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An Overall View of Disaster Management

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Abstract

The Disaster is the event that occurs without any prediction. The term 'Disaster' is loosely used to refer to as any incident, manmade accident, or natural occurrence that could affect the operation of the project in whatever way. We do not assess the impact of upcoming disaster. There are two type of disaster Natural and Manmade disaster. Disasters have adversely affected not only humans but also animals and all lives on earth. Disaster cause mass damage of construction or loss of economy. It gives very bad impact on the economy of the country. In the last decade, natural disasters claimed 79,000 lives each year and affected more than 200 million people, with damages amounting to almost US $ 70 billion annually. Disaster also affected to the climate, which also adversely affects local or regional climate. Today there is not any such develop technology which gives vulnerability of upcoming natural disaster. Manmade disaster causes through any big accident that occurs indoor or outdoor.

Key Words: Natural Hazards, Disaster Management, Risk Management

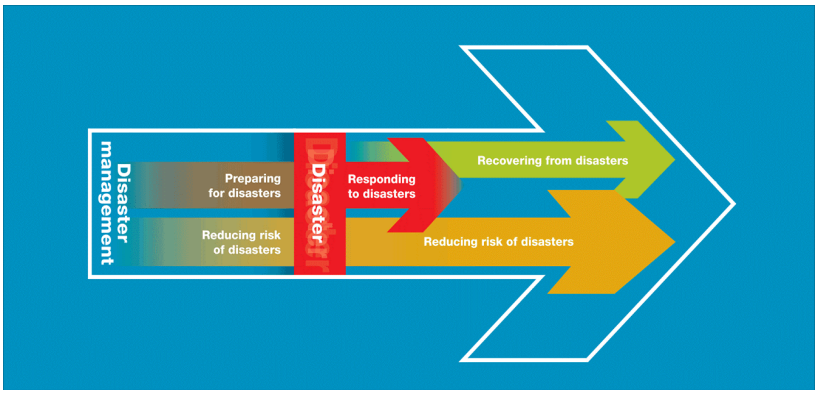
Introduction

Disaster management (or emergency management) is the creation of plans through which communities reduce vulnerability to hazards and cope with disasters. Disaster management does not avert or eliminate the threats; instead, it focuses on creating plans to decrease the effect of disasters. Failure to create a plan could lead to human mortality, lost revenue, and damage to assets. Currently in the United States 60 percent of businesses do not have emergency management plans. Events covered by disaster management include acts of terrorism, industrial

sabotage, fire, natural disasters (such as earthquakes, hurricanes, etc.), public disorder, industrial accidents, and communication failures.

Disaster Management can be defined as the organization and management of resources and responsibilities for dealing with all humanitarian aspects of emergencies, in particular preparedness, response and recovery in order to lessen the impact of disasters. The first people to respond to a disaster are those living in the local community. They are the first to start rescue and relief operations. The Red Cross and Red Crescent National Societies therefore focus on community-based disaster preparedness, which assists communities to reduce their vulnerability to disasters and strengthen their capacities to resist them.

When the capacity of a community or country to respond and recover from a disaster is overwhelmed, and upon request from the National Society, the International Federation uses its regional and international networks, assets and resources to bring assistance to the communities and National Red Cross Red Crescent Society which is assisting them. At an international level the International Federation advocates with Governments, international organisations and humanitarian donors for better practice and accountability in disaster management and greater respect of the dignity of the vulnerable people.



Disaster

A disaster is a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that

exceed the community's or society's ability to cope using its own resources. Though often caused by nature, disasters can have human origins.

(VULNERABILITY+ HAZARD) / **CAPACITY** = DISASTER

Types of Disasters

There is no country that is immune from disaster, though vulnerability to disaster varies. There are four main types of disaster.

- Natural disasters: including floods, hurricanes, earthquakes and volcano eruptions that have immediate impacts on human health and secondary impacts causing further death and suffering from (for example) floods, landslides, fires, tsunamis.
- Environmental emergencies: including technological or industrial accidents, usually involving the production, use or transportation of hazardous material, and occur where these materials are produced, used or transported, and forest fires caused by humans.

- Complex emergencies: involving a break-down of authority, looting and attacks on strategic installations, including conflict situations and war.
- Pandemic emergencies: involving a sudden onset of contagious disease that affects health, disrupts services and businesses, brings economic and social costs.

Any disaster can interrupt essential services, such as health care, electricity, water, sewage/garbage removal, transportation and communications. The interruption can seriously affect the health, social and economic networks of local communities and countries. Disasters have a major and long-lasting impact on people long after the immediate effect has been mitigated. Poorly planned relief activities can have a significant negative impact not only on the disaster victims but also on donors and relief agencies. So it is important that physical therapists join established programmes rather than attempting individual efforts.

Local, regional, national and international organisations are all involved in mounting a humanitarian response to disasters. Each will have a prepared disaster management plan. These plans cover prevention, preparedness, relief and recovery.

Disaster Prevention

These are activities designed to provide permanent protection from disasters. Not all disasters, particularly natural disasters, can be prevented, but the risk of loss of life and injury can be mitigated with good evacuation plans, environmental planning and design standards. In January 2005, 168 Governments adopted a 10-year global plan for natural disaster risk reduction called the Hyogo Framework. It offers guiding principles, priorities for action, and practical means for achieving disaster resilience for vulnerable communities.

Disaster Preparedness

These activities are designed to minimise loss of life and damage – for example by removing people and property from a threatened location and by facilitating timely and effective rescue, relief and rehabilitation. 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.

Disaster Relief

This is a coordinated multi-agency response to reduce the impact of a disaster and its long-term results. Relief activities include rescue, relocation, providing food and water, preventing disease and disability, repairing vital services such as telecommunications and transport, providing temporary shelter and emergency health care.

Disaster Recovery

Once emergency needs have been met and the initial crisis is over, the people affected and the communities that support them are still vulnerable. Recovery activities include rebuilding infrastructure, health care and rehabilitation. These should blend with development activities, such as building human resources for health and developing policies and practices to avoid similar situations in future. Disaster management is linked with sustainable development, particularly in relation to vulnerable people such as those with disabilities, elderly people, children and other marginalised groups. Health Volunteers Overseas publications address some of the common misunderstandings about disaster management.

Main Components of Disaster Management

Mitigation

Mitigation activities actually eliminate or reduce the probability of disaster occurrence, or reduce the effects of unavoidable disasters. Mitigation measures include building codes; vulnerability analyses updates; zoning and land use management; building use regulations and safety codes; preventive health care; and public education.

Mitigation will depend on the incorporation of appropriate measures in national and regional development planning. Its effectiveness will also depend on the availability of information on hazards, emergency risks, and the countermeasures to be taken. The mitigation

phase, and indeed the whole disaster management cycle, includes the shaping of public policies and plans that either modify the causes of disasters or mitigate their effects on people, property, and infrastructure.

Preparedness

The goal of emergency preparedness programs is to achieve a satisfactory level of readiness to respond to any emergency situation through programs that strengthen the technical and managerial capacity of governments, organizations, and communities. These measures can be described as logistical readiness to deal with disasters and can be enhanced by having response mechanisms and procedures, rehearsals, developing long-term and short-term strategies, public education and building early warning systems. Preparedness can also take the form of ensuring that strategic reserves of food, equipment, water, medicines and other essentials are maintained in cases of national or local catastrophes.

During the preparedness phase, governments, organizations, and individuals develop plans to save lives, minimize disaster damage, and enhance disaster response operations. Preparedness measures include preparedness plans; emergency exercises/training; warning systems; emergency communications systems; evacuations plans and training; resource inventories; emergency personnel/contact lists; mutual aid agreements; and public information/education. As with mitigations efforts, preparedness actions depend on the incorporation of appropriate measures in national and regional development plans. In addition, their effectiveness depends on the availability of information on hazards, emergency risks and the countermeasures to be taken, and on the degree to which government agencies, non-governmental organizations and the general public are able to make use of this information.

Response

The aim of emergency response is to provide immediate assistance to maintain life, improve health and support the morale of the affected population. Such assistance may range from providing specific but limited aid, such as assisting refugees with transport, temporary

shelter, and food, to establishing semi-permanent settlement in camps and other locations. It also may involve initial repairs to damaged infrastructure. The focus in the response phase is on meeting the basic needs of the people until more permanent and sustainable solutions can be found. Humanitarian organizations are often strongly present in this phase of the disaster management cycle.

Recovery

As the emergency is brought under control, the affected population is capable of undertaking a growing number of activities aimed at restoring their lives and the infrastructure that supports them. There is no distinct point at which immediate relief changes into recovery and then into long-term sustainable development. There will be many opportunities during the recovery period to enhance prevention and increase preparedness, thus reducing vulnerability. Ideally, there should be a smooth transition from recovery to on-going development.

Recovery activities continue until all systems return to normal or better. Recovery measures, both short and long term, include returning vital life-support systems to minimum operating standards; temporary housing; public information; health and safety education; reconstruction; counseling programs; and economic impact studies. Information resources and services include data collection related to rebuilding, and documentation of lessons learned.

Vulnerability

Vulnerability describes the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard. There are many aspects of vulnerability, arising from various physical, social, economic, and environmental factors. Examples may include:

- poor design and construction of buildings,
- inadequate protection of assets,
- lack of public information and awareness,
- limited official recognition of risks and preparedness measures, and

- disregard for wise environmental management.
- Vulnerability varies significantly within a community and over time. This definition identifies vulnerability as a characteristic of the element of interest (community, system or asset) which is independent of its exposure. However, in common use the word is often used more broadly to include the element's exposure.

The above explanation was taken from the **United Nations (UN) International Strategy for Disaster Reduction (ISDR) Terminology on Disaster Risk Reduction**. Follow the link to look up other terminologies.

There are four (4) main types of vulnerability:

1. Physical Vulnerability may be determined by aspects such as population density levels, remoteness of a settlement, the site, design and materials used for critical infrastructure and for housing (UNISDR).

Example: Wooden homes are less likely to collapse in an earthquake, but are more vulnerable to fire.

2. Social Vulnerability refers to the inability of people, organizations and societies to withstand adverse impacts to hazards due to characteristics inherent in social interactions, institutions and systems of cultural values. It is linked to the level of well being of individuals, communities and society. It includes aspects related to levels of literacy and education, the existence of peace and security, access to basic human rights, systems of good governance, social equity, positive traditional values, customs and ideological beliefs and overall collective organizational systems (UNISDR).

Example: When flooding occurs some citizens, such as children, elderly and differently-able, may be unable to protect themselves or evacuate if necessary.

3. Economic Vulnerability. The level of vulnerability is highly dependent upon the economic status of individuals, communities and nations The poor are usually more vulnerable to

disasters because they lack the resources to build sturdy structures and put other engineering measures in place to protect themselves from being negatively impacted by disasters.

Example: Poorer families may live in squatter settlements because they cannot afford to live in safer (more expensive) areas.

4. Environmental Vulnerability. Natural resource depletion and resource degradation are key aspects of environmental vulnerability.

Example: Wetlands, such as the Caroni Swamp, are sensitive to increasing salinity from sea water, and pollution from stormwater runoff containing agricultural chemicals, eroded soils, etc.

Hazard

A hazard is a situation that poses a level of threat to life, health, property, or environment. These hazards are also very dangerous for human and animal life. Most hazards are dormant or potential, with only a theoretical risk of harm; however, once a hazard becomes "active", it can create an emergency. A hazardous situation that has come to pass is called an incident. Hazard and possibility interact together to create risk. Identification of hazard risks is the first step in performing a risk assessment.

Modes of a Hazard

Hazards are sometimes classified into three modes:

- **Dormant**—The situation environment is currently affected. For instance, a hillside may be unstable, with the potential for a land slide, but there is nothing below or on the hillside that could be affected.
- **Armed**—People, property, or environment are in potential harm's way.
- **Active**—A harmful incident involving the hazard has actually occurred. Often this is referred to not as an "active hazard" but as an accident, emergency, incident, or disaster.

Capacity

Capacity includes the combination of all the strengths, attributes and resources available within a community, society or organization that can be used to achieve agreed goals. Capacity may include infrastructure and physical means, institutions, societal coping abilities, as well as human knowledge, skills and collective attributes such as social relationships, leadership and management. Capacity also may be described as capability. Capacity assessment is a term for the process by which the capacity of a group is reviewed against desired goals, and the capacity gaps are identified for further action.

Conclusion

The current "non-system" for providing information for disaster management is not effectively utilizing a wealth of information that resides with various organizations. Existing technologies could deliver to disaster managers important new information products that could save lives, reduce damage to property, and lessen the environmental impacts of natural disasters. Continued improvements in technology should help make information more widely, quickly, and reliably available—and at less cost. The current situation is characterized by numerous shortcomings that inhibit optimal decision-making for disaster management.

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