SUMMER TRAINING

AT

P.D HINDUJA HOSPITAL AND MEDICAL RESEARCH CENTRE

FROM 17TH MAY, 2021 TO 2ND JULY, 2021

BY

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ROLL NO: 1209

MBA – HOSPITAL AND HEALTH MANAGENENT

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IIHMR UNIVERSITY

P. D. HINDUJA NATIONAL HOSPITAL
& MEDICAL RESEARCH CENTRE
(Established and managed by the National Health & Education Society)

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July 2, 2021

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms Siddhi Rajendra Shasane a student of MBA - Hospital and Health Management from IIHMR University,Sanganer, Jaipur, did her project in our Hospital from 10TH MAY 2021 to 2ND JULY 2021 .

During this period her assignment was as follows:

- Time and motion study of OPD attendant staff.
- Scope tagging reasons for OPD refunds.
- FMEA for risk assessment and patient satisfaction survey of radiation oncology department.

I wish her all the success in future endeavor.

JOY CHAKRABORTY
Chief Operating Officer

DR. PREETI GORAKSHA
Senior Manager
Clinical Care Units and
Accreditation & Compliance

ACKNOWLEDGEMENTS

I am indebted to **Dr. PR.SODANI,** Principal of **IIHMR University, JAIPUR**, Dr.Dhirendra Kumar, **Dean (Academics)**, **Dr Preeti Goraksha and Rajvee Patel, Dr Sudesh Deshpande, Dr Rajasi Dharia** for allowing me to undertake this project

I would like to thank Dr. Pallavi Chaudhary Agrawala, for being the mentor (IIHMR UNIVERSITY) for this project and for constant support, supervising and guiding me as and when required during the course of internship.

I am also very grateful towards OPD Supervisor, Mrs Seema Kanetkar madam and technologist Mr Prakash, for the best support, guidance and also to enlighten me with all possible knowledge she gave me throughout my internship period and provide me relevant information to complete my project work.

Lastly, I would like to thank the whole housekeeping attendant staff in OPD for providing me with information for my project and also to all other staff members of all the departments of the hospital and for being so kind, helpful and informative.

Thus, here I conclude that my learning experience was very enriching, helpful and a great experience of being an intern at Hinduja Hospital and Medical Research Centre.

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INTRODUCTION

HINDUJA HOSPITAL:

P.D. Hinduja hospital and MRC is ultra-modern tertiary care hospital which is world renowned where in medical services offered by the P.D Hinduja hospital and Medical Research Centre, lies a 50-year-old dream. It is a multispecialty tertiary care hospital with a Medical Research centre in collaboration with Massachusetts General hospital (MGH), Boston USA.

The hospital has an inpatient capacity of 343 beds inclusive of 53 critical care beds in different specialities. In total it has 402 beds as a tertiary care hospital. As a tertiary care the services offered are comprehensive covering investigation and diagnosis to the therapy, surgery. and post-operative care. The inpatient services are complemented with a care outpatient facility, and an exclusive centre for health check-up for the executives.

Hinduja hospital was the first multidisciplinary tertiary care hospital to have been awarded the prestigious 1SO 9002 certification from KEMA of Netherlands for Quality management system. The hospital is also accredited by NABH and the Laboratory of the Hinduja hospital is NABL and CAP accredited, very few laboratories in India are NABL accredited.

MEDICAL EXPERTISE.

There are currently 130 consultants in the hospital available round the clock who are enriched in their field of study. The various specialities covered are Cardiology, Cardiothoracic Surgery, Neurology. Neurosurgery, orthopaedics, oncology, ophthalmology, oral and maxillofacial surgery, rheumatology, endocrinology, gastroenterology, paediatrics, ENT, Paediatrics surgery, pulmonology, psychiatry general medicine, IVF. Except for obstetric care and psychiatry care, the hospital has all possible specialities.

CUTTING EDGE DIAGNOSTIC

The diagnostic facilities offered by Hospital our comprehensive to include laboratory services imaging cardiology neurology and pulmonology. The hospital has fully automatic laboratory and it works 365 days at all hours. The laboratory has 5 sections: biochemistry, microbiology, histopathology, haematology and immunology and receives about 90000 to 100000 samples

every month. The laboratory has tie up with private hospitals and government hospitals for tests that are related to tuberculosis mainly Gene Xpert. The laboratory is NABL and CAP accredited.

It has all kinds of imaging facilities like ultrasound, nuclear medicine and PET scan, mammography and sono- mammography, colour Doppler, CT scan, MRI, BMD , Fluoroscopy, DSA, X-ray. It is also specialized in nuclear medicine.

TECHNOLOGY INTERVENTIONS

The hospital keeps upgrading its technology by acquiring new state-of-the-art diagnostic and therapeutic equipment's. It was the first in India to acquire Gamma knife a non-invasive neurosurgical tool that is gold standard in radiosurgery. Hospital was also the first to acquire the holmium laser in the country. In keeping with quest for continuous improvement in the quality and technological advancement, the hospital was the first to acquire twin speed MRI a revolutionary technology in neuro and cardiology imaging. The bone mineral densitometer (DEXA) is the addition to the imaging department. Oncology services are holistic and complete with installation of linear accelerator with multileaf collimator.

The department of Nuclear medicine has acquired the gamma camera / PET scan redefines treatment in Cancer management and in Orthopaedic, neurology, and cardiology. To enhance the specialised service in non-invasive cardiology Hospital installed GE-INNOVA 2000 Cath lab machine for better visibility of blood vessels in the procedure carried out in the support of nephrology services at hospital. New state of art dialysis department has been set up to provide the best care for dialysis patient.

The hospital has four buildings. When is OPD building 2nd is IPD building and the third is S1 building which is called Lalita Girdhar which is now completely dedicated Covid facility building and also has Laboratory. The fourth one is S2 building which has all administrative departments. Besides the hospital focuses on continuous research for the clinical development.

VISION:

Quality Healthcare for All.

MISSION:

Their mission is to provide best care to all the class of the patients through highly skilled consultants and nursing and other non-medical staff.

OBSERVATIONAL REPORT:

Before starting for the project a brief induction from 11th May 2021 to 14th May 2021 was conducted to understand some departments and its functioning. On 11th May induction of OPD was done. The OPD building has 4 floors and the ground floor has Radiation oncology and consultation rooms, Medical and surgical oncology rooms, Dialysis department, Gamma knife and OPD Lab collection and the main foyer has Reception and Report delivery. The first floor has consultation rooms, ophthalmology department, general radiology and dental department and X-ray rooms, ENT department, Medical Records department, Consultation rooms and faculty office and reception. The 2nd floor has neurology department consisting of EEG, EMG and psychiatry consultation rooms, Endocrinology, urology, dietician consultation rooms, Anaesthetist consultation and dental consultation rooms, reception and consultant's secretary rooms. The 3rd floor has blood bank, stat lab, endoscopy department, cardiology consultation rooms plus PFT, Colour Doppler, ECG, Stress test, 2D Echo, PV study and pulmonology consultation rooms and Health check- up and Reception. The 4th floor is only for administrative staff and has no patient footfall. It has administrative department, meeting room and doctor's lounge, library and marketing and architect department, conference hall and waiting area. Later we had and induction in accident and emergency department. The Casualty department works 24 by 7 and has 9 beds. The patient is classified as per triage, all kinds of patients are taken except for pregnant and burns patient, primary treatment is given to these patients and shifted to other nearby hospital. The team has disaster preparedness protocol to manage any kind of disasters as well. If the patient comes in emergency Rapid RT-PCR is done in stat and then the patient is shifted to the IPD after giving primary treatment. After that we had an induction of OT and CATHLAB, there are in all 11 Operation theatres 9 OT and 2 Cath labs the OT has 8 bedded recovery rooms and 9 common scrub rooms plus OT sub store and dirty and clean utility room, the CSSD lift is connected to the OT where in sterile and unsterile instruments are sent every day. After that we had and induction of laboratory medicine. The laboratory of Hinduja hospital is CAP and NABL accredited and has 5 sections- Haematology, Biochemistry, Immunology, Histopathology and Microbiology. Per month there are 90000 to 100000 samples tested and reported, the laboratory is known for Gene Xpert test in

Tuberculosis and daily 150 samples approximately are collected for testing of tuberculosis. There are 200 staffs working in the Laboratory department, for OPD the sample collection is done on OPD ground floor and every 40 minutes' transporter transports samples to concerned departments. For IPD patient phlebotomist visits and collects the sample and gives it to concerned department. Besides this the blood bank has NAT testing for Triple H testing and confidentiality of all reports are maintained, critical values of IPD patients are informed to the consultant.

On 12th May, 2021 we had an induction of CSSD department which is on the 5th floor of the IPD department. The area is 4 parts that are Decontamination area/ cleaning and washing area, Assembling and packing area, sterile storage area and dispatch area, Linen and dressing material area. Sterilization is done in 3 ways dry heat, Gas sterilization and autoclaving that is steam sterilization. The instruments are packed in peel pouches and medical grade paper and non -woven material. Next department that was observed was Admission and billing, which works 24 by 7, the billing department

Gives estimation for the stay and collects deposit for OT and booking of the beds, the interim bills are given to the patient relatives and charges are explained, TPA patients are also made aware of formalities. At the time of discharge final bill is given to the patient and the discharge process has a TAT time of one hour only, if the time increases the reason has to be given by manager to the Operations manager in the meeting. It has 46 staffs in all. The billing process is decentralized in IVF and Short Stay Service unit. After that we had an induction of ICU, the ICU has 43 beds, 20 beds on 2nd floor and 23 beds on 10th floor and 9 beds of PICU in which 6 beds are for paediatrics and 3 beds are of NICU, The ICU has Intensivist under him there is EICU doctor and an associate emergency doctor and there are ICU doctors under them, EICU doctor plays a major role in allocating bed to the patients. After that we had a brief induction of Food service department. It has 2 dining halls one for doctors and other for other staff and has hot kitchen, preparation area and washing area for vessels, It prepares 3500 meals per day and serves staff and patients. The food is served by hot trolleys to the patients and the diet is served as per the patient's condition. There are 129 staff working in the FSD and the food is tested every year by sending it to labs as per food safety act. Next we had an induction of radiation oncology department where in radiation therapy is given and branchy therapy is given to the cancer patient. The speciality of this department is that the department is 80% paperless

and there is no chance of human error as everything is done by machine and software called Varian.

On 13th May 2021 we had a brief induction of Short Stay Service unit which is located on 4th floor in the IPD building. It has 19 beds out of which 14 beds are of ward class and 4 rooms are single rooms. There are 11 nurses and 3 housekeeping staff in each shift. Patients are admitted for day-care procedures like angiography, cataract operation, chemotherapy, MTP etc. After that we had a brief induction of Engineering department in which the role of engineering department is to ensure that all equipment's and services of the hospital are kept in a serviceable state all the time and to minimize operational expenses of hospital by saving energy and reducing repair and maintenance cost. The scope of engineering is looking after following- Electrical power supply, HVAC and refrigeration, steam and hot water, water filtration system, medical gases, fire detection alarms and firefighting systems, internal and external plumbing systems, civil work and LPG and PNG gas supply. After that we had an induction of IVF department where the IVF treatment and counselling is done for the couples and it has 4 beds for the 4-5 hours' short stay and has a decentralized billing.

Later we had an induction of Medical records department, the MRD preserves IPD patient records for 5 years and OPD records for 2 years, the files are completed and then audited and then scanned for future reference. For MLC cases the records are preserved in double lock and key system. After that we had an induction of AKD department aka dialysis department. It has 14 beds and 18 dialysis machines. 3 dialysis machines are in the ICU for critical patients. The dialysis department has sub stores, RO plant machine for water filtration, reprocessing unit where dialysis tubes are sterilized. The department works from 7am to 11 am and 14 patients are called in 4 shifts every day for dialysis. After that we had an induction of pharmacy department, where the processes are dispatching the medicines to pharmacy and billing them. The pharmacy is only available for inpatients. Later we had a induction of radiology and imaging department which has ultrasound, nuclear medicine and PET scan, mammography and sono mammography, colour Doppler, CT scan, MRI, BMD , Fluoroscopy, DSA, X-ray. Later we had a brief induction of Customer service department. The customer service department addresses the patient complaints by taking rounds in every ward and taking feedback regarding the service, the problem has to be solved by them within 1 day. Patient counselling is done by them and at the time of discharge the even the discharge process is explained to them by the

Customer service department. Later we went to laundry department which is located in the basement of IPD department of besides engineering department and the department is connected to all wards till 16th floor via chute for easy transport of dirty linen and each department get its stock of linen of a week on selected day in a week, the laundry department also washes staff and patient uniforms on daily basis and has big washing machines of 99kg, 120kg, 60kg and 45 kg each. Later we had an induction of marketing department which looks after 2 things of the hospital that is sales and marketing communication the role of sales department is doing business development, camps, tie up with insurance companies and corporates and TPA companies, tie up with government organizations and other hospitals, identifying potential customers, CME's and events. The marketing communication does digital marketing and public relations, newspaper advertisings, billboards, brochures, SMS and taking care of brand name. Later we had an induction of housekeeping department where how the biomedical waste is segregated and disposed following the guidelines of MPCB, the housekeeping staff is trained every week for patient safety and cleaning etc. The housekeeping staff of any hospital is the backbone in keeping the hospital environment clean and hygienic.

OBSERVATIONAL LEARNINGS:

1. The hospital is NABH Accredited hospital and has SOP's for each and every department and each department in the hospital assures that the quality of service provided to every patient is of highest quality.
2. The engineering department has their own software called Treatwell which addresses engineering related issues and which has to be solved within the half hour after complaint is registered in the software. This is most efficient way to solve the issues.
3. The radiation oncology has 2 software: Varian and Care path which makes the department 80% paperless. This shows the efficiency of the department. And is an ideal example of sustainability.

TIME AND MOTION STUDY OF THE OPD ATTENDANT STAFF

INTRODUCTION: -

The housekeeping staff of any hospital is the backbone in keeping the hospital environment clean and hygienic. This project focuses on the time and motion study of the housekeeping attendant staff in OPD Department. The first impression of any hospital is due to the cleanliness in the hospital.

There are in all 4 Faculty staff attendant in housekeeping which only look after 1st Floor (Wing 1 and Wing 4) there is no rotation for them. There are 17 OPD Attendant Staff which are on rotational shift. In all there are 21 OPD Attendant staff. The list is as follows:

EMPLOYEE NAME	**DEPARTMENT**
DEVJI P ARDE	FACULTY
MUKESH RAORANE	FACULTY
SUNIL VASANT DANDEKAR	FACULTY
UMESH PATIL	FACULTY
ABHISHEK ALCHETTI	O.P.D
ABHISHEK KHAIRE	O.P.D
ADITYA UPARKAR	O.P.D
AJAY RAORANE	O.P.D
ASHOK MOHITE	O.P.D
DEEPAK BHILLARE	O.P.D
RAHUL DANDEKAR	O.P.D

SANJAY BANSODE	O.P.D
SANJAY VARTAK	O.P.D
SANTOSH RUPE	O.P.D
REJENDRA GHATYE	O.P.D
SHRIRANG MORE	O.P.D
SUNIL SATHE	O.P.D
TEJESH JADHAV	O.P.D
USHA BOBADE	O.P.D
VAIBHAV SHINDE	O.P.D
VISHAL SHINDE	O.P.D

GENERAL DUTIES AND RESPONSIBILITIES:

A) FACULTY STAFF:

1) Taking keys from the security at 7 am
2) Opening of Wing 1 and Wing 4 of 1st Floor in OPD building
3) Bottle refilling
4) Cleaning and dusting.
5) Collecting Milk from Food Service Department from 6th Floor IPD building
6) Making tea/coffee for staff and consultants.
7) Tea distribution
8) Patient transportation
9) File and other material transportation.
10) Fetching and arranging linen/laundry for staff
11) Closing of the department after the shift and handling keys back to the security.

B) O.P.D STAFF:

1) Collecting / depositing keys from security Opening and closing of the sections, reception counters.
2) Dusting, sweeping, cleaning OPD wings including consultation rooms.
3) Transport of reports multiple times per day.
4) Transport of CSSD items to and fro from IPD (Including collecting articles from sub-sections)
5) Obtaining and arranging indent items from various stores
6) Miscellaneous office transport- for instance replenishing stationary to reception counters/indent papers to stores, refund approval signatures and refund cheques.
7) Escorting wheelchair/ stretcher patients according to hospital protocols, from OPD entrance to various OPD services/ investigations/service source/Consultation completion.
8) Equipment sterilization: Washing of material and keeping in sterilizer
9) Equipment cleaning
10) Equipment transfer to repair section in case of breakdown/ requirement.
11) Arranging washing off privacy curtains once in a week
12) Assisting in installing/ replacing the disposable bed sheets as and when called for.
13) Serving tea/ coffee to doctors and staff in morning and evening
14) Co-ordinate with the OPD facility executive on relevant issues related to delivery of service quality.

Interactions- with OPD supervisory team, Doctors, Technicians, Clerical and other health professionals to provide seamless patient care service.

OBJECTIVE OF THE STUDY:

1. Reduce overtime of the housekeeping staff.
2. Framing weekly roaster in a sustainable way to increase the efficiency of the staff.

3. Giving suggestions and recommendations so the time taken for certain activities can be reduced and staff can be more patient centric.

DATA COLLECTION METHOD:

Direct interaction with all the attendant staff was done from the period 18TH May 2021 to 3rd June, 2021 on daily basis to know their actual core duties and responsibility.

To collect primary data detailed observation was done to record the time taken for each activity done by the attendant staff for the time and motion study.

FINDINGS:

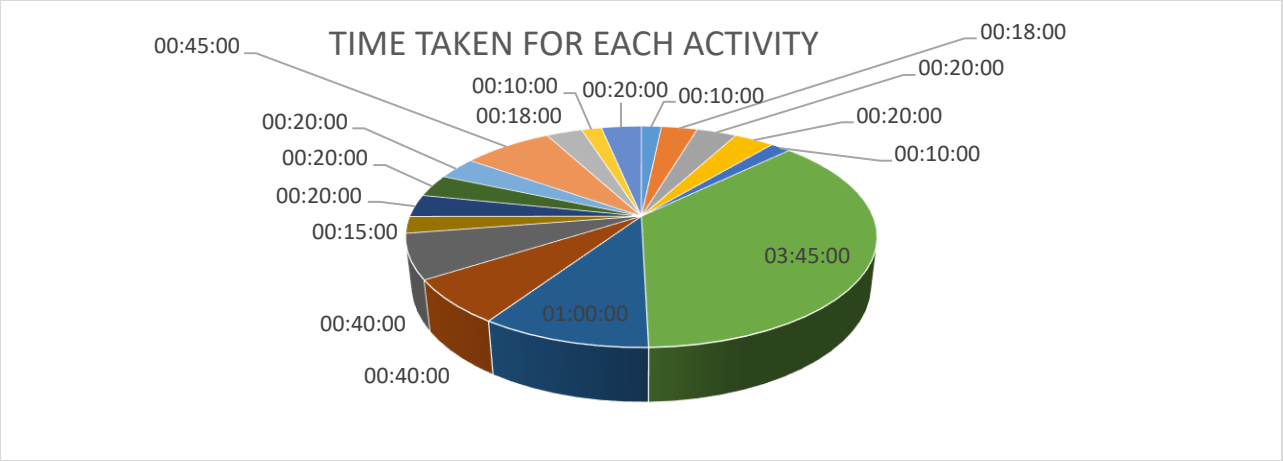
The list of activities and time taken for each activity performed by an attendant was observed and recorded in AKD Department, Gamma Knife Department, ENT Department, Ophthalmology Department, Physiotherapy Department, Neurology department, Cardiology and PFT department where there is major patient footfall every day.

GAMMA KNIFE DEPARTMENT

Working hours: 7am to 3pm

RESPONSIBILITIES	TIME TAKEN FOR EACH ACTIVITY
General Responsibilities:	
Collecting keys from security at 7am in the morning to open the department	10 minutes
Opening the doors of the department (6 doors x 3 minutes)	18 minutes
Dry mopping the whole department	20 minutes
Dusting the tables and computers with dry cloth	20 minutes
Co-ordinating with consultant if there is a case scheduled for in patient	10 minutes
Helping consultant in patient handling and positioning for the procedure (1 patient takes approximately 75 minutes) (3 cases x 75 minutes)	225 minutes
Transporting patient back to the designated bed after the procedure (3 patients x 20 minutes)	60 minutes
Collecting stationary as per requirement from General stores	40 minutes
Collecting medicine as per requirement from Pharmacy	40 minutes
Bottle refilling from ground floor water purifier for staff (7 bottles x 2 minutes)	15 minutes
Collecting tea from ground floor pantry twice in a day (9:30 am and 2:30 evening) (10 minutes x 2)	20 minutes
Tea distribution (10 minutes x 2)	20 minutes
Washing and cleaning the tea kettle twice after tea distribution (10 minutes x 2)	20 minutes

Wet mopping the whole department before closing	45 minutes
Closing of the department (6 doors x 2 minutes)	18 minutes
Handling the keys to the security	
Technical Responsibilities:	
Cleaning of machine with dry cloth everyday once	20 minutes
Total Time	**556 minutes**



Observations:

1. It was observed that the attendant staff is only needed when there are Gamma knife cases, otherwise the staff has ample of idle time when there is no case or less cases
2. Dry mopping is done in the morning and wet mopping is done before closing the department

AKD Department:

Working hours- 7am to 11pm

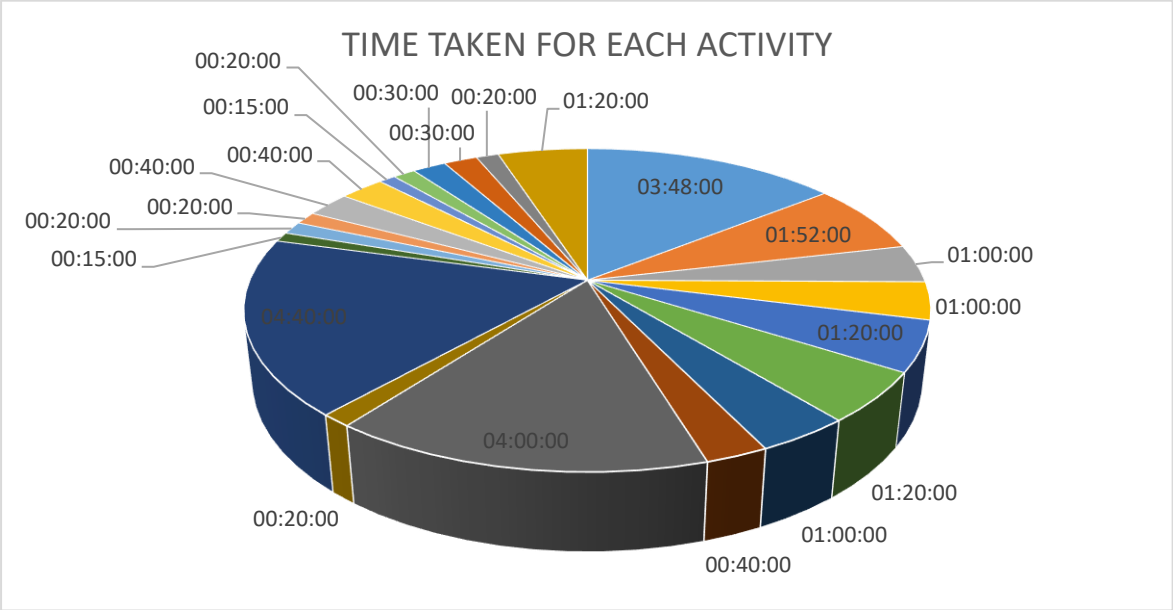
Attendant Shift: 7 am – 3 pm and 3pm to 11 pm

RESPONSIBILITIES	**TIME TAKEN FOR EACH ACTIVITY**
19 Cans used to fill solutions for dialysis are been washed and given to the dialysis technicians (19 cans x 3minutes x 4 shifts)	228 minutes
14 cans of solutions are taken into the trolley and are placed near each bed in every shift (14 cans x 2minutes x 4 shifts)	112 minutes
5 cans of sugar free and potassium solution to be placed at the nursing station in each shift (5 cans x 3minutes x 4shitfs)	60 minutes
Arranging saline bottle on the nursing station for technician to use (arranged twice in each shift) (1000ml saline, 2 boxes and each box contains 15 saline bottles) (30 minutes x 2 shifts)	60 minutes
Dry mopping whole department including R/O plant area, reprocessing unit, sterilization room, doctor/staff room, sub-store pantry, patient area, reception area twice. Once in the morning after 1st shift and second before closing the department (40 minutes x 2 shifts)	80 minutes
Wet mopping of the whole department	80 minutes
Dusting of nursing stations, computers, reception, doctor/staff room tables (30 minutes x 2 times)	60 minutes
6 cans of dialysis solutions to be transferred to s1 department for covid patients daily (once in a day)	40 minutes
Collecting and returning used 30 HD Sets from CSSD department and collecting medicine from the pharmacy in West Block (twice a day) (120 minutes x 2 shifts)	240 minutes

Sending 5 cans of dialysis solution in West Block 10th floor ICU once in a day	20 minutes
Disinfecting / wiping dialysis machine after every dialysis procedure (14 machines x 5 minutes x 4 shifts)	280 minutes
Sending blood samples of patients in Laboratory at the ground floor (OPD patients only)	15 minutes
Sending blood samples of IPD Dialysis patients to the 3RD floor OPD Stat laboratory	20 minutes
Sanistisation of the bed and curtains in case of covid suspected patient has taken treatment of dialysis	20 minutes
Movement of IPD patients back to their ward post dialysis (per patient)	40 minutes
Placing dirty laundry in hamper bag and packing blood stained linen separately if any twice a day (20 minutes x 2 shifts)	40 minutes
In case of blood stains on the floor wet mopping done with disinfectant	15 minutes
Changing hamper bag for dirty laundry twice a day (morning and evening) (10 minutes x 2 shifts)	20 minutes
Replenishing general stores stationary as per requirement	30 minutes
Cleaning of refrigeration every Saturday in the pantry	30 minutes
Collecting ECG portable machine from 3rd floor and keeping it back in case of emergencies only.	20 minutes
Collecting 50kg salt bag from Engineering department (West block) twice in a month (40 minutes x 2 times in a month)	80 minutes
Total Time	**1590 minutes**

Observations:

1. It was observed that major time of the attendant staff goes into getting HD sets from CSSD Department.
2. Dry mopping is done twice in a day.

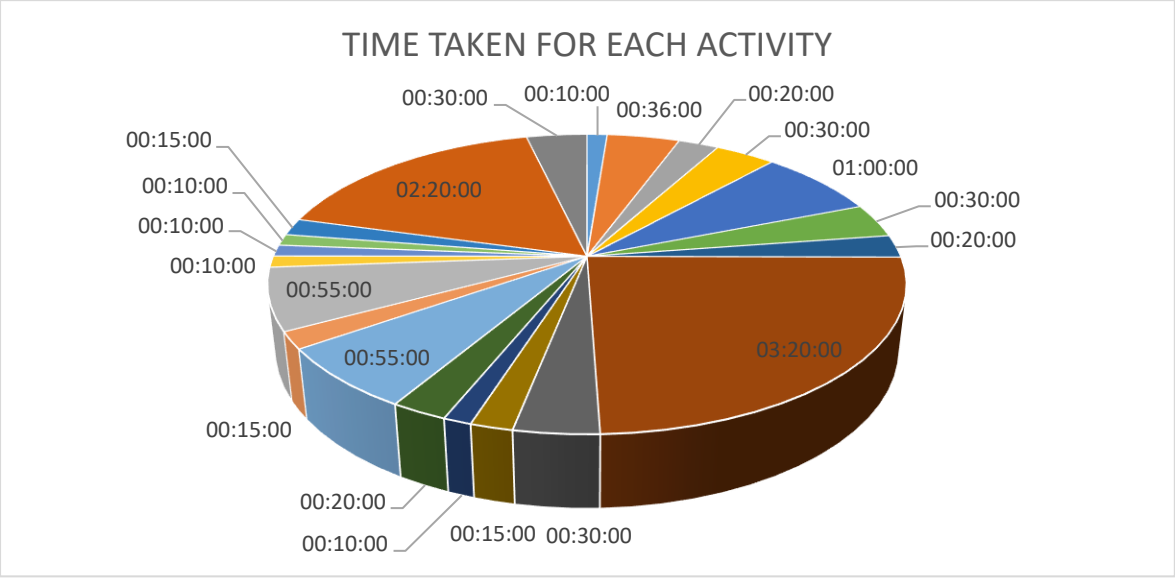


ENT DEPARTMENT

Working hours: 8 am to 6 pm

RESPONSIBILITIES	TIME TAKEN FOR EACH ACTIVITY
a) General responsibilities	
Collecting keys from the security to open the department	10 minutes
Opening the doors of the department (12 doors x 3 minutes)	36 minutes
Collecting milk from Food service department (West block) once in a day	20 minutes
Bottle refilling from the first floor cooler for staff and consultant (10 bottles x 3 minutes)	30 minutes
Tea making twice in a day (morning 9:30 and evening 3 pm) (30 minutes x 2)	60 minutes
Tea distribution (15 minutes x 2 times)	30 minutes
Washing cups in the pantry	20 minutes
Calling out patient names for consultation and helping consultant to settle the patient (20 patients x 10 minutes)	200 minutes
Replenishing the stationary as per the requirement	30 minutes
Collecting soiled linen and keeping the soiled linen in dirty linen room at the end of the day	15 minutes
Putting the new hamper bag to collect dirty laundry	10 minutes
Sanitising / disinfecting chairs and tables after visit of each mucormycosis patient (2 patients per day) (10 minutes x 2)	20 minutes
Dry mopping the whole ENT department all 11 rooms (5 minutes each room x 11 rooms)	55 minutes
Dusting of tables and computers	15 minutes

Wet mopping the 11 rooms before closing the department (5 minutes x 11 rooms)	55 minutes
Closing the department doors	10 minutes
Handling keys to security	10 minutes
b) Technical responsibilities	
Washing the sterilizer	10 minutes
Disinfecting instruments in the disinfectant water	15 minutes
Sterilizing scopes and instruments in sterilizer twice in a day (70 minutes x 2)	140 minutes
Transporting scopes to OT during cochlear implant cases and bringing back to the department post-surgery(usually on Saturdays)	30 minutes
Total time	**821 minutes**



Observations:

1. It was observed that there is no reliever sent for the attendant when there is major patient footfall in the morning 11am- 2pm afternoon.
2. Bottle refilling is done for all staff which consumes time.

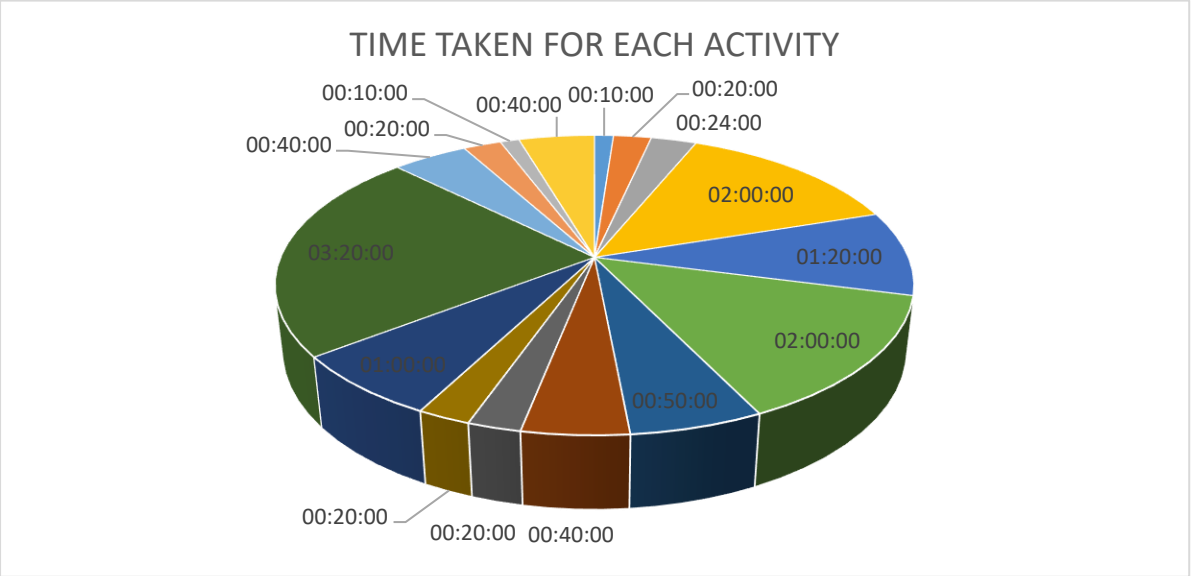
3. The attendant's time goes in tea preparation in the pantry while there is patient footfall.

OPHTHALMOLOGY DEPARTMENT:

Working hours: 8 am to 7pm

RESPONSIBILITIES	**TIME TAKEN FOR EACH ACTIVITY**
General responsibilities:	
Collecting keys from security at 8am in the morning to open the department	10 minutes
Opening the doors of the department (10 doors x 2 minutes)	20 minutes
Bottle refilling of consultant from pantry room 1st floor (8 bottles x 3 minutes)	24 minutes
Dry mopping of the floor twice a day (60 minutes x 2)	120 minutes
Dusting of tables (12 tables) and windows (40 minutes x 2)	80 minutes
Wet mopping of floor twice a day (60 minutes x 2)	120 minutes
Getting tea filled from OPD ground floor when tea comes from FSD (morning 9:30am and evening 3pm) twice a day (25 minutes x 2)	50 minutes
Tea distribution twice a day (20 minutes x 2)	40 minutes
Collecting dirty linen and keeping in the dirty linen room (10 minutes x 2)	20 minutes
Putting hamper bag to collect dirty gowns (10 minutes x 2)	20 minutes

Collecting vouchers of the patient and calling out names of the each patient and giving it to the nursing station (20 pts x 3 min)	60 minutes
Calling out patients name and helping technicians and consultant to settle the patients / patient movement (20 patients x 10 minutes)	200 minutes
Replenishing stationary stock as per the requirements	40 minutes
Closing of the department (10 doors x 2 minutes)	20 minutes
Handing over keys to the security	10 minutes
Technical responsibilities:	
Dusting of optometry machine twice a day (20 minutes x 2)	40 minutes
Total time	**874 minutes**



Observations:

1. It was observed that the reliever for the attendant is not sent on time before lunch which delays the lunch time of the attendant.
2. Dry mopping and wet mopping is done twice in the morning and before closing department as well.

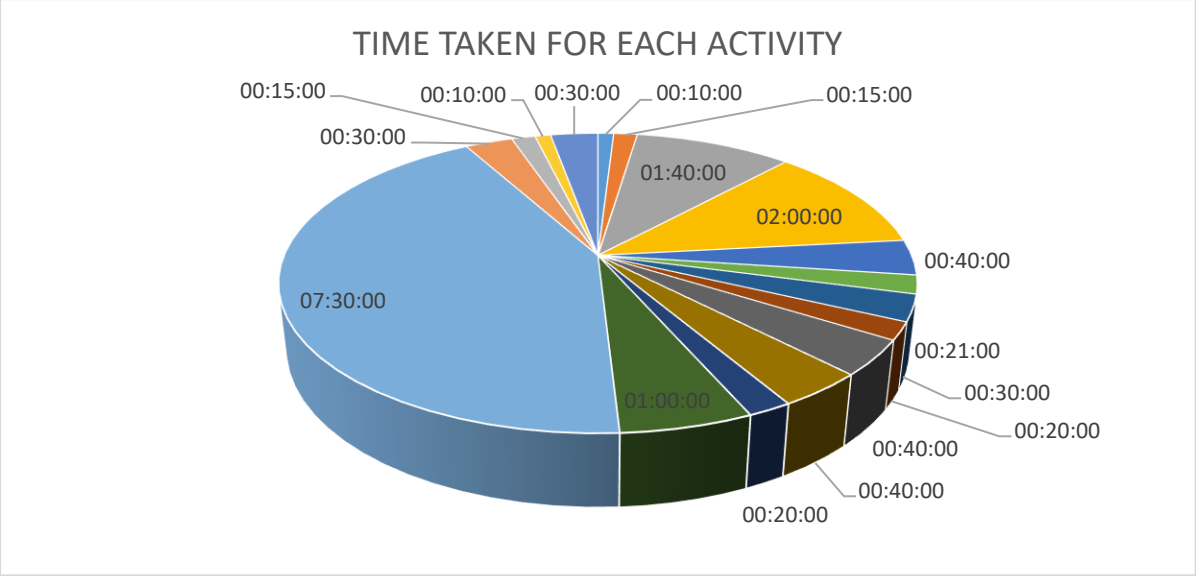
3. Bottle refilling is done for all staff which consumes time

PHYSIOTHERAPHY DEPARTMENT:

Working hours: 7am to 10pm

RESPONSIBILITIES	**TIME TAKEN FOR EACH ACTIVITY**
General Responsibilities:	
Taking keys from the security to open the department	10 minutes
Opening the doors of the department (5 doors x 3 minutes)	15 minutes
Dry mopping of the whole department twice (50 minutes x 2)	100 minutes
Wet mopping of the whole department (60 minutes x 2)	120 minutes
Dusting of tables with cloth (20 minutes x 2)	40 minutes
Bottle washing and refilling of the staff in the physiotherapy department itself (7 bottles x 3 minutes)	21 minutes
Collecting dirty linen and keeping in the dirty linen room on 1st floor (15 minutes x 2)	30 minutes
Putting hamper bag to collect dirty gowns (10 minutes x 2)	20 minutes
Collecting tea from ground floor pantry twice in a day (9:30 am and 2:30 evening) (20 minutes x 2)	40 minutes
Tea distribution (20 minutes x 2)	40 minutes

Washing and cleaning the tea kettle twice after tea distribution (10 minutes x 2)	20 minutes
Cleaning mirrors of the department every alternate days once in a day	60 minutes
Patient transportation and assisting physiotherapist in patient movements (30 patients x 15 minutes)	450 minutes
Stationary replenishing as per the requirement from stores	30 minutes
Closing of the department	15 minutes
Handling the keys to the security	10 minutes
Technical responsibilities:	
Cleaning of physiotherapy machines alternate days once with dry cloth	30 minutes
Total time	**1011 minutes**



Observations:

1. Bottle refilling is done for all staff which consumes time.

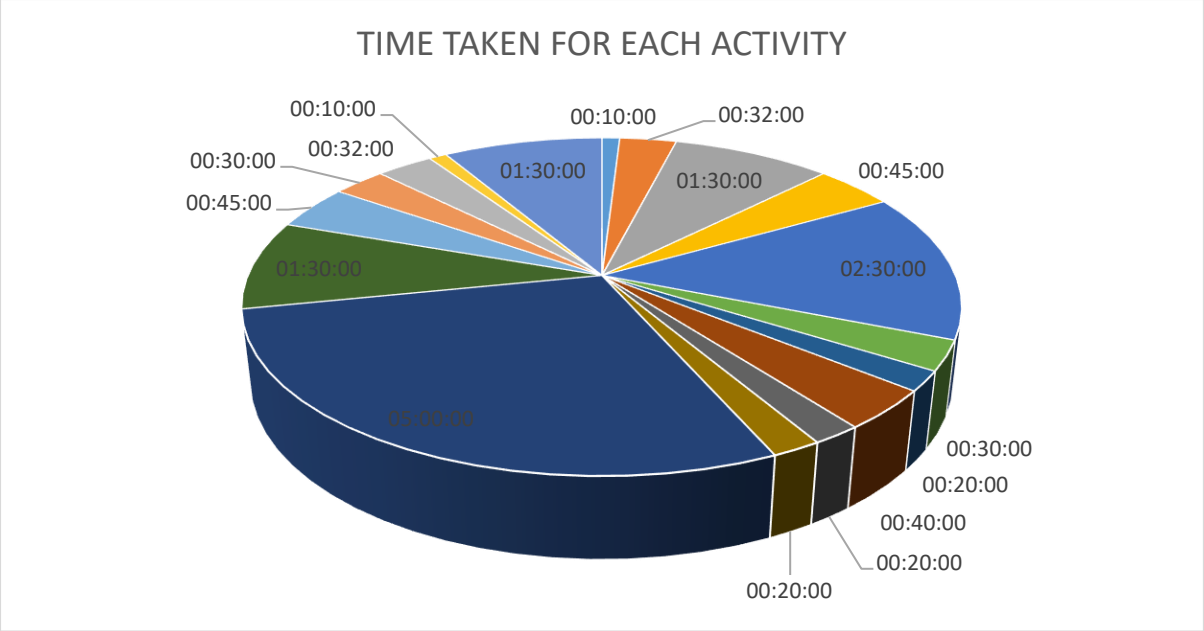
2. It was observed there are hardly any patient footfall in the morning from 8am to 11am so the staff has ample of idle time.

CARDIOLOGY DEPARTMENT:

Working hours: 7am to 8pm

RESPONSIBILITIES	**TIME TAKEN FOR EACH ACTIVITY**
General Responsibilities:	
Collecting keys from security at 7am in the morning to open the department	10 minutes
Opening the doors of the department (16 doors x 2 minutes)	32 minutes
Wet mopping of the whole department in the morning	90 minutes
Bottle washing and refilling for the consultants and the staff from the 3rd floor water purifier in the lobby (15 bottles x 3 minutes)	45 minutes
Dusting of the computers and tables with the dry of all 15 rooms (15 rooms x 10 minutes)	150 minutes
Collecting dirty linen and keeping in the dirty linen room on 1st floor (15 minutes x 2)	30 minutes
Putting hamper bag to collect dirty gowns (10 minutes x 2)	20 minutes

Collecting tea from ground floor pantry twice in a day (9:30 am and 2:30 evening) (20 minutes x 2)	40 minutes
Tea distribution (30 minutes x 2)	60 minutes
Washing and cleaning the tea kettle twice after tea distribution (10 minutes x 2)	20 minutes
Patient transportation and assisting consultant/technician in patient movements (15 patients x 20 minutes)	300 minutes
Dry mopping of the whole department before closing the department (15 rooms x 6 minutes)	90 minutes
Collecting stationary on every Saturday from General stores	45 minutes
Arranging the stationaries on the place in relevant department as per the requirements	30 minutes
Closing of the department (16 doors x 2 minutes)	32 minutes
Handling the keys to the security	10 minutes
Technical Responsibilities:	
Cleaning of cardio machines every day with dry cloth	90 minutes
Total Time	**1094 minutes**



Observations:

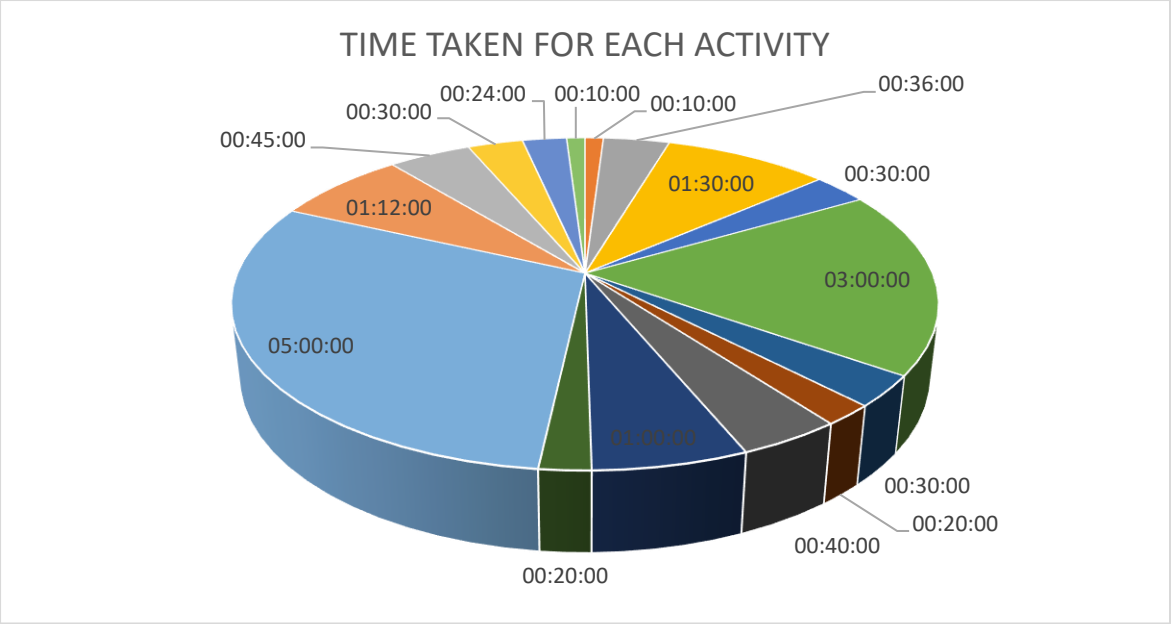
1. Bottle refilling is done for all staff which consumes time.
2. No wheelchair on the floor available for patient movement, the attendant has to go to the ground floor and collect the wheelchair to transport the patient.
3. Wet mopping is done in the morning and dry mopping is done before closing the department.

NEUROLOGY DEPARTMENT

Working hours: 8 am to 8pm

RESPONSIBILITIES	**TIME TAKEN FOR EACH ACTIVITY**
General Responsibilities:	
Collecting keys from security at 8am in the morning to open the department	10 minutes
Opening the doors of the department (12 doors x 3 minutes)	36 minutes
Wet mopping of the whole department in the morning	90 minutes
Bottle washing and refilling for the consultants and the staff from the 3rd floor water purifier in the lobby (10 bottles x 3 minutes)	30 minutes
Dusting of the computers and tables with the dry of all 15 rooms (12 rooms x 15 minutes)	180 minutes
Collecting dirty linen and keeping in the dirty linen room on 1st floor (15 minutes x 2)	30 minutes
Putting hamper bag to collect dirty gowns (10 minutes x 2)	20 minutes
Collecting tea from ground floor pantry twice in a day (9:30 am and 2:30 evening) (20 minutes x 2)	40 minutes
Tea distribution (30 minutes x 2)	60 minutes

Washing and cleaning the tea kettle twice after tea distribution (10 minutes x 2)	20 minutes
Patient transportation and assisting consultant/technician in patient movements (20 patients x 15 minutes)	300 minutes
Dry mopping of the whole department before closing the department (12 rooms x 6 minutes)	90 minutes
Collecting stationary on every Saturday from General stores	45 minutes
Arranging the stationaries on the place in relevant department as per the requirements	30 minutes
Closing of the department (12 doors x 2 minutes)	24 minutes
Handling the keys to the security	10 minutes
Total Time	**1015 minutes**



Observations:

1. Bottle refilling is done for all staff which consumes time.

2. No wheelchair on the floor available for patient movement, the attendant has to go to the ground floor and collect the wheelchair to transport the patient.
3. Wet mopping is done in the morning and dry mopping is done before closing the department.

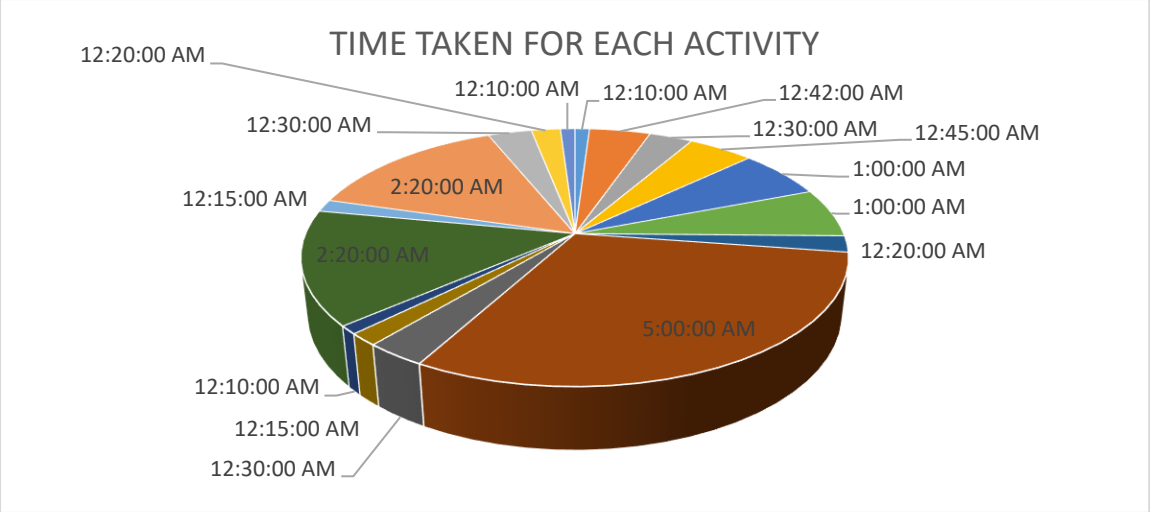
FACULTY STAFF ATTENDANT:

Working hours: 7am to 8pm

(This staff only manages Wing 1 and 4 on 1st floor and they are not included in OPD Attendants)

RESPONSIBILITIES	**TIME TAKEN FOR EACH ACTIVITY**
Collecting keys from the security to open the department	10 minutes
Opening the doors of the department (14 doors x 3 minutes)	42 minutes
Collecting milk from Food service department (West block) once in a day	30 minutes
Bottle refilling from the first floor cooler (15 bottles x 3 minutes)	45 minutes
Tea making twice in a day (morning 9:30 and evening 3 pm) (30 minutes x 2)	60 minutes
Tea distribution (30 minutes x 2 times)	60 minutes
Washing cups in the pantry	20 minutes

Patient transportation (30 patients x 10 minutes)	300 minutes
Replenishing the stationary as per the requirement	30 minutes
Collecting soiled linen and keeping the soiled linen in dirty linen room at the end of the day	15 minutes
Putting the new hamper bag to collect dirty laundry	10 minutes
Dry mopping the department all 14 rooms (5 minutes each room x 14 rooms x 2 shifts)	140 minutes
Dusting of tables and computers	15 minutes
Wet mopping the 14 rooms before closing the department (5 minutes x 14 rooms x 2 shifts)	140 minutes
Transferring documents to other departments	30 minutes
Closing the department doors	20 minutes
Handling keys to security	10 minutes



Observations:

1. Dry mopping and wet mopping is done twice in the morning and before closing department as well.
2. Bottle refilling is done for all staff which consumes time.
3. It was observed out of 4 faculty staffs 3 staffs are on duty in the morning and one person is only for the evening shift.
4. The attendant's time goes in tea preparation in the pantry while there is patient footfall.

DUTY ROASTER FOR ATTENDANT STAFF AND FACULTY STAFF TO INCREASE THE EFFICIENCY OF THE STAFF:

DUTY ROASTER FOR HOUSEKEEPING ATTENDANT STAFF			
NAME	**DEPARTMENT**	**TIMINGS**	**MANPOWER REQUIREMENTS**
SANJAY BANSODE	GROUND FLOOR	8AM TO 4PM	1
SHRIRANG MORE	GAMMA KNIFE	7AM TO 3PM	1
VAIBHAV SHINDE	REPORT DISPATCH/ GROUND FLOOR CLEANING	7AM TO 3PM	1
AJAY RAORANE	ONCO CONSULTATION	7AM TO 3PM	1
ABSHISHEK KHAIRE	ENT	8AM TO 4PM	1
TEJESH JADHAV	OPTHALMOLOGY	8AM TO 4PM	1
VISHAL SHINDE	NEPHROLOGY	7AM TO 3PM	1
USHA BOBADE	NEUROLOGY	7AM TO 3PM	1
RAHUL DANDEKAR	CDC AND PHYSIOTHERAPY	7AM TO 3PM	1
SANTOSH RUPE	DENTAL	7AM TO 3PM	1
RAJENDRA GHATYE	CARDIOLOGY	7AM TO 3PM	1
DEEPAK BHILLARE	ENT	12PM TO 8PM	1

ABHISHEK ALCHETTI	CARDIOLOGY	12PM TO 8PM	1
SUNIL SATHE	REPORT DISPATCH/ GROUND FLOOR CLEANING	12PM TO 8PM	1
ASHOK MOHITE	DENTAL/ PATIENT TRANSPORT	12PM TO 8PM	1
ADITYA UPARKAR	NEUROLOGY DEPARTMENT	12PM TO 8PM	1
SANJAY VARTAK	OPTHALMOLOGY	12PM TO 8PM	1
FACULTY STAFF			
DEVJI P ARDE	1st FLOOR WING 1 AND 4	7AM TO 3PM	1
MUKESH RAORANE	1st FLOOR WING 1 AND 4	7AM TO 3PM	1
SUNIL VASANT DANDEKAR	1st FLOOR WING 1 AND 4	12PM TO 8PM	1
UMESH PATIL	1st FLOOR WING 1 AND 4	12PM TO 8PM	1
TOTAL MANPOWER			**21**

OVERALL FINDINGS:

1. The housekeeping attendant staff did dry and wet mopping and dusting twice in a day which took most of the time of the staff.
2. The housekeeping staff also took major time for bottle filling and refilling of the staff other than consultant.
3. The faculty staff's major time was spent in the making of the tea for the staff.
4. The cardiology and neurology department did not have their own wheelchairs in the department for patient transportation.
5. The housekeeping attendant staff in Gamma knife department is idle most of the times.
6. The duty rota of the OPD attendant staff and faculty attendant staff was not properly made, which increased the overtime of the staff.
7. There was no rotation of the OPD attendant staff, each staff should be trained in each department which reduces the dependency on one staff and increases the efficiency of whole staff.

LIMITATIONS OF THE STUDY:

1. The role of housekeeping staff is not same each day hence it is difficult to track the time and motion of the staff as the role keeps changing.
2. The intern was introduced to the staff by one to one interaction. As the staff knew their activities were observed by someone, naturally they try to show the 'desk behaviour'.

CONCLUSION:

The housekeeping staff is the backbone of the any hospital. Hence to increase the staff efficiency job rotation was necessary to reduce the dependency on one staff for the departmental tasks. It was also important to reduce the overtime of the staff as the hospital had to pay overtime to the staff, hence the rota is framed in such a way that the overtime can be reduced. The time and motion study helped in tracking where the major time of the housekeeping attendant staff has been spent and how the time can be saved by observing and giving recommendations. The major time of any staff went in cleaning the department twice, which can be saved by cleaning the department just before closing.

RECOMMENDATIONS:

1. Cleaning including dry mopping and wet mopping should be done only before closing the department so there is no cleaning work at the morning and there is more focus on the patient.
2. Only dusting and little touch up can be done in the morning before starting of the patient footfall.
3. In Gamma department and physiotherapy if there are less cases the same attendant can be transferred to any other department as a reliever or can be sent to other department to help other attendant where there are more number of patients mostly in the ENT department.
4. In the ENT department tea can be ordered from FSD department like all other departments. As preparing tea for the staff and consultant consumes more time.
5. Attendant staff should only do bottle refilling for consultants and not for other staff as it consumes time.
6. At least 2 Wheelchairs in cardiology department and 2 wheelchairs in neurology department are to be kept so as to patient does not have to wait, as attendant has to bring the wheel chair from the ground floor to transport patient.
7. In AKD Department HD sets for each shift can be brought altogether in the morning and the used HD sets can be given in the night shift before closing the department, this will consume less time of the attendant and can the attendant can focus on the patients.
8. Duty roaster is prepared in such a way that the manpower is used efficiently and there is no idle time for any staff. And all staff are to be put in rotation in each department in every two weeks so that all the attendant staff can be trained for all the activities performed in each department.
9. 2 faculty staff should be kept on duty in the morning and 2 in the evening shift so that one staff can manage cleaning and the other staff can manage patients.

SCOPE TAGGING REASONS FOR REFUNDS AT OPD

INTRODUCTION AND OBJECTIVE:

Service vouchers are refunded for various reasons right from errors by Reception staff to waivers by Doctors, clinic cancellations etc., capturing reasons for refunds will give management an insight into recurrent reasons and understand the gaps to overcome.

Expectation from this development: OPD CARE module, Hinduja Clinic Vouchering.

SCOPE:

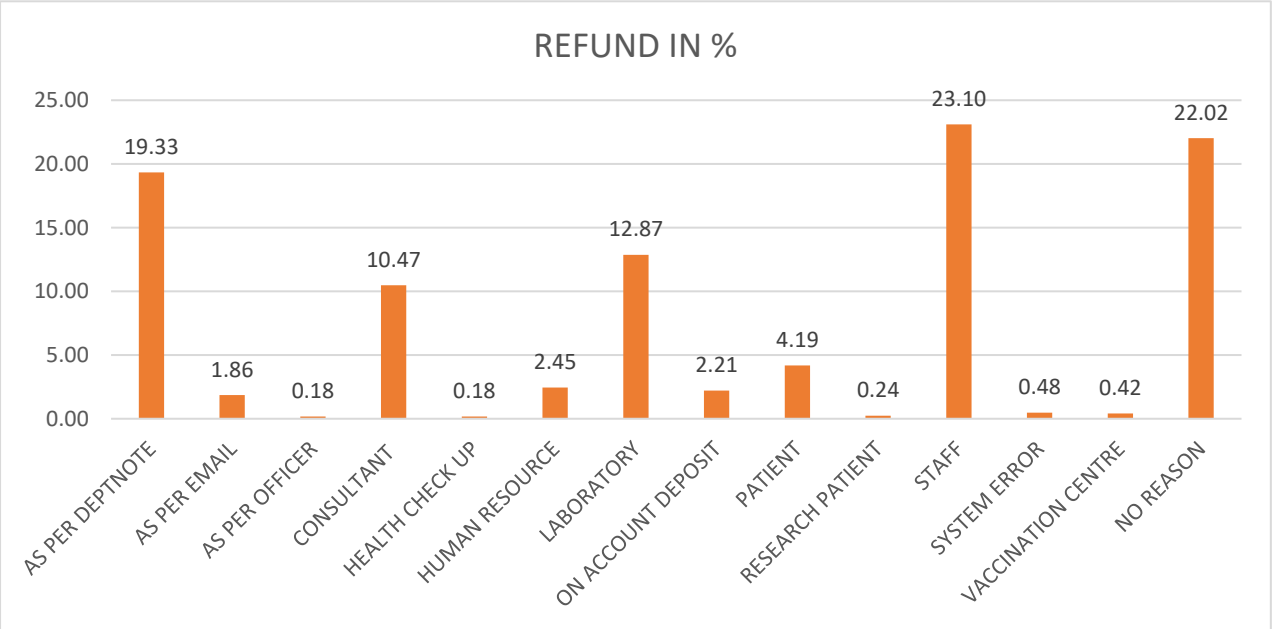
In the refund module there is no set of fixed reasons when the service vouchers are refunded. The billing staff has to state the reasons for the refund by typing in the module, besides there is no standard format for the reasons that are stated. Every staff types in their own way and style which makes it difficult for the managers and supervisors to keep a record and track of the refunds and also to understand. Some of the staff hastily do not type the reasons at all which makes it difficult for the manager / supervisor as he/she has to refer the refund vouchers to track a refund or for any audit purposes. The reasons for the amount is stated ‘on paper’ but there is no system in the module to keep a track for the same. The typing of the reasons consumes the time of the billing staff, as there are many refunds that are to be processed every day. So the scope of this report is to develop a system in the module which states the readymade reasons for the refunds that are being processed daily and if there are any other reasons besides the readymade reasons given, the reason should be mandatorily stated in the system without which the data cannot be saved.

DATA COLLECTION:

Data of the refunds in the month of May were analyzed. There were 1,671 OPD refunds in the month May 2021.

DATA ANALYSIS:

CODE	NUMBER OF REFUNDS
AS PER DEPTNOTE	323
AS PER EMAIL	31
AS PER OFFICER	3
CONSULTANT	175
HEALTH CHECK UP	3
HUMAN RESOURCE	41
LABORATORY	215
ON ACCOUNT DEPOSIT	37
PATIENT	70
RESEARCH PATIENT	4
STAFF	386
SYSTEM ERROR	8
VACCINATION CENTRE	7
NO REASON	368
TOTAL	**1671**



CONCLUSION:

As per the graph the major refunds are because of staff error and 22.02% refunds that are been processed for the month of May 2021 has **No Reason** stated for the refund which shows that there are refund reasons written on the refund voucher but there are no records in the system to refer and to keep track to. Hence it is necessary to develop a software module that can be user friendly, time saving and easy to track refunds and maintain record.

RECOMMENDATIONS:

After the analysis of the refunds which were processed for the month of May, for better classification Codes and Sub codes were made for each reason stated by the billing staff for the refund. The codes stated the responsible person or department for the particular refund and the sub codes states the main reason for the refund. In the refund module, the reasons can be stated with 2 drop downs, 1st drop down will state the codes, 2nd drop down should have the sub-codes. The codes and sub-codes are as follows:

1) **a) CODE: As per the department note:**
   b) SUB-CODE:

- PFT
- X-RAY
- EEG
- EMG
- HISTOPATHOLOGY
- LABORATORY
- MRD
- AKD

2) a) CODE: AS per Email

3) a) CODE: As per Officer

b) SUB-CODE:

- Dummy voucher

4) a) CODE: Consultant

b) SUB-CODE:

- As per consultant's note
- Change in the treatment
- Rescheduled appointment
- No charge
- Free OPD
- To be charged as Normal clinic
- Change in the test
- Transfer of patient under other consultant

5) a) CODE: Health check up

b) SUB CODE:

- Included in the package

6) **a) CODE: Human Resource**

b) SUB CODE:

- Pre-employment test
- Staff dependent
- Retired staff

7) **a) CODE: Laboratory**

b) SUB CODE:

- No growth/ABS

8) **a) CODE: On account deposit**

b) SUBCODE:

- No change
- Deposit refund
- OPD to IPD

9) **a) CODE: Patient**

b) SUB CODE:

- As per patient note/ request
- Request to change mode of payment
- Paid twice
- Wrong information given by the patient
- Name change for claim purpose

10) **a) CODE: PRD Discount Patient**

11) **a) CODE: Research patient**

b) SUB CODE:

- T1D1
- Dr Udwadia
- Dr Phulrenu Chauhan

- Other consultant

12) a) CODE: Staff

b) SUB CODE:

- Wrongly charged
- Wrong/No Nikshay ID mentioned
- Wrong/ No credit party selected
- Wrong name/surname
- Wrong gender
- Wrong Age
- Wrong mode of payment
- Wrong reference ward
- Wrongly made in clinic
- Wrong HH number
- Wrong consultant selected
- Wrong reference selected
- Contra entry

13) a) CODE: System error

b) SUB CODE:

- Discount is not reflected
- Voucher saved twice
- EDC Machine error
- Others

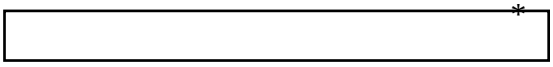
14) a) CODE: Vaccination center

b) SUB CODE:

- As per department note
- Less gap between 1st and 2nd dose
- Patient was Covid positive within 3 months'
- Planning pregnancy

15) a) CODE: OTHERS

b) SUBCODE



This reason can be used when there is no code and sub code for the refund available in the drops. The reason can be typed and the reason should be stated **mandatorily** without which the system should not save the refund voucher. This will help to track the reasons easily for record for every OPD refund transaction.

The software module should have an option to import the saved data into an excel sheet for records and audit purpose.

FMEA RISK ASSESMENT AND PATIENT SATISFACTION SURVEY OF RADIATION ONCOLOGY DEPARTMENT.

INTRODUCTION:

In radiation therapy the radioactive beam is given invasively or non-invasively at the affected area where the cancerous tumor or cells are in the body. The radiation kills the cancerous cells and the body the drains out the cells. The healthy cells in the body are not affected by the radiation.

HOW DOES RADIATION THERAPY WORK?

- Eliminating tumours which are not yet spread.
- Reduction of chemotherapy and surgery by destroying cancerous cells
- Reduction is sixe of tumour before operating it.
- Reduction of tumour in lung which affects patient's health before surgery.

WHAT ARE THE DIFFERENT KINDS OF RADIATION?

1. External beam radiation therapy: The patient is immobilized and positioned in such a way that the organ at risk gets most exposed to radioactive substance but just externally

2. Brachytherapy: The patient is immobilized and positioned in such a way that the organ at risk gets most exposed to radioactive substance and this is an invasive procedure where radioactive substance is placed near the tumour.

3. Systemic radiation therapy: Radioactive substance is given orally so it can treat the cancer that has been spreading entirely in the body

EXTERNAL BEAM RADIATION THERAPY

During external beam radiation therapy, a beam (or multiple beams) of radiation generated by a machine called a linear accelerator, or linac is directed through the skin to the cancer and the immediate surrounding area to destroy the tumour and any nearby cancer cells. To minimize side effects, the treatments are typically given five days a week, Monday through Friday, for a number of weeks. This allows enough radiation to get into your body to kill the cancer while giving healthy cells time to recover.

A. 3 Dimensional Conformal Radiation Therapy (3-D CRT)

Three-dimensional conformal radiation therapy uses computers and special imaging techniques such as CT, MR or PET scans to show the size, shape and location of the tumour as well as surrounding organs.

B. Intensity Modulated Radiation Therapy (IMRT)

Intensity modulated radiation therapy is a specialized form of 3-D CRT that allows radiation to be broken up into many "beamlets," and the intensity of each beamlet can be adjusted individually. Using IMRT, it may be possible to further limit the amount of radiation received by healthy tissue and allow a higher dose of radiation to be delivered to the tumour

C. Image Guided Radiation Therapy (IGRT)

Tumours can move between treatments, due to differences in organ filling or movements while breathing. IGRT allows for better targeting of cancer cells by use of CT, ultrasound, or X rays. You will first undergo a CT scan as part of the planning process. The team compares these images with the images taken just before treatment to see if the treatment needs to be adjusted. In some cases, doctors will implant a tiny marker in or near the tumour to help localize the treatment area.

D. Stereotactic Radiation Therapy

Treatment outside the brain is called stereotactic body radiation therapy (SBRT). It is typically given in a few treatments. Often used for the lung, spine or liver, this involves using very secure immobilization of the head or body as well as using techniques that allow the radiation beam to account for organ motion during treatment.

2. **BRACHYTHERAPY**

There are two main forms of brachytherapy – intracavitary treatment and interstitial treatment. With intracavitary treatment, the radioactive sources are put into a space near where the tumour is located, such as the cervix, the vagina or the windpipe. With interstitial treatment, the radioactive sources are put directly into the tissues, such as the prostate.

WHO ARE THE MEMBERS OF THE RADIATION THERAPY TEAM?

Radiation oncologists are specialized in treatment of cancer through radiation therapy, they guide in planning of the treatment and decides the amount of dosage which reduces the size of tumour without affecting healthy cells.

Radiation Technologists they work with the oncologist and train and immobilize the patient for therapy.

Radiation Oncology Nurses helps in taking vitals of the patient and helps the patient for pain management.

Medical Physicists approves the plan and checks that the radiation that the patient gets does not affect the healthy cells and verifies that the patient is receiving correct and quality treatment.

Dosimetrists they measure the amount of dosage that is to be given during therapy to patient. They are highly trained in calculating accurate values of dosage.

FAILURE MODES AND EFFECT ANALYSIS:

INTRODUCTION:

FMEA is method of identifying potential failures in the key processes of the department and implementing or studying if there is any protocol implemented to avoid such risks or not. In the radiation oncology department,115 potential failures were identified and if there are control measure to avoid the risks or not were observed.

The likelihood and consequence were identified and their product (RPN) was the score which decides if the risk is low, medium or high. The basis of scoring is as follows:

LIKELIHOOD	Remarks
5- Almost certain	Atleast monthly/ probability 99%
4- Likely	Occurs once in 2 months/ probability 75%
3- Possible	Occurs every 1-2 yrs/ probability 50%
2- Unlikely	Occurs every 2-5 yrs/ probability 10%
1- Rare	Occurs every 5 yrs or more/ probability 1%

CONSEQUENCE

5- Extreme:

Incident leading to death or major permanent incapacity, impacts large number of patients or public, permanent Psychosocial functioning incapacity

4- Major

Major injuries/ long term incapacity or disability requiring med treatment &/ counselling, IPF >6 months

3- Moderate

Significant injury requiring medical treatment &/counselling, >3 days' absence, 3-8 days extended hospital stay, IPF one month to six months

2- Minor

Minor injury, first aid required, <3 days absence, <3 days hosp stay, Impaired psychosocial functioning 3 days to one month

1- Negligible

Minor injury, not requiring first aid, no impaired psycho-social functioning

LIKELIHOOD X CONSEQUENCE = RPN SCORE (RISK RATING)

RISK RATING	
High	(15-25)
Medium	(7-14)
Low	(1-6)

DATA COLLECTION:

Each and every key process was personally observed by the intern in the radiation department. And the likelihood was calculated by the incidence occurrence. Personal interaction was done with the billing staff, nursing, dosimetrists and radiation technologist to know the process flow of the department and to identify risk in each process.

RISK ASSESSMENT WORKSHEET FOR RADIATION ONCOLOGY DEPT - 2021								
KEY PROCESSES AND STEPS	**FAILURE MODES**	**EFFECT ANALYSIS**	**LIKELIHOOD**	**CONSEQUENCES**	**RPN**	**RISK LEVEL**	**CONTROL MEASURES IN PLACE CURRENTLY**	**ACTIONS TAKEN**
ESTIMATION PROCESS								
(AFTER THE CONSULTATION AND DIAGNOSIS THE PATIENT IS SENT TO THE SECRETARY TO KNOW THE COST OF TREATMENT WITH COST SHEET FOR	Wrong Cost given	Confusion to the patient for payment and arranging it	1	1	1	LOW	Cost sheet is given by the consultant to the secretary in a prescribed format leading to no error in	Already Existing

PLANNING AND RADIO-THERAPY CYCLES)							costing. The cost break up given to each patient is also saved in the format	
	No couselling done of the patient for payment	Confusion in the patient for payment and arranging it and loss to the hospital	1	1	1	LOW	A note is made by the secretary that the counselling is done from her side with everything explained written on it	Already Existing

	No counselling done for bringing negative covid report at the day of planning and own thermometer	Delay in the treatment of the patient for radiation therapy and spread of infection	1	1	1	LOW	A note is made by the secretary that the counselling is done from her side with everything explained written on it	Already Existing
	No letters to trust for funding the patient	Patient will not be able to make timely payments and thus loss to the hospital	1	1	1	LOW	Secretary gives letters in a prescribed format for funding from trusts	Already Existing

							for the patients	
	No consent taken from cash patients to make full payment on time	If patient will not be able to make timely payments the hospital will bear loss.	1	1	1	LOW	It is a protocol to take a complete consent of paying patient to recover the amount from patient	
	No query letter given for solving the query from the insurance for reimbursement	Delay in reimbursement , leading to reduction in patient satisfaction	1	1	1	LOW	Secretary and billing staff harmoniously work together to solve the patient	Already Existing

							queries and gives query letter the next day itself	
COVID TRIAGE								
	No Temperature checked at the time of visit	Patient could be covid positive and possibility of spreading infection to staff and other patients	1	1	1	LOW	As per the protocol it is mandatory to fill up covid negative declaration form every time patient comes for the	Already Existing

							treatment	
	No symptoms recorded	Patient could be covid positive and possibility of spreading infection to staff and other patients	1	1	1	LOW	As per the protocol it is mandatory to fill up covid negative declaration form every time patient comes for the treatment	Already Existing
	No travel history recorded	Patient could be covid positive and possibility of	1	1	1	LOW	As per the protocol it is mandatory to fill up	Already Existing

		spreading infection to staff and other patients					covid negative declaration form every time patient comes for the treatment	
TAKING CONSENT FROM PATIENT AND COUNSELLING PATIENT AND THEIR RELATIVES								
	No detailed discussion of proposed treatment	Confusion in patient and patient	1	1	1	LOW	Detailed tretment plan is	Already Existing

		relatives about the treatment					discussed with the patient and patient relative with proper counselling by the consultant	
	No patient name on consent form	Legal compliance	1	1	1	LOW	The consent form is verified by nurse and in case of incomplete form it is been completed and then only	Already Existing

							sent for scanning to keep in records. Billing staff also verifies if the form is complete before scanning	
	No site of treatment on consent form	Legal compliance	1	1	1	LOW	All the details of treatment are mandatorily documented by the physicians and oncologists	Already Existing

							for records	
	No side of treatment on consent form	Legal compliance	1	1	1	LOW	All the details of treatment are mandatorily documented by the physicians and oncologists for records	Already Existing
	No signature of physician on consent form	Legal compliance	1	1	1	LOW	The consent form is verified by nurse and in case of	Already Existing

							incomplete form it is been completed and then only sent for scanning to keep in records. Billing staff also verifies if the form is complete before scanning	

	No signature of patient on consent form	Legal compliance	1	1	1	LOW	The consent form is verified by nurse and in case of incomplete form it is been completed and then only sent for scanning to keep in records. Billing staff also verifies if the form is complete	Already Existing

							before scanning	
	No signature of patient representative as witness on consent form	Legal compliance	1	1	1	LOW	The consent form is verified by nurse and in case of incomplete form it is been completed and then only sent for scanning to keep in records. Billing	Already Existing

							staff also verifies if the form is complete before scanning	
	Incomplete consent forms scanned for records and sent to MRD	Legal compliance	1	1	1	LOW	The consent form is verified by nurse and in case of incomplete form it is been completed and then only sent for scanning to keep in	

							records. Billing staff also verifies if the form is complete before scanning	
	No date and time on consent form	Legal compliance	1	1	1	LOW	The consent form is verified by nurse and in case of incomplete form it is been completed and then only sent for	Already Existing

							scanning to keep in records. Billing staff also verifies if the form is complete before scanning	
	No additional consent for anesthesia taken	Legal compliance	1	1	1	LOW	As per SOP it is mandatory to take consent for any invasive procedure	Already Existing

PRESCRIPTION								
	Wrong selection of site to be irradiated	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented by the physicians and oncologists for records and verified	Already Existing
	Wrong treatment side	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented	Already Existing

							by the physicians and oncologists for records and verified	
	No description of radiation modality	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented by the physicians and oncologists for records and verified	Already Existing

	Wrong amount of dose mentioned	Confusion in the treatment of patient	1	1	1	LOW	The dosage amount is calculated and documented and verified and then only approved	Already Existing
	No description of fraction	Confusion in the treatment of patient	1	1	1	LOW	The fraction dosage amount is calculated and documented and verified and then only approved	

	No date and signature of radiation oncologist	Legal compliance incomplete	1	1	1	LOW	All the details of treatment are mandatorily documented by the physicians and oncologists for records.	Already Existing
TREATMENT PLANNING								
(AFTER CONSULTATION AND ESTIMATION, APPOINTMENT IS BEEN SCHEDULE	Wrong RT registration done	Wrong treatment to wrong patient	4	2	8	MEDIUM	Billing staff is trained and patient identification is done twice	Already Existing

D FOR PLANNING AND IMMOBILIZATION OF THE PATIENT)							before starting of the treatment	
	Verbal physician clinical treatment and planning directive	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented by the physicians and oncologists for records	Already Existing
	No signed and date by physician on treatment sheet	Legal compliance incomplete	1	1	1	LOW	All the details of treatment are mandatorily	Already Existing

							documented by the physicians records	
	No modality mentioned	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented by the physicians and oncologists for records	Already Existing
	No technique mentioned	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily	Already Existing

							documented by the physicians and oncologists for records	
	Wrong dosage	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented by the physicians and oncologists for records	Already Existing
	Exceedance of radiation on organs at risk	Deteriorate	1	1	1	LOW	Time and amoun	Already Existing

		patient's health					t of dosage is verified by oncologist, physician and technologist.	
	Wrong time/Dose consideration	Radiation exposure to patient	1	1	1	LOW	The machine values are verified by the oncologist and physician	Already Existing
	Incorrect tattoo marking other than site	Confusion in the treatment of patient	1	1	1	LOW	The technologist verifies the written documents	Already Existing

							and follows the order of consultant	
	No review of dosage by radiation of oncologist	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented by the physicians and oncologists for records	Already Existing
	No method of delivery mentioned	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily	Already Existing

							documented by the physicians and oncologists for records	
	Wrong treatment position given	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented by the physicians and oncologists for records. And the staff is trained	Already Existing

							time to time	
SIMULATION								
	Simulation by radiation therapist/radiation technologist without the supervision of radiation oncologist	Confusion in the treatment of patient	1	1	1	LOW	As per the protocol the technologist has to only follow the order of consultant and then only perform radiation therapy.	Already Existing

							There is work flow process followed in the department	
	No simulation on dummy performed prior to treatment of patient and documented in medical chart	Confusion in the treatment of patient	1	1	1	LOW	As per the SOP it is mandatory to perform prior treatment to dummy and verify before plan approval	

	Incomplete documentation and signature of two credentialed members of timeout team	Legal compliance incomplete	1	1	1	LOW	All the details of treatment are mandatorily documented by the technologist for records and verified prior to treatment	Already Existing
	No documentation of final timeout done	Legal compliance incomplete	1	1	1	LOW	All the details of treatment are mandatorily documented by the technologist	Already Existing

							for records and verified prior to treatment	
	Incorrect site, side, level	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented by the technologist for records and verified prior to treatment	Already Existing
	Incorrect anatomic positions	Confusion in the treatme	1	1	1	LOW	All the details of treatm	Already Existing

		nt of patient					ent are mandatorily documented by the technologist for records and verified prior to treatment	
	Incorrect immobilization devices	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented by the technologist for records and verified prior	Already Existing

							to treatment	
	Wrong patient identification	Wrong treatment to the wrong patient	1	1	1	LOW	Verifying patient identification by two independent methods. One by photo identification and other by calling and confirming name thrice	Already Existing
	Incomplete documentation of discrepancy, date and	Legal compliance	1	1	1	LOW	All the details of treatm	Already Existing

	signature in patient's medical chart	incomplete					ent are mandatorily documented by the technologist for records	
	Not checking of pregnancy status before radiation therapy	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented by the technologist for records and verified prior to treatment	Already Existing

	Drug/contrast allergy to patient	Confusion in the treatment of patient	1	1	1	LOW	Medicine/.injection to reduce allergic reaction is kept in the department	Already Existing
	No checking and documentation of cardiac implantable devices	Legal compliance incomplete	1	1	1	LOW	All the details of treatment are mandatorily documented by the technologist for records and verified prior to	Already Existing

							treatment	
SIMULATION PROCEDURE AND DOCUMENTATION								
	Incorrect patient identification	Wrong treatment to the wrong patient	1	1	1	LOW	Verifying patient identification by two independent methods. One by photo identification and other by calling and confir	Already Existing

							ming name thrice	
	No documentation of radiation setup by technologist	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented by the technologist for records	Already Existing
	No documentation of radiation treatment by technologist	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented by the technologist	Already Existing

							for records	
	No documentation of radiation technologist/therapist for devices created or used during therapy	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented by the technologist for records and new techniques are mentioned in written format in SOP	Already Existing
	Incomplete documentation of any contrast media and	Confusion in the treatme	1	1	1	LOW	All the details of treatm	Already Existing

	placement of tattoos	nt of patient					ent are mandatorily documented by the technologist for records	
	Incomplete simulation notes	Confusion in the treatment of patient	1	1	1	LOW	All the details of treatment are mandatorily documented by the technologist for records	Already Existing
	Details of photographs and diagrams improperly labelled and not dated	Confusion in the treatment of patient	1	1	1	LOW	Training is provide to technologist	Already Existing

							and everyth ing is machi ne genera ted to avoid human error	
	No written physician simulation note signed and dated	Legal complia nce no followe d	1	1	1	LOW	All the details of treatm ent are manda torily docum ented by the physic ian for record s	Already Existing
	No documentation of participation and approval of simulation procedure by physician	Legal complia nce no followe d	1	1	1	LOW	As per SOP all the docum ents are to be thorou	Already Existing

							ghly and duly signed and verified twice	
TREATMENT AIDS								
	Wrongly determined the use positioning and immobilizing devices	Confusion to technician in treatment	1	1	1	LOW	All the details of treatment are mandatorily documented by the technologist for records and verified before starting	Already Existing

							treatment	
TREATMENT DELIVERY								
	Wrong patient identification	Deteriorates health of the patient and reduces patient satisfaction	1	1	1	LOW	Verify patient identification by two independent methods	Already Existing
	Radiation therapy treatment parameters not verified	Deteriorates health of the patient and reduces patient satisfaction	1	1	1	LOW	All the details of treatment are mandatorily documented by the physician for	Already Existing

							records	
	Incomplete prescription prior to treatment initiation	Confusion to technician in treatment	1	1	1	LOW	All the details of treatment are mandatorily documented by the physician for records	Already Existing
	Patient is not immobilized	Wrong site exposed to radiation	1	1	1	LOW	Simulation and training of positioning is given by the technologist and appropriate immob	Already Existing

							ilizatio n device s are used	
POST THERAPY								
	Verbal Dietary consultation	Deterior ates health of the patient and reduces patient satisfact ion	1	1	1	LOW	Proper docum entatio n of dietary consul tation is done by dietici an	Already Existing
	No psychological consultation	Deterior ates health of the patient and reduces patient satisfact ion	1	1	1	LOW	Couns elling is done by the psycho logist to motiva te the patient s and impro	Already Existing

							ve patient satisfaction	
	No proper follow-up plan	Deteriorates health of the patient and reduces patient satisfaction	1	1	1	LOW	The proper follow up plan is documented and approved by physician and radiation oncologist	Already Existing
BILLING PROCESS								
	Error in billing	Revenue loss to the hospital	2	1	2	LOW	The billing staff is trained and the billing is given	Already Existing

							exactly as per the cost sheet. Record of billing is kept in care path software and a copy of bill is also kept to make no error	
	No proper discharge summary and detailed bill given to the patient	Reduces patient satisfaction and creates problem for reimbursement	2	1	2	LOW	It is a protocol to give discharge summary and detailed bill break up to	Already Existing

							every patient after making the payment before starting the therapy so no patient goes without bill	
	Patient did not get the cost sheet while coming for the treatment	Billing cannot be done	2	1	2	LOW	The billing staff already has the copy of cost sheet to refer for billing in case patient does not bring	Already Existing

							the cost sheet paper before each cycle	
	No timely payment collection	Revenue loss to the hospital	2	1	2	LOW	List of people from whom payment is collected is taken out at the end of the week for next week and the staff is made aware to collect the payment on	Already Existing

							the same	
	Scanning of wrong reports for records	Wrong treatment delivery to patient	3	4	12	MEDIUM	After scanning the reports for records it is verified that correct patients file is scanned in correct patient folder by the billing staff	Already Existing
	Delay in sending documents of the TPA patients to insurance company	Revenue loss to the hospital	1	1	1	LOW	As per the SOP, the documents should	Already Existing

							be sent to TPA in 7 days for settle ment	
	Non solving patient billing query	Reduce s patient satisfact ion.	1	1	1	LOW	The billing staff is been trained time to time to solve the being querie s of the patient	Already Existing
RADIATIO N SAFETY OF STAFF AND PATIENT								

	Exceedance of radiation exposure to the patient during therapy	Deteriorate patient's health	2	1	2	LOW	As per the protocol the amount of radiation and the time is already decided by consultant and same is been fed into machine and implemented	Already Existing
	Exceedance of radiation exposure to the staff	Deteriorate staff's health	2	1	2	LOW	Use of Proper Shielding & Clothing &	Already Existing

							TLD Badges. Radiation Safety Training for Concerned Staff.	
	Staff going in the console room during ongoing radiation therapy	Exposure to radiation	2	1	2	LOW	Radiation safety Training given to concerned staff to avoid such hazards. Automatic interlocking door system available for	Already Existing

							prevention	
PATIENT FALLS AND SAFETY								
	Adverse Patient falls from wheelchair or stretcher	Injury to patient and reduction in patient satisfaction	3	4	12	MEDIUM	Safe Patient Transportation & Handling, Training of Concerned Health Care Workers. Usage of Safe Transport Equipment's like belts	Already Existing

MAINTENANCE								
	No information and knowledge management	Staff has no learning environment and upgradation in knowledge	3	1	3	LOW	Staff is trained every month and as per requirement.	Already Existing
	No timely cleaning	Departmental environment unsuitable for staff to work	4	1	4	LOW	The department is regularly cleaned twice by the housekeeping staff	Already Existing
	CT machine breakdown	Affects the treatment of the patient, increase	4	3	12	MEDIUM	Test cycles are done in the morni	Already Existing

		s waiting time and affects the busines s					ng before taking the patient s for appoin tment. Every 3 month s mainte nance of machi nes are done and yearly AMC is done to reduce the breakd own	
	No technical maintenance	Can lead to technica l failures (comput	3	2	6	LOW	Regula r techni cal mainte nance	Already Existing

		er failure, electricity issues etc.)					and repair by the concerned team like IT or electrical support.	
	No meetings/workshops for continuous learning	Staff has no new learning and hence functioning optimization is hampered	3	1	3	LOW	Staff meetings held weekly, monthly staff training.	Already Existing
FIRE SAFETY								
	No fire mock drills	Staff untrained for	4	1	4	LOW	Regular fire mock drills	Already Existing

		fire hazards					carried out by the fire safety depart ment.	
		Unable to manage hazard when strikes	3	1	3	LOW	Regula r fire mock drills carried out by the fire safety depart ment.	Already Existing
	No signage's	Staff not knowin g how to use fire extingui shers	4	1	4	LOW	All signag e's presen t. All trainin g regardi ng fire safety is given by the fire safety	Already Existing

							depart ment.	
		Staff uses lifts in case of fire	4	1	4	LOW	All signag e's presen t. All trainin g regardi ng fire safety is given by the fire safety depart ment.	Already Existing
		Panic strikes as no training and instructi ons seen	3	3	9	MEDI UM	All signag e's presen t. All trainin g regardi ng fire safety is given	Already Existing

							by the fire safety department.	
	No fire extinguishers	Unsafe staff and materials during fire hazards	4	3	12	MEDIUM	All signage's present. All training regarding fire safety is given by the fire safety department.	Already Existing
	No fire safety mechanism	Unsafe staff and materials during fire hazards	4	3	12	MEDIUM	Fire extinguishers present in the department.	Already Existing
	No fire safety balcony	No access	3	3	9	MEDIUM	Rescue area	Already Existing

		to fire trucks to rescue people at higher floors					is present	
	No staircase nearby	Resulting in panicky environment and crowding	3	3	9	MEDIUM	Staircase present nearby.	Already Existing
	Absence of floor plan maps	No idea of fire exits and fire stairways	4	2	8	MEDIUM	All floors have floor plans and fire exits marked.	Already Existing
	Staff not knowledgeable about evacuating crowd	Patient safety compromised	5	2	10	MEDIUM	Staff well trained for fire hazard	Already Existing

							s and safety.	
	Fire alarms unavailable	People cannot be intimated about fire hazard can be harmful	4	3	12	MEDIUM	Fire alarms are available	Already Existing
	Water sprinklers unavailable	Fire hazard management compromised	4	3	12	MEDIUM	Smoke detectors are available	Already Existing
	Staff not aware of fire brigade contact number	Delay to contact fire brigade can be harmful and cause a lot of loss	4	3	12	MEDIUM	Staff well trained for fire hazards and safety. All-important contacts saved in the	Already Existing

							phone and are pasted on the wall in the department.	
DISASTER PREPAREDNESS								
	NO SOP's for disaster preparedness	Confusion to take quick action and save people	3	2	6	LOW	The SOP's for disaster preparedness is already existing and continues training is given to the staff in	Already Existing

							order to be prepared for any kind of disaster. There is a contingency plan for the same	
	Shortage of staff	operations delayed	3	2	6	LOW	The existing staff is competent enough to manage the operations and ensures smooth functio	Already Existing

							ning of the depart ment.	
	Staff unable to cope with emergency needs	Operati ons delayed	3	2	6	LOW	Staff is thorou ghly trained for any hazard s like COVI D. there is a contin gency plan in place and the staff is trained foot the same.	Already Existing
		Staff burnout	4	2	8	MEDI UM	Due to shorta ge of staff or worklo ad the	Already Existing

							staff has to work longer hours. The hospital does take care of their stay and food if required at times of hazards like COVID.	
	Absence of mock drills	Unable to manage hazards (fire, earthquake, epidemics etc.)	4	2	8	MEDIUM	Mock drills conducted regularly by fire safety department.	Already Existing

	No rescue area for evacuation	No access to fire trucks to rescue people	4	3	12	MEDIUM	Rescue area is present.	Already Existing
	Miscommunication	Delay in process	3	1	3	LOW	Staff communicates amongst themselves. Any issue unresolved is taken to the senior staff or in charge.	Already Existing

	No safety to staff	Staff morale is lowered	3	2	6	LOW	Staff safety is prioritized. Staff is trained for various safety measures like fire, electricity, material safety HAZ MAT, given personal protective equipment etc. Staff also has free	Already Existing

							treatment and drugs in case of any ailment.	
		Staff at risk	4	2	8	MEDIUM	Staff safety is prioritized. Staff is trained for various safety measures like fire, electricity, material safety HAZMAT, given personal	Already Existing

							protective equipment etc. Staff also has free treatment and drugs in case of any ailment.	
UTILITIES								
	Printer not working	Delay in process	3	1	3	LOW	Multiple printers available.	Already Existing
	No letterheads for printing the bill	Delay in process	3	1	3	LOW	Stationery items ordered before stock	Already Existing

							runs out.	
	Barcode scanner not working	Billing staff has to manually check-in in Varian software	5	1	5	LOW	Maintenance of Varian software is done time to time.	Already Existing
INFECTION CONTROL								
	Masks not worn properly by staff and patients	Infection spread	4	2	8	MEDIUM	Staff is trained for infection control measures with respect to COVID. Masks are provid	Already Existing

							ed and worn properly by the staff.	
	Hand sanitizers not used frequently	Infection spread	4	2	8	MEDIUM	Hand hygiene and sanitizers are used frequently by the staff.	Already Existing
	No social distancing norms followed	Infection spread	4	2	8	MEDIUM	Seating arrangement of staff is such a way that they do not face each other. The seats and	Already Existing

							tables are at a distance.	
	Improper waste disposal	Infection spread	4	1	4	LOW	BMW guidelines are followed strictly.	Already Existing
	Wounds due to rusted sharp corners	Infection spread	4	1	4	LOW	Staff trained to do first aid. Any serious injury is catered to by doctors immediately.	Already Existing
	Aprons not worn by the staff	Infection spread	4	1	4	LOW	For the staff working in the patient	Already Existing

							area it is mandatory to wear aprons and this protocol is strictly followed by all staff to avoid to spread infection	
DOCUMENTATION								
	No written SOPs /incomplete	Confusions in following processes	2	3	6	LOW	All SOPs are explained properly to the	Already Existing

							staff. The staff is well trained with the daily duties and responsibilities. All the SOPs are present in the management system.	
		Delay in process	2	3	6	LOW	All SOPs are explained properly to the staff. The staff is	Already Existing

							well trained with the daily duties and responsibilities. All the SOPs are present in the management system.	
		Mistakes and redundancies in process	2	3	6	LOW	All SOPs are explained properly to the staff. The staff is well trained with	Already Existing

							the daily duties and responsibilities. All the SOPs are present in the management system. Staff is trained every month and any changes are well communicated to the staff.	
	No employee details and	Legal complications	4	1	4	LOW	All employee	Already Existing

	documents/incomplete						details are stored in the management system.	
	No written jobs and duties of the respective staff/incomplete	Confusions in daily job	3	1	3	LOW	All job details and descriptions stored in the management system. The staff is well communicated and well trained with respect to duties and job.	Already Existing

		Delay in process	3	2	6	LOW	All job details and descriptions stored in the management system. The staff is well communicated and well trained with respect to duties and job. Any confusion is well communicated amongst the	Already Existing

							staff and problems are resolved. The problems are catered by seniors if confusion persists.	
		Mistakes and redundancies in daily operations	2	3	6	LOW	Monthly training of staff regarding job duties and protocols are carried. If any changes require	Already Existing

							d to be made in the protocol are communicated to the staff.	
	No safety protocols documented/incomplete	Staff at risk of various hazards	4	2	8	MEDIUM	All safety training given to the staff. Protocols are present in the management system. Material safety instructions are well told to	Already Existing

							the staff and is printed and pasted on depart mental racks.	
SECURITY AND ACCESS								
	No camera	Theft or accident	3	2	6	LOW	Securit y camer as are presen t.	Already Existing
	No security staff	Theft or accident	3	2	6	LOW	Pharm acy staff monito rs the depart ment.	Already Existing

CONCLUSION:

After FMEA analysis in radiation oncology the risk in every process is only low to medium as the department is 80% paperless and at every step verification is done before starting of any process and in case of failure the control measures for each of the process is already existing.

After FMEA Analysis patient satisfaction survey was conducted through a questionnaire of patient feedback and feedback of 30 patients were taken by personally having one to one conversation with the patients and their relatives. The questionnaire was as follows:

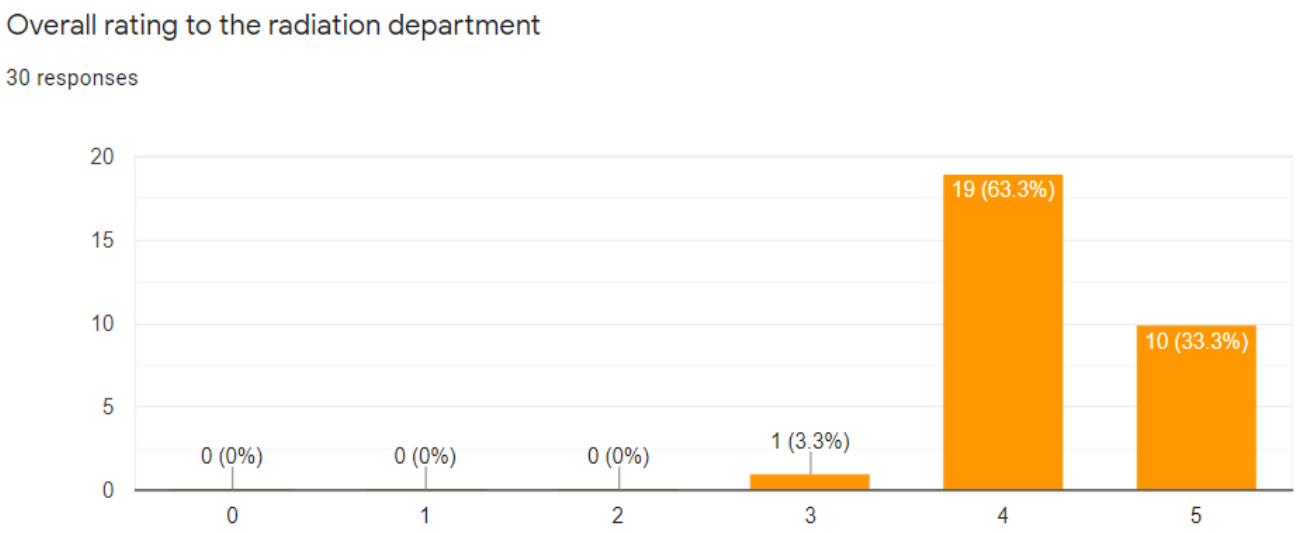
Sr. No	**Patient Name(optional):**	**Radiation Oncology Department**				
	HH No (optional):	**Help us to help you !!!**				
	Consultant's Name:	**Very Unsatisfied**	**Unsatisfied**	**Neutral**	**Satisfied**	**Very Satisfied**
1	Ease of booking an appointment					
2	Convenience of given appointment time					
3	Registration procedure in the department					
4	Behaviour and efficiency of the reception staffs					
5	Time required to compete the billing procedure					

6	Time taken to complete the Insurance procedure (*if applicable*)					
7	Waiting time to start the procedure					
8	Daily waiting time					
9	Behaviour and efficiency of the Doctor					
10	Explanation provided about your condition and line of treatment and options given by your doctor					
11	Follow up instruction provided by the doctor					
12	Behaviour and efficiency of the nurses					
13	Follow up instruction provided by the nurse					
14	Behaviour and efficiency of the technologist					
15	Role of Technologists in your care					
16	Confidentiality maintained while providing care					
17	Behaviour and efficiency of the attendants					
18	Cleanliness and hygiene of the rooms and washrooms					
19	Ambience of the department					

20	Privacy provided during the treatment process					
21	Appropriate Diet advice given to you					
22	At the end of the day do you have sufficient knowledge about self-care					
	Overall remarks of the care received by the department					
	Special comments or recommendations					
	How did you come to know about Hinduja Hospital ?	Word of mouth	Social media	Reference by doctor	Others	
	Would you recommend Hinduja Hospital to others? Please rate from 0-10 (considering 0 to be not recommending and 10 to be highly recommending)					
Overall service rating for the radiation department. Please rate 0-5						

ANALYSIS:

The overall rating of the radiation department was



CONCLUSION:

As per the feedback of overall rating only 3.3% gave neutral rating for the service as people who were financially challenged thought that the cost the treatment can be reduced as the minimum cost of the treatment is above 2 lacs, the hospital should help such patients by giving them the information of charitable trusts and 63.3% of patients are satisfied and 33.3% of are highly satisfied with the service.

RECOMMENDATIONS:

1. To avoid over-crowding and quick billing another billing staff must be kept between 9-5 as the major patient football in the radiation oncology department for billing. Hence 2 billing counters should be there for radiation oncology department.
2. Scanning of the reports should be done by the housekeeping attendant staff and not by the billing staff as there is a risk of mixing the patient reports while scanning, these reports are scanned for reference for taking further treatment decisions.

3. Patients who are financially disabled should be recommended for crowd funding institutions and donation trusts as the people gave neutral feedback because they think the cost of treatment is high.
4. A booklet for radiation oncology department can be made and distributed among patients in which all the contact information of consultants, dietary instructions, payment collection time and methods, dental hygiene information for oral cancer patients, basic information of how the treatment is given, this will increase the patient awareness.

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