



## SOP FOR MAINTENANCE

ISSUE NO: 02

DOC

DATE:01/08/2021

REV NO:01



## SOP FOR MAINTENANCE NMC/NABH/MAINT

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	Name	Designation	Signature
Prepared by			
Reviewed by			
Approved by			

Prepared by	Approved by
Mrs.Fathima Mary	Dr.Arjun Sundaram



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### AMENDMENT SHEET

S.No.	Page no.	Date of amendment	Reasons	Signature of the reviewing authority	Signature of the approving authority
1.	4	01/02/2020	Safety Committee		
2.	10	21/06/2021	Fire Safety Protocol		

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Mrs.Fathima Mary	Dr.Arjun Sundaram



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**PURPOSE:**

To provide guidelines for ensuring safety of Patients, their Families, Staff and Visitors

**SCOPE:**

Hospital wide

**POLICY:****Safety Policy:**

- The hospital aims to provide a safe facility for all its occupants.
- This shall be accomplished by a Facility management and Safety Committee, which shall oversee all aspects of Facility Safety
- Preventive and breakdown maintenance Schedule are monitored and carried out by the Maintenance department
- Drawings (site layout, floor plan and fire escape route) shall be maintained in each floor in a visible manner.
- Fire escape route in the display of escape route drawing is marked in Red colour.
- Fire EXIT signage is provided in Green Colour through self-illuminating stickers
- Internal and external sign posting in the organization shall be maintained in a language understood by patient, families and community.
- The provision of space shall be in accordance with the available literature on good practices.
- Space is provided for the proper functioning of the department.
- A comprehensive safety inspection shall be done twice a year in patient care areas and once a year in other areas by Site Engineer and Electrical Contractor.
- A report shall be generated after each inspection by maintenance department in-charge which shall be discussed in Facility Management and Safety Committee Meeting and shall form the basis

Prepared by

Mrs.Fathima Mary

Approved by

Dr.Arjun Sundaram

for safety. Records are maintained and monitored at the time of reporting for taking corrective and preventive action.

- Response times are monitored from time of reporting to time of inspection and time of implementation of corrective actions.

**Safety committee:** The Safety Committee shall conduct Hazard Identification and Risk Analysis (HIRA) and accordingly take necessary steps to eliminate or reduce such hazards and associated risks. The committee shall comprise of the following members:

- General Manager
- Admin Manager
- Maintenance Manager
- Housekeeping Manager
- Quality Manager
- Nursing Manager
- Safety officer

**Patient-safety devices:** Patient-safety devices shall be installed across the organization and inspected periodically. The devices are:

- Grab-bars
- Bed-rails
- Sign postings
- Safety belts on stretchers and wheelchairs
- Alarms auditory
- Warning signs – radiation or biohazard
- Fire safety devices

**SIGN BOARDS:**

- List of services offered by our hospital is displayed in hospital reception.
- Boards for fire exit, safe assembly point, drinking water, mobile and smoking restriction are displayed in required areas of hospital.

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- Speed limits, no parking, no horn, water not suitable for drinking (garden) are displayed around the hospital.
- Emergency evacuation plan is displayed in all floors for easy evacuation of patients, visitors and staffs.

### WAITING LOUNGE FACILITIES:

- Patient waiting lounges are provided with comfortable seating arrangement.
- Patient's lounges are well ventilated and illuminated.
- Near the waiting lounge the portable drinking water is available. The toilet facilities are also comfortably arranged at designated areas.
- Wheel chairs and stretchers are in place at the designated places in all locations to help physically challenged patients.

### SMOKING POLICY:

- Smoking is prohibited in the hospital premises. No smoking sign boards are displayed in several places in the premises. The securities on duty ensure implementation of the policy in compliance with Government of India rules and regulations.

### INCIDENT REPORTING AND CORRECTIVE ACTION:

- In the event of an incident occurring, incident report is made and appropriate action is initiated.
- A corrective action is taken for it, by making an alternative arrangement. On-going procedure will not be interrupted.

### ANNEXURE:

The following drawings are maintained by maintenance department with document control.

- Site Layout.
- Floor plans.

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- Floor wise Emergency evacuation plan.
- Sign boards.

**Facility Inspection Rounds:**

1. Facility inspection rounds shall be conducted by Safety Committee to ensure safety at least four times in a year in patient care areas and at twice a year in non-patient care areas.
2. Potential safety and security risks enlisted including hazardous materials checklist are identified during the rounds.
3. The finding of the rounds are documented and the CA / PA measures are taken to rectify the faults

**Safety Education for Staff:**

- All staff is educated about safety requirements – in both patient care areas and non-patient care areas
- There shall be regular safety training covering Fire safety, Hazardous materials, use of Personal Protective Equipment, Bio-Medical waste Management, etc.

**Equipment planning:**

- The organization has a proper equipment planning system that takes in to account the future requirements of the organization in accordance with its scope of services and strategic plans.
- The plans shall be reviewed periodically or as and when required
- All equipment's are selected, updated and upgraded by collaborative process.
- There is involvement of the end-users, management, finance, engineering and biomedical departments in the selection of equipment's

**Equipment management:**

- All equipment's are inventoried and proper logs maintained in the Registers.

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- All equipment's are allotted asset tags with history card

**Equipment Maintenance:**

- The Maintenance Manager is responsible for the overall management and upkeep of the Bio - medical equipment's.
- Designated staff is responsible for daily maintenance of equipment's based on daily monitoring checklist/Weekly monitoring /monthly monitoring.
- Deficiency details are documented in equipment break down book and the same is communicated to the Maintenance Manager & General Manager.

**Breakdown Maintenance:**

- All breakdown entries are made in the Registers
- The complaint is registered and complaint number is generated.
- Maintenance Department is assigned or directed to the site for rectification as per first line service guidelines.
- If it is minor break down, corrective actions are taken by the Maintenance Department with the available spare parts in-house within 2-3 hours and the same is documented in the breakdown register with the time of rectification details and it is counter signed by the biomedical engineers who have performed the tests.
- If the problem is not solved, the service engineer is put forward to the service engineer depending upon the warranty/AMC and further plan of action is decided
- Average down time depends on the type f breakdown
- The details are updated in to the daily breakdown report and follow up is done.

**Preventive maintenance:**

- The Maintenance Manager prepares and maintains a maintenance plan as per the list of available equipment's.

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- The Preventive Maintenance of instrument having an AMC contract is done by communicating with Bio-Medical engineer and company engineer.
- A schedule is prepared by the biomedical department for preventive maintenance as per the manufacturer recommendation.
- All medical equipment's undergo preventive maintenance at prescheduled period.
- The concerned department is informed about the schedule of the equipment for preventive maintenance well in advance, so that they can keep the equipment free for required time period.
- The availability of necessary spares, consumables, tools and necessary materials are ensured through standardization and /or advance planning, through Stores and guidance by Maintenance Manager
- After completion of maintenance (whether preventive or breakdown) the OK report is taken from the user department and also an acknowledgment is taken from user department.
- Preventive maintenance shall be done 6 months one in Generator, Fire equipment's, Smoke detector, generator and Lift.

### **Calibration of Devices:**

- A list of all instrument /equipment/ devices requiring calibration is prepared and maintained.
- The list identifies the measurement instruments by name, type, serial number, location, applicable calibration requirements, date of calibration done and calibration due date.
- The calibration status is updated continuously.
- Calibration certificate to be obtained from calibration agency with verification marked as O.K. /Not O.K.
- The same is kept with the biomedical department and copy is provided to the user department. Sticker is displayed on the machine which shows the last calibration date and next due date.

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**Note: Register to be followed for the switching off fire alarm when fogging starts. This register contains switch off time, switch on time, reason for switching off with particulars and the person who switch off.**

- ❖ The maintenance of piped gas, compressed air, and vacuum are looked after by the hospital Maintenance team.
- ❖ This team is responsible for the uninterrupted supply of piped medical gases, compressed air and vacuum
- ❖ There is a maintenance plan for medical gas, compressed air, and vacuum installation.
- ❖ All the faults and repairs of the gas and vacuum pipe lines are identified and rectified by them.
- ❖ They are responsible for intimating the authorities about the deficiencies of gas supplies and the quality of their services.
- ❖ A log is maintained on the supply and installation of gases.
- ❖ This hospital has provisions and facilities to combat any fire emergencies. All the floors of the hospital are provided with adequate fire fighting equipment's and fire alarms.
- ❖ The hospital has marked fire exits strategically located. The emergency exit routes are marked. Each patient room and common passages have marked directions of the exit routes to be used in the case of fire and other emergencies. Fire extinguishers and other fire fighting equipment's are provided in high risk areas like the medical records room, pharmacy, store, etc.
- ❖ Besides the members of the 'Fire Fighting Team' other staffs both medical and non-medical are trained to react and combat in such emergencies, with the priority to protect the patients and valuable hospital equipment's and assets.
- ❖ The Fire Fighting Team organizes mock fire and emergency drills twice a year with the help and guidance from the local fire fighting force. All staff takes part the drill which gives emphasis of safe evacuation of the patients and occupants in the affected areas or

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hospital in general, as the fire fighting and containment activity is under progress.

### ❖ Fire Safety Protocol:

#### Fire Preventive Measures:

- ✚ Fire risk areas in the Hospital are identified as given below:- Generator Room; Substation; Medical Gas storage room and medical record room.
- ✚ At these places, First Aid fire appliances are provided.
- ✚ In case of any fire incident the following action is to be taken:
  - Try to put it off; Shout for help in case not being able to put it off; if it is an electrical fire, inform Tel (**Extn. 555**) or cutting off the power supply.
- ✚ In case of fire in the hospital building and surrounding areas following action is to be taken: - Immediately try to put it off; If not extinguished, shout to help; Switch off the electrical supply; inform Tel (**Extn. 555**); Shift the patient to safer places. If fire has not been extinguished, without panic direct the patients to safer locations through fire escape route.
- ✚ Use fire escape route for going out of the hospital building (Fire /Emergency escape route is drawn and displayed at all floors important locations for information of patient and staff).

Prepared by

Mrs.Fathima Mary

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### ❖ Fire Fighting Instructions:

- a. The fire-fighting is an emergency requirement and this is called as **CODE RED** in this hospital it will be alerted through Public Announcement system/bell/fire alarm.
- b. Fire accidents may occur any time. If these fire accidents are not attended immediately it can cause loss to life and property. In case a fire incident is noticed at this hospital area, the following action is to be taken:-
  - ✚ Try to put off electric equipment.
  - ✚ Shout for help in case assistance is required. If unable to put off inform Tel (**Extn. 555**) about the type of fire and location of fire. Security Supervisor will activate “Code Red” signal and assemble the fire fighting team consisting of the following personnel on duty at this hospital. Security Supervisor will inform all the above personnel and reach the fire site without delay. If it is an electrical fire the electric supply should be switched off by informing duty electrician. Water will be used if it is confirmed as solid fire. If evacuation is required, the evacuation plan is to be activated. The Security Supervisor will maintain a record of the fire accident by noting the date, time of call and time of dousing the fire and loss of life or property if any. If the fire is not controllable the matter to be informed to civil fire station for immediate help while informing give type of fire and correct location of fire. The fire fighting team shall reach to the place of fire without delay and organize fire fighting after getting this warning of “ Code Red”

Prepared by

Mrs.Fathima Mary

Approved by

Dr.Arjun Sundaram