

LEARNINGS FROM AMRI HOSPITAL FIRE
KOLKATA

Date: 09.12.2011

Date and Time of Incidence : 9.12.2011 at around 0230 Hrs
Location : AMRI Hospital Kolkata
Type of Incident : Fire in the building causing multiple casualties

Brief:

At least 93 people – most of them patients died in the huge fire that broke out in the early morning hours in AMRI. The fire began in the basement where a pharmacy and the godown were located. The area was stacked with highly combustible material such as PVC pipes, mattresses, oxygen and LPG cylinders, and even mobil (engine oil). When the fire was sparked off, dense smoke started billowing out of the basement and entered the upper floors catching many persons unaware in their sleep.

While most nurses, doctors and other staffers were able to get away, many critically ill patients suffocated to death in their hospital beds. With no outlet / openable windows, the smoke started circulating in the building, choking the patients and the staff. None of the patients who died had any burn injuries. All were choked to death.

An incensed Chief Minister Mamata Banerjee openly blamed the hospital authorities for this “criminal negligence”. Taking a tough stand, she ordered the filing of criminal cases against them and ordered their arrest. In the afternoon six directors of the hospital group, R.S. Goenka, S.K. Todi, Manish Goenka, Prashant Goenka, Ravi Todi and D.N. Agarwal, surrendered at Lalbazar, the city police headquarters. They were booked on charges of culpable homicide tantamount to murder under Section 304 of the IPC.

Ms Banerjee, who holds charge as health minister, also cancelled the hospital's licence and registration.

What went wrong :

- The fire broke out at around 0200 am. The hospital staff started fire fighting operations on their own without initiating a fire alarm or informing the fire brigade. This resulted in loss of initial crucial time. Internal fire hydrants / sprinkler system were either nonfunctional OR the staff were not trained to operate them in an emergency situation. This resulted in the fire spreading rapidly and out of control.
- The hospital security staff did not allow local residents to enter for rescue work after the fire was detected. Few local youths of neighboring slums scaled the hospital's rear boundary wall and jumped into rescue work. Unfortunately, it was too late by then.
- The hospital staff informed fire brigade and Police only when fire was out of control and only then all locked doors / gates were opened for rescue operations upon their arrival

- Fire brigade help also turned up very late and were found entering smoke areas without BA sets. Also had no search lights / ladders to initiate any effective rescue operation at initial stage.
- The fire alarm system for the building was found SWITCHED OFF to avoid false alarms. This resulted in no fire alarm alert and centralized AC system too did not trip automatically. The running of AC in fire situation resulted in spreading of smoke in unaffected upper floors causing huge number of casualties. No fire / smoke dampers were found working in the fire situation.
- External glass Façade made of double glass panes were very difficult to break and the building had no operable windows to dissipate smoke which resulted in many deaths due to suffocation / asphyxia
- Emergency lighting too did not work / nor was adequately available resulting in total darkness inside the building hampering rescue / firefighting. Nobody started rescue operations using internal staircases / lifts ramps due to pitch darkness and presence of dense smoke at early crucial stage. The staff was untrained and was unaware of any emergency preparedness.
- The rescue operation was seen being carried out using rope -ladders from outside the building reaching to the trapped personnel by breaking the façade glasses. Though this saved many valuable lives but the technique used to rescue was hilarious / dangerous. Few patients were found jumping on hydraulic platform from the window.
- The basement was converted into pharmacy and godown stacked with highly combustible materials. It was learnt that even oxygen cylinders / LPG cylinders were found stored in the basement.
- The Fire Brigade vehicles could not reach closer to the building since the approach route was halved due to DG set installation and Gas Bank and emergency vehicles could not turn through the narrow passage.
- It is clear that all significant elements of the system failed - -starting from the regulatory oversight of the management to failure of State authorities in disaster management ; thus leading to loss of so many precious lives.

Learnings from the incident / Recommendations:

- All statutory and regularity compliance to be strictly implemented by the management not only to get adequate NOCs but in view to safeguard life of people.
- Disaster management plan to be prepared and implemented at site providing clear-cut guidelines to staff and concerned about actions in various emergency scenarios. The plan to be followed up with training of staff and continual improvements through on site mock drills.
- Firefighting / life safety systems to be commissioned and to be maintained in a Ready to Operate condition all the time
- Emergency power: Reliable source of emergency power to be installed in the building at par with the codes and practices (Use of MI cables may be made compulsory) so that even if main power source is switched off , life safety systems, lifts, emergency lighting, peripheral lights etc shall be provided with un interrupted power. This shall ensure rapid and effective emergency response.
- All emergency staircases and lifts should open in enclosed lobby (that can be pressurized by blowers upon activation of fire alarm) to avoid vertical smoke and flame travel. At least one emergency staircase shall open directly outside building at Ground floor for safe evacuation and rescue.
- Openable windows: At least 15% openable windows to be provided that can be opened easily during emergencies. These windows / doors to be marked with signage and periodically checked for operability.
- Basement: Proper mechanical ventilation and smoke exhaust system to be installed in basement to avoid smoke logging. No combustible materials to be stored in it. Any type of modifications to accommodate storage of consumables / stationery etc will be forbidden.
- Fire vehicle approach: Approach and peripheral roads to be designed to cater 20 meter turning radius for Fire Tender / Hydraulic Ladders and should be capable of taking 40 tons load of Fire VehicleS.

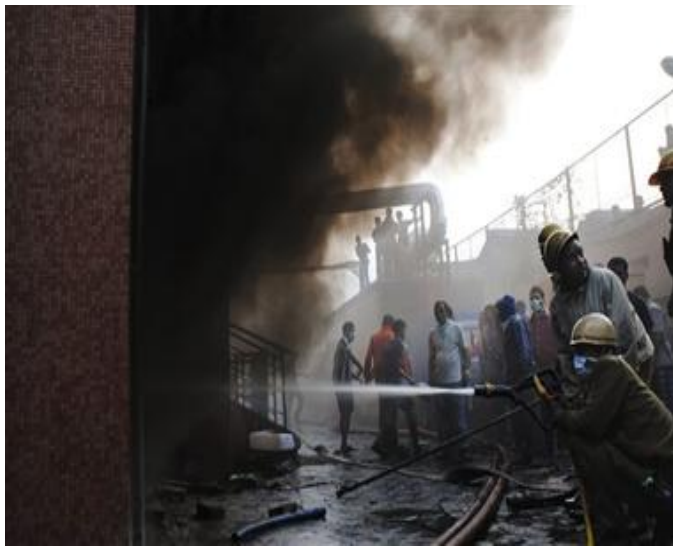
Photo gallery:



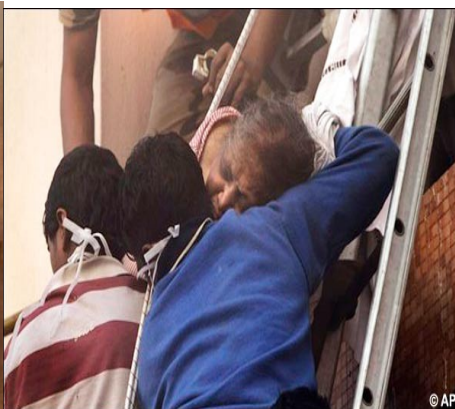
AMRI Hospital



Fire vehicles standing outside the premises unable to enter



Black dense smoke suggesting presence of hydrocarbon / PVC. Chaos outside the building



Rescue from outside of the building. No use of internal staircases ramps due to smoke logging / darkness



Rescue techniques used for evacuation though saved the lives; but a very rudimentary way due to darkness inside the building.



Pitch darkness and smoke logging inside building making rescue operation difficult.