Disaster, as defined by the [United Nations](http://www.unisdr.org/we/inform/terminology), is a serious disruption of the functioning of a community or society, which involve widespread human, material, economic or environmental impacts that exceed the ability of the affected community or society to cope using its own resources [[1]](https://www.physio-pedia.com/Disaster_Management#cite_note-p4-1). Disaster management is how we deal with the human, material, economic or environmental impacts of said disaster, it is the process of how we “prepare for, respond to and learn from the effects of major failures” [[2]](https://www.physio-pedia.com/Disaster_Management#cite_note-p1-2). Though often caused by nature, disasters can have human origins. According to the [International Federation of Red Cross & Red Crescent Societies](https://www.ifrc.org/what-disaster) a disaster occurs when a hazard impacts on vulnerable people. The combination of hazards, vulnerability and inability to reduce the potential negative consequences of risk results in disaster [[3]](https://www.physio-pedia.com/Disaster_Management#cite_note-p2-3).

([VULNERABILITY](http://www.ifrc.org/en/what-we-do/disaster-management/about-disasters/what-is-a-disaster/what-is-vulnerability/)+ [HAZARD](http://www.ifrc.org/en/what-we-do/disaster-management/about-disasters/definition-of-hazard/) ) / [CAPACITY](http://www.ifrc.org/en/what-we-do/disaster-management/preparing-for-disaster/) = [DISASTER](http://www.ifrc.org/en/what-we-do/disaster-management/about-disasters/definition-of-hazard/) [[3]](https://www.physio-pedia.com/Disaster_Management#cite_note-p2-3)

Natural disasters and armed conflict have marked human existence throughout history and have always caused peaks in mortality and morbidity. This article examines the advances in the humanitarian response to public health over the past fifty years and the challenges currently faced in managing natural disasters and armed conflict [[4]](https://www.physio-pedia.com/Disaster_Management#cite_note-4).

Types of Disaster

Natural Disasters

According to the [International Federation of Red Cross & Red Crescent Societies](https://www.ifrc.org/what-disaster) Natural Disasters are naturally occurring physical phenomena caused either by rapid or slow onset events that have immediate impacts on human health and secondary impacts causing further death and suffering. These disasters can be [[5]](https://www.physio-pedia.com/Disaster_Management#cite_note-5):

* Geophysical (e.g. Earthquakes, Landslides, Tsunamis and Volcanic Activity)
* Hydrological (e.g. Avalanches and Floods)
* Climatological (e.g. Extreme Temperatures, Drought and Wildfires)
* Meteorological (e.g. Cyclones and Storms/Wave Surges)
* Biological (e.g. Disease Epidemics and Insect/Animal Plagues)

The United Nations Office for Disaster Risk Reduction characterises Natural Disasters in relation to their magnitude or intensity, speed of onset, duration and area of extent e.g. earthquakes are of short duration and usually affect a relatively small region whereas droughts are slow to develop and fade away and often affect large regions [[1]](https://www.physio-pedia.com/Disaster_Management#cite_note-p4-1).

Man-Made Disasters

Man-Made Disasters as viewed by the International Federation of Red Cross & Red Crescent Societies are events that are caused by humans which occur in or close to human settlements often caused as a results of Environmental or Technological Emergencies. This can include [[3]](https://www.physio-pedia.com/Disaster_Management#cite_note-p2-3):

* Environmental Degradation
* Pollution
* Accidents (e.g. Industrial, Technological and Transport usually involving the production, use or transport of hazardous materials)

Complex Emergencies

Some disasters can result from multiple hazards, or, more often, to a complex combination of both natural and man-made causes which involve a break-down of authority, looting and attacks on strategic installations, including conflict situations and war. These can include [[6]](https://www.physio-pedia.com/Disaster_Management#cite_note-p3-6):

* Food Insecurity
* Epidemics
* Armed Conflicts
* Displaced Populations

According to [ICRC](http://www.ifrc.org/en/what-we-do/disaster-management/about-disasters/definition-of-hazard/) these Complex Emergencies are typically characterized by [[6]](https://www.physio-pedia.com/Disaster_Management#cite_note-p3-6):

* Extensive Violence
* Displacements of Populations
* Loss of Life
* Widespread Damage to both Societies and Economies
* Need for Large-scale, Humanitarian Assistance across Multiple Agencies
* Political and Military Constraints which impact or prevent Humanitarian Assistance
* Increased Security Risks for Humanitarian Relief Workers

Pandemic Emergencies

Pandemic (from Greek πᾶν pan "all" and δῆμος demos "people") is an epidemic of infectious disease that has spread across a large region, which can occur to the human population or animal population and may affect health and disrupt services leading to economic and social costs. It may be an unusual or unexpected increase in the number of cases of an infectious disease which already exists in a certain region or population or can also refer to the appearance of a significant number of cases of an infectious disease in a region or population that is usually free from that disease. Pandemic Emergencies may occur as a consequence of natural or man-made disasters. These have included the following epidemics:[[7]](https://www.physio-pedia.com/Disaster_Management" \l "cite_note-7) [[8]](https://www.physio-pedia.com/Disaster_Management#cite_note-8)

* [Ebola](https://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/)
* [Zika](http://www.who.int/emergencies/zika-virus/en/)
* [Avian Flu](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/en/)
* [Cholera](http://www.who.int/topics/cholera/impact/en/)
* [Dengue Fever](http://www.who.int/csr/resources/publications/dengue/CSR_ISR_2000_1/en/index2.html)
* [Malaria](http://www.greenfacts.org/en/malaria/)
* [Yellow Fever](http://www.who.int/csr/disease/yellowfev/en/)
* [Coronavirus Disease (COVID-19)](https://www.physio-pedia.com/Coronavirus_Disease_(COVID-19))

Aspects of Disaster Management

The [International Federation of Red Cross & Red Crescent Societies](https://www.ifrc.org/disaster-preparedness) defines disaster management as the organisation and management of resources and responsibilities for dealing with all the humanitarian aspects of emergencies, in particular preparedness, response and recovery in order to lessen the impact of disasters [[3]](https://www.physio-pedia.com/Disaster_Management#cite_note-p2-3).

Disaster Prevention

"The outright avoidance of adverse impacts of hazards and related disasters "

UNISDR views Disaster Prevention as the concept of engaging in activities which intend to prevent or avoid potential adverse impacts through action taken in advance, activities designed to provide protection from the occurrence of disasters [[1]](https://www.physio-pedia.com/Disaster_Management#cite_note-p4-1). WCPT similarly highlight that while not all disasters can be prevented, good risk management, evacuation plans, environmental planning and design standards can reduce risk of loss of life and injury mitigation. The HYOGO Framework was one such Global Plan for natural Disaster Risk Reduction, which was adopted in 2005 as a 10 year Global Plan, signed by agreement with 168 Governments which offered guiding principles, priorities for action and practical means for achieving disaster resilience for vulnerable communities [[10]](https://www.physio-pedia.com/Disaster_Management#cite_note-p8-10).

Disaster Preparedness

"The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions" [[1]](https://www.physio-pedia.com/Disaster_Management#cite_note-p4-1).

According to ICRC, Disaster Preparedness refers to measures taken to prepare for and reduce the effects of disasters, be they natural or man-made. This is achieved through research and planning in order to try to predict areas or regions that may be at risk of disaster and where possible prevent these from occurring and/or reduce the impact those disasters on the vulnerable populations that may be affected so they can effectively cope. Disaster preparedness activities embedded with risk reduction measures can prevent disaster situations and also result in saving maximum lives and livelihoods during any disaster situation, enabling the affected population to get back to normalcy within a short time period [[3]](https://www.physio-pedia.com/Disaster_Management#cite_note-p2-3).

Minimisation of loss of life and damage to property through facilitation of effective disaster response and rehabilitation services when required. Preparedness is the main way of reducing the impact of disasters. Community-based preparedness and management should be a high priority in physical therapy practice management [[10]](https://www.physio-pedia.com/Disaster_Management#cite_note-p8-10).

Disaster Response / Relief

"The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected" [[1]](https://www.physio-pedia.com/Disaster_Management#cite_note-p4-1).

Focused predominantly on immediate and short-term needs, the division between this response/relief stage and the subsequent recovery stage is not clear-cut. Some response actions, such as the supply of temporary housing and water supplies, may extend well into the recovery stage. Rescue from immediate danger and stabilization of the physical and emotional condition of survivors is the primary aims of disaster response/relief, which go hand in hand with the recovery of the dead and the restoration of essential services such as water and power [[3]](https://www.physio-pedia.com/Disaster_Management#cite_note-p2-3)[[10]](https://www.physio-pedia.com/Disaster_Management#cite_note-p8-10).

Coordinated multi-agency response is vital to this stage of Disaster Management in order to reduce the impact of a disaster and its long-term results with relief activities including [[3]](https://www.physio-pedia.com/Disaster_Management#cite_note-p2-3):

* Rescue
* Relocation
* Provision Food and Water
* Provision Emergency Health Care
* Prevention of Disease and Disability
* Repairing Vital Services e.g. Telecommunications, Transport
* Provision Temporary Shelter

Disaster Recovery

Vulnerability of communities often continues for long after the initial crisis is over. Disaster Recovery refers to those programmes which go beyond the provision of immediate relief to assist those who have suffered the full impact of a disaster and include the following activities [[3]](https://www.physio-pedia.com/Disaster_Management#cite_note-p2-3) [[10]](https://www.physio-pedia.com/Disaster_Management#cite_note-p8-10):

* Rebuilding Infrastructure e.g. Homes, Schools, Hospitals, Roads
* Health Care and Rehabilitation
* Development Activities e.g. building human resources for health
* Development Policies and Practices to avoid or mitigate similar situations in future

How Physiotherapists Can Contribute

The WCPT provide advice on how physiotherapists can most effectively contribute in disaster situations highlighting the role for the profession in the aspects of disaster management described above.

* [Disaster Management - How Individual Physical Therapists Can Contribute](http://www.wcpt.org/disaster-management/How-individual-physical-therapists-can-contribute)

## Disaster Management Guidelines

[**Responding Internationally to Disasters: Do’s and Don’ts**](https://wfot.org/resources/responding-internationally-to-disasters)

When disasters strike, there is always a huge amount of goodwill from rehabilitation professionals around the world who wish to use their skills to support those affected. This brief guidance informs those who are considering responding internationally to a disaster either as individuals or as part of a team. It highlights key questions to consider before departing, whilst working in the disaster area and on returning home. Responses to these questions considered are presented as “Do’s and Dont's” which are exemplified by recommended practices and those to avoid in the real case studies below. The guidance note is not intended to be a step-by-step or technical guide, nor is it exhaustive, and does not supersede any specific guidance provided by your own global professional body.

['**Health Care in Danger: The Responsibilities of Health-Care Personnel Working in Armed Conflicts and Other Emergencies'**](https://www.icrc.org/eng/assets/files/publications/icrc-002-4104.pdf)

A Guidance Document in simple language for health personnel, setting out their rights and responsibilities in conflict and other situations of violence. It explains how responsibilities and rights for health personnel can be derived from international humanitarian law, human rights law and medical ethics.

The document gives practical guidance on:

* The Protection of Health Personnel, the Sick and the Wounded
* Standards of Practice
* The Health Needs of Particularly Vulnerable People
* Health records and transmission of medical records
* "Imported" Health Care (including Military Health Care)
* Data Gathering and Health Personnel as witnesses to violations of International Law
* Working with the Media

[**Rehabilitation in Sudden Onset Disasters.**](https://www.bond.org.uk/sites/default/files/resource-documents/rehabilitation_in_sudden_onset_disasters_complete_manual.pdf)

he role of rehabilitation professionals in responding to sudden onset disasters, such as earthquakes or tsunamis, is evolving rapidly and they increasingly find themselves at the forefront of emergency response teams.

This manual is designed for Physiotherapists and Occupational Therapists who provide rehabilitation in the immediate aftermath of a sudden onset disaster. It was developed to support volunteers on the UK International Emergency Trauma Register but with the aim of being relevant to all rehabilitation professionals interested in rapid deployment to austere environments.

[**Minimum Technical Standards and Recommendations for Rehabilitation: Emergency Medical Teams**](https://www.who.int/publications/i/item/emergency-medical-teams)

This document is the result of collaboration between a working group of rehabilitation experts convened by WHO and external consultations. It is thus based on collective experience in rehabilitation during responses to recent large-scale emergencies and also on published data. In time, the minimum standards for rehabilitation in emergencies will be part of a broader series of publications based on the Classification and minimum standards for foreign medical teams in sudden onset disaster.

The purpose of this document is to extend these standards for physical rehabilitation and provide guidance to Emergency Medical Teams (EMTs) on building or strengthening their capacity for and work in rehabilitation within defined coordination mechanisms. The standards and recommendations given in this document will ensure that EMTs, both national and international, will better prevent patient complications and ensuing impairment and ensure a continuum of care beyond their departure from the affected area.

[**Communicable Disease Control in Emergencies - A Field Manual**](http://apps.who.int/iris/bitstream/10665/96340/1/9241546166_eng.pdf)

This manual is intended to help health professionals and public health coordinators working in emergency situations prevent, detect and control the major communicable diseases encountered by affected populations.

[Management of Limb Injuries in Disater and Conflict - A Field Manual](https://icrc.aoeducation.org/files/downloads/A_Field_Guide_Low_res.pdf)

The WHO Emergency Medical Team (EMT) Initiative helps countries and NGOs to set up teams that will be able to maintain agreed standards of quality and self-sufficiency, resulting in better patient care. With more teams striving to reach these standards, clear guidance on best practice is needed, particularly for managing patients with limb injuries, which make up the majority of cases. The consensus-based Field Guide—Management of Limb Injuries during disasters and conflicts and the complementary open-access online resources gathered here are aimed at providing that guidance. It draws on the expertise of the International Committee of the Red Cross, which has a long history of delivering care to patients and protecting them in conflict. This field guide will be regularly updated as new controversies are raised and evidence grows.