

## Introduction

The Hyogo Framework for Action 2005-2015 (HFA), adopted at the World Conference on Disaster Reduction in January 2005, put forth the following priority for action to measure the commitment to and success of national emergency risk reduction programmes: *Integrate disaster risk reduction planning into the health sector; promote the goal of “hospitals safe from disasters” by ensuring that all new hospitals are built with a level of resilience that strengthens their capacity to remain functional in disaster situations and implement mitigation measures to reinforce existing health facilities...*”

## Risk Reduction in the Health Sector and Status of Progress

Risk reduction has a critical place in the health sector. Health facilities and health services—a community’s lifeline in normal times, but especially so in times of crisis—have been severely damaged or, at the very least, left unable to function in the aftermath of disasters and emergency situations. There are countless examples of health infrastructure—from sophisticated hospitals to small but vital health centres—that have suffered this fate. One such case occurred in the Hospital Juarez in Mexico. In 1985, almost 600 patients and staff lost their lives when this modern (for its time) and well-equipped hospital collapsed in the wake of an earthquake. More recently, the 2005 South Asia earthquake that affected principally Pakistan and parts of India and Afghanistan damaged up to 80% of the health infrastructure in some areas, crippling health services.

It is just as common to see health facilities that are left standing but nevertheless unable to function, due to a failure of lifeline services, non-structural elements and equipment or to insufficient contingency planning (external and internal distribution of space, access routes, etc.). Following the 2006 war in Lebanon, 26% of health facilities were unable to provide any kind of service and another 6% were only partially operational.

Therefore, safe health facilities are those in which health services remain accessible and functioning at maximum capacity during and immediately after disasters, emergencies or other crises. In order for health facilities to protect the lives of patients and staff, they must be physically resilient and able to remain operational and continue providing vital health services.

Reducing risk in the health sector is achievable and progress has been made. At the global level, it is increasingly common to find the topic on national and international health agendas (in fact, Safe Hospitals and Health Facilities is the theme of the 2008-09 World Disaster Reduction Campaign—a joint effort between the International Strategy for Disaster Reduction (ISDR) and the World Health Organization (WHO). International organizations have endorsed resolutions to intensify support to Member States affected by crises and disasters, to work closely with the ISDR to ensure adequate emphasis is given to health concerns, to assess the resilience and risk-management capability of all key health infrastructure and to set the goal that all new hospitals are built with a level of protection that better guarantees they can remain functional in crisis situations and that existing health facilities take the necessary steps to reduce risk through mitigation and preparedness measures.

Progress has also taken place in a number of high-risk countries. Nepal offers a good example of what countries can do with existing resources. A three-year program supports activities and the development of publications aimed at reducing hospital vulnerability following earthquakes. Structural and non-structural assessments of selected hospitals were carried out in Kathmandu and guidelines for seismic vulnerability assessment in hospitals were published by the National Society for Earthquake

Technology. In Morocco, hospital managers and other health decision-makers have been trained to use a hospital risk management approach. The course was later adapted to the needs of Asian countries. In the Philippines, a substantial number of health facilities were destroyed by natural hazards in 2006. The Department of Health now requires hospitals to submit emergency response plans prior to official accreditation and will be conducting an assessment of hospital facilities in Metro Manila as a basis for future hospital design and planning activities. In Latin America and the Caribbean, several countries are pilot testing a Hospital Safety Index—a tool or scorecard that uses a wide range of factors to measure and rank a health facility’s level of safety, not only in terms of its physical and functional limitations, but also the organizational aspects as well. Although it is not meant to replace an in-depth analytical evaluation, this tool, nonetheless is easy to use and takes little time to apply.

Despite a degree of success in demonstrating the cost-effectiveness of making health facilities safer and capable of delivering health services during and immediately following disasters, progress has been hampered by a number of reasons, including an erroneous perception that building resilient health infrastructure is prohibitively expensive or the lack of involvement of multi-disciplinary experts in achieving these objectives.

However, the most important factor holding back rapid progress in this field may be the absence of a political commitment from outside the health sector. Disaster risk reduction in the health sector must be a responsibility shared among **many** sectors and constituencies: such as Finance and Planning, where funding decisions are made or with the international donor community. The choice of the land on which to build a health facility is often determined by local authorities, while the actual construction may be contracted privately or carried out or supervised by the Ministry of Public Works. Ministries of Health are quite sensitive to the need to incorporate risk reduction into health facilities (and indeed sector-wide) but cannot achieve this goal in isolation.

The key technical issues that must be addressed in order to achieve the goal of “Safe Hospitals” are: hazard assessment, site evaluation, appropriate conceptual design, competent analysis, complete pre-construction detailing, quality control during construction and planned maintenance. Overriding all of this is the critical need for independent checking by knowledgeable and experienced agencies. It is equally as important to address issues that relate to ensuring that health facilities can continue to function and that health services are adequately prepared to ensure continuity of services.

In summary, we have learned that with current knowledge, existing resources, and a strong political commitment, it is possible to stop disasters and reduce risk in the health sector. Everyday deficiencies in providing routine health services can be compensated for. However, in large-scale emergencies, the backbone of lifesaving health services must be preserved. Hospitals provide a great social value to communities and an essential sense of security. Communities do not put a price tag on this; rather they consider it one of their most basic needs. Although the social, political and economic justification for maintaining the functionality of hospitals in the aftermath of disasters is strong enough, there is an even stronger justification within the health sector itself. In some regions of the world, the cost of running hospitals consumes approximately 70% of the budget of the ministries of health; in remote areas and in small island nations, frequently there is only one facility of this type; losing this hospital represents a 100% loss. Every day the health sector invests large sums of money in building, remodeling or expanding health infrastructure. We cannot let the opportunity pass to draw attention to the importance of incorporating disaster risk reduction measures into the process to safeguard this critical investment.

## Key Points for Discussion

- ▶ Strategies for garnering political support for making health facilities (old and new) structurally more resilient
  - ▶ What can communities do to demand safe health facilities according to the definition on page 1 (community-driven pressure)?
  - ▶ Who should the main partners be at the international level? At the national level?
  - ▶ Lessons learned from recent emergencies.
  - ▶ Suggestions for “packaging” a comprehensive approach to safe health facilities that addresses all aspects: structural, functional and operational resilience.
  - ▶ Steps for making health facilities and the health system more resilient and strategies for securing resources to take this initiative forward.
  - ▶ Greater involvement of the construction industry in multi-disciplinary fora addressing disaster prevention and risk reduction
  - ▶ The routine use of check consultants (*bureaux de contrôle*) in capital projects
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## Where to Go for More Information

**Health Facility Seismic Vulnerability Evaluation**, published by WHO’s European Regional Office.

**Field Manual for Capacity Assessment of Health Facilities in Responding to Emergencies (WHO, 2006)**. A self-assessment management tool for evaluating disaster and emergency preparedness in health facilities, it allows users to customize the application of measures according to the resources, capabilities and acceptable norm in their respective national or regional settings.

**Publications on vulnerability assessment of health facilities in Nepal:**  
[A Structural Vulnerability Assessment of Hospitals in Kathmandu Valley](#)  
[Guidelines for Seismic Vulnerability Assessment of Hospitals](#)  
[Non-Structural Vulnerability Assessment of Hospitals in Nepal](#)

**Why Are We Still Building Unsafe Hospitals?** Editorial from the WHO/PAHO newsletter *Disasters: Preparedness and Mitigation in the Americas*. Issue 99, April 2005. Discusses why health facilities are still being built without the necessary safeguards to ensure they are able to function after a disaster, even though the necessary knowledge exists and is readily available.

**Safe Hospitals - A Collective Responsibility, A Global Measure of Disaster Reduction.** This short, easy-to-read publication, prepared for the Kobe World Conference on Disaster Reduction, summarizes why and how to reduce risk in health facilities.

**Guidelines for Vulnerability Reduction in the Design of New Health Facilities.** This publication puts forward three potential levels of protection from adverse events, or performance objectives: life safety, investment protection, and functional protection.

**Protecting New Health Facilities from Natural Disasters.** Recommendations on how to use risk reduction guidelines, it emphasizes the social and economic benefits of applying risk reduction mitigation measures to the design, planning and construction of health facilities.

Equally important, it describes how to apply these measures to achieve protection levels that not only ensure human safety and the continuity of services.

**Design Manual for Health Services Facilities in the Caribbean (with particular reference to natural hazards and other low-frequency events)** This document is aimed at those who commission, manage and monitor capital works projects in the health sector and those who design such projects. It is important that the owners (or custodians) and the designers of healthcare facilities have a common understanding of the objectives and performance expectations of such facilities in the face of natural hazards.

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[www.helid.desastres.net](http://www.helid.desastres.net).