

Recommendations from the Technical Commission on Mitigation Measures for Hurricanes

27 FEBRUARY 1996
MORNING SESSION

The Commission has produced the following recommendations:

1. Governments should mandate the use of appropriate building codes and include special provisions for hospitals.

An importance factor of 1.5 on design forces is to be used in the construction of health facilities in hurricane zones, as well as special inspection procedures, including strict quality control, from the design stage to completion of construction.

2. Nonstructural elements of the building envelope, e.g., windows and cladding, are to be designed to similar levels of safety as those applied to structural elements. In addition, all glass used should be laminated or storm shutters should be provided.
3. Each country is to form a national technical advisory group or commission to develop and advise on mitigation measures for health facilities. This group should include but is not limited to:
 - a) Technical personnel involved in health care as well as maintenance departments of the Ministry of Health;
 - b) Government technical personnel and project management agencies responsible for hospitals;
 - c) Representatives of professional institutions of engineers and architects.

4. The additional costs of design for increased wind-forces and new standards for nonstructural elements should be absorbed in project costs.
5. Where appropriate, wind and/or hydro-meteorological studies are to be conducted to support design of health facilities.

(Note: Technical considerations are expected to be covered by construction codes to be selected.)

AFTERNOON SESSION

1. The Commission takes the same position as voiced in point 3 of the morning's proceedings with the following additions:
 - a) The group or committee as indicated in point 3 of this morning's proceedings will focus on health;
 - b) It is to be expected that the health sector would act as a catalyst for other sectors.



The additional cost of building hospitals to resist hurricane force winds is minimal, making the failure to enforce such standards inexcusable. Experts meeting in a technical session on hurricanes called on Governments to mandate the use of appropriate building codes and include special provisions for hospitals. (Photo: H. Molin, PAHO/WHO)

2. The considerations to be taken into account in determining the order of priority of hospitals for retrofitting against hurricanes are:
 - location of the hospital;
 - level of hurricane hazard and history of occurrence;
 - area of influence of the hospital, based on the population it serves;
 - level of care it provides (local, regional, national/teaching);
 - age of the hospital;
 - type of construction under consideration, whether it meets hurricane hazard standards;
 - degree of vulnerability;
 - cost factor;
 - organization for disasters (plan available?);
 - training of personnel.
3. For the preparation of projects to retrofit priority hospitals subject to potential damage by hurricanes, the following requirements should be met:
 - technical assistance should be obtained from specialized agencies;
 - standardization of procedure manuals should be achieved to negotiate international loans;
 - priority should be granted by financing agencies to hospital retrofitting;
 - national funds are to be allocated as counterpart for this purpose.
4. The formulation and drafting of invitations to tender for the design and execution of projects must clearly stipulate the need for specific expertise in design for hurricanes and other natural hazards.
5. As the construction of a new hospital or major retrofitting are rare occurrences in any given island, it is extremely important to clearly define the organizational structure for decision-making. In the pre-construction programme, there should be two clearly defined intervals for client review,

discussion, and decision-making following any necessary amendments. These intervals would follow the consultant's inception report and the preliminary design submission.

6. PAHO should develop a rating and accreditation system for preparedness for hurricanes and other natural hazards, or should encourage the Health Ministries to jointly develop such a common rating. Such a system would provide goals and incentives for individual hospitals, so as to further accelerate the mitigation activities.