

# HOSPITAL FIRE SAFETY AUDIT OF FIVE GOVERNMENT HOSPITALS OF WEST CHAMPARAN

## Hospital Safety Audit Report



**October 2013**

**DISTRICT ADMINISTRATION OF WEST CHAMPARAN  
Bihar**

Title: Hospital Fire Safety Audit of Five Government Hospitals of West Champaran

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# HOSPITAL FIRE SAFETY AUDIT OF FIVE GOVERNMENT HOSPITALS OF WEST CHAMPARAN

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District Disaster Management Authority

District Administration of West Champaran, Bihar

October 2013

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## PREFACE

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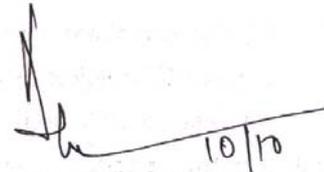
Health Infrastructure is the lifeline of human civilization anywhere in the world. However, there have been some gaps that have lead to disasters. Fire hazard has been one such prominent reason behind these disasters.

As a part of the District Disaster Management Planning (DDMP) exercise conducted in West Champaran district, District Administration sought to address the fire safety issue in hospitals. District Health Society (DHS), West Champaran with direct technical support from All India Disaster Mitigation Institute, Ahmedabad conducted Hospital Fire Safety Audit in 05 major government hospitals in the district.

The report focuses on several issues including finding sources of fire hazard, its prevention, and the response mechanism to quench fire and highlight important factors to ensure safe and quick evacuation.

This report will direct the Health Department and the District Administration in taking concrete and decisive actions. I hope readers will find new ideas to tackle the issue of unsafe hospitals by expressing solidarity through direct action.

10th October, 2013



Abhay Kumar Singh I.A.S.

District Magistrate, West Champaran

District Magistrate & Collector  
West Champaran, Bettiah

## ACKNOWLEDGEMENT

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We would like to extend our sincere gratitude to everyone that was directly or indirectly a part of the Hospital Fire Safety Audit.

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We especially wish to thank Mr. Anil Sinha, Vice Chairman of Bihar State Disaster Management Authority, Shri Vyashji, Principal Secretary of Department of Disaster Management of Bihar and their teams for providing valuable support throughout the process.

A special thanks to the staff of District Health Society for coordinating and assisting in the process of conducting fire audits in hospitals.

Lastly, we would like to thank All India Disaster Mitigation Institute, Ahmedabad for conducting the Hospital Fire Safety audit and preparing the report.

## EXECUTIVE SUMMARY

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The Fire Safety Audit was conducted in five main government hospitals of West Champaran, Bihar. The audit was conducted by District Administration of West Champaran with facilitating support of All India Disaster Mitigation (AIDMI), Ahmedabad. The Audit was conducted in MJK hospital of Bettiah, Sub Divisional Hospital of Bagaha, Referral Hospital of Lauria, Referral Hospital Narkatiyaganj and Referral Hospital of Gaunaha.

The audit aimed to know the fire safety levels of hospitals and to give recommendations to improve fire safety levels of government hospitals.

On the first day, the staff of District Health Society (DHS) was oriented by AIDMI team on how to use the audit tool and the teams were constituted to audit five hospitals in two days. On the second day, three hospitals and on the third day, two hospitals were inspected by joint team of AIDMI and DHS.

Through this audit several findings were made. It was found that an order has been placed by the DHS for fire extinguishers for all the hospitals as well as PHCs of all the 18 blocks of the district. There is no provision of sprinkling systems which are automated systems to release water all across the hospital. The fire fighters from respective fire stations are required to visit the hospitals to be well acquainted with the structure of the hospitals they are entrusted to respond to in case of a fire.

This assessment in hospitals is first such initiative and hence there is no system of planning, monitoring, control and coordination. There are no procedures developed that are to be followed in case of a serious and imminent danger. Employees are not provided with any information on dealing with such eventualities and responsibilities.

It's seen that there is a need to make explicit clear 'No Smoking' policy for the general public and the staff inside the hospital premises. The other sources of fire, the containers of powders, gases and liquids are not labeled properly everywhere and the electrical receptacles and plates are also in need of repair in some hospitals.

In the labs of the hospitals, corrosives were seen to be stored on the lowest shelves. Flammable, acids and bases are stored separately and chemicals labeled to indicate their contents. However, chemical containers were not found to be labeled to indicate hazard in most institutions.

In case of a fire, there are no fire alarms and there are no hot links yet with fire station or police station nor do they have emergency numbers put up on the wall. In most hospitals, exits are found to be kept clear of any blockage. Moreover, emergency doors are also no problem as they open in the direction of escape or remain open through the day. There is sufficient open space outside hospitals or within hospital boundaries to assemble in case of an emergency. Hospital employees are yet to be identified and appointed in for firefighting duties and provided with training. Evacuation drills are yet to be conducted for hospitals so as to measure preparedness and identify faults in current evacuation teams and the protocols they follow.

In times of urgent rush out of hospital, in case of a fire, it is found that it is mostly safe as the floor surfaces are even and not in need of repair. The stairways are kept clear of obstruction and their handrails are in good condition too. The corridors / aisles are sufficiently wide for the movement with clear line-of-sight.

To improve safety levels in hospital, there is a need of better management regulation, fix possible sources of fire that are through electrical wirings, equipments and safe storage of acids, basis and chemicals in laboratories, and training of staff on disaster management, possible mitigation measures that could be taken including usage of fire extinguishers, water sprinklers and putting up of fire alarms. The improvement in workplace regulation, formation of protocols and responsibility sharing among the staff can go a long way in mitigating the risks arising out of fire hazard and in preventing such disasters.

## INTRODUCTION

Its first time in the history of Bihar that a district (West Champaran) has conducted fire safety audit of five major government hospitals. The names of hospitals are MJK hospital of Bettiah (BET), Sub Divisional hospital of Bagaha (BAG), Referral hospital of Lauria (LAU), Sub-Divisional hospital of Narkatiyaganj (NAR) and Referral hospital of Gaunaha (GAU). The Audit was conducted by District Administration with facilitating support of All India Disaster Mitigation Institute (AIDMI), Ahmedabad.

Fire safety is matter of vital importance for hospitals concerning employee and patients in equal measure. After the grief-stricken incidence of AMRI hospital fire on December 9, 2011 in Kolkata, the question of hospital safety and preparedness to deal with fire hazard has come up. Unawareness of safety measures especially among hospital staff led to death toll of more than 90 persons including patients and staff. Whole incident turned out to be an eye opener for government as well as health care providers. Looking at the history of hospital fire around the world and India, there was an observed need to give much more focus on fire safety of hospitals. The audit in the hospitals of West Champaran was conducted to identify and plug gaps that increase the possibility of fire hazard and enhance ability to respond to it.

### HOSPITAL FIRE INCIDENTS IN INDIA AND AROUND THE WORLD:

#### AMRI Hospital, Kolkata

The biggest and the most disastrous of fire incidents in any hospital of India is a recent one, AMRI Hospital of Kolkata. According to eye-witnesses, smoke was reported coming out of the basement of the building at around 3:30 a.m. The fire soon spread to other floors of the hospital, which resulted in the suffocation of patients. At approximately 5 a.m., the Fire Brigade reached the room. The hospital authority said that some of the patients were shifted to other units of



the hospital at Saltlake. According to the hospital spokesperson, there were 160 patients at the time of the incident, of which around 50 were in ICU. By noon, the death toll reached 55. In the end, 73 people were reported dead. It was discovered that the medical waste and chemicals kept in the basement caused the fire.

#### **Safdarjung Hospital, New Delhi**

In the early morning hours of Jun 18, 2013, it faced major fire. The reason of fire was a short circuit. Five fire tenders were sent to the spot and the flames were doused within 25 minutes and any major damage was luckily averted.<sup>1</sup>

#### **Guru Teg Bahadur Hospital, Delhi**

A fire broke out in Guru Teg Bahadur Hospital in East Delhi on May 29, 2013. The fire broke out in an air conditioning unit around 11.05 a.m.. Around 18 fire tenders were rushed to the spot and major damage was averted. This hospital has a 1,000-bed capacity.<sup>2</sup>

#### **Galaxy Care Hospital, Pune, Maharashtra**

Twenty-six people, including 15 patients, from the Galaxy Care Hospital in Pune were evacuated to safety after a huge fire broke out on its premises on June 18, 2013. The cause of fire was a short circuit in one of the operation theatres.

#### **Rajendra Hospital, Patiala, Punjab**

Five newborns, all less than a week old, were killed and another was injured on January 31, 2013 in northern India after a short circuit sparked a fire in the hospital maternity ward where they were being treated for jaundice. The blaze began before dawn at the state-run Rajendra hospital in the city of Patiala.<sup>3</sup>

August 6, 2001: 28 mentally ill people were killed in a fire mishap at a private mental asylum in Erwadi in Tamil Nadu.

#### **Moscow, Russian Federation**

A fire swept quickly through a psychiatric hospital outside Moscow on April 26 2013 early morning, killing 38 people, some

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1 <http://m.timesofindia.com/city/delhi/Fire-in-Safdarjung-child-wing/articleshow/20640363.cms>

2 <http://southmonitor.com/fire-breaks-out-in-east-delhi-hospital/>

3 <http://www.topix.com/forum/in/chandigarh/T4T1BMARSUUP2NA8D>

of them sedated and in their beds. The cause of the fire was violations of fire regulations and a short circuit.<sup>4</sup>

These accidents in majority cases were man-made and leave one with a disturbing question: Why do fire accidents in India see a huge loss of lives? Even the 'Great London Fire of September, 1966', though reducing half the city to ashes, had killed only 6. Whereas in the state of Haryana in India, a school fire back in 1995 left 500 dead.

According to Delhi Fire Services statistics, the capital city had witnessed about 75,000 fire incidents between 1995 and 2000 resulting in deaths of about 2000 and injuries ranging from 7000 to 8000. Capital city of Tamil Nadu state, Chennai witnessed about 9000 fire incidents between 2001 and 2006 leaving about 100 dead. Maharashtra's capital, Mumbai, according to a report, is recorded almost 200 fire incidents a month from May to October, 2012.<sup>5</sup>

Thus, there is an urgent need to analyse causes of fire and means to mitigate fire hazard and create awareness about fire safety in general and hospital fire safety in particular.

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4 <http://newindianexpress.com/nation/38-die-in-hospital-fire-outside-Moscow/2013/04/26/article1562985.ece>

5 <http://www.legallyindia.com/Blogs/Entry/fire-safety-norms-in-indian-hospitals-suffer-a-step-motherly-treatment>

Ministry for  
Emergency Situations  
workers and fire  
fighters work at the  
site of a fire at a  
psychiatric hospital.  
(source: [http://  
newindianexpress.com/](http://newindianexpress.com/))



# 2

## PROVISIONS AND REGULATIONS FOR HOSPITAL FIRE SAFETY IN INDIA

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### 2.1 HOSPITAL ENGINEERING SERVICE PROVISION FOR FIRE PROTECTION, AS PER NABH (NATIONAL ACCREDITATION BOARD FOR HOSPITALS AND HEALTHCARE PROVIDERS)

- 2.1.1 Fire fighting installation approval must be obtained
- 2.1.2 Location of control room should be easily accessible
- 2.1.3 Control panel and manned, PA equipment should be connected with detection system or fire alarm system
- 2.1.4 Pumps and pump room
- 2.1.5 2 separate pumps i.e. electric and diesel pump should be available
- 2.1.6 Provision of Forced ventilation should be there
- 2.1.7 Arrangement of filling Fire tenders
- 2.1.8 4 way fire inlet must be present in case of emergency
- 2.1.9 Proper access for Fire tender to fire tanks
- 2.1.10 Fire Drill should be performed
- 2.1.11 Yard Hydrants should be available
- 2.1.12 Ring main and yard hydrants should be as per strategic locations.
- 2.1.13 2 way fire heads to charge the ring main
- 2.1.14 Landing Hydrant and Hose reels
- 2.1.15 Wet riser system must be installed
- 2.1.16 First aid Fire fighting appliances must be in working conditions
- 2.1.17 First aid equipment cabinets
- 2.1.18 Provision of Escape routes – escape stair
- 2.1.19 Sprinklers system – basement and bldg. above 15 M in height
- 2.1.20 Automatic Smoke detectors / heat detectors
- 2.1.21 Provision of Fire Alarm System and Fire extinguishers

## **2.2 REGULATIONS AS PER NATIONAL BUILDING CODE 2005**

2.2.1 All high-rise buildings need to get NOC?as per the zoning regulations of their jurisdiction concerned.

2.2.2 A road which abuts a high rise should be more than 12 meters wide, to facilitate free movement of Fire Services vehicles, specially the Hydraulic Platform and Turn Table Ladder.

2.2.3 Entrance width and clearance should not be less than 6 metres or 5 metres, respectively.

2.2.4 At least 40 per cent of the occupants should be trained in conducting proper evacuation, operation of systems and equipment and other fire safety provisions in the building, apart from having a designated fire officer at the helm.

2.2.5 The buildings should have open spaces, as per the Zonal Regulations.

2.2.6 Minimum of two staircases with one of them on the external walls of the building.

2.2.7 They should be enclosed with smoke-stop-swing-doors of two-hour fire resistance on the exit to the lobby.<sup>6</sup>

Apart from the National Building Code, there also exists a provision of building code in Bihar.

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<sup>6</sup> <http://www.hospitalinfrabiz.com/fire-safety-and-protection-in-hospital.html>

# 3

## OBJECTIVES OF THE AUDIT

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The objectives of Hospital Fire Safety Audit were to:

1. Analyze the present fire preparedness levels of the five major government hospitals of West Champaran.
2. Identify the gaps that can be the cause of fire hazard in hospitals.
3. Identify the understanding and awareness levels of the hospital staff with respect to fire hazard, its sources and mitigation measures.
4. Foster the process of hospital fire preparedness by recommending measures to decrease fire risk and improved response in case of an incident.
5. Conduct an in depth institution specific study to utilise the study in the drafting of the District Disaster Management Plan (DDMP) of West Champaran.

## FINDINGS THROUGH DATA ANALYSIS

### 4.1 GENERAL INFORMATION OF HOSPITALS

4.1.1 All the hospitals are directly connected with main road.

4.1.2 Local fire station facility is acquainted with MJK Hospital's facility, its location and specific hazards, but same is not the case with other hospitals.

4.1.3 Hospitals are in the process of getting fire extinguishers and the orders have been placed.

4.1.4 All hospitals have open spaces in or just outside the hospital for people to assemble in case of an emergency.

4.1.5 Hospitals are aware of the communication numbers that can be made via mobiles and telephones with Police or fire department.

4.1.6 Hospitals are yet to have fixed sign boards and signal allocated at proper place for emergency evacuation to safety.

Parameter	Hospital
Connected to the Main Road	All
Readily available Emergency Nos.	LAU, NAR, BAG
Fire Facilities acquaintance	BETTIAH Only
Fire Extinguishers	None
Open space for assembling during emergency	All
Sign boards for directing emergency evacuation to safety	None

### 4.2 GENERAL SAFETY

4.2.1 Drawers are kept closed when not in use, thereby not becoming a hindrance in case of emergency evacuation.

4.2.2 Compressed gas cylinders are secured from falling over.

4.2.3 3 hospitals don't have carts and wheelchairs in good operating condition. (Annex-II, Photo 1)

4.2.4 All hospitals except in Gaunaha, are free from clutter.

4.2.5 Excess paper, combustible material is improperly stored in Gaunaha and Bettiah.

4

Parameter	Hospital	
	Yes	Not Applicable
Drawers kept closed when not in use	All	
Cooking gas cylinders kept safely on ground	BAG	GAU, BET, LAU, NAR
Wheelchairs, Carts in good operating condition	GAU, BET	
Area free of clutter	All except GAU	
Excess paper, combustible material properly stored	GAU, BET	

### 4.3 FIRE AND DISASTER

4.3.1 Fire alarm pull stations are not available in any of the hospitals.

4.3.2 Hospitals don't have a proper reporting procedure on finding fire.

4.3.3 Sprinkler systems are not available in hospitals.

4.3.4 Containers of powders, liquids, and gases are labeled as to its content in Bettiah and Bagaha.

4.3.5 Hospitals don't have "No Smoking" policies, except in Gaunaha. (Annex-II, Photo 6)

Parameter	Hospital	
	Yes	Not Applicable
Fire all pull stations, fire extinguishers accessible		ALL
Staff knows reporting procedure on finding fire		ALL
Water sprinklers kept unobstructed by keeping storage atleast 18" below		ALL
Containers of powders, liquids, and gases labeled as to its contents	BET, BAG	GAU
Compliant to 'No Smoking' policy	GAU	

#### 4.4 HALLWAYS, STAIRS, AND EXIT PATHS

4.4.1 Hospitals are kept clear of obstruction except that found in Bagaha and Gaunaha where motorcycles were parked inside the hospital that was acting as an obstruction in movement. (Annex-II, Photo 2)

4.4.2 Wet floors are not marked with "CAUTION, WET FLOOR" (or similar) signs in any of the hospitals.

4.4.3 All hospitals have hard floor surfaces that are secure and free of tripping and slipping hazards.

4.4.4 Floor surfaces are not uneven or in need of repair.

4.4.5 Hospitals don't have Exit signs illuminated. However, MJK hospital in Bettiah does not need any Exit sign as there are a lot of clearly evident paths that leads to exit.

4.4.6 Fire exits are not available in any hospital. For example, in case of Bagaha's hospital, a fire exit could be constructed at the extreme end of the corridor.

4.4.7 Three hospitals (Gaunaha, Bagaha and Narkatiaganj) have stairways and their handrails are in good condition.

4.4.8 No objects are placed on stairways and are completely clear of obstructions.

Parameter	Hospital	
	Yes	Not Applicable
Corridors kept clear of obstruction	All except BAG	
Wet floors are marked	None	
Floor surfaces secure and free of tripping and slipping hazard	ALL	
Floor surfaces uneven and in need of repair	None	
Exit signs illuminated	None	
Fire doors close and latch properly		ALL
Handrails in good condition	GAU, BAG, NAR	LAU, BET
Stair treads in good condition	GAU, BAG, NAR	LAU, BET
Stairways clear of obstruction	GAU, BAG, NAR	LAU, BET

## 4.5 ELECTRICAL SAFETY

4.5.1 Hospitals, except in Narkatiaganj, have not identified electrical switches and circuit breakers necessary to prevent fire in case of a short circuit. (Annex–II, Photo 3)

4.5.2 Electrical receptacles and cover plates are in good condition in Narkatiaganj and Gaunaha. (Annex–II, Photo 4 )

4.5.3 Electrical cords and plugs are in good condition only in Narkatiaganj.

4.5.4 Electrical equipments in Narkatiaganj and Bettiah appear to be in good condition.

Parameter	Hospital	
	Yes	Not Applicable
Electrical switches and circuit breakers identified	None	
Electrical receptacles and cover plates are in good condition	NAR, GAU	
Electrical cords and plugs are in good condition	NAR	
Electrical equipments appear in good condition	NAR, BET	

## 4.6 LABORATORY SAFETY

4.6.1 Emergency showers and fire extinguishers are not available. Only tap water for eye washing is available in Bettiah.

4.6.2 Aisles are not clear and obstructed preventing ready access out of the area in case of fire or another emergency.

4.6.3 Corrosives are stored on the lowest shelves.

4.6.4 Flammables, acids, and bases are all stored separately from each other. (Annex–II, Photo 5 )

4.6.5 Chemicals are labeled to indicate their contents.

4.6.6 Chemical containers are not labeled to indicate any hazard which may be present, i.e. TOXIC or FLAMMABLE.

Parameter	Hospital	
	Yes	Not Applicable
Emergency showers and fire extinguishers	None	GAU, BAG
Aisles clear and unobstructed to permit ready access in case of fire	None	GAU, BAG
Corrosives are stored on the lowest shelves	ALL	GAU, BAG
Flammables, acids, and bases are all stored separately from each other	ALL	GAU, BAG
Chemicals labeled to indicate their contents	ALL	GAU, BAG
Chemical containers labeled to indicate hazards	None	GAU, BAG

#### 4.7 WORKPLACE REGULATIONS

4.7.1 Hospitals are yet to have any firefighting equipment (FFE), however, supply order for fire extinguishers have already been placed.

4.7.2 Hospitals do not have suitable means for giving warning/detection of fire. For ex, there are no fire alarms or smoke alarms in place.

4.7.3 Employees have not been identified for firefighting duties and not been given adequate training on firefighting.

4.7.4 Different sections of hospitals don't have contacts with emergency services nor are their numbers handy.

Parameter	Hospital	
	Yes	Not Applicable
Firefighting equipment provided	None	
Means of giving warning/detection of fire	None	
Employees identified for firefighting duties	None	
Different sections don't have contacts with emergency services	None	

#### 4.8 EMERGENCY ROUTES AND EXITS

4.8.1 There are no separate emergency routes and exits routes except in Gaunaha. However, the usual main routes are clear and unobstructed that always lead to a place of safety. (Annex-II, Photo 6)

4.8.2 Hospitals seem to have the means of escape sufficient for the number of people present.

4.8.3 Only Narkatiaganj hospital has exit route and exit adequately lit.

Parameter	Hospital	
	Yes	Not Applicable
Emergency routes and exits kept clear	ALL	GAU
Means of escape sufficient for numbers present	ALL except GAU	
Exit routes are adequate lit	None except NAR	

#### 4.9 MANAGEMENT REGULATIONS

Hospitals have not carried out any fire risk assessment (FRA) before this. There has been no emergency preparedness plan created, and no planning or system of monitoring and control been made. Management is required to appoint competent persons and define appropriate procedures for serious and imminent danger. Employees need to be provided with relevant information, adequate co-operation and co-ordination between employers and appropriate training given to all employees and placed with clearly defined responsibility.

#### 4.10 WORK AREA

4.10.1 Aisles are sufficiently wide for personnel and moving equipment except in Lauriya and Bagaha.

4.10.2 Lighting is inadequate in corridors of the all the hospitals except in Narkatiaganj.

4.10.3 Exits are not marked in any of the hospitals, except in Gaunaha.

Parameter	Hospital	
	Yes	Not Applicable
Aisles are sufficiently wide	ALL except LAU, BAG	
Lighting is inadequate in corridors	None except NAR	
Exits are marked in all the hospitals	None	

## RECOMMENDATIONS

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### 5.1 FIRE PREVENTION OR RISK MITIGATION

5.1.1 'No Smoking policy' need to be explicitly stated and implemented.

5.1.2 Excess paper and combustible material should be stored properly and it should not create a fire risk.

5.1.3 All hospitals should use electrical switches and plugs of good standard quality and in sufficient quantity to avoid electrical fire.

5.1.4 Electrical cords and plugs should be inspected regularly to look out their conditions.

5.1.5 Electrical circuit breakers must be identified.

5.1.6 Fire alarms must be put in place for early detection of fire or possibility of fire and timely evacuation. This can be a simple calling bell which is specially designated for such a scenario.

5.1.7 Fire extinguishers must be made available and mounted on appropriate locations. Some identified staff must be trained on the use of a fire extinguisher

5.1.8 Location of fire extinguishers should be identified and sign board should be fixed at every place to reach nearest fire extinguisher location.

5.1.9 Sprinklers system should be atleast in each storage room of all the hospitals and kept at least 18" below on sprinkler head.

5.1.10 Staff in the area should be made aware of the proper reporting procedure (relevant contact persons who can take swift actions) if they find a fire.

5.1.11 All chemical containers should be labeled to indicate any hazard which may be present.

5.1.12 Direct communication hot links should be established with police and fire stations for quick response.

5.1.13 Material Safety Data Sheets (MSDS) should be available for all products in the laboratory.

5.1.14 Appropriate firefighting equipment (FFE) should provide to employees. They should be easily accessible, simple to use and indicated by signs

# 5

## **5.2 EVACUATION**

5.2.1 Sign boards and signals should be put up at proper places for emergency evacuation.

5.2.2 All EXIT signs should be illuminated for the maximum use in emergency.

5.2.3 All exits must be bright with sufficient lighting even at night.

5.2.4 A specified team for evacuation must be formed and adequate training must be provided to them.

5.2.5 Emergency routes of each hospital should be identified and emergency exits must be keeping clear from any type of obstruction.

5.2.6 There should be mock drills done annually for evacuation by the trained team and drill records should be maintained well. Identified gaps from mock drills must be plugged.

5.2.7 Emergency exits must be created in hospitals that be used only in times of any eventuality.

## **5.3 TEAMS AND TRAINING**

5.3.1 Staff must be identified and formed into different teams required for different purposes that include -Mock Drill and Evacuation, Monitoring and Control, Fire Extinguisher Operations and Maintenance.

5.3.2 Proper relevant trainings must be conducted for the staff identified as per their team and role and responsibilities.

## **5.4 FIRE RESPONSE**

5.4.1 Availability of medicines / facility to treat fire victims.

5.4.2 Doctors for burn treatment.

5.4.3 Isolation sterile room for burn patients.

5.4.4. Fire tenders to quickly respond to a fire scenario in a hospital.

## **ANNEX-I. LIST OF RESPONDENTS**

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### **Referral Hospital, Gaunaha**

1. Mr. Shailendra Kumar, BHM, PHC Gaunaha

### **Referral Hospital, Lauria**

1. Mr. Ravishankar Prasad Singh, BHM – PHC LAURIYA
2. Dr. Abdul Gani, Medical Officer – PHC LAURIYA
3. Dr. Sunita Prasad, BDS – Dental Doctor – PHC LAURIYA
4. Mr. Arun Kumar Bhagat, Block Health Worker
5. Mrs. Kanchan Kumari, ANM
6. Mr. Ramesh Mahto, Computer Operator
7. Mrs. Puja Kumari, ANM

### **Referral Hospital, Narkatiyaganj**

1. Dr. Chandrabhushan, MOIC – PHC NKE
2. Mr. Shashank Shekhar, BHM – NKE
3. Mr. Pradeep Kumar Shukla, Laboratory Technician – RNTCP – NKE.

### **MJK Hospital, Bettiah**

1. Mr. Uday Kumar, Establishment Clerk
2. Mr. Shanti Bhushan, Store Incharge

### **Sub-divisional Hospital, Bagaha**

1. MR. Rahul Kumar, Hospital Manager
2. Mr. Nurain, Accounts, FRU

**ANNEX-II. PHOTO DOCUMENTATION OF HOSPITAL FIRE SAFETY AUDIT  
IN WEST CHAMPARAN DISTRICT, BIHAR**



Photo 1: Carts and Wheelchairs are not in good operating condition.



Photo 2: Motorcycles parked inside the hospital – Bagaha and Gaunaha.



Photo 3: Electrical switches boards are open and prone to hazard. Short circuits are the major source of fire in hospitals in India.



Photo 4: Electrical receptacles and cover plates are in good condition.



Photo 5: Flammables, acids, and bases are all stored separately from each other.



Photo 6: Separate emergency routes and exits; No Smoking Policy – Only in Gaunaha.

District Disaster Management Authority  
Collector Building, Bettiah,  
West Champaran, Bihar