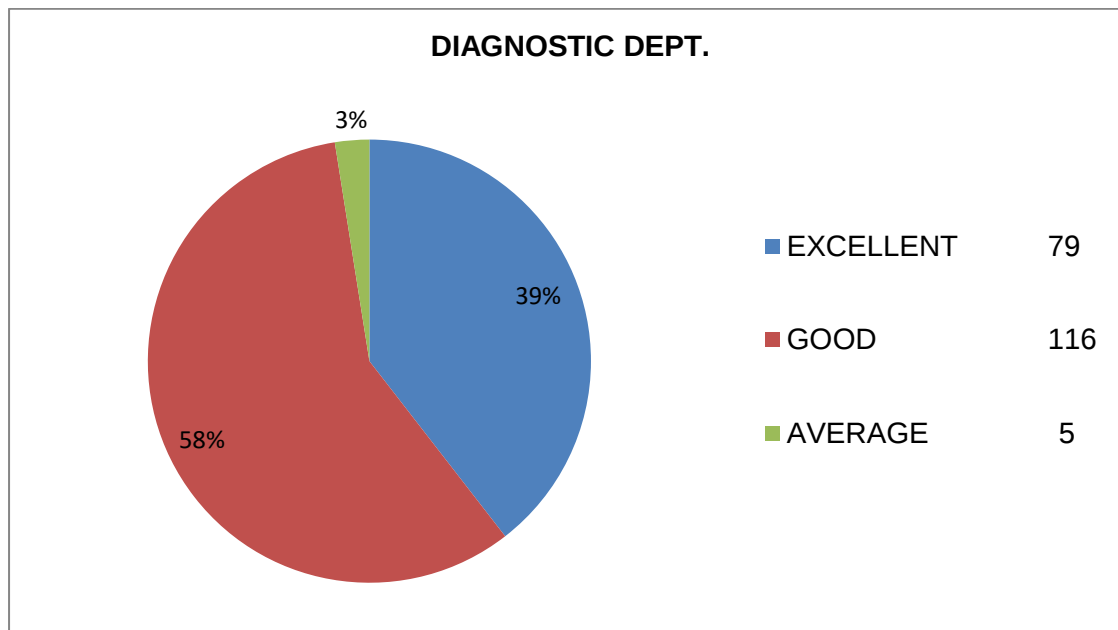
Fig 21: Patient Satisfaction for Nursing Care



The above pie chart suggests that a large number of patients are satisfied with the nursing care delivered but a few are dissatisfied with it, due to language barrier between the nurses and the patient/relative, rude behaviour sometimes, delay in response to patient call.

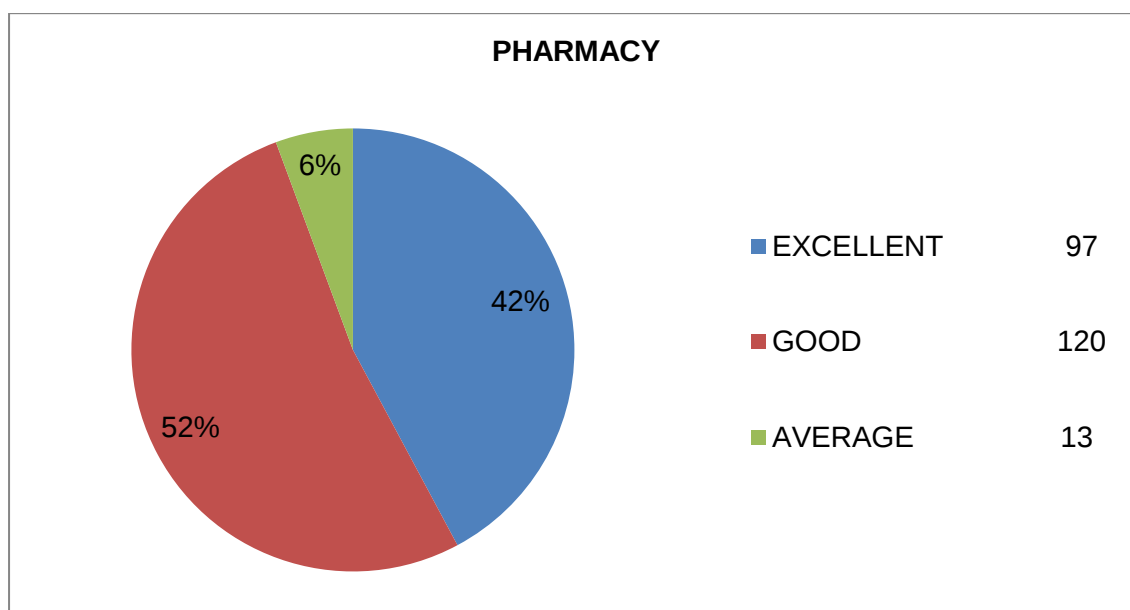
As observed, the nursing staff also has to perform certain clerical work, as a result of which there is work overload on them.

Fig 22: Patient Satisfaction for Diagnostic Dept.



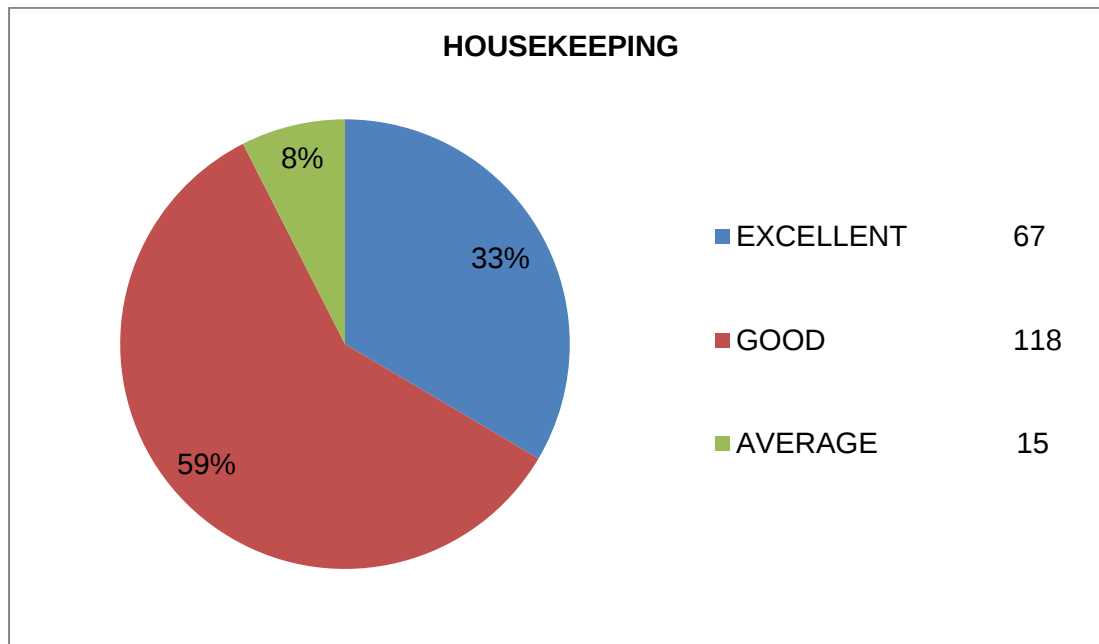
As seen in the above pie chart, almost all the patients are satisfied with the diagnostic services, very few patients rated the services as average due to delay in reports.

Fig 23: Patient Satisfaction for Pharmacy



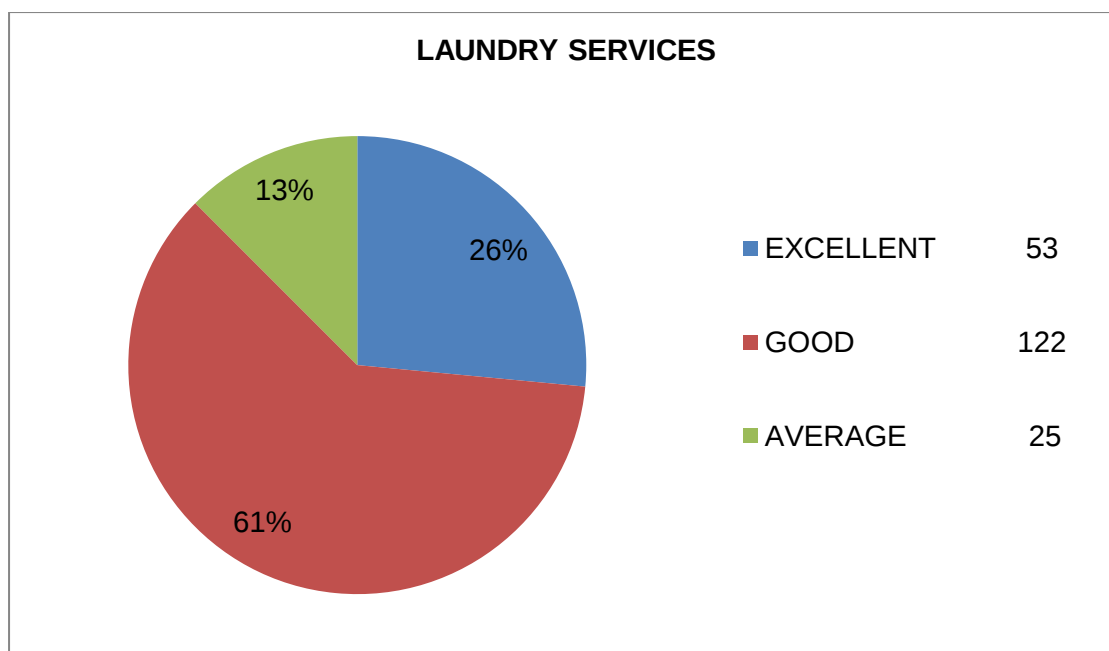
The above pie chart depicts that a few number of patients are dissatisfied with the pharmacy due to long waiting time and long distance between in-house pharmacy and IPD. (As it is located in a separate building within the hospital premise.)

Fig 24: Patient Satisfaction for Housekeeping



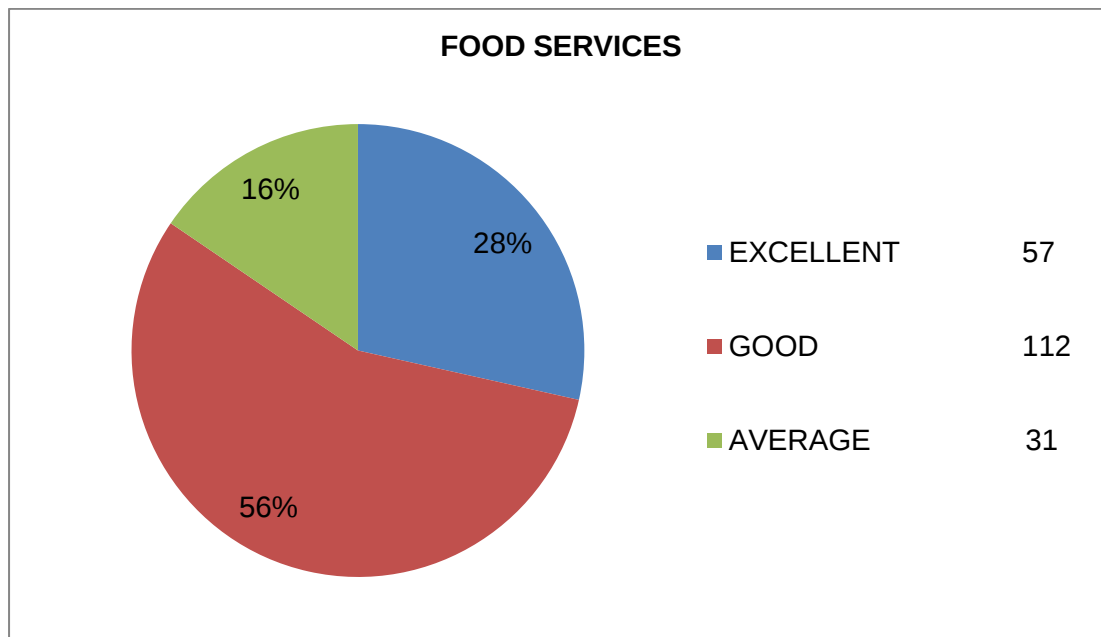
As seen in the above pie chart, a few patients have rated the housekeeping services as average. This is due to delay in cleaning sometimes and unavailability of housekeeping staff.

Fig 25: Patient Satisfaction for Laundry



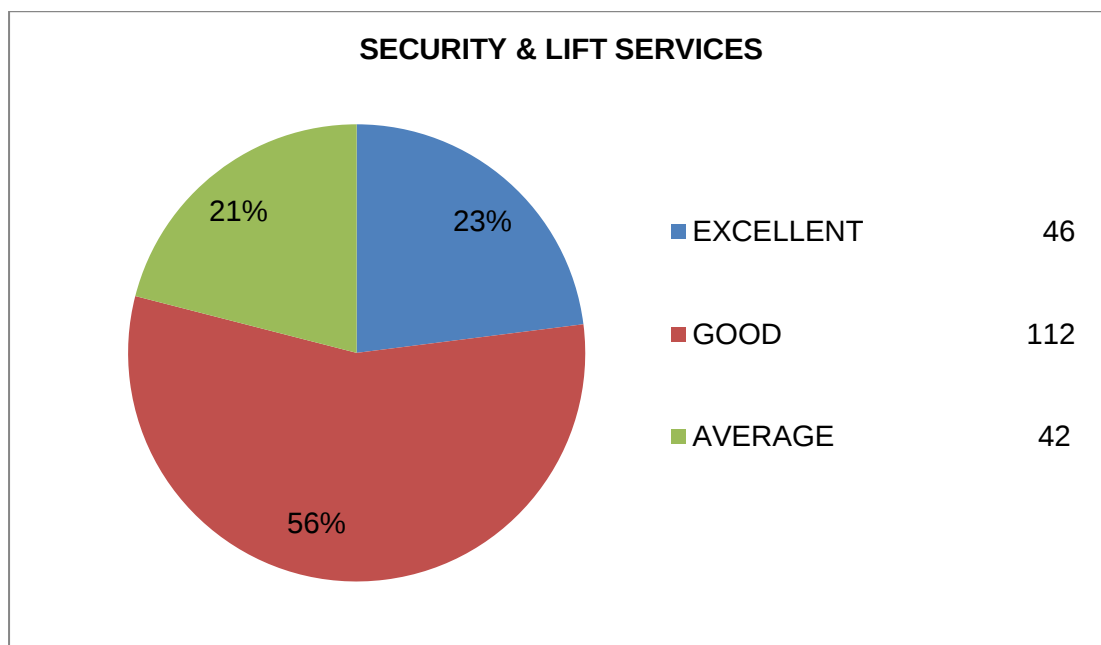
The above pie chart suggests that around 13% patients are dissatisfied with the laundry services due to delay in change of patient dress and bed linen.

Fig 26: Patient Satisfaction for Food Services



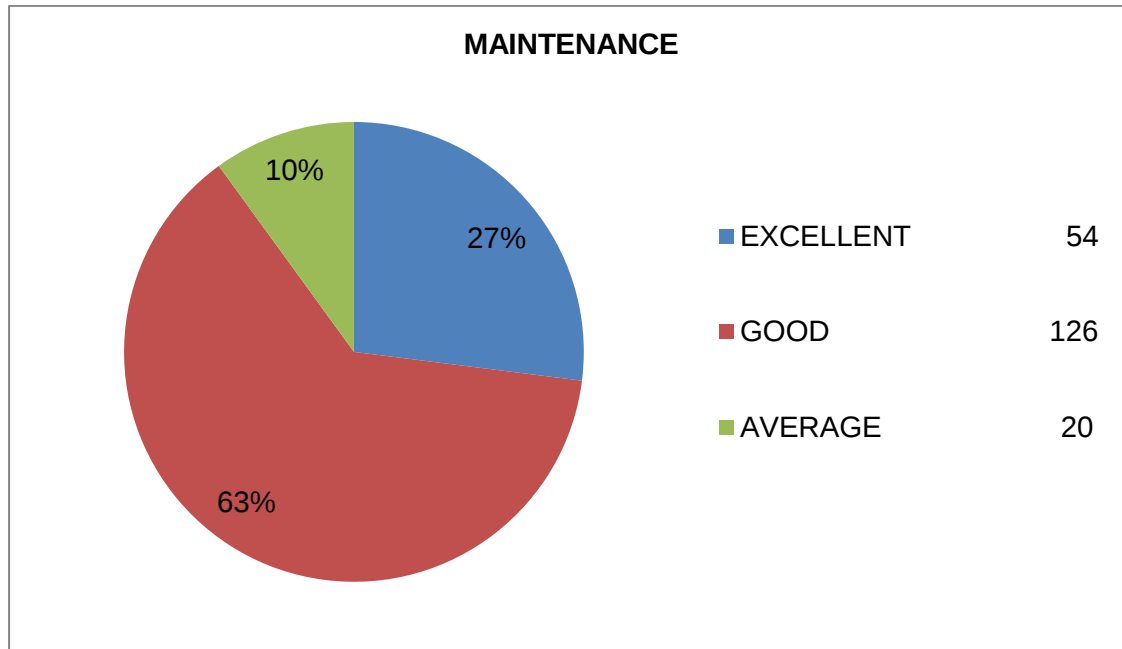
The above pie chart suggests that some people are dissatisfied with the food services as they find the food spicy and of low quality.

Fig 27: Patient Satisfaction for Security & Lift Services



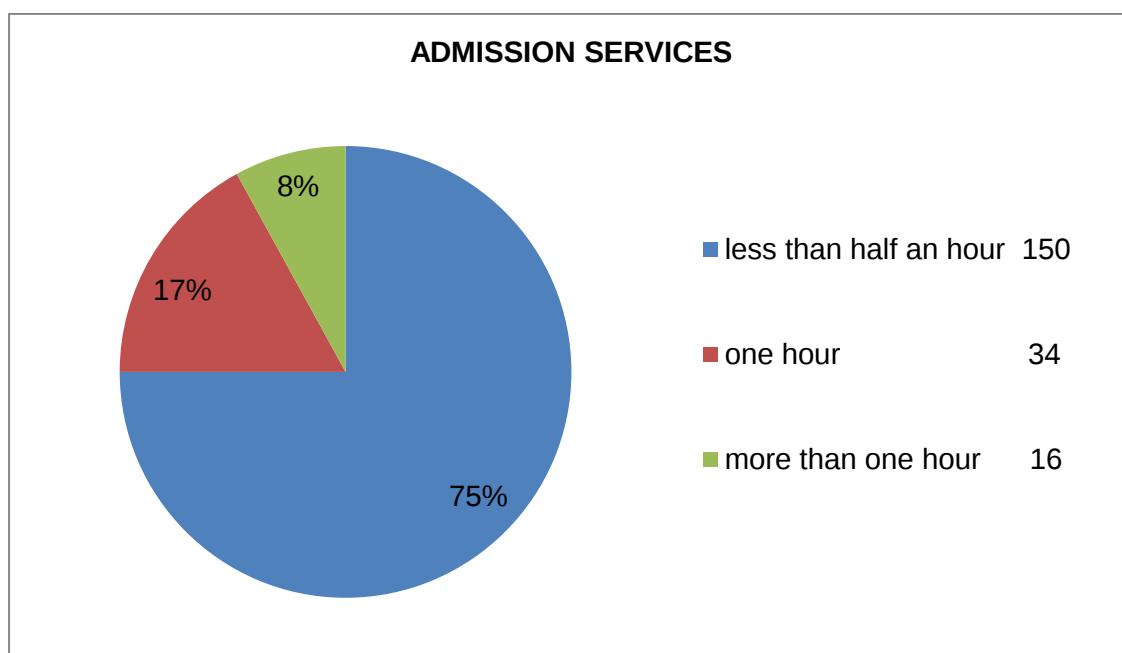
The above pie chart shows that about 21% people are unhappy with the security and lift services. This is due to less number of lifts, as the people have to wait for the lift for a long time.

Fig 28: Patient Satisfaction for Maintenance



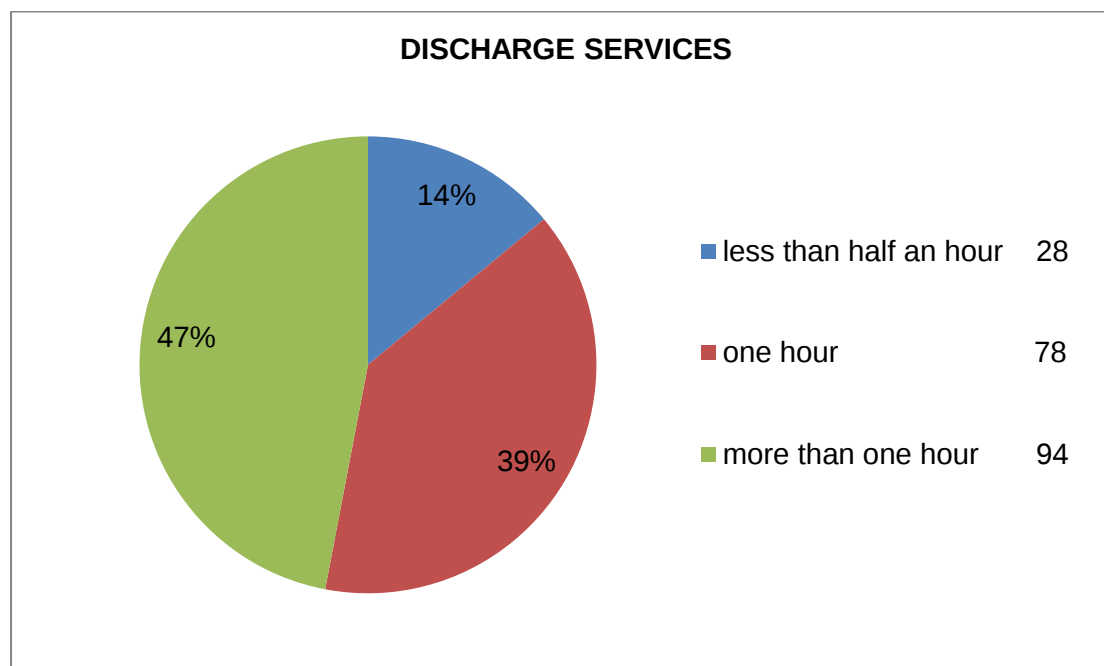
As seen in the above pie chart, some patients are dissatisfied with the maintenance of the ward. There is lack of curtains, especially in the male ward and the bed side trolleys are damaged.

Fig 29: Patient Satisfaction for Admission Services



The above pie chart shows that the admission services of the hospital are efficient as in 75% of people the admission process was completed in less than half an hour, it exceeded one hour only in case of a few number of patients. This may be due to complicated document policies or extra time taken by the patient's attendant in filling up the forms.

Fig 30: Patient Satisfaction for Discharge Services



As seen in the above pie chart, the discharge process of a large number of patients took more than one hour. The reason behind this may be due to delay in preparation of discharge summary by the RMO, and long documentation process.

CONCLUSION

On the basis of the patient feedback and the observations, it can be concluded that most of the patients are satisfied with the services provided by the hospital (especially the clinical care delivered by the consultants and the RMOs). Only a few patients are dissatisfied with some of the services like nursing care, supportive services and discharge process.

RECOMMENDATIONS

- Medical care should be improved by enhancing the nursing care.
- A clerical person should be appointed to do the non clinical file work.
- Periodic training sessions should be conducted for nurses with special emphasis on behavior towards patient and basic words of Hindi language needed for communicating with the patients.

- Waiting time for reports should be reduced by increasing coordination between the technicians and nursing staff to manage the work overload.
- Medicine delivery should be started at the 5th floor also like other floors.
- Random auditing should be done in order to monitor the work of the housekeeping staff along with periodic training and briefing.
- Proper check on housekeeping staff for regular change of bed linen and patient dress.
- Quality check audit should be conducted periodically for food services and the staff should be trained accordingly.
- Lift man and security staff should be given proper training for conducting work smoothly.
- Curtains should be installed in the male ward.
- Bedside trolleys should be repaired or replaced if required.
- Weekly maintenance audit should be done and the needful action should be taken as early as possible.
- Patient/attendant should be properly guided for completing the admission formalities.
- Strict guidelines should be there for the RMOs for completing the discharge summary of patients timely.

REFERENCES

- a) Bombay Hospital Manuals
- b) Essentials of Hospital Services – Dr. (Col.) Ashok Kaushik
- c) A case study of zonal hospital, Mandi (H.P.) by R.K. Sharma
- d) www.ncbi.nlm.nih.gov – study on management of swine-flu patients in the intensive care unit by Raktima Anand, Akhilesh Gupta, Sonia Wadhwan, Anshu Gupta & Poonam Bhadoria
- e) Training Manual for Medical Officers for Hospital based Disease Surveillance – by National Centre for Disease Control
- f) Clinical Management Protocols & Infection Control Guidelines (Swine Flu) – By Ministry of Health & Family Welfare

ANNEXURE: Patient Feedback Form in English



Bombay Hospital - Indore

BHI / FM / 51 / 2014

Ring Road, Indore-452010 Phone : 0731-4077000

Patient Feed Back / Suggestion Form

IP No. : _____ Patient Name : _____

Bed No. : _____ Doctor Name : _____

Admission Date : _____ Date of Discharge : _____

Dear Friend,

We thank you for choosing Bombay Hospital for providing services to you. This questionnaire is an on going survey conducted by us to solicit your opinion about hospital. Kindly spare some time to complete this questionnaire, as it will give us invaluable feedback to improve the services. After you finish kindly tick the same and hand it over to the sister incharge on the floor.

Kindly tick (✓) against the box you consider most appropriate.

Details	Excellent	Good	Average	Remarks
Medical Care				
Consultants				
Jr. Doctors				
Nursing Care				
Diagnostic Dept				
Pharmacy				
Housekeeping (Ayah / Ward boy)				
Laundry Services				
Food Services				
Security & Lift Services				
Maintenance				
Admission Services	Less than 1/2 hr ☐	1 hr ☐	more than 1 hr ☐	
Discharge Services	Less than 1/2 hr ☐	1 hr ☐	more than 1 hr ☐	

SUGGESTIONS : _____

Date : _____

Signature : _____

Patient Feedback Form in Hindi



Bombay Hospital - Indore

BHI / FM / 51 / 2014

Ring Road, Indore-452010 Phone : 0731-4077000

मरीज का अभिप्राय एवं सुझाव

आय.पी.नं. : _____ मरीज का नाम : _____

बेड नं. : _____ चिकित्सक नाम : _____

भर्ती दिनांक : _____ डिस्चार्ज दिनांक : _____

प्रिय मित्र

आपकी स्वास्थ्य सेवाओं के लिए बम्बई अस्पताल चुनने के लिए हम आपके आभारी हैं। आपके सुझाव हमें सुविधाओं को बेहतर बनाने में मदद करेंगे। कृपया कुछ समय निकालकर इसे भरने की कृपा करें। इस पत्र को भरने के बाद सिस्टर इनचार्ज को सौंप दें।

नीचे कृपया (✓) करें।

विवरण	उत्तम	अच्छा	सामान्य	दुष्प्रियाँ
स्वास्थ्य की देख-रेख				
वरिष्ठ चिकित्सक				
कनिष्ठ चिकित्सक				
उपचारिका / नर्स देख - देख				
जॉब विभाग				
दवाइयाँ				
आया / वॉर्ड बॉय सेवाएँ				
लॉन्जी सेवाएँ				
खाद्य सेवाएँ				
सुरक्षा एवं लिफ्ट सेवाएँ				
रख - रखाव				
भर्ती सेवाएँ (भर्ती के लिए लिया गया समय)	आधा घंटे से कम []	एक घंटा []	एक घंटे से ज्यादा []	
डिस्चार्ज सेवाएँ (डिस्चार्ज के लिए लिया गया समय)	आधा घंटे से कम []	एक घंटा []	एक घंटे से ज्यादा []	

सुझाव

दिनांक : _____

हस्ताक्षर : _____