

Haiti Medical Assistance— A Life-Changing Experience

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On January 12, 2010, at 4:30 p.m. EST, a 7.1 magnitude earthquake struck Haiti, centered under the capital city, Port-Au-Prince. This is one of the poorest countries in our hemisphere, with approximately nine million inhabitants. The damage was horrendous. Dr. Tom Cromwell has covered the history and social condition of Haiti in his article that accompanies mine. One reason for this article is to help folks who may have to participate in these missions in the future. None of us was totally prepared for the situation, despite our training, including having detailed lists of required equipment.

On January 13 at 5 p.m., I was given seven hours notice to be on a midnight flight to Atlanta as a member of DMAT CA-6 (Disaster Medical Assistance Team California 6). This is a federal medical team set up to deploy a 35-40-person, self-sufficient team to render “austere” medical care in cases of disaster situations. It usually consists of 35 physicians, physician assistants, advanced nurse practitioners, paramedics, and logistic and administrative personnel. DMATs are designed to be deployed for two weeks, at which time they are relieved by another team. We are federal uniformed employees under the DHHS (Department of Health and Human Services). In the case of the Haiti earthquake disaster, five DMATs were deployed within three days of the earthquake.

I quickly re-packed my gear—consisting of two bags, one weighing 50 pounds, and a backpack weighing 25 pounds. We are supposed to have everything in our backpack to subsist for 24 hours until our main gear bag arrives. This includes a uniform, personal hygiene gear, rain gear, flashlight, food and water. Our main bag has a sleeping bag and inflatable mattress pad, two more uniforms, underwear, more personal hygiene gear, more food and water, flashlight, et cetera.

After one night in Atlanta, we boarded a charter jet to Haiti. We arrived in the late afternoon in Haiti on January 15 (three days after the earthquake) at the overwhelmed airport. It was crowded by refugees seeking to leave the country and assistance teams seeking to enter the country. We had been combined with one other DMAT, NJ-1. We now totaled around 80 people.

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The airport was very small, with a tarmac for only around 15 airplanes to park. The terminal building was structurally damaged and deemed unsafe for occupancy, so everyone simply stood on the tarmac with the noise of jet engines, waiting for either a plane flight out or a ride into the city. Toilet facilities consisted of a cardboard box with a plastic bag liner. In our case, we sat on the tarmac for around six hours until four large dump trucks pulled up in front of our area. Then, we all threw our gear into the back of the dump trucks, climbed aboard, and were driven to the U.S. Embassy. It was dark, so we could only see numerous groups of people with cooking fires burning along the streets.

Upon arriving at the embassy, we learned that our equipment cache (team support equipment including cots, medical equipment, tents, drugs, etc.) had not arrived with us and so, for the moment, we had to make do with what we carried on our backs. It was four days until our equipment arrived, local transportation and security were arranged, and an appropriate site from which to operate was determined. This delay was extremely frustrating.

Unfortunately, the arrival of hundreds of relief workers, including DMATs, a surgical team (IMSuRT, or International Medical Surgical Response Team), and several FEMA Urban Search and Rescue (US&R) teams overwhelmed the embassy facilities, and we ended up with one working male shower per 300 people and one working male bathroom. The women's facilities were in only slightly better shape.

The difference between DMAT and IMSuRT teams are that DMATs establish general austere medical and minor surgical services, and IMSuRTs enhance a DMAT with operating room capabilities with primitive anesthesia capabilities—well described by Dr. Tom Cromwell who worked with the IMSuRT.

So, we ended up sleeping on the ground for several nights with our mats and sleeping bags. Haiti is a tropical island, and temperatures and humidity were excessive. Also, malaria is endemic and critters liked very much to crawl onto something warm. For some reason, 2-inch long millipedes took a liking to me and repeatedly woke me up by crawling on exposed skin. We did not have access to the mosquito nets in our equipment cache, so we relied on bug repellent. All of us were given malaria prophylaxis for the trip and a month afterwards. We were also immunized with typhoid vaccine. We experienced aftershocks daily, with a 6.1 shock being the largest.

Meals were MREs (military rations, or Meals Ready To Eat) and bottled water. There was no running water, and all structures were uninhabitable because of damage. We discovered that only one MRE out of six had instant coffee in it.

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Those of us who were coffee drinkers and with caffeine withdrawal headaches hunted these coffee packets down. My favorite mixture was to dump two or three instant coffee packets, one creamer packet and one sugar packet into a partially empty bottle of cold water. Shake well and drink, and your caffeine headache went away. The new Starbucks Via instant coffee packets were like gold for those who had thought to bring them.

After the four-day delay, we were loaded onto trucks from the 82nd Airborne Division and driven 10 miles to our new base. This was located on a hill overlooking the city, on a golf course in the nearby town of Petionville. We were located with an 82nd Airborne element (1-73rd) of about 300 soldiers that was assigned to food and water distribution. We slept on a tennis court. There were no showers or latrines except for open-air bucket toilets. At least the women in our group got a small tent with toilets for privacy. One's sense of propriety disappears quickly in these situations. We attempted to keep clean using baby wipes in the mid-90 degree temperatures (actually hotter inside our medical treatment tents.) Without belaboring the point, my first shower was in Atlanta on return to the U.S. six days later.

A word about our friends, the U.S. Army: We always go into situations that can be somewhat dangerous, from a security perspective. On this deployment, we heard gunshots daily, and treated some victims of violence. Our "force protection" was the U.S. Army unit with which we were co-located. These people were extremely competent, very well-armed, polite, and all-in-all nice to have around, considering the 50,000 refugees nearby. The Haitians respect the military, especially because they set up a major distribution point for food and water at our location. We had long, well-controlled lines of refugees lining up to get some of the meager supplies that the Army was handing out.

We set up our two medical treatment tents and tried to engineer a reasonable patient flow with appropriate supplies available. Then we had an interesting incident that set us back several hours. A Navy CH-53 Sea Stallion heavy-lift helicopter from the USS Carl Vinson landed at our LZ (landing zone). These helicopters can generate well over 120 knots of downdraft (rotor wash). It came over our medical tents and supply dump at around 30 feet altitude. I was moving boxes into the tent from our supply dump. I heard the helicopter and immediately was blown 10 feet through the air onto the ground. Then a series of heavy supply boxes, blown into the air by the downdraft fell on me. I ended up with broken ribs on the left, a minor concussion, and cuts and bruises. In total, we had eight injuries, none requiring Medevac. Also, two large trees about 20 yards away from where I was standing were broken in half. And, even worse, the roof of our just constructed medical tent was completely blown

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off and all the supplies we had so carefully arranged were scrambled. We all pitched in and got things straightened out.

Then we started to see patients. I acted as an ER doc (granted, not fully trained), doing a lot of debridements of grossly-infected wounds. Unfortunately, many of my patients had their crush injuries and lacerations sutured shut by someone prior to seeing us. My previous experience as a Marine Corps Flight Surgeon in Vietnam had taught me that dirty combat wounds rarely should be sutured. In every case, the wounds I saw in Haiti required removal of the sutures, debridement of non-viable tissue, irrigation, and dressing. In severe cases, we asked the patient to return for follow-up. Usually they did so.

We saved every piece of “disposable equipment,” such as scalpels, scissors, forceps, syringes, etc., for washing and reuse (remember that Haiti is a high-risk AIDS population). Our operating conditions were noisy, very hot (my gloves would accumulate several ounces of sweat), and dusty due to the constant helicopters landing nearby.

One remarkable case: I took care of a patient with a large fluctuant (4 X 4 inch) abscessed scalp wound. The original injury, two lacerations, was sutured shut. We removed the sutures and opened the lacerations, which gushed pus. We then made two more incisions in the abscess to aid drainage. Then, as we probed the wound with a hemostat, we encountered something soft. We pulled on it and out came a six inch piece of gauze. Someone had packed this wound with gauze and sutured it shut; pretty stupid care. We irrigated the wound with a peroxide solution and dressed it (all without any anesthesia). After a day on oral antibiotics, I saw the patient again; the wound was no longer fluctuant and appeared to be draining well. I hope he did well.

A word about anesthesia in this situation: I read a quote from the *Wall Street Journal* from a trauma surgeon in Haiti. He said, “We were practicing Civil War surgery.” What he meant was that we did not have the ability to provide decent anesthesia other than local infiltration and an occasional extremity block, and amputations were the major treatment for many of the wounds we saw. In most cases, I debrided without any anesthesia; the patients were remarkably stoic in most cases. We also had no x-ray or ultrasound equipment.

If a patient had an open extremity fracture or crush injury, the correct treatment was amputation prior to gangrene and sepsis setting in. We could not do amputations, so we simply dressed and splinted these wounds, informing the patient to return for follow-up when we could transport them to a surgical site. Many did not return.

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One happy note: we delivered several healthy babies.

We had extremely limited ability to Medevac patients to a higher level of care. Every surgically capable facility was maxed out with patients within two days of opening. This included the hospital ship Comfort (650 beds), the Israeli field hospital (200 beds), and the USS Carl Vinson (100 beds). For most days, we were told that no Medevacs were possible. I personally clinically diagnosed two pelvic fractures in young females and could do nothing for them except to fashion pelvic splints and explain through interpreters how to use them.

And some personal notes:

- I wondered why I had so much left-sided lower rib cage pain after the accident; the question was answered on return home after x-rays and exam. Fractured ribs hurt. Vicodin is a wonderful drug until you get hooked on it. I think I had withdrawal symptoms several weeks later.
- Also, showing very poor judgment, I went to Haiti three weeks into a case of shingles (right side, cervical 2, 3, and 4). I did take anti-virals and steroids and do not think they did any good. I am now at eight weeks and can say that shingles is a very debilitating and demoralizing disease. The constant itching and pain can drive you crazy. If you have not had the shingles vaccine and are over 60, run to your doctor to get it.

All in all, I am glad I went. I find myself waking up at night thinking about this experience; I have never been a real believer in post traumatic stress disorder, but there actually may be something to it. I have frustration and guilt for not having been able to do more for these poor people, who in every case were polite, well dressed, clean, and very stoic. I must thank my fellow DMAT members and the Army who worked until they dropped. We all acted as a team, supporting each other through this experience.

According to the *Wall Street Journal*, "Haiti's recent earthquake was the most destructive natural disaster that a single country has experienced ... It killed an estimated 200,000 to 250,000 people, claiming more lives as a percentage of a country's population than any recorded disaster." It probably injured another 300,000 people. Our DMAT facility treated over 1,200 patients in four days.

We did the best we could.