

Recommendations and Goals

INTRODUCTION

Since 1960 natural disasters in Latin America and the Caribbean have caused the deaths of some 180,000 people and approximately US\$ 54 billion in property damages. The health sector has been particularly vulnerable to these damages, so much so that hurricanes like “Gilbert” (Jamaica, 1988), and “Luis” and “Marilyn” (Antigua and Barbuda, St. Kitts and Nevis, St. Maarten, and other islands, September 1995) and the earthquakes in Mexico (1985), El Salvador (1986), and Costa Rica and Panama (1991) seriously damaged hospitals and health centers just when they were most needed to provide health services. ECLAC estimates that during the period 1985 to 1988 the health sector lost roughly US\$1.9 billion.

In Latin America and the Caribbean there are just over 15,000 hospitals, as many as 50% of which are located in areas at high risk to natural hazards. Many of these facilities lack emergency plans and disaster mitigation programs or the appropriate infrastructure for resisting powerful earthquakes or hurricanes.

Concerned about the high risk that this situation poses to the health of the populations and economic well-being of the countries, delegates from Governments, representatives of governmental, international, regional, and nongovernmental organizations, and the private and scientific sectors of the Latin American and Caribbean countries met in Mexico City from 26 to 28 February 1996 at the **International Conference on Disaster Mitigation in Health Facilities**. This Conference was convened by the Pan American Health Organization, Regional Office for the Americas of the World Health Organization (PAHO/WHO), together with the Ministries of Health and Interior of Mexico, the Social Security Institute of Mexico, the

Secretariat of the International Decade for Natural Disaster Reduction of the United Nations Department of Humanitarian Affairs (IDNDR), the Economic Commission for Latin America and the Caribbean (ECLAC), the General Secretariat of the Organization of American States (OAS), and the World Bank.

The participants decided to alert the Governments and international, regional, and subregional organizations of the need to adopt regional and national policies to reduce the vulnerability of existing or planned hospitals to hurricanes and earthquakes and other hazards, with the objective of helping to protect the lives of patients and health personnel and ensuring the availability of health care services.

RECOMMENDATIONS AND GOALS

1. The participants of the **International Conference on Disaster Mitigation in Health Facilities**, held in Mexico City from 26 to 28 February 1996, *considering that*:
 - 1.1 The definition of health adopted by the countries in the WHO Constitution is: “a complete state of physical, mental and social well-being and not merely the absence of disease” and the prevention and reduction of damage due to natural hazards form an integral part of health;
 - 1.2 The General Assembly of the United Nations has declared the decade of 1990-1999 the International Decade for Natural Disaster Reduction (IDNDR, Resolution 44/132) and adopted the “Strategy and Plan of Action for a Safer World” at the World Conference on Natural Disaster Reduction, held in Yokohama, Japan, in May 1994;
 - 1.3 The high number of lives lost and the economic costs produced either directly or indirectly by the inadequate measures employed to protect health care facilities against the impact of hurricanes, earthquakes, and other hazards can be avoided;
 - 1.4 The uninterrupted operation of health care facilities in the wake of a disaster, when the need for them is greatest, is extremely important, both socially and politically;

- 1.5 The program for disaster mitigation in hospitals, promoted by PAHO with the generous support of the Governments of Canada and the United States, as well as the pilot project for hospital vulnerability analysis conducted by this same Organization with the backing of the European Community's Humanitarian Office (ECHO), have been very satisfactory and necessary;
- 1.6 Disaster mitigation measures should be carried out at the *structural* level of the physical plant (location, soil conditions, design, and compliance with and application of construction standards), the *nonstructural* level (equipment, installations, hazardous and pharmaceutical substances, furniture), and the *functional* level (physical distribution and training of human resources). It is important to guarantee the integrity of lifeline services outside of the hospitals or to create basic reserves to permit hospital autonomy;
- 1.7 Interventions to reduce *nonstructural* vulnerability (protection of equipment and supplies, better securing of furniture and equipment, planning for emergencies) can be identified and carried out by the staff of the health facilities themselves with minimal economic investment;



The Conference provided a forum for nearly 500 delegates to endorse measures to reduce risk to hospitals in this Region. There were opportunities both for technical discussions and ones focusing on the economics and politics of disaster reduction.

- 1.8 The United States Federal Emergency Management Agency, in its publication “Seismic Considerations—Health Care Facilities” (FEMA publication No. 150) states that: “The average increase in cost of health care facilities . . . should be less than 1.5 percent of the construction cost of the building which, of course, is only a part of the total project costs.” The cost of protecting against high winds is generally less than protecting against earthquakes.
 - 1.9 The greatest challenge will be to provide *structural* reinforcement for existing health care facilities, despite the relatively high cost such corrective reinforcement measures or structural adaptations may present, as well as to fulfill the need for highly specialized professional advisory services;
 - 1.10 Regular maintenance and inspection of health care facilities, particularly in zones at seismic or meteorological risk are of great importance;
 - 1.11 Health care facilities form an integral part of the communities they serve, sharing hazards and many aspects of vulnerability, and disaster reduction projects and programs in communities also contribute to reducing risk in health facilities;
2. *Urge* all countries and institutions to:
 - 2.1 Take into account that *each country has the primary responsibility for protecting its population and infrastructure from the impact of natural disasters*, as formulated in the “Strategy and Plan of Action for a Safer World,” adopted at the World Conference on Natural Disaster Reduction, held in Yokohama, Japan, in May 1994;
 - 2.2 Declare the adoption of concrete measures to mitigate the impact of natural phenomena on the physical plant, lifeline services, and equipment in health care facilities as a high health, social, and economic priority, and as an integral part of disaster prevention and emergency preparedness plans;

- 2.3 Define guidelines, integrated plans and programs for disaster mitigation in existing hospitals and other health care facilities, as well as those in the planning phase, mustering the political will and resources necessary to prevent facilities designed to improve health from causing loss of life and injuries when natural hazards strike, and to ensure their uninterrupted operation in emergencies;
 - 2.4 Take into account the recommendations made by the Technical Commissions on earthquakes and hurricanes during the Conference;
 - 2.5 Review the working documents “Role of International Development Financing Agencies,” “Economic Impact of Natural Disasters on Health Infrastructure,” and “General Policies on Consideration of Natural Disasters in Proposals for Investment in Health Infrastructure” as technical and scientific guidelines for the formulation of this strategy and its respective work plan;
 - 2.6 Ensure that the planning, design, construction, alteration, and maintenance of health facilities be carried out by multidisciplinary, professional teams to guarantee proper investment in health facilities.
3. *Recommend* to the countries at risk to hurricanes and earthquakes that they continue, strengthen, or initiate the disaster mitigation process in health facilities between the years 1996 and 2001, for which it will be necessary to establish an annual schedule for reaching objectives, to be determined in accordance with constraints and possibilities of local political, economic, organizational, technical, and logistical conditions. *The following is proposed:*
- 3.1 Formally identify which of the *existing health care facilities* are of greatest priority for the study and adoption of measures to reduce the impact of hurricanes or earthquakes;
 - 3.2 Adopt legislation and standards regulating the characteristics of the investment in order to avoid structural collapse and nonstructural

- damages that would affect the safety or functionality of the hospital in the event of a disaster;
- 3.3 Consider geological and hydrometeorological hazards as determining factors in decision-making when planning health services, and introduce disaster mitigation measures into the design and construction of new health establishments or into the remodeling and expansion of existing facilities;
 - 3.4 Carry out structural vulnerability studies and design retrofitting for those health care facilities which have been classified as “priority” in accordance with accepted norms and procedures, given the present state of technical knowledge;



Conference delegates recommended that by the year 2001 all “priority” hospitals in the Region be able to withstand moderate- to high-intensity events. Factors used to assign priority are: risk level, hospital complexity, and population served. Pictured is a hospital that collapsed in the 1985 earthquake in Mexico. (Photo: C. Gaggero, PAHO/WHO)

- 3.5 Ensure that *existing hospitals* in areas exposed to natural hazards meet the standards and regulations governing *nonstructural* safety in case of disaster;
- 3.6 Include measures for nonstructural mitigation against earthquakes and/or hurricanes, as appropriate, in all plans for maintenance, inspection, remodeling, and upgrading of existing hospitals;
- 3.7 Identify budgetary resources and have mitigation plans to protect the lives of patients and health workers in hospitals classified as “priority” and where vulnerability studies have been made.

By the end of the year 2001:

- 3.8 All hospital structures considered “priority” will be able to withstand moderate- to high-intensity events without suffering functional damage and the maximum established probable event for their designs without danger of collapse, within the useful life defined for their location, and will protect the life and health of their occupants and maintain essential health care services;
 - 3.9 The level of vulnerability to natural hazards, as well as the level of preparedness, will be criteria to be considered in hospital accreditation;
 - 3.10 Necessary allotments will be assigned to carry out measures to reduce vulnerability of health facilities within the budgets of all public and private institutions in the health sector.
4. *Recommend* to the regional and subregional organizations that they:
- 4.1 Consider the recommendations of the “International Conference on Disaster Mitigation in Health Facilities” in the agenda of subregional meetings of Ministers of Health and at other gatherings during 1996, so that they are adopted as policy;
 - 4.2 Request PAHO/WHO to serve as a facilitator to promote the exchange of information and mutual support for disaster mitigation in health facilities, in the health sector, among other sectors, and regional and subregional agencies among the countries of Latin

- America and the Caribbean, taking advantage of the development and experience that some countries have already attained in this area;
- 4.3 Encourage and promote the development of training and research in universities and institutions of higher learning as a means to maintain efforts to reduce the impact of disasters on the health sector;
 - 4.4 Strengthen the ongoing education and training of health workers in the mitigation of structural, nonstructural, and functional damage, as well as disaster preparedness;
 - 4.5 Follow up on schedules for disaster mitigation in health facilities in order to assist countries to comply with established goals;
 - 4.6 Support the countries in the development and use of data banks and experts in mitigation;
 - 4.7 Support the efforts of the countries to include risk assessment in the health sector.
5. *Urge* international agencies to:
- 5.1 Include the presentation of these Recommendations in the agenda of their respective Governing Bodies for approval;
 - 5.2 Include risk analysis with respect to natural hazards as part of the criteria for the approval of loans or grants for hospital construction or retrofitting;
 - 5.3 Strengthen their technical cooperation on the subject, promoting the development and dissemination of methodologies that will be utilized and the standards that will be applied when carrying out risk analyses with respect to natural hazards in both the health sector and the planning of economic development;
 - 5.4 Support and promote the linkage between loans and grants aimed at improving structural and nonstructural safety, and the organized response of priority health care facilities.