



Review

What we have learnt from past disasters, how do we prepare for future calamities?



Hitoshi Ohto *

Department of Blood Transfusion and Transplantation Immunology, Fukushima Medical University, Hikarigaoka 1, Fukushima City, Fukushima 960-1295, Japan

ARTICLE INFO

Keywords:

Disaster
Blood
Transfusion
Supply

Contents

References 175

How have transfusion specialists managed and learnt from past disasters? How and what should we prepare for future catastrophes?

We have learnt lessons from past disasters about providing humanitarian coordination in blood donation/transfusion and reducing risks in the aftermath of disasters. *Disasters and Blood Transfusion*, the special theme of this issue, has been chosen by Professor Gail A. Rock, Editor-in-Chief, and other editorial staff of *Transfusion and Apheresis Science*. During the confused aftermath of catastrophes, maintaining a stable and safe blood supply has long been a concern in our specialty. Japan's 2011 earthquake, tsunami, and nuclear power plant triple disaster has expanded the scope and depth of our deliberations.

Being a guest editor affords a unique opportunity to work in the company of transfusion authorities with disaster-related experience around the world. Managing a system

of reliable blood collection, processing, and distribution is a tough challenge for transfusion specialists in the aftermath of natural and manmade catastrophes such as earthquakes, tsunamis, hurricanes/typhoons, and acts of terrorism. Previous epidemic threats, like pandemic influenza and emerging infectious diseases, however, have strengthened transfusion systems and transfusion technologies of affected areas as well as other nations. Earthquakes and consequent tsunamis have caused widespread loss of life and major injuries. With each disaster, resident stakeholders, healthcare professionals, transfusion specialists, government officials and armed forces should cooperatively respond and mitigate in the present, then empower society to prepare for the future.

Table 1 shows transfusion-related aspects of major natural and man-made disasters from the past two decades. This guest editor solicited manuscripts for those not already well-reported, such as the Izmit major earthquake (Turkey), Bam earthquake (Iran), Indian Ocean earthquake and tsunami (Indonesia and Sri Lanka), Wenchuan earthquake (China) and Haiti earthquake. However, not all prospective authors could share their experiences, present situation, and future plans within the time constraints of this theme section.

* Department of Blood Transfusion and Transplantation Immunology, Fukushima Medical University, Hikarigaoka 1, Fukushima City, Fukushima 960-1295, Japan. Fax: +81 24 549 3126.

E-mail address: hit-ohito@fmu.ac.jp.

Table 1
Recent calamities.

Name	Date	Country	Victims	Destroyed houses	Transfusion	Information	References
Earthquakes and tsunamis							
Hanshin-Awaji earthquake (magnitude 7.2)	17-Jan-1995	Japan	Dead: 6308 Missing: 2 Injured: 43,177	Completely: 100,302 Partially: 336,114	Demand: increased Blood donors: increased	Cause of death: injured under houses collapsed (83%), burn (13%)	[1]
Izmit major earthquake (magnitude 7.6 or 7.4)	17-Aug-1999	Turkey	Dead: 17,127 (or 45,000 including missing) Injured: 43,953	600,000 lost their houses	Demand: no information available Blood donors: no information available	Most deaths caused under collapsed multistory houses not resistant to earthquakes	[2]
Bam earthquake (magnitude 6.5)	26-Dec-2003	Iran	Dead: >40,000 Injured: 30,000 Victims: 75,600	70% of houses collapsed	Demand: no information available Blood donors: no information available	Most deaths caused under collapsed houses made with adobe bricks	[3]
Indian Ocean earthquake and tsunami (magnitude 9.1 or 9.3)	26-Dec-2004	Indonesia, Malaysia, Thailand, India, Sri Lanka, Maldives, Madagascar, Somalia	Dead 226,000 Injured: 130,000 Victims: 5,000,000		Demand: not increased Blood donors: no information available	Most deaths caused by tsunami drowning	[4]
2005 Kashmir earthquake (magnitude 7.6)	8-Oct-2005	Pakistan, India, Afghanistan	Dead: >87,300 Injured: >75,000 Victims (lost houses): 4,000,000		Demand: not increased? Blood donors: no information available	Collapsed buildings, mudslides	[5]
Wenchuan earthquake (magnitude 7.9–8.0)	12-May-2008	China (Sichuan)	Dead: 69,000 Missing: 18,000 Injured: >370,000 (bruise, crush injury, limb fracture, cranial trauma, chest injury, multiple trauma, amputation)	Totally: 220,000 Partially: 4,150,000	Demand: increased? Blood donors: increased?	Most deaths caused under collapsed houses	[6]
Haiti earthquake (magnitude 7.0)	10-Jan-2010	Haiti	Dead: 222,570 (or 316,000) Missing: 869 Injured: 310,928 Victims: 3,000,000 (one-third of the population) Dead due to cholera: >800		Demand: increased? Blood donors: increased?	Heavily destroyed infrastructure (water supply, electricity, information/communication media, transportation, convey)	[7]
2010 Chile earthquake (magnitude 8.8)	27-Feb-2010	Chile	Dead: 800 (including tsunami dead >500) Victims: 2,000,000	279,000 houses	Demand: increased twice Blood donors: increased, especially female donors	Disturbed peace, thus foreign aid teams could not go nor assist	[8]
Great East Japan earthquake (magnitude 9.0)	11-Mar-2011	Japan	Dead: 15,894 Missing: 2561 Injured: 6152 Victims: >8,000,000	Totally: 118,636 Partially: 785,000	Demand: 30–40% decreased Blood donors: increased	Death caused by tsunami drowning (91%), crushing (4%), burn (1%), no radiation deaths	[9]
Nepal (Gorkha) earthquake (magnitude 8.1 or 7.8)	25-Apr-2015	Nepal, India, China, Bangladesh	Dead: >8664 Injured: >23,447 (bruise, falling injury, limb fracture) Victims: 8,000,000 (30% of the population)	760,000	Demand: increased? Blood donors: increased?	Collapsed houses, avalanche, mudslide serious damage to transportation infrastructures, difficulty in rescue	[10]
Floods							
Hurricane Katrina	24–30 -Aug-2005	USA (Louisiana, Mississippi, Alabama, Florida)	Dead: 1836 Injured: >23,400 Missing: >135		Demand: not increased? Blood donors: no information available	Directly by storm for 1170, drowning (40%) and injury (25%) in Louisiana	[11]
Typhoon Haiyan/Yolanda	7–8 -Nov-2013	Philippines	Dead: >5200 (>10,000?) Injured: >23,400 Missing 22,000		Demand: not increased? Blood donors: no information available	No running water, electricity, or secure transportation	[12]
Terrorist attack September 11, 2002	11-Sep-2002	USA (New York, Washington, DC)	Dead: 3000 Injured: >4000		Demand: sizably decreased Blood donors: drastically increased	Terrorists using hijacked airplanes attack World Trade Center Buildings in New York and Pentagon in Washington, DC	[13,14]

Download English Version:

<https://daneshyari.com/en/article/5664738>

Download Persian Version:

<https://daneshyari.com/article/5664738>

[Daneshyari.com](https://daneshyari.com)