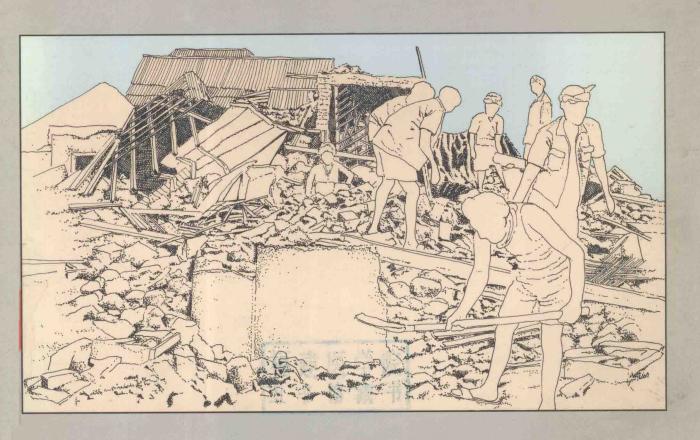
Coping with natural disasters: the role of local health personnel and the community







Coping with natural disasters:

the role of local health personnel and the community



ISBN 92 4 154238 1

© World Health Organization 1989

Publications of the World Health Organization enjoy copyright protection in accordance with the provisions of Protocol 2 of the Universal Copyright Convention. For rights of reproduction or translation of WHO publications, in part or *in toto*, application should be made to the Office of Publications, World Health Organization, Geneva, Switzerland. The World Health Organization welcomes such applications.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

Printed in Belgium 88/7790 — Vanmelle — 7000 The World Health Organization is a specialized agency of the United Nations with primary responsibility for international health matters and public health. Through this organization, which was created in 1948, the health professions of some 165 countries exchange their knowledge and experience with the aim of making possible the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life.

By means of direct technical cooperation with its Member States, and by stimulating such cooperation among them, WHO promotes the development of comprehensive health services, the prevention and control of diseases, the improvement of environmental conditions, the development of health manpower, the coordination and development of biomedical and

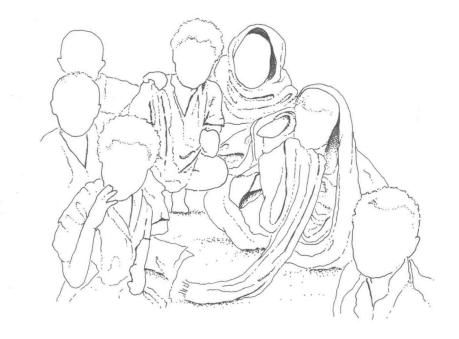
health services research, and the planning and implementation of health programmes.

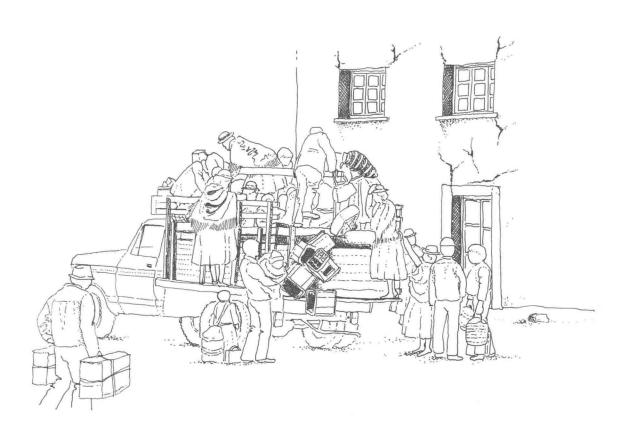
These broad fields of endeavour encompass a wide variety of activities, such as developing systems of primary health care that reach the whole population of Member countries; promoting the health of mothers and children; combating malnutrition; controlling malaria and other communicable diseases including tuberculosis and leprosy; having achieved the eradiction of smallpox, promoting mass immunization against a number of other preventable diseases; improving mental health; providing safe water supplies; and training health personnel of all categories.

Progress towards better health throughout the world also demands international cooperation in such matters as establishing international standards for biological substances, pesticides and pharmaceuticals; formulating environmental health criteria; recommending international nonproprietary names for drugs; administering the International Health Regulations; revising the International Classification of Diseases, Injuries, and Causes of Death; and collecting and disseminating health statistical information.

Further information on many aspects of WHO's work is presented in the Organization's publications.

Coping with natural disasters: the role of local health personnel and the community





Acknowledgements

This publication could not have appeared without the valuable assistance of Dr Luciano Carrino, Health Department, Cooperation in Development, Ministry of Foreign Affairs, Italy, who drafted and reviewed the various versions. Dr S. William Gunn launched the publication when he was in charge of WHO's Emergency Relief Operations (1977–1984); he also reviewed the final text in his capacity of Scientific Vice-President of the European Centre for Disaster Medicine.

WHO also wishes to thank Ferruccio Ferrigni and Patrick de Maisonneuve for their contributions on architecture and town planning; Teresa Volpe who prepared the original drawings; Giulia Dario for her advice on community action; Guido Bertolaso, Marta di Gennaro, Guglielmo Riva, Enzo Lucchetti, Carol Djeddah, Agostino Miozzo, Giancarlo Samaritan and the health team of the Department for Cooperation in Development of the Italian Ministry of Foreign Affairs, for information and documentation on emergency health action; Adriano Mantovani for his contribution on veterinary medicine; José Luis Zeballos, Dorothy Blake, José Maria Paganini, Marc Parent, Don Washington, Luis Jorge Perez, Carmen Bowen-Wright, Miguel Gueri; the University of Louvain's Disaster Epidemiology Team led by Michel Lechat; the participants in the WHO meetings on health activities in the event of disasters held in Rabat (1981), Trieste (1984), Ankara (1985), Brazzaville (1986) and Marrakesh (1986); and all the other experts consulted.

Thanks also go to the teams in health centres/local hospitals at Giugliano (Italy), Ayapel (Colombia), Port Antonio (Jamaica) and Diré (Mali) who allowed us to field-test various parts of this manual.

Finally, acknowledgements are also due to the Campania Region and to the International Centre for Research-Intervention in Naples, which provided organizational support.

The following members of staff of WHO and the League of Red Cross and Red Crescent Societies (LORCS) also collaborated in this publication: Thomas Bergmann (LORCS), Claude de Ville de Goyet (WHO/Pan American Health Organization), Olavi Elo (WHO), Concetto Guttuso (WHO), John Jones (WHO), Andrei Kisselev (LORCS), Sten Kistner (LORCS) and Michael Tailhades (LORCS).

This Guide is in three parts:

- The first part deals with rescue work and emergency care immediately after the disaster has struck.
- The second deals with action to be taken when the acute period of the disaster is over.
- The third describes what can be done at local level to prevent and mitigate the consequences of disasters.

Each part consists of two chapters:

- The first describes what the community can do.
- The second describes what the local health personnel can do.

But the action of the community and that of the local health personnel are closely linked. In disaster situations, the local health personnel sometimes need to act as a referral point for the population, to solve problems relating to survival or to the general organization of the community.

Contents

Introduction	An active role for communities and their health personnel				
	PART I — The disaster	5			
Chapter 1	Community rescue operations Fear Panic Rescue operations Reception at the health centre or hospital				
Chapter 2	The tasks of the local health personnel Organizing the health centre or hospital to meet the emergency Triage Emergency care PART II — The aftermath	11			
Chapter 3	Action by the community The coordination committee Assessment of requirements Outside assistance Coordination of groups from outside Family groupings Temporary shelter and sanitation Displaced persons Monitoring food supplies Food distribution Dealing with the dead Dealing with animals Post-disaster development	15			

Chapter 4	Action by the local health personnel Post-disaster health problems and the organization of the local health personnel Monitoring the community's health status Vaccinations Nutrition Health education and sanitation Mental health Vulnerable groups Periodic reports by the local health personnel	29
	PART III — Preventing and alleviating the consequences of disasters	39
Chapter 5	Action by the community Analysis of past experience Information on disasters Some information on natural disasters Knowledge of the risks and resources Evacuation of the population Twinning Exercises and activities to promote community preparedness Basic education	41
Chapter 6	Action by the local health personnel Essential professional qualities of local health personnel for coping with disasters Improving certain professional skills Preparation of the health centre or hospital The training of voluntary health workers Preparedness activities for the population	57

ANNEXES

1.	Diseases to be monitored when people are housed in temporary shelters	65
2.	Specimen record card for use by person in charge of family grouping in preparing health report in collaboration with local health personnel	66
3.	Nutrition Recommended daily energy and protein intakes for healthy individuals Weight-for-height Arm-circumference-for-height Indicators of likely need for a supplementary feeding programme	67
4.	What to do in an earthquake	71
5 .	Mercalli scale of earthquake intensities	74
6.	Community risk maps	76
7.	The signs of danger in disaster-damaged buildings	79
8.	Resource maps	84
9.	Medical equipment of the health centre or hospital for coping with a disaster	87
10.	Outline schedules for self-evaluation in the event of disaster For community action For action by the local health personnel	89
11.	The League of Red Cross and Red Crescent Societies (LORCS)	95
12.	A short reading list for local health personnel	96

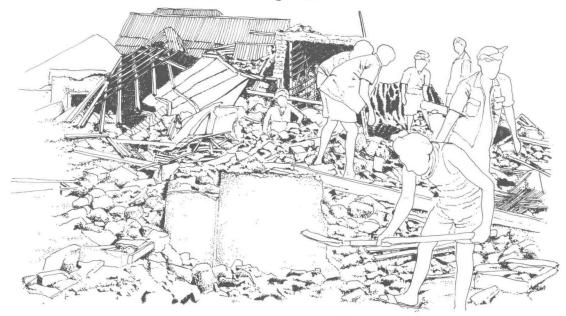
Introduction

An active role for communities and their health personnel

It is usually assumed that in emergency only national governments and international agencies can mobilize the resources needed to deal with the situation.

Various countries set up systems for protecting the civilian population in the event of disaster that are based on central state authorities and make use of the latest equipment and technology. It is also certain, however, that the local communities have an active part to play before and after disasters:

- because a good state of preparedness before a disaster strikes may reduce its impact,
- because the greatest number of lives can be saved during the first few hours after a disaster has occurred, before help arrives from elsewhere,
- because the numerous problems of survival and health resulting from a disaster are dealt with more efficiently if the community is active and well organized.



The purpose of this Guide is to help local communities and their health personnel cope with the consequences of disasters, particularly natural

disasters such as earthquakes, volcanic eruptions, floods, hurricanes, gales, tidal waves and droughts. It is intended for relatively small communities with scanty resources, in which there is a health centre or local hospital and where the local health personnel consists of a small team, including at least a physician or trained nurse.

Since it focuses on local action, the Guide might give the impression that a community can be self-sufficient in the event of a disaster. On the contrary, it must not be forgotten that a large number of problems can be solved only through outside assistance at various levels:

- the intermediate level: the nearest and best-equipped urban centres,
- the national level: the government and national bodies, including non-governmental organizations,
- the international level: international organizations and other countries.

However, an active and well-organized community will help to improve the quality of outside assistance and reduce the shortcomings often recorded, such as lack of information, poor evaluation of requirements and inappropriate forms of aid.

Two groups are envisaged that will take action in the event of a disaster:

- the local health personnel,
- the community: local authorities and persons or groups who concern themselves in the localities with rescue work, communications, transport, shelter and food supply.

The communities and local health personnel for the most part improvise their organization for meeting the emergency situation following a disaster.

The aim of this Guide is to encourage them to prepare beforehand, particularly in high-risk areas, for setting up the community's organization for dealing with disasters.

This is not just one more burden for already overburdened people and teams. Emergencies bring to light in an acute and extreme way things that in the day-to-day life of the community and in the functioning of the health services may long remain inapparent: lack of coordination, gaps in communication and information, unsatisfactory relationships between services and the population, inflexibility of the health services, a failure on their part to adjust to requirements, their poor territorial distribution and excessive concentration on hospital facilities, and many other shortcomings. On the credit side emergencies also reveal valuable professional and human capacities and qualities which in the normal course of events are not clearly apparent and are not put to use. In short, because they make it absolutely essential to find quick and effective solutions for dramatic problems, disasters at the same time throw into relief the deficiencies and potentialities of the services. Ensuring disasterpreparedness largely consists in improving the quality and effectiveness of existing community services: the prospect of possibly having to face up to an emergency serves rather to bring to general attention many

essential and priority questions that concern the community's health and life even under normal conditions.

The local population stricken by a disaster should be considered as taking action for itself, not as having action taken for it. This presupposes a fundamental change compared with the usual notion that the responsibility of caring for a disaster-stricken community should be entirely taken over by outside assistance and the State authorities. This notion is based on preconceived ideas: people panic and flee without regard for others, some of them will be bewildered or act impulsively, others will remain numb or stupefied; local organizations will be disorganized and unable to act effectively; there will be antisocial behaviour and looting. However, experience of disasters shows that the ways in which people really behave differ greatly from these stereotyped ideas. Cases of panic are generally localized and short-lived. The majority of people prefer to stay in the threatened area and generally take steps to protect their families and themselves. Indecision is usually due rather to the poor circulation of information than to panic. Those stricken by the disaster usually react in a positive way and busy themselves quickly and spontaneously, together with their families, friends and groups, in rescue operations. Looting and certain types of antisocial behaviour (exorbitant prices, for example) have been exaggerated (or are perpetrated by people from outside the community). Conflicts and class differences may die down and a sense of community solidarity not ordinarily present may develop. Local communities, if they are not discouraged and made passive, react quickly and effectively, particularly if they are supported (but not overrun or supplanted) by assistance from outside.

The disaster

Every catastrophic event has its own special features. Some can be foreseen several hours or days beforehand, as in the case, for example, of cyclones or floods. Others, such as earthquakes, occur without warning. Whatever the type of disaster, for some hours the community and local health personnel have only themselves to rely on before outside assistance arrives. In a later chapter, this Guide will deal with organizing the community to manage the consequences of the disaster. Here it will confine itself to describing the steps to be taken by the community and the local health workers to carry out rescue work and provide emergency care immediately after the disaster has struck.

