Role of Medical Associations in Times of Disaster

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I would like firstly to thank the Japan Medical Association (JMA) for having invited me to participate in this meeting, so giving me the honour and privilege to be here with you, enjoying you friendship and hospitality. On behalf of 99 national medical associations and the millions of physicians they represent, to express our gratitude to JMA for its dedication to our World Medical Association (WMA).

As the summary of my presentation, I will start with this phrase, "There is no safe place on this planet" (**Fig. 1**). And to illustrate it, I will just remember some quite recent events registered last year. In my country, Rio de Janeiro, there were more than 600 deaths. In the city where I live, São Paulo, streets were immersed under water due to a massive flooding. In north of Brazil, 2 weeks ago, Acre river water level increased 6 meters above normal, and more than 30,000 people were affected and 6,000 were unsheltered. In Europe, there were severe floods as well—in Germany, Belgium, Australia, Myanmar, Cambodia, China, Columbia, United States, India, Japan (Nagoya), Mexico, Pakistan, Thailand, and Philippines.

So, "there is no safe place on this planet," and the impression that natural disasters are becoming more and more frequent is being confirmed. In the last decade, the attention of the world has been drawn to a number of severe events which seriously tested and overwhelmed the capacity of local healthcare and emergency medical response systems.

Armed conflicts, terrorist attacks and natural disasters such as earthquakes, floods and tsunamis in various parts of the world have not only affected the health of people living in these areas but also have also drawn the support and response of the international community. Many national medical associations have sent groups to assist in such disaster situations.

According to the World Health Organization (WHO) Center for Research on the Epidemiology of Disasters (CRED),[1] the frequency, magnitude, and toll of natural disasters and terrorism have increased throughout the world. In the previous century, about 3.5 million people were killed worldwide as a result of natural disasters, and about 200 million were killed as a result of human-caused disasters (e.g., wars, terrorism, genocides). Each year, disasters cause hundreds of deaths and cost billions of dollars due to disruption of commerce and destruction of homes and critical infrastructure.

Population vulnerability (e.g., due to increased population density, urbanization, or aging) has increased the risk of disasters and public health emergencies. Globalization, which connects countries through economic interdependencies, has led to increased international travel and commerce. Such activity has also led to increased population density in cities around the world and increased movement of people to coastal areas and other disaster-prone regions. Increases

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Fig. 1

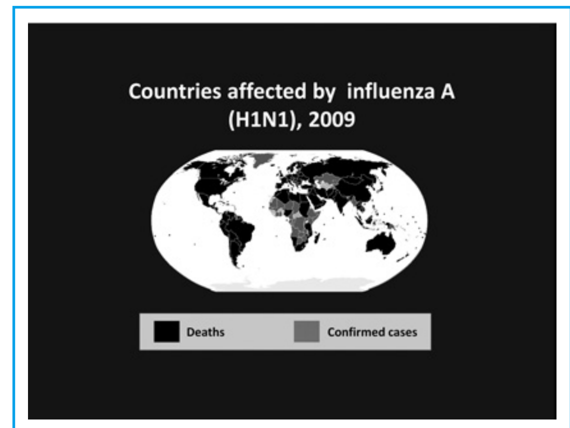


Fig. 2

in international travel may speed the rate at which an emerging infectious disease or bio-terrorism agent spreads across the globe. Social climate changes, and terrorism have emerged as important global factors that can influence disaster trends and thus require continued monitoring and attention. The emergence of infectious diseases, such as H1N1 influenza A and severe acute respiratory syndrome (SARS), and the recent arrival of West Nile virus and monkey pox in the Western hemisphere, reinforces the need for constant vigilance and planning to prepare for and respond to new and unexpected public health emergencies (**Fig. 2**).

The growing likelihood of terrorist-related disasters influencing large civilian populations affects all nations. Concern continues about the security of the worldwide arsenal of nuclear, chemical, and biological agents as well as the recruitment of people capable of manufacturing or deploying them. The potentially catastrophic nature of a "successful" terrorist attack configures an event that may demand a disproportionate amount of resources and healthcare professional's preparedness.

Natural disasters such as tornadoes, hurricanes, floods, and earthquakes, as well as industrial and transportation-related catastrophes, are far more common and can also severely stress existing medical, public health, and emergency response systems.

Physicians are on the front lines when dealing with injury and disease—whether caused by microbes, environmental hazards, natural disasters, highway collisions, terrorism, or other calamities. Early detection and reporting are critical to minimize casualties through astute teamwork by public- and private-sector health and emergency response personnel.

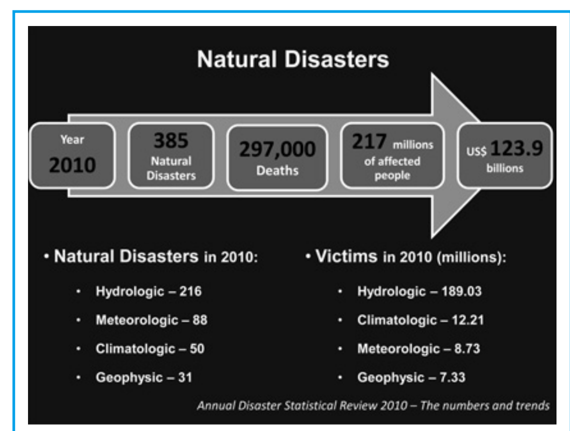


Fig. 3

Let's get back to 2010. In Haiti, there were 316,000 deaths, 350,000 blessed, 4,000 amputations, and 1.5 million unsheltered. There were 385 natural disasters worldwide, causing 297,000 deaths and affecting 217 million people.[1] Just 2010 alone gave us those alarmingly large numbers (**Fig. 3**).

Statistical data on events and victims confirm the progressive increasing in magnitude of catastrophic events in the globe (**Fig. 4**).[1] The top 10 countries with the largest number of reported

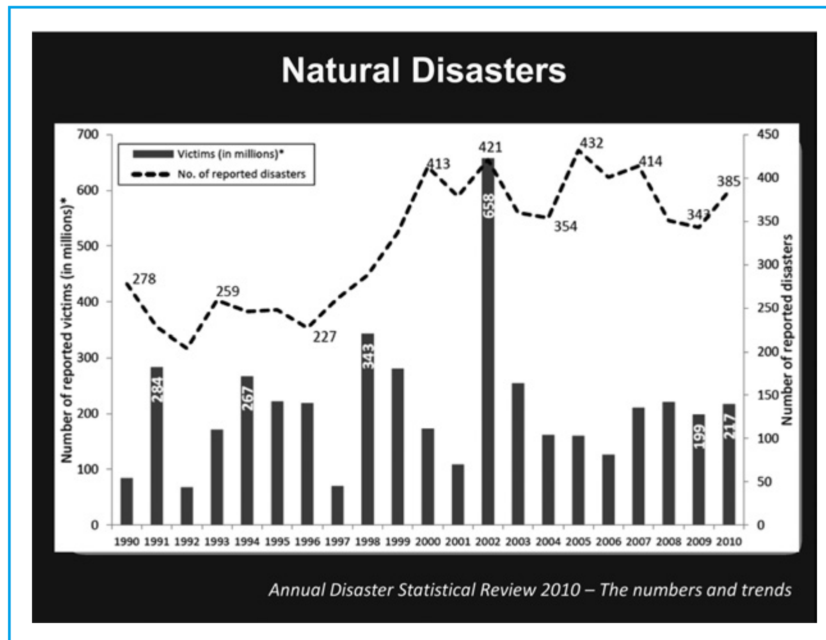


Fig. 4

events in 2010 are: People's Republic of China, India, Philippines, United States, Indonesia, Mexico, Australia, Russia, Pakistan, and Vietnam (**Fig. 5**).[1] My country, Brazil, was among those top 10 countries the year before.[2]

Even when causes are known, and there are logical ways to avoid or minimize damage, solution is not always achieved.

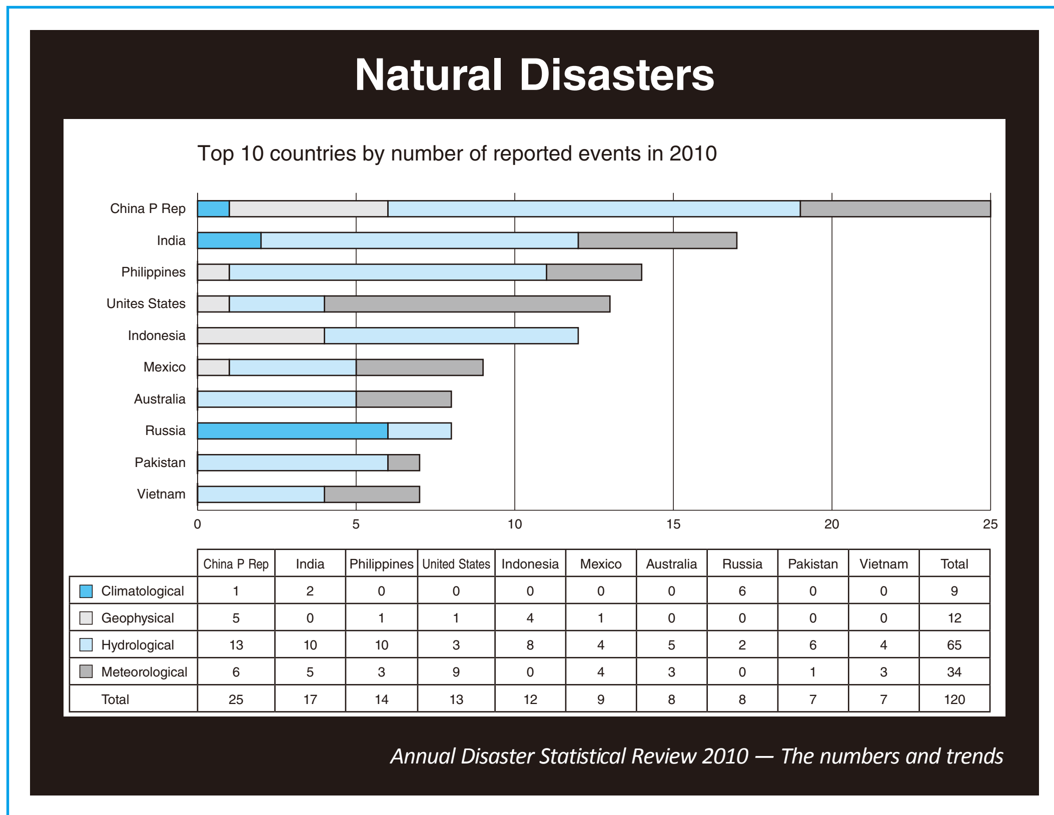
According to Brazilian legislation, for instance, it is forbidden to build on the top of the mountains, above 1,800 meter, in slopes of 45-degree or more, or closer than 30 meter from rivers. But, recommendations were very often not followed, and the result was more than 900 deaths, 345 missed and 35,000 unsheltered.

So, if prevention is not always possible. Reducing the risk, however, still most certainly is, and there is no doubt of the importance of preparing ourselves for adversity. Even though it never strikes at those in our immediate circles, disaster can hit more quickly today or tomorrow than we ever would have supposed yesterday—much more quickly than expected, even though we had wanted to avoid it.

Whatever the nature of the disaster, it imposes obligations on us all—much more on us doctors than on the others. Although security, communication, transport and so many other necessities are pressing, healthcare is a fundamental concern in light of the invariable implication that disasters and human survival have. In the same measure that we become trained but to treat threats to life, it is expected that we also take action and give the advice and spirit of solidarity, intrinsic to the Art of Medicine.

This is why we need to be prepared. Preparedness is the key, and it starts with information. People have to know when to leave and what should they do if to stay. Preparation is also having the human resources and materials in the necessary place at the necessary time.

Among the millions of practicing doctors on our planet, it is urgent that we qualify them to be on the ready in temporal and geographical terms, putting them in right places, with specialization and skills that are potentially useful in catastrophic situations. We must make them, above all, recognize risk so that they can better protect themselves and transmit prevention to others. Later, we must train them to act in collaboration with the other essential players and in the various circumstances that can befall us. We also have to organize efforts of the civil medical community in harmony with other healthcare institutions.



	China P Rep	India	Philippines	United States	Indonesia	Mexico	Australia	Russia	Pakistan	Vietnam	Total
Climatological	1	2	0	0	0	0	0	6	0	0	9
Geophysical	5	0	1	1	4	1	0	0	0	0	12
Hydrological	13	10	10	3	8	4	5	2	6	4	65
Meteorological	6	5	3	9	0	4	3	0	1	3	34
Total	25	17	14	13	12	9	8	8	7	7	120

Fig. 5

But, which are the roles of Medical Associations?

Understanding its role on this regard, the WMA adopted last October in Montevideo, Uruguay, the "Declaration of Montevideo on Disaster Preparedness and Medical Response."[3] The WMA, representing the doctors of the world, calls upon its members to advocate for the following statements from the Declaration:

- *To promote a standard competency set to ensure consistency among disaster training programs for physicians across all specialties. Many NMAs have disaster courses and previous experiences in disaster response. These NMAs can share this knowledge and advocate for the integration of some standardized level of training for all physicians, regardless of specialty or nationality.*
- *To work with national and local governments to establish or update regional databases and geographic mapping of information on health system assets, capacities, capabilities, and logistics to assist medical response efforts, domestically and worldwide, when needed. This could include information on local response organizations, the condition of local hospitals and health system infrastructures, endemic and emerging diseases, and other important public health and clinical information to assist medical response in the event of a disaster. In addition, systems for communicating directly with physicians and other front line health care providers should be identified and strengthened.*
- *To work with national and local governments to ensure the developing and testing of disaster management plans for clinical care and public health including the ethical basis for delivering such plans.*
- *To encourage governments at national and local levels to work across normal departmental and other boundaries in developing the necessary planning.*

The WMA could serve as a channel of communication for NMAs during such times of crisis, enabling them to coordinate activities and to work

together.

Lastly, I will conclude that we need to integrate in solidarity the efforts of the international medical community, understanding the world itself as the object of our attention, and to be ready when the moment comes.

We have in front of us an extensive, difficult and complex mission. It is not possible to procrastinate, nor can we leave it in second place.

Let's get to it.

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