COMMENTARY

A Tale of Two Responses: Haiti Earthquake Highlights the Need for Training in International Disaster Response

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The earthquake that devastated Haiti on January 12, 2010, led to an outpouring of aid from around the world. The scale of the disaster, and horrific images of collapsed buildings, crushed limbs and amputations, and residents sleeping in the streets, moved people to open their hearts and wallets for the Caribbean country. Clinicians, too, wanted to help. Indeed, in the days immediately following the earthquake, hundreds of doctors, nurses, and other personnel arrived in Haiti to set up field hospitals and provide much-needed medical care to injured survivors.

I was one of those doctors. I arrived from the Harvard Humanitarian Initiative two days later and stayed nearly three weeks. In that time, based on field observation, I came away more convinced than ever of the efficacy of trained disaster relief specialists. The relative lack of expertise and experience in the international disaster response too often led to less than adequate care and outcomes. Many of the arriving medical aid workers—especially those originating from American hospitals rather than via international aid organizations—had little or no disaster response training. Some clinicians from the United States had worked in the Gulf Coast after Hurricane Katrina; others had been on medical mission trips to Haiti in the past. But very few of the doctors and nurses who responded to the Haiti earthquake were familiar with international disaster response and the standards and practices that apply in such situations. Most responders did not have a basic understanding of the United Nations' "cluster" system and the Sphere Project's standards for international disaster response.

Clinicians with years of experience providing medical care in Haiti similarly lacked some of the necessary disaster management skills. These clinicians often felt an understandable sense of "ownership" of the earthquake medical response, but this was a crisis requiring skills transcending local knowledge and general medical expertise. Local knowledge of Haiti was a necessary, but not sufficient, predicate for the most effective disaster response. In some cases, that sense of "ownership" mitigated the possibility of collaboration with experienced international relief agencies and personnel that could have delivered better medical care.

With several colleagues, I was involved in two distinctly different field hospitals established post-earthquake in and around Port-au-Prince. At both, teams of smart, generous, capable clinicians did their best to provide good medical care for those injured in the earthquake. But the two field hospitals—and the experiences of patients at each—were quite different.

FIELD HOSPITAL #1

The 150 patients arrayed in long rows of cots in the two large tents of Field Hospital #1 preceded the arrival of the international doctors. Ninety-five percent of the patients had injuries requiring surgical care. Most had open compound fractures of the extremities; a few had pelvic fractures needing stabilization.

Within a day of the earthquake, the facility was taken over by clinicians with a long record of providing medical aid in Haiti. When I arrived, 35 or so clinicians, led by two surgeons who had previously worked in Haiti as part of a hurricane response, were already at work. While undoubtedly well meaning, the doctors did not observe basic protocols used by international disaster relief specialists. To begin with, no attention was given to supportive services. For example, the only food or water available for patients was brought in by family members. There were no latrines set up for patients, who resorted to relieving themselves on a small strip of land directly behind the tents. Bedbound patients had to use makeshift bedpans in full view of others. There was no privacy in the tents and no separation of genders. There was no water for washing hands, no soap, no supplies for personal hygiene. No system of medical record-keeping was introduced, not even a list of patients or their diagnoses. Five unaccompanied children were in the hospital, with no special efforts taken to protect them from abduction or to reunite them with family members. In sum, the list of deficiencies was quite long.

Staffing was not the issue. Indeed, once or twice a day, a new load of volunteers would arrive, and within 5 days more than 90 clinicians were present at the tents. The volunteers slept inside one of the two patient tents as no other arrangements for staff housing had been made. Staff took their meals inside the tent in full view of hungry patients. Staff used latrines and hygiene facilities set up by a nearby agency that were off-limits to patients. There was very little organization of clinicians, including no formal orientation, no staff roster, and no formal arrangements for night shift coverage. Because there was no security at the tents, outsiders could come and go freely. Volunteers from other agencies would wander in and take photos (often without a patient's permission) or start interviewing and examining patients.

What outcomes occurred? Most important, patient care appeared to suffer. In the first days, patients with open fractures needed surgical washouts and stabilization. Even though the field hospital leaders spoke of the field hospital as being a surgical hospital, they did not immediately have a functioning

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operating room. They expected operating room tents to arrive any day, but when the tents failed to arrive they had no backup plan. Patients were never moved to operative facilities elsewhere. Even when another local facility became available for these surgeons to use, they declined, preferring instead to wait for their own tents. As days went by, open fractures became infected, limbs turned gangrenous, and patients became septic. Death followed. First one patient died; the next day, five were gone. At this point, the surgeons decided that they could wait no longer and began to perform surgeries in a makeshift operating room set up in the corner of one of the tents. Fourteen amputations were performed that day to avoid overwhelming sepsis.

The surgeon in charge was not fully knowledgeable about international standards for disaster response. He was able to rationalize the conditions in Field Hospital #1 by framing the situation as a "war zone" (he often spoke of it as such to his staff), implying thereby that certain standards could be overlooked. He did not know, as a trained disaster response clinician would, that daily coordination meetings in the areas of health, water and sanitation, food, protection, and logistical support were taking place within a 5-minute walk of his facility. With help available from other responding agencies at these meetings, many amputations and deaths might have been avoided and the overall standard of patient care improved.

FIELD HOSPITAL #2

Field Hospital #2 presented a much different case. This facility was established from the outset with the necessary infrastructure familiar to those trained in international standards for disaster response. With far fewer resources initially available as compared to Field Hospital #1, the specialists leading this field hospital, trained in disaster response, coordinated donations and volunteers so that the hospital met the international standards. The leadership was constantly aware of which aspects of the facility needed improvement, and this led them to make informed requests of donors.

Initially there were 25 patients at Field Hospital #2. Within 10 days, 500 patients had been treated. A first priority was to assure security. To that end, a fenced compound was selected for the hospital site, and security guards were hired to control access to the compound. The leadership worked with multiple donor organizations to ensure adequate supplies of tents, water, food, and medical equipment. Latrines were set up and personal hygiene kits, composed of a bucket, towels, soap, toothbrush and toothpaste, and similar materials, were assembled and distributed to each arriving patient. Patients received three meals a day, and clean water was always available for drinking and washing. Every patient was registered in an official log book to be used by the international community to reconnect patients with their families. Unaccompanied minors were logged separately and registered with UNICEF to ensure their protection. Men, women, and children were housed in separate tents, with women and children being kept nearest to the latrines and the international clinicians for security. Tetanus vaccination was given to every patient on arrival, and a measles vaccination campaign was completed within the first 10 days.

Volunteer medical staff from 13 countries were coordinated to provide all aspects of care. Around 80 staff daily were providing patient care. All staff were registered and organized into care teams, including surgical, wound care, and physical therapy teams. A daily schedule specified times for rounds, staff meetings, and chief-of-service meetings. Night shifts were covered by dedicated staff. Staff were housed separately from patients in a secure area. A pharmacy, medical supply room, and material warehouse were also established and secured. A separate nearby camp was created in cooperation with a well-known international aid organization to provide housing and services for patient families and those not requiring hospital care. By using the camp as a discharge facility, the field hospital avoided becoming overcrowded and ensured that medical needs to incoming patients could be adequately addressed. The hospital census was about 250 patients per day, with 30 new patients arriving daily.

Visible signs of relative satisfaction abounded. Patients felt secure enough to engage in recreational activities such as daily sing-alongs led by patient family members and weekly church services by local pastors. More important, medical outcomes were good. Organized care teams were able to identify unstable patients early to arrange special care or transport when necessary. Prompt surgical care was provided, and when on-site operating rooms were deemed insufficient, the leadership team secured use of a better facility nearby.

As this issue goes to press, no deaths or disease outbreaks have occurred in Field Hospital #2, and it has become a key accepting facility for field hospitals elsewhere in Haiti that are seeking to wind down operations.

THE UN CLUSTER SYSTEM AND SPHERE STANDARDS

The patient experience at Field Hospital #2 was better not because of the availability of more money or more capable doctors, but because its leadership was trained in international disaster response and knew which resources were needed and how to access them from the international community. Unlike US-based disaster response, grounded on the Incident Command System structure, international disaster response is coordinated by the UN Office for Coordination of Humanitarian Affairs (OCHA) via its "cluster" system. Each cluster (health cluster, food cluster, shelter cluster, water and sanitation cluster, and so on) is headed by a separate UN agency. For example, the World Health Organization leads the health cluster, and the World Food Programme leads the food cluster. In the early days following major international disasters, there are daily cluster meetings at local UN headquarters to coordinate the response and ensure that different organizations' needs are met. If a field hospital needs doctors or latrines or food, help is available from the relevant cluster.

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How do responders know what is needed in international disaster response? The Sphere Project, a collaboration of major international aid organizations, has established international standards for shelter, food, water, sanitation, and protection. The Sphere standards, as they are commonly known, are available online and are widely recognized in the international aid community. The standards in each area of response are accompanied by specific numerical indicators that guide field workers in providing adequate services. For example, the indicators for water and sanitation include a minimum of 15 liters of clean water per person per day and 1 latrine per 20 people in emergency situations.

International disaster response in situations like the Haiti earthquake is unlikely to ever proceed in the calm, structured way that most physicians are accustomed to in their daily practice. There will always be a measure of disorganization, even chaos. But there are standards in this area of medicine to which medical responders should hold themselves accountable, just as they are required to be familiar with the standards of any other area of medicine in which they practice.

International disaster response training is within reach. The Health Emergencies in Large Populations course (offered by the ICRC) and the Humanitarian Studies Course (offered by the Harvard Humanitarian Initiative) are two examples of short-format courses that offer introductions to humanitarian response. Books such as the Sphere Project handbook and other online resources are available. Aid agencies offer training programs to their staff involved in humanitarian response. Given the potential for these courses to improve the quality of international disaster response, it is desirable that the international humanitarian community makes this type of training even more widely available to medical response volunteers, and that volunteers take it upon themselves to become better trained for the important work that they selflessly pursue at times of disaster. Good intentions and general medical skills are surely necessary, but less than sufficient, in seeking better outcomes in disaster zones.

About the Author

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