Summer Training at

Tata Main Hospital
Jamshedpur, Jharkhand
(April 5 - May 31, 2012)

By
Supriti Laha

Under the guidance of
Dr. Vijay Pratap Raghuvanshi

Post Graduate Diploma in Hospital and Health Management
2011-2013

Institute of Health Management Research,
Jaipur
2012

INSTITUTE OF HEALTH MANAGEMENT RESEARCH
1, Prabhu Dayal Marg
Sanganer Airport, JAIPUR - 302 011, IN
Tel. : 3924700, 2791431-32
Fax : 91-141-3924738
E-mail : iihmr@iihmr.org
URL : http://www.iihmr.org
Gram : HEALTHINST

Certificate

This is to certify that the study entitled *"Study on the awareness of Fire safety and Hazmat practices"* at Tata Main Hospital, Jamshedpur is a bonafide original work of Supriti Laha (PGDHM BATCH 16th, Institute of health management and research) and has been carried out under our direct guidance, supervision and to our entire satisfaction.

The work presented herein has not been previously submitted for the award of any degree, diploma, and fellowship or any other similar distinction.

During her training period 05.04.2012 to 31.05.2012 her performance and conduct was found to be good.

Dr. P.R Sodani

Dean (Academic and student affairs)
IIHMR , Jaipur

Dr.V.P Raghuvanshi

Assistant Professor
IIHMR, Jaipur

LETTER OF RECOMMENDATION

To whomsoever it may concern

This is to certify that Supriti Laha has completed her internship with us from April 5, 2012 – May 31, 2012. During her tenure she has worked on various assignments deputed to her.

1. To analyze the functioning of IT dept , AHU, Laundry dept & to identify the limitation and suggestion for improvement.

2. To assess the level of awareness on fire safety in various departments of the hospital & thus increase the preparedness level of fire disaster management.

3. To assess the awareness level of HAZMAT practices in TMH.

During this span her contribution to the various short term assignments given to her related to above topics is appreciable.

During this tenure i found her sincere in approach & a great team member.

Regards

KUMAR LILANAND

Manager
~~Head of~~ Housekeeping & Operations

KUMAR LILANAND
MANAGER HOUSEKEEPING
TATA MAIN HOSPITAL

Director,
IHMR Jaipur,
Jaipur

Dear Sir,

Ms Supriti Laha, First Year Student of PGDHHM has done Summer Placement at Tata Main Hospital, Jamshedpur from 05 Apr through 31 May 2012.

During her stay at this hospital she has been acquainted with various aspects of hospital administration & also given an opportunity to study some important areas in depth.

She is inquisitive & exhibited keenness to derive maximum learning experience. She has a sociable nature & gets along well with seniors & peers.

We wish her all the best in her future endeavours.

Yours sincerely,

Brig (Retd) Dr KJ Singh
MBBS, DHA, MD, DNB, MAHA
Head Administration Trust Hospitals
Tata Main Hospital
Jamshedpur

TATA STEEL LIMITED
Office of the General Manager (Medical Services) Jamshedpur 831 001 India
Tel 91 657 2243425 2143525 Fax 91 657 2423525 e-mail gmms@tmh.tatasteel.com
Registered Office Bombay House 24 Homi Mody Street Mumbai 400 001

ACKNOWLEDGEMENT

Completion of any project is like another feather in the cap of an individual. For this consistent hard work, desired to succeed & last but not the least blessings of Lord Almighty are essential ingredients.

It gives me immense pleasure to complete my entire project in two areas of Fire Safety awareness & HAZMAT practices during my stay of 2 months in TATA MAIN HOSPITAL , JAMSHEDPUR.

For the successful accomplishment of this task I am really grateful to my mentor Dr. Vijay Pratap Raghuvanshi for his valuable suggestion given to me to complete my summer internship.

I would also like to pay my heartiest thanks to the Executives Brid. Dr. K.J. Singh Sir & My mentor in the hospital Kumar Lilanand Sir for his kind support, cooperation & guidance given to me for the successful completion of my project .

Last but not the least I am really thankful to the entire staff of TMH, nurses & consultants for cooperating in my study & making my study a memorable experience for lifetime.

With regards

Supriti Laha

TABLE OF CONTENTS

ACRONYMS / ABBREVIATIONS

S.NO	ACRONYMS	FULL FORM
1.	IT	Information Technology
2.	AHU	Air Handling Unit
3.	HAZMAT	Hazardous Materials
4.	TCS	Tata Consultancy Services
5.	OT	Operation Theatre
6.	CSSD	Central Sterile Supply Department
7.	EMR	Emergency Medical Record
8.	HMS	Hospital Management System
9.	EDP	Electronic Data Processing
10.	LPG	Liquidified Petroleum Gas
11.	DCP	Dry Chemical Powder
12.	CO2	Carbondioxide
13.	CCU	Critical Care Unit
14.	BCU	Burn Care Unit
15.	ICU	Intensive Care Unit
16.	OPD	Out Patient Department
17.	JGMH BLOCK	Jahangir Gandhi Memorial Hospital

OVERVIEW

OBJECTIVE : -

1. **To analyze the functioning of IT dept , AHU, Laundry dept & to identify the limitation and suggestion for improvement.**
2. **To assess the level of awareness on fire safety in various departments of the hospital & thus increase the preparedness level of fire disaster management.**
3. **To assess the awareness level of HAZMAT practices in TMH.**

METHOD OF DATA COLLECTION : -

1. **Random survey and vigilant observation in the respective department. Primary data was collected in the form of checklist, face to face interaction, Questionnaires , and observation.**
2. **Secondary data available from various sources within hospital premises.**

Hospital profile

The Tata Main Hospital, the Medical Division of Tata Steel was born in 1908 in a tent near the site of what is today the steel works of Tata Steel limited. Today TMH is an 890 bedded multi-speciality hospital with more than 200 doctors and 350 nurses apart from other staff providing treatment to more than 1400000 outdoor patients, 56000 in door patients and more than 20000 surgeries / procedures per annum. [1]

TMH its nine dispensaries at Jamshedpur provide curative healthcare services to the employees of Tata Steel and their families free of cost in Jamshedpur and has some of the finest facilities in the state of Jharkhand. Apart from TMH and the dispensaries, out-location hospitals are located at Jamadoba, Noamundi and Sukhinda Mines and West Bokaro Collieries. TMH also extends its facilities to non-entitled patients from Jamshedpur and its surrounding area.TMH is recognized as a teaching hospital by the national board of examinations for post graduate training in several specialities.[1]

Service Range

TMH provides curative healthcare through outpatient, inpatient and round-the-clock emergency services. Diagnostic services include Pathology, Radiology and Nuclear Medicine. Advanced diagnostic services like CT and MRI scans areavailable in the nearby Meherbai Tata Memorial Hospital (MTMH). In addition to general wards, TMH offers intensive care to its patients through Critical Care Unit (CCU), Intensive Care Unit (ICU), Paediatric Intensive Care Unit (PICU) and Burns Care Unit (BCU). There are nine operation theatres for the surgical specialties.TMH also provides super speciality services in Cardiology, Neurology, Neurosurgery, Nephrology, Urology and Paediatric Surgery.

The hospital has various departments offering healthcare services in specific areas. All clinical departments treat their outdoor patients in OPD. Indoor patients are treated in wards, generally organized according to specialties. This 102-year The hospital also maintains a medical store for procuring and storing medicines implants and all consumables. The medicines are dispensed to patients through pharmacy counters located in OPD complex and various dispensaries. Wards requisition their requirement of medicines to medical stores for administering to inpatients.

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OPD Services

OPD services cover the speciality areas of treatment: Medicine, Cardiology, Dermatology, Chest, Paediatrics, Obstetrics & Gynaecology, Surgery, Orthopaedics, Psychiatry, Neurosciences, Eye, ENT, Dentistry, Joint Replacement and Reconstructive surgery, Pre-anaesthetic and Pain clinic and Physiotherapy. For OPD patients there is an OT located in OPD complex.[1]

Dispensaries also provide OPD services.

Indoor Services (Medical & Surgical)

There are 13 wards and 73 cabins with A/C facility for 115 beds. Indoor patients are treated in wards, organised according to specialties. 14 operation theatres serve the Surgery, Orthopaedics, Neurosurgery, Otorhinolarygology and Obstetrics & Gynaecology departments. Obstetrics and Gynaecological surgeries are carried out in its designated Gynaecology operation theatre (GOT). Department of Obstetrics and Gynaecology has a labour room with an adjacent neonatal unit. All other surgeries are carried out in the main OT complex. Eye surgeries are done at Eye Hospital, Sakchi, which is not part of TMH.

Critical patients are treated in ICU, CCU and PICU. Burns cases are treated in BCU. [1]

Emergency & Casualty Services

Emergency is a 24x7 service with round-the-clock availability of trauma team and on-call specialists.

The Casualty ward provides round-the-clock medical observation to needy patients who are either sent home after initial treatment or are admitted as indoor patients depending on the need.[1]

Diagnostic Services

Pathology and Radiology have 24-hour service and cater to routine and specialised tests. The Nuclear Medicine & RIA carries out nuclear medicine scans and specialised blood tests [1].

Critical Care Services

Patients requiring specialised management are taken care of in the Critical Care and Intensive Care Units (CCU & ICU). There is a dedicated Burns Care Unit. The Paediatric Intensive Care Unit (PICU) caters to the critically ill children and level II neonatal unit for critically sick new borns.

12.5% of the total bed strength provides special care through the CCU, ICU, PICU, intermediate care units, nursery and labour room. [1]

ACHIEVEMENTS & CHALLENGES

Major initiatives in 2009-2010

- The telephonic appointment system for booking consultation slots in TMH OPD was successfully implemented. By the end of the year, 94% of registration for OPD visits was by telephonic booking.
- To ease the rush during peak hours in the morning, OPD timing was extended with the OPD manned from 9.00 AM to 6.00 PM on weekdays. This resulted in reduction in waiting time for consultation.
- There was reduction in wait time for diagnostic tests (ultrasound, x-ray, Thallium scans) by 50%. Emergency ultrasound and x-ray facilities were made available round-the-clock.
- There was increase in the number of successfully stabilised patients in the Emergency and faster diagnosis and shifting of cardiac patients to the ICU.
- An audit process for nursing was initiated.
- An error reporting system was instituted for all departments with review in the management meetings.
- Pathology and Radiology Departments started the DMLT & DMIT courses to train local youth.
- The Department of Medicine re-engineered work time to provide ward coverage by doctors from 7 AM to 9 PM. The change in ward round time also led to a reduction in discharge time by 60%.
- Several new services were established in various departments - teeth whitening procedure in Dentistry, antenatal classes and ' Well Woman Clinic' in Obstetrics & Gynaecology. The facility for painless labour was started by Obstetrics & Gynaecology and Anaesthesiology, neonatal TSH screening by Nuclear Medicine and neonatal hearing screening by Department of ENT.
- Departmental restructuring resulted in formation of new departments - Psychiatry, Dermatology and Urology.
- A new Neurosciences ward was opened.
- A Neurosciences seminar on Paediatric Neurology and Epilepsy was held.
- AIDS awareness camps were held in collaboration with HIV / AIDS Cell of TMH.
- There was 100% compliance to Small Group Activity (SGA) and 90% compliance to need-based training among nursing staff.
- Professional service providers were brought into TMH for Housekeeping, kitchen and dietary services, linen and laundry and bio-medical equipment maintenance services.

Department of Cardiology

- Paper presentation (***Experience of Pacemaker Follow-up Clinic***) in the 25th Arrthymia Workshop held by Heart Beat International in Atlanta, USA.
- Article published on ***RVOT Pacing*** in the CME of McGuile University, Canada.
- Article on ***ALCAPA*** accepted for publication in the Journal of the Association of Physicians of India.

Department of Ophthalmology

- Presentation on ***Trabeculectomy with Small Incision Cataract Surgery & Phaco Surgery*** at Barcelona, Spain.
- Presentation on ***Ocular Changes in Employees Working in Furnace Area of Steel Plant*** in half-yearly conference of Indian Occupational Health and Environment Medicine.

A book on ***Management of Thyroid Disorders Made Easy*** from Dept. of Nuclear Medicine published by Jaypee Medical Publishers.

Presentations by Dept. of Obstetrics & Gynaecology in All India Congress of Obstetrics & Gynaecology, Guwahati (Jan 2010), All India Congress of Royal College of Obstetrics & Gynaecology , East Zone Kolkata (Feb 2010), Bihar & Jharkhand AOBOGS and AISMOC. [1]

OBSERVATION LEARNING

(Major critical factors affecting the functioning of the department)

OBJECTIVE --- **To analyze the functioning of IT dept , AHU, Laundry dept & to identify the limitation and suggestion for improvement.**

DATA COLLECTION --- **Face to face interaction with respective department.**

PROCESS **Secondary data available within the respective department.**

I.T DEPARTMENT

Introduction :

Information technology (IT) has the potential to improve the quality, safety , and efficiency of h
By providing new ways for providers and their patients to readily access and use health information.
IT allows health care providers to collect, store , retrieve, and transfer information electronically. In
Technology priorities for hospitals such as Upgrading security protocols Implementing wireles
Implementing electronic health records , Upgrading network infrastructure , Designing process ,
Improving the IT department Replacing , upgrading inpatient clinical systems , Reducing medi
promoting patient safety Hospitals consider both financial return on investment and nonfinancial be
making IT investment decisions. Investment in IT leads to increased volume in nonprofits hospitals a
length of stay in for-profit hospitals. [2]

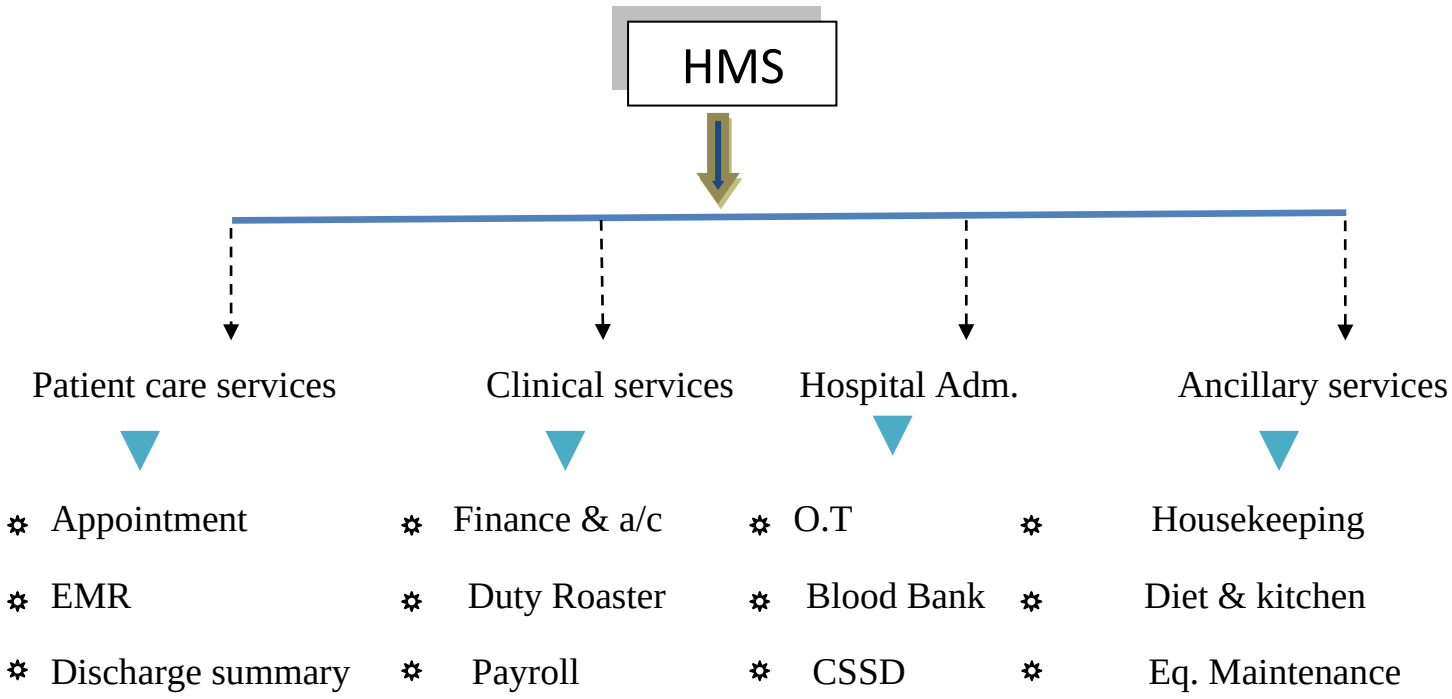
The software handled by IT department is HMS (Hospital management system) developed by TCS.

HOSPITAL MANAGEMENT SYSTEM : –

Incorporated in 2005 in TMH.

HMS is a comprehensive system that integrates all the department in a hospital & automates most of t

function.


HMS
Patient care services
Clinical services
Hospital Adm.
Ancillary services
Appointment
EMR
Discharge summary
Finance & a/c
Duty Roaster
Payroll
O.T
Blood Bank
CSSD
Housekeeping
Diet & kitchen
Eq. Maintenance

DIFFERENT MOUDLES IN H.M.S

1. APPOINTEMENT SCHEDU LING **2. REGISTRATION** **3. IN PATTIENT MANAGEMENT** **4. BILLING** **5. MASTER SCREEN** **6. RADIOLOGY/NUCLEAR MEDICINE** **7. LABORATORY** **8. PHARMACY** **9. STORES** **10. STORES MGMT.** **11. ELECTRONIC-MEDICAL RECORD** **12.BLOOD BANK** **13.O.T** **14. DUTY ROASTER**	**15. DIET & KITCHEN** **16. HOUSEKEEPING & LAUNDRY** **17. PERSONNEL** **18. PAYROLL** **19. FINANCIAL ACCOUNTING** **20. EQUIPMENT MAINTENANCE** **21. MGMT.INFORMAION SYSTEM** **22. SECURITY & ADMINISTRATION** **23. INSURANCE** **24.FAMILY PLANNING/IMPORTANT CASH**

BENEFITS : -

- Online availability of information.
- Improved administration and control.
- Automated information flow across department(avoiding duplication)
- Simplified billing & discharge process.
- Optimized resource allocation.
- HMS aims at streamlining the functions in a hospital.

LIMITATIONS : -

1. Absence of emergency exit within the I.T Department.
2. Requirement of advanced software as it lack in intelligence.
3. No drinking point source available near I.T dept.
4. Absence of EDP dept.

SUGGESTION FOR IMPROVEMENT

1. Up gradation of existing software with more advanced and intellengcy based.
2. Implementation of Clouding computing is highly recommended with other TATA Hospital.(pri
3. Requirement of EDP department is essential for effective functioning .

LAUNDRY

Washer	*- 3*
Hydro extractor	*- 3*
Dryer	*- 3*
Callender press	*- 1*
Bed press	*- 2*
Hand press	*- 1*

Laundry service is responsible for providing an adequate , clean and constant supply of linen to all users. The basic tasks include : sorting , washing, extracting , drying , ironing , folding , mending and delivery. A reliable laundry service is of utmost importance to the hospital . In today's medical care facilities, Patients expect linen to be changed daily . An adequate supply of clean linen is sufficient for the comfort and safety of the patient thus becomes essential. The term 'hospital linen' includes all textiles used in the hospital including mattress, pillow covers , blankets , bed sheets, towels, screens, curtains, doctors coats, Theatre cloth and table cloths. [3]

Legal requirement

Total no. of equipment- 14

- Mechanized laundry license
- Half yearly return & Annual return
- Accident register
- Annual survey of industry

PROCESS FLOW CHART

Soiled linen collection area(critical ward to general ward)

↓

Linen sorting area

↓

Washing area

↓

Hydro area

↓

Drying linen area

↓

Ironing area

↓

Folding area

Works in 3 shifts ⟶ 6.30 a.m – 11 a.m(A) , 2 p.m – 10 p.m(B) , 10 p.m – 6 a.m

Manpower – 92 worker/per day (supervisor ,operator ,attainder ,tailor)

DOCUMENTATION

- Equipment uptime documentation on daily basis –

Total Equipment – 14 , Breakdown of Equipment -1

14 Equip. - - - - - - - - - - - - - 100% Uptime

13 Equip. - -- - - - --- - - - $\frac{13}{14} * 100$

= 92.86% Uptime

- Maintenance documentation – regular checkup
- Listing of discarded item on daily basis
- Laundry washing item documentation
- Compliance report for vendor payment

Total washed linen – 177427 (supply for the month)

Targeted linen to be washed _ 274598 (8858 per day i.e. 8858*31)

Compliance rate = $\frac{177427}{274598} * 100$

= 64.61% (gives % of production rate)

Notes:-

- 4:1 linen /bed/day in TMH & (5:1 linen/bed/day as per standard.)
- Quality check – Swab test of washed linen twice in a month.
- Occupier – M.D. (H.M. Nerurkar)
- Annual Medical Check up of laundry staff (By Asst. Civil Surgeon)

Limitations

1. Improper management of time scheduling during linen transaction in respective wards.
2. Lack of linen supply to the wards as per the requirement.

Area for improvement

1. Shift wise maintenance of employee record.
2. Proper labelling of linen for its identification.

AIR HANDLING UNIT (AHU)

The air handling unit and the air distribution terminal devices are important parts of the ventilation System . Generally , hospitals tend to have a large number of relatively small air-handling units , each serving a specific function within the building. The special technical demands include hygiene, reliability, safety and energy-related issues . Air-handling unit filters have the task of , as a minimum, limiting the concentration of particles entering the room from outdoors but also of keeping the air-handling unit components as clean as possible in order to reduce the risk of biological growth within the unit itself. HEPA (high-efficiency particulate air) filter frame eliminates the risk of bypass leakage while avoiding the use of liquid seals and offering clean and rapid filter replacement.[4]

- AIR HANDLING UNIT(AHU) IN TMH

MAIN O.T – 3

I.C.U - 2

B.C.U - 2

C.C.U - 2

LABOUR ROOM – 1

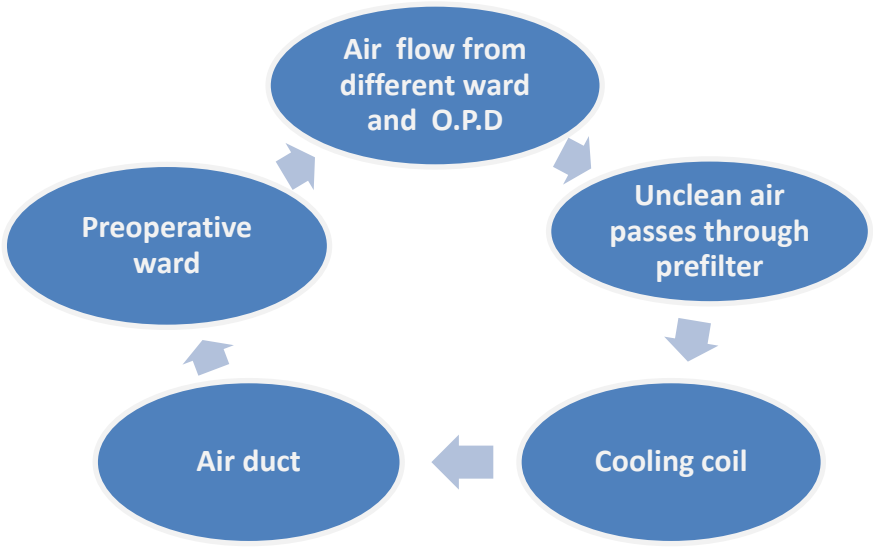
NURSERY - 1 (HEPA FILTER)

GYNAEC O.T - 1

O.P.D - 2

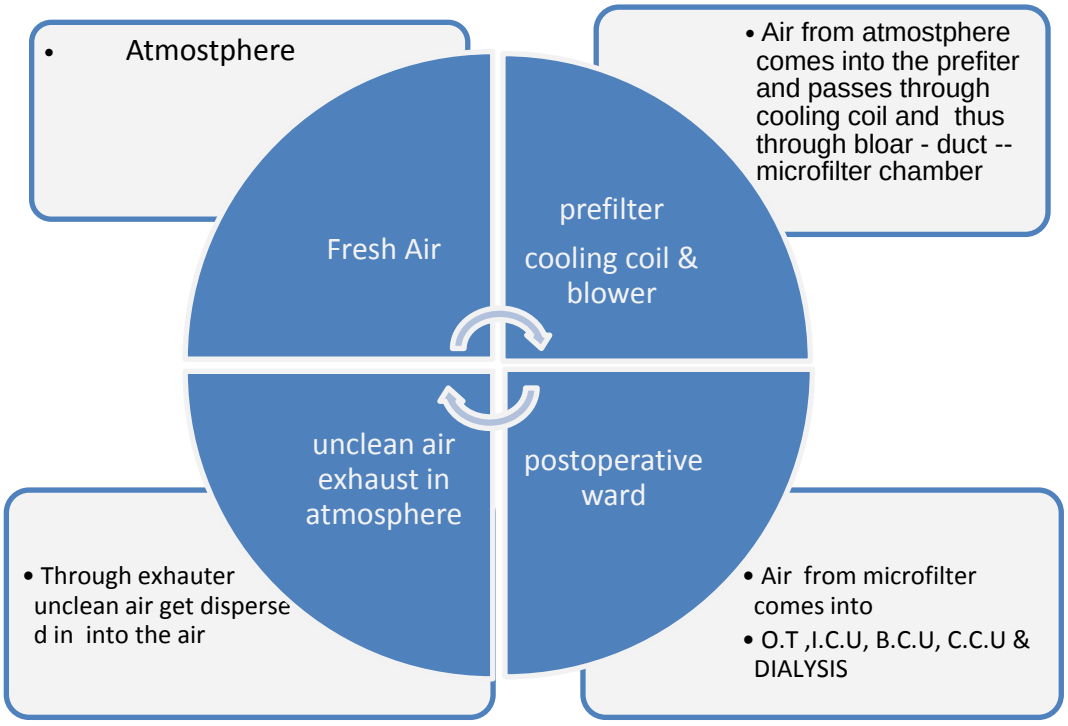
A.H.U PROCESS FLOW CHART

CASE 1 :



- **NOTE – NO MICROFILTER USED**

Case2 :



- **NOTE –**

  - **Use of micro filter & in case of nursery unit use of HEPA filter**
  - **No HVAC system in a hospital.**

Limitation

1. **Less no. of HEPA filter.**
2. **No fire alarm system, but it is in the process of implementation.**

Area for improvement

1. **Replacement of simple micro filters with standardized HEPA filter.**

MAJOR PROJECT

STUDY DESIGN

Project 1 :- Awareness of fire safety in Tata main hospital.

General objective :- **To ensure that the various departments of the hospital are familiar with the hospital fire safety preparedness.**

Specific objective : - **To assess the level of awareness on fire safety in various departments of the hospital & thus increase the preparedness level of fire disaster management.**

Method of the study :-

Type of study: Exploratory study

Sampling-

- **Study area: Nine Departments (Housekeeping, Laundry, Kitchen, Security guard, Pathology, Ward secretary, Medical Store, Sister in charge, Radiology**
- **Duration: 35 days , 4-5 persons interviewed per day**
- **Method: Purposive sampling according to the presence of the staff on the day of interview**
- **Sample size: 156 including doctors, nurses, paramedical staffs, pathologists, security guards and other hospital staffs**

Data Collection-

Approach: Qualitative data collection

Tool: Open ended questionnaire

Technique: Face to face interview & vigilant

Literature review

[5] What is Fire ?

Fire is a chemical reaction in which fuel react with Oxygen at a higher (required) temperature when, heat and light is liberated. Light helps to identify the fire and heat acts as a secondary source of ignition.

It has three factors :-

1) Fuel :- The matter which burns.
2) Oxygen :- It helps in combustion or fire
3) Heat :- It is required to raise the temperature of the Fuel.

Light → Helps to identify .
Heat → acts as a Secondary source of ignition

[5] Causes of Fire

1. Negligence
2. Carelessness
3. Poor House keeping
4. Smoking
5. Improper Maintenance

[5] Method of Extinguishing

If any one of these factor is missing, there will not be any Fire.

There are three methods:-

1) Cooling - Removing Heat
2) Blanketing - Reducing Oxygen
3) Starvation - Removing Fuel

[5] Class of Fire

Fire scientists have classified all fires in to various categories on the basis of nature of combustible materials and the situation in which they might be found.

Class : - 'A', 'B', 'C' and 'D'.

Class - A :- Fire in ordinary combustible material such as wood, paper, textiles, jute, hut etc.

Class – B :- Fire in inflammables liquids such as Oil, Organic Solvent, Petroleum Products, varnish, paints etc.

Class - C :- Fire involving in gases substances such as Methane, Propane, Butane, Acetylene, Cooking Gas (LPG) & Live Electrical Fire etc.

Class -D :- Fire involving burning combustible metals powder such as magnesium, Aluminum, Zinc, Alkali metals like Sodium and Potassium etc.

Electrical Fire :- This fire includes live electrical equipment's.
"Under any circumstances water jet should not be applied for Electrical Fire".

[5] Different types of fire fighting systems

1. **Fire extinguisher- Water CO2, Mechanical foam, D.C.P, CO2**
2. **Fire alarm control panel**
3. **Hooters**
4. **Fire pumps**
5. **Hydrants points**
6. **Sprinklers**
7. **Water tanks**
8. **Smoke detector**
9. **Public address system**
10. **Breathing apparatus**

HERE ARE SOME FIRE FIGHTING SYSTEMS IN TATA MAIN HOSPITAL

1. **Fire extinguisher-**

   A fire extinguisher consists of a hand-held cylindrical pressure vessel containing an agent which can be discharged to extinguish a fire.

There are 2 types of fire extinguisher present in the hospital

- **Co2 Fire Extinguishers**

Used for B, C, and Electrical Fires

Handling mechanism

Safely keep the extinguisher on the ground, hold the discharge horn by left hand and direct it towards fire.
Open the valve wheel anti-clock-wise through right hand.
Co2 gas, which is heavier than the oxygen will expel the oxygen from the fire spot.
Fire goes-off by smothering/blanketing effective
Duration :- 8 to 20 Sec., Effective Range : 1 to 2 Mtrs.
[5]

- **D.C.P. TYPE**

Use for B, C, and Electrical Fires.

Handling mechanism

Collect extinguishers from the available places.
Place it nearer to the fire, Approach from the wind direction.
Keep the extinguisher away from the Body.
Hold the discharge tube by left hand, remove the safety lock from the plungers knob and strike the knob by right hand.
Direct the dry chemical discharge on to the fire base by sweeping motion. Fire will be eliminated by blanketing/smothering effect.

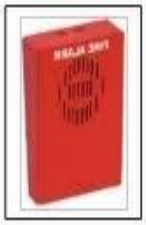
Duration :- 18 to 24 Sec., Effective Range : 4 Mtrs.[5]

2. **Fire alarm control panel**

The main function of fire alarm control panel is fire detection , it indicates the exact location of fire in the panel & inform the concerning agency like fire brigade, security, administration , electrical department through auto dialers. [6]

3. Hooters

The **fire alarm hooter is a device that produces sound when sensor senses any kind of fire activity**. It is enough to make alert everyone inside the building, industry, home, hospital etc. [6]

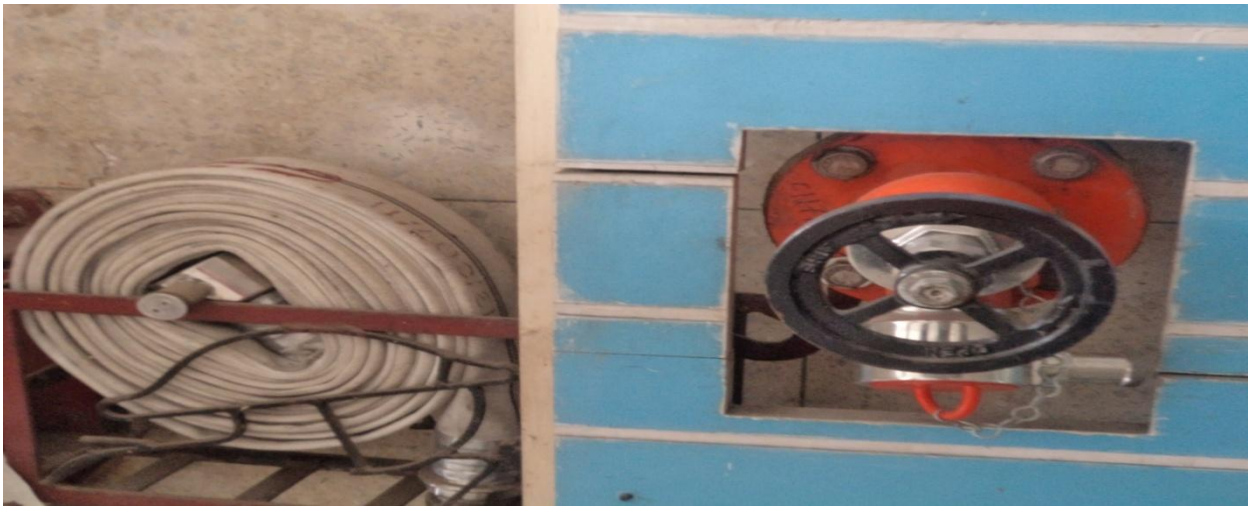


4. Fire pumps

A **fire pump** is a part of a fire sprinkler system's water supply and can be powered by electric, diesel or steam. The pump intake is either connected to the public underground water supply piping, or a static water source (e.g., tank, reservoir, lake). The pump provides water flow at a higher pressure to the sprinkler system risers and hose standpipes.

In Tata Main Hospital,there are 2 centrifugal pumps , powered by electric. **[7]**

5. Hydrant



Hose

Hose carries high pressured water required to supply to douse the fire. One part of the hose is coupled with Hydrant Valve or the Fire Engine. It can be permanently attached to a building's standpipe or plumbing system. [7]

Hydrant valve

A hydrant valve is attached to the fire hydrant and then the valve is opened to provide a powerful flow of water. [7]

6. Water tanks

Tank Connection supplies and installs components for a complete fire protection water storage system & Designed for your specific "water reserve" requirements.[8]

7. Smoke detector

It detects any kind of smoke generated out of fire, due to burning of scented sticks, steam generated out of boiled water or any form of dust particles coming in contact with it.

Its capacity is within the range of 5 metre square. **[6]**

8. Public address systems

The main purpose of public address system is to inform large number of people at a time about the present situation & thus guide them accordingly.

Hooters are also a form of PA system.

9. Breathing apparatus

A breathing apparatus play a vital role in fire, but the primary purpose is to support the mechanical movement of air in and out of the lungs and the exchange of oxygen and carbon dioxide. Wearing a breathing apparatus allows you to enter into a hazardous environment, underwater and even resuscitate a person who is not breathing**. [9]**

10. Manual call point

MCPs are an active fire protection device that usually gets activated when the user pulls the handle down or press the keys .**[6]**

TOTAL NUMBER OF FIRE FIGHTING SYSTEM IN TATA MAIN HOSPITAL

ITEMS	NUMBER
Fire extinguisher	179
Fire alarm control panel	3
Hooters	29
Fire pumps	2
Hydrants	12
Water tanks	1
Smoke detector	517
Public address system	6-8
Breathing apparatus	2
Manual call point	28

***NOTE** - Fire extinguishers are present all over the hospital
All other items are only present in the new building(JGMH), emergency, laundry, OPD wards & stores.

Work is in progress for these items to be incorporated all over the hospital.

[10] EMERGENCY RESPONSE PROCEDURE DURING FIRE

1. **Communication & Approach : –**

A team of three members are responsible for all safety related communication

Actions to be taken by the above team : -

- Inform Head of Department and Security, Fire Brigade, First Aid Station, Safety and Ergonomics of emergency situation and location.
- Inform Departmental personnel trained in Fire Fighting, First Aid and Emergency Management team of the department as per departmental guidelines.

1.1 In case of fire, you are requested to immediately come out of the building and assemble at the designated assembly area. Every ward has got its separate exit in case of any emergency thus you may use any of the exits which is nearer to you. The emergency exit is usually under lock and key for security reasons. However, the key is kept at the nursing station which could be asked for in the event of an emergency.

Assemble in designated Assembly Areas:-

In front of CCU and BCU
In front of JGMH and CCU/BCU
Near Doctor's/ Nurses Hostel
In front of OPD Block
In front of Radiology Department
Near Labour Room Complex

1.2 Assessing fire as an emergency, the nominated floor coordinators are responsible to press the hooter immediately. However, anyone can press the hooter in case he or she comes to know about the emergency.

COMPLEX	PERSON RESPONSIBLE
OPD	WARD SECRETARY MANNING "MAY I HELP YOU" COUNTER
EMERGENCY	DOCTOR ON DUTY/ ENQUIRY IN CHARGE
OLD BLOCK	SISTER ON DUTY IN FRONT CABINS SISTER ON DUTY IN RESPECTIVE WARDS SECURITY PERSON ON DUTY IN ADMINISTRATIVE BLOCK SISTER IN CHARGE LABOUR ROOM
PEDIATRIC WARDS	SISTER IN CHARGES RESPECTIVE WARDS
RADIOLOGY DEPT	WARD SECRETARY MANNING REGISTRATION COUNTER IN RADIOLOGY
MEDICAL STORE	MEDICAL STORE RECEIVING PHARMACIST IN MEDICAL STORES
LAUNDRY	OFFICE CLERK IN LAUNDRY
NUCLEAR MEDICINE	REGISTRATION COUNTER MANNING PERSON IN NUCLEAR MEDICINE
NEW CABINS	SISTER IN CHARGE NEW CABINS
JGMH BLOCK	RESPECTIVE SISTERS ON DUTY IN VARIOUS WARDS
CCU AND BCU, OT AND ICU	RESPECTIVE SISTER IN CHARGES

1.3 Electrical switches near the vicinity of Fire shall be put off and Emergency lights shall be put on or provided by the above team members for illumination of the area.

1.4 The persons responsible for communication listed above will also ensure opening of all exits.

1.5 The persons responsible for communication listed above will reach the site immediately on receipt of information and start taking action.

1.6 For communicating following communication channels will be utilized:
a) TISCO telephones
b) Mobile phones

1.7 Responsibility of the members in case of emergency will be displayed at all prominent locations. This shall also be communicated through E-mail.

1.8 (a) Chairman , AIC of the area shall form and activate an Area Emergency control room during emergency.

(b) He shall inform VP, Corporate Services and other concerned agencies.
(c) He shall reach the site and take charge of all Control / Rescue operations within the Department/ area.
(d) Establish contact with Central Control Room and coordinate actions initiated.

1.9 (a) The Area Emergency control room shall keep information of affected persons at the commencement of functioning and update information periodically and keeps track of the affected persons from TMH.
(b) The Area Emergency control room shall keep local addresses of all affected persons with the help of personnel departmental representative and ensures that the relatives of affected persons have been informed.

2.0 <u>Cordon</u>: -

A team of three members along with the team members listed above will facilitate entry of only authorized people/ agency into the building and ensure sufficient space for parking of vehicles of Fire Brigade, Security, Safety and other concern agencies. Personal Protective Equipments (PPEs): The above personnel will also ensure that the required PPEs are obtained and kept in proper & accessible place for their use in emergencies.

3.0 Evacuation, Search & Rescue : -

A team of 11 members are responsible for evacuation, search & rescue operations in case of emergency .Training schedule of leaders and team members of the Evacuation, Search & Rescue team is once in 2 years

The team will also assist Fire Brigade, First Aid and other agencies in evacuation, search and rescue operations. This team will also ensure removal & safe keep of documents & assets during the emergency. In this connection a hall / room shall be identified in advance as a safe place for removal & safe keeping of documents & assets in case of fire. Filing cabinets (pasted on 'Remove first in case of Fire') should be removed first and kept at a safe place.

Emergency assembly point shall be identified and displayed at Cold zone for each and every building/ Work area by this team. All team members have formal training of evacuation, Fire fighting and first aid.

4.0 Checks : -

Following personnel are responsible for periodical inspection & maintenance of the emergency equipments such as(Fire extinguishers/Fire hydrants, Stretcher, First Aid Box, emergency lights etc.) as per the Standards

5.0 Emergency Management team : -

(Every department should have an Emergency Management team headed by Departmental Chief/ Head and comprising of Emergency coordinators, Rescue team.)

5.1 Periodicity for review of Emergency Management Plan will be once in every four months, however they may also meet as and when required.
5.2 Emergency Control room shall be well equipped to deal with Emergencies.
5.3 Emergency Control room shall be identified and activated immediately by the Emergency Management committee.

6.0 For mitigating the Emergency situations the above committee will seek help from Central Emergency Committee of Corporate Services headed by VP, Corporate Services, where all chiefs & Heads under Corporate Services division will be the members. Some specialists and others will be members as permanent invitees.

6.1 The In-charge of Central Emergency Committee of Corporate Services after activating the Emergency Control Centre will inform Town Emergency Control centre (JUSCO), Town Transport, TMH, Police, Govt. Officials, Outside Fire Brigade Services, Factory Inspector and other relevant agencies as per need.

FINDINGS OF THE STUDY : -

Checklist prepared on the basis of 4 parameters

Parameters	Correct Code response	Remarks
What is the colour code used for fire?	Red	If responded correctly- Marked as "YES" If responded incorrectly Marked as "NO"
Where is the emergency exit & its key location in your department ?	Aware or unaware	
How to handle the fire extinguisher ?	Handling mechanism mentioned above.	
Whether to use lift or stairs during fire ?	Mainly stairs used & lift should be avoided.	

Departments covered
1.Housekeeping 2.Kitchen 3.Laundry 4.Security Guard 5.Pathology 6.Ward secretary 7.Medical store 8.Sister in charge 9.Radiology

TOTAL AWARENESS GRAPH OF DIFFERENT DEPARTMENTS ON THE BASIS OF 4 PARAMETERS

HOUSEKEEPING	YES	NO
Code used for fire	5	15
Fire exit & key	12	8
Handling of fire extinguisher	6	14
Use lift or stairs	11	9

SAMPLE SIZE - 20

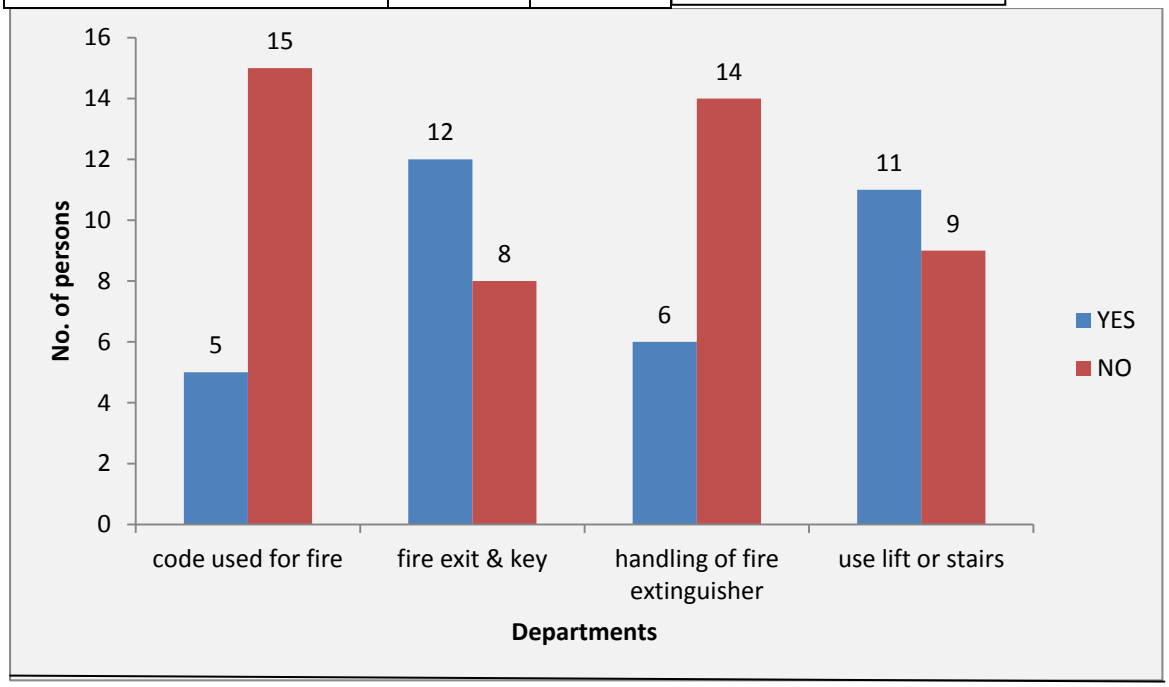


TABLE – 1

GENERAL FINDINGS OF HOUSEKEEPING DEPARTMENT : -

- **Mostly people are not aware about the code for fire and how to use a fire extinguisher.**
- **They are well known about the exit gate of their respective department in which they are working and use of stairs during fire.**

KITCHEN	YES	NO
Code used for fire	16	4
Fire exit & key	20	0
Handling of fire extinguisher	14	6
Use lift or stairs	16	4

SAMPLE SIZE - 20

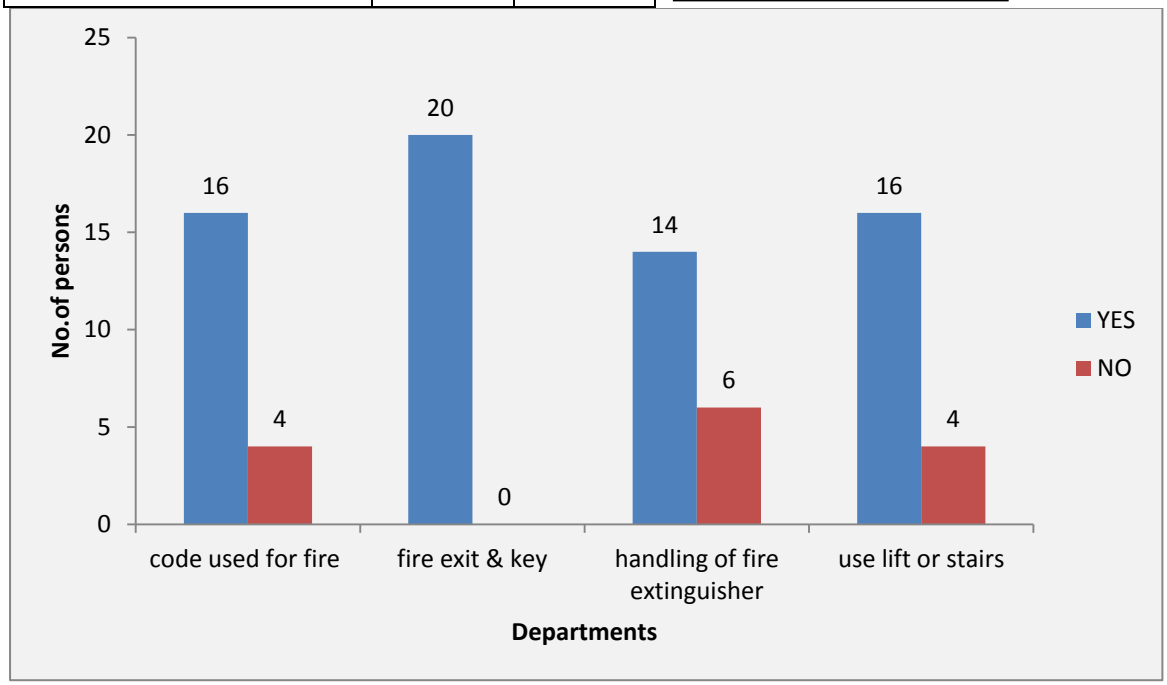


TABLE -2

GENERAL FINDINGS OF THE KITCHEN : -

- **Almost all the randomly selected persons were aware of the emergengy exit gate and the key during emergency.**
- **At the same time they were well informed about other parameters also.**

LAUNDRY	YES	NO
Code used for fire	7	13
Fire exit & key	13	7
Handling of fire extinguisher	6	14
Use lift or stairs	11	9

SAMPLE SIZE - 20

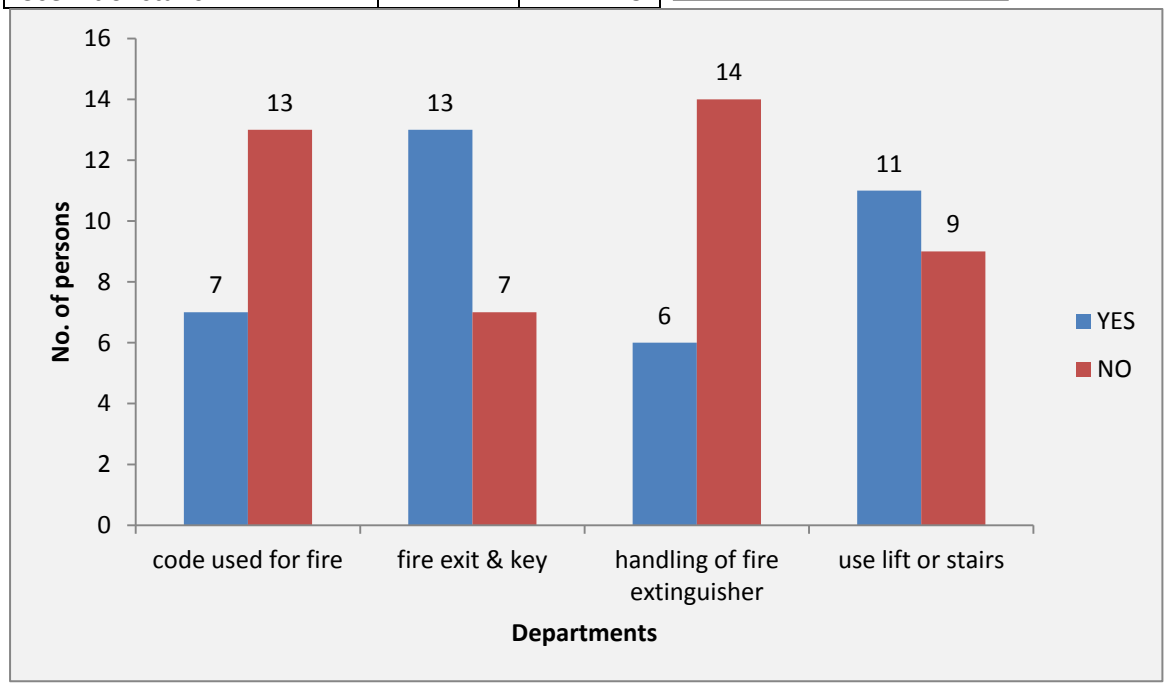


TABLE - 3

GENERAL FINDINGS OF THE LAUNDRY DEPARTMENT : -

- **Poor knowledge about the handling of fire extinguisher & the code used for fire.**
- **More than 50% knew about the emergency exit gate and about the concerned key.**

SECURITY GUARD	YES	NO
Code used for fire	16	9
Fire exit & key	18	7
Handling of fire extingusher	7	18
Use lift or stairs	9	16

SAMPLE SIZE - 25

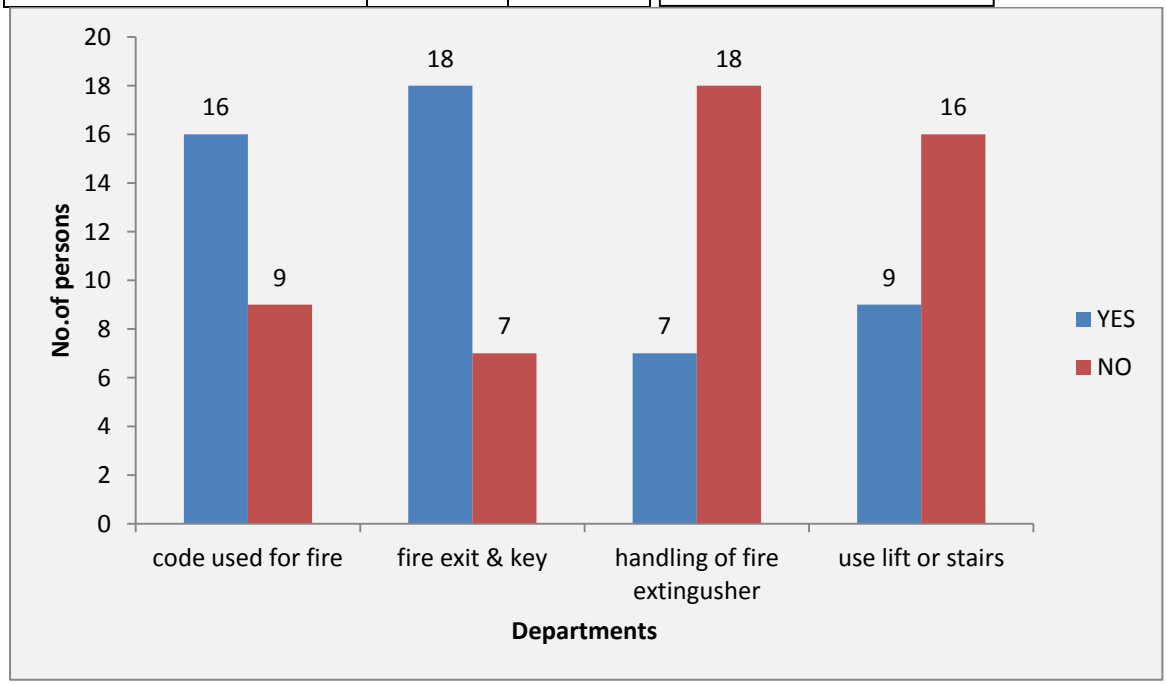


TABLE - 4

GENERAL FINDINGS OF THE SECURITY GUARD OF THE ENTIRE HOSPITAL : -

- **Training needs to be imparted regarding handling of the fire extinguisher.**
- **Lack of knowledge regarding use of lifts or stairs during fire.**
- **Adequate awareness about the emergency exit gate and code used for fire.**

PATHOLOGY	YES	NO
Code used for fire	2	7
Fire exit & key	8	1
Handling of fire extinguisher	4	5
Use lift or stairs	6	3

SAMPLE SIZE - 9

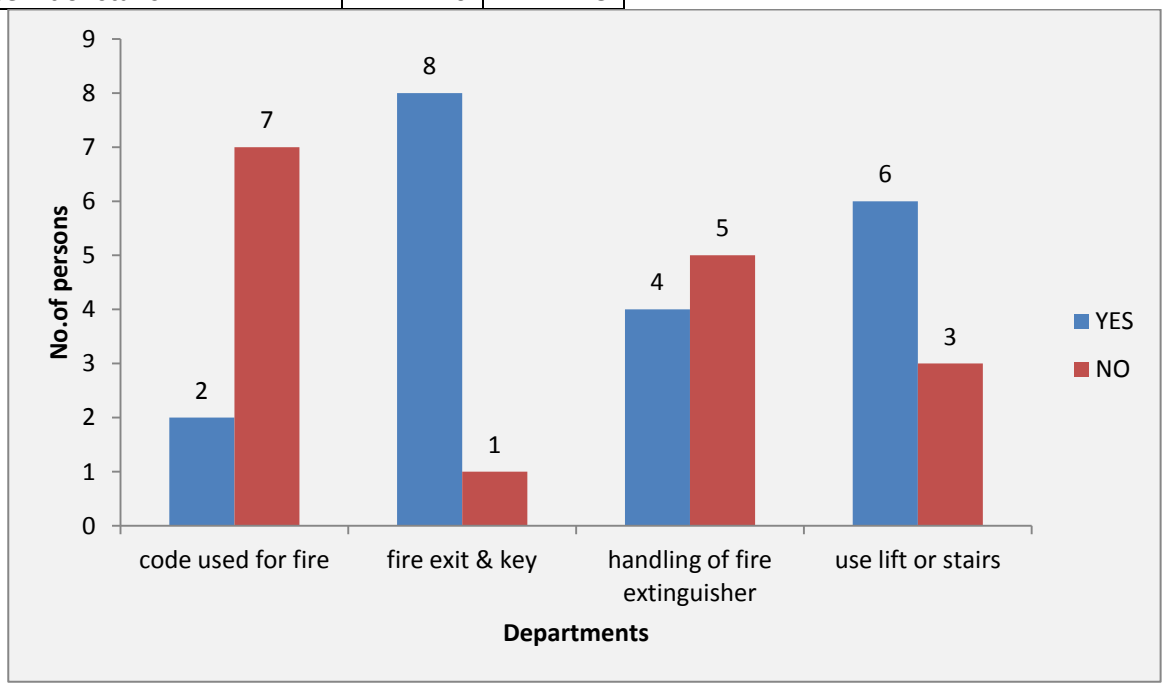


TABLE - 5

GENERAL FINDINGS OF THE PATHOLOGY DEPARTMENT : -

- **Well aware about the exit gate and whether to use lift or stairs in case of fire.**
- **Less than 50% have knowledge about the handling of fire extinguisher & have least knowledge about the code used for fire.**

WARD SECRETARY	YES	NO
Code used for fire	13	7
Fire exit & key	3	17
Handling of fire extinguisher	0	20
Use lift or stairs	14	6

SAMPLE SIZE - 20

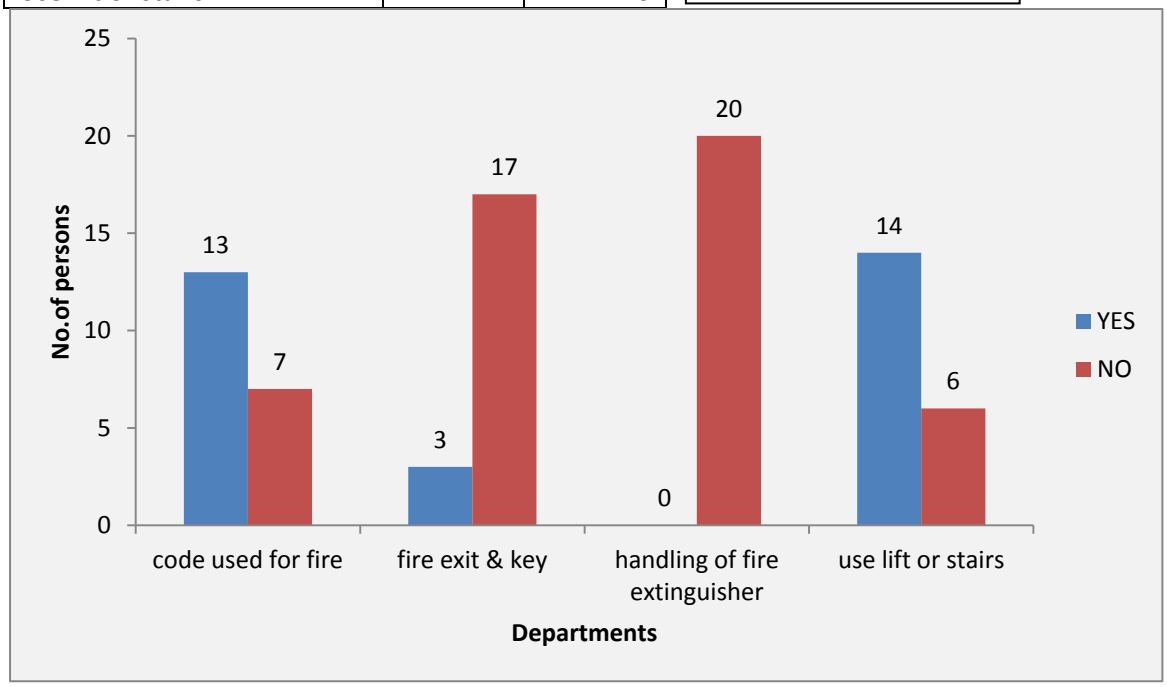


TABLE - 6

GENERAL FINDINGS OF THE WARD SECRETARY : -

- **Immediate training needs to be imparted regarding handling of the fire extinguisher as they donot have any knowledge about the handling procedure.**
- **Lack of awareness about the emergency exit gate**

MEDICAL STORE	YES	NO
Code used for fire	3	6
Fire exit & key	7	2
Handling of fire extinguisher	4	5
Use lift or stairs	7	2

SAMPLE SIZE - 9

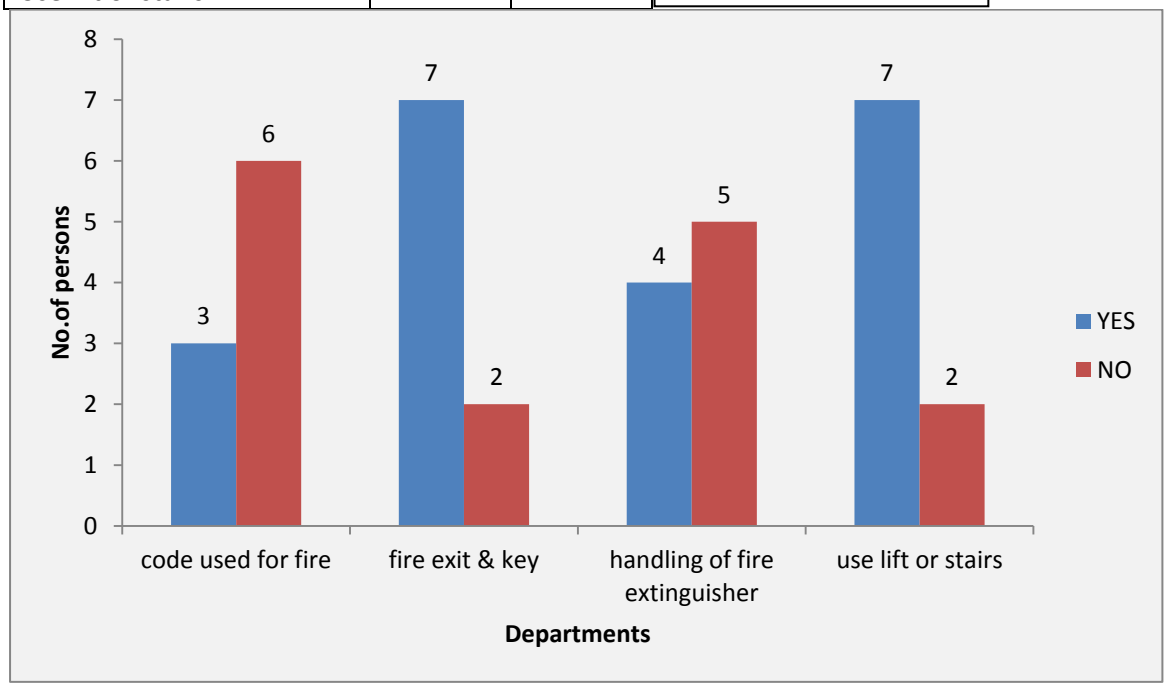


TABLE – 7

GENERAL FINDINGS OF THE MEDICAL STORE DEPARTMENT : -

- **Less than 50% aware about handling of the fire extinguisher & code used for fire.**
- **Well aware about the exit gate & use of lift or stairs during emergency.**

SISTER IN CHARGE	YES	NO
code used for fire	20	7
fire exit & key	27	0
handling of fire extinguisher	21	6
use lift or stairs	19	8

SAMPLE SIZE - 27

TABLE - 8

GENERAL FINDINGS OF THE SISTER IN CHARGE : -

- **Almost all the randomly selected sister in charges are well aware about all the 4 parameters.**
- **The awareness about the fire exit gate and the respective key for the gate is 100% (the key for emergency exit is properly labelled and kept at the nursing station, such that it is easily accessible to all)**

RADIOLOGY	YES	NO
Code used for fire	5	1
Fire exit & key	6	0
Handling of fire extinguisher	4	2
Use lift or stairs	6	0

SAMPLE SIZE - 6

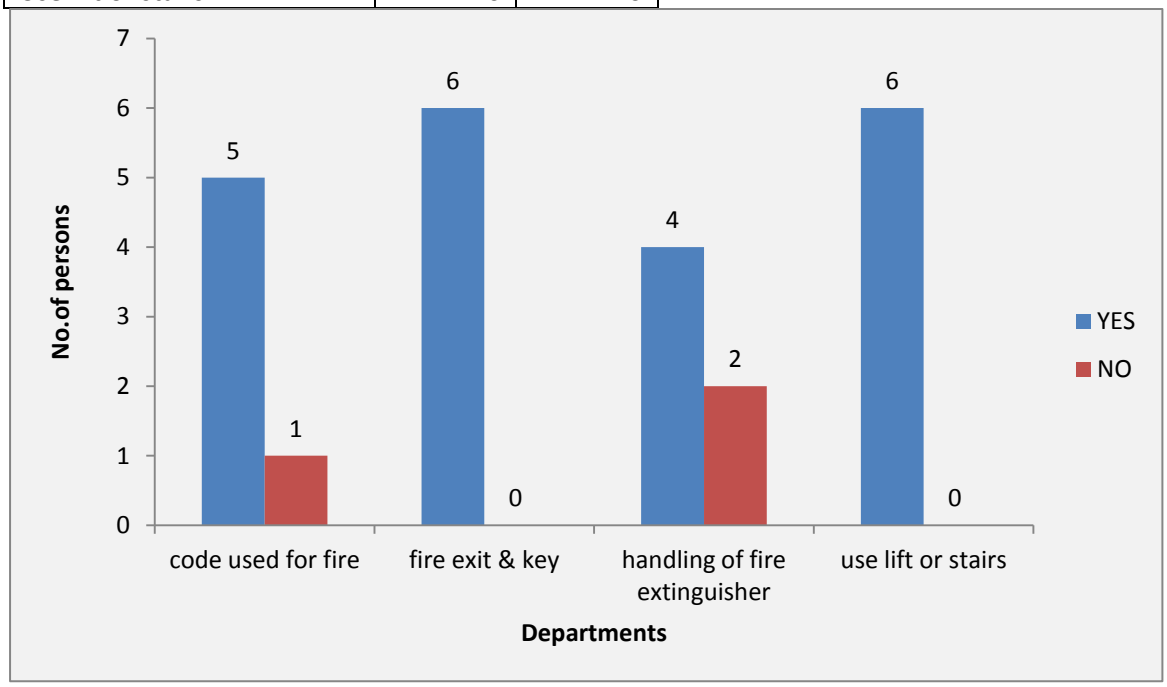


TABLE - 9

GENERAL FINDINGS OF THE RADIOLOGY DEPARTMENT : -

- **100% knowledge about exit gate and whether to use lift or stairs where as in comparison to this little less awareness in other two parameters**

COMPARISON BETWEEN DIFFERENT DEPARTMENTS ON THE AWARENESS OF CODE USED FOR FIRE

CODE USED FOR FIRE	YES	NO
Housekeeping	5	15
Kitchen	16	4
Laundry	7	13
kitSecurity guard	16	9
Pathology	2	7
Ward security	13	7
Medical store	3	6
Sister incharge	20	7
Radiology	5	1

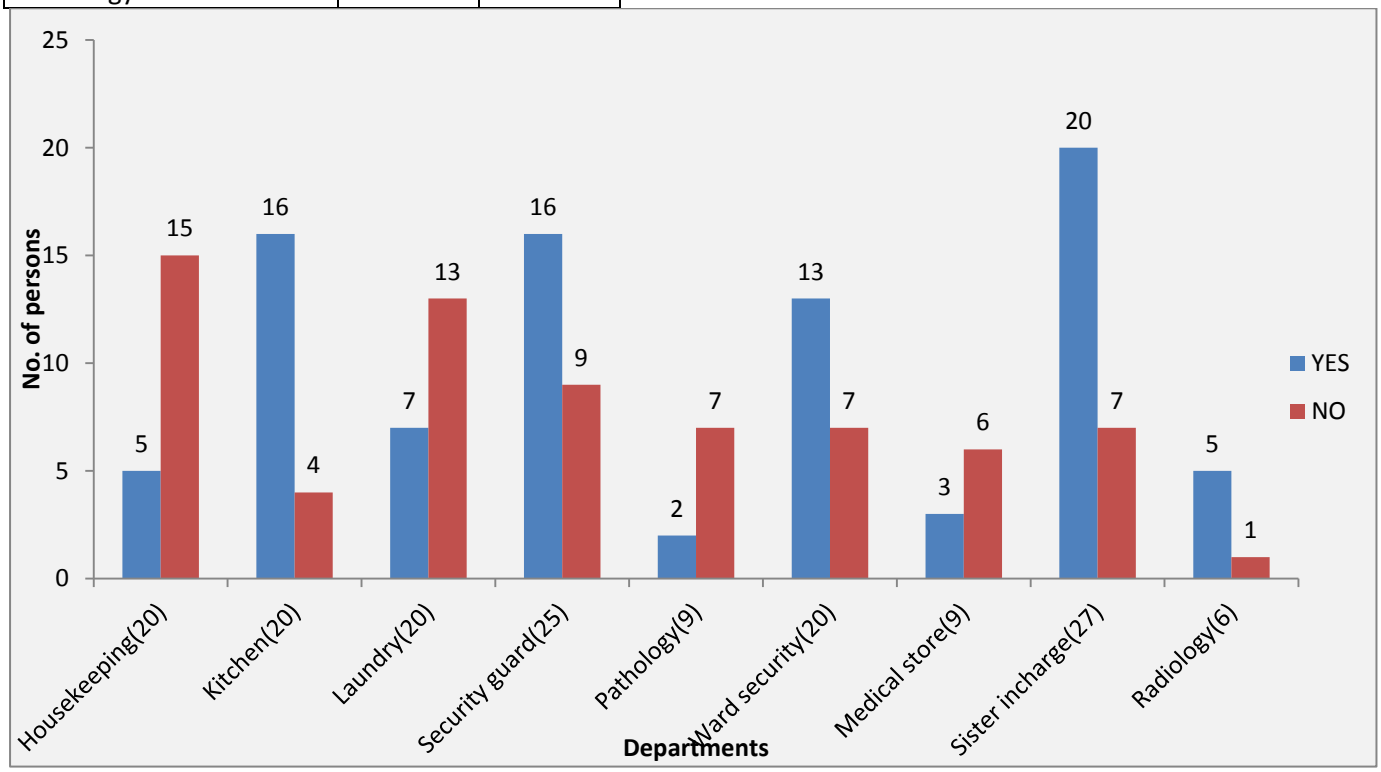


TABLE- 10

ANALYSIS & INTERPRETATION : -

The awareness about code used for fire is maximum in radiology department followed by sister in in charge and is minimum in housekeeping department followed by laundry department.

COMPARISON BETWEEN DIFFERENT DEPARTMENTS ON THE AWARENESS OF FIRE EXIT & KEY

FIRE EXIT & KEY	YES	NO
Housekeeping	12	8
Kitchen	20	0
Laundry	13	7
Security guard	18	7
Pathology	8	1
Ward security	3	17
Medical store	7	2
Sister incharge	27	0
Radiology	6	0

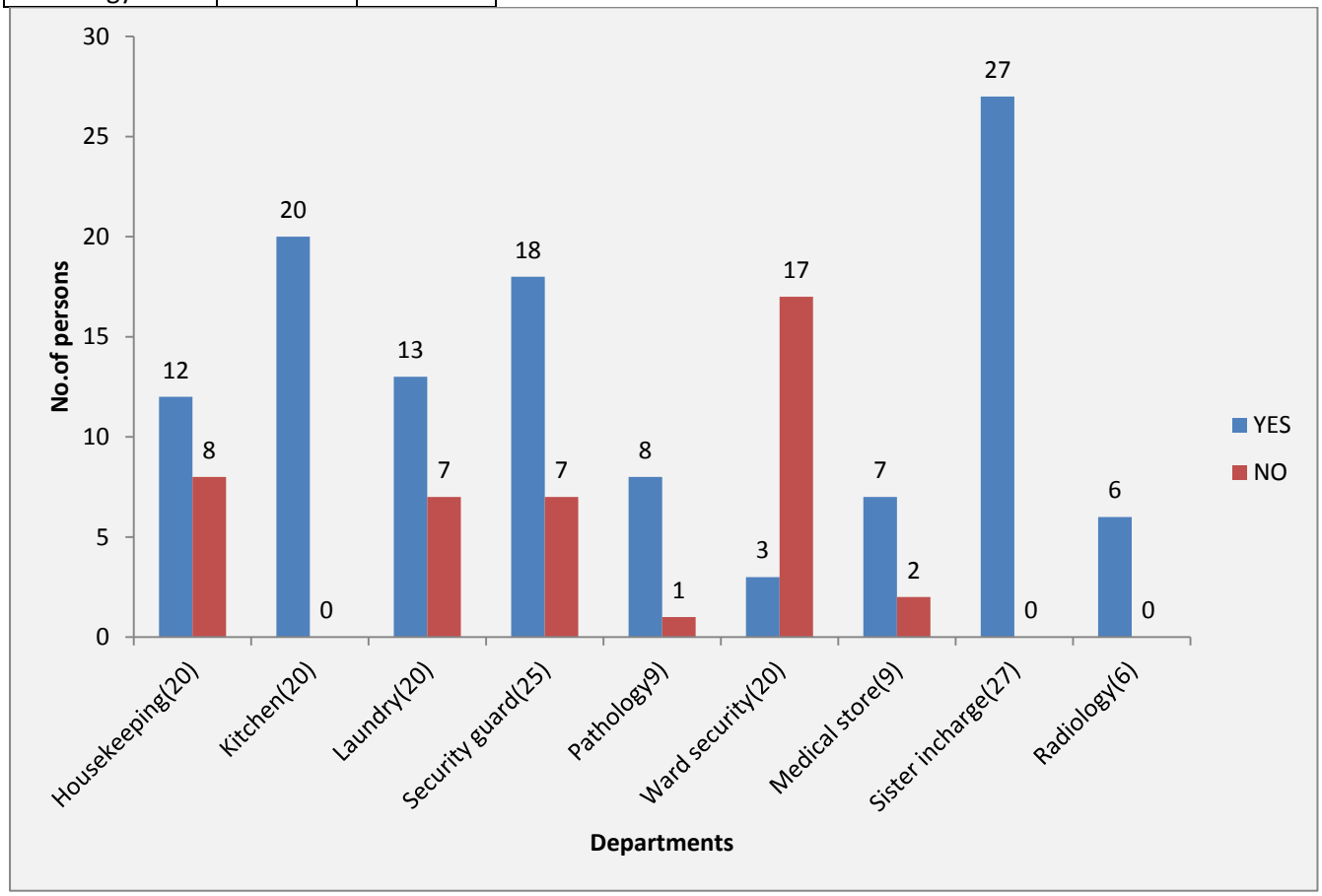


TABLE- 11

ANALYSIS & INTERPRETATION : -

The awareness about fire exit & key is maximum among sister in charge , kitchen & radiology department. All the interviewed staff in these departments were found aware about the same. It was minimum in ward secretary.

COMPARISON BETWEEN DIFFERENT DEPARTMENTS ON THE AWARENESS OF HANDLING OF FIRE EXTINGUISHER

HANDLING OF FIRE EXTINGUISHER	YES	NO
Housekeeping(20)	6	14
Kitchen(20)	14	6
Laundry(20)	6	14
Security guard(25)	7	18
Pathology(9)	4	5
Ward security(20)	0	20
Medical store(9)	4	5
Sister incharge(27)	21	6
Radiology(6)	4	2

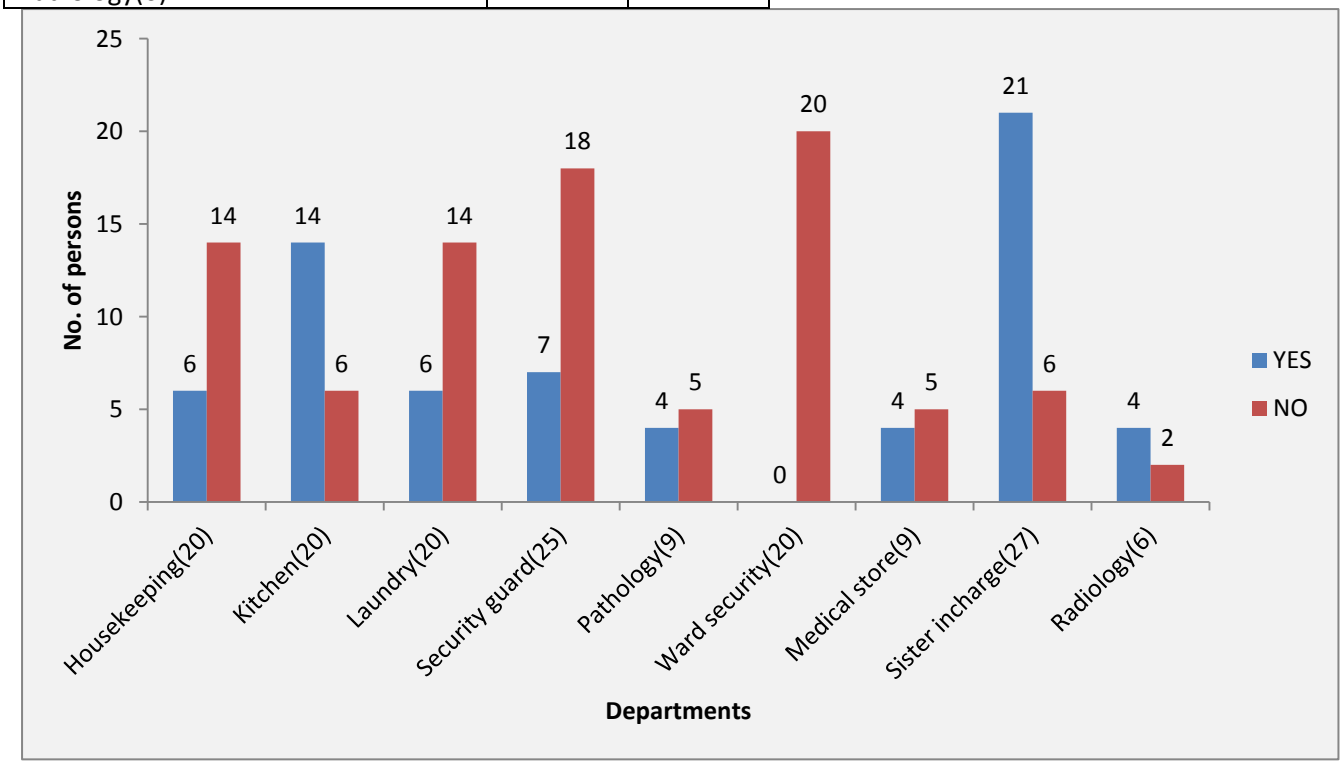


TABLE-12

ANALYSIS & INTERPRETATION : -

The awareness about handling of fire extinguisher is found maximum in sister in charge followed by kitchen department. Surprisingly, no one in ward security department found aware about the same followed by security guards.

COMPARISON BETWEEN DIFFERENT DEPARTMENTS ON THE AWARENESS OF USE OF LIFT OR STAIRS

USE LIFT OR STAIRS	YES	NO
Housekeeping	11	9
Kitchen	16	4
Laundry	11	9
Security guard	9	16
Pathology	6	3
Ward security	14	6
Medical store	7	2
Sister incharge	19	8
Radiology	6	0

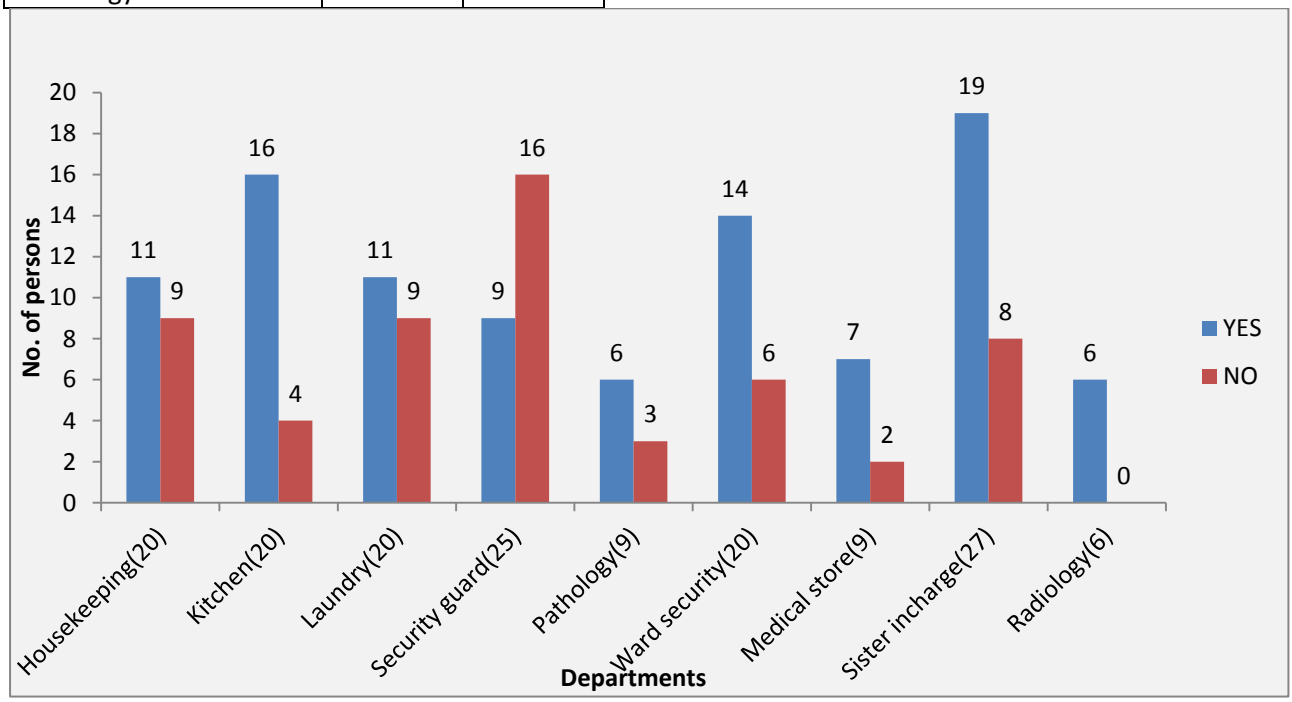


TABLE- 13

ANALYSIS & INTERPRETATION : -The awareness about use of lift or stairs during emergency found maximum in radiology, all were aware about the same, followed by kitchen and sister in charge and minimum in security guards followed by laundry, housekeeping.

RECOMMENDATION : -

- **Scheduled training programmes on handling of fire extinguisher need to be conducted at regular intervals particularly to the high concerned areas such as ward secretary , security guards as they are spreaded all over the hospital.**

- **As per the observation during survey departments, such as pathology and medical store have emergency exit but not identified & labelled as emergency exit door. So, proper identification & labelling is recommended.**

- **Recommendation for the construction of ramps in JGMH building as they play an important role in patient transportation during an emergency.**

- **Sprinkles need to be incorporated in major areas of the hospital.**

- **Each department should be inspected without ant prior notice at a regular interval by the fire safety department to check the level of awareness & hence take corrective action.**

CONCLUSION : -

The areas of high concern identified as per the study conducted are as follows:-

• All Ward secretary (As far as awareness on handling of fire extinguisher and emergency exit is concerned) should be trained pertaining to fire safety measures.

•Security guards should be aware about the use of lift or stairs during fire & handling of fire extinguisher

•The areas having adequate awareness identified as per the survey conducted are radiology ,kitchen & sister in charge

MINOR PROJECT

Project 2 **: - Awareness on hazardous material practices in Tata Main Hospital.**

OBJECTIVE OF THE STUDY **: - To assess the awareness level of HAZMAT practices in TMH.**

METHOD OF DATA COLLECTION : **: - Random survey and vigilant observation in the respective department.**

Primary data was collected in the form of checklist , face to face interaction, questionnaires, and observation.

SAMPLE SIZE : - 40

LITERATURE REVIEW

- A **Hazardous waste** is waste that poses substantial or potential threats to public health or the environment.[11]
- [11] Characteristic hazardous wastes are materials that are known or tested to exhibit one or more of the following four hazardous traits:
  - Ignitability (i.e., flammable)
  - Reactivity
  - Corrosivity
  - Toxicity
- RCRA's (**Resource Conservation and Recovery Act)** record keeping system helps to track the life cycle of hazardous waste and reduces the amount of hazardous waste illegally disposed.[11]

[11] The following list includes categories often applied to HAZMAT :

- **Paints** and **solvents**
- Automotive wastes (used **motor oil**, **antifreeze**, etc.)
- Pesticides (**insecticides**, **herbicides**, **fungicides**, etc.)
- Mercury-containing wastes (**thermometers**, **switches**, **fluorescent lighting**, etc.)
- Electronics **(computers**, **televisions**, **cell phones**)
- Aerosols / Propane cylinders
- Caustics / Cleaning agents
- **Refrigerant**-containing appliances
- Some specialty **Batteries** (e.g. lithium, nickel cadmium, or button cell batteries)
- Ammunition
- **Radioactive waste** (some home **smoke detectors** are classified as radioactive waste because they contain very small amounts of a radioactive **isotope** of **americium** - see: **Disposing of Smoke Detectors)**

[11] Final disposal of hazardous waste

Historically, some hazardous wastes were disposed of in regular landfills. Currently, hazardous wastes must often be stabilized and solidified in order to enter a landfill and many hazardous wastes undergo different treatments in order to stabilize and dispose of them.

Recycling

Many hazardous wastes can be recycled into new products.

Portland cement

Another commonly used treatment is cement based solidification and stabilization. Cement is used because it can treat a range of hazardous wastes by improving physical characteristics and decreasing the toxicity and transmission of contaminants.

Neutralization

Some HW can be processed so that the hazardous component of the waste is eliminated: making it a non-hazardous waste. An example of this might include a corrosive acid that is neutralized with a basic substance so that it is no-longer corrosive.

Incineration, destruction and waste-to-energy

A HW may be "destroyed" for example by incinerating it at a high temperature.

Pyrolysis

Some hazardous waste types may be eliminated using pyrolisis in an ultra high temperature electrical arc, in inert conditions to avoid combustion.

ANALYSIS AND CONCLUSION

- **CORRECTLY INDENTIFIED HAZMAT IN TMH**

ITEMS IDENTIFIED	ITEMS IDENTIFIED
LIQUID MOLYBDENUM 99	NITRIC ACID
SODIUM HYDROXIDE	METHANOL
MERCURY	SODIUM HYPOCHLORIDE
HYDROGEN PEROXIDE	ETHANOL
SAVLON	HYDROGEN PEROXIDE
CARBOLIC ACID	MICROBIAL CULTURES
ACETONE	HYDROCHLORIC ACID
CONTROL SERA USED IN IMMUNOASSAY	SULPHURIC ACID
SOLID MOLYBDENUM	HYPOCHLORIDE SOLUTION
LIQUID TECHNETIUM 99 M	FORMALDEHYDE
LIQUID IODINE 125	ISOPROPYL ALCOHOL
LIQUID SAMARIUM153	ACETONE
METHANOL	ETHANOL
1 N SULPHURIC ACID	SILVER NITRATE
POTASSIUM HYDROXIDE	MERCURIC CHLORIDE
SODIUM HYPOCHLORITE SOLUTION	ETHER
METHYL ETHYL KETONE	PICRIC ACID
1N HYDROCHLORIC ACID	SULPHUR POWER
CONJUGATES LAB	ACETIC ANHYDRIDE
ANTIGEN	ACETIC ACID
FORMALIN	

TOTAL NUMBER OF DEPARTMENTS SURVEYED

DIFFERENT WARDS – **1A ,1B, 2A, 3A , 3B , 4A , 4B , 5(A Block) , 5 (B Block) , HDU, 4BPost , 6A, 6B , 7A , Nursery 9B ,8B ,8A ,7B ,Maty Cab (9C), Maty post ,OBR ,New cab, 10A , PICU ICU , BCU, CCU, GOT, MOT .**

DIFFERENT DEPARTMENTS – **Radiology , Housekeeping , Kitchen , Medical store, ,Laundry ,OPD, Dentistry ,Pathology , Nuclear medicine.**

- **HAZMAT CORRECTLY IDENTIFIED & LOCKED WITH A CORRECT AWARENESS AMONG VARIOUS DEPT.**

CORRECT IDENTIFIED	PROPERLY LOCKED	CORRECT AWARENESS
Nuclear medicine	Nuclear medicine	Nuclear medicine
1A, 4A, 4B, 4B Post , 6B , 7A ,7B	ICU	1A, 3A ,3B ,6B, 7A ,7B ,9B , Maty cab (9c) , Maty post
O.T		PICU
MOT		ICU
Dentistry		BCU
pathology		GOT
		Biochemistry

RECOMMENDATION

- **Training on spill management procedure.**
- **Facility for proper storage wherever not available.**
- **Availability of spill management kits.**
- **Documentation of practices for TMH based on guidelines**.

REFERENCES

1. tatamainhospital.com

2. **180** Information technology in healthcare
Hawryluk, M. 2004. FDA targets medication errors by requiring bar codes on drugs. *American Medical News (*March 15). http://www.ama-assn.org/amednews.

Health Technology Center. 2003. Spending our money wisely: Improving America's health care system by investing in health care information technology. San Francisco: HTC.

Healthcare Financial Management Association. 2004. *Financing the future report 2: How are hospitals financing the future? The future of capital spending*. Westchester, IL: HFMA. March.
Healthcare Information and Management Systems Society. 2004a. *15th Annual HIMSS Leadership Survey. Final Report: Healthcare CIO*. Chicago, IL: HIMSS. February 23. http://www.himss.org.

Healthcare Information and Management Systems Society. 2004b. *Ambulatory technology survey*. Chicago, IL: HIMSS. February 9. http://www.himss.org.

3. http://laico.org/v2020resource/files/laundry_Jan_mar04.pdf Business briefing: hospital engineering & facilitiesmanaement 2003, mrs. krishna veni, laico paramedical.

4. http://www.touchbriefings.com/pdf/13/Hosp031_t_Flakt.pdf , Business briefing: hospital engineering & faciliiesmanagement 2003,1 Technology & Services a report by William Lawrance Product Manager, Fläkt Woods.

5. TATA STEEL FIRE BRIGADE , Fire management..ppt **,**AWARENESS PROGRAM ON FIRE PREVENTION, PROTECTION & EVACUATION MANAGEMENT CAPSULE

6. http://www.indiamart.com/ecopsecurity/fire-protection-system.html#fire-fighting-systems.

7. ^ "NFPA 20: Standard for the Installation of Stationary Pumps for Fire Protection". Nfpa.org. Retrieved 2011-12-15.

8. 

9. Dave's Outdoor Adventure: What is Scuba Diving?

"Fire and Smoke: Understanding the Hazards"; Committee on Fire Toxicology, Board on Environmental Studies and Toxicology, Commission on Life Sciences, National Research Council; 1986

Brinkster.com: The Invention of the Gas Mask
Kaiser Permanente: How Does CPAP Work
Emedicine: Ventilator Management

10. **TATA MAIN HOSPITAL _Emergency Prepardness Plan Documents**

11. http://en.wikipedia.org/wiki/Hazardous_waste

^ [a] [b] Orloff, Kenneth, and Henry Falk. 2003. An international perspective on hazardous waste practices. International Journal of Hygiene and Environmental Health 206 (4-5):291- 302.

^ Chaudhary R., Rachana M., 2006. Factors affecting hazardous waste solidification/stabilization: A Review. In: Journal of Hazardous Materials B137 pp.267–276

^ Hazardous Waste Landfills

^ Land Disposal Units

ANNEXURE A. Time schedule

SL NO.	NAME OF THE DEPARTMENT	DATE OF VISIT	% OF TIME SPENT	PEOPLE MET (WITH DESIGNATION)
1.	HRD	5/04/12	27 %	Mr A.K Singh (IR manager)
	Housekeeping		27%	Mr.Kr Lilanand (Manager housekeeping)
2.	Housekeeping & O.PD	6/04/12	58.90 %	Mr. Kr Lilanand manager housekeeping)
			31.50 %	Dr. K.P Dubey (HOD OPD)
3.	Radiology dept. & PICU	7/04/12	58.90 %	VVL Narayana (senior radiographer)
			27.39%	LALY (Sister in charge)
4.	WEEKEND	8/04/12	WEEKEND	WEEKEND
5.	I.T Dept. &	9/04/12	82 %	Mr. Rajendra Prasad (Executive TCS)
	Neuro Trauma WARD		13.69 %	Pramila Bose (Sister In charge)
6.	I.T Dept	10/04/12	86.30%	Mr. Rajendra Prasad (Executive TCS)
7.	I.T Dept	11/04/12	86.30 %	Mr. Rajendra Prasad (Executive TCS)
8.	I.T Dept	12/04/12	86.30 %	Mr .Rajendra Prasad (Executive TCS)
9.	I.T Dept & Emergency Dept.	13/04/12	86.30 %	Mr. Rajendra Prasad (Executive TCS)
10.	I.T Dept &	14/04/12	86.30 %	Mr. Rajendra Prasad (Executive TCS)

	Pathology Dept.			**Dr. Minakshi Mishra (in charge)**
11.	**Weekend**	**15/04/12**	**Weekend**	**Weekend**
12.	**Housekeeping** **Laundry**	**16/04/12**	**54.79 %** **31.51 %**	**Mr.Kr Lilanand (Manager housekeeping)** **Mr.saifi Zama** **(Asst. Manager housekeeping)**
13.	**MRD** **&** **Radiology**	**17/04/12**	**54.79 %** **13.69 %**	**Mr. Singh Rajan (Medical record officer)** **VVL Narayana (senior radiographer)**
14.	**Executive health checkup**	**18/04/12**	**41.1 %**	**Ms.Kuku Chakraborty** **(in charge executive clinic)**
15.	**O.T** **&** **A.H.U**	**19/04/12**	**100 %**	**Dr. Rajeev shukla** **(Specialist an aesthesis & OT In charge)** **Mr. pramod pandit (Senior Technician)**
16.	**Holiday**	**20/04/12**	**Holiday**	**Holiday**
17.	**I.T DEPT.**	**21/04/12**	**100 %**	**Mr.Rajendra Prasad(Executive TCS)**
18.	**Weekend**	**22/04/12**	**Weekend**	**Weekend**
19.	**Customer Services**	**23/04/12**	**27.39 %**	**Sajitha Nair** **(executive customer care services)**
20.	**Holiday**	**24/04/12**	**Holiday**	**Holiday**
21.	**Housekeeping** **&** **Pharmacy**	**25/04/12**	**82.19 %**	**Kumar Lilanand** **(manager housekeeping)** **Mr.S.K Roy(chief pharmacist)**
22.	**Medical store & Pharmacy**	**26/04/12**	**100 %**	**Mr.P.K Roy(senior officer)** **Mr.S.K Roy(chief pharmacist)**
23.	**Quality dept.** **&** **Furniture Maintenance**	**27/04/12**	**82 %**	**Dr. Sujata Mitra** **(Specialist & incharge Nuclear Medicine)** **Kumar Lilanand** **(manager housekeeping)**
24.	**Weekend**	**28/04/12**	**Weekend**	**Weekend**
25.	**I.T dept., Blood Bank**	**29/04/12**	**54.79 %**	**Mr.Rajendra Prasad(Executive TCS)**
26.	**Quality Dept.**	**30/04/12**	**109.58 %**	**Dr. Sujata Mitra** **(Specialist & incharge Nuclear Medicine)**
27.	**Quality Dept (Preparation of**	**01/05/12**	**109.58 %**	**Dr. Sujata Mitra** **(specialist & incharge Nuclear Medicine)**

	checklist)			
28.	NABH project (Laundry, Wards, MOT, GOT, Radiology)	02/05/12	109.58 %	Dr. Sujata Mitra (specialist & incharge Nuclear Medicine)
29.	NABH project (ward;4b,1a,1b, 2a,2b,PICU)	03/05/12	109.58 %	Dr. Sujata Mitra (specialist & incharge nuclear medicine)
30.	NABH project (CCU,iICU,Pathology,Nursery)	04/05/12	95.89 %	Dr. Sujata Mitra (specialist & incharge nuclear medicine)
31.	NABH project (Pathology,BHU,Kitchen)	05/05/12	123.28 %	Dr. sujata mitra(specialist & incharge nuclear medicine)
32.	weekend	06/05/12	Weekend	weekend
33.	Nuclear medicine	07/05/12	54.79 %	
34.	Fire Safety Training Programe	08/05/12	82.19 %	MR. A.B Tiwari (Tata Steel Fire Bridget dept. Trainer)
35.	Fire Safety Training Programe	09/05/12	82.19 %	MR. A.B Tiwari (Tata Steel Fire Bridget dept. Trainer)
36.	Preparation of Fire Safety Survey Checklist	10/05/12	68.49 %	Fire safety dept.
37.	Fire safety survey in different wards	11/05/12	95.89 %	Sister in charge
38.	Fire safety survey in OPD	12/05/12	86.30 %	Ward secretary
39.	Fire safety survey in housekeeping	13/05/12	82.19 %	Mr. Paul (Housekeeping staff)
40.	Fire safety survey in security DEPT.	14/05/12	82.19 %	MR. Ramesh singh (head of security dept.)
41.	Fire safety survey in JGMH building	15/05/12	82.19 %	Wards(sister in charge)
42.	Fire safety survey CCU,ICU	16/05/12	54.79 %	Sister in charge
43.	Fire safety survey in laundry	17/05/12	54.79 %	Laundry staff
44.	Fire survey of security guard	18/05/12	54.79 %	Various Security guards
45.	Fire safety survey of radiology dept. & Pathology dept.	19/05/12	54.79 %	VVL Narayana (senior radiographer) Pathology staff

46.	**Fire safety survey in medical store**	**20/05/12**	**54.79 %**	**Medical store staffs**
47.	**Fire safety survey in kitchen**	**21/05/12**	**100 %**	**Mr. Tanmoy Roy (Incharge) & staffs**
48.	**Visit to the Tata steel fire brigade department**	**22/05/12**	**100 %**	**Mr. A. B Pillai (Head fire brigade dept.)**
49.	**Documentataion of final report**	**23/05/12**		
50.	**Documentataion of final report**	**24/05/12**		
51.	**Documentataion of final report**	**25/05/12**		
52.	**Final report submission**	**26/05/12**	**54.79 %**	**Kumar Lilanand (Manager Housekeeping)**
53.	**weekend**	**27/05/12**		
54.	**Finance department**	**28/05/12**	**58.90 %**	**Ms. Simran Bhullar & Rajan kr. Sharma(manager financial analyst)**
55.	**HR Department**	**29/05/12**	**70 %**	**Ms. Pankhuri yadav (HR Manager)**
56.	**Bio medical Engineering department**	**30/05/12**	**84 %**	**Ms. Sangeeta (Manager)**
57.	**Discussion of finding & conclusion** **Collection of summer internship certification**	**31/05/12**	**100 %**	**Mr. Kumar Lilanand (Manager Housekeeping)** **Dr. K.J Singh (IR Administrator Trust Hospital)**

Annexure B : Detailed data on Minor & Major project.

CHECKLIST DOCUMENT OF HAZMAT PRACTICES IN TMH

L – Whether the items are locked or not.

D- Whether the list is displayed in the department.

A- Whether awareness regarding spill procedure is there or not.

IF YES THEN – "Y"

IF NO THEN - "N"

DIFFERENT WARDS – 1A,1B, 2A etc.

DIFFERENT DEPARTMENT - Pathology ,Radiology, Medical store etc.

ITEMS IDENTIFIED	1A	L	D	A		1B	L	D	A		2A	L	D	A
Mercury	Y	N	N	Y		Y	N	N	Y		Y	N	N	N
Sodium Hypochlorite	Y	Y	N	Y		Y	Y	N	N		Y	Y	N	N
Hydrogen peroxide	Y	Y	N	Y		Y	Y	N	N		Y	Y	N	N
Savlon	Y	Y	N	Y										

ITEMS IDENTIFIED	3A	L	D	A		3B	L	D	A		4A	L	D	A
Mercury	Y	Y	N	Y		Y	Y	N	Y		Y	Y	N	Y
Sodium Hypochlorite	Y	Y	N	Y		Y	Y	N	Y		Y	Y	N	N
Hydrogen Peroxide	Y	Y	N	Y		Y	Y	N	Y		Y	Y	N	N
Savlon											Y	Y	N	Y

ITEMS IDENTIFIED	4B	L	D	A		5C (A BLOCK)	L	D	A		5C (B BLOCK)	L	D	
Mercury	Y	N	N	Y		Y	Y	N	Y		Y	Y	N	Y
Sodium Hypochlorite	Y	Y	N	N		Y	Y	N	N		Y	Y	N	N
Hydrogen peroxide	Y	Y	N	N		Y	Y	N	N		Y	Y	N	N
Savlon	Y	Y	N	Y										

ITEM IDENTIFIED	HDU	L	D	A		4B POST	L	D	A		6A	L	D	A
Mercury	Y	N	N	Y		Y	N	N	Y		Y	N	N	Y
Sodium Hypochlorite	Y	Y	N	Y		Y	Y	N	N		Y	Y	N	Y
Hydrogen peroxide	Y	Y	N	Y		Y	Y	N	N					
Savlon						Y	Y	N	Y					
Vircon	Y	N	N	N										

ITEMS IDENTIFIED	6B	L	D	A		7A	L	D	A		7B	L	D	A
Mercury	Y	N	N	Y		Y	N	N	Y		Y	N	N	Y
Sodium Hypochlorite	Y	Y	N	Y		Y	Y	N	Y		Y	Y	N	Y
Savlon	Y	Y	N	Y		Y	Y	N	Y		Y	Y	N	Y

ITEM IDENTIFIED	NURSERY	L	D	A		MATY Cab (9C)	L	D	A		MATY POST	L	D	A
MERCURY	Y	N	N	Y		Y	N	N	Y		Y	N	N	Y
Sodium Hypochlorite	Y	Y	N	N		Y	Y	N	Y		Y	Y	N	Y
Hydrogen peroxide	Y	Y	N	Y		Y	Y	N	Y		Y	Y	N	Y
Savlon	Y	Y	N	Y										
Cidex	Y	Y	N	N										
Carbolic acid	Y	Y	N	N										

ITEM IDENTIFIED	EMERGENCY	L	D	A		OBR	L	D	A		NEW CAB	L	D	A
Mercury	Y	N	N	Y		Y	N	N	Y		Y	N	N	Y
Sodium Hypochlorite	Y	Y	N	Y		Y	Y	N	Y		Y	Y	N	Y
Hydrogen peroxide	Y	Y	N	N		Y	Y	N	N					
Aseptik Solution											Y	Y	N	Y

ITEMS IDENTIFIED	Labour room (8A)	L	D	A		8B	L	D	A		9B	L	D	A
Mercury	Y	N	N	Y		Y	N	N	Y		Y	N	N	Y
Sodium Hypochlorite	Y	Y	N	Y		Y	Y	N	Y		Y	Y	N	Y
Hydrogen peroxide						Y	Y	N	N		Y	Y	N	Y

ITEM IDENTIFIED	FRONT CAB	L	D	A		10A	L	D	A		PICU	L	D	A
Mercury	Y	N	N	Y		Y	N	N	Y		Y	N	N	Y
Sodium Hypochlorite	Y	Y	N	Y		Y	Y	N	Y		Y	Y	N	Y
Hydrogen peroxide						Y	Y	N	N		Y	Y	N	Y
Savlon											Y	Y	N	Y
Vircon														
Spirit											Y	Y	N	Y
Aseptik Solution	Y	Y	N	Y							Y	Y	N	Y

ITEM IDENTIFIED	GOT	L	D	A		RADIOLOGY	L	D	A		MOT	L	D	A
						NO ITEMS								
Mercury	Y	N	N	Y										
Sodium Hypochlorite	Y	Y	N	Y							Y	N	N	N
Hydrogen peroxide	Y	Y	N	Y							Y	N	N	Y
Savlon											Y	N	N	N
Vircon											Y	N	N	Y
Formalin											Y	N	N	N
Vikron														
Betadine											Y	N	N	N
Sterilium											Y	N	N	N
Gluteraldehyde											Y	N	N	Y
Dettol											Y	N	N	N
Lysol											Y	N	N	N

ITEM IDENTIFIED	ICU	L	D	A		BCU	L	D	A		CCU	L	D	A
Mercury	Y	N	N	Y		Y	N	N	Y		Y	N	N	Y
Sodium Hypochlorite	Y	Y	N	Y		Y	Y	N	Y		Y	Y	N	Y
Hydrogen peroxide						Y	Y	N	Y		Y	Y	N	Y
Savlon	Y	Y	N	Y							Y	Y	N	Y
Vircon														
Spirit	Y	Y	N	Y										
Cidex											Y	Y	N	N
Carbolic acid											Y	Y	N	N
Aseptik Solution						Y	Y	N	Y					
Acetone	Y	Y	N	Y										
Formalin											Y	Y	N	Y

ITEM IDENTIFIED	HOUSEKEEPING	L	D	A		KITCHEN	L	D	A		MEDICAL STORE	L	D	A
Mercury											Y	N	N	N
Sodium Hypochlorite	Y	Y	N	Y										
Hydrogen peroxide											Y	N	N	N
Liquified petroleum gas						Y	N	N	Y					
Cooking oil						Y	Y	N	Y					
Alkali											Y	N	N	N
Acid											Y	N	N	N
Detergents											Y	N	N	N
Medical Gases											Y	N	N	N

LAUNDRY	L	D	A		OPD	L	D	A		DENTISTRY	L	D	A
Mercury					Y					Y	N	N	N
Sodium Hypochlorite													
Hydrogen peroxide					Y								
Savlon					Y								
Alkali	Y	N	N										
Acid													
Detergents	Y	N	N										
Medical gases													

DEPARTMENT OF NUCLEAR MEDICINE

ITEMS IDENTIFIED	L	D	A
Liquid molybdenum 99	Y	Y	Y
Sodium hydroxide	Y	Y	Y
Control sera used in immunoassay	Y	Y	Y
Solid molybdenum	Y	Y	Y
Liquid technetium 99 m	Y	Y	Y
Liquid iodine 125	Y	Y	Y
Liquid samarium153	Y	Y	Y
Methanol	Y	Y	Y
1 N Sulphuric acid	Y	Y	Y
Potassium hydroxide	Y	Y	Y
Sodium hypochlorite solution	Y	Y	Y
Methyl Ethyl ketone	Y	Y	Y
1N Hydrochloric acid	Y	Y	Y
Conjugates lab	Y	Y	Y
Antigen	Y	Y	Y

DEPARTMENT OF PATHOLOGY

MICROBIOLOGY

ITEMS IDENTIFIED	L	D	A
GASES	N	N	N
ISOPROPYL ALCOHOL	N	N	N
ACETONE	N	N	N
ETHANOL	N	N	N
AMMONIUM SALT	N	N	N
HYDROGEN PEROXIDE	N	N	Y
MICROBIAL CULTURES	N	N	Y
HYDROCHLORIC ACID	N	N	Y
SULPHURIC ACID	N	N	Y
HYPOCHLORIDE SOLUTION	N	N	Y
FORMALDEHYDE	N	N	Y

BIOCHEMISTRY

ITEMS IDENTIFIED	L	D	A
SILVER NITRATE	N	N	Y
COPPER SULPHATE	N	N	Y
MERCURIC CHLORIDE	N	N	Y
ETHER	N	N	Y
PICRIC ACID	N	N	Y
BARIUM SULPHATE	N	N	Y
SULPHUR POWDER	N	N	Y
AMMONIUM & POTASSIUM SALTS	N	N	Y
HYDROCHLORIC ACID	N	N	Y
SULPHURIC ACID	N	N	Y
HYDROCHLORIDE SOLUTION	N	N	Y
NITRIC ACID	N	N	Y
ACETIC ANHYDRIDE	N	N	Y
ACETIC ACID	N	N	Y
SODIUM HYDROXIDE	N	N	Y

HISTOPATHOLOGY

ITEMS IDENTIFIED	L	D	A
SILVER NITRATE	N	N	N
ETHER	N	N	N
ISOPROPYL ALCOHOL	N	N	N
ACETONE	N	N	N
METHANOL	N	N	N
XYLOL	N	N	N
PICRIC ACID	N	N	N
BARIUM SULPHATE	N	N	N
MATCHES	N	N	N
AMMONIUM POTASSIUM SALTS	N	N	N
HYDROCHLORIC ACID	N	N	N
HYPOCHLORIDE SOLUTION	N	N	N
NITRIC ACID	N	N	N
FORMALDEHYDE	N	N	N
ACETIC ACID	N	N	N
SODIUM HYDROXIDE	N	N	N

CHECKLIST DOCUMENT OF FIRE SAFETY AWARENESS IN TMH

SISTER IN CHARGE

S.NO.	NAME	CODE USED FO R FIRE	FIRE EXIT & KEY	FIRE EXTINGUISHER	USE OF LIFT OR STAIRS
1.	ICU(BINODINI MISHRA)	N	Y	Y	N
2.	BCU(SISTER GEETA)	Y	Y	Y	N
3.	HDU(SISTER SUSHMA)	Y	Y	Y	Y
4.	3A WARD(SISTER JAYJOT)	N	Y	N	Y
5.	3B WARD(DIPTI ROY)	Y	Y	Y	Y
6.	4A WARD (GR TRIPATHY)	Y	Y	Y	Y
7.	4B WARD(ELIZABETH THOMAS)	Y	Y	Y	Y
8.	5 TH FLOOR(ROSHAMMA DANIEL)	Y	Y	Y	N
9.	1A WARD(PRAMILA BOSE)	Y	Y	N	Y
10.	1B WARD(SISTER KATHA)	Y	Y	Y	N
11.	PICU(LALY)	Y	Y	Y	Y
12.	10A WARD(SISTER ELORA)	N	Y	Y	Y
13.	NURSERY(SISTER RAMAVATI)	N	Y	Y	Y
14.	NEW CABIN(SISTER PREMLATA)	Y	Y	N	N
15.	GYNAE OT(SISTER GIRIJA)	N	Y	N	N
16.	9B (PRITI GHOSH)	Y	Y	Y	Y
17.	MATY POST(PRITIGHOSH)	Y	Y	Y	Y
18.	MATY CAB(PRITI GHOSH)	Y	Y	Y	Y
19.	MAIN OT(PARAMJIT)	N	Y	N	Y
20.	MAIN OT(SISTER ANJANA)	Y	Y	Y	Y
21.	8A (S KUMARI MARMU)	N	Y	Y	Y
22.	8B(ALO SINGH)	Y	Y	N	Y

23.	7A (PUSHPA VERMA)	Y	Y	Y	N
24.	7B (A. SAMUEL)	Y	Y	Y	Y
25.	6A (MARY JOHN)	Y	Y	Y	N
26.	6B (D MEHTA)	Y	Y	Y	Y
27.	CCU(SAPNA BISWAS)	Y	Y	Y	Y

MEDICAL STORE

S.NO	NAME	CODE USED FOR FIRE	EXIT GATE & KEY	FIRE EXTINGUISHER	USE OF LIFT OR STAIRS
1.	P K. ROY	Y	Y	N	Y
2.	R.B. SINGH	N	N	N	N
3.	DEEPAK KR. NAYAK	Y	N	N	Y
4.	**MD.KALIM**	**N**	**Y**	**N**	**N**
5.	SHASHIDHAR	Y	Y	Y	Y
6.	GANTAIT	N	Y	Y	Y
7.	RAKESH KUMAR	N	Y	Y	Y
8.	PRADHAN	N	Y	N	Y
9.	DHRUBANANDA KAR	N	Y	Y	Y

RADIOLOGY

S.NO	NAME	CODE USED FOR FIRE	EXIT GATE & KEY	FIRE EXTINGUISHER HANDLING	USE LIFT OR STAIRS
1.	C.B SHARMA	Y	Y	Y	Y
2.	VVL NARAYANA	Y	Y	Y	Y
3.	SURAJ KR.	Y	Y	N	Y
4.	NIDHI KUMARI	Y	Y	Y	Y
5.	S.K SINGH	Y	Y	N	Y
6.	DR. PREETAM SINGH	N	Y	Y	Y

PATHOLOGY

S.NO.	NAME	CODE USED FOR FIRE	EXIT GATE & KEY	FIRE EXTINGUISHER	USE OF LIFT OR STAIRS
1.	S.N.CHATTERJEE	N	Y	N	N
2.	A.K.CHONGDAR	N	Y	N	N
3.	PANKAJ	N	Y	Y	Y
4.	AKHILESH PRASAD	Y	Y	Y	Y
5.	B.C. ACHARYA	N	N	Y	Y
6.	SUNAL KR. MAHATO	Y	Y	N	Y
7.	A.K. BISWAS	N	Y	Y	Y
8.	B.N. DALAI	N	Y	N	N
9.	SWAMI	N	Y	N	Y

HOUSE KEEPING

S.NO.	NAME	CODE USED FOR FIRE	EXIT GATE & KEY	FIRE EXTINGUISHER HANDLING	USE LIFT OR STAIRS
1.	ARVIND	N	Y	N	N
2.	VIMAL KUMAR	N	Y	Y	Y
3.	RAJ MUKHI	N	Y	Y	Y
4.	KRISHNADIN	N	N	Y	N
5.	RAMAN	N	N	N	N
6.	SUKH CHANDRA	N	Y	Y	Y
7.	ASMA	N	Y	N	Y
8.	NIBHA	N	Y	Y	Y
9.	PAUL	Y	Y	Y	Y
10.	SAINY ACHARYA	Y	Y	N	Y
11.	RITESH	Y	Y	N	Y
12.	TIWARI	N	N	N	N
13.	KUMAR SHASHI	Y	Y	N	Y
14.	RATNA	N	N	N	N

15.	UMA. L SONA	N	N	N	N
16.	NIRASHI	N	Y	N	N
17.	SANGEETA	N	N	N	Y
18.	SAWRI	N	N	N	N
19.	MEENUKA	N	N	N	Y
20.	PINKI	Y	Y	N	N

KITCHEN

S.NO	NAME	CODE USED FOR FIRE	EXIT GATE & KEY	FIRE EXTINGUISHER HANDLING	USE OF LIFT OR STAIRS
1.	TANMAY ROY	Y	Y	Y	Y
2.	UTTAM	N	Y	Y	N
3.	MADAN	Y	Y	Y	Y
4.	SUBHKANT	Y	Y	Y	Y
5.	BADRI PRASAD	Y	Y	N	Y
6.	RAMANOJ	N	Y	N	N
7.	SUBRATO	Y	Y	Y	Y
8.	PRAFUL	Y	Y	Y	Y
9.	RAMESH	Y	Y	N	Y
10.	MUNNA	Y	Y	Y	Y
11.	PRATAP	Y	Y	N	N
12.	NAVRATNA	Y	Y	Y	Y
13.	BABLU KHABRI	Y	Y	N	N
14.	DINESH NATH	N	Y	Y	Y
15.	TAPAN	Y	Y	Y	Y
16.	RAMJA PATRA	N	Y	N	Y
17.	RAHRI KRASHNA	Y	Y	Y	Y
18.	SAMEER	Y	Y	Y	Y
19.	RAMESH	Y	Y	Y	Y
20.	RADHAGOBIND AWASTY	Y	Y	Y	Y

SECURITY GUARD

S.NO.	NAME	CODE USED FOR FIRE	EXIT GATE & KEY	FIRE EXTINGUISHER HANDLING	USE LIFT OR STAIRS
1.	ICU(PANKAJ)	N	Y	Y	Y
2.	ADMN.(VIJAY)	N	Y	N	N
3.	LINK 2 GATE(RAJU)	Y	N	N	N
4.	WARD 2A(GOPAL)	N	Y	Y	N
5.	DOCTOR PARKING(P C MISHRA)	N	N	N	N
6.	JGMH ENTRY GATE(ANUJ KR.)	N	Y	Y	Y
7.	JGMH EXIT GATE(BIMAL)	N	Y	N	N
8.	EMERGENCY GATE(SANJAY)	Y	Y	Y	Y
9.	SPECIALIST BLOCK(PANDU)	N	N	N	Y
10.	UMA DEEP	N	N	N	N
11.	LINK GATE 1(CHAMAN LAL)	N	Y	N	N
12.	JGMH(NILESH ACHARYA)	Y	Y	Y	N
13.	VASANT KR.	N	Y	Y	N
14.	R D SINGH	N	N	N	N
15.	2B (SHARMA)	Y	N	N	Y
16.	MORTUARY(RAMESH)	N	N	N	Y
17.	MAIN GATE(ABHA)	Y	Y	N	N
18.	CABIN GATE(MAMTA)	N	Y	N	N
19.	OLD BUILDING(DEEPAK)	N	Y	N	N
20.	PICU(SIKANDAR KR.)	Y	Y	N	Y
21.	LABOUR ROOM(S.ROBOT)	Y	Y	N	N
22.	OPD GATE(ASHOK)	N	Y	N	N
23.	OPD GATE(PREM)	Y	Y	N	Y
24.	MAIN GATE(RAM CHANDAR)	N	Y	Y	Y
25.	MAIN GATE(DHRUB SINGH)	Y	Y	N	N

LAUNDRY

S.NO	NAME	CODE USED FOR FIRE	EXIT GATE & KEY	FIRE EXTINGUISHER HANDLING	USE LIFT OR STAIRS
1.	SANGEETA	N	Y	Y	N
2.	GAURAV	Y	Y	Y	Y
3.	VIKASH	N	Y	N	Y
4.	RANJEET	N	N	N	Y
5.	PARMESHWAR	N	Y	N	Y
6.	N.M SHARMA	Y	Y	Y	Y
7.	DEVENDRA	N	Y	N	N
8.	MAHESH	N	Y	N	N
9.	AMARJEET	Y	N	N	Y
10.	TULSIRAM	N	Y	N	N
11.	PRAMOD	N	N	N	Y
12.	MUNNA	N	N	N	Y
13.	VISWANATH	N	N	N	Y
14.	RAVI SHARMA	N	Y	N	N
15.	INDRAJEET	N	Y	N	N
16.	GAURI KUMARI	Y	N	Y	N
17.	POOJA DEVI	Y	N	Y	N
18.	RAJESH	N	Y	N	Y
19.	SUNIL RAJAK	Y	Y	N	Y
20.	RASHMI	Y	Y	Y	N

WARD SECRETARY

S.NO	NAME	CODE USED FOR FIRE	EXIT GATE & KEY	FIRE EXTINGUISHER HANDLING	USE LIFT OR STAIRS
1.	RESHMA BEGAM	N	N	N	N
2.	SARITA	Y	Y	N	Y
3.	RAJ KUMAR	N	N	N	Y
4.	CHANDRAKANT	Y	N	N	N
5.	ITI	Y	N	N	N
6.	ZUHAIB	Y	Y	N	Y
7.	AJAY	N	N	N	Y
8.	POONAM	Y	N	N	Y
9.	SUSHIL	Y	N	N	Y
10.	SANTOSH	Y	Y	N	Y
11.	MOUMITA	Y	N	N	Y
12.	JAMUNA	Y	N	N	Y
13.	SANTONA	Y	N	N	N
14.	KAVITA	N	N	N	N
15.	RUPA	N	N	N	N
16.	SWETA	Y	N	N	Y
17.	SALMA	Y	N	N	Y
18.	MOHITA	N	N	N	Y
19.	SHYAM	N	N	N	Y
20.	SUSHILA	Y	N	N	Y