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The Turkish Earthquake: Adapting a Relevant Medical Relief Response Mode

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Brief Report

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Abstract

On February 6, 2023, a Mw 7.8 earthquake struck southern and central Turkey and northern and western Syria. Over 50 000 people were confirmed dead, and nearly 130 000 were injured. The Turkish government was leading the response there through coordination by the Disaster and Emergency Management Agency (AFAD). A massive search and rescue operation continued, and humanitarian partners were rapidly ramping up efforts to provide life-saving assistance. Over 53 000 Turkish emergency workers were deployed to the regions affected by the earthquakes. More than 100 nations and international organizations mounted a massive, unprecedented response. Among them, the State of Israel dispatched 2 missions, with the first on the ground the same day as the earthquake. Under guidance of the local health authorities, it was determined that the most effective approach would be to support an existing medical facility rather than establishing a standalone field operation. Teams responding to disaster zones should arrive only after a formal request and deploy after full coordination with the local country. The devastated country understands best what is really needed. Deploying in full collaboration has an advantage of better cultural understanding and long-term effect in restoring the local needs.

Kahramanmaraş Province, Turkey has a population 1.17 million and a proud tradition of producing dondurma, a unique, thick ice cream that can be eaten with a knife and fork. At the direction of the Turkish government, our team of 220 arrived in Kahramanmaraş on February 8, 2023, 2 days after a 7.8-magnitude earthquake that rocked southern and central Turkey and northern and western Syria shattered the region. Several hours later, a second, 7.7-quake hit Kahramanmaraş Province. There were over 2100 aftershocks.

As of this writing, registered Turkish deaths are well over 40 000, with injuries of 108 000, while in Syria, there are more than 6000 deaths and 14 500 injuries.[1] It is estimated that at least 13.5 million people and 4 million buildings have been affected. This calamity resulted in wide-scale interruptions in the provision of electricity and running water, with cut-off access to or severe hampering of operation of roads, airports, railway lines, and cargo ports. The Turkey-Syria earthquake is the deadliest since 2010's Haiti quake.[2] This paper aims to describe the unique experience of the Israeli delegation aiding the Turkish people.

Within hours of the disaster, Turkey issued an urgent appeal for international aid. More than 100 nations and international organizations mounted a massive, unprecedented response. Following the Turkish Disaster and Emergency Management Authority (AFAD) request, the State of Israel dispatched 2 missions, the first arriving the same day as the earthquake. This mission included a search-and-rescue delegation and an advance team that worked with local medical and emergency management authorities to map out the most urgent needs. The second mission, a mobile field hospital, arrived 2 days later. Seventeen C-130 cargo planes transported our Israeli medical team into Kahramanmaraş – 140 medical professionals, 80 logistic personnel, and 110 tons of medical equipment. Both missions were held according to The World Health Organization (WHO) Type 3 Emergency Medical Team (EMT)[3] and the SPHERE standards[4] to prevent and reduce excess mortality and morbidity standards.

The scene we encountered was bleak. More than 1000 destroyed structures and nearly 400 000 suddenly homeless people in immediate need of shelter and support. A mass grave within the city will eventually serve as the burial ground for 10 000 or more victims.[5] Meeting medical response demands in such an environment requires quick and comprehensive decision-making. Accordingly, even before we boarded the flight to Turkey, on-site assessments had presented us with 3 working options:

1. Deploy a self-sufficient, standalone, tent-based EMT similar to the one used in Haiti.
2. Support a local medical facility by deploying our EMT as an add-on component.[6]

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3. Provide professional medical personnel to augment staffing at an existing local medical facility.

Upon arriving on-site, we learned that the most critically injured individuals had already been evacuated to areas in the northern part of the country, which the earthquake had not directly impacted. Nevertheless, Kahramanmaraş Province faced significant challenges due to the destruction of several hospitals and a massive shortage of medical personnel. Consequently, local citizens had limited access to appropriate emergency medical services. We prioritized our immediate response to the small number of severely wounded individuals who had not yet been evacuated and those still trapped beneath the rubble. Additionally, we aimed to provide treatment to locals suffering from chronic medical conditions that could worsen due to the lack of medication following the destruction of their homes. According to the guidance of AFAD and the Turkish government,[7] it was determined that the most effective approach would be to support an existing medical facility rather than establish a standalone EMT.

Getting to Work

Wednesday evening, February 8. Necip Fazıl City Hospital (250 beds, ER services, 5 ORs, a laboratory, and imaging capabilities - CT scan and MRI). We found a mostly deserted facility with limited emergency services outside the main building.[8] Our engineers conducted a structural inspection and assessed the hospital's condition to be safe for occupancy.

As the earthquake took place in the middle of the night, many hospital employees were at home. Many died or were severely injured, while others were coping with the loss or injury of family members. A sizable number of staff were left homeless. With the local medical community clearly needing adequate time to recover before it could return to necessary levels of health care responsiveness, we made it our mission to restore healthy medical operations quickly.

We thoroughly cleaned the building and deployed our equipment as needed during our first night there. By morning we resumed the ER's medical activity and provided care for 6 ICU beds and a 50-bed hospitalization area. Over the next several days, in tandem with local medical teams, we treated over 500 patients; 16 had been rescued after being buried for more than 100 hours.

Our efforts were supported by a steady stream of local Turkish volunteers who traveled from other parts of the country and hospital personnel who were gradually returning to work. We provided assistance, needed or requested, while the local staff was responsible for oversight and direction, thus working closely throughout our deployment.

Daily meetings between the hospital's management and leaders of our EMT concentrated on implementing optimal workflows and promoting collaboration among our teams. Joint teams conducted patient rounds and case deliberations. Equally, while clear lines of responsibility were established and well understood, all relevant decisions were made jointly with each team bringing added value. The diverse cultures and differing professional experiences and perspectives presented a few challenges, but these were managed for the emergency moment and the greater good by placing egos aside and respecting individual talents and approaches.

Fundamentals

Among the essential tenets of disaster medical response is ensuring that deployment treatment levels are never inferior to the local standard of care—for example, a woman presented in labor on our third day. The Israeli OBGYN determined that delivery was still several hours away. Our team, which included 2 gynecologists and 2 midwives, was fully equipped and trained for birthing. However, we were informed by the hospital's management that they do not generally manage such deliveries and that the patient should be transferred to another hospital nearby. The decision to do so was motivated by our understanding that we needed to respect local culture and the hospital's operational norms.

This speaks to an imperative in international disaster assistance: understanding the balance between humanitarianism and respect for local authority in treating local patients and native culture. A dramatic and tragic event occurred, and we could not look away or stand on the sidelines and hope for the best. We had help to give, and we gave it willingly and wholeheartedly. Nevertheless, we are outsiders, and the long-term burdens of clean-up, healing, rebuilding, community restoration, and commemoration of loss rest with local citizens. International aid workers must never see themselves as saviors. We are partners, colleagues, compatriots, and fellow citizens doing what is right. Moreover, doing what is right obliges us to collaborate, cooperate, be sensitive and empathetic, and see the greater whole.

While our primary purpose in international aid missions is to provide an immediate, urgent response to victims of natural calamities, in this instance, we believed restoring a sense of normalcy to the crippled local health care system was no less critical. The strategic decision to invest our efforts within an existing facility helped support the local community. Furthermore, working inside a secure building with a functional engineering infrastructure is certainly superior to a tent environment. Residents were heartened and given some confidence by seeing the hospital facility they knew and trusted remain a center of care in a time of painful loss, uncertainty, and chaos.

Our impact was in direct patient care, helping to initiate the logistics of a complex recovery process, pursuing mutually fruitful discussions in which both sides benefitted from the experience, and leaving behind much-needed medical equipment. We are proud of the life-affirming, community-restoration work we were able to conduct. Our success, in partnership with our Turkish counterparts, can best be measured by the fact that we will leave Turkey with the sure knowledge that Necip Fazıl City Hospital has been restored and better readied to address the post-earthquake burdens that lie ahead.

While the lessons of this experience are many, it is well worth remembering that there is no specific formula for how humanitarian assistance can or should be designed. Every disaster is different in scale and magnitude, with its own number of people killed or injured, and in how well local medical institutions cope with the aftermath. A responder's responsibility is to be flexible to each situation on the ground and provide the support needed in any given place and at any given time – which, in many cases, may be quite different from what was anticipated prior to arrival.

In the wake of this earthquake, the Turkish nation and its people acted quickly and responsibly, primarily by effectively evacuating the most seriously injured patients out of the disaster zone. As a result, our relief response turned out to be very different from previous missions. On a practical level, our contribution was substantial, but the morale-boosting effect of our efforts should not be underestimated. We arrived and confronted devastated people dealing with unimaginable pain, emotional suffering, disorientation, and loss of life. We departed with full faith that our approach to treatment and care will be instrumental in allowing our Turkish friends and colleagues to move forward along their long road to recovery.

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