






**AMALA INSTITUTE OF MEDICAL SCIENCES
AMALA NAGAR, THRISSUR**

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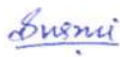


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ADDENDUM
AMENDMENT SHEET

Sl. No.	Section No. & Page No.	Details of the Addendum	Reasons	Signature of the preparatory authority	Signature of the approval authority
1.					
2.					
3.					
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Sl.	Section	Details of the Amendment	Reasons	Signature of	Signature of
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CONTROL OF THE MANUAL

The authority over control of this manual is as follows:

Preparation	Approval	Issue
Fire and Safety officer	Accreditation coordinator	Director

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Distribution List of the Manual:

Sl. No.	Manual Type with No.	Designation
1.	Master Copy	Director
2.	Controlled Copy - 1	Quality Coordinator
3.	Controlled Copy - 2	Fire and Safety officer
4.	Controlled Copies (soft copies) 3 - 95	Nursing In-charges of stations –Wards*, ICUs*, OTs*, OPs, Vaccination room, CT & MRI, Nuclear Medicine, Chemo, LR, Casualty, Dialysis, Cathlab, HIC in consecutive order, All unit heads/ Incharges

Wards

1,1A,2,3,4,5,6,7,9,9A,11,12,14,15,16,18,22,23,24,30,31,33,34,35,36,38,39,40,49,50,60(A,B,C),93,94.

ICUs – CVSICU,CCU,CICU,RICU,MICU,SSICU,ONICU,NICU,PICU,SICU,NSICU,PSICU.


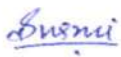

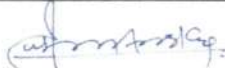
OTs – GOT, SSOT, CVSOT.


OPDs – All

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The holder of the copy of this Manual shall maintain it in current status by inserting latest amendments as and when the amended versions are received.



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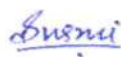
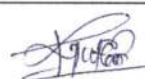
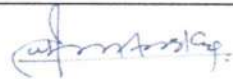
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Safety officer is responsible for issuing the amended copies to the copy holders; the copyholder should acknowledge the same and he /she should return the obsolete copies to the safety officer.

If amendment regarding any point is required, the person who prepared the manual should contact the Quality Coordinator, prepare the amendment and get approval from approval authority. It should be attached to the Master copy and details to be entered in its amendment sheet. Quality Coordinator is responsible for issuing copy of amendment(s) to the controlled copyholder and he/she should acknowledge the same. Quality Coordinator should also enter the amendment details in the amendment sheets provided in the controlled copy.

The manual is reviewed once a year and is updated as relevant to the hospital policies and procedures. Review and amendment can happen also as corrective actions to the non conformities raised during the self assessment or assessment audits by NABH.




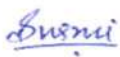

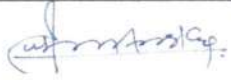
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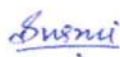

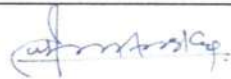



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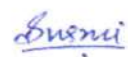
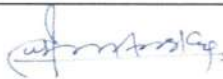
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ABBREVIATIONS USED IN HOSPITAL SAFETY MANUAL

A C	Air Condition
AERB	Atomic Energy Regulatory Board
ALARA	As Low As Reasonably Achievable
BARC	Baba Atomic Research Center
CO2	Carbon Dioxide
Doc.	Document
ELCB	Electrical Leakage Circuit Breakers
ETO	Ethylene Oxide
Fig.	Figure
GM	Geiger-Muller Counter
Gy	Gray
GLP	Good Laboratory Practice
HIC	Hospital Infection Control
HRD	Human Resource Department
HSM	Hospital Safety Manual
ISI	Indian Standard Index
LPG	Liquefied Petroleum Gas
Ltd.	Limited
Min.	Minute
mm.	Millimeter
MSDS	Material Safety Data Sheets
MSv	Millisievert
NABH	National Accreditation Board for Hospitals & Healthcare providers
No.	Number
NOC	No Objection Certificate
Pb	Lead
PPE	Personnel Protective Equipment



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PVC	Poly Vinyl Chloride
Rev.	Revision
RSO	Radiation Safety Officer
Sl. No.	Serial Number
SSD	Source-Skin Distance
SWL	Safe Working Load
THF	Tuned high frequency
TLD	Thermo luminescent Dosimeter
UV	Ultraviolet

SAFETY & DISASTER MANAGEMENT COMMITTEE / RADIATION SAFETY COMMITTEE / MAINTENANCE AND DEVELOPMENT COMMITTEE (EVERY MONTH)


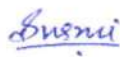

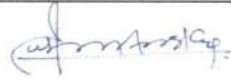
The Safety Committee shall conduct Hazard Identification and Risk Analysis (HIRA) and accordingly take necessary steps to eliminate or reduce such hazards and associated risks. The committee shall comprise of


- Fr. Antony Perincherry CMI Chairman
- Fr. Deljo Puthoor CMI, Joint Director, Management Nominee
- Ms. Susmi Alphonsa Kurian, Asst. Quality Coordinator, Vice Chairperson
- Mr. Joby .P.J,RSO, Secretary
- Mr. Ribilo Pius T, Fire & Safety Officer- Secretary
- Mr. Jeelson P J, Fire & Safety Technician- Joint Secretary

Members

1. Dr. Rajesh Anto, Medical Superintendent
2. Dr. Dijoe Davis, Associate Professor Orthopedics Dept. (Patient Safety Officer)
3. Mr. Saiju C Edakkalathur, Chief Operating Officer(COO)
4. Sr. Likhitha, Chief Nursing Officer
5. Er. Jose A. Mekkattukulam, Electrical Engineer
6. Er. Jijo Lazarus T, Civil Engineer
7. Er. Jomon Jose, Biomedical Engineer
8. Er. Manikandan, Civil Engineer
9. Mr. Joby P.J, RSO
10. Sr. Hanna, Radiology Incharge
11. Mr. Sanukrishna, Operations Co-ordinator.
12. Mr. Stanly, Security Supervisor



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13. Ms. Susmi Alphonsa Kurian, Asst. Quality Co-ordinator
14. Ms. Noonlinda, HICN In-charge
15. Mr. Joy Puthoor, CRO
16. Mr. Jomon, Housekeeping Supervisor
17. Mr. Stanly, Security Supervisor

STRUCTURE OF COMMITTEE AND ROLES

CHAIRMAN

The committee shall be headed by Chairperson elected by members whom shall overlook the functioning of the committee and system

SECRETARY

Elected secretary shall be responsible for coordination of meetings, documentation of minutes and communication of decisions to respective members. They shall also coordinate with quality department regarding the functioning of Committee


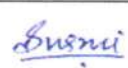
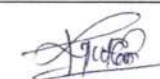
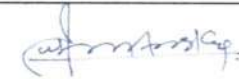
FREQUENCY OF MEETING


Once in a month

Responsibilities

- 1) All safety related reporting and data collections mechanisms shall be established and pursued like.
 - Incident Reporting
 - Medication Error Reporting
 - Adverse Drug Reactions
 - Nosocomial Infection Reports
 - Facility Safety Surveillance
- 2) The hospital shall collect data and analyze it regarding the following aspects with a view to improve patient safety plan.
 - Staff perceptions and suggestions for improving patient safety
 - Staff willingness to report errors
 - Patient/family perceptions and suggestions for improving patient safety
- 3) The hospital may also focus on the improvement of the patient safety program through utilizing proactive risk reduction strategies like.
 - Identification, reporting, and management of sentinel events
 - Identification of high-risk processes
 - Failure mode, effects, and criticality analysis
- 4) Responsible for implementation of policies related to Radiation safety.
- 5) Undertake Facility & Loss Prevention Surveillance every quarter to identify and analyze potential patient safety issue and submit the report to the Quality Improvement Committee.



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6) Prepare Fire Plan, Fire Drawings, fire training and conduct 2 fire drills/ year.

7) Prepare Disaster Plan, Internal & external disaster drill annually

HOSPITAL SAFETY OFFICER

Responsibilities


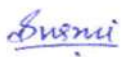

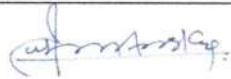
1. Perform the responsibilities of Fire & Safety Officer of Amala Institute of Medical sciences.
2. Organise fire & safety training for all hospital employees in the organization as a part of induction training.
3. Organise annual fire & Safety training for all employees of the hospital.
4. Create separate team(s) for fire safety management in the institution and ensure efficacy of their activities through trainings, mock drills etc.
5. Ensure sufficient fire safety equipment and facilities in the hospital and premises.
6. Initiate steps to avail proper functioning of fire safety measures (including men and material) round the clock.
7. Conduct periodic Fire Safety inspection of the hospital and report the Associate Director with necessary recommendations.
8. Repair and maintenance of all fire protection systems in the hospital and premises
9. Organize periodic fire safety mock drills as per specified schedule and take necessary corrective and preventive actions.
10. Maintains records of fire & safety training, inspections and mock drills in accordance with NABH standards and statutory requirements if any.
11. Ensure Fire Regulations applied to Hospitals
12. Play key role in disaster management planning and implementation coordination with the management
13. Proper management of disaster related events in the hospital and premises (if any) and submission of reports and recommendations to concerned authorities
14. Undertakes other related responsibilities under the direction of concerned Associate Director.


Duty Time: Monday to Saturday (9 am – 5 pm) and as and when required in case of emergencies

EMERGENCY CODES

Code	Situation	Activation Number	Responsible Person/ Team
BLUE	Cardiac Arrest/Medical Emergency	6666	Code Blue Team
YELLOW	Rapid Response Team	6666	RRT Team
			Fire and Safety Officer -80511



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RED	Fire Disaster	6666	Electrical Engineer -80510
ORANGE	Hazardous Material Spill Radiation exposure	6666	House Keeping In-charge -80639 Lab In-charge -1010,80682 HIC – 1270,80827 Radiation Safety Officer(RSO)- 1280,80652
PINK	Child Abduction/ Man Missing	6666	Security Supervisor –80922 (Night) Security Supervisor (On duty) – 80694
GRAY	Security Threat	6666	Security Supervisor –80922 (Night) Security Supervisor (On duty) – 80694 Joint Director -80700
BROWN	External Disaster/ Mass Casualty	6666	Security Supervisor –80922 (Night) Security Supervisor (On duty) – 80694 Medical Superintendent -80815 Joint Director -80800

CODE ANNOUNCING METHOD


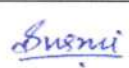

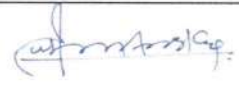
In case of Emergency in the Hospital any one can dial the number 6666 which is a emergency phone in counter and say code and place for 3 times. Then the counter staff will announce the code through the public announcement system. After clearing the situation staff will contact 6666 again for code clear and report for the code.


CODE BLUE – MEDICAL EMERGENCY

Code Blue - Cardio Pulmonary Resuscitation (CPR)

- Check Carotid pulse & respiration (not more than 10 seconds).
- If pulse/respiration not present, activate **CODE BLUE** by dialing **6666**. Start chest compressions immediately and give ventilations at a ratio of 30 compressions: 2 Ventilations.
- Ensure the availability of defibrillator and crash cart. If pulse is present and no breathing, give ventilation with AMBU bag every 5-6 sec, ie 10-12 breaths /min.
- Connect defibrillator as soon as it is available. And defibrillate if the rhythm is shockable.
- Resume chest compression immediately after defibrillation.
- Continue CPR for 2 minutes (5 cycles of 30:2 compressions).



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CODE PINK –CHILD ABDUCTION/MAN MISSING

INTRODUCTION:

Amala Hospital is taking utmost care for patient and their aids for a safety stay and visit. One dedicated bystander is permitted to look after the patients during their stay in the hospital. However, sometimes missing a child or patients may happen in spite of the tight security system and the presence of bystander. Missing a child may be considered more serious because the child is a vulnerable person and may not be familiar with the place, may have communication problem or may be an infant. Child abduction by others is also possible since many people move in and around the hospital every day. To prevent such incidents, hospital has taken all preventive measures like identity band, care and support of bystanders, assistance from nursing staff, Public Relation Officers, security, housekeeping and maintenance staffs.

PURPOSE:

To ensure a safe and secure environment for children and patients. The abduction of children from hospitals has clearly become a concern for parents, nurses and patient Safety. Although it is not a crime of epidemic proportions, any child abduction can cause great trauma for the family involved and potential risk for the hospital. The child abductions are largely preventable if organizations take preventive measures.

Code Pink - A code pink will alert staff in the hospital that there has been potential child abduction or patient missing. Examples of actions which may be suspicious for child abduction:


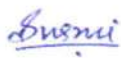

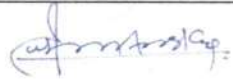
- A person in the hospital without proper identification.
- Any person who might be seen trying to avoid contact with a Security Officer stationed at an entrance.
- Anyone who appears to be carrying an unusual bag or container which could harbor a small child or infant.


INITIAL RESPONSE

Staff's play a crucial role when a child is abducted from hospital. The quick response and immediate action of these health care professionals can make a critical difference in the successful recovery of that child.

If such abduction happens (Child Missing or missing of admitted patient), duty nurse need to dial 0666 and inform the hospital reception about the incident e.g. Inform **Code Pink in ward No.1** Then the receptionist will announce "**Code Pink in Ward No.1**" three times.



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EMPLOYEE RESPONSE TO A CODE PINK:

1. Staff's should stay in their assigned work areas. The purpose of announcing a Code Pink is to alert staff so that they may be aware of and report any suspicious activity immediately to Public Safety.
2. On hearing the announcement all the entries of the hospital will be closed. Sufficient strength of security staff will be available to guard the gate. Vehicle and personal will not be allowed to leave the hospital gate without checking and security clearance. Security officer and searching party will get information, identity and briefing from the ward staff about the child/missed patient and proceed.
3. CODE PINK TEAM should immediately reach the nearest exit area when Code Pink is announced. This will ensure that all potential exits or routes to exits are observed in a timely manner.

In the event of a child abduction or attempted child abduction or patient missing, the following actions will be accomplished simultaneously:

The child/patient may still be in the building. Contact the Security Officer and provide the following information about the suspected abductor and the child /patient as quick as possible:

- Approximate age
- Gender
- Distinguishing characteristics
- Description of clothing
- Colour of hair
- Description of anyone seen with the patient

INFORMATION CENTRE:


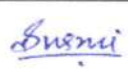


PRO will function as information centre of the code pink to pass and get information about the situation. He will inform the Director/Joint Director/Associate Director(s) about the current status.


SEARCHING GROUP:

Four groups will be formed under the leadership of the Security Officer. He will depute each group to separate areas. Each group consists of minimum 3 persons.

Sl. No	Group	Area(s)
1	Group 1	
2	Group 2	



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3	Group 3	
4	Group 4	

Nursing team, Safety Officer, Security in-charge and Housekeeping in-charge have to ensure that the assigned staff reached the site within stipulated time. The team will search in to different areas and enquire up to 30 minutes. If the patient is found by the team, he/she shall immediately handover to the hospital staff and code clear will announce. If the team cannot found after 30 minutes, the Security leader will inform to higher management and as per the decision this will inform to nearby Police station.

REASSURANCE:

- Medical social worker will provide emotional support/crisis counseling to the family.
- The parents/bystanders should be accompanied by social worker at all times, protecting them from stressful contact with the media and other interference.
- Medical social worker will give necessary reassurance. Time to time progress will be intimated to the parents/bystanders.
- Police intimation if needed will be given by the PRO for assistance.

CHILD/NEONATE ABDUCTION AND ABUSE

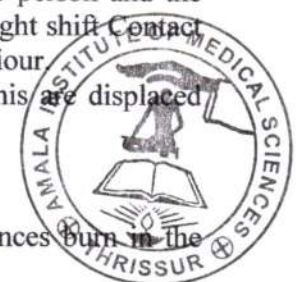
The organizations have adequate security/surveillance system to prevent child abduction. Securities are guarding in front of all department and hospital premises. CCTV cameras are installation throughout the hospital, which is monitored in the Surveillance room. This shall be tested at periodical intervals.


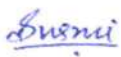

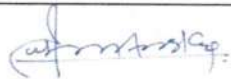
CODE GREY –SECURITY THREAT/WORKPLACE VIOLENCE

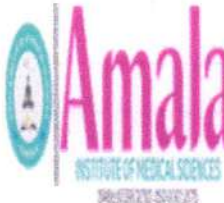
Any employer who feels that she/he has been threatened should immediately report their concern to their immediate supervisor or to Associate Director. If any person is observed exhibiting threatening behaviour or making threatening statements, or misbehave to staff, misbehave in ward, the person discovering the situation should warn others in the area and immediately notify Security Officer 8597 or activate code gray dialling 6666 from any in house phone Depending upon the level of concern and the security officer/ safety officer will maintain the situation by talking with the person and the situation is going out of control the safety officer will call for police support. During night shift Contact Hospital Supervisor. Never attempt to confront any person exhibiting threatening behaviour. Photography is strictly prohibited inside the hospital and the information regarding this are displaced prominently in the hospital.

CODE RED AND FIRE SAFETY PLAN

- Fire – How it occurs?
- Fire is a chemical reaction called “Combustion” in which combustible substances burn in the presence of oxygen to produce a lot of heat and light.



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	1. Pull pin 2. Aim at the base of the flame 3. Squeeze handle 4. Sweep extinguisher	1. Pull pin 2. Aim nozzle 3. Squeeze handle 4. Sweep extinguisher	1. Pull pin 2. Aim nozzle 3. Squeeze handle 4. Sweep extinguisher
Discharge Range	30 - 40 feet	3 - 8 feet	5-20 feet
Discharge Time	60 sec	30 sec	30 sec

Safety Instructions – Fire prevention

- Adhere to the hospital’s “No Smoking” Policy
- Keep the area around your workplace dry and litter free.
- Ensure electrical connections and devices are in good condition
- Do not insert naked wires into plug sockets.
- Ensure fuses of the right ratings are used.
- Do not pour / spill any liquid (water, chemicals, etc.) on electrical wires / cables.
- In case of fire, use the correct type of fire extinguisher.

FIRE SAFETY INFORMATION

SITE MAP

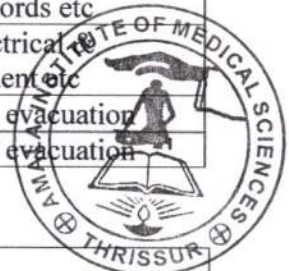
Posted in designated locations with you are here labels Shows locations of fire exits and extinguishers, evacuation routes.



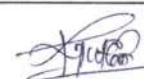
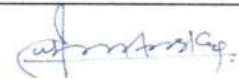
FIRE EXITS


Marked with EXIT. Each floor has a minimum of 2 exits.

FIRE EMERGENCY TEAM / FIRE RESCUE TEAM (CODE RED TEAM)

Fire safety officer	1	Team leader
In charge Nurse	1	Assisting safety officer (or taking his role in his absence) & coordinate nurses & asst nurses
Nurses	All staff from same ward +1 nurses each from all wards in same floor	Evacuation of patient, Salvages of equipment, records etc
Maintenance	All staff	Fire fighting, electrical, oxygen management etc
housekeeping	Minimum 6	Fire fighting and evacuation
securities	Minimum 3	Fire fighting and evacuation



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- Shall be familiar with the written Fire Safety Plan, providing for fire drill and evacuation procedure.
- Shall be responsible for availability and state of readiness of fire emergency.
- Shall participate in fire and evacuation drills.
- Shall be responsible for daily check for the availability of Fire watch at work place.
- In the event of Fire, shall report to Security office to supervise, provide and coordinate the following:
 - Ensure that the all concerned has been notified of any fire or fire clearance.
 - Direction of evacuating procedure is provided in Fire Safety Plan.
 - Reports on condition on fire floor for information of Fire and rescue service on their arrival.
 - Advise Fire and rescue service department in-charge in the operation.
- Each floor of a building shall be under the direction of a designated Fire/ Security department personnel for the evacuation of occupants in the event of fire. He shall be assisted in his duties by the fire rescue team.
- Each Fire / Security department personnel shall be familiar with the Fire Safety Plan, the location of exits and the location and operation of any available fire alarm system.

ASSEMBLY POINT/ EVACUATION ROUTE :

- Evacuation will be done through staircase in exit route. The patient evacuation will be done by trained personnel using foldable stretchers, wheel chairs etc.
- Staff will be evacuated through the staircases in exit route .
- The evacuated personnel will be assembled in fire assembly zones. The assembly zones are as follows:

FIRE ASSEMBLY POINT

The assembly points are numbered for easy identification.

NEAR LABOUR ROOM POINT -1


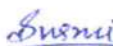
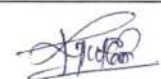
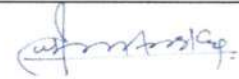
INFRONT OP CANTEEN -2

NEAR ATM -3

NUCLEAR MEDICINE -4


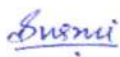
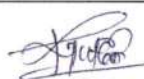
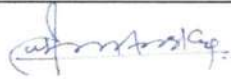
Sl. No	Assembly point	Personnel should arrive from
1	Near ATM / Milma	St. Mary's Block
2	In front Of Canteen	Sacred Heart Block



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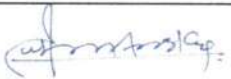
3	<p>Chavara Block (Nuclear Medicine)</p>	<ol style="list-style-type: none"> 1. Psychiatry OP 2. W-7 3. Central Store 4. Maintenance 5. Nutrition Clinic 6. W-18 7. Insurance 8. Gastro Dept.
4	<p>Chavara Block (Near ATM/Milma)</p>	<ol style="list-style-type: none"> 1. W-6 2. Microbiology lab 3. W-5 4. PSICU 5. NSICU 6. Pharmacy store 7. Pharmacy 8. Chavara X-ray 9. W-4 10. Surgery op 11. Blood bank 12. Biomedical engineering dept 13. Dental OP 14. W-15




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		<ul style="list-style-type: none"> 15. SICU 16. W-22 17. W-23 18. W-24 19. Purchase 20. HIC 21. Quality Control Dept. 22. Operations 23. Chavara OT 24. W-14 25. HRM 26. Directors office 27. Accounts 28. Internal audit
5	Chavara Block (Near Labour Room)	<ul style="list-style-type: none"> 1. Chavara Registration counter 2. Chavara MRD 3. Gynecology OP 4. W-3 5. W-2 6. Labour room 7. W-1 8. W-1A



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		<p>9. W-9</p> <p>10. W-9A</p> <p>11. NICU</p> <p>12. Pediatrics OP</p> <p>13. PICU</p> <p>14. W-11</p> <p>15. W-12</p> <p>16. W-14</p>
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FIRE EXTINGUISHING PROCEDURE

Race

This easy to remember acronym is our hospital procedure in the case of a fire. Particularly in the hospital, every staff member is trained to recognize and respond appropriately in the case of a fire using this term.

Rescue - Remove everyone from the area. If a fire occurred in a patient room the staff should immediately remove the patient from the area.

Alarm - The Fire Alarm Pull Station shall be activated. Fire Alarm Pull Stations are located throughout the buildings, several on each floor. By activating the Fire Alarm a fire action plan is set into motion where Security receives the signal and initiates the emergency response. In addition the air conditioning systems that could increase fire spread are automatically shut down.

Confine / Contain - Once the room or area has been cleared of patients the door shall be closed, thus confining the fire, which gives the fire response team the time needed to arrive.


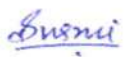
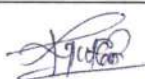
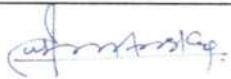
Extinguish / Evacuate - When practical and only when an employee has been properly trained in the safe and proper use of a fire extinguisher, the attempt shall be made using one fire extinguisher. Evacuate if you are not comfortable using a fire extinguisher or if more than one extinguisher is needed.

OPERATING FIRE EXTINGUISHERS


Scope

This set of instructions deal with the operation of all handy fire extinguishers in Amala hospital.

Type of extinguishers

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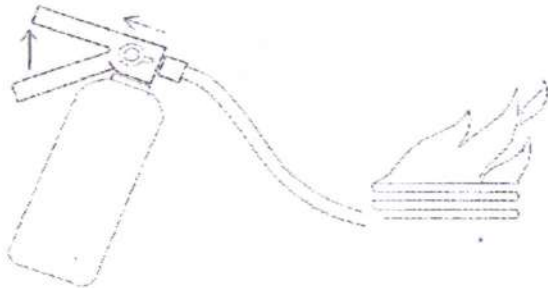
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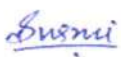
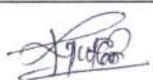

- CO2
- DCP
- Foam

Instructions on how to operate most fire extinguishers

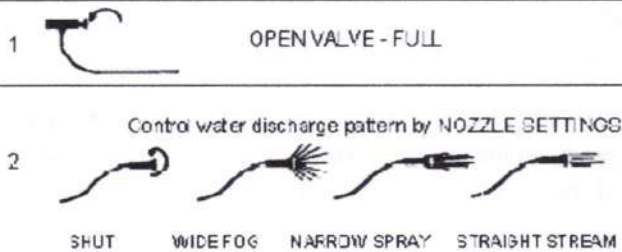
- READ THE INSTRUCTIONS given on the fire extinguisher.
- Remember the word - **P A S S**
- **PULL** the pin. Some units require the release of a lock latch, pressing a puncture lever, inversion, or other motion.
- **AIM** low. Aim the extinguisher nozzle (horn or hose) at the base of the fire.
- **SQUEEZE** the handle. This releases the extinguishing agent.
- **SWEEP** from side to side.
- Watch for reflash. Move in close. Pull apart the burned area to get at hot spots. Discharge the contents of the extinguisher.

NOTE: Foam, CO2, water or other types of extinguishers may require slightly different actions.



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TO OPERATE HOSE RACK



Summary:

- Know how to operate the extinguishers. A small fire can easily become a big fire if an extinguisher is used incorrectly.
- Fight only small fires and preferably not alone!
- Make sure you have access to a safe exit.
- If you have the slightest doubt about whether to fight or not to fight the fire - DO NOT!
- Get out and call.

Fire alarm control panel

Hospital has automatic fire detection system and centralized panel for information. Which are daily inspected and maintained properly with records.

Detector battery operated

In one of the block battery operated detector is used and maintained well.


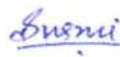


Fire pump rooms

Hospital has separate pump rooms which are working in automatic pressure or manually operated. Which are daily inspected and maintained properly with records.


Fire extinguishers

Hospital has adequate number of extinguisher. Which are periodically inspected and maintained properly with records.

EVACUATION PROCEDURE

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On hearing the continuous ring of fire alarm all the staff members and the visitors (if any) are required to evacuate the building. In case of evacuation the accompanying staff will guide the visitor(s) to follow the evacuation procedure.

- While evacuation follow the exit signs.
- In case of patients, first remove the Bed Ridden patients, then remove the patients who need support and then the ambulatory patients.
- During evacuation exit thorough the stairs and do not use lifts.

Fire alarm, fire extinguishers and exit signs are checked for their performance as per the schedule. The performance of the same is recorded in the performance record. Mock drills / practice evacuation is carried out once in six months as a minimum and the same is recorded. After the Evacuation all the staff should be assembled in the assembling point.

Assembling Point:

The assembling area should be outside of the building. This area is always free from materials and vehicles

- After that the on of the representative from departments will count the staff to ensure, whether there is any missing or not.
- Identify the missing persons if any
- Pass on the information of the missing persons(s) to the fire service.
- Unplanned fires of any type should be reported in the complaints record.

FIRE TRAINING AND DRILLS

Fire Training and fire drills are held at periodic intervals according the mock drill calendar. All employees are provided adequate fire training; they are informed about the fire evacuation procedures including fire exits located in their work places. Fire Escape route and fire plan is fixed in all locations. The following special precautions are also undertaken:


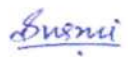
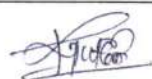
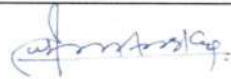
Exits


No obstructions may be placed in front of or upon any exit door. No aisle, exit access, or stairway may be obstructed with furniture or other obstructions so as to reduce the required width of the exit unless it is required for some maintenance purpose or during night hours when the main entrance is closed.

Railings, steps and Walks

The area immediately outside of building exits will be maintained free of material at all times. Vehicles are not permitted on sidewalks immediately adjacent to an exit.



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Fire Mock Drill

The Hospital will be conducting Fire Mock Drill according to schedule and the records are kept with Safety Committee. The variations of the mock drill will be identified and the safety officer analyse this and take proper corrective and preventive action.

And it planned as 2 mock drill per block in year

CODE ORANGE – HAZARDOUS MATERIAL SPILL

If any spillage (which includes blood and body fluids/hazardous materials) which cannot be manage by using spill kit or is found be more than 30 ml, then the staff can activate Code Orange. Then the team consists of staff from Lab, Housekeeping, HIC will come along with HAZMAT kit and manage the situation.

CODE BROWN AND DISASTER MANAGEMENT

External Disaster Management Plan

Management plans for External Disasters in place, which have the approval of the Hospital Safety Committee. This plan is drawn as per guidelines in Mass Casualty Management.

External Disasters

External Disaster is the one that occurs in a community and is due to a natural or a man made emergency. In these situations there are many victims requiring urgent medical care. To deal with such situations it is necessary to mobilize hospital staffs, equipment and supplies in a coordinated an efficient manner.

The External Disaster shall be named **Code Brown** in the hospital and all actions, as laid down in the External Disaster Plan, shall initiate on declaration of Code Brown.

External Disaster Plan


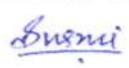

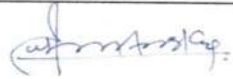
SITUATIONS


This plan shall normally apply to the following situations Earthquake, Flood and others disasters caused by the natural forces Vehicular accidents (Plane, Train, and Car etc)

- Drowning
- Collapse of building
- Explosions
- Major Fire Accidents
- Biological & Medical Accidents
- Chemical Accidents including poisoning
- Terrorist Attacks or Invasion by the Enemy



CATEGORIES OF CASUALTIES

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Category A. Patient in critical condition

Include cases of polytrauma with head injuries, thoracic injuries, abdominal injuries, fractures of major bones with profuse bleeding etc. These patients require immediate resuscitation and supportive measures. About 10% of these are beyond salvage. This category will be triaged with RED COLOR BAND.

Category B. Patients in serious but not life threatening condition:

Include polytrauma cases of a less serious nature, for example, fractures and crush injuries of limbs without major blood loss, facial injuries, spinal injuries, etc. This category will be triaged with YELLOW COLOR BAND.

Category C. Walking wounded:

These patients may have minor injuries requiring wound toileting and dressing and / or limb fractures requiring closed reduction and immobilization. This category will be triaged with GREEN COLOR BAND.

Category D. Brought Dead:

Cases of brought dead and will be triaged with BLACK COLOR

Code Brown

External Disaster is the one that occurs in a community and is due to a natural or a man made emergency. In these situations there are many victims requiring urgent medical care. To deal with such situations it is necessary to mobilize hospital staffs, equipment and supplies in a coordinated an efficient manner. Hence the hospital has been set a Code Brown Concept in which the Emergency Medicine Department(ED) will handle this situation. Hence whenever the intimation will get related to the disaster, the ED consultant will activate the **Code Brown by dialling 6666** and the public announcement will be done by Front office staff from Chavara Block.


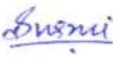


Team include


- Doctors -PG doctors from Anesthesia, Ortho, Surgery, ENT, Ophthal
- Nurses-5
- CRO
- PREs
- Housekeeping -5
- Security-3
- Pharmacist
- CSSD

Process

- Triageing will be done and the area will be handling by the ED Junior doctor and ED floor In-charge.
- Temporary ID will be created for these patients.



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- After announcing the code, the team members will come to the ED. The ED consultant will act as commanding leader and assign the area and duties to the consultants and PG doctors.
- After stabilizing the patients and shifted the patients to different wards and ICUs, a post event analysis will be done by the core team in which discuss the deviations related to the event.

Role of team members

- Red area – managed by ED Consultants and JRs and Anaesthesia PG doctors.
- Yellow area- managed by PG doctors from Surgery and Ortho
- Green area-managed by PG doctors from ENT and Ophthalmic
- In the Yellow and Green area, only stabilizing process or first aid activities only will be done and deposited the patients to ICUs and Wards.

INTERNAL AND EXTERNAL COMMUNICATION

In the event of Class C (CODE BROWN) public announcement will be done in PA system
Using 6666

WATER, ELECTRICITY and SANITATION

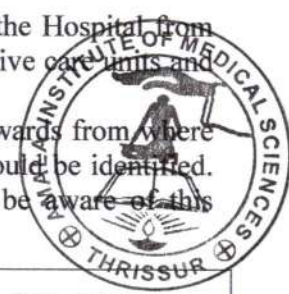
During CODE BROWN, not only do the numbers of patients increase, but the number of visitors to the emergency department also increases. Basic facilities like drinking water, toilets, sitting space etc., have to be planned.


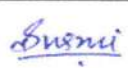

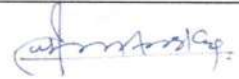
- a. The ED department should be provided with sufficient number of safe drinking water points. The visitors waiting area should be provided with sufficient drinking water. This responsibility is with Store supervisor.
- b. Cleaners working in wards should be mobilized by the House Keeping supervisor to work in the ER, So that toilets and the working area can be cleaned frequently or else the casualty section and the attached toilets will become dirty and unhygienic. The area from where cleaners are to be withdrawn should be predetermined.
- c. Sufficient number of color – coded bags should be available by the House Keeping supervisor to collect Bio-medical and other type of hospital waste. A stock of such bags should always be available.
- d. Electrical Engineer will ensure the uninterrupted supply of electricity and water.


TRANSPORTATION

This encompasses a wide range of activities. Patients need to be transported within the Hospital from emergency department to other departments like, Radiology, Operating Rooms, Intensive care units and wards. Dead bodies will have to be transported to the Mortuary.

- a. Sufficient number of trolleys and wheel chairs should be available in the ER wards from where extra trolleys and wheel chairs can be withdrawn and sent to the Casualty should be identified. The nursing staff of the casualty and those of the Lending wards should be aware of this



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- arrangement. The nursing supervisor or the senior most nurses on duty should activate this plan of action. And they shall Mobilize patient transport equipment's with the help of shifting staff
- b. The vehicle drivers residing in the campus or nearby places should be called to the casualty. All available ambulances in the hospital and other vehicle, if any, like vans, jeeps etc., should be mobilized. Security supervisor will do this task.
 - c. There should be liaison with private ambulances, which can be called at short Notice.


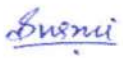
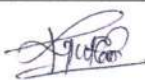

SAFETY INSPECTIONS/SAFETY AUDIT


- Facility inspection rounds shall be conducted by safety team to ensure safety at least twice in a year in patient care areas and at least once a year in non-patient care areas.
- Facility inspection also includes, Electrical safety audit to minimize the electrical risks to persons & property and ensure that occurrence of fire due to short- circuiting is prevented. It could be incorporated into electric system maintenance plan. Electrical safety audit helps to prevent fire incidents.
- Potential risks enlisted as a common safety hazard checklist are identified during the rounds.
- The findings of the rounds are documented and the CA / PA measures are taken to rectify the faults.
A before and after evidence shall be maintained to document the work done.
- Corrective preventive actions are taken and summary of these has been presented in the safety committee.
- The reports of the safety inspections are submitted to appropriate Government Department/Agency as and when required.
- The safety Inspection records are maintained with respective departmental authorities

During the inspection/ assessment the following shall be inspected,

1. Environmental (lighting, dusts, gases, sprays, noises).
2. Hazardous materials (flammable and caustic).
3. Equipment (biomedical equipment's etc.).
4. Power equipment (boilers, motors, etc.).
5. Electrical equipment (switches, breakers, fuses, outlets, connections).
6. Hand tools.
7. Personal protective equipment (safety glasses, ventilators, radiation safety aprons etc)
8. Personal service/first aid supplies (Medical Check Up).
9. Fire protection equipment (alarms and extinguishers).
10. Walkways/roadways (sidewalks, roadways).
11. Transportation equipment (Ambulances, lifts).
12. Containers (hazardous waste bags).
13. Structural openings (windows, doors, stairways).
14. Buildings/structures (floors, roofs).



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15. A C plant.
16. Utility equipment's
17. Signage's
18. Miscellaneous (any items not covered above).

Each inspection report will record pertinent safety management violations, noncompliance items, and observe deficiencies. Employees directly involved in the use or operation of the facilities or function being inspected is to participate in the inspection process. Corrective and preventive measures are undertaken and implemented.

FACILITY AND SAFETY

SIGNAGE

There shall be internal and external sign postings in the organization in a language understood by patient, family and community or bilingual. These signage shall guide patients and visitors. Fire signage shall follow the norms laid down by National Building Code or respective statutory board.

Provision of space

The provision of space shall be in accordance with the available literature on good practices and directives from government agencies.

REGULATIONS AND STANDARDS:

The Hospital ensures strict adherence to the required standards and performs its operations within the purview of the law of the land so as ensure utmost safety for its patients, staff, visitors etc. The required licenses and other regulatory requirements are duly satisfied. The Director of the hospital is the custodian of all the statutory documents/licenses.

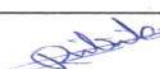

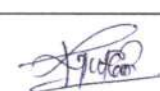
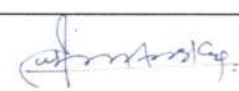
PATIENT SAFETY DEVICES


The organization ensures that patient safety devices are installed across the organization and inspected periodically, for ex. grab bars, bed rails, sign postings including warning signs like radiation or biohazard, safety belts on stretchers and wheelchairs, safety alarms, call bells, fire safety devices, Toilet for disabled people etc.

NO-SMOKING POLICY

Amala Hospital shall be a declared as 'No Smoking Area' with appropriate signage depicting the same. The same shall be monitored periodically.



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MATERIALS OR SCRAP DISCARDING POLICY

Organization shall condemn and dispose in a systematic manner the material which is not in usage such as non-functioning items, excess unwanted material, general waste, scrap material etc. In order to do this, the In-charge of the concerned department shall prepare a request letter which should be approved by the priest In-charge of that department. The approved letter and the item were verified by the In-charge of the Store/biomedical engineering department. After the verification, they decided that this cannot be used as further and enter in the material stock register. The items then moved to the scrap storage area.

SAFETY EDUCATIONS

The Hospital requires all new employees to attend orientation program. This orientation is intended to provide new employees with an awareness of safety importance and their responsibility for maintaining a safe and healthy work environment, and to give an overview of workplace safety basics. The results should be safety conscious employees who can perform safe, healthy practices in workplace.

Safety Orientation for New Employees:

All new employees receive safety orientation. The orientation will consist of the following information: The Hospital Fire Safety Officer will present the general safety policies of the Hospital, and the new employee's supervisor will present:

1. Procedures and policies specific to the new employee's position
2. All Policies & Procedures related to safety
3. Fire reporting procedures
4. Fire extinguisher location and use
5. Fire prevention
6. Occupational safety.
7. Radiation safety.
8. laboratory safety
9. Any information the supervisor feels will provide the new employee with a safe environment.


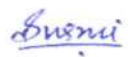
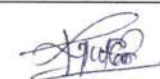
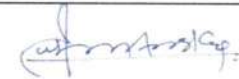
Regular Training Programs:


Hospital shall conduct various training programs on safety issues at regular intervals. Safety committee in association with HRD should conduct these programs.

MAINTENANCE PLAN FOR FACILITY AND FURNITURE

- There is a maintenance plan for facility and furniture
- This shall include civil work like wall, floor and roof etc, fixed furniture like nurse station, shoe racks etc loose furniture like emergency cart, chairs and trolleys. This is adhered to manufacturer's recommendations, good infection-control practice requirement, etc.
- Regular inspections and timely repair of civil structure like walls, servicing of furniture are carried out.



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- The staff can report the maintenance related requests through One Amala i-Apps software. A complaint attendance register is maintained as electronically to indicate the date and time of receipt of complaint, allotment of job and completion of job.
- Response times are monitored from reporting to inspection and implementation of corrective actions. The consolidated reports shall present as a quality indicator in the Quality committee/Maintenance and development committee/safety committee.

PROGRAMME FOR ENGINEERING SUPPORT SERVICES AND UTILITY SYSTEM.

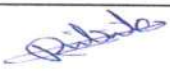



The organization has a well defined programme for engineering support services and utility system.


- **Equipment planning:**
 - The equipment planning shall be done based on the future requirements of the organization in accordance with its services and strategic plans.
 - The plans shall be reviewed periodically or as and when required.
- **Equipment selection:**
 - All equipment shall be selected, rented, updated and upgraded by collaborative process.
 - There shall be involvement of the end-users, management, finance and engineering departments in the selection of equipment.
- **Equipment management:**
 - All equipment shall be inventoried and proper log book shall be maintained.
 - All equipment shall be allotted asset tags.
 - Wherever applicable, the relevant quality conformance certificates along with the manufacturer's factory test certificate shall be retained as a part of the documentation for every equipment
- **Qualified and trained personnel:**
 - There shall be qualified and trained personnel to operate and maintain equipment and utility systems.
 - There shall be personnel on-call for 24 hours.
- **Equipment Maintenance:**
 - **Routine maintenance:**
 - Periodic maintenance shall be done by the designated maintenance staff as per the check list (Daily, weekly and monthly) basis.
 - Details of repair status shall be maintained in the maintenance department.
 - All the equipment are identified by the identification code affixed on the equipment.

Break Down Maintenance:

- Any breakdown call should be attended in less than one hour.
- All the breakdown calls shall be notified to the maintenance department through One Amala Software – i-Apps or written work request form.
- All minor breakdowns related directly to patient comfort should be rectified immediately on rounds itself.



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- Depending up on the type of break down, maintenance team shall allot the work to the concerned person.
- Maintenance staff shall analyze the nature of work to be done for rectifying the problem.
- Details of break down repairs call shall be documented in the break down register.
- All break down calls will be termed accomplished only offer verification from the In-charge of concerned department.
- The supervisor shall maintain the details of work in the maintenance log book/electronically.

Preventive maintenance:

- Maintenance team shall prepare and maintain a maintenance plan as per the list of available equipment.
- Based on the preventive maintenance plan scheduled work are done on a regular basis.
- The details of preventive maintenance plan and details of the equipment are maintained in the service register.
- Periodic checking of the building shall be done periodically by the designated staff for peeling of paints from walls, cracks, seepages etc. and should be in writing be given to Director of Amala Hospital
- All repair complaints directly related to patients comfort like fan, bell etc. not working shall be attained in 2 hrs.
- On failure of above the reason should be given in written to Director on the same day.

Air Purity Measurement:

- Biomedical engineering department co-ordinate this procedure.
- Compressed air purity checked once in a year.

Water Management:

- All water storage tanks shall be cleaned and treated periodically, at regular intervals of 6 months and as when required.
- The RO plant shall be tested regularly every 30 days and undergo maintenance every 6 months.
- The STP plant shall be cleaned regularly every 30 days and undergo maintenance every 6 months and as when required.

Electrical System Maintenance:

- All electrical systems, transformers, LT and / or HT panels and lifts shall be covered under the periodic maintenance plan of the engineering department.


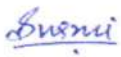


HVAC Maintenance:


- All elements of HVAC – chiller plant, air handling units (AHUs), FCU, air-conditioners shall be covered under the periodic maintenance plan of the engineering department.

Equipment replacement and disposal:

- All equipment to be condemned or disposed shall be routed through the purchase & condemnation committee.



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MAINTENANCE PLAN FOR INFORMATION TECHNOLOGY & COMMUNICATION NETWORK

To ensure that information is protected from unauthorized access, disclosure, modification or loss and that above all confidentiality of patient data is not compromised.

Each User will be issued with a unique network login identification and password. This will allow access to the Hospital Management System.

Each user's access is limited to specific Modules in Hospital Management System & will be given sufficient access rights to undertake their job functions.

Users are prohibited from disclosing password information whether it be accidentally or purposefully given to another users. In the event that access details are disclosed (either deliberately or accidentally) then the owner of that access information must immediately change their password.

It is essential that only the authorized equipment is connected to the network. The reasons for this are to ensure that only tested and accredited equipment that meets performance, resilience and security criteria is installed on the network. It is expressly forbidden for staff (other than IT Department staff) to connect any non-authorized equipment to the network. Examples of non-authorized equipment are: Staff personal computing equipment (Laptops, printers, scanners etc)

Staff and others are prohibited from connecting or inserting any type external electronic devices E.g.: Pen drives, CD/DVD, to Hospital Work Stations

1.0 Procedure for network and data security

- Security of the physical environment. In hospital IT Department servers and data storage is in locked rooms.

2.0 Storing and Retrieving of Data

All applications required Employee Id and Password to access the database. The password rule ensures each employee need to reset their password periodically.

3.0 Data Back up


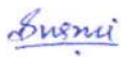

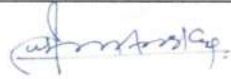
1. Database - Daily , Weekly, Monthly, Yearly and Financial Year Back up


4.0 Contribution to external data base

External database contribution is not available.

Preventive Maintenance Activity	Frequency	Auto/Manual
Scan for viruses	Daily	Auto
Back up data	Daily	Auto
Clean LCD screen	Daily by Users	Manual
Defragment hard disks	During Preventive Maintenance –	Manual



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	Quarterly / On-demand	
Clean mouse	Daily by Users	Manual
Check for full hard disk volumes and remove unnecessary files	Monthly	Manual
Update virus definition files	Monthly	Manual
Check processor temperature, inspect heat sink and fan to ensure they are working	During Preventive Maintenance – Quarterly / On-demand	Manual
Check hard disk for temperature and vibration	During Preventive Maintenance – Quarterly / On-demand	Manual
Clean exterior of case	During Preventive Maintenance – Quarterly / On-demand	Manual
Clean exterior of monitor	Daily by users	Manual
Check and clean interior, motherboard and expansion cards if necessary	During Preventive Maintenance – Quarterly / On-demand	Manual
Check internal connections and cables	During Preventive Maintenance – Quarterly / On-demand	Manual
Clean keyboard	Daily by users	Manual

INTERNATIONAL PATIENT SAFETY GOALS (IPSG)

International Patient Safety Goals (IPSG)

To promote specific improvements in patient safety

To highlight problematic areas in health care and describe evidence- and expert-based consensus solutions to these problems.

Goal 1: Identify patients correctly

Goal 2: Improve effective communication


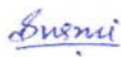
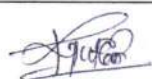

Goal 3: Improve the safety of high-alert medications


Goal 4: Ensure correct Site, Correct Procedure, and Correct Patient Surgery

Goal 5: Reduce the risk of health care-associated infections

Goal 6: Reduce the risk of patient harm resulting from falls



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IPSG.1 Identify Patients Correctly

- Patients must be identified using “two unique identifiers” i.e. Full name and hospital number.
- The patient’s room number and location shall not be used to identify the patient.
- Patients are identified when:
 1. Giving medicines, blood or blood products.
 2. Taking blood samples and other specimens for clinical testing.
 3. Providing any other treatments or procedures.
- Always ask the patient / guardian / parent to verbalize patient’s name whenever possible.

IPSG.2 Improve Effective Communication


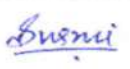

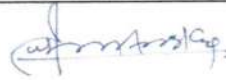
- The hospital develops and implements a process to improve the effectiveness of verbal and/or telephonic communications among care givers.
- The complete verbal and telephone order or test result is written down by the receiver of the order or test result.
- The complete verbal and telephone order or test result is read back by the receiver of the order or test result.
- The order or test result is confirmed by the individual who gave the order or test result.
- The hospital develops and implements a process for handover communication Using ISBAR tool (Identify, Situation, Background, Assessment and Recommendation) to improve safety in the transfer of critical information. It is done during shift changes, between different levels of care (general ward to critical area and vice versa), from inpatient units to diagnostic units (endoscopy, cath lab etc), from one unit to another unit.


IPSG.3 Improve the Safety of High-Alert Medications

The hospital develops and implements a process to improve the safety of high-alert medications. High-alert medications are drugs that bear a heightened risk of causing significant patient harm if an error occurs in its use. It includes:

- Medications involved in a high percentage of errors and/or sentinel events
- Medications that carry a higher risk for adverse outcomes
- Look-alike/sound-alike medications
- Prior to administration, high-alert medications shall be verified by two staff (nurse-nurse or doctor-nurse) independently for correctness of patient identification, strength, dose, route and frequency. Policies and/or procedures are developed to address the identification, location, labelling and storage of high-alert medications.



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- Concentrated electrolytes are not present in patient care units unless clinically necessary, and actions are taken inadvertent administration in those areas where permitted by policy.
- Concentrated electrolytes that are stored in patient care units are clearly labelled and stored in manner that restricted areas.
- Look-alike/sound-alike medications have been separately stored.

IPSG.4 Ensure Correct-Site, Correct- Procedure, Correct-Patient Surgery

The hospital develops and implements a process for ensuring correct-site, correct-procedure, and correct-patient surgery.

- Uses an instantly recognized mark for surgical-site identification and involves the patient in the marking process.
- Uses a checklist or other process to verify preoperatively the correct site, correct procedure and correct patient and that all documents and equipment needed are on hand, correct, and functional.
- The full surgical team conducts and documents a time out procedure just before starting a surgical procedure.

IPSG.5 Reduce the Risk of Health Care-Associated Infections

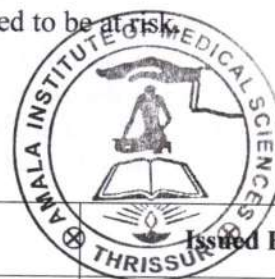
The hospital adopts and implements evidence-based hand-hygiene guidelines to reduce the risk of healthcare-associated infections.

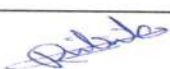

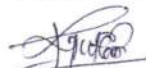

- The organization has adopted or adapted currently published and generally accepted hand-hygiene guidelines.
- The organization implements an effective hand-hygiene program.
 - Wash hands with soap and water when hands are visibly soiled.
 - Use alcohol-based hand rub when hands are not visibly soiled
 - Policies and/or procedures are developed that support continued reduction of health care-associated infections.


IPSG.6 Reduce the Risk of Patient Harm resulting from fall

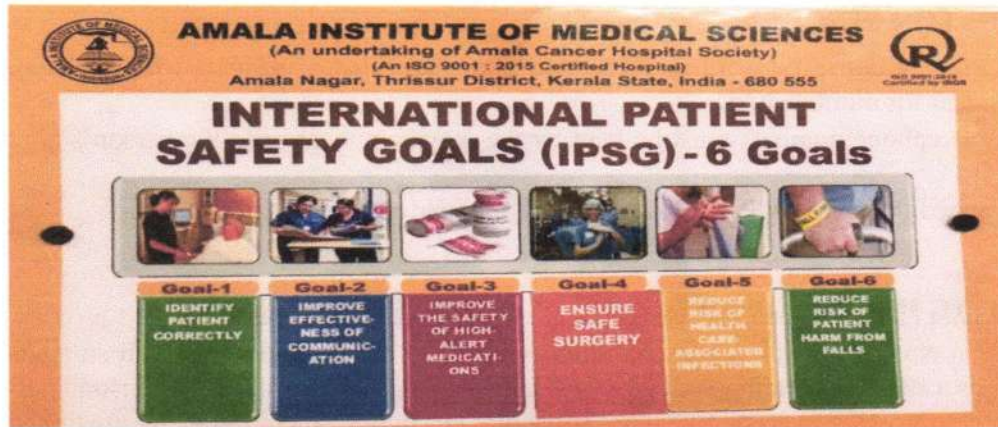
The hospital develops and implements a process to reduce the risk of patient harm resulting from falls.

- Implements a process for the initial assessment of patients for fall risk and reassessment of patients when indicated by a change in condition or medications, among others.
- Measures are implemented to reduce fall risk for those assessed to be at risk.



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HAZARD COMMUNICATIONS

General:

Any incident in the hospital should be investigated by the Hospital Safety Committee and the report would be forwarded to the higher authority for further action. The following incidents should be immediately informed to the Safety Officer of the hospital:

1. Serious injury to patients.
2. Serious injury to employees.
2. Serious injury, caused by Hospital operations, to another party.
3. Major loss of Hospital equipment or property.
4. Major loss of equipment or property belonging to another party caused by Hospital operations.


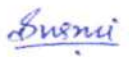
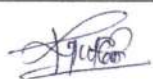

Reporting Accidents: (Refer-PSQ07)


Any accident should be immediately investigated by the employee's supervisor or appropriate staff member. It should be reported to the Safety Officer for reporting purposes and for further investigation and resolution. Upon learning of a serious accident involving employees, employees, or equipment, an employee must notify the Safety Officer immediately. Serious accidents will be investigated by the Safety Officer. Reports for any such incident are to be forwarded to the Safety Management committee of the hospital.

Release of Information:

In the case of accidents, supervisors and employees must not release information to the news media so as to avoid creation of unwanted panic among the people. Information to the media is to be provided by the top management authorities not less than the designation of Medical Superintendent. If contacted by the media refer these individuals to the appropriate persons.



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PROCEDURES FOR RESCUE

- At all patient care units, the ward In-charge will maintain a list of patients who are handicapped / fully dependant for mobilization.
- Emergency telephone numbers must be kept by the telephone nearest to the person’s normal work location.
- All handicapped personnel will be evacuated with the help of assigned personnel.

TRANSPORTING HANDICAPPED PERSONS VIA THE STAIRWELLS

In the event of an emergency, all handicapped personnel shall be directed along with an attendant to a safe area, such as a stairwell landing, exit or to a refuge area. At no time shall any person be directed to an elevator lobby to wait for evacuation. Under some circumstances, where it may be life threatening for the handicapped person and their attendant to remain in that location, the handicapped person must be evacuated via the stairwells. The following are examples of some techniques that may be used to transport a handicapped person.

1. THE BACK PACK LIFT BY ONE RESCUER:

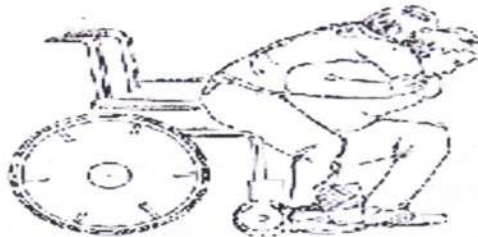



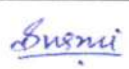

Figure 1

The rescuer kneels in front of the handicapped person and places the person's arms up and over his shoulders and across his chest. The rescuer then leans forward and slowly rises to a full standing position.

NOTE: This method should be used only if one rescuer is available. It is preferred to use one of the two person methods following.

2. SEAT CARRY BY TWO RESCUERS:



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Figure 2

Fig. 2: Two rescuers position themselves on either side of the handicapped person, in order to grasp each other's upper arms or shoulders.



Figure 3

Fig. 3: The person being assisted places their arms firmly around both rescuers' necks.



Figure 4



Figure 5


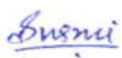

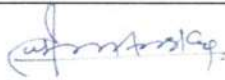
Fig. 4 and 5: The two rescuers then lean forward placing their free arms under the individual's legs, firmly grasping each other's wrists,. Lifting at the same time, with backs erect, using the strength of their legs, the rescuers slowly rise to a standing position and then proceed carefully forward.


3. EXTRA CARRY BY TWO RESCUERS

Two rescuers place the person being assisted on the stairwell landing. One rescuer at the legs places their arms under the person's knees, while the other places their arms under the person's shoulders with fingers locked across the chest. Lifting at the same time, with backs erect, using the strength of their legs, the rescuers slowly rise to a standing position and then proceed carefully forward.

Figure 6 These are but a few examples of transporting a person down a stairwell.



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It may only be necessary to take handicapped people to the protected stairways, to await rescue by the Fire Department.

In case of the patient being on ventilator or completely bedridden, the security and firefighting staff on each floor shall ensure that the complete bed is wheeled to the other side of the tower / taken down using the fire elevator, keeping strict vigilance on the working of any medical equipment connected with the patient which cannot be safely removed.

SAFETY IN RADIOLOGY

(For Details, refer Radiation safety manual (AIMS/DM/RSM – 81)

INTRODUCTION:

Radiology workers are at risk for occupational exposure to radiation and hazardous chemical. However standard precautions like personal protective equipment (PPE), safety devices and proper disposal of biohazard wastes can drastically reduces these risks. The document deals with the basic procedures to reduce the above mentioned risks.

PURPOSE:

To reduce the risk of occupational exposure to radiation and hazardous chemicals.


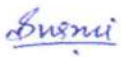

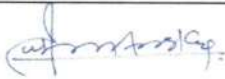
SCOPE:


- 1.1 The Hospital Radiation Safety program applies to all locations where radiation producing machines are used or stored, regardless of ownership or the location.
- 1.2 It applies to all persons working at or frequenting these locations, regardless of their relationship with the Hospital.
- 1.3 It applies to all radiation-producing machines at these locations, regardless of ownership of the machines.

DEFINITIONS:

- Absorbed Dose: The amount of energy imparted to matter by ionizing radiation per unit mass of irradiated material. The unit of absorbed dose is the Gray (Gy)
- ALARA: Acronym for As Low As Reasonably Achievable.
- Calibration: The check or correction of the accuracy of a measuring instrument to assure proper operational characteristics
- Critical Organ: The organ or tissue, the irradiation of which will result in the greatest hazard to the health of the individual
- Declared Pregnant Worker: A woman who has voluntarily informed her employer of her pregnancy and the estimated date of conception
- Dose Rate: The radiation dose delivered per unit of time
- Dosimeter: A portable instrument for measuring and registering the total accumulated exposure to ionizing radiation
- Gray: The international (SI) unit of absorbed dose in which the energy is equal to one Joule per



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kilogram

- **Half Value Layer:** The thickness of any specified material necessary to reduce the intensity of an x-ray or gamma ray beam to one-half its original value
- **Inverse Square Law:** The intensity of radiation at any distance from a point source varies inversely as the square of that distance
- **Ionizing Radiation:** Any radiation capable of displacing electrons from atoms or molecules, thus producing ions
- **Occupational Radiation Dose:** The dose received by an individual in the course of employment.
- **Radio sensitivity:** The relative susceptibility of cells, tissues, organs, organisms, or other substances to the injurious action of radiation
- **Sievert:** The international (SI) of dose equivalent.
- **Thermo luminescent Dosimeter (TLD):** Crystalline materials that emit light if they are heated after they have been exposed to radiation.

RESPONSIBILITY:

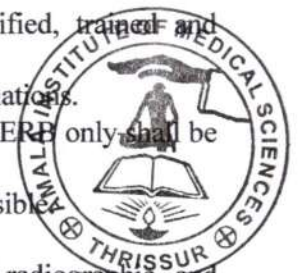
SAFETY PRACTICES:


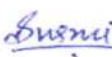
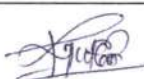
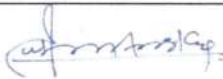
Statutory Requirements:


- Commissioning and Decommissioning of X-ray Equipment has to be registered with AERB.
- Direct assistance to the patient while being X-rayed has to be avoided. If assistance is required, appropriate precautions have to be taken by the person who will assist by making use of appropriate protective material and devices which are available.
- Fetal protection measures to be used.
- Image intensifiers to be used for fluoroscopy examination.
- Periodic inspection of X-ray equipment and shielding features is conducted regularly.
- Personnel monitoring facility be provided to all radiation workers.
- Presence of uninvolved staff, patients and persons in any X-ray room must be avoided.
- Regular maintenance and calibration of the unit must be carried out.
- Reproductive organs must be particularly shielded.
- Services of qualified radiologists and X-rays technologists to be used.
- Servicing and calibration of X-rays equipment should be undertaken by qualified, trained and authorized service engineer.
- There should be transfer of radiographs and reports to avoid repeated X-rays examinations.
- X-rays equipment meeting design certification and type approval requirement by AERB only shall be used.
- X-ray examination of pregnant women and children should be avoided as far as possible.

Personal protective equipment:

- No person shall operate or permit the operation of certified or uncertified medical radiographic and fluoroscopic equipment systems unless the following conditions are met
- Only individuals required for the medical procedure, for training or for equipment maintenance shall



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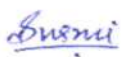

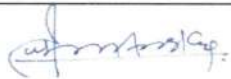
be in the radiographic or fluoroscopic room during an exposure.


- Individuals who are present in a radiographer or fluoroscopic room during any exposure shall wear protective aprons of at least 0.25 mm lead equivalent during every exposure.
- The fluoroscopist shall wear protective gloves of at least 0.5mm lead equivalents. When a patient must be provided with auxiliary support during a radiation exposure and Mechanical holding devices are insufficient; the following procedures shall be followed:
- The person holding the patient shall be protected with a lead apron of at least 0.5mm lead equivalent. The person holding the patient shall be protected with lead gloves of at least 0.25 mm lead equivalent if the hands must be placed in the useful beam.
- Radiographers not to hold the patient during a radiation exposure, except in a life-threatening situation.
- No person shall be employed, routinely assigned, or required to hold a patient during radiographic and fluoroscopic procedures.
- If a patient must be held during the x-ray exposure, non-radiation workers such as nurses or members of the patient's family may be asked to perform this duty.
- Gonad shielding of not less than 0.5 mm lead equivalent shall be used on a patient during.
- Radiographic and fluoroscopic procedure, except for cases in which this would interfere with diagnostic procedure.
- The operator shall collimate x-ray beam limitation to ensure that the x-ray field does not extend beyond the Region of interest.
- The Radiographic field shall be restricted to the areas of clinical interest as far as practical.
- A method to observe the patient during the x-ray exposure shall be provided for all units.
- During radiographic exposure, the operator shall stand behind the protective barrier.
- The department manager shall provide safety rules to each individual operating x-ray equipment including any restrictions as to the operating technique required for the safe operations of the particular x-ray apparatus, and require that the operator sign a form acknowledging that the safety manual was read. No person shall permit or arrange for the intentional irradiation of a human being except for the purpose of medical diagnosis or treatment.
- No person shall deliberately expose an individual to the useful beam for the sole purpose of training or demonstration.
- No person shall operate an ionizing -radiation-producing machine unless that person understands and uses the principles of radiation safety to keep radiation exposure as low as reasonably achievable (ALARA).

List of Personal Protective Equipment:

- Lead Aprons (0.50 mm Lead)
- Thyroid Shields (0.50 mm Lead)
- Lead Goggles
- Abdominal Shield (0.50 mm Lead)



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- Gonad Shield
- Ovarian Shield
- Lead Glasses
- Lead Screen 6 X 3 Feet (Mobile)(2mm Lead)
- 2mm Lead Lined Doors in all X-ray Producing unit.
- A method to observe the patient during the x-ray exposure shall be provided for all units.
- Lead Gloves


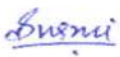

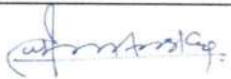
Safety Guidelines:

- Report every injury, no matter how slight, to your in charge.
- No intoxicating liquor shall be consumed while on duty. Anyone who is found under the influence of alcohol or drugs will be terminated.
- Know all the hospital emergency codes and be sure of your responsibilities.
- When dealing with the extremely large patient, be sure to seek help and lift the patient correctly.
- Know your fire extinguishers, their locations and the use.
- Use good housekeeping techniques at all times.

General Radiation Protection:

- A qualified radiographer must only do all radiographic techniques and procedures.
- All radiographers must take necessary steps in reducing radiation dose to the patient.
- Check the correct patient for correct examination.
- Plan your technique to reduce the radiation dose
- Close the X-ray room door properly and tightly.
- Provide the necessary radiation protection.
- Collimate the radiation beam to necessary area only.
- Give proper and correct instructions.
- Select the appropriate exposure factor.
- Avoid unnecessary repeats.
- For female patients check whether they are pregnant.
- Limit number of people in the X-ray room while X-ray is being done.
- Mobile X-ray request only if it is necessary.
- All staffs must wear radiation-monitoring badge while in the radiology department.
- Use only high-speed cassette (Green Sensitive) - to reduce exposure.
- Clear all staffs from room during Mobile X-ray /Provide Lead apron to the next Bed patient if he/she is not able to move.
- Everybody should be 6 feet away from x-ray tube during Mobile x-ray.
- Appropriate personal protective equipment (Radiation Protective devices) is to be worn where there is a risk of Radiation exposure.
- Personnel monitoring devices should always be worn when working with



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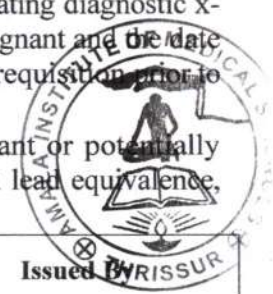


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radiographic/fluoroscopic equipment. The devices worn should be those issued for the current time period and should be worn under the lead apron. Those workers wearing TLD badges should ensure that the Card has been properly inserted into the Cassette holder.

- Only persons whose presence is necessary should be in the radiographic or fluoroscopic room during exposure. All such persons who are subject to direct scatter radiation shall be protected by aprons or whole body protective barriers of not less than 0.25 mm lead equivalent. Note: A lead apron (Pb) of 0.25 mm lead equivalence will reduce scattered x-rays by 95%.
- Mechanical supporting or restraining devices shall be used when a patient or film must be held in position for radiography or fluoroscopy. If a patient must be held by an individual, that individual shall be protected with appropriate shielding devices of at least 0.25 mm lead equivalence for whole body protection and at least 0.5 mm lead equivalence for any part of the holder's body that is exposed to the primary x-ray beam.
- Mobile equipment should be used only for examinations where it is impractical to transfer patients to permanent radiographic installations.
- The operator should stand behind the barrier provided for his/her protection during radiographic exposures at permanent radiographic installations and should stand as far as possible (at least 6 feet) from the patient when operating the mobile equipment.
- Each mobile radiographic equipment operator, prior to making an exposure, should ask anyone within 6 feet of the x-ray tube and/or patient being radiographed to move further away until the exposure is complete. Those persons who must remain within 6 feet of the patient and/or x-ray tube must be protected by whole body aprons or barriers of at least 0.25 mm lead equivalence. The operator shall give an audible warning before the exposure is made.
- When Making X-ray exposures, it is advisable to place the image intensifier closest to the region of interest. This results in better image quality and reduces risk from potential hazards.
- The hand of the fluoroscopist should not be placed in the useful beam unless the beam is attenuated by the patient and a protective glove of at least 0.5 mm lead equivalent.
- Special precautions, consistent with clinical needs, should be taken to minimize exposure of the embryo or fetus in patients known to be or suspected of being pregnant.
- No fluoroscopy or abdominal area radiographic imaging shall be performed on a pregnant or potentially pregnant patient without the approval of a qualified physician. If the x-ray procedure does include the abdominal region of the pregnant or potentially pregnant patient, the examination shall not be performed without approval from a diagnostic radiologist. Although it is the responsibility of the referring physician to determine pregnancy status, those operating diagnostic x-ray equipment will ask all patients of childbearing age whether or not they are pregnant and the date of their last menstrual period. This information is to be recorded on the study requisition prior to examination.
- If the x-ray procedure does not include the abdomen or pelvis of the pregnant or potentially pregnant patient, the abdominal region should be shielded with at least 0.25 mm lead equivalence, and the examination performed without regard to pregnancy.



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- The minimum source-skin distance (SSD) for all mobile radiographic x-ray units must be 30 centimeters.
- The radiation protection program is guided by the concept of keeping radiation exposure As Low as Reasonably Achievable (ALARA).
- Remember that radiation cannot be seen or felt, but can be detected with radiation survey meters.
- Radiation exposure of all individuals routinely working with sources of radiation is monitored with a TLD (Thermo luminescent dosimeter) badge. The devices are checked quarterly.
- Radiation exposure can be minimized by utilizing three basic principles
 - Time: Shorter exposure time means a lower dose.
 - Distance: Doubling the distance from a radiation source means one-fourth the dose rate. Tripling the distance gives one-ninth the dose rate. Inverse square law.
 - Shielding: The use of appropriate shielding greatly reduces the dose rate.


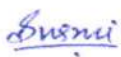

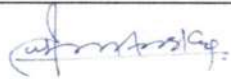
Departmental Safety:


- Radiologist/Radiographer of radiology services is responsible for notifying the Management in case of any safety hazard.
- All radiology employees shall report defective equipment, unsafe conditions, acts or safety hazards to Manager of radiology services.
- Keep electrical cords clear of passage ways. Do not use electrical extension cords without prior informing the facility department.
- All equipment and supplies must be properly stored.
- Scissors, knives, pins, razors blades and other sharp instruments must be stored and used safely.
- All electrical machines, with heat producing elements, must be turned off or unplugged n it is in not use.
- Smoking is prohibited, per hospital smoking policy.
- Do not permit rubbish to accumulate.
- Notify the facility department immediately of illumination and Air conditioning effect Problems.
- Furniture and equipment must be allowed adequate passage and access to exist at all times.
- Employee who discovers the spill should inform minor spills, such as water& chemical spill, to housekeeping team. This shall be done immediately.
- Report faulty equipment to the Biomedical Engineer or vendor.
- Obey warning signs.
- File drawers and cabinet doors shall be closed when not in use.
- Wear suitable clothing, only authorized personnel shall be allowed in X-ray room.

Patient's Safety:

- No patients shall be left unattended.
- Appropriate Personal protective equipment shall be kept available at all times, personnel shall be trained in their use.
- Two staff personnel will attend all trolley patients.



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- When the lift is used for any patient, one staff must be present on the lift.
- All wheelchairs will have safety band attached to it.
- When a trolley is used for the transportation of the patient, the side rails will always be up.
- Transportation method for outpatient will be based on status of the patient when assessed by the hospital staff prior to x-ray/scanning. An outpatient determined to be ambulatory will be allowed to walk to the unit.
- Ambulatory patients are to be accompanied from the radiology department to the CT room and back to the department.
- The bed roll of U.S. Scan table shall be changed for each patient to prevent any kind of cross Infection/contamination.
- X-ray bed roll will be provided for Infectious patients.
- If a patient must be held during x-ray, the assistant holding the patient will wear a lead-lined apron during the entire procedure.
- The radiographer will ensure that all the Infant/children being radio graphed have proper shielding and proper collimation of the X-ray beam to expose only the required Anatomy.
- All expectant females if necessary to be X-rayed will be properly shielded and the X-ray beam collimated to the area of interest only.
- Pregnant females will not be permitted in the X-ray room during exposure.




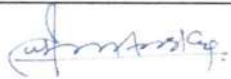
U.S. Scan Safety Guideline:


- Use condoms when using transvaginal probe and scanning infectious patients. Discard condoms safely.
- Equipment or incorrect settings can result in measurement errors or failure to detect details within the image.
- Damaged probes or improper use and manipulation can result in injury or increased risk of infection.
- A damaged probe can also increase the risk of electrical shock if conductive solutions come in contact with internal live parts. Inspect probes often for cracks or openings.

Lead Apron inspection/Radiation protective device:

- Lead aprons must be used to protect staffs and patients from unnecessary radiation exposure from diagnostic radiology procedures.
- Health care organization must perform inspections on medical equipment, including lead aprons, lead protective devices etc.
- Inspection Frequency:
 - Monthly: The Inspection consists of visual check to look for obvious tears, cuts, or etc.
 - Bi annually: Apron must be placed on the table and checked using the automatic brightness control (fluoroscopic method).
- If fluoroscopy is not available, then a radiographic unit may be used to x-ray the apron, one section at a time.
- Aprons must be stored properly in hangers.
- Do not fold or pile up.



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- Check for cracks.

Chemical Waste Disposal:

- Fixer & Developer is recommended for processing Medical X-ray films in automatic Film processor equipment.
- Storage:
 - The chemicals must be stored and used at 4 to 29° C.
 - Discard if there is evidence of contamination, dirt, over-dilution, excessive evaporation, or crystallization safely.
- Mixing Instructions: Instructions for mixing replenish and/or working solutions provided by leaflets for individual size packages shall be followed.
- Disposal: -Developer: Used Developer should be neutralized (pH 7-9) and flushed with large quantities of water to the sewer system.
- UNUSED developer contains hydroquinone which is a toxic substance, so unused developer cannot go down the drain.
- Keep developer and used fixer separated. If used fixer and developer accidentally get mixed together, the mixture must be disposed of as dangerous waste.
- Disposal: Fixer - Used fixer from X-ray processing is defined as a Hazardous waste because it contains high concentrations of silver.
- Collect used fixer in a container marked "Hazardous Used fixer". Keep fixer separately- storage capacity 200 Liters.
- The supplier will be asked to take it back at cost. Keep disposal receipts.
- After sale close all the lids of the sold fixer container seal it with plaster to avoid spillage during transportation
- The films are disposed with used fixer to the hypo buyer as solid waste

SAFETY IN LABORATORY

(For details, refer to laboratory manual (AIMS/DM/LSM – 44)


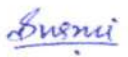
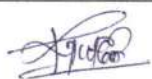
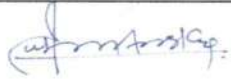
INTRODUCTION:


Laboratory workers are at risk for occupational exposure to infectious agents and hazardous chemical. Infections can be acquired from exposure to contaminated blood, tissue and other biological material. However good laboratory practices with standard precautions like personal protective equipment (PPE), safety devices and proper decontamination and disposal of bio hazardous wastes can drastically reduces these risks. The document deals with the basic strategies and procedures to reduce the above mentioned risks.

PURPOSE:

To follow good laboratory practices (GLP) to reduce the risk of occupational exposure to infectious agents, hazardous chemical and to avoid accidents (eg. fire) in the laboratory.



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SAFE WORK PRACTICES:

HANDLING OF SPECIMEN:

Gloves:

- Wear gloves and laboratory coats (aprons) at all times when handling and processing patient specimen, decontaminating instruments and cleaning.
- Bandage open cuts and scratches on the hand and then wear gloves.
- Wear gloves when performing phlebotomy and handling actual blood specimens.
- Wash hands immediately after gloves are removed, after a task that involves heavily contaminated matter and before leaving the laboratory.

Specimen Transport:

- Always transport specimens to the laboratory in leak proof containers.
- Do not accept grossly soiled or contaminated specimens. Notify the individual responsible for submitting such a specimen and follow the laboratory’s specimen rejection policy.

Needles and Syringes:

- Use needle-locking syringes or plastic disposable syringe-needle units.
- Never bend the needles, after use do not recap and cut the needle with help of needle destroyer, discard them in the sharps container.
- Secure blood culture bottles before inserting needles into the bottle (eg, place bottle in support rack).

Tubes:

- Always carry tubes in racks.
- Use plastic tubes when possible.
- Uncaps tubes carefully, avoid splashes or sprays (eg. when removing tops from vacuum tubes). In case of splash or spray, see the shower and eye wash section in this document.
- Do not use glass tubes that are broken or damaged at the mouth. Discard such tubes into the sharps container.

Centrifuges:

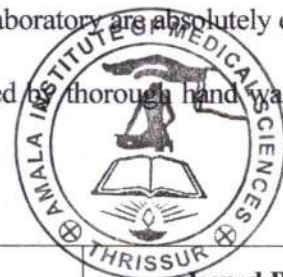
- Centrifuge tubes must be intact and properly balanced when centrifuged.
- Do not place tabletop centrifuges in the biological safety cabinets.
- Clean the centrifuge once daily after use to remove any contaminating material on the inner side of the centrifuge.


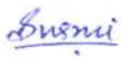

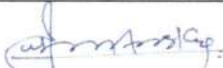
Hand washing:


- Frequent hand washing after removing gloves, before leaving the laboratory are absolutely essential
- Use nonirritating soap for routine washing
- Use antiseptic soap or an alcohol based hand disinfectant followed by thorough hand washing for accidental skin contamination.

HANDLING CHEMICALS:

- Wear appropriate PPE when handling hazardous chemicals.



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- Label all reagents with their chemical names and appropriate hazard warnings provided from their material safety data sheets (MSDS).
- Keep MSDS for all chemicals either in the laboratory or in the office nearby.
- Store all hazardous chemicals, including chemicals, reagents and dyes, below eye level.

HOUSE KEEPING AND MISCELLANEOUS SAFE PRACTICES:

- Avoid or minimize activities associated with transmission of infectious agents.
- Designate clean and contaminated work area.
- Clean and disinfect all surfaces after spills and at the end of each work shift.
- Keep all work areas neat and uncluttered.
- Do not store personal items in the work area.
- Do not bring food or beverages into the laboratory area.
- Remove coats before leaving the laboratory
- Dispose all contaminated materials in appropriate coloured closed bags

DECONTAMINATION:

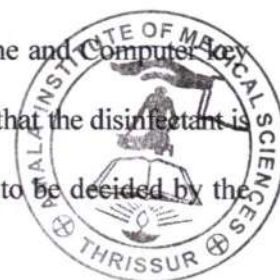
Routine decontamination and cleaning of the work environment are the responsibility of all laboratory workers particularly, of the housekeeping staff. To accomplish this work area should be uncluttered, with clean and unclean materials clearly demarcated and separated. The section below outlines the common decontamination protocols to be followed in the routine day-to-day functioning of the laboratory.


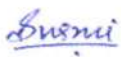

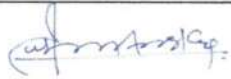
Preparation of Household Bleach:


- Prepare fresh daily
- Add one part of household bleach to nine parts of tap water
- Dispense in wide mouthed large plastic containers. The containers should be only half full
- Place the containers in the designated work areas

Decontamination of Work Surfaces:

- Works surfaces have to be decontaminated at least twice daily, before the work begins and at completion of work
- Use a paper towel or a soft cloth soaked with the disinfectant (1% sodium hypochlorite solution)
- Wipe the work surface going over each area at least twice. Allow to air dry with a minimum contact time of 5-10 min
- The housekeeping staff has to regularly fill the decontamination worksheet
- Decontamination of Equipment's (including vortex, centrifuge, and Telephone and Computer boards):
 - Follow same procedure as for work surfaces after consulting the supervisor that the disinfectant is compatible with the equipment surface
 - The periodicity of decontamination for the above mentioned equipment has to be decided by the supervisors in each section of the laboratory based on the use of equipment
 - Do not use alcohol on equipment that are close to open flames (burner).



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- Do not use sodium hypochlorite on metal parts because they may cause rusting.
- Do not use aldehyde based disinfectants as general surface disinfectants

Decontamination of Spills

Refer MSDS Hazardous Spills

WASTE DISPOSAL:

Refer infection control Manual (BMW)(AIMS / DM / HIC- 35)

LABORATORY AREAS:

- The laboratory should have designated areas for laboratory work and access to such areas should be limited to the laboratory employees.
- Visitors in laboratory areas:
 - Children under 12 years of age should not be permitted into any laboratory.
 - Laboratory supervisor is responsible for the safety of adult visitors to his or her laboratory.
- Hazard warning signs and labels shall display at appropriate locations.

LABORATORY ACCIDENTS:

Though the laboratory provides all facilities to avoid accidents, it is inevitable that a few accidents may occur over a period of time. The following section provides details of the management of such laboratory accidents:

Needle stick injury (including other sharps): HIC manual (AIMS / DM / HIC- 38)

- Wash the area immediately with running water.
- Briefly induce bleeding from the wound by massaging (don't squeeze).
- Wash the area again with soap and water.
- Inform the department in charge.
- Inform the incident to casualty in charge and an incident report will have to be made.
- The casualty medical officer has to assess the risk to the individual and suggest plan of treatment.
- The incident report forward to personal manager.
- The hospitals' policy of Post exposure prophylaxis will have to be followed and the appropriate prophylaxis instituted as early as possible.


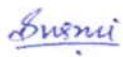


Incident report:


- While it may not be possible to alert the supervisor about the laboratory accident immediately, the laboratory worker should ensure that the supervisor is informed about the incident at the earliest.
- The supervisor is duly advised to prepare a report of the incident, using the incident report work sheet and the laboratory director has to be informed.
- The laboratory in charge shall ensure that the appropriate PEP/treatment has been followed.



BUILDING SAFETY

Scope:

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This set of instructions applies to the existing as well new building layouts. These are to be followed by projects / engineering or other concerned employees.

Safety Instructions:

- Any building, wall, chimney, stairway, ramp, floor, platform or other structure whether of a permanent or temporary nature shall be constructed, situated or maintained in such a manner as not cause to risk of bodily injury.
- A workplace must have at least two exit routes to permit prompt evacuation of employees during an emergency.
- Exit must lead directly outside or to a street, walkway, refuge area, public way or open space with access to the outside.
- Ceilings of exit routes must be at least 7'6" high. An exit access must be adequately wide at all points.
- Exits must be reasonably straight, smooth, solid, substantially level walkways and not to have a dead end
- False ceiling materials are preferably made of non-combustible materials.
- Electrical wirings should be properly conducted and carried through cable trays, having appropriate heat based smoke detectors above and below false ceiling
- Bathroom Floor should be non slippery and antiskid.
- Electrical switches / panel boards should have Electrical Leakage Circuit Breakers (ELCB) and double earthing concepts.
- The slope and drainage should be properly connected, so as to avoid any seepage / leak in the building.
- Not to keep any stock of combustible / flammable materials unauthorized unless otherwise it has been designated.
- No storage is permitted at exit doors.

ELECTRICAL AND MECHANICAL SAFETIES

(Refer to Electrical Maintenance manual – AIMS/DM/MEL-47)


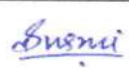
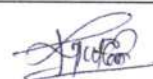
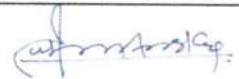
Scope


These sets of instructions relate to electrical and mechanical safety aspects.

Safety Instructions

- Don't meddle with electrical equipment. Repairs are an electrician's job.
- Always check for defective cables, plugs or sockets.
- Never overload electrical equipment.
- Switch off and disconnect any equipment that sparks or stalls.
- Don't let cables trail across the floor. They are stumbling hazards.
- Don't use lighting circuits for portable tools.



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- Avoid kinking, twisting, binding or crushing electrical cables.
- Do not put loose wires in the socket, use proper plug.
- Use only three pin plugs.
- Never connect a portable electrical tool without earthing.
- Don't use electrical tools near flammable vapors.
- Wear safety shoes where required.
- Do not use wet gloves at work.
- Keep pathways to switch boards clear of obstructions.
- Do not throw water on live electrical equipment / wires in case of fire, use sand or blanket instead.
- Know the location of the nearest fire extinguisher, use the right type of extinguisher.

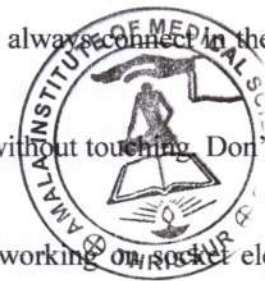
Electrical maintenance personnel – DO's & DONT's


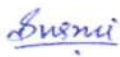


DO's


- Switch off the supply before handling a fan or replacing a bulb.
- Use the correct size and quality of fuse wire when renewing a blown fuse.
- Place "MEN WORKING" signboards on all switches before commencing work
- Ensure that all controlling switches are opened and locked or the fuses withdrawn, before working on any circuit or apparatus.
- Treat circuits as alive until they are proved otherwise.
- See all the connections are securely made.
- Discharge all cables to earth before working on the case.
- Test rubber gloves periodically.
- Place rubber mats in front of electrical switch boards.
- Ensure that all portable appliances are provided with 3-pin plug and the metal part of the apparatus is earthed.
- Disconnect the supply immediately in case of fire on or near electrical equipment.
- Warn others when they seem to be in danger near live conductors.

DONT's

- Do not connect single pole switch or fuse in the neutral circuit, but always connect in the phase wire.
- Do not close any switch unless you are familiar with the circuit.
- High voltage apparatus may give leakage shock or flash over even without touching. Don't touch without being sure.
- Do not use wires with poor and deteriorated insulation.
- Do not wear loose clothing, metal watch straps, rings etc, while working on socket electrical appliances.



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- Do not bring a naked flame near oil filled equipment and battery.
- Do not enter excavations and trenches which give pungent smells, or work in badly lit / ventilated and congested areas.

POWER LOSS:

- The Hospital may experience temporary power losses due to Storms Power company disruptions, or damage to the service lines entering the hospital
Malfunctioning of the internal electrical wire system of the hospital.
- Immediate action: In the event of power loss, every effort should be made to immediately turn off all electrical equipment (if required) within an employee's work area before power is restored to protect the equipment.

BACK UP PLAN FOR POWER LOSS

- UPS: In Case of Power loss in the Hospital we can use UPS in the Critical Care areas and Networking Areas.
- Generators: Hospital is having Generators in case of Power loss

HANDLING CHEMICALS

Policy:

All Hospital personnel must be able to safely handle chemicals belonging to the six different hazard classes recognized by Workplace Hazardous Materials Information System (WHMIS) regulations.

Purpose:

This policy will help to maintain a safe and healthy workplace.

Responsibility

Management and employee




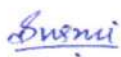
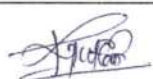
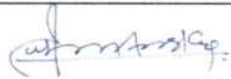
Class A Chemicals - Compressed gas


A compressed gas includes any product, material or substance contained under pressure greater than atmospheric pressure. This includes gases liquefied by compression or refrigeration. Compressed gases may represent many hazards depending on the type of gas, i.e. toxic, flammable, and corrosive, oxidizer or frostbite in the case of cryogenic gases. Compressed gas cylinders may also pose a serious physical hazard if handled improperly. Dropped or damaged cylinders may become missiles if they rupture, or valves are knocked off.

GENERAL PRECAUTIONS FOR COMPRESSED GAS CYLINDERS

- Identification of Contents
- Identify the contents of any compressed gas cylinder clearly so as to be easily, quickly and completely determined by the personnel



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- Provide a durable label that cannot be removed from the cylinder.
- Do not accept any compressed gas cylinder for use that does not identify its contents legibly by name.
- Do not rely on colour coding as a means of identification; cylinder colors vary from supplier to supplier, and labels on caps are not reliable because many caps are interchangeable.
- Attach tags to the gas cylinders on which the names of the users and dates of use can be entered.
- If the labelling on the gas cylinder becomes unclear or defaced so that the contents cannot be identified, mark the cylinder "contents unknown" and contact the manufacturer regarding removal.

Transportation

- Before moving a cylinder, close the cylinder valve, remove the regulator, and replace the protective valve cap.
- Do not transport cylinders with the regulator attached to the cylinder.
- Do not transport cylinders without safety caps. Screw the cylinder cap all the way down on the cylinder's neck ring.
- Transport cylinders on a gas cylinder transport trolley and secure the cylinder with a strap or chain.
- Do not use the protective valve cap for moving or lifting cylinders. The cap is for valve protection only.
- Do not allow cylinders to drop or to strike other cylinders violently.

Leaking cylinder


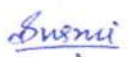


- Tag leaking cylinders or cylinders with stuck valves and move to a safe, secure outdoor location.
- If the contents are flammable, keep away from any source of ignition.
- Inform the supervisor who will make the necessary arrangements with the supplier for removal.
- Do not attempt to repair cylinder valves or their relief devices while a cylinder contains gas pressure.


Storage of Cylinders

Appropriate storage conditions:

- Secure empty and full cylinders at all times to a fixed support (solid wall, cylinder truck, cylinder rack, or post) by use of chains or other substantial restraining devices
- Well-ventilated areas designated and marked only for cylinders.
- Away from flames, sparks or any source of heat or ignition.
- In an upright position.
- Away from sources of heat and ignition
- Away from electrical circuits and electrical wiring where the cylinder could become part of the circuit



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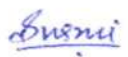
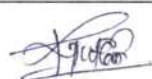
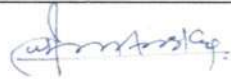
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- Away from dampness, salt, corrosive chemicals or corrosive vapors. Corrosion may damage cylinders and cause their valve protection caps to stick.
- If stored outdoors, protect cylinders from the ground to prevent bottom corrosion, and protect from the direct rays of the sun.
- Store cylinders in compatible groups. Identify them by signs to prevent confusion.
- Store flammables separately from oxidizers
- Store corrosives separately from flammables
- Store full cylinders separately from empties
- Mark empty cylinders EMPTY or MT.
- Keep valves closed on empty cylinders.
- Keep protective valve caps in place when the cylinder is not in use.
- Store liquefied flammable gas cylinders in an upright position or such that the pressure relief valve is in direct communication with the vapour space of the cylinder.
- Do not store flammable gas cylinders with oxygen or nitrous oxide cylinders or adjacent to oxygen charging facilities.
- Keep oxygen cylinders a minimum of six metres from flammable gas cylinders or combustible materials. If this cannot be done, separate by a non-combustible barrier at least 1.5 metres high having a fire rating of at least one-half hour.

Use of Compressed Gas Cylinders

- 1.0 Do not use cylinders for rolling, supports, or any purpose other than the transportation and supply of gas.
- 2.0 Do not charge, ship or use any cylinder which is not provided with a legible decal that identifies its contents.
- 3.0 Wipe the outlet with a clean, dry, lint-free cloth before attaching connections or regulators. The threads and mating surfaces of the regulator and hose connections should be cleaned before the regulator is attached.
- 4.0 Always use the proper regulator for the gas in the cylinder. Always check the regulator before attaching it to a cylinder. If the connections do not fit together readily, the wrong regulator is being used.
- 5.0 Before attaching cylinders to a connection, be sure that the threads on the cylinder and the connection mate are of a type intended for the gas service.
- 6.0 Do not permit oil or grease to come in contact with cylinders or their valves.
- 7.0 Attach the regulator securely tightly fitting wrench to tighten the regulator before opening the valve wide. Always use a cylinder wrench or another nut and hose connections.
- 8.0 Stand to the side of, and face away from, the regulator when opening the cylinder valve.
- 9.0 Open cylinder valves SLOWLY. Do not use a wrench to open or close a hand wheel type cylinder valve. If it cannot be operated by hand, have the valve repaired by the manufacturer.



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10.0 Shut off gas cylinder valves when cylinder not in use



Class B Chemicals - Combustible and Flammable Material

I. Sub-divisions

Combustible and flammable materials include the following sub-divisions;

- B1 Flammable gases
- B2 Flammable liquids
- B3 Combustible liquids
- B4 Flammable solids
- B5 Flammable aerosols
- B6 Reactive flammable materials

Flammables or combustibles are materials that under standard conditions can generate sufficient vapor to cause a fire in the presence of an ignition source.

Special Precautions - Flammable Liquids

Flammable liquids

Materials which generate sufficient vapors to ignite at temperatures below (38 °C)


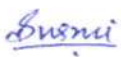


Combustible liquids


Materials which require temperature above 100° F to provide sufficient vapors for ignition.

GENERAL PRECAUTIONS FOR FLAMMABLE & COMBUSTIBLE MATERIALS IN THE HOSPITAL

- Use: Know the location of the nearest fire extinguisher and fire alarm pull station.
- Use in well-ventilated area or in a chemical fume hood.
- Eliminate ignition sources such as open flames, smoking materials, hot surfaces, sparks from welding or cutting, operation of electrical equipment and static electricity from areas in which flammable or
- Combustible materials are used or stored.
- Ensure that areas in which flammable/combustible materials are used have appropriate sprinkler systems or fire extinguishers.



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- Never dispose of a flammable or combustible material down a drain or sewer storage Minimize the quantity of these materials within the work area. See Special Precautions above for volume restrictions.
- Use approved container with a spring-closing lid for storage of flammable liquids (except in exceptional and approved circumstances). Container is designed to safely relieve internal pressure when subjected to fire exposure
- Store in grounded flammable liquid storage cabinets or in vented cabinets under a chemical fume hood.
- Store any solvents which must be stored in glass bottles in the vented cupboard under a chemical fume hood
- Never store flammable or combustible materials near oxidizing materials.
- Label storage areas or cabinets clearly as **DANGER - FLAMMABLE**. Examples of such flammable liquids are acetone, ethanol, and glacial acetic acid
- For storage of flammable liquids in refrigerators and freezers, use only explosion-proof refrigerators and freezers.
- Bulk storage
- Ensure that areas in which flammable/combustible materials are stored have appropriate sprinkler systems or fire extinguishers.
- Bond and ground metal containers whenever filling, dispensing or storing flammable liquids.
- Use portable safety cans whenever possible for storing, transporting, and dispensing flammable liquids.



Class C - Oxidizing Materials

Oxidizing materials include any compound that spontaneously evolves oxygen either at room temperature or under slight heating. Oxidizing materials pose a serious fire and/or explosion risk in the presence of flammable or combustible materials. Many oxidizers may be highly corrosive or toxic.


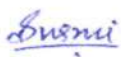

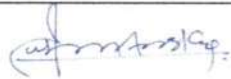
GENERAL PRECAUTIONS FOR OXIDIZING MATERIALS IN THE HOSPITAL

1. Keep oxidizers away from combustible and flammable materials.
2. Store in designated areas only. Designated areas must be cool and dry.
3. Keep away from heat and sources of ignition.
4. Always wear proper personal protective equipment, including eye, face and hand protection.

Examples of strong oxidizers include:

- Chromic acid Potassium permanganate



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- Hydrogen or benzoyl peroxide (any peroxide) Sodium perchlorate (any perchlorate)
- Nitric acid Sodium hypochlorite
- Perchloric acid Sulphuric acid

Examples of incompatible chemicals:

- Flammable liquids such as
- Methanol
- Organic acids such as
- acetic acid

AND oxidizing materials such as

- Sulfuric, nitric or perchloric acids
- Sodium hypochlorite
- Benzoyl peroxide
- Potassium permanganate




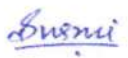
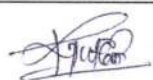

Class D1 - Chemicals, poisonous and infectious material: Immediate and serious toxic effects

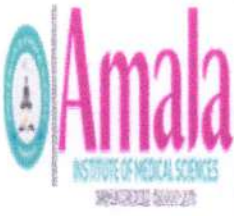
Chemicals which may cause acute toxic effects are classified as D1 materials. Such materials may be fatal or cause permanent damage if they are inhaled or ingested, or if they enter the body through skin contact. Less toxic substances should always be selected if an alternative is available.

Examples of D1 Chemicals

- Chloroform Iodine
- Crystal violet Methanol
- Ethanol Oxalic acid dehydrate
- Giemsa's stain Potassium hydroxide
- Hydrochloric acid Sulfuric acid



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GENERAL PRECAUTIONS FOR ACUTELY TOXIC MATERIALS IN THE HOSPITAL

Handle with caution. Always wear appropriate personal protection equipment including lab coat, gloves, eye protection, masks, and respirators as required. Avoid inhaling by working in a well ventilated area or in a chemical fume hood. When possible, eliminate Class D1 materials from the workplace and use substitutes. Keep controlled substances such as controlled drugs, and chemicals such as cyanides in a locked cupboard. Secure narcotics and inhalant anaesthetic agents as required by legislation. Solution containing class D1 substances should be dispensed with burettes or automatic dispensers at low pressure. Cover work surfaces with dry, absorbent plastic-backed paper, as appropriate. Dispose of it after each procedure. Wash thoroughly after handling.



Class D2 - Chemicals, poisonous and infectious material: Other toxic effects

Class D2 chemicals are materials that are not immediately dangerous to health; however, repeated exposures may cause death or permanent damage over time.

Many D2 chemicals will cause cancer, birth defects and sterility. Other D2 chemicals may be sensitizers, which produce a chemical allergy.

Examples of D2 Chemicals


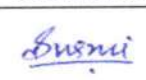
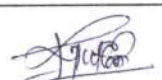
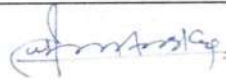
- Hexane Sodium phosphate dibasic
- Petroleum spirit Sodium phosphate tribasic
- Isopropanol Trichloroacetic acid
- 2-Methoxyethanol Acetone
- Depex mounting medium Sodium azide
- Boric acid Xylene


Potassium ferrocyanide Ethidium bromide

GENERAL PRECAUTIONS FOR TOXIC MATERIALS IN THE HOSPITAL

1. Handle with caution. Always wear proper personal protective equipment, including Eye, face and hand protection.
2. Avoid inhaling by working in a well ventilated area or in a chemical fume hood.
3. When possible, eliminate Class D2 materials from the workplace and use substitutes.
4. Cover work surfaces with dry, absorbent plastic-backed paper, as appropriate.
5. Dispose of it after each procedure.



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6. Wash thoroughly after handling.

Class E - Corrosives

Corrosives are materials which chemically react at the point of contact to cause visible (Often burn-like) damage to tissue. Examples of corrosives include acids and bases.

When handling these materials, the following precautions should be observed:

GENERAL PRECAUTIONS FOR USE OF CORROSIVE MATERIALS IN THE HOSPITAL

Transportation

- Use Neoprene bottle carriers or Styrofoam packing crates.
- Wear appropriate Personnel Protective Equipment (PPEs), including laboratory coat and goggles or a face shield. Consult
- Material Safety Data Sheet (MSDS). Additional Personnel
- Protective Equipment (PPE) to be considered include gloves and an apron.
- Limit the amount of corrosive chemicals at the bench to the amount required for testing.
- Keep containers tightly closed.
- Use strong corrosives in a chemical fume hood.
- Always add acid to water (never the reverse), and do so slowly to avoid a violent reaction and splattering.
- Ensure that eyewash and safety showers are readily accessible in areas where corrosives are used and stored. In the event of skin or eye contact with corrosives, immediately flush the area of contact with cool water for 15 minutes. Remove all affected clothing. Get medical help immediately.



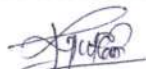

Class F Chemicals –

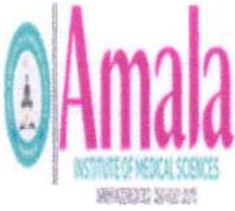
Dangerously Reactive Chemicals Dangerously reactive chemicals are materials that react rapidly with themselves or other materials to release relatively large amounts of energy. In some situations, the reaction may be violent enough to produce a detonation. GENERAL PRECAUTIONS FOR USE OF DANGEROUSLY REACTIVE MATERIALS IN THE HOSPITAL Indicate the date of purchase and date of opening on each container of peroxide forming chemicals. Store reactive chemicals in a cool, well ventilated, flameproof space away from flammables and combustibles, oxidizes and corrosives

Management of Hazardous Material

- Substances dangerous to human and other living organisms. They include radioactive or chemical materials. In addition to these, biological materials like blood, body fluids and microbiological cultures, mercury, nuclear isotopes, medical gases, LPG gas, steam, ETO, etc., and some of the other common hazardous materials.
- Aware about Material Safety Data Sheet (MSDS) which is displayed in your location.



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- Hazard Identification and Risk Analysis (HIRA) is one of the methods to identify and reduce the risk/errors in the working environment.

Policy

Only staff trained in spill response shall be allowed to clean-up major spills or they will take appropriate action in laboratories as mentioned below in all the cases immediate action would be taken as per protocols.

In case of any spill hazard emergency, rescue operation is carried out through trained personnel (Safety team immediately).

If hazardous material spillage occurs, manage it by using spill kit. If it cannot be managed, then activate code orange.

Make the following notifications:

- If the spill involves a fire, activate the fire alarm. Call code red team and provide details of the fire.
- For spill that does not involve fire or explosion, activate **code orange** and describe emergency.
- Instruct others in the area about the emergency and stay clear of the spill area. If you have knowledge about the spill, identify yourself to the Safety Team.

Follow the directions of the safety team.

BIOHAZARD SPILLS IN THE LABORATORY:

Refer laboratory safety manual (AIMS/DM/LSM – 58)


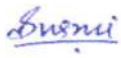
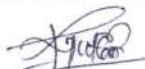

Employee Contamination:


- If the skin becomes contaminated with blood or other potentially infectious materials, wash the area thoroughly with soap and water.
- If blood or other potentially infectious material is splashed into the eyes, immediately use the nearest source of clean water, and flush for at least 15 minutes. There is eye wash station in all the departments of Laboratory Services.
- Remove grossly contaminated clothing immediately. Place the contaminated clothing in a plastic bag.
- Report the spill to the Supervisor, and seek medical attention.

Clean Up:

- Wear the appropriate PPE to clean up the spill. At a minimum, this includes gloves, protective eyewear and a mask, or a face shield. Depending on the size and type of spill, impervious gowns, protective foot coverings, or respirators may be needed.
- Pick up any broken glass with tongs or heavy towel. Do not use your hands.
- Spread 1% Hypochlorite solution over the spill and contain the area with disposable paper towel/ Newspaper.
- Allow a contact time of 30 minutes.



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- Carefully pick up the absorbent towels/ newspaper, and place into a yellow bag and clean the area with cleaning agent specific to that area.
- All PPE, newspaper and other items that became contaminated must be disposed of as per bio-medical waste disposal.
- Wash hands and any other exposed skin with soap and water even after removal of gloves before leaving the work area.

Spills or Breakage in a Centrifuge:

- If a spill / breakage occur during centrifugation, switch off the machine.
- Leave the centrifuge stopped and closed for at least 30 min. to allow any aerosols to settle.
- Remove the tube holding sockets if any and their contents to a safety cabinet.
- Call up the Biomedical Engineering Department.

For Engineering / Bio- Medical Department Personnel / Repair Personnel:

- Remove the lids (if they are being used) of the tube holder and place the tube holder, lids and tubes into a container for autoclaving or into an appropriate disinfectant (not into Hypochlorite which will corrode metal).
- Disinfect the whole inside of the centrifuge using 70% Isopropyl / Ethyl alcohol.
- The operator dealing with the breakage must wear heavy-duty gloves with a disposable plastic apron in addition to the conventional protective clothing.
- Please see that the centrifuge is functional before returning to the area.
- Intimate laboratory staff.

Spills in a Biological Safety Cabinet or Laminar Flow Hood:

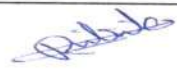
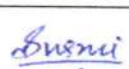


- Do not shut off the ventilation. The cabinet should be left running to prevent the escape of contaminants. If there is a UV light, leave it on.
- Wear the appropriate PPE. If the material is infectious, a respirator may be needed.
- Use 1% hypochlorite solution to disinfect the cabinet. Clean the area with tissue and discard it in yellow color bag.


CHEMICAL SPILLS

Employee Contamination

- If the skin becomes contaminated with hazardous chemicals, wash the affected area thoroughly with copious amounts of water. If available, use the nearest source of water for at least 15 minutes.
- If hazardous material is splashed into the eyes, immediately use the nearest eye wash station and flush for at least 15 minutes.
- Remove grossly contaminated clothing immediately. Place the contaminated clothing in a yellow bag.



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- Report the spill to the supervisor of the area and seek medical attention, from staff medical officer of the Casualty if possible, carry the label, Material safety data sheet (MSDS) or other pertinent information on the chemical.

Minor spill Clean Up

- Small spills are less than 30 ml.
- Pick up any broken glass with tongs or another mechanical device. Do not use your hands.
- Place absorbent material over the spill, making sure not to spread liquid.
- Dispose of all contaminated material in a yellow color bag. Label the bag with the name of the hazardous material. Contact housekeeping for disposal.

Major spill Clean Up

- Large chemical spills are greater than 1 square feet, or any quantity of a highly hazardous material.
- Immediately evacuate the area and close all doors. Notify others not to enter the area.
- **If hazardous material spillage occurs, manage it by using spill kit. If it cannot be managed, then activate code orange.**
- Contact Security and request for the Safety team.
- Inform the Safety team of the location, name of material and approximate quantity.
- Do not reenter the area until advised by the Safety team. The Safety team will assess the need to conduct further evacuation, shut down ventilation and the scope of clean up operations.
- When the spill is cleaned and the area is safe to re-enter, Security will notify the staff in the area.

HANDLING MERCURY SPILLS

Procedures:

1. Do not touch mercury:
2. collect the mercury carefully:
3. Never use vacuum cleaner or broom:
4. Dispose the mercury properly:


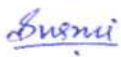

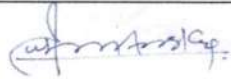
Mercury Spill Kit:


It includes gloves, face mask, eye shield, a syringe and two stiff pieces of cardboard, two bag or covers of sticky tape, a flash light, glass bottle and packing date.

Spill and Containment Plan:

- Collect the mercury spill as per the rule
- Report the incidence to maintenance engineer who is the In-charge of waste management
- Fill the mercury spillage incident reporting form
- Maintenance engineer should keep a register for incident reporting
- Send the collected mercury waste to the waste management department and store it safely in the locker at the bio-medical waste treatment plan
- Hand over to mercury equipment manufacturer.



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ETHYLENE OXIDE EMERGENCY

Procedures:

Primary Emergency Procedures:

Evacuate the immediate area and if possible, remove any injured persons. To aid in containment of the ETO, raise an alarm. Ask everyone to evacuate the area and notify the Safety team. Seal the area as best as possible. Close the doors and if possible, tape the edges to prevent escape of ETO. This will aid in containment, as ETO is highly inflammable. A spill or leak of ETO should be handled as follows:

- Immediately contact the Security and ask for the Safety team
- Persons who come in contact with ETO should immediately remove contaminated clothing and wash or shower to remove any ETO from the skin. These persons would then be brought to the Emergency Room for proper care.
- Contact the necessary companies, which installed the unit.
- Do not re-enter the area unless the Safety team declares the area safe for re-admission.

Secondary Emergency Procedures:

After personnel have carried out the above procedures, the Department of Engineering, along with the Security is responsible for bringing the emergency under control. Thus Secondary Emergency Procedures include rescue, fire fighting and contamination control through clean up or other methods.

OTHER SPILLS

Responsibilities:

Only staff that are properly trained and equipped with the appropriate level of personal protective equipment shall be permitted to clean major hazardous materials spills. The Hospital's SAFETY COMMITTEE team consists of specially trained staff from Engineering, Nursing and Housekeeping.

ELEVATOR SAFETY

Refer to electrical manual (AIMS/DM/MEL-63)


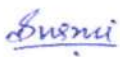
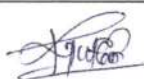
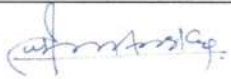
Scope:


This set of instructions deal with safety in elevator.

Safety in operation of men / materials lifts:

- Give way to passengers getting out of the elevator, and wait for the next trip if the elevator is full.
- Know the safe working load (SWL) and the number of persons allowed in an elevator
- In case of fire use the stairs, not an elevator.
- Enter and exit carefully, watch your step. Hold children's hands firmly.
- Stand clear off the doors. Keep clothes and any luggage that you may be carrying away from the opening
- Push and hold the door open button if doors need to be held open.
- If the doors are struck, use the emergency call button (or phone)
- Ensure that lifts are inspected periodically.



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KITCHEN

Scope:

These sets of instructions apply in cooking and related activities in the kitchen / pantries of Hospital.

Safety Instructions:

- While handling knives and other cutting implements hold firmly on the handle and concentrate on cutting only.
- Do not use knives having broken handles.
- Always use sharp knives for cutting
- Avoid direct exposure with steam and steam carrying pipes.
- While frying, drop the ingredients into the oil slowly to prevent splashing of hot oil
- Turn down or switch off the flame when you see the cooking oil smoking too much
- Whenever you smell any cooking gas, turn off the regulator of the outlet(s)
- Do not wear loose clothing while operating the grinding machine
- Do not keep leftover foodstuffs for long. Dispose them regularly
- While handling hot containers, use a hand pad or cloth
- Know the location of the nearest firefighting equipment
- In case of fire in LPG room use DCP or Co2 extinguisher
- Do not touch electrical switches / plugs with wet hands
- Make sure the floor is scrubbed / dried regularly
- Wear clean aprons while working
- Cut nails and crop your hair regularly.

WATER QUALITY SAFETY:

Refer to HIC manual (AIMS/DM/HIC-38)

PURPOSE:

To narrate the activities related to the quality safety of drinking water and general-purpose water.

SCOPE:

Covers drinking water and general purpose water


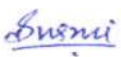
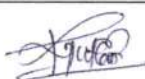
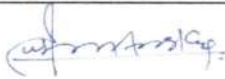
RESPONSIBILITY:


Maintenance staff



PROCEDURE:

- The water required for drinking and general purpose shall be obtained from the Hospital's water sources such as corporation water.
- 24 hours water supply shall be ensured by the technical team, which includes our plumbers and electricians. All complaints shall be attended to without any loss of time.

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- The portability of the water used for drinking and cooking purposes shall be tested and ensured once in three months.
- The overhead tanks shall be cleaned once in two weeks to avoid any contaminants settled in the tank getting mixed in the pipeline. The date of cleaning and next due date for cleaning to be indicated.
- The overhead tank shall be kept covered.
- The drinking water points shall be provided with water filters and the filters shall be periodically cleaned and cleaning dates indicated.
- Water used for general purpose shall be directly supplied to the point of use.

SAFETY ON OPERATION OF A/C PLANTS:

Refer to electrical manual (AIMS/DM/MEL-63)

Scope:

These sets of instructions apply to safety in operation / maintenance of Air-conditioning plants (all types) and related equipment in Hospital.

Safety Instructions:

- Ensure that all the belt drives and fans are guarded properly.
- Ensure all fasteners are properly tightened.
- Ensure that the blower motor / condenser motor in Central A/c plants have isolation for safe working during maintenance.
- Use ladders to climb onto the roof while attending on condensers and adopt ladder safety procedures.
- Ensure the floor is clean without water leakage.
- Do not operate the equipment to more than its rated capacity.
- Do not use compressed air for body cleaning / cooling.
- Ensure all piping connections are secured properly.
- Do not store flammable materials near the A / C plants.
- Ensure all the safety interlocks are in working condition.
- Ensure that containers / pipelines are free of flammable vapours before any hot works.
- Know the location of the nearest firefighting equipment.
- Follow recommended safety procedures in case of fire.

GAS CYLINDER SAFETY

Refer to electrical manual (AIMS/DM/MEL-63)


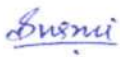


Scope:


The set of instructions apply to Gas cylinders storage and handling.

Safety Instructions:

- Gas cylinders come under “explosives.”



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- Gas Cylinders are pressurized
- Gas cylinders storage should have storage license according to their stock.
- Gas cylinders should be stored only under shade, away from heat and fire and smoke
- Some of the gases are explosive, flammable, toxic and inert.
- Gas cylinders should be transported through appropriate cylinder trolleys
- Gas cylinders should be kept vertically with proper-chained condition, safety caps to be ensured at its nozzle.
- Full and empty cylinders should be properly marked.
- Oxygen and Acetylene cylinders should not be stored together.
- Proper ISI color code to be followed.
- Gas cylinder header lines should have NRV's and gate or globe valves at every safe distance. Brass lines only to be used.
- Gas cylinder storage area should have the following necessary items.
 - Enough ventilation and exhaust
 - Fire extinguishers / hose reels
- Bulk gas should be delivered through manifold system with appropriate header and tapings as per the gas cylinders act and rules guidelines.

HOUSEKEEPING

: Refer to housekeeping manual (AIMS / DM / HSK – 07)


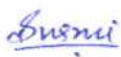

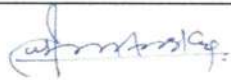
Scope:


This set of guidelines apply to cleaning, mopping and infection control in the Hospital.

Safety Instructions:

- Keep all gangways, pathways, aisles and stairways clear.
- Wipe up spilt materials.
- Do not disturb electrical connections during cleaning.
- Do not open electrical panel boards of the machine.
- Ensure power supply is disconnected before cleaning electrical appliances.
- Use Safety gloves (Rubber, PVC) while handling biomedical waste.
- Dump waste materials in appropriate places in backyard.
- Do not spill any hazardous waste on the road.
- Ensure easy access to fire extinguishers.
- Know the location of the nearest firefighting equipment.
- Do not enter radiation room unless otherwise authorized by the department.
- While cleaning cobweb use ladder and helmet.
- Adhere to the policies and procedures as specified in Infection Control Manual.



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HOT WORKS

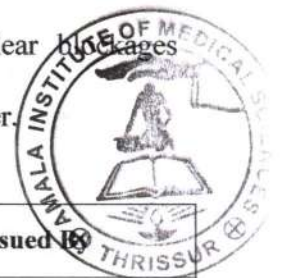
Safety precautions:


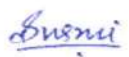
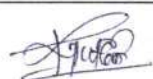
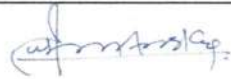
- All Flammable Materials cleared from site.
- Fire Watch to be informed about the work.
- Arc Welding – Proper earthing to be ensured.
- Work at Heights – Safety Belt, Helmets to be used.
- Welding Shields / Goggles to be used by operators.
- Ensure Water and Fire extinguishers are available while working.
- No loose wires, two pin plug sockets are allowed.
- Ensure welding return cable connected to job only.
- Connect the ground clamp when using electrical is welding. The ground clamp should be connected as close to the work.
- Securing gas cutting and welding cylinders so that they will not be upset or damaged.


WORKING IN UNDERGROUND SEWAGE / STORAGE TANKS / SEWAGE TREATMENT PLANTS

Safety precautions:

- Manholes are to be kept open for at least 8 hours before any person starts working inside the tank / vessel / confined space.
- Before entering the tank, ensure no poisonous gas is present by conducting flame test.
- Barricades (with warning sign) to be provided around open manholes.
- No underground work should be done during night and after sunset.
- Nobody should be allowed to go underground without a Valid Work Permit with the site supervisor.
- At any point of time, a single person should not be working underground.
- Every person working underground should have a Safety Belt tied firmly around his hip, with a rope and the other end of the rope tied to a secure structure outside the tank.
- Face mask with self-contained breathing apparatus should be worn by persons working underground.
- At least two persons should be positioned outside the tank directing the underground work.
- All persons working underground should wear PVC gloves / Gum boot.
- Only wooden or non-conducting poles / implements should be used to clear blockages underground.
- Wooden poles taken underground should be brought up after the day's work is over.
- The Contract Supervisor must be always available at site during the work.



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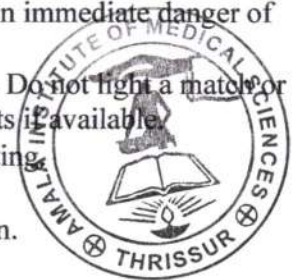
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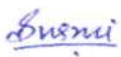

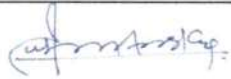
- As soon as the work is over, ensure that the manholes are closed firmly.


EARTHQUAKES

DURING AN EARTHQUAKE:

- Do not panic.
- Move away from overhead hazards
- **IF YOU ARE INSIDE A BUILDING:**
- Stay there! Do not try to exit.
- Do not use the elevators.
- Get under a sturdy table or desk or brace yourself in a doorway or corner
- Move to an inside hallway when possible.
- Choose a location that will allow you air to breathe in the event the building collapses around you.
- Stay clear of windows, bookcases, shelves, cabinets, mirrors, hanging plants and other heavy objects.
- Watch out for falling ceiling tiles, ceiling fans, wallboard and plaster.
- **IF YOU ARE OUTSIDE:**
- Move to an open area.
- Keep away from power lines & poles, trees, walls and chimneys.
- In all cases, try to stay calm and reassure others.
- **AFTER AN EARTHQUAKE**
- Remain calm - reassure others. Use common sense and cooperate with others.
- Wait until all motion has stopped before proceeding with further action.
- Wait until all motion has stopped before proceeding with further action.
- Be prepared for significant aftershocks.
- Do not place yourself in danger.
- Do not use elevators.
- Administer First Aid to injured persons as needed.
- Do not attempt to move any seriously injured persons unless they are in immediate danger of further injury.
- Check for trapped and handicapped persons and assist where possible. Do not light a match or turn on a light switch until certain there are no gas leaks, use flashlights if available.
- Take any emergency supplies and first-aid kits with you when evacuating.
- Go to a pre-determined emergency meeting place.
- Wait until all motion has stopped before proceeding with further action.
- Be prepared for significant aftershocks.


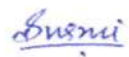

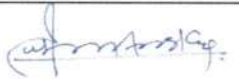



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- Do not place yourself in danger.
- Do not use elevators.
- Administer First Aid to injured persons as needed.
- Do not attempt to move any seriously injured persons unless they are in immediate danger of further injury.
- Check for trapped and handicapped persons and assist where possible. Do not light a match or turn on a light switch until certain there are no gas leaks, use flashlights if available.
- Go to a pre-determined emergency meeting place.
- Turn on a battery operated radio (or car radio) for emergency information.
- Clean up any spilt hazardous materials.
- Take prescribed medication, if any, at their usual time.
- Do not go without food or water for too long. Avoid open containers near shattered glass.
- Check around for building damage and evacuate if there is any chance of the building collapsing.
- Go to a pre-determined emergency meeting place.
- Turn on a battery operated radio (or car radio) for emergency information.
- Clean up any spilt hazardous materials.
- Take prescribed medication, if any, at their usual time.
- Do not go without food or water for too long. Avoid open containers near shattered glass.
- Check around for building damage and evacuate if there is any chance of the building collapsing.
- Do not re-enter buildings until assessed for safety, and use extreme caution if doing so.
- Be prepared for additional significant earthquake aftershocks, which may bring down or further, damage previously weakened structures.
- If possible, assess and establish a safe weatherproof shelter.
- Stay out of risk prone areas.
- Assist with requests from civil defense officers, police, fire fighting or other emergency and relief organizations.
- Wear sturdy shoes for protection from debris or broken glass.
- Check gas, water and electrical lines and devices for damage. Shut off, if appropriate.
- Do not approach downed power lines or objects touched by downed lines.
- Clean up spilled chemicals or other potentially harmful materials.
- Check water supplies. If water is off, use emergency water obtained from water heaters.
- Check to see that sewage lines are intact before flushing toilets or using other plumbing.
- Do not use telephones except for emergency calls to save lives.
- Keep roads clear for emergency vehicles.
- Do not use your vehicle unless there is an emergency.



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BOMB THREATS

Purpose

To establish uniform procedures for management of any bomb threats.

Scope

Hospital wide


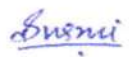
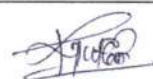

Procedures:


Following points to be noted before informing the security officer / security control room and other authorities.

When a bomb threat is received by telephone:

- **Listen**
- Be calm and courteous
- Do not interrupt the caller
- Obtain as much information as you can



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- Questions To Ask:

- What time will the bomb explode?
- Where are you calling from?
- What is your name?
- Where and why did you place the bomb?

- Pertinent data to record:

- Time
- Date
- Duration of call
- Exact wording of threat

- Identifying characteristics of caller:

- Sex
- Estimated age
- Accent
- Voice (loud, soft, etc.)
- Speech (fast, slow, etc.)
- Diction (good, nasal, lisp, etc.)
- Manner (calm, emotional, vulgar, etc.)
- Was the voice familiar?
- Did the caller seem familiar with the area?
- Any background noises?

- Write down as much information as possible. Include your impressions of the caller as this may also prove to be useful to investigators.
- After the caller hangs up, notify the Security Control Room and other authorities as soon as possible.

Be prepared to evacuate as soon as possible, after a bomb threat is received:

- Search guidelines:


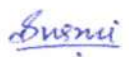

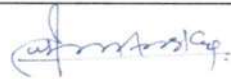
- Look around your immediate area for any suspect object.
- Do not touch anything - report the suspect object if any.
- You can be of help to authorities by pointing out any other unidentified objects.
- Unlock drawers, cabinets, etc. for search crew.


- Precautions:

- Should a device or suspect device be discovered:
- Do not touch or move it.
- Do not assume that it is the only one.
- Leave the area immediately.
- Notify the Security Control Room as soon as possible.

- Evacuation Guidelines:



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- If necessary, the fire alarm system may be activated in order to initiate an evacuation. This will also bring the assistance of fire fighting personnel.
- Keep calm.
- Follow instructions of supervisors or other authorities.
- When evacuating, remove identified personal property, such as lunch containers, briefcases, purses, etc.
- Assist with requests from police, fire or other authorities in order to safely resolve the situation.

CRASH CART

Refer Nursing manual (AIMS/DM/PH-60)/ Pharmacy Manual (AIMS/DM/PH-69)

Scope:

To insure availability of all drugs, equipment, and supplies necessary to initiate advanced life-support measures and ensure availability of carts throughout the hospital.

Responsibilities:

- Carts shall be stocked in accordance with an approved listing of drugs and supplies as established by the organization
- Pharmacy shall be responsible for maintaining and replacing drugs in emergency carts.

Use of crash cart:

- A sealed emergency cart shall be located in designated clinical, patient care areas at all times for use in medical emergencies and resuscitation.
- Carts shall be stocked in accordance with an approved listing of drugs and supplies as established by the organization.
- Emergency carts shall be checked every day for lock and In addition, monthly inspections shall assure that there are not outdated/ damaged drugs in the cart.

Procedures:


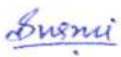

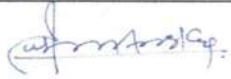
- Medication in Emergency carts shall be inventoried, checked for outdates and replenished by the pharmacist every time the cart is opened in emergency.
- Outdated drugs shall be removed from emergency carts by the pharmacy carts that are ready for use shall be locked with a lock. When lock is removed from a cart, drugs and supplies in cart shall be inventoried and restocked as previously mentioned.
- A log shall be kept listing all drugs and expiration dates of drugs in each emergency cart.


WORKING AT HEIGHTS

Safety precautions:

- Suitable and sufficient access ladders, boards should be used and they should be securely fixed or supported



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- Safety belts in good condition and approved by engineering / project planning to be collected from stores should be given to all persons going on roof and they should be asked to wear them and fasten them securely.
- Nobody should be allowed to go on to the light roof without a valid work permit available with the site supervisor.
- Tools / materials taken to the roof should be kept properly and should be brought down after the day's work is over.
- The contract supervisor must be always available at site during the work.

REGISTER MAINTAINED

1. Daily Inspection Register
2. Extinguisher Register
3. Pump Room Checklist
4. Inspection Register
5. Safety Audit Report File
6. Mock Drill Report

Betsy

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