

Approach to Earthquake Related Health Problems

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A disastrous 7.8 Richter scale earthquake struck Nepal on April 25, 2015. Major Nepalese hospitals including Dhulikhel hospital did well to manage the initial thrust of patient load with grievous injuries in spite of damage to their own hospitals.¹ More than 9,000 people lost their lives and many thousands are still missing. Similarly, more than 20,000 people were injured. More serious among them were brought to the hospitals situated in major cities and others were treated at health camps conducted for that purpose as most of the health care facilities situated in the earthquake affected areas were completely damaged.¹ Hospital data from Dhulikhel Hospital two months after the major earthquake indicates that about six hundred patients required complex major surgery and 3,500 patients needed less serious and minor surgery. The immediate response is appropriately directed to save lives. However, majority of patients require long term physical and mental care even though they may not have grievous injuries. The deaths in earthquake may be instantaneous due to crush injuries, rapid due to asphyxia, hypovolemic shock etc. and delayed due to dehydration, wound infection, post-operative infection etc.² Health of people put in temporary shelters is further made vulnerable due to poor sanitary conditions, lack of safe drinking water and malnutrition.

It is extremely difficult to conduct epidemiological study regarding mortality and morbidity in situation like this due to lack of surveillance data. However, mortality and morbidity in earthquake is not only related to injury sustained due to collapse of buildings but also due to non surgical problems like acute myocardial infarction, exacerbation of chronic diseases such as diabetes, hypertension, anxiety, depression etc.³ Fifty percent increase in death rate due to myocardial infarction during the first three days peaking on the third day was reported from Athens, Greece after 6.7 Richter scale earthquake in 1981.⁴ Exacerbation of chronic obstructive pulmonary disease (COPD) should be a serious problem due to dust arising from the collapse of the buildings. And it is made worse in countries like in Nepal as cigarette smoking rate is extremely high in the rural areas; and the major cities including Kathmandu are known to have very high degree of air pollution. Epidemics of diarrhoea and other communicable diseases due to unsanitary condition arising from dead and decaying bodies trapped in the collapsed buildings, over crowding in the temporary shelters and lack of appropriate toilets and safe drinking water are frequent occurrences after the massive April 25 Earthquake that hit Nepal. Mental health problems are generally over looked in emergency conditions like this as attention is focused on saving lives and attending the physically injured individuals in the beginning and providing food and shelter in the aftermath. However, mental health problems are prevalent in the aftermath of the earthquake which starts or gets aggravated from day one and lasts for decades to come. A report from Sichuan, China in the aftermath of 2008 massive earthquake indicates that one in five child survivors were identified as having post traumatic stress disorder or depression and their health related quality of life were deeply compromised.⁵ Plight of individuals specially children who have lost near and dear ones is understandable. However, treatment of physical injuries and physical rehabilitation almost completely over shadows the psychological stress people go through in situation like this.

Considering the above facts, health care providers and health care managers of under developed country like Nepal which is known to be highly vulnerable to earthquake should consider adapting the following steps in order to minimise mortality and morbidity due to earthquake.

1. All health care facilities including those in remote rural areas should be built or re-enforced to be earthquake resistant so that people can avail health care services in emergency situation like this without having to wait for health camps. This will significantly reduce mortality and morbidity among people injured in earthquake. In addition, all equipment and other accessories should be adequately secured to save the patients and health care personnel inside the health care facility.
2. Rapid response team including different levels of health care personnel and health care managers should be in place to deal with the unforeseen situation in terms of man power, drugs and other logistics.
3. Care of patients with non surgical chronic diseases in earthquake affected area should also be adequately addressed to reduce mortality and morbidity.

4. Mental health problems specially among children should be adequately addressed from day one and should continue for months and years to come.
5. Sanitation, clean drinking water supply and prevention of communicable disease among people residing in temporary shelter should not be forgotten.
6. Physical and mental rehabilitation should continue for years to come.

It is very evident that small steps taken before the earthquake, immediately after the earthquake and in the long run can save lot of mortality and morbidity in the quake affected area.

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