



The South Asian Earthquake Six Months Later — An Ongoing Crisis

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The magnitude 7.6 earthquake that struck northern Pakistan and India on October 8, 2005, was the world's third-deadliest natural disaster of the past 25 years, surpassed only by the 2004

Asian tsunami and the 1991 cyclone in Bangladesh. An estimated 74,650 people lost their lives — a higher death toll than the average annual loss to all natural and man-made disasters combined during the 1990s, excluding armed conflicts. Yet the outpouring of concern, solidarity, and assistance was of short duration. Today only 66 percent of the “flash appeal” issued by the United Nations — an appeal for emergency aid initially estimated at \$312 million and rapidly increased to \$550 million — has been funded. Important needs remain unmet.

This falling off of support is not surprising — 2005 was an uncommon year for disasters. The

tsunami, famine in Niger, floods in Guatemala, three major hurricanes in the United States, and man-made disasters in such countries as Uganda and Sudan put enormous demands on the world's capacity and willingness to respond. In addition, more than six months have passed since the quake occurred. There are no more tales of dramatic rescue, televised scenes of devastation, or high-profile visits by politicians. Why should we be concerned with the ongoing relief and recovery efforts? For disaster-relief professionals, the answer is obvious: the scale of need remains enormous.

In addition to those who died, more than 76,000 people were injured, 2.8 million were left home-

less, and 2.3 million have insecure access to food and other essentials. And the affected population is spread over 30,000 km² in impoverished, mountainous, and difficult-to-reach areas. Once the bitterly cold winter set in, it became clear that the earthquake would continue taking its toll for months to come.

The first priority of rescue teams was, appropriately, rescue and the provision of emergency care for physical trauma. There was much early criticism of the Pakistani authorities, who struggled to deploy military aircraft and mule trains to remote mountain villages. International urban search-and-rescue teams arrived within days, but their heroic efforts probably saved relatively few lives: such interventions are generally responsible for only a small part of the public health effect of relief efforts after major disasters, since most survivors are rescued



A Nurse from the International Rescue Committee's Mobile Clinics on a Follow-up Home Visit in a Mountain Village.



Remains of the Inpatient Department at the Rural Health Center in Chattar Plain, Mansehra.

by community members in the first hours or days.¹ Other international teams provided invaluable helicopter airlift to retrieve the injured and deliver aid to remote villages.

Pakistani authorities estimated that of 564 health facilities in the affected area, 291 (52 percent) were totally destroyed, including the district hospitals in Muzaffarabad and Mansehra, and an additional 74 (13 percent) were seriously damaged. Health-sector coordination meetings during the

first two weeks, under United Nations leadership, focused on the reestablishment of hospital-based surgical care. The need for continual review of health-sector priorities prompted by the rapid evolution of public health threats was not initially recognized by some health officials. Overcrowding, poor sanitation, limited access to clean water, environmental exposure, and the widespread disruption of health care services quickly superseded surgical services as primary considerations.

Although large outbreaks of infectious diseases are relatively uncommon after natural disasters (certainly as compared with refugee crises), such outbreaks do occur in settings such as that in Pakistan, with its poor environmental conditions and overcrowded, camp-like settlements.² To accommodate the survivors, 144 relief camps were established, housing nearly 140,000 residents. As early as mid-October, mobile clinics that were operated by relief agencies documented that infectious diseases accounted for at least 65 percent of all illnesses, and ongoing surveillance has shown that acute respiratory infections, including pneumonia, and diarrhea continue to be the most common causes of clinic visits.³

The establishment of preventive services is often neglected after disasters. In Pakistan, mass vaccination against measles was undertaken, and water and sanitation facilities were urgently reestablished. But the most critical public health intervention — the distribution of tents and other shelter materials — was not managed by the health care sector at all. Early targeting of health care facilities and their staffs for tent distribution permitted these facil-

ities to be reactivated. Most tents, however, were not suitable for harsh winter conditions, and many collapsed under heavy snow. Winterization of shelters soon became the most important priority of the relief effort.

Ensuring equity in the provision of health care services is another ongoing challenge. Much of the quake-affected area is home to a conservative Muslim society in which many men refuse to allow their wives and daughters to be examined by male clinicians. In the early days, anecdotal reports indicated that less than 10 percent of the patients in some clinics were women. Staff members of several organizations reported numerous cases of severely injured women being denied medical care by their families. Relief agencies such as the International Rescue Committee found that including at least one female doctor or nurse in each clinic substantially improved women's access to services, increasing the representation of women among patients at such clinics to more than 50 percent. The addition of women to other response teams, including those distributing shelter materials and other nonfood items, was also critical in ensuring women's access to essential aid.

Despite the overwhelming needs, it is naive to rely on altruism alone as the basis for foreign assistance. When natural disasters occur in countries in which the United States believes it has a national-security interest, a strong case can be made for long-term involvement. The U.S. government, including its armed forces, has already made important contributions to the relief effort in Pakistan, as have many nongovernmental organizations based in the United States. The same was



A Man Carting Water to His Temporary Home in Bana, Allai Valley.

true in Indonesia after the tsunami, and polls have shown that U.S. assistance improved Indonesians' opinions about the United States.⁴ Many observers would consider continued contributions by the U.S. government to recovery efforts in Pakistan an appropriate demonstration of solidarity with an ally that has provided highly valued assistance in the search for Al Qaeda.

Many lessons may be learned from the earthquake and the response to it — the first response to a large international disaster in which the United Nations implemented its new “cluster” approach. This approach entails the identification of a lead agency

within each sector to improve coordination among responding agencies, as well as the quality, consistency, and predictability of the relief effort. In Pakistan, 10 main cluster working groups were established, focusing on health, emergency shelter, water and sanitation, logistics, camp management, protection, food and nutrition, information technology and communications, education, and reconstruction. The approach had an uneven start, largely because of a general lack of understanding about the objectives, procedures, and responsibilities, as well as inconsistent leadership. A disaster of this scale warranted the deployment of lead-agency professionals trained not only in technical areas of expertise but also in the science and practice of disaster management and, especially, the art of coordination, the lack of which has been said to be a leading cause of death in disasters.⁵ Too many of the lead-agency coordinators in Pakistan appeared to be poorly equipped and lacking in the skills required to chair a meeting, set a strategy, and articulate priorities.

Fortunately, under the leader-

ship of the World Health Organization, the Health Cluster Working Group in Geneva has initiated a process for training future sector leaders, with an emphasis on both technical and management skills. It is in the interest of all future victims that an “A team” be consistently deployed to manage large-scale disasters.

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BECOMING A PHYSICIAN

The New Medical “Missionaries” — Grooming the Next Generation of Global Health Workers

Claire Panosian, M.D., and Thomas J. Coates, Ph.D.

Noelle Benzekri is a first-year medical student with a mission. Even before the 27-year-old New York native spent a year as a clinic assistant and polio *vaccinateur* in Senegal, she knew that global health was her calling. “It’s the reason I decided to go

to medical school,” the former philosophy major acknowledged at a recent meeting of our journal club on global health at the University of California, Los Angeles (UCLA). Spurred by memories of her African patients, Benzekri intends to return to Africa some-

day to train local health workers to deliver care to the poorest of the poor.

The journal club has become a magnet for UCLA students, trainees, and faculty members who share Benzekri’s hopes for greater global equity in health. Many