

# Disaster Preparedness and Response as Primary Health Care

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#### Abbreviations:

CERT = Citizen Emergency Response Teams

FEMA = Federal Emergency Management Agency

PHC = primary health care

PHCW = primary health-care workers

UNICEF = United Nations Children's Fund

WADDEM = World Association for Disaster and Emergency Medicine

WHO = World Health Organization of the United Nations

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The need for search and rescue and medical care following a sudden impact disaster is immediate and often overwhelming. In the past, governments and international organizations have relied on external assistance for these efforts. Because the life expectancy of severely injured and trapped victims is limited, the response must come first from the impact area itself. The preponderance of disaster research demonstrates that the local populace overwhelmingly is responsible for search-and-rescue efforts.<sup>1-3</sup> Emergency medical care, e.g., that delivered in the first 24 hours to 48 hours after a disaster, also is overwhelmingly from local or regional resources.<sup>5-8</sup> Outside and, perhaps, even international assistance is required for medium- and long-term response, but is of limited benefit for the "emergency phase."

The primary rescuers and first-aid providers are the families, friends, and neighbors of the victims. Their backup consists of the local government's fire, police, ambulance, and health services. Thus, communities must be the focus of disaster preparedness. An increasing number of disaster-related organizations have come to understand this: The World Association of Disaster and Emergency Medicine (WADDEM) now recommends focusing on disaster preparedness at the community level,<sup>4</sup> and the U.S. Federal Emergency Management Agency (FEMA) has begun training local search-and-rescue teams in its Citizen Emergency Response Teams program. Since disasters most commonly occur in developing countries, they must focus on local preparedness activities. To reach all communities in developing countries, pre-existing governmental and nongovernmental structures must be used. Since hospital, police, and fire services may not be available locally, one solution is to integrate disaster preparedness into the structure of the primary health-care (PHC) system.

Primary health care is a concept developed and supported by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), and is the foundation of health care in most developing countries. The goal of PHC is to provide basic health services to all of the citizens of the world to achieve "health for all by the year 2000."<sup>9</sup> Preventive services, such as immunizations and prenatal care, as well as basic curative services for diarrhea and respiratory diseases, are provided in an effort to help reach this goal. These services are delivered by trained paramedical personnel called primary health care workers (PHCWs),<sup>10,11</sup> who are stationed at health centers in urban and remote communities throughout the developing world. A managerial and supply system is in place to support their activities. The developing countries that rely on the PHC system also are those most susceptible to disasters. In most countries, the PHC system only is connected loosely to the hospital-based curative care system. If training only is directed to the hospital system, it will fail to reach the remote sites where it also is needed. Although the focus of PHC is predominately preventive, disaster preparedness and mitigation unfortunately have not been included in the scope of the work. Since in many villages PHCWs are the only source of health care, they also are likely to become the source of immediate post-disaster care.

One tool to involve PHCW in disaster control is first aid. In the immediate post-disaster period, when local response is needed most, injuries are the overwhelming health problem. Unfortunately, first aid and injury care traditionally have not been a part of the PHC system or training. Including first aid in PHCW training would help to optimize the local response to disasters and would provide a pre-existing network on which

to organize the response. The benefits of this training would extend far beyond disaster response, as injuries currently cause more than 3 million deaths annually.<sup>12</sup>

Currently, culturally appropriate first-aid skills are taught around the world by individual national Red Cross and Red Crescent societies. Teaching first aid to PHCWs would be more effective than the current practice of teaching laypersons whose skills rapidly deteriorate.<sup>13</sup> Primary health-care workers have constant exposure to patients with injuries and would retain the skills through daily use.

By itself, first aid is an important disaster-response skill, but it also can be the core to which other disaster skills are added. Skills, such as extraction and transportation techniques, can be taught in addition to the standard Red Cross curriculum. Like first aid for the layperson, the trouble with disaster training programs is that the events are so uncommon that the skills deteriorate. Utilizing more common skills as the basis of dis-

aster response makes their appropriate use during an actual disaster more likely.

A successful disaster-preparedness program requires national, regional, and local participation. It also requires cooperation among multiple governmental agencies, including the curative and public-health systems. In many countries, the PHC system may be the only national program providing routine access to all communities. Making first aid the basis of disaster training within PHC would mainstream these important topics into the structure of the pre-existing international health efforts. The resources necessary to start such a program could be minimized, and the previous expertise maximized by cooperation between national Red Cross and Red Crescent societies and the WHO and UNICEF. It is time to develop local preparedness and response capabilities rather than continue to rely on acute international response, and the PHC system can be used to achieve this end.

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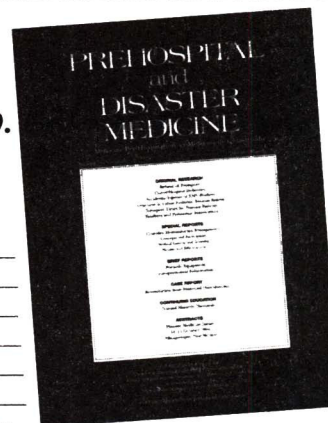
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