

COMMENT

Ethics in humanitarian services: report on the earthquake in Nepal

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Abstract

The Nepal earthquake was one of the biggest natural calamities of the year 2015. This paper attempts to explore the ethical issues involved in the humanitarian services rendered during the crisis and thereafter. The four principles of biomedical ethics – autonomy, beneficence, non-maleficence, and justice – are discussed in relation to the relief activities immediately following the disaster and the subsequent long-term activities, such as rehabilitation, wherever applicable. The discussion touches upon public health components such as vulnerable populations, environmental ethics and justice for the future. Incorporating ethical principles into the response to disasters is of vital importance to ensure that healthcare complies with professional norms and ethical standards, and is in tune with the medical needs of the local culture. Beneficence is prioritised, while non-maleficence and autonomy tend to be ignored. Justice, particularly distributive justice, deserves due attention in the context of limited resources, not only during the emergency phase but also during the phases of rehabilitation and planning for the future.

Background

On April 25, 2015, an earthquake of a magnitude of 7.8 struck Nepal, its epicentre being 77 km west of the capital, Kathmandu. This was followed on May 12 by an earthquake of a magnitude of 7.3, the epicentre lying east of Kathmandu. These earthquakes were the most severe natural disasters to hit Nepal since 1934, when an earthquake of a magnitude of 8.0 had claimed about 8500 human lives. The total death toll in the recent earthquakes was 8856. The dead included more than 100 foreigners, mainly tourists. The total number of injured people was 22,309 (1).

This paper attempts to explore the ethical issues involved in the humanitarian services rendered during the crisis situation

and thereafter. This ethical debate is based on the literature, primarily the medical literature, on the humanitarian services for the victims of the 2015 earthquakes and these services are explored keeping in mind the four principles of biomedical ethics. The PubMed database was searched for articles the abstracts or titles of which contained the terms “earthquake, Nepal”, and which were published between April 2015 and December 2015. A total of 43 articles were found and their full texts were accessed through Health InterNetwork Access to Research Initiative (HINARI) to identify ethical issues. A total of 19 articles dealt with issues related to either one or more principles of biomedical ethics and have been included in the discussion.

Discussion

Disaster relief activities/humanitarian services include care of the injured or sick people or the community as such. The adoption of the principles of medical ethics is important in disaster situations (2). Several authors have linked the four principles of biomedical ethics to disaster situations and discussed them in this context (2,3). Setting forth a ten-step approach to ethical decision-making in the context of humanitarian aid, Clarinval et al discuss an ethical framework which indirectly includes all these principles (4). In this paper, we discuss each of the four principles of biomedical ethics with reference to the immediate relief activities, followed by subsequent long-term activities, wherever applicable. Efforts have been made to incorporate the issues raised by the authorities concerned, the victims and relief workers, and to link these issues with the ethical principles.

Beneficence

The activities of immediate response in any disaster are intended to benefit the victims.

Search and rescue – Most lives are saved by the locals themselves, long before the international teams arrive on the scene. Thus, many more lives could be saved if the local students and citizens were taught the basics of rescue (5). The people on the scene immediately start making efforts to extricate the trapped victims. Untrained rescuers are not only ineffective but also may increase the risk to themselves. Previously trained, uninjured survivors can provide basic rescue services and effective life-supporting first aid (LSFA) to the injured (6). Emergency medical care cannot be provided to seriously injured earthquake casualties trapped under rubble

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unless the victims have been extricated and transported to medical facilities by friends or relatives, or are accessible to field rescue and medical teams (7).

Responses of volunteers – The social media played a very positive role in bringing the authorities up to date on the situation in various districts, and helped to increase the involvement of volunteers in geometric progression. Similarly, the mass communication media, particularly radio and television, kept everyone abreast of the details of the situation in the various affected areas. During the crisis, a spirit of volunteerism emerged spontaneously as the Internet, smartphones and social media fuelled a feeling of shared responsibility (8).

Medical care – All the hospitals, including private establishments, provided free treatment to the victims of the disaster. This was one of the best examples of beneficence. Later on, they were reimbursed by the government.

Non-maleficence

The extrication of seriously injured, trapped victims by laypersons is hazardous, unless the rescuer has a basic knowledge of extrication and effective life-supporting skills (7). The principle of non-maleficence – “do no harm” – is to be considered here. Good intentions do not always suffice (9), eg rescue by non-trained personnel might harm rather than benefit the victim. At the time of the earthquakes, Nepal did not have trained rescuers at the community level. The police and the Nepal Red Cross had deployed such human resources in some parts of the country, but these did not suffice to cope with the massive demand. Thus, due to the crisis situation in the wake of the disaster, even non-trained personnel were deployed for search and rescue operations, which might have increased the risk of harm.

Infection control - Shelter, food and water are basic essentials for displaced people and responders. The essentials provided must meet certain safety standards because otherwise, they may be the source of vector-borne diseases and faeco-oral transmission of diseases. There were fears regarding the outbreak of epidemics of endemic diseases, such as typhoid, cholera and hepatitis E, among the affected populations, which were living in temporary shelters in crowded conditions (10–13). Early warning and response system was established for disease surveillance and outbreak control in each affected district so that the potential outbreaks of infectious diseases like diarrhoeal diseases were prevented on time (14).

Autonomy

According to the World Medical Association (WMA), it must be recognised that in the response to a disaster, obtaining informed consent may not be a realistic possibility as there may not be enough time. However, at the same time, it has acknowledged the consenting autonomy of the survivors of disaster to receive the most appropriate treatment available and to be treated with the same respect as other patients

(15). In the aftermath of the earthquake, it was not possible to obtain consent in all cases and the treating physicians took decisions in the best interest of the patient. The autonomy of the beneficiaries should be respected in the rehabilitation process.

Justice

With regard to justice as a principle of biomedical ethics, distributive justice is to be considered in disaster situations since the resources cannot meet the need. Disaster response is dependent on planning and the availability of capacity to restore infrastructure. Most developing countries with pre-existing chronic shortages of resources usually suffer a scarcity of resources during public health emergencies (16). Nepal not only lacks the resources to restore infrastructure, but is also ill equipped in terms of planning a response to a disaster situation. Developing countries rarely have adequate provisions for disaster response, and the restoration of services is greatly dependent on international aid. Countries that are struggling to develop economically find it difficult to divert resources to planning for disasters and providing reserve capacity, and thus require international assistance not only for immediate relief, but also long-term rehabilitation for the restoration of infrastructure (17). The principle of “do no harm” links well with distributive justice in the post-disaster situation (18) and ultimately protects the vulnerable population.

Triage for medical treatment - Triage of patients, ie attempting to set an order of priorities for treatment that will save the greatest number of lives and restrict morbidity to a minimum, is based on the philosophy of utilitarianism. Having to manage a large number of injured people in a short time, with limited resources, amid the disruption of the regular mechanisms and resources, results in chaos. The first earthquake took place during the weekend, so the number of human resources available was very limited. Triage poses an ethical problem because the treatment resources immediately available are limited in relation to the large number of injured persons in varying states of health (15, 19). However, proper disaster planning including drills results in timely intervention, effective utilisation of resources, and surgical intervention by a skilled surgical team can make a huge difference in the morbidity of patients (20).

Logistics and coordination - Kathmandu's only international airport, a small one, had difficulty coping with the flights arriving with relief supplies. Triaging those flights without adequate information was definitely problematic. The limited capacity of the airport resulted in delays in the arrival of relief workers and supplies. In addition, the government mechanism for arranging space for the supplies that had already been unloaded was in disorder. According to the government's policy, all foreign inputs for the provision of relief, including human resources, had to go through the ministries concerned. Thus, medical supplies had to be routed through the Ministry of Health and Population and other relief materials via the Ministry of Home Affairs. The problems

faced by these ministries in terms of the management of logistics were twofold. First, there was uncertainty regarding the local situation in remote areas and second, determining the capacity of the relief teams and deploying them to suitably needy areas presented a challenge. Efforts were made to coordinate with the local counterparts of the foreign teams. Remote villages in the mountains that did not have access to roads could not receive relief materials for more than a week. The existing roads were blocked due to landslides, particularly in the worst affected districts, such as Sindhupalchok and Rasuwa.

Emergency medical teams from other countries working under crisis conditions following a disaster are expected to understand and respect the medical aspects of the local culture, comply with professional norms and ethical standards, and be accountable (21). Obviously, it was not feasible for foreign doctors to get themselves registered with the Nepal Medical Council and obtain a medical licence before starting work. They were allowed to work without local registration, in accordance with the "WMA statement on medical ethics in the event of disasters," which urges governments to accept the presence of foreign physicians without discrimination (15). A reporter from CNN television, who had a medical degree, highlighted the scarcity of medical professionals and claimed that he had operated upon a patient with a head injury in Bir Hospital. The hospital authorities publicly denied this. Foreign medical teams were deployed by the Ministry of Health and Population to specific districts, where they reported to the district health office and provided services in coordination. For example, the Norwegian Red Cross set up a field hospital in the district of Sindhupalchok. The Israeli field hospital team worked for the Birendra Army Hospital in Kathmandu. Several smaller teams of foreign aid workers worked at the village level. Even weeks after the disaster, teams were arriving with first aid materials, though the need in the field was for food and shelter.

Infrastructural resources for services

Hospitals

Disaster situations characteristically bring out an acute and unforeseen imbalance between the capacity and resources of the medical profession. It is essential for all hospitals to have a particular plan of preparedness for emergencies so that they can perform optimally during a crisis (22). Health services were disrupted in the earthquake-affected districts due to the destruction of healthcare facilities, including birthing centres (23). However, the damage was minimal in the major hospitals in the cities, including in the Kathmandu valley, and these institutions were able to meet the additional healthcare needs. It is likely that hospital preparedness for disasters, including retrofitting and timely response, was the reason why the death toll in the Nepal earthquakes was lower than that in the Haiti earthquake (24). In addition, the efforts of the volunteers and ambulance operators to ensure fair and coordinated distribution of patients among the hospitals were commendable.

Schools

As for schools, there are two dimensions to be considered in the context of disasters. First, students are crowded inside the school building, which makes them a vulnerable population that deserves special safety measures. Second, schools provide a space to shelter the victims in the aftermath of a disaster. It was not possible to utilise schools as shelters in many hard-hit areas as most of the school buildings were damaged. With a total of 8308 school buildings being damaged, these earthquakes proved that school buildings were the most vulnerable (1). The first earthquake took place during the weekend and schools were still closed on the day of the second earthquake. Even then, 32 teachers and 256 students – mostly those staying in hostels – died. The number of casualties could have been enormous if the earthquakes had occurred on school days. Children spend a significant part of the day in school. In the event of a disaster, paediatric emergencies and accidental/intentional injuries are likely to occur. Thus, schools should draw up emergency-response plans to deal with life-threatening medical emergencies among children (25). In addition, disasters have a long-term psychological impact which constitutes a major public health problem, particularly among children.

Vulnerable population

The victims of earthquakes include vulnerable populations such as children, pregnant women and lactating mothers. In a crisis situation, these populations have to live in shelters, without proper access to food, safe drinking water and toilets. In such situations, resources have to be allocated fairly and special attention must be paid to ensure that the most vulnerable receive fair treatment (2). Household food security and child nutrition should be special areas of focus. The chronic nutritional burden that predated the earthquake is bound to increase after the disaster (26). The synergism of malnutrition with infection presents a threat to the survival of children and calls for effective nutritional monitoring.

With the advances in acute medical care, the number of deaths following natural disasters has decreased, but the rates of disability among the survivors are rising (27, 28). Rehabilitation services have an important part to play in the continuity of care in the context of post-disaster relief, which may last for years.

Mental health issues

During disasters, the obvious focus is on physical care and mental health issues tend to be underestimated, either due to a lack of resources or ignorance regarding their management. Those requiring psychological care should be categorised as a vulnerable population group and the strategies aimed at helping them should be tailored to the specific culture of the local community. It is essential to give greater attention and support to high-risk groups, such as bereaved survivors, to alleviate their mental distress and help them recover from the devastating loss of their loved ones (29). Since such services are

required on a large scale and the existing system cannot cope with the demand, volunteers should be trained and mobilised for the purpose. In the aftermath of the earthquake, the Nepal Medical Association (NMA), in collaboration with its Japanese counterparts, the Japan Medical Association (JMA) and the Association of Medical Doctors of Asia (AMDA), has been training volunteers in the provision of psychosocial support and counselling (30).

Environmental ethics in the aftermath of the disaster

It is not earthquakes that kill people, but the resultant collapse of buildings. Raising public awareness, conducting rigorous research on risk and measurable targets will help policy-makers to increase resilience against natural hazards (31). However, it is common practice even in hazard-prone regions to pay no heed to the standard codes for the construction of buildings. While prioritising the reconstruction of buildings and infrastructure, one must not overlook the impact of large-scale restoration work on the fragile environment and imperiled ecosystems (32). The rugged terrain, unstable soils, heavy rainfall and mountainous geology contribute to make Nepal one of the world's landslide-prone areas (33). Landslides occurred during the earthquake but after the earthquake, during the monsoon (June to September), the number of landslides was not significantly greater than in previous years.

Justice for the future

Better preparedness for disasters always helps to save lives and property. A disaster plan makes for better health services. This plan should also cover health professionals (34), who may be equally affected by the disaster. Experts have compared the Nepal and Haiti earthquakes and the lower death toll in Nepal has been attributed to better preparedness (24,35). Emergency management plans should be practised long before a disaster occurs since this minimises not only the number of casualties, but also the ethical challenges arising during disaster responses (3). Other than earthquake-proof construction, retrofitting and improvements in the healthcare system (28), preparedness entails the establishment of warning systems, education, raising awareness, communication of risk (31) and ethical preparedness (36,37).

Medical care institutions

The medical interventions in the Kathmandu valley owed their success to the two following components.

The major hospital buildings in Kathmandu, such as the Tribhuvan University Teaching Hospital, Patan Hospital, Birendra Army Hospital and better part of the Bir Hospital, had undergone retrofitting and remained intact. Thus, they were able to provide prompt services.

In addition, disaster drills were conducted regularly in these hospitals to equip the staff to deal with crisis situations.

However, many health facilities outside the capital city were damaged by the earthquake. For example, the new building of the Sindhupalchok district hospital was not usable. Similarly,

about 90% of the health centre buildings in Dolakha district were damaged. The lesson drawn from this experience is to have an effective disaster plan in place for the future; retrofitting of healthcare facility buildings and training of the staff are essential. In addition, regional medical and nursing colleges could adopt disaster-affected areas to help with measures for the mitigation of disasters (38).

Summary

Embedding ethical principles in every aspect of healthcare, including disaster preparedness plans, is of vital importance. Disaster preparedness is important not only at the level of healthcare facilities, but also at the community level. The emphasis should be on public places such as hospitals and schools. The ethical challenges faced while responding to disasters can be minimised with the help of the preparedness plan, and by the ongoing orientation of the authorities concerned, including those at the grass-roots level, to this plan. Regular efforts should be made to disseminate this plan. The four principles of biomedical ethics must be respected even when working under crisis conditions, so that the health services rendered comply with professional norms and ethical standards, and are in consonance with the medical aspects of the local culture.

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Competing interests

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