

Haiti, 2010

WHY I WENT

Upon first hearing the news of the earthquake in Port-Au-Prince on NPR, I was aware that the destruction from this natural disaster hitting the heart of the most populous city in Haiti would be of an immense scale. Haiti, already being the poorest country in our hemisphere was a setup for a complete medical nightmare. With the news of the aftershocks and exponentially growing numbers of casualties, word also began to spread of an unprecedented number of orthopedic injuries. Though the death toll which eventually climbed as high as perhaps 250,000 is beyond imagination, it was the plight of the injured survivors that caught my attention. I heard the calls for orthopedic surgeons as a direct invitation to go to Haiti. Within a day of the initial quake, I began to scour the Internet for a way to volunteer in the relief effort. As I filled out applications on-line for various non-governmental organizations sponsoring medical disaster relief programs, I realized that my cumulative life experience had actually been preparing me for just such a task. I have been treating orthopedic injuries in hospital emergency rooms continuously for the past 28 years. Through my travel experience I have become comfortable moving about in impoverished third world countries. I pride myself in being creative and innovative in situations with very limited resources. Unlike many younger orthopedic surgeons I was trained in an era when orthopedic surgeons were not as dependent on high tech imaging or modern surgical devices to diagnose and treat orthopedic injuries. Additionally, I speak French. Moved by the graphic images that were broadcast on television, I became determined to go to Haiti.

LEAVING

Unfortunately, no one answered my applications, e-mails and voicemail messages. The days passed following the earthquake. I continued to pursue any possible leads. Organizations such as Partners in Health appeared to be interested in complete surgical teams willing to volunteer. I contacted some surgical colleagues, anesthesiologists, nurse anesthetists, and nurses in an attempt to form a complete surgical team. Unfortunately, I was unable to coordinate any type of workable group. My friend, Jennifer Greenwood, a nurse anesthetist knew of another nurse anesthetist who had arranged transportation to Haiti. I was directed to a web site concerning her transportation with an NGO called Airline Ambassadors International (AAI.) I received an immediate response to an e-mail to Jesse Sullivan at AAI. I was referred to Joseph Mutti, also at AAI, who could list me on a flight manifest. I had never heard of this organization, so I asked my office manager, Beth, to search the Internet to ascertain its legitimacy. I almost missed the return e-mail from Joseph Mutti and only found it the day after it was sent... in my spam box. That was on Thursday, Jan. 28, 2010. I was in my Buffalo Grove office seeing patients and indeed was on trauma call at Advocate Condell Medical Center for that night. The day old e-mail which I had almost missed in my spam box offered me a seat on a direct flight from Chicago to Port-Au-Prince, two days later on Jan. 30, 2010. When I finally responded to the offer around 11am Thursday, I was told that the Saturday flight was full and my only option would be to leave early in the morning on Friday, Jan. 29, 2010. I had to be at O'Hare at 2:30 in the morning. This gave me approximately 13 hours to commit myself, notify Laurie, my wife that I had an opportunity to go, reschedule my patients for the following week, arrange coverage for my call that night and during the following week, and make all the necessary preparations for the trip. All of this crossed my mind, as well as the fact that no return transportation could be guaranteed or even tentatively arranged in advance. I also knew that I had no specific destination in Haiti and would have to fend for myself while finding a way to be helpful. I discussed the offer with Mary Senf, my office assistant of the past 21 years. She and everyone else who was with me in the office encouraged me to go. My own thought process was very simple: I reasoned that if I declined this offer, I would regret that decision for the rest of my life. I had to go. It was an emotional moment for me and I almost began to cry. Immediately, I shifted into high gear and my preparation began in earnest. I contacted my wife who was normally unreachable in her office, by finding a friend in another office in her building who could slip a note under her door. I spoke to my practice partners who agreed to cover my call. I quickly made a list of what I knew I would have to do... and eventually did during the remainder of that afternoon. I got a

tetanus shot and verified that as I was current on all of my other immunizations. I phoned a family friend and physician, Madeleine Neems, who prescribed me CIPRO for potential infections, as well as MALARONE as malaria prophylaxis. She also offered to loan me her backpack for my travels. I procured some surgical masks, gloves, Gigli saws and other small things from Advocate Condell Medical Center. I bought myself a small tent, sleeping pad and mosquito net. I brought sunblock, mosquito repellent and protein bars. I dug out a water filtration bottle, sleeping sheet, knife, flashlights, toilet paper, duct tape, sun hat, and all of the appropriate clothing. Laurie helped me with all of it. Dressed in my comfortable travel clothes, money belt and Timberland shoes, I got a ride to O'Hare at 2 a.m. from Laura Skolnik, a good family friend. It was a frigid night and O'Hare Airport was quite asleep. The doors at the United Airlines terminal were locked and I had to test several before I eventually found a way in. The only others waiting in the terminal were clearly volunteers in the relief effort awaiting the same flight. I met a nurse and an obstetrician headed to the general hospital in Port-au-Prince, a team of Christian missionaries from a disaster recovery organization who had gathered from all points around the country at O'Hare, and a team of firefighter paramedics from Denver, Colorado. The Airline Ambassadors International flight was a charter, United Airlines, Boeing 757 direct to Port-Au-Prince. It was emphasized that we must depart on time in order not to miss our strictly reserved landing slot at the busy airport in Port-Au-Prince. During the flight I networked with others aboard the plane, contemplating what I might do when I arrived. I napped and listened to air traffic control over the headsets. We were given some bottled water and donated sandwiches which I stowed in my pack. I had no idea when or where I would get my next meal.

ARRIVAL

After a beautiful sunrise, we passed over the Caribbean Sea along with the turquoise waters of the Southern Bahamas and the Turk & Caicos Islands. As we began our descent over the north coast of Haiti with Cap Haitien in plain view, for the first time it hit me that I was quite alone, embarking on an unplanned journey, yet with a clear goal, to help the people of Haiti in any way I could. Instead of concentrating on all the unknowns including where I would stay, safety issues, food, drink, and my own health, I peered out the window to take in the passing scene. I had previously been to the Dominican Republic which shares the island of Hispaniola with Haiti. The Dominican Republic is lush and fertile. Haiti, which is a word originating from a Taino Indian term meaning land of mountains, is indeed mountainous but also almost totally devoid of vegetation. The trees had been recklessly deforested over 200 years ago and have never been replaced. From the air, gray and brown cliffs and valleys appeared furrowed by years of uncontrolled erosion. Throughout most of the island, there was no sign of any life and only very few scattered villages were evident. As we approached Port-Au-Prince we circled over the bay awaiting our landing slot behind a C-130 which was clearly visible out my window. An aircraft carrier, the hospital ship, USNS Comfort, and two other Naval vessels were also stationed offshore. Even before landing at the Port-Au-Prince Airport, Toussaint L'Ouverture, named after the leader of a Haitian slave rebellion 200 years ago, signs of the earthquake became visible. Flattened buildings, dust rising from the city, encampments of flimsy tents, and people in the streets were already apparent, during our final approach. On the ramp at the airport, we parked alongside primarily military transports, large C-17's, C-130's, as well as, a few smaller private aircraft. Getting off the plane the sound of helicopters and the screaming turbo fans of C-17's, maneuvering backwards from their parking spaces filled the air. There was a smell of jet fuel fumes and an odd smell of rotting garbage on the hot wind as I stepped down the stairs. I quickly found my backpack as it was pulled from the belly of the plane. I had hoped to try to check in with the U.S. State Dept. but instead I immediately hopped on a truck with the firefighter paramedics from Denver, headed to a house which was rented by AAI in Port-Au-Prince.

The first day, I worked with the paramedics organizing equipment containers supplied by US AID. The house we were in had some earthquake damage and was flanked by two houses which had collapsed completely. An edgy Haitian man named Chris acted as security guard for the house. He walked around the grounds carrying an old rifle, usually with his index finger poised right on the trigger. Two scrappy mutts would tramp around with him, occasionally

barking. Chris actually fired the gun a few hours later, during the night. I never learned if any intruder had been shot. Hopefully, Chris had simply chased them off. Even though my impression was that leaving the house might prove dangerous, I was nevertheless filled with curiosity and recruited a 12-year-old Haitian boy to take me for a walk through the neighborhood. This boy, like almost all others in Port-Au-Prince had been living beneath a bed sheet stretched between sticks as a makeshift tent. Though his house had only been partially damaged, he only dared run inside momentarily to fetch some of his belongings. Houses of his neighbor's on both sides were completely flattened and all of his neighbors had been killed. His family, he told me had survived. He took us down a street where I saw some American soldiers in a Humvee and an Italian news crew videotaping a street scene. Tarps, multicolored bedsheets and other rags were loosely suspended making shelters that did little more than keep out a bit of the intense sun. These clearly would be useless for rain, wind or anything else. People were huddled beneath their shelters, some with small piles of broken furniture piled up as cooking fires and some with small stashes of retrieved artifacts stacked in the corners of their tent space. People uniformly gazed at me with a curious but vacant expression, still numbed by the shock of the earthquake and almost devoid of hope... no water, no sanitation, a few scrawny wandering chickens and the occasional stray dogs digging through the rubble to find a meal. That evening I had my first introduction to the ubiquitous U.S. military rations known as meals ready to eat (MRE's.) Some of the well stocked Denver firefighters offered me one. They're actually pretty amazing, complete hot meals in plastic packs.

CENTRE HOSPITALIER DU SACRÉ-COEUR/CDTI

The next day, after pursuing several leads as to where I may be of most assistance, I was driven to Centre Hospitalier du Sacré-Coeur/CDTI, a private hospital in Port-Au-Prince. This hospital which usually caters to private patients had opened its doors to all comers, suspending its operation as a private institution following the earthquake. As most of the employees had taken leave, the hospital was entirely managed and staffed by temporary international volunteer workers, such as myself, who were passing through. As I arrived at CDTI, I was introduced to Justine Crowley, an orthopedic trauma surgeon from Colorado Springs who rather than acting as a surgeon, served as the director of the entire hospital. I was immediately impressed by her handle on the pulse of what was happening as well as her ability to organize workers and resources which were in a constant state of flux. Fortunately, the operating room and a limited x-ray suite were still functional. However, patient wards in the hospital were all closed, having been deemed unsafe due to earthquake damage. Unfortunately, this meant that all inpatients had to stay in makeshift tents on the grounds of the hospital outside the front entrance. Each tent housed 8 patients on small cots or simple mats on the ground. It was hot and only a few of the patients were fortunate enough to have relatives and friends who could stand by to try to fan away the flies attracted to the blood and open wounds. Much to my surprise, I also immediately learned that the hospital was divided into an American sector and a French sector. This apparently had originated shortly after the earthquake when a team of American surgeons had clashed with the highly organized and disciplined group of French fireman, nurses and doctors who were evidently quite set in their ways. In the two weeks since the earthquake, those Americans had gone home and the reasons for the rift between the Americans and French appeared to be to be purely historic. During my time at CDTI, in the six days I was there, I made many efforts to improve the relationship and merge the operations of the French and the Americans. By the end of my week, this merger became increasingly important, as the departure of the French contingent was anticipated in mid-February. The French outpatient clinic and debridement tent operations would have to be taken over eventually by Americans as hundreds of patients returned for follow-up.

By the end of the week we did have excellent cooperation between a Tunisian orthopedic surgeon who was part of the French contingent, and the American orthopedic surgeons. I saw to it that the French and American inpatient tents were less segregated, with American nurses and doctors helping to make rounds and care for the patients in what previously were tents in

the French sector. Meanwhile, the French plastic surgeons were being consulted for patients in the American tents. The operating room was always an amazing picture of collaboration, cooperation, patience, and innovation throughout the week. An impressive gathering of individuals who all came with the intention to serve and help in any way possible, rather than with the intention to restrict their work in their respective areas of expertise, permitted very effective operation. Cassi Howard, a neonatal intensive care unit nurse ran the C-arm fluoroscopy machine, apparently the only one in Port-Au-Prince, despite never having done this before. She also acted as a surgical circulating nurse which was a daunting task due to the hodgepodge of disorganized surgical supplies which were both incomplete and hard to locate. She did a phenomenal job and managed to remain cheerful throughout. Jenny Jenkins, another nurse spent almost the entire time sorting and organizing surgical supplies as they arrived from various donor sources. Though she was not in the center of patient care while doing this, her job was as critical and instrumental as anyone else's in the functioning of the operating room.. Peggy, an orthopedic surgical nurse from the United States, was the operating room coordinator, charge nurse, scrub nurse, scheduler, and general operating room resource specialist. When I arrived there were two other orthopedic surgeons present who had already been at CDTI for over a day. John Fernandez and Geoff Van Thiel were part of the 20 person team of medical volunteers from Rush Medical Center in Chicago. A genuine atmosphere of collaboration and consultation concerning the optimal treatment for patients was the rule. A team of great anesthesiologists including Angela & Rob were also at CDTI as members of the Rush team. It is interesting that our working team materialized without any prior recruitment or any advanced global planning. It was even more amazing that the entire group meshed together as an effective functional team dealing with meager supplies, horrendous injuries, and questionable patient follow-up. A local orthopedic surgeon, Dr. Bernard Nau had a thriving private practice of orthopedics at this hospital prior to the earthquake. His practice was entirely lost in a matter of seconds, his hospital in disarray and indeed taken over by foreign workers rotating in and out, changing each day. Dr. Nau had been present after the earthquake and was very active in the initial response having performed many surgeries for external fixation as well as amputations. During my week at CDTI, Dr. Nau would appear for brief periods almost every day but was performing very few cases. He was very gracious in permitting this tremendous invasion into his personal space as just another part of the disaster. Dr. Nau was beginning to think about his own future and had started to negotiate with the hospital owners to go on salary while assisting the hospital in obtaining outside funding to continue its relief operation as a public hospital for the near future.

Practicing medicine at CDTI was the most pure and meaningful patient care I have ever experienced. Without being spoken, it was apparent that every patient who presented to the hospital had a very significant medical problem. Men, women and children waited patiently in line to be triaged and treated. Record keeping was simple. Each patient kept a single page dossier with their name, diagnosis, the date and description of treatments performed and the intended plan for the next encounter. If the patients had an x-ray it was typically a single view near their initial presentation. Postoperative x-rays and post-treatment x-rays were generally foregone. The information on the dossier was also written in black marker on the dressings, splints or casts of the patient. In this way, anyone treating the patient could easily know the diagnosis and the treatment plan for any individual. During the weeks before my arrival, the most common procedure performed was an amputation. Based on estimates, some 2000 amputations were performed in Port-Au-Prince, though this figure is only an estimate. During my time at CDTI, very few amputations were performed and the majority of cases involved external fixation of open fractures, wound debridement and coverage procedures, such as muscle rotation flaps or skin grafting. As the week went on, we began to perform some fracture internal fixation and other treatments of closed fractures which had been neglected up until this time. Our resources and supplies were quite limited and sometimes we had useless sets of instruments. Someone had donated a complete, albeit archaic, set for femoral nailing. However, we did not have the intramedullary reamers necessary to perform the procedure and were therefore unable to use the set at all. There was also no blood available for transfusion. Patients with hip fractures had no option for treatment, as we had no proper internal fixation for hip fractures. Traction was not an option either, for there were no inpatient beds whatsoever. Internal fixation could be performed while the supplies lasted; however, we ran

out of screws of an appropriate size to plate forearm fractures. We used a bolt cutter which was donated to cut some longer screws down to the appropriate size. That way we were able to perform a couple of more cases before we ran out of plates as well. External fixation was also often a question of mix and match. We had various parts of many types of external fixators. No two external fixators were alike. We used what we had and it actually worked fairly well. Irrigation fluid was in short supply. An open fracture which we would irrigate with 9 liters of fluid at home would perhaps be irrigated with 1-2 liters of fluid in order to conserve the resources. During much of the week, I was able to work with an excellent orthopedic chief resident, Geoff Van Thiel from Rush, as well as with a second year resident from Ft. Wayne, Indiana named Kartheek Reddy. The experience in the operating room, dealing with the late crush injuries, open fractures, osteomyelitis, and difficult clinical decisions proved an incredible learning experience for all of us. There were heart wrenching situations of having to turn patients away that could not be helped, knowing they would simply go back on the streets where they were living malnourished, amid garbage and raw sewage. There were orphans and children with crushed limbs who had stories of returning into collapsed buildings trying unsuccessfully to save their siblings and parents.

One story I heard from another worker concerned a woman who came in with a terrible injury in the midpalm of her hand. The story was that at the time of the earthquake a shaft of metal had impaled her hand, shooting up through the back of her hand causing the injury. The horrible part of the story was that at the time, she was carrying her infant in her hand. The metal was thrust through her infant who died instantly. We worked hard to treat an open fracture wound in an 11-year-old boy who had already lost his other leg, only to have to recommend that he undergo a second amputation. These are among the countless horrors of this catastrophe. One woman died in our post-op tent two days following surgery for an open fracture. She complained of difficulty swallowing, talking and ultimately breathing. She was dying of tetanus, a disease few of us in the United States have ever seen. Other things which were commonly treated included injuries which were poorly treated during the initial panic that followed the earthquake. Apparently many surgeries were performed without the assistance of x-rays and perhaps some of these orthopedic surgeries were performed by those who had no orthopedic expertise. Nonetheless, having to redo things which were improperly done did take time away from treating others who were being seen for the first time, even three weeks after the quake. Examples include the case of an external fixator which should have spanned a femoral shaft fracture but instead the pins and bar supporting the bone had all been placed on only one side of the fracture. We saw this more than once. Pins of an external fixator directed into the fracture site rather than into the bone, a cast for a femoral shaft fracture which extended from the ankle to the knee and other similarly misguided treatments were common. I cannot second guess the valiant attempts which the initial responders made while performing damage control surgery in a completely panicked situation, however there are surely lessons to be learned for future disasters. Work at CDTI was emotionally intense, incredibly rewarding, heartbreaking and at times overwhelming all at once.

THERE IS NO "THEY"

I am often asked if "they checked credentials" or if "they provided food, water, or security." The simple answer is that after my passport was stamped upon arrival in Haiti, there was no visible authority or controlling agency concerned with my paperwork or my daily activities. It seems almost a miracle that dedicated individuals arrived where they were needed to do a job, and simply went about their business with great efficiency. An imposter may have posed as a surgeon, though his or her work would have been observed and stopped by co-worker volunteers had he or she appeared not to be performing good work. If good work were done, credentials actually made no difference. Survival of the volunteers was their own responsibility. Everyone I saw did this responsibly, without imposing upon the resources so desperately needed by the Haitians themselves.

QUISQUEYA CHRISTIAN SCHOOL

One hopeful spot, an oasis among the devastation, was Quisqueya Christian School, a school based on Christian beliefs and education which acted as a headquarters for medical relief workers in Port-Au-Prince. The management of this school permitted housing of over 150 medical relief workers in tents on their grounds. Additionally, following the earthquake, a small U. S. Army base was stationed on their grounds as well. The base was fairly quiet and contained a small core of soldiers who worked on a classified mission apparently pertaining to communications. The school directors had also set up a crisis control center for the medical relief of Haiti. They had the infrastructure and the knowledge to establish communication with the clinics which were being temporarily set up, the hospitals which existed, and all of the medical bases which were known to be functional throughout Haiti following the earthquake. Those leaders at Quisqueya School orchestrated the needs and the available resources while sensing the pulse of the current problems at each of these medical contact points. Every evening at 8pm a meeting was held at the Quisqueya School drawing members from as many relief organizations, medical groups and clinics as possible, as well representing provider groups, in order to pool and coordinate the complex medical relief effort. If one organization knew of a shipment of certain supplies or the arrival of a group of nurses and a particular clinic or hospital had need for these resources, these things would be matched in the nerve center at the Quisqueya School. Ted Steinhauer was the director of this operation and he worked closely with a staff of several others who also helped to coordinate transportation, communication and dissemination of medical resources throughout Port-Au-Prince. Amazingly efficient workers including Daniel and Miquette were truly among the heroes of the relief effort. Spiritual leader and chaplain, David was also instrumental in ensuring the comfort and physical safety, as well as providing for the spiritual needs of those who were boarding at the school. A set of cold water spigots was set up on the side of a building so that there were six showers for men and six showers for women. Food was served at breakfast and at dinner for those who required. Breakfast consisted of a plastic tumbler filled with soggy uncooked oatmeal, sweet milk and a few plump raisins. Sometimes a small piece of fruit was offered as well. Surprisingly, given the overall environment, this breakfast was excellent. Dinner was generally a plate of rice, usually with some beans or some sauce. The general atmosphere at the school in the evenings was that of a camp. Some groups, usually small church groups, would sit around playing guitar and singing religious songs while others would mill about, visit or check e-mail until the lights went out around 10pm. Each morning we would hop on the back of an open truck filled with cargo, the back of a caged truck, or into a Tap Tap and were driven through various routes across Port-Au-Prince to our destinations. The ride to CDTI usually took about a half hour.

STREETS OF PORT-AU-PRINCE

The streets of Port-Au-Prince were amazingly animated. Before arriving, I had anticipated that many of the people had fled the city and that the city would be largely abandoned ruins with only a few people remaining. This is not the case. The city was teeming with people. Perhaps it seemed as though there were more people than there actually were because no one was inside of any buildings and everyone was on the streets. Doors and buildings were almost all shuttered and in certain areas the majority of buildings were destroyed. Poorly constructed concrete and cinder block buildings had pancaked down upon themselves crushing any inhabitants. At the time I was there between 2 ½ -3 ½ weeks following the earthquake, bulldozers and heavy equipment still had not made it into the city. I saw no effort to clean up or move away any of the wreckage. There was some food for sale on the streets and market areas where a few vendors sat on the sidewalk with some plantains or baskets of grains spread in front of them. But for the most part, it was hard to tell where people would get any food or water. There were a few distribution centers set up by the UN or the U.S. Army where water could be distributed from trucks. The city water was turned on for a few hours a few times a week. There were too many leaks for them to leave the water running full time. While the water was turned on, there were some places where broken pipes would protrude from the sidewalk and people would be lined up with buckets to fetch the water as it flowed out. All the lines I saw were orderly, no pushing, no shoving, and no fighting. The Haitian people looked as they always must have, many people carrying bundles on their heads, people milling about

street corners and others walking with purpose quickly down the street. Occasionally, in some neighborhoods the stench of the corpses trapped within the buildings emanated through the air. We volunteers in the trucks would look at one another with little spoken exchange at those times. Tent encampments which had become tent villages appeared on any empty land. Large parks became small tent cities. Some relief workers had set up clinics near some of the larger encampments. Many Haitians gathered near the ruined government buildings and presidential palace to see for themselves that even these edifices had collapsed.

THE SECOND DISASTER

I do not know where the relief effort will lead. I have only questions now. Will the great interest and aid which has poured into Haiti continue long enough to accomplish a meaningful recovery? Will medical workers arrive to pursue the immense task of follow-up care for those already treated with fractures, open wounds, and amputations? Will the rainy season which has held off longer than usual ultimately bring the anticipated wave of diseases such as cholera? Will the unsheltered masses continue to survive during the rains? Will widespread violence result? A second disaster may well be at hand.