



GOVERNMENT OF KERALA

Abstract

Disaster Management Department – Hospital Safety - Conduct of Rapid Safety Audit in COVID Hospitals across the State – Orders Issued

DISASTER MANAGEMENT (A) DEPARTMENT

G.O.(Rt)No.414/2021/DMD Dated,Thiruvananthapuram, 13/05/2021

ORDER

Considering the huge demand of hospital resources in the wake of a surge in COVID 19 cases, safety within the hospital premises needs greater emphasis. In the background of fire and oxygen leak in some COVID Hospitals in different states, with increasing footfall, it is critical that COVID Hospitals do not overlook safety aspects with respect to natural or anthropogenic hazards. A Rapid Safety Audit (RSA) appears necessary in all the COVID Hospitals (Government and Private) in the State to ascertain gaps, if any, so that the respective institutions can further take necessary steps to better hospital safety and meet safety standards.

Therefore, in exercise of the powers conferred under section 20 read with sections 24 and 65 of the Disaster Management Act, 2005, the undersigned, in the capacity as the Chairman, State Executive Committee of the Kerala State Disaster Management Authority, hereby issue the following orders with immediate effect:

1. A rapid safety audit of COVID Hospitals (Private and Government, including Co-operative and ESI COVID Hospitals)) across the State shall be conducted to identify gaps, if any, in hospital safety. The respective institutions, shall thereafter, take necessary steps to bridge the gaps to better hospital safety and meet safety standards.
2. The Rapid Safety Audit shall be conducted based on the formats developed by the Kerala State Disaster Management Authority (KSDMA) for the purpose [*Guidance Note, Rapid Safety Audit Formats (part I and part II)*] appended to this order.
3. Audits Teams shall be constituted by the respective District Disaster Management Authorities (DDMAs) in the following manner so as to complete the rapid safety audit of all COVID Hospitals in the district in a week's time:

- i. One representative from Revenue/Disaster Management Department (Team Leader),
- ii. One representative from Fire and Rescue Department,

- iii. One representative from Health Department,
- iv. One representative from LSGD (Engineering Wing) / PWD,
- v. A competent official from the Electrical Inspectorate in the district
- vi. One representative of the hospital audited (person responsible for maintenance / management)*

*The Medical Superintendents of the respective Private COVID Hospitals (including Co-operative Hospitals) shall render necessary assistance for the rapid safety audit

4. The checklist has broadly two sections,

- a) Basic information related to the hospital (truthful and 'as is') which can be filled by the staff of the hospital prior to the audit
- b) Safety Information which have to be filled by the audit team themselves after physical verification

5. The Audit Teams shall submit duly filled check lists to the Chairperson DDMA within 2 days of audit, highlighting the immediate steps and suggested medium /long term steps to be undertaken to prevent a hazardous situation within the COVID hospital, with a copy to the respective DMO (Health).
6. Based on the findings of the rapid safety audit and associated inputs, the Department of Health and Family Welfare in the case of Government COVID Hospitals of the State, ESI in the case of ESI Hospitals and the respective managements in the case of Co-operative and Private Hospitals shall take steps (immediate, medium term and long term) to bridge the gaps so that hospital safety is improved to meet safety standards within a reasonable time limit.
7. The Rapid Safety Audit exercise is exempted from lockdown restrictions. COVID19 Protocol should be followed during the audit exercise. Patient care shall not be hindered during the audit process.
8. Though self-explanatory, the KSDMA may arrange online trainings based on need for the Audit Teams and Hospital Managers regarding the conduct of the above Rapid Safety Audit.
9. The above RSA pertains to COVID Hospital settings. In the case of *adhoc* COVID Second Line Treatment Centers (CSLTCs) and some COVID First Line Treatment Centers (CFLTCs), especially where Oxygen beds are being arranged, the DDMA shall locally assess the *adhoc* arrangements and ensure patient safety in such centers. Taking basic fire & electrical safety precautions and ensuring adequate ventilation and air exchanges are of primary importance, *inter alia*.

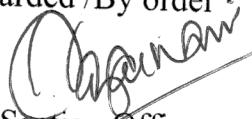
(By order of the Governor)
DR. V P JOY
CHIEF SECRETARY

To:

Land Revenue Commissioner
Commissioner, Disaster Manangement
All District Collectors

Health Department
Home department
LSG department
Public Works department
Power department
The Director, Information & Public Relations Department (Web & New
Media) Copy to
Special Secretary to Chief Secretary
PA to Additional Chief Secretary, Disaster Management

Forwarded /By order


Section Officer

Guidance Note

To The Checklist For

Rapid Safety Audit Of Covid-19-Specific Facilities In Hospitals

Aim:

The checklist aims to assess the safety of COVID-19-specific facilities in COVID-19 hospitals of the State.

Objectives:

1. To take stock of the present conditions in the COVID-19-specific facilities of COVID-19 hospitals.
2. To identify gaps in the existing infrastructure and thereby facilitate decision making for augmenting the safety in hospitals.

Scope and Limitations:

1. The checklist is intended for buildings and utilities involved in COVID-19 care only and not the entire hospital complex.
2. The checklist lays its focus on assessing the safety from the perspective of following hazards only:
 - a. Fire
 - b. Oxygen leakage and associated eventualities
 - c. Electrical malfunctioning and associated eventualities
 - d. Floods
 - e. Landslides

Description of the checklist:

The checklist consists of two parts, namely,

Part I. General Information of the Hospital

Part II. Safety Checklist

Part I consists of 41 questions about the location, contact details, rapid response team, staff details, COVID-19-specific facilities and their capacities etc. whereas Part II consists of 68 questions under the following sections:

- a. Fire safety
- b. Multi-hazard preparedness
- c. Utilities- Electricity

- d. Utilities- Water
- e. Utilities- Oxygen
- f. Communication facilities

Instructions to use the checklist:

1. The intention of this safety audit needs to be clearly communicated to the hospitals as well as to the auditors. The audit is being carried out in the context of multiple incidents of fire and oxygen leakage and subsequent loss of lives reported from COVID hospitals in different parts of India. The checklist intends not to criticise or find faults but to recognize areas of improvement so as to strengthen the state's efforts in improving hospital safety and containment of COVID-19 by preparing for any eventuality.
2. Part I of the checklist may be filled by a representative of the hospital prior to the physical audit. This form may be administered via google forms prior to the Part II audit because the data from Part I are beneficial for the easy conduct of Part II audit.
3. Part II of the checklist is to be filled by a team of external auditors, preferably, comprising of the following officials:
 - a. Representative from Revenue – Disaster Management Dept.
 - b. Representative from LSG Engineering/ PWD
 - c. Representative from Fire and Rescue Services
 - d. Representative from Health Department
 - e. A competent official of the Electrical Inspectorate in the District
 - f. Representative of the concerned hospital (preferably Maintenance Officer)

The form is to be filled after a rapid yet careful inspection at the hospital. As deemed necessary, data may be collected through

- interviews with medical, para-medical and non-medical staff,
 - checking of hospital records, and
 - on-site inspection of various facilities.
4. All the questions in the checklist are objective. Wherever applicable, tick mark (✓) is to be used for answers. Space has also been provided for adding remarks, if any.
 5. It is mandatory for the auditing team to take due precautions during the inspection and follow COVID-19 protocols of the hospital without fail. The hospital management is expected to facilitate the smooth conduct of the audit. The audit exercise shall not hinder patient care at any time.

RAPID SAFETY AUDIT OF COVID-19-SPECIFIC FACILITIES IN HOSPITALS

PART 1				
GENERAL INFORMATION OF THE HOSPITAL				
(to be filled by the concerned hospital staff)				
Please tick wherever applicable (√)				
Name of the respondent:			Contact No.:	
Designation of the respondent:				
1	Name of the hospital			
2	Address with PINCODE			
3	District			
4	Name of the LSG		Municipal Corporation	Municipality
5	Phone number (Landline):		Phone number (Mobile):	
6	E-mail id		7. Website	
7	Month and year of establishment of the hospital			
8	Ownership of the hospital		Government	Cooperative/ Trust
9	Type of healthcare		Primary	Secondary
10	Total no. of beds			
11	a. Name and designation of the Head of the hospital (CEO/ Director/ Superintendent etc.)			
	b. E-mail id		c. Office number	d. Mobile number
12	a. Name and designation of the Head of the Institutional Rapid Response Team (RRT)			
	b. E-mail id		c. Office number	d. Mobile number
13	Details of the Core Committee members of the Institutional RRT			
	Name		Role	
14	Has the hospital building faced any disasters in the past? (e.g.: flood, landslide, fire, etc.)		Yes	No
			If yes, type of disaster: Month and year of occurrence:	

15	a. Total no. of staff		b. No. of medical staff		c. No. of para-medical staff		d. No. of non-medical staff	
16	Total no. of operating staff shift-wise			General shift	1 st shift	2 nd shift	3 rd shift	
17	No. of doctors shift-wise			General shift	1 st shift	2 nd shift	3 rd shift	
18	No. of nurses shift-wise			General shift	1 st shift	2 nd shift	3 rd shift	
19	Age of the COVID block (in years)							
20	Year of renovation, if done.							
21	Total height of the building (in meters)			Above ground level		Including basements		
22	Total No. of floors (e.g.: Basement + Ground + First + Second etc.)							
23	No. of basements			24. Use of basements (e.g.: parking, labs, laundry etc.)				
25	Total no. of COVID beds			26. Total no. of ICU beds				
27	Current occupancy of COVID beds			28. Average no. of COVID patients admitted per day				
29	a. Total no. of COVID wards		b. No. of COVID wards with oxygen		c. No. of COVID wards without oxygen			
30	a. Total no. of COVID isolation rooms		b. No. of isolation rooms with oxygen		c. No. of isolation rooms without oxygen			
31	a. No. of ventilators available		b. No. of BiPAP machines /Non Invasive Ventilation (NIV) available		c. No. of High Frequency Oscillatory (HFO) Ventilators available			
32	Are the following specialties available for COVID care?							
	General Medicine		Emergency Medicine		Anesthesia		Critical Care	
	Pediatrics		Nephrology		Cardiology		General Surgery	
33	No. of Operation Theatres		Is there a Central Sterile Supply Department (CSSD)?			Yes	No	
34	Does the hospital have laboratories?			Yes		No		
35	Does the hospital have diagnostic radiology?			Yes		No		
36	Does the hospital have a pharmacy?			Yes		No		
37	Does the hospital have a kitchen and canteen?			Yes		No		
38	a. Total no. of staircases							
	b. No. of internal staircases			Width (in m):				
	c. No. of external staircases			Width (in m):				
	d. No. of fire escape staircases			Width (in m):				
39	No. of ramps			Width (in m):				
40	a. Total no. of lifts			Total capacity:				
	b. Patient lift/ bed lift			Capacity:				
	c. Service lifts			Capacity:				
	d. Fire lifts			Is lift license available?			Yes	No

RAPID SAFETY AUDIT OF COVID-19 SPECIFIC FACILITIES IN HOSPITALS PART II SAFETY CHECKLIST

Hospital Name and District:

Distance to nearby fire station:

Distance to nearby hospital:

FIRE SAFETY

1	Does the hospital have a dedicated department for managing fire and safety?	Yes	No
	Remarks:		
2	Is an Environment, Health & Safety (EHS) officer available at the hospital?	Yes	No
	Remarks: Name & Contact details:		
3	Is Fire Emergency Plan (Code Red) available and communicated?	Yes	No
	Remarks:		
4	Has the Rapid Response Team (RRT) been formed?	Yes	No
	Remarks:		
5	Have the RRT been regularly trained?	Yes	No
	Remarks: Check training records		
6	Is the nodal officer for handling emergencies available 24 hours?	Yes	No
	Remarks: Designations in each shift:		
7	Is Fire sprinkler system available in all areas and is inspected (internally/externally) periodically?	Yes	No
	Remarks: Date of last inspection:		
8	Are manual call points (MCP) available in all floors and operational?	Yes	No
	Remarks:		
9	Are adequate number and types of fire extinguishers available in all floors?	Yes	No
	Remarks:		
10	Is adequate firefighting system available- hydrant valves, hoses, monitors, etc.?	Yes	No
	Remarks:		

11	Are periodical fire trainings (fire drills) and mock drills conducted?	Yes	No
	Remarks: Last date of mock drill:		
12	Is fire NOC available?	Yes	No
	Remarks: Date of expiry:		
13	Is adequate pressure maintained in fire hydrant and sprinkler pipelines (min of 5 Bar)?	Yes	No
	Remarks:		
14	Is adequate water level maintained in fire water reservoir? Mention level	Yes	No
	Remarks: Level:		
15	Are inspections tag/stickers available for fire extinguishers (mention frequency of inspection)?	Yes	No
	Remarks:		
16	Is adequate training given on usage of fire extinguishers to all staffs?	Yes	No
	Remarks: Check training records		
17	Availability of Automatic fire detection system (smoke detectors) and alarm system (MCP's, Annunciator panel, siren), and is in working condition?	Yes	No
	Remarks:		
18	Is accessibility of all firefighting equipment (fire extinguisher, hydrant valves, hose reels, etc.) ensured?	Yes	No
	Remarks:		
19	Are all combustible materials segregated and stored away from ignition sources?	Yes	No
	Remarks:		
20	Does the basement have automatic sprinkler systems?	Yes	No
	Remarks:		
21	Are the basements free from combustible materials (check for any unauthorized storages, position of DG, etc.)?	Yes	No
	Remarks:		

22	Are the Emergency Exits and Evacuation route accessible?	Yes	No
	Remarks:		
23	Are access roads available throughout the hospital building to facilitate the fire tender?	Yes	No
	Remarks: Width of road:		
24	Is the width of the main entrance gate not less than 4.5m? (min 4.5m)	Yes	No
	Remarks: Mention width:		
25	Are emergency evacuation route plans displayed prominently?	Yes	No
	Remarks:		
26	Is every exit and access to every exit free from all obstructions?	Yes	No
	Remarks:		
27	Are the emergency exit signs clearly visible (preferably illuminated) in each floors ?	Yes	No
	Remarks:		
28	Does the staircase have a width of at least 2m?	Yes	No
	Remarks:		
29	Is width of the corridor and passage greater than or equal to 2.4m?	Yes	No
	Remarks:		
MULTI-HAZARD PREPARDNESS			
30	Is the building located in Flood Prone area ?	Yes	No
	Remarks:		
31	Is High Flood Level (HFL) marked and visible ?	Yes	No
	Remarks:		
32	Is the building located in a Hilly Terrain ?	Yes	No
	Remarks:		

33	Do you have designated Assembly points marked?				Yes	No
	Remarks:					
34	Are Critical facilities (OT, ICU, etc.), chemical storage and Essential Supplies being stored on an elevated platform or above the HFL ?				Yes	No
	Remarks:					
35	Is procedure for movement of patients from critical facilities, in case of an emergency (fire, flood, landslide, oxygen leak/shortage) available ?				Yes	No
	Remarks:					
UTILITIES- ELECTRICITY (+ * Electrical Inspectorate to append their remarks to this format as a separate sheet)						
36	Is Diesel Generator (DG) facility available?				Yes	No
	Remarks: No of DGs present:					
37	Capacity of each generator:	1	2	3	4	
	Remarks:					
38	Is local diesel storage tank (for Diesel Generator) properly protected, and appropriate fire extinguisher provided?				Yes	No
	Remarks:					
39	Are all generators kept above HFL (High Flood Level)?				Yes	No
	Remarks:					
40	Does the fuel storage facility for generators ensure a back-up for 3 days?				Yes	No
	Remarks: Capacity of the storage tank:					
41	Do the ICUs and OTs have inverter back-up?				Yes	No
	Remarks:					
42	Are statutory electrical inspection certificates available (Earth certificates, power quality etc.)?				Yes	No
	Remarks:					
43	Ensure all electrical equipment are capable for continuous duty (Continuous duty, Short time duty and Intermittent duty)?				Yes	No
	Remarks:					

44	Has an energy audit been conducted?	Yes	No
	Remarks:		
UTILITIES- WATER			
45	Source of water supply.	Internal:	External:
	Remarks:		
46	Is alternate water supply available?	Yes	No
	Remarks: Source:		
47	Water reserves for hospital services and functions (minimum 3 days)	Yes	No
	Remarks: If not, how many days?		
48	Is safe and potable water available in times of emergency?	Yes	No
	Remarks: Source:		
UTILITIES- OXYGEN			
49	Is the location of storage area for medical gases adequately ventilated?	Yes	No
	Remarks:		
50	Type of oxygen storage and its capacity	Bulk storage:	Bottled oxygen:
	Remarks:		
51	Are trolleys available for movement of oxygen cylinders?	Yes	No
	Remarks:		
52	Are caps available for oxygen cylinders in storage areas?	Yes	No
	Remarks:		
53	Is the staff adequately trained in handling of oxygen cylinders?	Yes	No
	Remarks:		
54	Are all oxygen cylinders stored upright?	Yes	No
	Remarks:		

55	For how many hours will the oxygen reserve last?	24 hours	48 hours	72 hours	72 and more
	Remarks:				
56	Does the oxygen plant have a competent operator who can handle emergencies such as leakage?			Yes	No
	Remarks:				
57	Is automatic gas monitoring system available?			Yes	No
	Remarks:				
58	Any open ignition sources (e.g.: kitchen) and inflammable material storage (e.g. diesel for DG) nearby the oxygen storage area?			Yes	No
	Remarks:				
59	Are identification valves for different gases available and colour coding of pipelines been followed and displayed?			Yes	No
	Remarks:				
60	Has leakage audit been conducted for gas pipelines?			Yes	No
	Remarks:				
61	Has newly laid oxygen pipelines undergone inspection?			Yes	No
	Remarks:				
	Certificate:				
62	Is a bio-medical engineer available at the hospital?			Yes	No
	Remarks:				
COMMUNICATION SYSTEMS					
63	Is a Public Addressing System (PAS) available?			Yes	No
	Remarks:				
64	Does the PAS have a power back-up?			Yes	No
	Remarks:				

65	Are all employees aware of the in-house emergency contact number of the nodal officer?	Yes	No
	Remarks:		
66	Are all external emergency contact numbers displayed prominently?	Yes	No
	Remarks:		
67	Is an alternative mode of communication available in case of the failure of existing communication system?	Yes	No
	Remarks:		
68	Is there a Common Alert Mechanism for natural disasters (flood, landslide, earthquake, etc.) affecting the hospital?	Yes	No
	Remarks:		

ABBREVIATIONS

HFL	High Flood Level
OT	Operation Theatre
ICU	Intensive Care Unit
RRT	Rapid Response Team
MCP	Manual Call Point
NOC	No Objection Certificate
DG	Diesel Generator
PAS	Public Addressing System
EHS	Environment, Health & Safety
Overall Remarks by the auditing team / Include any critical concerns to be addressed immediately (including that of Electrical Inspectorate)	

Any other recommendations (if any)

Auditing Team			
Name of Auditor	Department	Contact Number	Signature

Date of the Audit	
Audit Report Submitted on:	