Nursing Ethics and Disaster Triage: Applying Utilitarian Ethical Theory

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When a disaster strikes, normal thinking and routine procedures no longer apply. A disaster disrupts everything, including the triage system that is used successfully every day in the emergency department. This disruption applies both to clinical procedures and to the ethical foundation of those procedures. ED triage nurses traditionally practice using 4 ethical principles of autonomy, beneficence, nonmaleficence, and justice, along with the attendant moral rules of fidelity and veracity, for example. Disaster triage operates according to a different ethical approach, the utilitarian ethical theory. A lack of standards and distinct guidelines in applying this theory adds to the moral distress felt by the triage nurse during a disaster. Making a life or death decision that a patient will consume too many resources and must go into the dead or dying category runs counter to the moral intuition of most people and most nurses, as well as counter to the typical ethical principles that normally inform daily nursing practice. The nurse's instinct is to help and nurture the patient. To ignore this instinct causes great consternation with extreme and potentially long-lasting moral distress for the triage nurse. An understanding of the ethical basis of disaster triage can help nurses reconcile the personal and professional difficulties, including moral distress, that can result from the decisions that must be made in such a situation.

Ethics in Health Care and Nursing

PRINCIPLISM

Health care as practiced today in the Unites States is widely recognized as being based upon the 4 ethical principles of autonomy, beneficence, nonmaleficence, and justice. In their book *Principles of Biomedical Ethics*, which was first published in 1979, Tom Beauchamp and James Childress identified and developed these principles, along with more narrowly defined moral rules (such as fidelity and veracity) to provide a coherent approach to ethical decision making in a medical and health care context.[1] This approach, later designated "principlism," has not achieved universal consensus as the appropriate approach for ethical decision making in health care. This lack of universal consensus is not surprising, given the complex and contentious nature of ethics and ethical decisions. However, principlism has become one of the most common and widely accepted approaches for understanding ethical problems in health care and for aiding ethical decision making.

The principle of autonomy refers to the obligation of health care providers to respect the medical decisions of patients, even if they might conflict with medical advice. Autonomy is exercised through direct communication, advance directives, and by health care proxies. Respecting the principle of autonomy not only ensures that the autonomous decisions of patients are followed but also acknowledges the individual dignity of patients as persons able to form their own life paths. The principle of autonomy has been the most emphasized moral principle in modern health care ethics, replacing the "doctor knows best" paternalism of the past with a respect for the individual volition and values of patients, even if they do lack the extensive medical knowledge of medical professionals.

Respect for autonomy is not without limits. Bioethicists and clinicians generally agree that clinicians are not required to accede to every possible request of a patient.[2,3] Clinicians are not ethically obligated to fulfill requests that fall outside of clinical standards of practice or that might be unnecessarily risky or harmful. In addition, the concept of conscientious objection may also in some circumstances provide an ethical justification to refuse a patient's request.

Beneficence is the moral obligation of contributing to the benefit or well-being of people. More specifically, the principle of beneficence provides for the prevention and removal of harm and the active promotion of the well-being of others.[4] That is, any action taken by a health provider toward a patient must be a positive one, not just an action taken to avoid harm.[5] Discharge instructions and education given to patients is an example of this principle in action.

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Smoking cessation information is given to all patients who state that they smoke. The benefit of quitting smoking is stressed, and if the information is heeded and the patient stops smoking, then a positive result has occurred. In addition, an inefficient or disorderly system or department in a clinical setting could be said to involve a violation of beneficence if the lack of order or efficiency were patent and easily remedied and caused unnecessary harm to patients.[5]

The principle of nonmaleficence is an ethical injunction to avoid harming others, most especially patients, of course. This principle is popularly conceived through the Hippocratic dictum "do no harm." This straightforward and simplistic expression of the principle is inaccurate in terms of how the principle is properly understood and put into practice. Often pain or another form of harm is inflicted as part of therapeutic or diagnostic procedures (eg, surgery or a spinal tap). In these cases, however, there is a presumption of a compensatory good that outweighs the pain involved. The principle of nonmaleficence is violated when harm is inflicted, either intentionally or negligently, without a presumption of compensatory benefit. For example, medication errors, either through negligence or as a result of a health care provider skimming medication to support an addiction problem, could inflict harm on patients.[6] The goal of treatment is to improve the health or condition of the patient.

The principle of justice "refers to people getting what is fair or what is their due"[4] (p. 12). For example, everyone presenting to the emergency department is due a medical screening to see if an emergency medical condition exists. This screening is guaranteed by the Emergency Medical Treatment and Labor Act (EMTALA) law passed in 1986 by the federal government, establishing this screening as a legal right and an ethical obligation. To deny this screening or delay it for reasons outside of the optimal operation of the emergency department and benefit toward the patient population as a whole (eg, reasons based upon the race, ethnicity, or economic status of the patient) would be unjust.

AMERICAN NURSES ASSOCIATION CODE OF ETHICS

Specifically regarding the ethical practice of nursing, the American Nurses Association (ANA) has published a code of ethics for nurses as a "framework for nurses to use in ethical analysis and decision-making"[7] (p. 7). The ANA Code of Ethics draws from various approaches to ethics, including the principlism previously outlined but also humanist views, feminist views, and virtue ethics, among others, to construct a decision-making framework designed for the particular goals and unpredictable challenges of nursing practice.[7] The ANA Code is composed of 9 provisions or principles, each of which is developed with explanatory material ("interpretive statements"). The ANA divides these 9 provisions into 3 groups of 3 provisions. The first 3 provisions represent the "most fundamental values and commitments of the nurse"[7]. These 3 provisions include respect for the dignity of all persons, recognition of the nurse's primary commitment to the patient, and the promotion, advocacy, and protection of the "health, safety, and rights of the patient"[7]. The second 3 provisions "address the boundaries of duty and loyalty" and include the accountability of the nurse for individual nursing practice, duties of the nurse to herself, and the improvement of health care environments, conditions of employment, and the provision of quality health care[7]. The last 3 provisions address duties beyond encounters with individual patients, including the advancement of the profession, collaboration with other health professionals to promote the health needs of the community, and the obligation of the profession of nursing for articulating values, maintaining the integrity of nursing, and shaping social policy.[7]

The ANA Code of Ethics is not intended to be simply a list of rules to follow or a mere reference book to supply simple answers to complex ethical questions.[8] Ethics is often a subtle, complex, and contentious area. The ANA Code represents an attempt to bring practical coherence and guidance to a very uncertain area. Despite the strengths and popularity of principlism, the best conceptualization of the ethics of disaster triage may be utilitarianism. To say this does not place one outside of or at odds with the ANA Code of Ethics. The pluralistic approach to the construction of the code noted by the ANA makes conceptual and practical room for different approaches that may best fit the specifics of the situation.

Triage

Triage is used every day in the medical field. Emergency medical technicians triage patients at the scenes of accidents. Intensive care units triage to identify the next person who can be downgraded. By far, the most common form of triage occurs in emergency departments worldwide. Triage is the first contact with medical care within the emergency department. The triage nurse welcomes the patient and assesses the medical complaint and the physical condition of the patient. To appreciate the elevated degree of moral distress the triage nurse faces during a disaster, one must understand the ethical and moral obligation the triage nurse faces while triaging during nondisaster times.

In the United States, most emergency departments use an acuity level assigned to patients based on the Emergency Severity Index (ESI) scale, a 5-level triage system that,

TABLE 1
Immediate lifesaving interventions

	Lifesaving	Not lifesaving
Airway/breathing	BVM ventilation: Intubation Surgical airway Emergent CPAP Emergent BiPAP	Oxygen administration: Nasal cannula Nonrebreather
Electrical therapy	Defibrillation Emergent cardioversion External pacing	Cardiac monitor
Procedures	Chest needle decompression Pericardiocentesis Open thoracotomy Intraosseous access	Diagnostic tests: ECG Laboratory tests Ultrasound FAST
Hemodynamics	Significant IV fluid resuscitation Blood administration Control of major bleeding	IV access Saline solution lock for medications
Medications	Naloxone D50 Dopamine Atropine Adenocard	ASA IV nitroglycerin Antibiotics Heparin Pain medications Respiratory treatments with beta agonists

Modified from the ESI Implementation Handbook. *ASA,* Acetylsalicylic acid; *BiPAP,* biphasic positive airway pressure; *BVM,* bag-valve-mask; *CPAP,* continuous positive airway pressure; *ECG,* electrocardiogram; *FAST,* focused abdominal scan for trauma; *IV,* intravenous.
From Gilboy N, Tanabe T, Travers D, Rosenau AM. Emergency Severity Index (ESI): A Triage Tool for Emergency Department Care, Version 4. Implementation Handbook. 2012 ed. Rockville, MD: Agency for Healthcare Research and Quality; 2012.

through numerous studies, has proven to be the most effective.[5] A level 1 acuity is life-threatening and requires immediate medical attention (see Table 1). Does the patient have an open airway? Is the patient breathing? Does the patient have a pulse? For level 1 patients, lifesaving interventions (eg, bag-valve-mask ventilation and defibrillation) should be started immediately. Conditions that qualify as level 1 include cardiac arrest, respiratory arrest, and anaphylactic shock. Level 2 is assigned to a patient who needs medical attention within 20 minutes and requires many resources (see Table 2). Does the patient's condition constitute a high-risk situation? Does the patient present with new-onset confusion, lethargy, disorientation, severe pain, or distress? Patients with level 3 acuity can wait 20 minutes to an hour and require 3 or more resources. Patients who have been assigned a level 4 acuity can safely wait for attention and require one resource. Level 5 patients can safely wait for attention and do not require resources. Most patients presenting to the emergency department are level 3 patients.

"By applying a triage system," write Aacharya, Gastmans, and Denier,[5] "one can quickly and efficiently sort patients according to clinical priority, thus aiming to manage patient flow safely when clinical needs exceed capacity." This happens every day across the United States when the number of patients presenting to the emergency department exceeds the physical capacity and people must wait for an open space to become available. Triage as described here endeavors to avoid unnecessary harm, promote well-being, treat all patients fairly, and respect the autonomous decisions of patients. Given the need to manage limited resources in any triage situation, some application of utilitarian thinking is inescapable. However, at the same time, rights, privacy, autonomy, and other nonutilitarian values are given equal or near-equal consideration, which may not be the same in the context of disaster triage.

TABLE 2
Emergency Severity Index resources

Resources	Not resources
Laboratory tests (blood, urine)	History and physical examination (including pelvic)
ECG, x-rays, CT, MRI, ultrasound, angiography	Point-of-care testing
IV fluids (hydration)	Saline solution or heparin lock
IV, IM, or nebulized medications	By mouth medications, tetanus immunization, prescription refills
Specialty consultation	Phone call to PCP
Simple procedure = 1 (laceration repair, Foley catheter) Complex procedure = 2 (conscious sedation)	Simple wound care (dressings, recheck) Crutches, splints, slings

Modified from the ESI Implementation Handbook. *CT,* Computed tomography; *ECG,* electrocardiogram; *IM,* intramuscular; *IV,* intravenous; *MRI,* magnetic resonance imaging; *PCP,* primary care provider. From Gilboy N, Tanabe T, Travers D, Rosenau AM. Emergency Severity Index (ESI): A Triage Tool for Emergency Department Care, Version 4. Implementation Handbook. 2012 ed. Rockville, MD: Agency for Healthcare Research and Quality; 2012.

Disaster Triage

Disaster triage does not use the ESI triage acuity system. The goal of triage changes drastically during a humanmade, natural, or public health disaster, because resources quickly become scarce. The goal is to do the maximum good for the most casualties through the most efficient use of resources.[9] This goal mirrors the utilitarian ethical theory: achieving the greatest good for the greatest number of people. During a disaster, the triage system changes and the Simple Triage and Rapid Treatment[10] (START) method or a similar method, such as Sort, Assess, Lifesaving Interventions, Treatment/Transport (SALT), is used (Table 3).[10] Following the START method, a simple color system is used to identify the level of acuity. Black is used for the patients who are dead or are expected to die unless extensive resources are used to save them. The victim is tagged and the triage nurse then moves to the next patient. Red is used for the patients needing immediate care. Criteria for this status include respiratory rate above 30 per minute, absence of a radial pulse, capillary refill above 2 seconds, and inability to follow simple commands. Yellow is used for persons who need care but can wait. These patients are in need of care to the point that they cannot get up and walk around, but in contrast to the patients who are tagged as red, these patients do not have a respiratory rate above 30 per minute, a capillary refill above 2 seconds, or absence of a radial pulse, and they are able to follow simple commands. Green is used for patients who are referred to as the "walking wounded." These patients are able to get up and walk around and may be enlisted to help.[11,12]

This system is in direct conflict with the system used in emergency departments. An ED patient who is receiving cardiopulmonary resuscitation (CPR) is taken first and everything is done to try to save that person's life no matter how many resources are required. In a disaster situation, a patient in cardiopulmonary arrest may not have CPR started. Critically ill patients with minimal chance of survival are tagged as black. Only comfort measures such as pain control are given, even if it hastens the death of the patient. The most morally distressing decision to make is to assign a black tag to a critically ill patient when a nurse's first instinct is to help and protect all of her or his patients. The process and flow of the department is radically changed when a disaster happens, presenting unique challenges for ED nurses. Because disasters happen unexpectedly, it is nearly impossible to train for the moral and emotional conflict that the nurse will face. However, an understanding of the ethical justification for these decisions, which may differ from the ethics and ethical justification for health care in general and nondisaster triage, can help in allaying these moral and emotional conflicts.[8,13]

Ethical Challenges of Disaster Triage

DISASTER TRIAGE AND UTILITARIAN CALCULUS

One difficulty in having a triage nurse switch from the traditional triage system to a disaster triage system is that it may cause the nurse to feel as if she or he is violating the nursing code of ethics. Provision 3 of the Code enjoins the nurse to promote, advocate for, and strive to protect the health, safety, and rights of the patient.[7] During a disaster the nurse no longer has that option. The decision to advocate for the sickest patient is overruled by the utilitarian principle of doing the greatest good for the greatest number

TABLE 3
Comparison of Emergency Severity Index and Simple Triage and Rapid Treatment

Emergency Severity Index	Simple Triage and Rapid Treatment
Does the patient require immediate lifesaving intervention? If yes, level 1: Severely unstable, must be treated immediately	Can the patient walk? If yes, then Green: minor injury
Is this a high-risk situation? Is the patient in severe distress/pain or disoriented? If yes, level 2: potentially unstable, must be treated within 10 minutes	If the patient is not breathing and an airway is unable to be opened, then Black: deceased
How many different resources are needed?	If the patient is breathing, assess pulse; if no pulse, then Red: immediate
If many, level 3: stable patient, must be seen within 30 minutes	If a pulse is present, assess level of consciousness; if nonresponsive, then Red: immediate; if responsive, then Yellow: delayed, can wait
If one, level 4: stable patient, nonurgent, expected to be discharged	
If none, level 5: stable patient, requires no testing or procedures, expected to be discharged	

Data from Gilboy N, Tanabe T, Travers D, Rosenau AM. *Emergency Severity Index (ESI): A Triage Tool for Emergency Department Care, Version 4. Implementation Handbook.* 2012 ed. Rockville, MD: Agency for Healthcare Research and Quality; 2012 and University Hospitals EMS Training & Disaster Preparedness Institute. S.T.A.R.T.: Simple Triage and Rapid Treatment. www.emsconedonline.com/pdfs/startriage.pdf.

of patients. The various needs and even rights of individual patients that, in another context, would be high priorities may need to be temporarily set aside in favor of providing the basic good of survival for the greatest number possible. This situation occurs because an implication of utilitarian ethical thinking is that some persons may need to suffer for the sake of providing good overall.[14] Additionally, utilitarianism has a complex relationship with the concept of rights. Bentham was critical of the notion of natural rights, famously referring to them as "nonsense upon stilts"[15]. John Stuart Mill worked hard to fit a concept of rights into his version of the theory, in which it clearly did not fit easily or comfortably.[16]

Another provision that may be pushed aside is provision 5: "…the nurse owes the same duties to self as to others, including the responsibility to preserve integrity and safety, to maintain competence, and to continue personal and professional growth"[7]. During disaster times, many nurses are faced with working longer hours to help other people when they may not know if their own family is safe. Utilitarian calculus brings with it the presumption that no one person's good or happiness weighs more than that of any other person. Thus, as previously noted, decisions might need to be made to sacrifice the good of some patients for the good of more patients; one also might be obliged to sacrifice one's own good or happiness for the greater good. The extended period of time away from family responsibility can weigh heavily upon the nurse, and child care issues have been identified as an additional stressor during times of disaster.[17]

In addition to immediate harms and risks of harm for a nurse during a disaster, harms due to the provision of care and the difficult decisions made during disaster triage could result in distress of an emotional, psychological, spiritual, or moral nature. Recognition of this fact implies a managerial or administrative obligation to provide counseling resources for nurses who suffer in such a manner. One option, debriefing or critical incident stress debriefing (CISD), provides a structured environment for processing the experience of the incident through a conversation among peers assisted or facilitated by a professional peer skilled in CISD.[18] CISD can help nurses and other health providers "identify the personal impact of the traumas and losses they had experienced as a workgroup".[18] Debriefing cannot take the place of individual counseling but can aid in identifying who is in need of further help. It can also provide tangible support and foster group cohesion, potentially resolving the sacrificial harms necessitated by the utilitarian calculus of disaster triage.[18]

During a public health disaster, the triage system may not be clear because of the lack of clarity regarding the measuring of good or happiness according to utilitarian calculus. Jeremy Bentham proposed a literal, quantified calculus.[15] John Stuart Mill disagreed and conceived good

or happiness more qualitatively.[16] Beyond these founding thinkers, various forms and developments of utilitarianism have disagreed on these deeper theoretical questions.[19] Numerous methods have been suggested to guide the triage team in deciding who should receive the scarce lifesaving interventions. For example, during an outbreak of a contagious respiratory illness that causes respiratory failure, how would the triage team decide who would receive the ventilators required to keep them alive? A limited number of ventilators are available at any given hospital at any given time, leading to the necessity in difficult circumstances of determining who should receive the scarce resource and what parameters would be used to make that decision. Should the decision be made on the basis of societal worth? Does a teacher have more societal worth than an airplane pilot? Another option would be to make resource allocation "first come, first served." With that option, all the resources may be used before the majority of cases are discovered. Should the decision be based on the life cycle principle? Should the resources go to the patient who has the most life years yet to be spent? Should children take precedence over elderly persons, because elderly persons have lived more life years?[20] Another method used in determining priority is the sequential organ failure assessment score, which is a relatively simple mortality prediction model.[21] This method is simple to use, requires minimal laboratory testing, and prioritizes treatment based on the probability of short-term survival.[21]

Disaster Triage During Hurricane Katrina

Disaster triage is meant to save the most people and best utilize the resources that are available. Unfortunately, there are only loose guidelines to follow in making decisions, and the triage nurse is often left questioning whether she or he made the correct decisions. For example, "Was that person I placed in the black category going to use too many resources, or should I have given him or her a chance at life?" Although it is not possible to predict disasters and no definitive guidelines exist for determining who receives scarce resources, some guidance should be provided so decisions are made in as fair and equitable a manner as possible. During the aftermath of Hurricane Katrina in 2005, the New Orleans Memorial Hospital staff was faced with many difficult choices about who should be evacuated first, who would only receive comfort care, and how to give the caregivers a chance to rest. Many people died at this hospital in the aftermath of the hurricane. Many difficult decisions were made, and some patients were given only comfort measures that were believed to hasten their death. Criminal charges brought against members of the staff were later withdrawn following the judgment of a Grand Jury.[22] This experience has raised awareness that few guidelines are available to be followed in times of disaster.

During the aftermath of Hurricane Katrina, comfort measures were used without the permission of the patients; in fact, the patients were not even offered options. This course of action goes against the typcal practices of our medical care system, which is immersed in individualism and autonomy.[23] Members of Memorial Hospital's medical staff who were involved in the care of the patients who died are advocating for a clear definition of standards so the medical staff would have more direction if the situation happens again.

Some decisions made during the aftermath of Hurricane Katrina at Memorial Hospital were to save the babies first, then ICU patients who were dependent on electricity.[22] The patients with "do not resuscitate" (DNR) orders were the last to be evacuated.[22] Staff focused on a few decision-making methods in the established evacuation plan.[22] Based on the life cycle principle, babies were the first to be evacuated.[22] The societal worth principle was used when staff decided to have any patient with a DNR order go last.[22] It was believed that they had the least to offer to society. The fact that loose guidelines and few standards are provided as guidance to the staff compounds the moral distress and issues of self-doubt often felt by triage staff. Without discussing the issue openly and publicly, triage nurses and staff will continue to undergo moral distress.

Conclusion

Disaster triage is a unique function of health care providers. It is unique within the practice of health care in general and within the context of triage in particular. With this uniqueness comes unique clinical, personal, and ethical challenges. Thus, it follows that the best means of understanding these ethical challenges and making ethical decisions would be different from the typical approaches in health care. Utilitarianism is an important element of our academic and practical understanding of ethics in health care. It represents an important development of ethical thought in the modern world. At the same time, it has been criticized as a general approach to ethical life because of problems regarding the neglect of justice and of rights, the consideration of inherent values beyond happiness or well-being, and a number of other classic criticisms of the theory.[14,24] Most contemporary ethicists, including bio-ethicists, perceive utilitarianism as a helpful tool but believe it is incomplete as a general theory on ethics and ethical

decision making. However, as a limited theory with potential valuable insight, it can be useful in limited situations, such as the crisis of a disaster.

Without clear guidelines and standards, which was a problem contributing to the events at Memorial Hospital in New Orleans after Hurricane Katrina, nurses and other health care providers can face a multitude of difficulties.[22] Clear guidelines, as provided by a method such as START, along with an understanding of the ethics underlying the decisions indicated by these methods, can go a long way in preventing and alleviating additional problems resulting from disastrous events, including the inevitability of moral distress. In addition, disasters typically are managed by area emergency management systems. As part of the disaster plan, a debriefing is held after the event to discuss what went well, what did not go well, and to evaluate suggestions for rectifying situations that could have gone better. A critical management crisis team should also be available to the medical staff. Through CISD, health providers can discuss the event and assure the triage personnel that the moral distress felt is a normal and expected reaction when the values and ethics they practice on a daily basis are turned upside down. A disaster presents unique challenges, clinically and ethically. A combination of preparedness, clear guidelines, ethical understanding, debriefing, and counseling if necessary can minimize the harms of the disaster and harms resulting from treating victims of a disaster.

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