Non-structural safety assessments: a case of 15 hospitals in Assam

HFA Priority area

Priority 4: Reducing underlying risk factors

Abstract

‘Assessing Hospital Safety describes the audit which was conducted in fifteen government and private hospitals in the three districts of the Indian state of Assam. The audit focused on non-structural safety aspects in health facilities. The main findings were that all the aspects of non-structural hospital safety are given differential importance in the audited hospitals and health facilities in Assam. Aspects, which were researched, can be categorized in two types: general Safety aspects and disaster/ emergency preparedness aspects. Findings were shared with government and hospitals.

Context

Assam, a state of India, situated in the northeastern region of the country, is located in seismic Zone V, and is prone to earthquakes of high magnitude. The State has a history of two great earthquakes of magnitude 8.7 (in the year 1897) and magnitude 8.5 (in the year 1950). As many as 20 destructive earthquakes of magnitudes 6 to 7 have rocked this region during the past century. The State is also vulnerable to disasters like floods, landslides and cyclones as well as man-made disasters. Hospitals play a vital role in a society. During normal times and in emergencies, hospitals are the places where populations seek help and sometimes even shelter. During emergencies the demand for the services of hospitals can increase dramatically and hospitals may face issues related to the safety of the patients as well as the overall safety of the hospital and its staff. Therefore, it is necessary to assess the vulnerability of hospitals and find out possible mitigation measures to tackle disasters in hospitals and surrounding area.

Location

The project was implemented with 15 Public and private hospitals in three districts of Assam. The districts covered were Nagaon, Jorhat and Dibrugarh.
**Addressing the Problem**

To address the problem, Assam State Disaster Management Authority (ASDMA) with the All India Disaster Mitigation Institute (AIDMI) join hands and designed the ‘Hospital Safety Audit tool’ to achieve following objectives:

- To assess the vulnerability of Hospitals/Health facilities from non-structural elements.
- To assess the preparedness of hospitals/health facilities to prevent or minimize the loss of lives during emergencies and disasters in respective towns/districts.
- To recommend non-structural mitigation measures for each hospital/health facilities to respond to the need of communities especially during emergencies.

The safety audit tool covered 18 aspects and had a total of 183 questions. The tool was developed after extensive literature study and review of various guidelines from national and international reports; the guidelines of the National Disaster Management Authority (NDMA) on medical preparedness & mass causality management followed; and the knowledge and lessons of existing audit tools of the United Nations and many other international and national agencies and organizations. A total of 38 documents and reports were reviewed. Stakeholders involved in the project were the Health Department, doctors and hospital administrators, AIDMI and government officials from Assam. Doctors and administrators were sensitized on the need for such safety assessments and trained on how to use this safety audit tool.

The hospital administrators conducted safety assessments in their respective hospitals. The findings were verified by government officials and AIDMI experts. Each hospital was assessed for general safety, command & control, communication, security, triage, logistics & supply management, anchoring, fire evacuation, heating, cooling & ventilation system, electricity, surge capacity, lighting, water & food, medical gases, waste treatment, hygiene and human resources.
Result

It was found that there are positive and negative aspects in all hospitals. Most of the issues identified are due to mindset and not lack of resources. Aspects such as hygiene, for instance, are often not very costly to address but are in most cases not given enough attention to due to reasons not related to financial means.

Another aspect, which seems to have been neglected in the hospitals in Assam is the supervision of everything, which happens inside the hospital. The hospital must keep all patients, staff and visitors supervised at all times in order to know who is doing what inside the hospital. This is especially necessary in situations of increased stress such as disaster scenarios and emergencies. Security staff is one of the aspects of control. Even in smaller, one story building hospitals it is necessary to have enough security staff in place. Security staff ensure that human life and hospital assets are protected against threats of destruction and violence. Furthermore security staff is necessary to guarantee law and order especially in situations like emergencies or sudden increases of patients due to external factors.

The problem in many health facilities is that the staff members are not properly trained to recognize underlying risk factors. It is important that people who work in the hospital are able to recognize threats which might not seem very serious but which might turn into catastrophic factors in emergency situations. Obstructed corridors, which were a common sight in the hospitals, are examples of indirect threats. They might only be perceived as reduced space, but in case of an emergency where the life of a patient depends on the time it take to bring him from one hospital department to another they might be a major threat.
Another important aspect of nonstructural safety, which has been widely neglected in the hospitals in Assam is the aspect of ‘Evacuation’. Evacuating is a procedure, which is done in case of immediate threat but must be planned if it is to be conducted efficiently without exposing people to increased threats. In none of the five hospitals in which the audit was conducted was there a planned evacuation procedure in place, which includes the different aspects of evacuation such as evacuation decisions and evacuation relocation that is regularly tested with mock drills. For each of the 15 Hospitals, findings and recommendations were shared.

**Measuring the success:**

The project was completed recently and findings were shared with relevant authorities. Its long lasting impacts are yet to be measured, but hospitals have started implementing
recommendations and look forward to support from authorities to make hospitals safe during emergencies.

**Relevance to HFA**

The initiative guides us to integrate DRR in health facilities. It also guides authorities on how to assess health facilities from disaster risk and take corrective mitigation measures to make disaster resilient hospitals. The HFA’s perspective to strengthen health facilities and assure functioning during emergencies is served by these initiatives. The initiative is relevant to HFA2 Priority 1 on understanding disaster risk as well as Priority 4 on preparedness and building back better as discussed in the Zero draft.

**Potential for replication:**

This innovative approach to find out underlying risk factors in health facilities was one of its kinds in South Asia. This pilot came out with the thought provoking findings and encourages national and sub-national authorities to carry out safety assessments in all public and private hospitals. The Hospital Safety Audit Tool developed can be used to assess any hospitals. Such innovations are rare in DRR space and have immense scope of replication.

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