



HURRICANE KATRINA

## Volunteer Work — Logistics First

Hilarie H. Cranmer, M.D., M.P.H.

“What can I do to help?” The voice was clear and assertive, almost authoritative, and it captured my attention immediately. I looked up from the chaotic mosaic of maps, lists, notes, and messages on the

table in front of me, removed the telephone that was pinned between my shoulder and ear, and met the determined eyes of the volunteer. Joyce was the newest member of our team at the Baton Rouge field headquarters of the American Red Cross, where we had been working 16 hours a day since September 1. Our team had been deployed from the organization's headquarters in Washington, D.C., to perform the critical-needs assessments that would help define the public health response to Hurricane Katrina.

The American Red Cross has been responding to national disasters for the past century, and there has been no significant outbreak of disease in any shelter

that it has supported. The Katrina situation, however, was unlike any the organization had faced before. The unprecedented scale and impact of the disaster and the enormous population of displaced people, many of them chronically ill, demanded an extensive network of long-term shelters and posed an array of new public health challenges. There are long-established, well-defined standards for meeting the public health needs of displaced populations; the challenge was to ensure that these standards would be met despite the enormous variations in the size, location, facilities, capability, and integrity of the far-flung shelters that had been conscripted after the hurricane.

Our role was to assess as many of the shelters as possible, rapidly identify immediate and longer-term needs and problems, and develop a plan for a response that was fully coordinated with the local authorities, who, with their federal counterparts, commanded the needed resources. At the moment of Joyce's offer of help, I needed copies of the lists of doctors and nurses who were available for deployment. Joyce immediately addressed herself to the task with energy and intensity, grasping the piles of loose sheets and making her way to the copy machine.

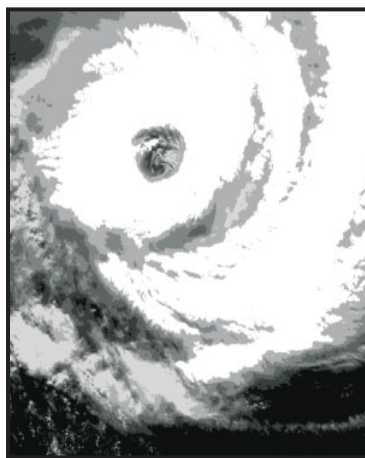
Like the water in Lake Pontchartrain, which waited for a breach in a levee to unleash its power on the adjacent neighborhoods, a reservoir of potentially catastrophic communicable diseases lies ready to explode into an epidemic that can overwhelm a vulnerable population confined

to overcrowded quarters. The early warning system for such outbreaks consists of health care providers who can detect unusual patterns in their clinical practice. But when the health-protection infrastructure of an entire geographic area is destroyed, ordinary symptoms begin to carry extraordinary meaning. Diarrhea containing blood might signify dysentery. Patients with cough might be harboring tuberculosis. In an overcrowded shelter, an untreated person with tuberculosis places the entire population at risk. One must be extremely vigilant, recognizing that every symptom in a displaced person, no matter how innocuous it would seem in normal practice, might be the leading edge of a destructive wave of infectious disease.

In a little over four days, our multidisciplinary and interagency teams assessed more than 200 shelters housing nearly 30,000 people. Amazingly, in a majority of cases, the basic public health needs were being met. There were inspiring stories of local communities rising up to provide for their unexpected guests; nearly all native Baton Rouge residents had someone new staying in their homes. Nearly every hotel housed displaced families, extended families, and pets. Nearly every large shelter had created a clinic, staffed by local doctors and nurses furnished with medicines and supplies, to provide medical care.

Coordination on the ground is imperative. The American Red Cross was caring for more than 50,000 displaced people. There were more than 9000 hospital beds in New Orleans that could

no longer be used for sick patients. Many of the New Orleans health care and public health workers had also been displaced, but many wanted to help, perhaps believing that immersion in the care of others would assuage the pain of their own losses. The clinics in the larger shel-



ters were improvised but were generally providing good medical support, given the limited resources available.

When Katrina hit, the immediate national response among health care professionals mirrored the response to the Asian tsunami last December: everyone wanted to help. But because Katrina had invaded U.S. shores, many well-intentioned clinicians and health care organizations simply self-deployed and traveled to Louisiana, where their arrival compounded the overall disorganization of the effort to provide health care to a population that did not normally have great access to care. They were writing prescriptions for medications that couldn't be filled, for diseases such as hypertension and diabetes. Lacking an assigned role

within a properly planned framework, many found themselves sitting on their hands, doing nothing for which they had been trained.

I soon found myself saying, "We are here for the people of Louisiana" — a mantra that I repeated endlessly to the eager volunteers who arrived in uncoordinated fashion. I am fortunate to have been trained in emergency medicine, public health, and disaster response. But in the first days and weeks after this disaster, my clinical skills were my least useful qualities. I was helping to manage more than 100 doctors and nurses deployed on public health missions throughout the state, virtually all of whom had been waiting around to do something. Every one of them wanted and expected to save lives and alleviate suffering, but it was still logistically impossible for them to use their skills in the way they expected. Clearly, there was a disconnect between the aspirations of the army of volunteers and the actual needs of the victims of Hurricane Katrina.

In the immediate aftermath of a disaster involving large, displaced populations, doctors, as difficult as it might be to accept, are one of the least useful commodities. The first priorities, standards in the developing world, are security and safety for the population, then water, sanitation, food, and shelter. Once the humanitarian-aid staff is safe from danger, the most effective way to save lives is to ensure the availability of clean water, secure a place for bodily wastes away from the water supply, and then vaccinate every child younger than

15 against measles. Only after these needs have been addressed can curative care become operational.

Unfortunately, the skill set for such a response was not on the curriculum vitae of any of the health care workers who had shown up to volunteer. All the eager, superbly trained doctors and nurses who told me “I’m here to help” almost always meant that they were ready to deliver care in the same way they did at home. But the burden of the initial emergency response is on logistics, not on the provision of direct care. Indeed, attempts to

provide direct care in a setting with no coordination or infrastructure can distract from the urgent mission of establishing basic human security and meeting immediate needs.

Through those early days of frantically assessing the safety and needs of the population and planning the medium-term response, Joyce was one of the most valuable members of our team. Without question, without complaint, she made copies, gave directions, and ferried people around in her car. Her only expectation was to help. She had dropped everything to volunteer;

she had left her work, her daughter, and her grandchildren behind and, having missed the flight she planned to take, had driven alone across several states to Baton Rouge. At the end of her two-week session, she would return to her life, another of the many anonymous volunteers who responded to the crisis. Once back at home, she would resume her usual work — as a thoracic surgeon.

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## Public Health Response — Assessing Needs

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Never before Hurricane Katrina has a disaster caused such a massive displacement of a U.S. population. Never before has the country seen so vividly the exposure and vulnerability of displaced persons — primarily the poor, the infirm, and the elderly. We know from experience that disasters take their greatest toll on the disenfranchised, but the distressing television images of our citizens stranded without basic human necessities and exposed to human waste, toxins, and physical violence awakened the public health community to a frightening realization: given the ineffective response mechanisms that were in place, Katrina could become a public health catastrophe.

The critical issues raised by Katrina’s devastation are straight from the public health textbook: sanitation and hygiene, water

safety, infection control, surveillance, immunizations, environmental health, and access to care.<sup>1</sup> A public health response was clearly needed; determining what it would look like was a bit more complicated.

The traditional focus on infectious disease in displaced populations is well supported. Because disaster shelters often lack potable (or any) water, are often crowded and unclean, and may house a population with limited knowledge about health, the risks of airborne and waterborne transmission of disease are increased. Educating sheltered evacuees — particularly children — about strict personal hygiene can aid in preventing outbreaks. Ideally, facilities with adequate numbers of toilets and enough water for washing and bathing should be sought; in places where the shelters them-

selves are damaged — as many were in the Biloxi and Gulfport areas of Mississippi — evacuees may need to travel greater distances for shelter or wait wherever possible until better facilities can be found.

Epidemics of vector-borne disease have occurred after other hurricanes.<sup>2</sup> Although there may be essentially no risk of malaria transmission on the Gulf coast, the presence of vast stands of stagnant water in any locale may increase the risk of other vector-borne diseases, particularly the viral encephalitides. The decision to initiate expensive spraying campaigns should always be based on solid knowledge of vector breeding and endemic disease. West Nile virus, St. Louis encephalitis, and even dengue have native ties to the Mississippi delta.<sup>3</sup> There have been confirmed deaths from skin infec-