

Epidemiologic Surveillance after Natural Disaster



PAN AMERICAN HEALTH ORGANIZATION
1982

HEALTH FOR ALL BY THE YEAR 2000

In 1977, the World Health Assembly decided that the main social target of the governments and of WHO should be the attainment by all people of the world by the year 2000 of a level of health that would permit them to lead a socially and economically productive life, that is, the goal popularly known as "health for all by the year 2000."

In 1978 the International Conference on Primary Health Care (Alma-Ata, USSR) declared that, as a central function of the national health system and an integral part of economic and social development, primary health care was the key to achieving that goal. Subsequently, the governments committed themselves—at the global level at the World Health Assembly, and at the regional level at meetings of the PAHO Governing Bodies—to implement the resolutions adopted for attaining health for all. In the Americas the high point of these mandates was reached on 28 September 1981 when the Directing Council of PAHO approved the Plan of Action for implementing the regional strategies for health for all by the year 2000. These strategies had been approved by the Directing Council in 1980 (Resolution XX) and today constitute the basis of PAHO's policy and programming, and represent in addition the contribution of the Region of the Americas to the global strategies of WHO.

The Plan of Action approved by the Directing Council contains the minimum goals and regional objectives, as well as the actions governments of the Americas and the Organization must take in order to attain health for all. The Plan, continental in nature, is essentially dynamic and is addressed not only to current problems but also to those likely to arise from the application of the strategies and the fulfillment of regional goals and objectives. It also defines priority areas that will serve as a basis, in developing the program and the necessary infrastructure, for national and international action.

The exchange and dissemination of information constitutes one of the priority areas of the Plan of Action. PAHO's publication program—including periodicals, scientific publications, and official documents—is designed as a means of promoting the ideas contained in the Plan by disseminating data on policies, strategies, international cooperation programs, and progress achieved in collaboration with countries of the Americas in the process of attaining health for all by the year 2000.

Epidemiologic Surveillance after Natural Disaster

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Preface

A companion piece to the guide *Emergency Health Management after Natural Disaster* (Pan American Health Organization, Scientific Publication No. 407, 1981), this manual contains a more detailed presentation of the information in the "Epidemiologic Surveillance and Disease Control" chapter of the guide. The guide provides an overview intended to be of use to policy makers and the administrators responsible for health service delivery after the occurrence of disaster in developing nations. This manual, in which the scientific basis of and experience with the surveillance and control of communicable disease after disaster is summarized, is directed to an audience which consists of the senior technical officers involved in disaster relief. These will particularly be epidemiologists, specialists in disease control, sanitary engineers and senior medical officers.

The natural disasters of concern in both this manual and the guide include earthquakes, volcanic eruptions, floods, tidal waves and destructive winds (cyclones, hurricanes and tornadoes). Also briefly considered as disasters in their own right in this work are epidemics of communicable disease. Because of the close relationship between the conditions of communication of disease, the ecology, and nutrition, there is discussion here of such topics as drought, famine and man-made disaster, which are not covered in the parent guide. The time frame of this manual extends beyond the three to four week frame of the guide since the impact of communicable disease is often delayed for weeks or months after the acute event.

Scientific data for use in disaster epidemiology are scarce, yet there exists a plethora of subjective observations (which in the end may prove

to be correct). Consideration of the topics discussed here must be modified to comply with local conditions.

This document is an initial attempt to present this material in an organized fashion. Further documentation of the patterns of communicable diseases after disaster and further epidemiologic research will be needed to more completely understand problems. This will require sustained surveillance, long after the occurrence of acute events, on the part of national health authorities.

The general principles and observations in this manual are relevant throughout the developing world. Special emphasis is, however, given to the experiences and needs of Latin America and the Caribbean.

Acknowledgment and References

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The Save the Children Fund, London, England

Dr. John Seaman

Technical information and articles concerning communicable diseases are plentiful and accessible to most senior public health professionals. However, scientific publications concerning epidemiologic surveillance and the organization of surveillance systems are surprisingly scarce and these usually deal with only a single disease. Reports about the epidemiologic surveillance of communicable diseases after disaster have been infrequent. Although the collective experience of individual epidemiologists with the organization of surveillance activities in disaster situations during the past fifteen years has grown, it is not readily available in scientific literature.

The following publications served as sources for many of the ideas and material incorporated into this document:

1. Western, K. A. *The Epidemiology of Natural and Man-Made Disasters: The Present State of the Art*. Dissertation for D.T.P.H., London School of Hygiene and Tropical Medicine, University of London, 1972.*
 2. Sommer, A., and W. H. Mosley. West Bengal cyclone of November, 1970. *Lancet* 1: 1029-1036 (1972).
 3. *Epidemiología: Guía de Métodos de Enseñanza*. PAHO Scientific Publication No. 226. Washington, D.C., Pan American Health Organization, 1973.
 4. Romero, A., *et al.* Some epidemiologic features of disasters in Guatemala. *Disasters* 2: 39-46 (1978).
 5. Spencer, H. C., *et al.* Disease surveillance and decision-making after the 1976 Guatemala earthquake. *Lancet* 2: 181-184 (1977).
 6. Western, K. A. Organization and administration of communicable disease control programs in developing countries. *Bulletin of the Pan American Health Organization* 14: 65-76 (1980).
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7. Benenson, A. S. (ed.). *Control of Communicable Diseases in Man*. 13th ed. Washington, D.C., American Public Health Association, 1981.**

Additional publications of interest are cited in Annex 6.

*Copies available from the author. **In the XIII Edition the risk of individual communicable diseases in disaster situations is discussed. This is a new feature not contained in earlier English editions and translations into French, Portuguese and Spanish.
