

Haitian children at the University of Chicago Medical Center's field hospital in Fond Parisien, Haiti. Photo by Marshall Segal, MD

Haiti

Mending Body and Spirit

After the January 12 earthquake devastated Haiti, 37 volunteers from the University of Chicago Medical Center traveled to Haiti to run a field hospital in Fond Parisien and to staff the Haiti University Hospital in Port-au-Prince. Cheryl L. Reed, executive and managing editor of *Medicine on the Midway*, traveled to Haiti to document the work of the volunteer medical teams.

A photograph showing a patient in a white tank top and blue shorts walking away from a tent hospital. The patient is using two wooden crutches and carrying a white water jug. The tent hospital is made of blue and white tarps. In the background, other tents and people are visible, along with a dirt path and some vegetation.

A patient carries a water jug back from the field hospital well. Patient population in the tent hospital averaged about 270 patients daily, plus their family members, requiring some tents to house up to 13 people at a time. Photos by Jimin Kim.

By Cheryl L. Reed

Piles of crumbled and mashed cement towered three and four stories beside the downtown streets, forming caverns of destruction. Young men and boys dug furiously through the mountains of stones, as if it were possible to find someone living, breathing, weeks after the earthquake that killed 225,000 people in Port-au-Prince. Stagnant gray sewage pooled at intersections. The smell of decay clung in the air. Amidst the ruins lay the detritus of people's lives—a woman's shoe, a handbag—all prompting me to wonder if their owners were still alive.

In the midst of the city's downtown, the landscape was like Ground Zero after the collapse of the World Trade Center. A fine mist of dust hung in the air, a fog of cement and asbestos that covered the city. There were mounds and mounds of rubble with people picking and guarding the remains. The owner of a barber shop, filled to the roof with boulders, set out to clear his building by hand, one stone at a time. On a busy side street, a man stationed himself on a chair in the middle of the road, a sawed-off shotgun laid casually across his lap. A few blocks away, the bodies of two young boys beaten to death lay discarded in the middle of the street, Haitian and United Nations police circling like flies trying to determine what had happened.

That was Haiti in the aftermath of its worst modern natural disaster: a land of chaos and vigilantism. A place where thousands

slept on the ground on beds made of stone protected only by a tarp or a bed sheet, where entire extended families crowded into a single shanty the size of a closet. It was a country whose population was largely injured and homeless, hungry and destitute. It was also where more than three dozen University of Chicago Medical Center volunteers spent months mending the bodies and spirits of survivors.

Two weeks after the earthquake, the Medical Center sent teams of medical volunteers to staff the university hospital in Port-au-Prince. Other Medical Center teams established a field hospital and pharmacy on the grounds of the Love-A-Child orphanage in Fond Parisien, a bumpy hour's drive from the capitol city. The teams worked 15-hour days for three weeks and then were replaced by subsequent teams on a rotating basis.



Rubble from destroyed buildings in downtown Port-au-Prince formed caverns of destruction. Photo by Cheryl L. Reed

In the early weeks, busloads of patients arrived at the field hospital in the middle of the night, transported from hospitals in the neighboring Dominican Republic (DR) where their initial wounds had been treated. They arrived in the dark, stressed and disoriented. Because there were initially only a few lights mounted in the camp, patients were sometimes treated by miner-like flashlights strapped around physicians' heads.

After one onslaught, Christian Theodosios, MD, an emergency room (ER) physician at the Medical Center, texted back to Chicago: "Just finished getting crushed: 67 patients on three buses, after dark. Conditions quite intense, quite rough. Running short on tents, short on hands. Many, quite vulnerable people. Hungry and tired."

By May, a total of 37 Medical Center volunteers had experienced that Haiti rush, a mixture of adrenaline, sweat, hunger and compassion that kept us going long after we thought we could. Thirty-one Medical Center volunteers served at the field camp and another six at the University hospital in Port-au-Prince, with a couple serving at both sites.

At the field hospital, we inhaled dust from winds that scraped the arid ground and breathed in diesel fumes from the generators that powered the field camp. At night, we traded stories about the injured and how we'd stifled our emotions. We ate one hot meal a day: rice with specks of beans. We took cold bucket showers and drank tepid well water. We slept on the ground in tents as the strange sounds of Creole gospel songs wafted from the nearby hills. We had no luxuries like cold drinks, vegetables or self-pity. In brief moments of despair, we were reminded of all that we had and all that our injured patients did not.

Homeless earthquake victims packed into donated blue and beige Eddie Bauer tents, sometimes burgeoning with up to 13 people a tent. At first glance, the nine uniform rows of tents resembled an Outward Bound adventure trip, but then a man with a missing leg hopped by on crutches. Later, during the rainy season, two tennis court-sized tents donated by the World Health Organization housed patients to get them off the soggy ground.

Though modest, the field hospital was a place of refuge. Medical Center volunteers, along with medical personnel from Harvard University and medical organizations from 15 different countries, staffed the hospital. From late January until early May, the camp treated 2,000 patients and performed 1,500 minor procedures and 300 major surgeries.

The Catacombs of Port-au-Prince

What had been the main entrance of the University hospital in Port-au-Prince was an eerie, empty place. Discarded hospital beds lay scattered in giant, dark rooms. After the earthquake, most patients were treated in tents and Quonset huts hastily constructed on the hospital grounds. The tents were hot and crowded, patients lined up next to each other as the few doctors rushed around speaking in different languages. At its peak, nearly 1,000 patients were treated daily at the hospital.

Brian Callender, MD, a Medical Center hospitalist, arrived in February and was first assigned to the hospital's internal medical ward. "My first day, it was chaotic with dismal working conditions," Callender said. "There were 50 some patients and only two physicians, myself and another man. I quickly concluded that not all the patients were going to be seen."

Most patients in the ward, he said, had chronic and acute conditions for which there were no real medical options. Many had cancer, others had suffered catastrophic strokes, some suffered from liver disease and heart failure. "It was nicknamed 'the catacombs' because it was dark and dank, and it was where people went to die," he said. "You'd walk through the next day and patients were gone. You had no idea what happened to them. It was not uncommon to walk through and declare someone dead."

Each night, Callender went back to the hotel, where he shared a room with three other Medical Center volunteers. Others at the hotel were camped out in tents in what had been the ballroom. From the hotel's balcony on the second floor, Callender watched the Champs de Mars tent city, the largest in Port-au-Prince. It was the same balcony from where CNN's Anderson Cooper and Soledad O'Brien broadcasted.

Callender, 35, BA '97, MA '98, MD '04, grew up in the Chicago suburb of Naperville. As part of his medical training at the Pritzker School of Medicine and as a resident at the Medical Center, Callender volunteered in Cambodia as well as in the DR. But those were not disaster situations. In Port-au-Prince, at times, he felt frustrated and depressed: "I questioned, as one individual seeing so many patients a day, was I really making a difference? I started taking the attitude that I had to do the best I could with what I had, knowing that in that setting people were going to die."

Two months later, when Callender was sent to the field hospital in Fond Parisien, he was stunned by the contrast: "At Fond

Parisien, the situation was more hopeful because there was an end in sight. The patients were taking care of their external fixators and keeping their wound sites clean. After a surgical team removed the fixators and they had some physical therapy, they were up and walking. Within a couple of days, they were being discharged.”

The Magic of Western Medicine

Like patients at the Port-au-Prince hospital, patients at the field hospital feared further aftershocks and preferred sleeping in tents away from buildings. At night, the ground beneath us rumbled, frightening patients and staff who feared further tremors.

During the day, the temperature in the tents was so stifling that Melanie Plumley, RN, a pediatric emergency nurse from Comer Children’s Hospital at the University of Chicago, cared for patients in between tents where there was an occasional breeze and a sliver of shade.

“There’s never enough people,” she said as she ripped at the stiff mold around a man’s leg. “There’s always something to do. I can’t do enough.”

Meanwhile, Medical Center physical therapists, led by Diane Davis, PT, director of therapy services at the Medical Center, went “door to door” urging patients to exercise their injured body parts, especially those with amputations whose muscles needed to be stretched.

In the triage tent, the cots were nearly always full. Besides the earthquake victims, the sick in the surrounding community arrived every day, having heard about the field hospital. We saw chronic illness and injuries from car or motorcycle accidents. Many children suffered from severe malnutrition. Some Haitians practice voodoo, and our Western medicine seemed just as mysterious and magical to them. But they often went away disappointed that they couldn’t be immediately cured.



Christian Theodosis, MD, co-director of the Fond Parisien field hospital, sits among the rubble of Port-au-Prince, where he met almost daily with officials from the World Health Organization and secured many grants for the field hospital and school. Photo by Marshall Segal, MD

A Haitian Nurse's Struggle

One factor in the Medical Center’s success in Haiti was the inclusion of nurses who had grown up in Haiti, could speak the language and knew the culture. Elvire Laplanche, RN, an ICU nurse from South Shore Hospital, and Nicole Muse, RN, a Comer Children’s Hospital NICU nurse, were sent with the first team. Later, Marie LaFontant, RN, a Medical Center burn unit nurse, was sent.

“Everyone throughout the camp understood that Elvire and Nicole were the pivotal people in their functions,” said Richard Cook, MD, of the Department of Anesthesia and Critical Care, who was sent with the first and last teams. “That was far more important than anyone had anticipated.”

Muse ended up making three “tours” to Haiti, rotating back to Chicago just long enough to check in with her 16-year-old daughter. Muse grew up in Port-au-Prince, finishing middle school before her family moved to Chicago when she was 14. Seeing the devastation was especially difficult. “These are my people,” she said, looking around the triage tent at the injured in complicated casts. “I want to be here as long as I can.”

Muse’s primary responsibilities at the field camp were working in the triage tent and overseeing the unaccompanied minors in camp, children who had been separated from their parents, many of whom were feared dead. Patients felt comfortable telling her their stories as well as reporting problems in camp. The weight of those stories, though, was almost too difficult for Muse to bear.

“I cry every day,” Muse admitted one day in the triage tent. She could clean the wounds of amputated and injured patients, care for mothers with dying, malnourished children, and be fine, but

then a 5-year-old asking for underwear, something so basic, would make her break down.

Like a pied piper, Muse was often trailed by little girls pulling at her hips. Seven-year-old Samantha Francois followed

Mobilizing on Short Notice

The decision to send medical teams into Haiti was backed by both Medical Center trustees and Everett Vokes, MD, former dean of the Biological Sciences Division and Pritzker School of Medicine and former CEO of the Medical Center, who wanted the hospital and university to respond to the medical crisis. No one was sure, though, whether an academic institution had the capability to mobilize a response team quickly. When Carolyn Wilson, RN, Medical Center chief operating officer and associate dean, and Olufunmilayo “Funmi” Olopade, MD, FACP, associate dean, for Global Health, put out a Medical Center-wide e-mail three days after the earthquake asking for volunteers, they were overwhelmed with the more than 200 people offering to go.

The Medical Center took a tactical approach. What were the needs on the ground, and who at the Medical Center could fill those specific needs? How could the Medical Center send skilled people who weren’t crucial to patient care at the Medical Center in Chicago? How could the Medical Center send senior staff who would be directed by junior staff trained in disaster medicine? A vetting committee had to determine how a person working under duress in a clinical hospital setting might respond in a disaster and perform amidst chaotic conditions and tropical heat with little food.

“That was the most critical part,” admitted Christopher Sola Olopade, MD, clinical director of the Global Health Initiative and

chair of the vetting committee. “There was a toughness factor we had to consider. People who were too squeamish and too methodical, we couldn’t take them. We needed flexible and creative people, those who could figure out alternatives when certain supplies and equipment weren’t available.”

Meanwhile, both Wilson and Funmi Olopade, co-leaders of the Haiti mission, were trying to organize supplies along with Mike Sorenson, executive director of information technology. Sorenson had managed to get a wealthy donor to pay for a chartered plane that would take the first group of volunteers and more than 1,100 pounds of medical, surgical and pharmaceutical supplies.

On January 26, the day the first team was to deploy, Funmi Olopade was e-mailing and fielding calls about Haiti constantly, so much so that a policeman pulled her over on 53rd Street and cited her for talking on her cell phone while driving. “I’m trying to get people deployed to Haiti,” she told him. He wasn’t swayed. By the end of the weekend, Olopade’s thumb was in a cast because she’d strained it responding constantly to e-mails on her iPhone.

“In a matter of a couple days, people were mobilized,” said Olopade. “We got them vaccinated, credentialed. We got the equipment. I never even imagined that we were capable of doing that so quickly.”

"I don't know that the University of Chicago needs to put out all the fires in the world. But they sure showed they know how."

Christian Theodosis, MD

Muse around so much, calling her "Miss Nicole," that the girl's mother urged Muse to adopt her daughter and take her back to the United States. "She loves my daughter," the mother, Evana Alexandre, 48, said of Muse. "I know she would take care of her. I'm afraid for her future if she stays in Haiti."



Nicole Muse, RN, with earthquake survivors Evana Alexandre and her daughter, Samantha Francois. Photo by Cheryl L. Reed

Muse tried to get another girl, 16-year-old Magana, to make contact with family members. Magana's right leg had to be amputated below the knee. But Magana resisted any efforts by the staff to find her family. "They don't want me," Magana insisted.

Muse turned away from Magana for a moment: "This breaks my heart," she said in sotto voce, wiping her eyes.

There were small successes. When Nicole returned on her final tour, she was able to get a 15-year-old boy who'd been abandoned by his parents to an orphanage.

"I felt great about that,"

Muse reflected shortly after she returned to Chicago from her last tour. "I think we helped them the best we could. We could not take all these children. My heart remains in Haiti. You cannot measure what we did."

The God of Survivors

By March, the daily inpatient population at the field hospital remained steady at about 270. With family members and volunteers, the total camp count was often near 1,000. Patients couldn't be discharged unless they had a safe place to go. Most didn't. A little less than a quarter were amputees, and many were urged to remain until they could be fitted with prostheses.

One of those with multiple amputations was Louphine Demorcy, 31, a mother of three. Demorcy spent much of her day lying on a mattress on the floor of the tent she shared with her family and two other patients and their families. A vendor in Port-au-Prince, Demorcy was getting ready to go home the day of the earthquake when the sidewalk underneath her feet suddenly opened up.

Demorcy called out: "Jesus, Jesus, help me." She was thrown into the street, where a store wall fell onto her arm and another

wall fell onto her leg. Two days passed before someone found her. But during her three days in the hospital she never saw a doctor. Eventually, she was transported by an ambulance to the DR, where a doctor had to amputate most of an arm and leg because they were infected. She was later transported to the Fond Parisien field hospital to recover.

"I didn't have hope after I lost my arm and leg," she told me through an interpreter. Like most patients, Demorcy speaks Haitian Creole with a smattering of French. "Then I told myself that most people died, and Jesus is going to help me."

Demorcy, like many patients in camp, credited God for her survival. Religion plays an important part of the culture and every night patients gathered for a religious service that included hours of singing. Each Sunday morning, the lower portion of the tent hospital transformed into a church, with preachers delivering sermons from a pulpit with a microphone and patients swaying to music from a live band.

"If I had the same patient at home with an amputated arm and amputated leg, at this stage they would be depressed and on Prozac and Ativan and seeing a psychiatrist," said Plumley as she restocked the shelves in the supply room. "These people don't have a psychiatrist. And they are getting through this better than anyone I've ever seen. They are not crying in their tents, they are not moaning 'Why me?' They are getting up, washing themselves, feeding themselves. Doing the next thing. It's amazing."

The Medical center did send staff psychiatrist Angela Smyth, MD, to Leogane, the epicenter of the earthquake, where she taught nurses how to treat traumatized patients.

Success that Closed the Camp

By early April, the rains and flooding had started. The camp's delicate septic field overflowed, flooding the triage and post-op tents and covering the ground with sewage. Rivulets of water coursed through camp, undermining tents. The rain came nearly every afternoon around 4 p.m. and with the water came mosquitoes.

"I was covered head to toe with bites," said Dima Awad, PharmD, a Medical Center pharmacist. "Repellant did not work."

Awad had arrived with the first group at the end of January and set up the pharmacy. She transported many special-order drugs and vaccines from Chicago and combed through boxes and boxes of donated drugs, many from other countries, and discarding those that were expired. Though she speaks fluent French,



Diane Davis, PT, teaches field hospital patient Louphine Demorcy how to wrap her amputation wounds. Photo provided by Diane Davis, PT



Chris Sullivan, MD, checks on a young patient in the field hospital triage tent.



Chrissy Babcock, MD, greets a Navy helicopter delivering four patients to the field hospital. Photos by Cheryl L. Reed

Awad was challenged by the multiple languages on the drug labels and often had to rely on an international drug index that gave the names of drugs and their generics in multiple languages. Establishing the pharmacy was one of the field hospital's major accomplishments and allowed physicians to treat patients and track their medicines better.

When Awad arrived for the second time in early April, the camp had evolved into something that looked routine, organized. There were more latrines and even showers, though they operated only a few hours a day. A patient chart system on donated iPhones that had a bumpy start was fully operational; physicians were able to view electronic charts and X-rays with a touch of a button—more streamlined than back in Chicago.

Along with Awad, the last team from the Medical Center had a mix of nurses and doctors, mostly orthopaedic surgeons whose goal was to take off any remaining external fixators. At three months out from the earthquake, 80 percent of the patients were healed. Some needed surgical procedures, others were being fitted for prostheses and receiving physical therapy.

"I think we did accomplish what we thought we should do," said Chris Sullivan, MD, pediatric orthopaedic surgeon at Comer Children's Hospital. "It was a unique situation in that everyone had been injured at one time and healed up at one time. We were so successful that the hospital outgrew its function."

In the last few weeks of camp, handfuls of patients were being discharged every day. Those who had no place to go ended up at the International Displaced Persons (IDP) camp down the road from the field hospital. The IDP camp looked like a poorer version of the field hospital, with many of the same blue and beige Eddie Bauer tents. There, patients cooked for themselves on crude burners. Many of the WHO funds for which the Medical Center had applied were eventually allocated to run the IDP camp and to repair the

damage done so the field hospital could return to its original purpose: an elementary school. In August, the Medical Center secured a \$100,000 grant from the United States Agency for International Development to train Haitian college students in disaster relief and community health.

"From a humanitarian perspective, the field hospital was a huge success," said Theodosios, who ran camp operations at Fond Parisien, along with Christine Babcock, MD, also a Medical Center ER physician. "The University of Chicago gave us everything we needed to be successful. We said we needed an X-ray machine; they sent it. We said we needed frozen measles vaccine; they shipped them all the way to our field in Haiti on dry ice. We were the first hospital in Haiti where all of our patients were vaccinated. The Medical Center operated from a model of generosity. I don't know that the University of Chicago needs to put out all the fires in the world. But they sure showed they know how."

Though the field hospital closed in early May, the Medical Center has matched an anonymous \$100,000 donation and is planning on sending more medical teams of faculty and staff volunteers, along with residents and students, to Haiti. The Medical Center, which has already donated nearly \$400,000 to its Haiti missions, and is discussing ways to become involved in building up Haitian medical schools. It is one way the Medical Center, as an academic hospital, can facilitate learning experiences for its staff, who can, in turn, teach from those experiences.

"In Haiti, we learned an organizing principle that will help us respond to any medical emergency on the planet,"

said Olufunmilayo "Funmi" Olopade, MD, FACP, associate dean for Global Health, of which Haiti will play a key role. "We demonstrated that the Medical Center and the university can work collaboratively. It gave us confidence. And we will absolutely use that confidence to respond to other emergencies around the world."



Jorel Altema, 38, a Baptist pastor who was injured in Port-au-Prince when his home caved in on him. Photo by Cheryl L. Reed

Haiti Volunteers

Deployed to Fond Parisien:

Christian Theodosios, MD
Rex Haydon, MD
Richard Cook, MD
Elvire LaPlanche, RN
Nicole Muse, RN
Dima Awad, PharmD
Chrissy Babcock, MD
Keegan Checkett, MD
Kris Alden, MD
Sean Clancy, OT
Diane Davis, PT
Walter Flores, RN
Marie LaFontant, RN
Elizabeth Mouw, PharmD
Vivian Liese
Marshall Segal, MD, JD
Michael Sorensen
John Kress, MD
Chris Sullivan, MD
Karen Arndt, RN
Karen Wilson, RN
Megan McDonald, PT
Catherine Kennedy, PT
Cheryl L. Reed
Melanie Plumley, RN
Sabine Cadeau
Jimin Kim
Melodie Kinet
Nada Williamsom, RN
Yadira Martell, RN*

Deployed to Port-au-Prince

Heather Costello, MD
Steve Schrantz, MD
Brian Callender, MD*
Mark Haseman, RN
Kathy Luba, MD
Nilam Soni, MD
Daniel Johnson, MD

Deployed to Leogane

Angela Smyth, MD

Administrators

Michael Millis, MD
Nicholas O'Hearn, RN
Carolyn Wilson, RN
Funmi Olopade, MD
Christopher Sola Olopade, MD
Jeffrey Finesilver
Joyce Keldsen
John Easton
Mohan Gundeti, MD
Gregory Bales, MD

* Deployed to both Fond Parisien and Port-au-Prince