Emergency Risk Management for Health
OVERVIEW

What is emergency risk management for health?

Emergencies and disasters often result in significant impacts on people's health, including the loss of many lives. Every new threat reveals the challenges for managing health risks and effects of emergencies and disasters. Deaths, injuries, diseases, disabilities, psychosocial problems and other health impacts can be avoided or reduced by emergency risk management measures involving health and other sectors.

Emergency risk management for health is multisectoral and refers to:

> the systematic analysis and management of health risks, posed by emergencies and disasters, through a combination of (i) hazard and vulnerability reduction to prevent and mitigate risks, (ii) preparedness, (ii) response and (iv) recovery measures.

The traditional focus of the health sector has been on the response to emergencies. The ongoing challenge is to broaden the focus of emergency risk management for health from that of response and recovery to a more proactive approach which emphasises prevention and mitigation, and the development of community and country capacities to provide timely and effective response and recovery. Resilient health systems based on primary health care at community level can reduce underlying vulnerability, protect health facilities and services, and scale-up the response to meet the wide-ranging health needs in disasters.

> Emergency risk management for health is
> **"EVERYBODY'S BUSINESS"**

Advocating for emergency risk management for health

These advocacy materials are an introduction for health workers engaged in emergency risk management and for multi-sectoral partners to consider how to integrate health into their emergency risk management strategies.

This overview places emergency risk management for health in the context of multi-sectoral action and focuses on the generic elements of emergency risk management, including potential hazards, vulnerabilities of a population, and capacities, which apply across the various health domains.

The accompanying fact sheets identify key points for consideration within a number of essential health domains.

However, importantly, all health domains are interlinked; each fact sheet should therefore be considered as part of the entire set and in conjunction with the overview.

Why is there a need for emergency risk management for health?

Natural, biological, technological and societal hazards put the health of vulnerable populations at risk and bear the potential to cause significant harm to public health. Examples of these hazards are as follows:

- Natural: earthquake, landslide, tsunami, cyclones, flood or drought.
- Biological: epidemic disease, infestations of pests.
- Technological: chemical substance, radiological agents, transport crashes.
- Societal: conflict, stampedes, acts of terrorism.

Emergencies, disasters and other crises may cause ill-health directly or through the disruption of health systems, facilities and services, leaving many without access to health care in times of emergency. They also affect basic infrastructure such as water supplies and safe shelter, which are essential for health.

International consensus views emergencies as barriers to progress on the health-related Millennium Development Goals (MDGs), as they often set back hard earned development gains in health and other sectors.

World Health Organization   **Public Health England**   **UNISDR** The United Nations Office for Disaster Risk Reduction

Natural Hazards

In the last year an in excess of 700 emergencies arising from natural hazards affected more than 200 million people.[14] A comparative analysis of emergency statistics in Latin America found that for each disaster listed in global disaster databases, there are some 20 other disasters with destructive impact on local communities that are not recorded.[3] In Latin America, the cumulative effect of ten years of local emergencies were found to have had a greater impact on the poor than any one-off event.[4]

The incidence of emergencies arising from natural hazards has been increasing and the impact of climate change will increase the risk for millions of individuals, their homes, their communities, and the infrastructure that supports them.

Biological Hazards

During the last few decades, biological emergencies have assumed an increasing importance: major outbreaks related to new and re-emerging infectious diseases such as SARS, influenza (H1N1 and H5N1) and cholera.

Technological Hazards

The international disaster database (EM-DAT) recorded more than 1,500 people from technological disasters killed which also affected more than 17,000 individuals.[15]

Societal Hazards

Complex emergencies, including conflict, continue to affect tens of millions of people, causing displacement of people both inside and across borders. In 2012 there were an estimated total of 20 million persons who remained internally displaced by armed conflict across the world.
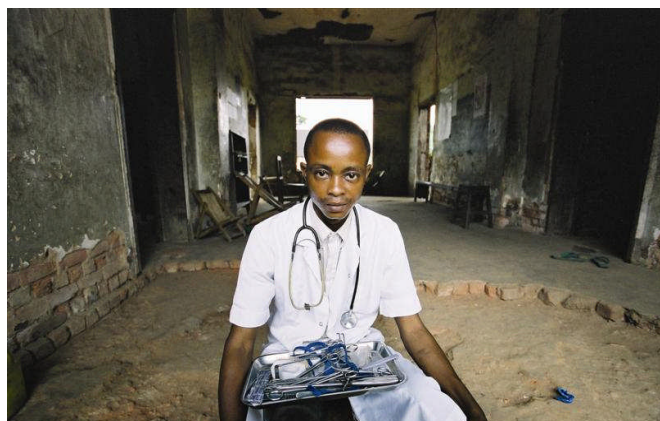
Democratic Republic of Congo (WHO/M. Kokic)

Country capacities and needs

Progress has been made at global, regional, national and community levels, but the capacity of countries for risk reduction, emergency preparedness, response and recovery remains extremely variable.

The 2007 WHO global assessment found that less than 50% of national health sectors had a specified budget for emergency preparedness and response.[7] Factors affecting capacity include:

- weak health and disaster management systems.
- lack of access to resources and know-how.
- continuing insecurity due to conflict.

But a number of high-risk countries have strengthened their disaster prevention, preparedness and response systems; in some countries, the health sector has led initiatives developing multi-sectoral approaches to emergency and disaster risk management.

Emergency risk management for health in context

Sustainable development

Emergency risk management has emerged as a core element of sustainable development and an essential part of a safer world in the twenty-first century.[6] Reducing risk is a long-term development process, managed by communities and individuals working together.

Health Systems

Health care systems provide core capacities for emergency risk management for health. Some countries affected by emergencies have limited basic health services and infrastructure, which in itself hugely compounds the challenges of disaster response. Countries with well-developed systems are often much more resilient and better prepared for disasters.

Primary health care (PHC) focuses on basic services to improve health status, which in turn builds community resilience and provides the foundation for responding to emergencies. Policies and strategies focusing on PHC can contribute to decreasing vulnerability and preparing households, communities and health systems for emergencies. Following an emergency, focus is often given to acute care needs and specialist interventions; whilst important, it is usually chronic and pre-existing conditions that prove the largest burden of disease.

Community-based actions are at the front line of protecting health in emergencies because:

- local knowledge of local risks is used to address the actual needs of the community.
- local actions prevent risks at the source, by avoiding exposure to local hazards.

- a prepared, active and well-organized community can reduce risks and the impact of emergencies.

- many lives can be saved in the first hours after an emergency through community response before external help arrives.

Hospitals and health infrastructure

Health systems are composed of public, private and nongovernmental facilities which work together to serve the community; these include hospitals, primary health care centres, laboratories, pharmacies and blood banks. Safe hospitals programmes ensure health facilities are safely built to withstand hazards, remaining operational in emergencies.

Developing adaptable and resilient health care systems

Surge capacity: Health care systems need to prepare to cope with large numbers of patients. This may require mobilising staff around the country to aid affected areas.

Flexibility in health care systems: Flexibility to deliver different functions is an essential component of health care delivery. This may mean reducing some services in order to increase others.

Business continuity planning: Plans to maintain the continuity of health sector operations includes identifying priority services, mechanisms for response coordination and communicating with staff and partner organisations.

Multisectoral action

In order for the health of the population to be protected during and after a disaster, wider determinants of health such as water, sanitation, nutrition, and security also need to be adequately addressed through multisectoral working.

Essential infrastructure such as communications, logistics, energy and water supplies, and emergency services and banking facilities need to be protected through multisectoral working to ensure the continuity of health services.

South Asian earthquake (2005), WHO/C. Black

Health and the Hyogo Framework for Action: 5 Priorities for Action

The Hyogo Framework for Action identifies 5 priorities for action towards strengthening community and country resilience to disasters. The application of these 5 priorities for health and the health sectors as described below. [8]

Priority 1: Emergency risk management for health as a national and local priority

- Development and implementation of health and multisectoral polices, strategies and legislation to provide direction and support for emergency risk management, especially at local levels.

- Health sector and multisectoral coordination mechanisms at local and national levels to facilitate joint action on risk reduction, response and recovery by the various health and non-health actors.

- Commitment of sufficient resources to support emergency risk management for health.

Priority 2: Health risk assessment and early warning

- Assessment of risks to health and health systems.

- Determining risk management measures based on risk assessments.

- Surveillance and monitoring of potential threats to health, particularly from biological, natural and technological (such as chemical and radiological hazards) sources to enable early detection and warning to prompt action by the public, health workers and other sectors.

There are three broad elements, which are usually considered in risk assessment:

1. Hazard Analysis: Identification of the hazards and assessment of the magnitude and probability of their occurrence.

2. Vulnerability Analysis: Analysis of vulnerability of individuals, populations, infrastructure and other community elements to the hazards.

3. Capacity analysis: Capacity of the system to manage the health risks, by reducing hazards or vulnerability, or responding to, and recovering from a disaster.

Reducing vulnerability to emergencies: a public health priority [9]

Risks can be understood in terms of hazards and people's vulnerability to that hazard.[10] Human vulnerability to emergencies is a complex mix of issues that includes social, economic, health and cultural factors. In many situations it is not the hazard itself that necessarily leads to an emergency, but the vulnerability and inability of the population to anticipate, cope with, respond to and recover from its effects.

The burden of emergencies falls disproportionately on vulnerable populations, namely the poor, ethnic minorities, old people, and people with disabilities. Worldwide, the loss of life from climate related emergencies is far higher among the less-developed nations than it is in developed nations. Within each nation, including developed nations, poor people are the most affected. [11] Poverty reduction is an essential component of reducing vulnerability to emergencies. High-risk populations must be prioritized in targeted efforts to mitigate human vulnerability. Various risk factors for human vulnerability to disaster-related morbidity and mortality include the following. [12]

- Low income
- Low socioeconomic status
- Lack of home ownership
- Single-parent family
- Age: older than 65 years
- Age: younger than 5 years
- Female sex
- Chronic illness
- Disability
- Social isolation or exclusion

In the context of emergency risk management, public health programmes build capacities and resilience of individuals and communities to risks, to reduce the impact, cope with and to recover from the effects of adversity. [13]They address issues related to health disparities that arise between the general population and the most vulnerable groups.

Priority 3: Education and information to build a culture of health, safety and resilience at all levels

Through education, training and technical guidance, strengthen the knowledge, skills and attitudes of professionals in health and other sectors for managing the health risks of disasters.

Information, education and risk communication for households and communities at risk to promote healthy behaviours to reduce risks and prepare for disasters. This may be through raising awareness through the media and community-based emergency and disaster risk management programmes.

Priority 4: Reduction of underlying risk factors to health and health systems

Poverty reduction measures and systems aimed at improve the underlying health status of people at risk of disasters.

New hospitals are built with a sufficient level of protection and existing health care infrastructure is strengthened to remain functional and deliver health services in emergency situations.

Protection of other vital infrastructure, and facilities that have the potential to generate risks to public health, such as water and sanitation systems and chemical facilities, should also apply risk management measures.

Adherence to building standards and retrofitting of vulnerable health infrastructure, protection of ecosystems, and ensuring effective insurance regimes and microfinance initiatives to ensure business continuity across all health care settings.

Priority 5: Emergency preparedness for effective health response and recovery at all levels.

Emergency preparedness, including response planning, training, pre-positioning of health supplies, development of surge capacity, and exercises for health care professionals and other emergency service personnel, is critical for the effective performance of the health sector in the response.

Structurally reinforced hospital, Ecuador (PAHO)

Development of capacities for emergency risk management for health

The health sector requires capacities and relationships with other sectors which span across the spectrum of emergency risk management measures at community, sub-national, national and international levels. The health risks of an emergency can be mitigated by decreasing exposures and the human susceptibility to the hazard, and building resilience of individuals, communities and the country to protect health, respond and recover effectively from the impact of the hazard.

An all-hazards emergency risk management for health programme could be expected to have the following groups of components:

1. Policies, legislation and strategies

- Defines the structures, roles and responsibilities of governments and other actors for ERM-H; includes strategies for strengthening ERM-H capacities. Includes (a) policies and legislation; and (b) capacity development strategies; (c) monitoring, evaluation and reporting.

2. Resource management

- Describes financial and workforce management requirements for implementing ERM-H. Includes (a) financing; (b) human resource management

3. Planning and coordination

- Emphasises effective coordination mechanisms for planning and operations for ERM-H. Includes (a) coordination mechanisms; (b) ERM units in MOH; (c) prevention and mitigation planning and coordination; (d) response planning and coordination; (e) recovery planning and coordination; (f) business continuity management; and (g) exercises.

4. Information and knowledge management

- Includes a) risk assessment; (b) early warning and surveillance; (c) research for ERM-H; (d) knowledge management, including technical guidance; (e) information management; and (f) public communication.

5. Health infrastructure and logistics

- Includes (a) logistics and supplies; and (b) safer prepared/functional health facilities to support ERM-H.

6. Health and related services

- Recognises the wide range of health-care services and related measures for ERM-H. Includes (a) health care services, (b) public health services and (c) specialized services for specific hazards.

Health and related services include:

- Injury prevention and trauma care
- Communicable diseases prevention, control and care
- Mental health and psychosocial support
- Sexual and reproductive health
- Child health
- Non-communicable diseases
- Management of dead and missing
- Environmental health
- Food and nutrition
- Primary health care services

7. Community ERM-H capacities

- Focuses on strengthening local health workforce capacities and community-centred planning and action.

Developing a robust evidence base

The establishment of an evidence base is necessary to provide support for establishing or strengthening of multi-sectoral and multidisciplinary emergency risk management programmes in at-risk countries. This may best be achieved by:

- A multi-sectoral forum promoting and coordinating the development of research methodologies in emergency risk management.
- Enhanced multi-sectoral and coordinated communication and data sharing.
- Development of multi functional instruments to collect a minimum data set of information.
- Ensuring learning is used to influence decision making at all levels of civil society.

Emergency risk management for health: key considerations

Development of national and community health emergency risk management systems with emphasis on primary prevention, vulnerability reduction and strengthening community, health facility, and health system resilience by reinforcing a community-centred primary health care approach.

Stimulate development of further evidence-based technical guidance and training programmes for the advancement of emergency risk management for health capacities, including priority technical areas.

Strengthen partnerships, institutional capacities and coordination mechanisms among health and related sectors for global, regional, national and community emergency risk management for health.

References and further reading

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Sichuan Earthquake, China 2008 (WHO)

Fact sheet development & partners

This set of advocacy materials for Emergency Risk Management has been developed by Public Health England, formerly United Kingdom Health Protection Agency (HPA), and many departments within WHO in Geneva and Regional Offices with the support of the United Nations Secretariat of the International Strategy for Disaster Reduction. They were first released in 2011 for the 3rd session of the Global Platform for Disaster Risk Reduction. Save the Children were significant contributors to the Child Health Fact Sheet. Inputs have been gratefully received on the Overview and various factsheets from the International Federation of Red Cross and Red Crescent Societies, UNICEF, United Kingdom Met Office, members of the United Kingdom Natural Hazards Partnership, United States Centers for Disease Control and Prevention and the World Meteorological Organization. The Overview and Fact Sheets were developed through a review of existing literature, guidance and tools with respect to the domains covered by the factsheets, and reviewed by subject matter experts in WHO and other partner organisations. The production of the factsheets was supported by the in-kind contribution of the partners, and in particular, Public Health England.