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General Report

Value of Disaster-oriented Educational Program for Health Care Professionals

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Abstract

Lately, a growing number of severe and complex humanitarian crises such as earthquake, tsunami, flood, fire, hurricane, armed conflicts and epidemics have been occurring in different regions of the planet earth, causing hundreds or even thousands cases of injury, mental disorders, outbreaks of air and water borne communicable and non-communicable disease epidemics and deaths. To deal with such humanitarian crises, national heath policy makers and international health institutions have created state-based agencies and non-governmental organizations to deal with disaster's consequences and take care of disaster-affected populations. This article highlights the importance of a special disaster-oriented graduate medical and nursing education program for catastrophe preparedness. Natural disasters are often unpreventable; however, risk reduction strategies with involvement of governmental and non-governmental bodies, health care providers, the media and at-risk population may help mitigate its physical and psychological impacts. Enhancing the skills of health care and social relief workers in the way to deal with disaster-related issues and improving communication between and within organizations involved in disaster interventions are really critical for the success of every humanitarian crisis management operation. Thus, preparedness of disaster health care providers is indispensable for a prompt and efficient disaster response. The classic education and training given at undergraduate levels are obviously not well adapted to the psychological environment surrounding disasters and might limit care givers' capacity to provide fast and adequate emergency relief to affected populations. There is a crucial need to train health care professionals whose major competency would be to respond to disaster-related socio-medical issues.

Keywords : disaster, education, humanitarian crisis, international organization, preparedness.

Introduction

With the introduction of the principles of triage during the Napoleonic wars of 1799-1815, the term emergency medicine started to be used[1]. Currently, the term is commonly used in relation to efforts to address health care issues within humanitarian crises[2]. Outbreaks of infectious diseases (cholera, shigellosis, tuberculosis, measles…) and trauma resulting from natural disasters and war in the nineteenth and twentieth centuries have inspired the necessity for a global medical response beyond national borders. To deal with such catastrophes, national heath policy makers and international institutions have created state-based and non-governmental organizations so as to limit or eradicate epidemics and take care of disaster-affected populations. On a global scale, the United Nations High Commissioner for Refugees (UNHCR), the World Health Organization (WHO), the Office for the Coordination of Humanitarian Affairs (OCHA) and other international organizations (International Relief Committee, IRC; Medecins Sans Frontieres, MSF/DWB; Medecins du Monde, CARE, OXFAM, Red Cross/CICR etc…) are playing a critical role in responding to humanitarian disasters worldwide.

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Since the last century, a growing number of humanitarian catastrophes-earthquake, tsunami, flood, fire, hurricane and typhoon, armed conflicts- have been occurring at different sites on the planet earth, causing hundreds or even thousands cases of injuries and other musculoskeletal disorders, outbreaks of air and water borne illnesses, communicable and non-communicable diseases and deaths. Disaster nursing, as well as disaster medicine, involves preparedness and readiness to promptly and efficiently respond to community needs during and after a natural or man-made disaster that might be beyond local health system's capacity to deal with. This implies the necessity for national health policy makers to envisage providing a program that trains health care providers with appropriate skills and ready to intervene in time of humanitarian crisis.

Disaster response: Are national health systems well prepared?

A glance to recent natural disasters both in developed and developing countries shows that there is still much to do in terms of disaster preparedness, rescue, medical and social relief for affected populations and risk communication. Recently, the hurricane Sandy that particularly damaged the city of New York has left more than 90 of the inhabitants dead and a lot of infrastructure damages, despite early warnings on the imminent catastrophe and possible damages it might cause.

During the past decade, considerable public investment has been made in standardizing command and communication assuring appropriate and rapid supply chains in the United States, for example. Obviously, recovery from large-scale disasters is invariably a prolonged and complex challenge that is poorly understood and difficult to accomplish[3]. Another evidence of insufficiency of disaster preparedness can be seen in the "triple Tohoku-Fukushima disaster" (earthquake, tsunami and nuclear explosion) on 11 March 2011 in Japan. Though much effort has been done in terms of preparedness for future humanitarian crises in Japan since the great Hanshin-Awaji earthquake that occurred on 17 January 1995 in Kobe, most of tsunami victims in the Tohoku region could not benefit of health care relief services and food supply 2 to 3 days after the disaster. This supposes that the level and impact of the catastrophe might have been beyond the nation's preparedness efforts and response capacity, suggesting the necessity to improve the disaster management system for early relief and efficient coordination of humanitarian interventions.

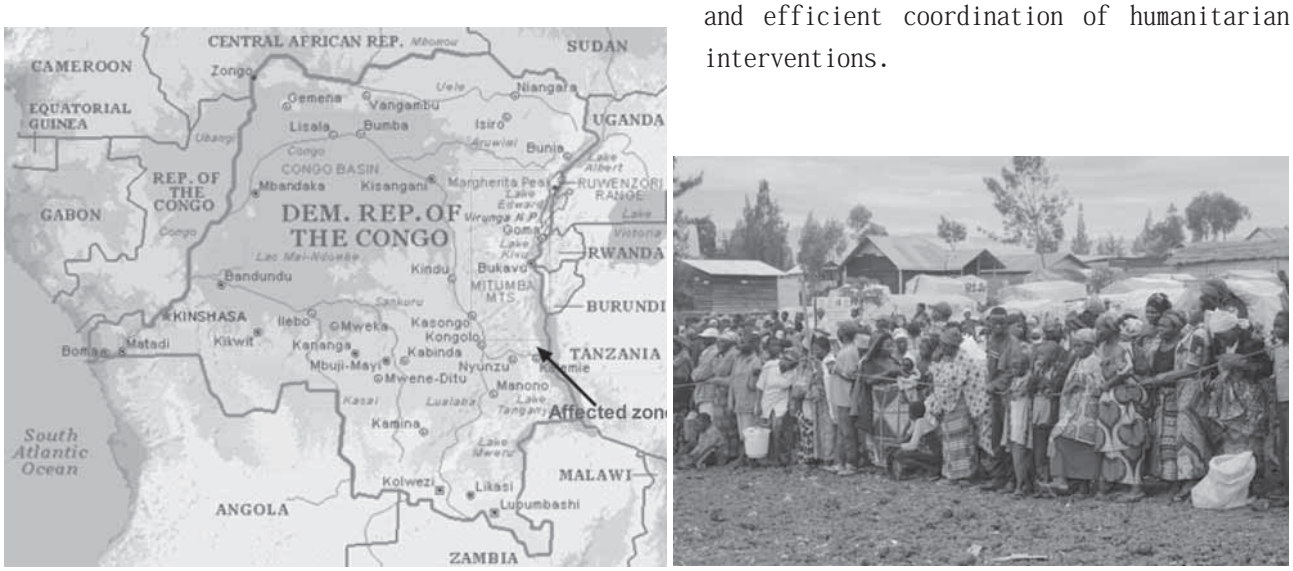

Fig 1 — Map of Congo DR with war-affected eastern zone and Congolese IDPs at Goma (MSF, 2013).

Currently, there are a number of hot spots in Africa where armed conflicts are claiming thousands of lives, causing millions of refugees and displaced populations; governments are often powerless to face the humanitarian crises, whilst international organizations are low to respond. In central African region, the ongoing "Congo war" has already claimed more than 6 million lives of innocent people since 1998, mostly women and children, with more than 445,000 refugees in neighbor countries and 2.5 million of internally displaced populations (IDPs) left in forest and savanna without enough support and with no hope for ending their misery. This "economic war" is reported to be the deadliest one since the World War 2 (Stephen Lewis, 2007)[4].

Similarly, thousands of Malian and Somalian refugees in neighboring countries (Mauritania, Burkina Faso, Kenya...) have been striving to survive for months without any assistance. These facts highlight the lack of preparedness of local governmental agencies and regional organizations to protect and provide necessary relief to populations in need.

In 2010, an earthquake of magnitude 7.0 occurred in Haiti which devastated the country, leaving approximately 230,000 people dead and injured more than 300,000 of inhabitants. It has been reported that about two million Haitians were left homeless without consistent relief in the aftermath[5].

There are a lot of things to learn from those past and current disasters so that disaster response and intervention strategies could get improved. Enhancing the skills of health care providers in the way to deal with disaster-related health and social issues and improving communication between and within organizations involved in interventions are really critical for the success of every humanitarian crisis management operation.

Images of Kimaza camp in DRC (a,b) and Fassala camp in Mauritania (c,d) for Malian refugees

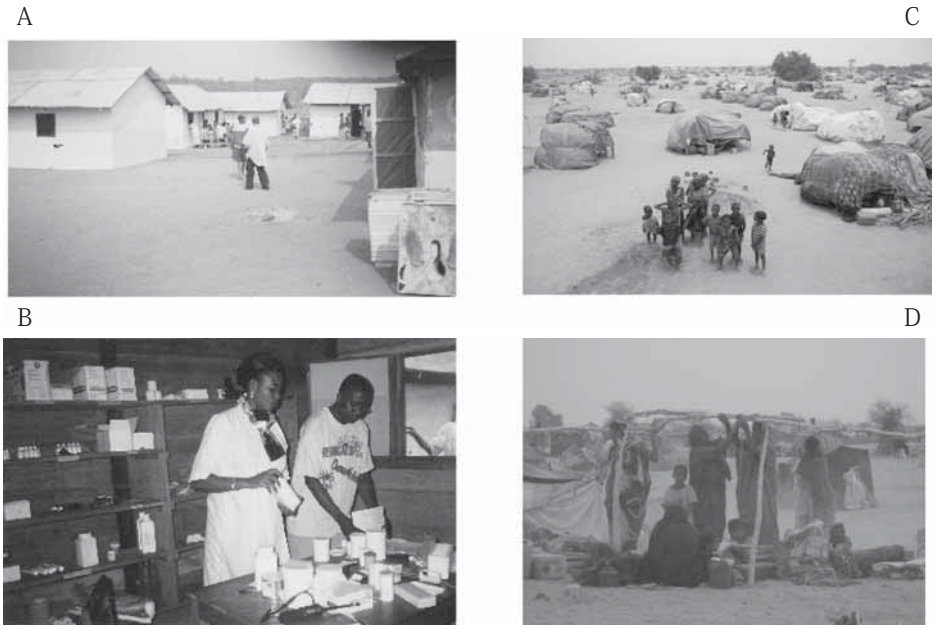

Fig 2 — The Kimaza camp in Congo DRC (prepared to receive refugees from Brazzaville in neighbor country, photos taken by one of the authors) (A,B) and Malian refugees in Fassala, Mauritania (C,D) (RFI, 2013).
The figure shows a contrast between two refugee camps within Africa; one well prepared and equipped to receive refugees, and the other without shelters with women trying to build tents.

More natural disasters expected in a near future

In Japan, the imminent great Nankai earthquake is predicted to occur in a near future; it is only one of the natural catastrophes to be faced sooner or later in the country. Recently, Asia pacific region and Latin America have been one of the world regions the most affected by natural disasters such as earthquake, tsunami and flood. There is a possibility of occurrence of such events in the coming years.

Given the ecological consequences of climate change, extreme weather events, increase of sea level, melting of glaciers in oceans would inevitably lead to flood disasters that will affect vulnerable population across the planet[6]; and, follo-wing the flood, outbreaks of epidemic diseases, depression and post traumatic stress disorder (PTSD)will, as usual, occur and will require appropriate disaster response. Michael Charness, an American researcher, declared in the midst of hurricanes Katrina ruins, that he was overwhelmed by the number and volume of mental health problems arising from this disaster[7]. If the current trend of climate change is not reversed, we can expect the burden of disasters to increase as a result[6].

Limits of classic medical/nursing education curriculum and the necessity of a disaster-oriented training program

It is true that natural disasters are often unpreventable; however, disaster risk reduction strategies with involvement of governmental agencies, the media and at-risk population may help mitigate its physical and psychological impacts[2].

A good coordination and communication system between disaster responders are certainly an important component of a successful disaster response; but they are not sufficient by themselves. Preparedness and competence of disaster health care providers are indispensable for an efficient medical humanitarian response.

The classical education and training given at undergraduate levels are not always adapted to the psychological environment surrounding disasters, particularly those with large scale consequences, as they involve a person to person relation between a care giver and a patient in a hospital, a setting equipped with necessary materials needed to administrate health care. In contrast to the classic education, disaster health care response implies dealing with a group of affected individuals or a population mostly at sites with limitations in terms of materials, personnel, even competences and under working conditions that are unfamiliar to neophytes.

Due to the relatively high frequency of both natural and man-made disasters occurrence and for efficiency purpose, the nursing personnel involved in relief interventions should be adequately prepared. That is very important as nurses come in contact, in disaster-affected sites, with people of different ethnic, educational and traditional or cultural backgrounds, nationalities and sensitivity.

Conclusion

Many scientists are predicting the occurrence of natural disasters of great intensity and magnitude in a near future. However, lessons from past humanitarian crises show an insufficient preparedness and a poor disaster management policy in many regions of the world. These realities suggest the necessity for a disaster-oriented discipline in the field of nursing and medicine, as there is a crucial need to train health care professionals whose major competency is to respond to disaster-related socio-medical issues.

As stated by Aunice Reed[8], helping nurses become formally trained for disaster equips them with a universal code or method for them

to adhere to, no matter the environments. It also gives them much more confidence in their ability to lead and organize large groups of people in frantic situations and times. As part of the first-response front, nurses are then better able to effectively assist and ease overwhelmed medical teams. So in essence, nurses can save many lives.

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