

# Safe Hospitals in Emergencies and Disasters

Structural, Non-structural and Functional Indicators



## Save Lives!

Make Hospitals Safe in Emergencies.



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Structural, Non-structural and Functional Indicators



## Acknowledgments

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# Preface

Hospitals are one of the essential institutions that must continue to function when an emergency event occurs. In spite of its importance, health facilities are themselves vulnerable to disasters and can get damaged, risking the lives of patients and health workers.

This book presents structural, non-structural and functional elements that must be considered in order to ensure that the health facility can withstand and remain operational in emergencies. It forms an essential reference for hospital administrators and planners including architects, engineers, safety officers, management, and emergency managers. It enumerates indicators in the form of a checklist that can be easily used in planning for construction, retrofitting, renovation, and assessment of damages.

These indicators were developed through years of experience, research, workshops, and reviews. Initial work was started by the Philippine Department of Health – Health Emergency Management Staff (DOH-HEMS) and National Center for Health

Facility Development (DOH-NCHFD), in partnership with the Association of Hospital Administrators (AHA) Philippines through the support of the World Health Organization Regional Office for the Western Pacific (WHO-WPRO). After further reviews by other experts and Member States including Cambodia, Lao People's Democratic Republic, and Viet Nam, this regional tool was developed. We hope that this tool will promote awareness of these essential elements and understanding that cost-effective strategies can be done to ensure safety. It is our goal that this book will assist government agencies and private stakeholders to start planning and incorporating these measures for preparedness in the health sector.

Saving lives is our priority. Hospitals then must be safe from disasters and prepared to do its vital role.

This project was completed under the technical supervision of Dr Arturo M Pesigan of the Emergency and Humanitarian Action unit of WHO-WPRO.

# Introduction

## World Disaster Reduction Campaign on Safe Hospitals

The World Health Organization recognizes the need for making hospitals safe, especially at a time of disasters and emergencies, when they must be ready to save lives and continue providing essential health services to the community. It supports the World Disaster Reduction Campaign on Safe Hospitals (2008-2009), which seeks to raise awareness and effect change that will:

- Protect the lives of patients and health workers by ensuring the structural resilience of health facilities.
- Ensure that health facilities and health services are able to function in the aftermath of emergencies and disasters, when they are most needed.
- Improve the emergency management capacity of health workers and institutions.

## Safe Hospitals Vulnerability Assessment

Hospitals and health facilities play a critical role in times of emergency and disasters. It is imperative that they remain structurally sound and fully operational at such times. To ensure that hospitals and health facilities can withstand emergencies and disasters, an assessment of their vulnerabilities is most significant. These vulnerabilities may be structural (load-bearing system),

non-structural (architectural elements, installation and equipment) and systems and operations.

This document, Safe Hospitals in Emergencies and Disasters, began with the initial experience of the Philippines in formulating the sets of structural, non-structural and functional indicators for safe hospitals. The Department of Health-Health Emergency Management Staff (DOH-HEMS) and the National Centre for Health Facility Development (DOH-NCHFD) of the Philippines, with support from the Association of Hospital Administrators (AHA) Philippines and the WHO Western Pacific Regional Office, conducted several workshops. They included different technical working groups in health emergency management and experts in hospital structures and functional operations who proposed a list of indicators for safe hospitals during emergencies and disasters. These indicators were reviewed to make them appropriate not only in the Philippines but also in Cambodia, the Lao People's Democratic Republic and Viet Nam.

## Target Users

The Safe Hospitals in Emergencies and Disasters is intended for people who recognize the important role of hospitals and health care facilities during emergencies and disasters. These people include hospital administrators

and managers as primary users of this document, health professionals as advocates, and patients as clients whose safety always should be the priority.

## Objectives

This document seeks to serve as a guide and reference to:

1. assess existing hospitals and health facilities in terms of structural, non-structural and functional vulnerabilities;
2. advocate for construction of a new hospital or health facility that could withstand any emergency or disaster; and
3. plan for renovation and retrofitting of hospitals and health facilities to ensure their resilience, safety and continuous operations in times of emergency and disaster.

## How to use this assessment tool

Countries that intend to use this guide should examine the building, structural code, fire safety and electrical code and other guidelines or regulations related to the structure and function of hospitals and health facilities. This is to ensure that they are familiar with their own rules and regulations based on their country-specific needs. A list of references is provided at the end of this document to give readers additional information.

Countries also are encouraged to form a technical working group that can review the sets of indicators listed, determine whether they are applicable and rationalize the need for more specific indicators in their own setting. This group may comprise the hospital's health emergency coordinator, architect, engineer, safety officer and administrative officer.

This document explains the reasons for most of the indicators. These rationales appear before the checklist of indicators. Read the rationales carefully to ensure that the indicators are clearly understood. In reading through the checklist, either put a check sign (☑) if the specific condition is satisfied or a cross sign (x) if not. Use the "Remarks" column if there is a need to explain further. If the indicator is not applicable or useful in the country or local setting, put N.A. (not applicable) in the "Remarks" column.

Finally, the checklist in this document is not intended to compare countries or local settings. Rather, this should be used as an internal assessment for improving the structure and functions of hospitals and health facilities for emergency preparedness and response. Some indicators need to be adapted to a local context or setting. For example, basic equipment, treatment guidelines and protocols and emergency kits must be based on country setting and type

of hospital. Further refinements on the indicators and tools also are welcome.

The sets of indicators listed in this document need to be reviewed and tested further as to their applicability in different countries and local settings. It also neither provides nor claims to

be the definitive and only guide to follow in ensuring safe hospitals and health facilities in emergencies and disasters. This is a work in progress and subsequent revisions will be made accordingly to ensure that hospitals and health facilities are safe in emergencies and disasters.

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