

## Teaching about disasters in medical education: the need for international collaboration

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Dear Editors,

Pfenninger et al. [1] presented in a recent research paper an outline of a curriculum covering medical student disaster education. Their work demonstrated an interdisciplinary format and multi-experiential structure for a curriculum. However, understanding the rationales for including such a component in a medical curriculum might need to be clearly highlighted. Furthermore, many universities are lacking expertise in this area and find it challenging to take such decisions. These two issues were not adequately addressed by Pfenninger et al. in their paper.

Disasters caused by earthquakes, hurricanes, cyclones, other natural disasters or terrorist attacks put us in situations with a high level of threat to life, property and the environment. The recent earthquake in January 2010 in the Haitian region reflects the wide scale of such damages [1]. However, looking carefully beyond this catastrophe, we realize that there has been an increasing pattern of such disasters over the last 10 years (Table 1). A careful review of data reveals that disasters caused by earthquakes with such large scale have not occurred since the 1920 Haiyuan earthquake in China. Such a trend raises the need for including a training component in the undergraduate medical and other health professional curricula covering disaster management systems and public health preparedness. The aim is to enable graduates to be prepared for risk

**Table 1** Deaths from major earthquakes, natural disasters and terror attacks from 1999 to 2010\*

Year	Place	Deaths	Magnitude/ others
January 2010	Haitian region	222,570	7.0
September 2009	Southern Sumatra, Indonesia	1,117	7.5
March/April 2009 up to April 2010	Mexico and then spread worldwide to over 206 countries	At least 17,700**	Influenza A virus subtype H1N1 flu pandemic
May 2008	Eastern Sichuan, China	87,587	7.9
May 2008	Myanmar (Burma)	22,000	Cyclone Nargis
May 2006	Indonesia	5,749	6.3
October 2005	Pakistan	86,000	7.6
October 2005	Mexico, Cuba, US state of Florida	63	Hurricane Wilma (Category 5)
August 2005	Bahamas, Cuba, Florida, Louisiana, Mississippi, Alabama	1,836	Hurricane Katrina (Category 5)
March 2005	Northern Sumatra, Indonesia	1,313	8.6
December 2004	Sumatra	227,898	9.1
December 2003	Southern Iran	31,000	6.6
August 2003	France	11,000***	Heat waves
May 2003	Northern Algeria	2,266	6.8
March 2002	Afghanistan	1,000	6.1
January 2001	Gujarat, India	20,085	7.6
September 2001	New York, USA	2,976	Terror attacks
September 1999	Taiwan	2,400	7.6

\*Modified from USGS, Earthquake Hazards Program

\*\*World Health Organization, Global Alert and Response (GAR)

\*\*\*World Health Organization, The health impacts of 2003 summer heat-waves

Briefing note for the Delegations of the 53rd session of the WHO Regional Committee for Europe (<http://www.euro.who.int/document/Gch/HEAT-WAVES%20RC3.pdf>)

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management, how to work as part of a team and how to use a wide range of skills to respond to potential disasters in an increasingly interconnected world. Searching PubMed for medical schools that have included disasters in their programs reveals that there are a few programs covering parts of this concept [3–5]. Leadership in modern medicine and global health and the need in such disasters for expertise of diverse groups of health professionals necessitate that such programs be developed by collaboration between universities in the risk areas and other universities. Such initiatives might open new scopes of collaboration in the area of global health, medical education and students' training.

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