## Murder or Mercy? Hurricane Katrina and the Need for Disaster Training

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n July 2006, a New Orleans phy-▲sician, Anna Pou, and two nurses, Lori Budo and Cheri Landry, were arrested and accused of the second-degree murder of four patients at Memorial Medical Center in 2005, 4 days after Hurricane Katrina. According to Charles Foti, Jr., the Louisiana attorney general, the patients, ranging from 61 to 90 years of age, had been injected with a combination of morphine and midazolam that had killed them. Some observers have noted that these drugs are commonly given to reduce pain and anxiety, arguing that their administration probably represented an attempt to calm seriously ill patients during a crisis. Others, believing that the drugs were purposely given in overdose, have defended the acts as euthanasia, intended to prevent needless suffering in patients who had no realistic chances of surviving in a stranded, incapacitated hospital. Many in New Orleans have attacked Foti, as a representative of a government that was ineffectual during the crisis, for placing blame on those who cared for vulnerable citizens after Katrina.

The patients had been on the seventh floor of Memorial Medical Center in a long-term care unit operated by LifeCare Hospitals, which rented the space from Memorial's owner, Tenet Healthcare. Approximately 250 patients were stranded at Memorial after Katrina, and at least 34 of them died; the 4 patients at the center of the controversy were among

24 who died on the LifeCare unit. These patients had chronic medical conditions rendering them nonambulatory and in need of supportive care. Before Katrina, however, none had been thought to be in imminent danger of death.

Whatever roles Pou, Budo, and Landry eventually are proved to have played, a key question is whether Memorial's staff members were prepared to make life-and-death decisions during a disaster. If not, what could have prepared them?

In 2001, when I arrived at Tulane University in New Orleans, I had to prove my proficiency in my medical subspecialties. I also had to undergo yearly training in handling workplace sexual harassment, compliance with the Health Insurance Portability and Accountability Act, and insurance regulations. To run laboratories, I had to prove my competence in experimentation with animals and the safe handling of hazardous material. And there was the occasional fire drill.

I was taken by surprise the next fall, when, because of the proximity of Hurricane Lili, Tulane University Hospital and Clinic (where I was chief of hematology and medical oncology) announced a code gray, a procedure for determining which personnel would be assigned which duties when a hurricane struck. I had received no previous information on code gray, and I became educated later only by talking to colleagues

who had practical experience but no formal training. As it turned out, there was no real system for code-gray assignments. Unlike the military, which doesn't send soldiers into combat until they have been trained for specific battle conditions and have undergone psychological testing to ensure that they can handle the horrors they'll face, hospitals generally enlisted whichever doctors happened to be on duty during a potential hurricane strike.

On August 27, 2005, as Katrina bore down, my wife, a physician at the Medical Center of Louisiana at New Orleans (Charity), was assigned code-gray duty there. I volunteered to staff Tulane Hospital across the street, and I visited Charity daily and worked there after Tulane was evacuated.

Katrina's floodwaters crippled emergency power generators, transforming hospitals into dark, fetid, dangerous shells. Extremely high indoor temperatures killed some people. We were under tremendous strain: in addition to the dire medical circumstances of many of our patients, we confronted uncertainty about our own evacuation, exacerbated by the tensions of threatened violence by snipers and frazzled soldiers and guards. I saw some competent professionals reduced to utter incoherence and uselessness as the crisis unfolded. I saw others perform heroic deeds that surprised me. Clearly, a better personnel selection process was needed.

Colleen Lambert, a nurse at Memorial's bone marrow transplantation unit, described conditions at Memorial that were similar to those at Charity and Tulane: no power, scarce food and water, nonfunctional toilets, uncertain prospects for evacuation, chaotic communication, gaps in leadership, poor security, and threats of violence. Nevertheless, staff and family members at Memorial evinced heroism and altruism as they worked together to mitigate suffering and save lives.

"Patients were complaining some," reported one of Lambert's colleagues, "but we never considered euthanasia." This description was echoed by Peter DeBlieux, the physician who ran Charity's intensive care unit during the crisis. "Patients complained of being too hot," he said. "It was fairly unpleasant," but no one ever asked for euthanasia, nor did such considerations arise among staff members.

DeBlieux did rate patients according to their potential for survival. "Red meant critical care. Black meant moribund - comfort care only. We had rated a number of patients red, and treated them accordingly. We finally got them evacuated to the airport. I found out later that the airport personnel re-rated them black, and gave comfort care only. We were devastated." The same patients, he explained, received different levels of care depending on the availability of resources at specific locations. "The airport was just too swamped, and they didn't have anything to spare," he noted. Acknowledging that conditions at Memorial, where the heat was extreme, were worse than those at Charity, DeBlieux added, "Now you have to imagine what decisions might have been made at Memorial, with its specific conditions."

Lambert agreed that "different conditions require different responses and decisions." She also acknowledged that she "did hear rumors" 3 days after Katrina "that 'they're talking about euthanizing patients," but that



discussion apparently centered only on patients in the LifeCare facility. She said she was not entirely surprised, given what she had heard about conditions there.

What might lead a health care professional to consider euthanasia in such a situation? If a terrorist bombs a building and we identify trapped people who are doomed to die before they can be rescued, should we offer to kill them or oblige them if they ask us to do so? If professionals who do undertake euthanasia in such circumstances have had no training in coping with disaster, does that change their accountability? When is such killing murder, and when, if ever, is it medically justified, humane, or legal?

Answering these questions is hardly an academic exercise. Tsu-

namis, earthquakes, fires, urban warfare, terrorist attacks, and other calamities are present and evolving threats that can rattle unprepared responders to the core and expose complex ethical, moral, legal, and medical conundrums.

At Tulane, we faced our share of these difficulties after Katrina. I cared for a woman with severe graft-versus-host disease caused by a bone marrow transplant. Given her dismal prognosis, I omitted her from the priority evacuation list — predicting a much greater chance of survival for other patients, including a man with a life-threatening low platelet count due to idiopathic thrombocytopenic purpura. Blood was oozing from his gums, bowels, and skin, and I couldn't treat him because all our blood products had been destroyed by the heat. Although he was at great risk for bleeding into his brain, which could precipitate paralysis or death, I never considered ending his life. Would someone else in the same position have done so?

Despite chaotic communications, we had some sense of central command and control at Tulane and Charity, as well as a tenuous group decision-making process. I find it unimaginable that our group discussions would have led to a decision to euthanize anyone. If the allegations of euthanasia at Memorial are borne out, such behavior might be attributable to less effective group decision making, lack of a sense of central control, or individual actions that were contrary to group decisions, in addition to environmental or medical conditions that were judged not to be survivable, requests of patients, or criminal intent.

How can health care profes-

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sionals educate themselves about these factors and about how best to act and cope during a disaster? I am no expert, but my experience suggests that our sense of teamwork at Tulane and Charity was vital to our success in coping with Katrina. Thus, in addition to the obvious medical issues, I would argue that disaster training must include attention to the organization of an effective administrative operation in a chaotic setting. Communications failures must be prevented with the installation of fail-safe hardware that can also be used to communicate with police, fire, government, and military per-

sonnel. First responders must understand something about armed conflict and how to deal with violence. Ethical decision making, professionalism, and personal integrity must be emphasized. It would also be helpful to have an understanding of the legal ramifications of the actions one might take in such a situation. Finally, we must prioritize training according to the probabilities of events and find ways to identify the persons who would be best suited to responding and those who ought to be assigned other duties.

A careful analysis of what

happened in New Orleans hospitals after Katrina — and why — should inform our evolving concepts of how best to prepare first responders. Whatever the outcome of the investigation in the Memorial case, I hope that the patients' deaths will catalyze the needed plans for training health care providers to deliver competent care — and survive — during the inevitable disasters of the 21st century.

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