



GUIDELINES FOR FORMULATING A FIRE & EMERGENCY DRILL AND EVACUATION PROCEDURE FOR HOSPITAL

Before FIRE & EMERGENCY drills are planned in Hospital, the following points must be of prime consideration.

- i) The purpose of fire & emergency drills.
- ii) Formulating of fire routine.
- iii) Instruction and training.
- iv) Fire routine details.
- v) Frequency of drills.

1) THE PURPOSE OF FIRE & EMERGENCY DRILLS :

(a) The responsibility for carrying out fire & emergency drills in Hospital rests with the management of the hospital.

(b) A fire & emergency drill in a hospital is intended to ensure by means of training and rehearsal that in event of fire.

- i) The people who may be in danger act in a calm and orderly manner.
- ii) Where necessary, those designated carry on their allotted duties in ensure safety of all concerned.
- iii) The means of escape are used in accordance with pre determined and practiced plan. It is done in a judicious way so that total evacuation is done only if required.
- iv) If the evacuation of the hospital becomes necessary, it is done in a speedy and orderly manner.
- v) To have co-ordination between mind and muscle during an emergency. Lack of knowledge leads to loss of more lives and property in an emergency and creates a panic chaos and stampede. Fire & emergency drill is a pre-determined and practiced plan of action.
- iv) Give confidence to all the staff that they can perform the duties allotted to them for safe guarding the lives of patients and their own lives by following pre-determined plan with speed and accuracy. For better results fire & emergency drills should be conducted repeatedly and periodically.

2) FORMULATING OF FIRE ROUTINE :

a) Preparation before the visit :

Before a fire officer visits a hospital to give fire & emergency drill instruction, he has to ascertain the type of fire appliances, fire alarm systems, sprinkler system fire pumps and other types of fire protection equipments that are available in the hospital . In this regard the report of your fire prevention officer or colleague who has previously given instruction at the premises will, no doubt be able to provide this and other useful information.

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b) TABLE TOP EXERCISE:

- i) Table top exercise should be conducted before conducting actual mock drill to facilitate group analysis of an emergency situation in an informal, stress free environment.
- ii) The Table top Exercise is designed for examination of operational plans, problem identification, and in-depth problem solving.
- iii) The tabletop exercise is essentially a group brainstorming session centered on a scenario narrative and problem statements or messages that are presented to members of the group.

c) ARRIVAL AT THE HOSPITAL :

- i) Record Book : The fire officer should verify the fire & emergency drill record book and attest same with his signature, name and date.
- ii) Contact senior Hospital Officials : It is very important to contact senior Hospital officials viz. administrative officer, secretary (steward) , engineer and discuss with them about the level of preparedness of their staff to effectively tackle any emergency situation.
- iii) Availability of Staff : Each member of the staff should attend fire & emergency drill instruction at least twice a year. This should be ensured by the hospital administration. The fire officer should record his findings of inspection of fire safety measures in the Hospital.

d) Preparation of Fire safety plan:

It is essential to prepare fire safety plan according to Clause C-8 (Annex - E) of part-4 of National Building Code of India,2005 duly incorporating the following important components.

- i) Fire Safety Director.
- ii) Deputy Fire Safety Director.
- iii) Fire Wardens and Deputy Fire Wardens.
- iv) Building Evacuation Supervisor.
- v) Fire Party.
- vi) Occupants Instructions.
- vii) Fire Command Station
- viii) Signs

The Fire safety plan format and duties of above responsible inmates or enclosed at **Annexure – I.**

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3) INSTRUCTION AND TRAINING:

The fire officer should explain the object of fire & emergency drill, pointing out that the responsibility for the prevention and prompt extinction of fires rests equally on every member of the staff regardless of their rank. The senior hospital officials should be motivated to give the instructions frequently as there is change of staff. During the instruction the fire officer should start with explaining the purpose of drill, position of exits, methods of rescue, equipments of fire fighting, prevention of fires in hospitals by explaining about the common causes of fire in hospitals. The model instructions should be as detailed below.

a) Procedure in an emergency :

Give clear and concise instructions on what the staff are expected to do on discovering a fire and in answering an alarm of fire.

i) On discovering a fire :

Operate the internal fire alarm system, remove patients from the proximity of the fire, ensure that the fire brigade has been called, endeavor to extinguish the fire with the appliances provided.

ii) Calling the fire service

All fires, suspected fires or potential fires should be reported immediately to the Fire Service by the quickest method available. It is the duty of the chief warden to ensure that the fire service is called. However, the priority is to ensure call is made. It is important that there is no delay in transmitting the call. A fire notice (instructions for calling the fire service) should be posted adjacent to the telephone.

An Example is as follows.

**IN CASE OF FIRE
CALL THE FIRE SERVICE ON
101
(OR YOUR LOCAL EMERGENCY NUMBER)
ASK THE OPERATOR WHETHER IT IS
"FIRE SERVICE"
When the fire service answers, give the call distinctly
"FIRE"**

At _____

discovering a fire and on hearing the fire alarm. The fire instruction notices should be brief, clear, prominent, legible, appealing.

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A model of a fire instruction Notice is as follows

I). When a Fire Alarm is Raised.

1. On being advised of the alarm, a member of the operation theatre staff is to remain at the telephone to receive status reports and instructions. The hospital fire control officer will advise when to stand down or to evacuate.
2. The theatre staff are to advise the fire control officer of the current operating status and whether evacuation is possible or not.

II). If you Discover a fire

1. Raise the alarm and commence moving any patients from the immediate vicinity to a place of safety.
2. Attack the fire using available fire equipment only if you feel capable of controlling it. If not, take all steps to isolate the area by closing doors and windows.
3. If the fire cannot be controlled, evacuate the area completely at once.

III). Evacuation Procedure

1. Evacuate through the nearest safe exit.
2. In the event that an operation is in progress, the decision to evacuate is at the discretion of the surgeon in charge of the operation.
3. When operations are not in progress, the designated senior staff member will supervise whatever evacuations may be required by whatever means are safest.
4. Staff should make every attempt to turn off all medical gas supplies and electrical equipment before vacating the suite.

A model of a fire instruction notice for fire control officer.

IV. When an alarm is raised

1. Report to the designated control centre.
2. Ascertain the location and size of fire.
3. Check that the fire brigade has been called.
4. Advise all units of the fire status and instruct them to stand by for further instructions.
5. Send additional staff to the fire scene to assist if, it is considered necessary.
6. Send staff members to main entrance to prevent visitors from entering the building .

7. On receipt of status reports, this officer will determine further course of action and advise an evacuation or stand down action.

N. B. The senior receptionist will assume the duties of fire control officer pending the arrival of the designated person or until relieved by a senior staff member.

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A model of a fire instruction notice for the hospital staff.

V. When a fire alarm is raised.

1. Report to the switch board and standby for further instructions.
2. If in the ward areas, report to the sister in charge for assignment. You should advise your office of your location when possible.

VI. If you discover a fire

1. Raise the alarm and if there are any patients or visitors in the area, move them to a place of safety.
2. Attack the fire using available fire equipment only if you feel capable of controlling it. If not, take all steps to isolate the fire by closing windows and doors.
3. If the fire cannot be controlled, evacuate the area completely at once.
4. Take with you all patient records and other essential documents without placing yourself in further danger. Avoid moving bulky record cabinets as they could block exits.

VII. Evacuation Procedure :

1. Evacuate through the nearest safe exit.
2. Stay with your working group.
3. Assist in the preparation of staff and patient roll call.

4) FIRE ROUTINE DETAILS :

A fire routine as a general rule should be based on a sequence of events. Details will be as listed below for a Hospital.

- i) **Alarm Operation** : Type – single or Two stage – Audible or otherwise – total or partial – Notification to central point.
- ii) **Power** : Stopping central A. C., isolating power supplies.
- iii) **Call the fire brigade** : Precise instructions – watchman's or receptionists instructions.
- iv) **Evacuation** : (i) Two stage instructions – closing of Doors and windows, search of toilets etc. (ii) Responsible persons for carrying out the patients by various rescue methods.

- v) **Assembly** – Away from premises – under cover – mutual arrangement with nearby premises.
- vi) **Roll Call** - Registers – patients list – Responsible person – Reports to Fire Brigade Officer about any missing patient / staff.
- vii) **Attacking the Fire** - Circumstances will dictate whether fire fighting operations should be attempted.

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- viii) **Testing of installations and equipment :**
- ix) During the Drill, the real performance of all the available fire fighting installations and equipment, viz. Hose Reel, Wet Riser, Downcomer, Yard Hydrant system, Fire Extinguishers, Emergency Lighting, Automatic Detection and alarm system, Sprinkler system, Smoke management system, Fire Doors, Water tanks, Fire Pumps, etc. have to be tested and deficiencies if any shall be recorded in the Fire and Emergency Drill Check List.
- x) It is the responsibility of the building Management to rectify the deficiencies immediately to ensure fire and life safety.

5. **DEMONSTRATIONS**

It may be ensured to conduct demonstrations at periodic intervals so that all the inmates are familiarized with the usage / working of Fire Extinguishers, Hose Reel, Wet riser , Fire alarm System (manual and automatic) and Sprinkler System.

6. **FREQUENCY OF DRILLS**

At least once in every 3 months for existing buildings and for new buildings during the first two years after the issuance of the certificate of occupancy. There after fire & emergency drills shall be conducted once in every six months.

The fire & emergency drills should not be allowed to become stereotype as the situation under actual fire conditions may vary widely. For instance a stair case may be unsuitable due to smoke or other causes before. arranging a fire & emergency drill where a staircase is presumed to be blocked it is essential that an alternative safe route is available which leads to open air and safety.

(a) Practice fire & emergency drill - By staff (Using other staff as patients)

- i). Evacuation of bed patients to a place of safety using various methods.
- ii). Discovery of a fire in a room adjacent to a ward / bedroom raise alarm - patients / residents evacuated attacking fire with appliances available if safe to do so.
- iii). Discovering a fire in kitchen fat fire or electrical fire usual closing of door etc, and attack on fire as appropriate, foam, dry powder, CO₂, and fire blanket.
- iv). Smoke spreading from corridor to a ward alarm given evacuation commenced investigate smoke and source of fire and attack fire.

And practice fire & emergency drill should be carried out in every hospital, simulating conditions in smoke in which one or more escape routes is obstructed by smoke. During these drills the fire alarm should be operated by a member of the staff who is told of the supposed out break and thereafter, the fire routine should be rehearsed as fully as circumstances allow.

The principles of fire, drills and procedures should also be taught at Nurses training schools but must afterwards be related to the arrangements actually in force at each hospital.

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(b) Evacuation of Patients :

People designated for evacuation should know basic methods. They should be taught the following.

- i) 2, and 4 handed lifts,
- ii) Fireman's lift from the bed
- iii) Human Crutch
- iv) Blanket removal
- v) Wheel Chair
- vi) Pick a back
- vii) Fore and Aft method
- viii) Removal Downstairs
- ix) Removal by stretcher / with or without wheels

7. EVALUATING FIRE & EMERGENCY DRILL PLANS

(a) The ultimate evaluation of fire & emergency drill and emergency plans has two factors.

- i) Performance of the staff in a fire incident in a Hospital.
- ii) Effectiveness of the behavior in accordance with the fire & emergency drills or the fire emergency plan.

(b) The successful evacuation of the inmates to reach a place of safety within the floor viz., protected staircase, protected lift lobby, Refuge area or Assembly point outside the building within reasonable time (2 ½ minutes) before the spread of smoke, fire and heat is the essence of evaluating the fire & emergency drill.

(c) Fire safety education and practice of evacuation procedures by the hospital employees will determine the success of a fire & emergency drill in a Hospital.

(d) A Proforma of Fire & emergency drill check-list and Fire & emergency drill Register is enclosed at **Annexure-II.**

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