Medical Activities in Areas Struck by the Great East Japan Earthquake

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Introduction

The magnitude-9.0 Tohoku Area Pacific Offshore Earthquake that occurred on March 11, 2011 at 2:46 p.m. brought unprecedented catastrophe to eastern Japan. This time, the destructive force of the earthquake coincided with many secondary disasters, such as tsunamis and nuclear power plant explosions, which have complicated and magnified the effects of the earthquake. The streets and buildings along the beautiful, deeply indented coastline were completely destroyed, the number of people killed or missing has reached 30,000, and even now, many evacuees are forced to live in discomfort and insecurity. We express our sorrow at the passing of those who lost their lives in the earthquake and extend our sympathy to those who are still evacuees.

Three hospitals affiliated with Toho University worked together to provide medical care for people who fell victim to the major earthquake, sending medical teams to Miyagi, Iwate, and Fukushima Prefectures. From March 12 to June 1, we continuously dispatched these teams—Tokyo/Japan DMATs (Disaster Medical Assistance Teams), followed by Toho University medical teams (medical relief teams for the Tokyo Medical Association's disaster base hospitals and Toho University Medical Association teams: all organized from the staff of the Omori, Ohashi, and Sakura Medical Centers)—to the disaster sites to provide acute medical care.

Tokyo/Japan DMAT Activities

Receiving instructions to head out at 4 a.m. on March 12, the day after the earthquake, we dispatched a Tokyo DMAT (one doctor, two nurses, and three firefighters) who arrived in Kesennuma, Miyagi Prefecture at 5 p.m. We also sent out a Japan DMAT at the same time to the Sendai Medical Center in Miyagi Prefecture. Most of the people who died in the earthquake were victims of secondary disasters caused by the tsunamis, and there were not many injured people who needed acute care from the DMATs, so after completing their work, the teams returned to Omori Medical Center on March 15 at 3 a.m.

Three doctors, two nurses, and one coordinator at Toho University had obtained Japan DMAT qualifications in the wake of the Great Hanshin-Awaji Earthquake. When the disaster hit in 1995, there were very few doctors, nurses, or other medical personnel working at the sites and not enough medical resources, such as medical instruments and drugs, so the principal work of the DMATs was triage to make the best use of medical resources and stabilization of vital signs so that patients could be transported to medical facilities. In this Great East Japan Earthquake, however, the severity of the victims' injuries and illnesses was polarized between two extremes, so the need for medical services from the DMATs was not very high. Furthermore, as lifelines to the hospitals at the disaster sites were severely damaged and the hospital staff were victims of the disaster themselves, we had thought that local

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medical personnel would be under a lot of stress, but we were impressed with how diligently they carried out their medical activities, even under these circumstances.

Activities in Fukushima Prefecture

Along with medical teams sent to Iwate Prefecture, Toho University medical teams were dispatched to Koriyama in Fukushima Prefecture on March 18–20, March 21–23, March 24–25, April 6–7, and April 9–10. Because of the accidents at the Fukushima Daiichi Nuclear Power Plant, many residents had been evacuated from the Hamadori region of Fukushima Prefecture to Koriyama. We loaded our cars with medical supplies and basic necessities from the Sakura Medical Center and, avoiding the roads affected by the disaster, reached Koriyama via the Tohoku Expressway. By this time, there was a serious shortage of gasoline, and all of the gasoline stands were crowded with cars waiting to refuel. I visited Koriyama myself, and at Big Palette Fukushima, which took in about 2,000 evacuees, there was a temporary medical clinic where three doctors, between five and eight nurses, one or two pharmacists, and two receptionists from Fukushima Prefecture were providing medical care. The doctors' main duties were examining patients in poor health due to colds and other illnesses, treating chronic diseases like hypertension and diabetes, and making their rounds throughout the evacuation facilities. In addition, the evacuation center was not cleaned regularly, and the large amounts of dust put the evacuees in danger of developing respiratory infections. With privacy nonexistent and a large number of people lying down, there were also concerns about people developing conditions such as vein thrombosis and depression.

Activities in Iwate Prefecture by the Medical Relief Teams at the Tokyo Medical Association's Disaster Base Hospitals and the Toho University Medical Association Teams

We also received a request from the Tokyo Medical Association, and from March 29 to June 1, we sent sixteen medical teams made up of doctors and nurses to Rikuzentakata in Iwate Prefecture. The medical teams were basically composed of two doctors and two nurses each, and the Toho University Medical Association asked the university's three hospitals for help in forming the teams.

I went out to Rikuzentakata myself from May 21 to 24 to assess the situation at the site and to conduct medical examinations. Plans for reconstruction there were still uncertain, and the areas hit by the tsunami were damaged beyond imagination. As for the health care system, the director of the Takata, Iwate Prefectural Hospital took over medical care for the whole city of Takata and supervised the medical teams who had come from all over the country. The Takata, Iwate Prefectural Hospital is a four-story building, but everything up to the ceiling of the third floor was ravaged by the tsunami, and patients who needed to be hospitalized were transferred to Ofunato Hospital. At first, the medical teams from Toho University helped provide medical care for residents who had been evacuated to Kojuen, situated in an elevated area of the city. There were few patients who needed acute care, so their main work was providing continuous therapy for adult-onset diseases such as hypertension and diabetes, chronic diseases, etc. There were also some patients who had been injured by nails or shards of glass when they were pulled out from the rubble and needed minor surgery. Not surprisingly, a flexible working knowledge was more needed than the expertise of a university hospital. From late April onward, we provided outpatient examinations, alongside medical teams from all over the country, in outpatient booths (between six and eight examination rooms) set up at the community center.

From April 21 to 25, we organized doctors, nurses, and office workers who had been sent to Rikuzentakata from multiple hospitals into "mental care teams." The teams' activities included mental health examinations of staff members, medical care at temporary medical clinics, counseling for patients referred to us by public health nurses, home visiting health care, outreach activities using leaflets, etc. The mental health care provided at the evacuation facilities included points such as "Prejudice toward mental illness remains deeply rooted," "Mental illness often goes untreated," and "Patients have dealt with the problem themselves by socially withdrawing." The significance and challenges of the "mental care team" activities stemmed from the fact

that, due to the different ways they had been affected by the disaster, the victims were hesitant to speak about their problems with each other. With the external intervention of a "mental care team," the psychological burden on the individual was decreased and patients were able to talk about their experiences; one downside, however, was that the medical teams alternated, so we were unable to provide continuous care.

Conclusion

The most important task of medical volunteers is to provide medical care that is needed, where it is needed. Towards this end, we will continue to provide timely medical assistance as appropriate, including "infection control measures" and "mental care." We also need to focus on the rehabilitation of the health care system. This will require the collection of accurate information and medical assistance that corresponds to what is needed at the moment.

Since the major earthquake struck the Tohoku region where medical care was already sparse, our focus from now on is securing temporary clinics that can provide regular medical services and full-time doctors who can perform clinical and hospital work.

We here conclude our outline of some of the medical activities Toho University provided following the devastating earthquake, with our sincere hopes for the earliest possible recovery of the areas decimated by the disaster.