Ethical Issues in Disasters

Fatimah Lateef, MBBS, FRCS(Edin)(A&E), FAMS(Em Med)

Senior Consultant, Emergency Medicine and Trauma, Director of Undergraduate Training and Education, Department of Emergency Medicine, Singapore General Hospital; Senior Clinical Lecturer, Yong Loo Lin School of Medicine, National University of Singapore, Senior Part-Time Lecturer, School of Health Sciences, Nanyang Polytechnic, Singapore

Correspondence:
Associate Professor Fatimah Lateef
Dept of Emergency Medicine
Singapore General Hospital
1 Hospital Drive
Outram Road
Singapore 169608
E-mail: fatimah.abd.lateef@sgh.com.sg

Keywords: autonomy; disaster; duty to care; ethics; utilitarian

Abbreviations:
CRED = Centre for Research on the Epidemiology of Disasters
IRB = institutional research board

Received: 05 March 2010
Accepted: 10 May 2010
Revised: 21 October 2010

Online publication: 07 October 2011

doi:10.1017/S1049023X1100642X

Abstract

A disaster is a situation that overwhelms the local population's capacity to respond, thus necessitating a request for assistance from outside the impacted area. In these circumstances, needs usually outweigh resources. The objective of response is to do the greatest good for the greatest number of people (the utilitarian principle). As such, some unique ethical considerations will arise that are not seen in day-to-day practice.

The adoption of medical ethics principles is important in such situations, but certain provisions must be accepted. In large-scale, complex disasters, it may be impossible to provide optimal care to each patient. This paper will discuss some of the challenges for healthcare personnel at "ground zero", how training in preventive ethics may help, and what principles can be applied when working in disaster-affected areas or when responding to disasters.

Lateef F: Ethical issues in disasters. ***Prehosp Disaster Med*** **2011;26(4):289–292.**

Introduction

A *disaster* is a situation that overwhelms the local population's capacity to respond, necessitating a request for assistance from outside the affected area. There will be disruption and destruction of the local social, economic, and health networks, systems, and organization, resulting in the inability to cope as usual, day-to-day practice.

This is the definition of disaster as defined by The Centre for Research on the Epidemiology of Disasters (CRED) in Brussels, Belgium. The CRED maintains a disaster database from 1900 to the present; most of the data are derived from relief and humanitarian groups inputs.[1] The Centre also conducts research and training activities linking relief, rehabilitation, and development, with an emphasis on humanitarian emergencies. This database can be used to help improve needs-based preparedness responses to future emergencies. The number of reported disasters confirmed the upward, global trend of disasters caused by natural hazards, with increasing impacts on population.[2,3]

Moreover, with the increasing tensions in various regions of the world, the possibilities of terrorism and human-made disasters are more relevant.

Questions that may arise with disaster response and aid distribution include:

1. Are resources really limited or are there issues with equitable distribution?;
2. Who should dictate the disaster response?; and
3. Has triage decisions ever been made based on factors such as age, social worth, etc., and if so, was this appropriate?

Needs outweigh resources in disasters. Medical and human resources will be stretched to their limits. In day-to-day medical practice in developed countries, the principle would be to do the best for every single patient. During disasters, the principle is to do the greatest good for the greatest number of people (i.e., to save as many lives and limbs as possible).This is referred to as the "utilitarian principle".[4]

Healthcare personnel practice under certain codes of conduct and etiquette. Appropriate ethical principles must be upheld at all times, in a multitude of circumstances and situations.

Medical Ethics

Ethics is an endeavour to understand what is good and right in human experiences. It is about discernment, knowledge, and self-reflection, and it is sustained through seeking,[5] clarifying, and translating. It also is the concrete expression of moral

ideals in everyday life. Some of the principles of medical ethics include:[5–7]

1. *Beneficence*—The obligation of healthcare personnel to help others/patients. The personnel must act in a manner that promotes the growth and well-being of patients,
2. *Non-Maleficence*—Not doing harm or putting patients through unnecessary and unacceptable risks;
3. *Justice*—Fair treatment of everyone, without regard to race, religion, creed, or socio-economic status; and
4. *Autonomy*—freedom to make choices and decisions with appropriate informed consent. The choice must be made by patients with adequate knowledge, competence, and in a voluntary capacity

In addition to the above principles, other values such as fidelity (keeping promises as well as your word and commitment), veracity (honesty and truthfulness), fairness, and respect must be upheld.

Fairness

This requires resources to be distributed and allocated fairly with special concern that the most vulnerable will receive fair treatment. However, knowing that there will be limited resources, the fair distribution often is governed not by what is best for an individual, but rather by the principle of the greatest good for the affected community. Therfore, in order to be realistic, not every single individual need can be met during a disaster.

Respect

All patients are worthy of respect; they must be treated justly and with dignity. In the context of a large-scale, complex disaster, it is not uncommon that some victims will receive only dignified comfort care as assessed by healthcare providers.

Solidarity

With limited resources, it is optimal if each individual also can consider the needs of others who are affected. Each person has an obligation to care for another human being, and must go beyond one's own self interest.

Limiting Harm

The commitment "to do no harm" remains. "Limiting harm" to patients affected by the disaster also must be considered.

Individual Rights versus Public Health

Physicians and healthcare staff who are members of response and relief teams must be prepared with an understanding of disasters. They must be aware of what happens during disasters and what to expect. They also must understand the justifiable expectations pertaining to ethics in disasters, and to be prepared psychologically. The ethical problems and issues faced in these situations are similar to those encountered on a day-to-day basis. The ethical challenges also may differ during the relief phase (the phase with the greatest vulnerability and the least social order) of the disaster and the later, more stable recovery phases.[8,9]

Application of ethical principles must consider the presence of people/residents of different religions, cultures, sects, and races, as well as geographic and ethnic backgrounds. Even as rendering care cannot discriminate by these factors, they do represent sensitive elements that responding healthcare personnel must be aware of in order not to offend any persons or groups.[10]

Conflicts may arise pertaining to issues of utilitarianism and equity during triage in complex disasters (resulting from several different hazards, often complex combinations of both natural and man-made causes of vulnerability. Examples include epidemics, conflicts, and displaced populations).[11] The paradigm shift from usual care is to apply the utilitarian principle to do the greatest good for the greatest number of people.[12,13] Generally, this is not done in everyday, routine, medical practice, and thus, may represent something that healthcare personnel find challenging and uncomfortable. For example, when Person A obviously is going to die, given the circumstances, resources may be allocated to help others who are more salvageable. This is a difficult decision, and the switch from the normal mode of practice may be a challenge to healthcare personnel.

Another question that may arise is, to what extent are disaster survivors able to make decisions, given the stresses they are experiencing? Should the "first come first served" principle be applied, or should the more severe cases be managed first? How will the local people view this, as their culture may differ from that of the volunteer healthcare personnel (especially if responding to a disaster in another country)?

Also, adhering to the principles of autonomy and privacy sometimes can pose a conflict in situations in which surveillance and reporting are required for certain diseases and conditions. These often are required for the sake of public health. In situations involving terrorism or war, where national security is at stake, privacy may not be pertinent. Issues of autonomy may be encountered less frequently during large-scale disasters, as the overwhelming numbers of victims sometimes, may not be in a position to choose or refuse. There also are times when refusal of treatment such as a blood transfusion may even be welcomed, because a scarce resource can be made available to others. However, health personnel must be aware that refusal of one type of care/ therapy does not mean loss of attention and withdrawal of other forms of care.[13]

During disasters, an injured physician may be treated first for a fractured arm, because once treated, the physician can treat other patients (applying the principle of greatest good for a greater number of people). During crises such as disasters caused by natural hazards, where the local healthcare providers and their families are victims, they may not be able to perform their duties. These personnel must know that their loved ones are cared for and safe, and at the same time, they should have the capability to maintain communications and contact. At times, when the victims are related to local healthcare personnel, it may be difficult not to get emotionally involved, and thus, decisions may be affected.

Besides caring for victims and patients, healthcare personnel also must take care of themselves. They often place themselves at risk. For example, healthcare personnel may take risks upon themselves when rescuing or managing patients who are trapped in potentially dangerous situations (e.g., in avalanche- or iaftershock-prone areas), or they may become too engrossed in performing their duties that they forget to take relevant precautions to reduce the spread of infectious diseases).

Healthcare personnel have a "duty to care" commitment to patients, but how can this principle be assured in a disaster setting? The World Medical Association International Code of Medical Ethics specifies the duties of a physician as the need to adhere to the principles provided in the Geneva Declaration Geneva i.e., " I will not permit considerations of age, disease or disability, creed,

ethnic origin, gender, nationality, political affiliations, race, sexual orientations or social standing to intervene between my duty and my patients. I make this promise solemnly, freely and upon my honour." Duty is the action to which doctors/healthcare staff is bound. On a daily basis, this will be clear and non-controversial, but in disaster situations, are physicians/ healthcare personnel expected to know the "extended" limits of their duty?

There usually are limited numbers of personnel during disasters. In carrying out their duty to care, how much work can or should healthcare providers be expected to cope with? How far out of their usual scope of practice can they perform, knowing that often, without any care, patients may be harmed. If there is insufficient personal protective devices, should a provider place on self (and other patients) at risk and continue to care for contagious patients?[3,4,10,15–16]

Kant, in *The Metaphysics of Morals*, specifies duty as either duties of "justice" (those that can be appropriately enforced by means of coercion) and duties of "virtue" (those by which a personnel can be morally assessed but not coerced). Perhaps, this can be borne in mind on a case-by-case basis, as healthcare personnel encounter specific situations in disasters and crisis settings.[15,17]

There are many ethical and ethics-related question that have been raised because of increased exposure and experience with large-scale disasters. No one person will be able to resolve all of these issues, but there is an ethical responsibility to consider such issues and the involved professional discussions or studies pertaining to such issues. Some light may be shed, which should be shared through publications, conferences, and appropriate seminars. This can be spearheaded by personnel who have been involved in providing care in disaster areas. Experiences on handling issues related to gender and healthcare perceptions, disposition of dead bodies, and belief in traditional treatment methods are good examples of issues that may pose ethical questions and challenges.

Preventive Ethics

Preventive ethics refers to activities performed by individuals or groups to identify, prioritize, and address systemic, ethical issues. The practice of preventive disaster ethics involves preparation and understanding inculcated through education and training (related to ethics, principles, and challenges unique to disaster settings), before disasters occur. This appears to be one of the basic tools needed in order to manage ethical situations. Potential issues that may arise can be addressed in advance as part of ethics education and training programs. Preventive ethics can help reduce variations in the practice of ethics.[18] Time and resources must be provided.

In practice, ethical issues and challenges will be encountered and require handling. It would be difficult to manage them without prior knowledge, education, training, information, and experience. When these ethical issues arise, the principles and culture of an organization may be at stake. At the heart of ethical dilemmas, there are conflicts of interest between obligation to others and self interest. A reactive approach may yield unfavorable results, especially in emotive situations.[19]

Preparedness for catastrophic events forces the consideration of unexamined priorities and values. Thus, training using realistic scenarios, simulation exercises, and tabletop exercises are encouraged. Training also can cover exercise planning actions that will minimize morbidity and mortality, maximize use of limited resources, and balance acceptable ethics. Topics such as professionalism in the field, shared decision making, resource allocation, end-of-life issues of disaster victims, and handling confidentiality in the "open field", can be covered. However, these simulations and exercises will not reproduce the emotional reactions related to making such decisions or eliciting the appropriate compassion and respect for the dignity of those in need during an actual situation.

For example, after a large-scale earthquake with multiple casualties and the destruction of healthcare facilities, there never will be a sufficient number of ventilators for all of the injured. Using the principles of beneficence and justice, what are the basic assumptions during triage that will provide a useful algorithm or a plan for the care of such victims? Training allows personnel to think about the possible situations they have not faced before. In this way, they will then not be going into the disaster situation "blind" to these issues. Certainly, all of these may act as guides, but in the real world of complex disasters, the appropriate alignment of decisions and actions must be made.

Research in Disasters

Research is crucial in the aftermath of disaster-causing events, but it should be contextual and culturally appropriate and acceptable. Research provides data and evidence for certain practices, approaches, and actions. Information-sharing through best practices also helps contribute toward enhancing the quality of disaster responses. This is becoming increasingly important, especially with the high expectations of the public and affected communities. It helps fine-tune the responses and plan for future interventions. It also helps with areas such as studying the best surveillance for disease outbreaks and their management. Research in disaster settings present unique ethical challenges.

One crucial consideration is how to balance the need to conduct research and collect data with the obligation to respect and protect the interest of research participants. Individuals in stricken communities are vulnerable, and it is important to ensure that research does not exploit this vulnerability. It is the duty of healthcare providers to care for patients, but when they play the role of "physician-researcher", certain conflicts may arise.[20]

Research should be limited to studies that cannot be conducted under non-disaster situations, e.g., a clinical drug trial for asthma may not be highly relevant during a disaster.

In many institutions, institutional review board (IRB) approval is a prerequisite prior to commencing research. However, with disaster-related research, this can prove to be a challenge, as approval often cannot be obtained prior to collecting the data/taking informed consent at "ground zero". These disasters occur suddenly, and research may begin without proper scientific rigor and ethical consideration. In addition, there may be a lack of proper planning of the methodology. Language barriers also may exist, especially when responding to international disasters, and interpretation may not always be optimal.

The best suggestion for moving forward is to keep the research in disaster settings:

1. Simple and straight forward proposal and methodology;
2. Establishing the question set early in order to get IRB approval;
3. Planning for research at minimal or no risk to the affected population; and
4. Having a flexible study design.

https://doi.org/10.1017/S1049023X1100642X Published online by Cambridge University Press

Ideally a framework would be developed by both agencies performing/funding the research and the host country. This framework can cover the types of research required, local needs and priorities, timeframe, complexities that may arise, and other unique practices/features of the host country. However, this can be challenging, as disasters often strike suddenly, and time is a constraint.[20-1]

Conclusions

Preparedness is key, and this must come in the form of education and training, the appreciation of preventive ethics and mindset and psychological preparation. With more experience at "ground zero" , practitioners can share best practices and learn how to balance research and disaster response in a responsible way. Culture competency in a host country also is very important. This refers to the ability to interact effectively with people of different cultures. It comprises of:

1. Awareness of one's own culture;
2. Attitude toward cultural differences;
3. Knowledge of different cultural practices; and
4. Cross-cultural skills and understanding.

Cultural competency will help healthcare personnel communicated better with people in disaster-striken areas. Those with more experience can help ethicists identify specific and commonly recurring issues in advance and work with them to clarify the best ways to overcome these issues or reduce their negative impact.

Inevitably, disaster response will involve ethical issues because they involve human beings. Ethics covers the conduct and moral judgments that must be made on the ground.

References

1. Centre for Research on the Epidemiology of Disasters (CRED): Definition of disaster. Available at http://www.cred.be/. Accessed 10 October 2010.
2. CRED: EM-DAT: The International Disaster Database. Available at http://www.emdat.be/natural-disaster_trends. Accessed 10 October 2010.
3. Mission C, Guha-Sapir D: The development of a database on disasters. *Disasters* 1992;16:80–86.
4. Lin JY, Anderson-Shaw L: Rationing of resources: Ethical issues in disasters and epidemic situations. *Prehosp Disaster Med* 2009;24:215–221.
5. Kluge EH: Code of ethics and other illusion. *Can Med Asssoc J* 1992;146:1234–1235
6. Wynia MK: Ethics and public health emergencies: Rationing. *Am J Bioeth* 2006;6:4–7.
7. Roberts LW: Ethics as endeavour in psychiatry: principles, skills and knowledge. *Psychiatric Times* 2002;12:19.
8. Holt GR: Making different ethical decisions in patient care during natural disasters and other mass casualty events. *Otolaryngol Head Neck Surg* 2008;139:181–186.
9. World Medical Association: Medical ethics in the event of disasters. *Bull Med Ethics* 1994;102:9–11
10. Von Ryn M, Burke J: The effect of patients' race and socio-economic status on physicians' perceptions of patients. *Sac Sci Med* 2000;50:813–828.
11. International Federation of Red Cross and Red Crescent Societies: Disaster management: About disasters: Complex emergencies.. Available at http://www.ifrc.org/what/disasters/about/types/manmade/conflict.asp. Accessed 10 October 2010.
12. Sztajnkrycer MD, Madsen BE, Alejandro BA: Unstable ethical plateaus and disaster triage. *Emerg Med Clin North Am* 2006;24:749–768.
13. Okie S: Dr Pon and the hurricane: Implications for patient care during disasters. *NEJM* 2008;358:1–5.
14. World Medical Association: International Code of Medical Ethics. Available at http://www.wma.net/en/30publications/10policies/c8/index.html. Accessed 10 October 2010.
15. Khan RI: Clinicians' duty to care : A Kantian analysis. *Law and Governance* 2005;9:25–36.
16. Sokol D: Healthcare workers duty to care and severe infectious diseases. Available at www.medicalethicist.net/Thesis3.doc. Acccessed 10 October 2010.
17. Guyer P, Kant I, in E Craig (ed): Routledge Encyclopedia of Philosophy Online. Available at http://www.rep.routledge.com/article/DB047SECT10. Accessed 10 October 2010.
18. Harris CE Jr: Explaining disasters: The cause for preventive ethics. *Technology and Society Magazine* 1995;14:22–7.
19. Levine Ariff J: Preventive ethics: The development of policies top guide decision-making. *Clin Issues Crit Care Nurs* 1990;1:169–77.
20. Rosenstein DL: Decision making capacity and disaster research. *J Trauma Stress* 2004;17:373–81.
21. Iserson KV, Heine CE, Larkin GL, *et al*: Fight or flight: The ethics of emergency physicians disaster response. *Ann Emerg Med* 2008;51:345–53.