

Critical Care at a Critical Time

SCCM Responds to Earthquake Disaster

When Society of Critical Care Medicine (SCCM) member Alejandro Baez, MD, MPH, inquired about bringing the first Fundamental Critical Care Support (FCCS) course to the Dominican Republic while attending the 39th Critical Care Congress in Miami, Florida, USA, he did not expect that the course would be conducted within weeks and in the wake of one of the deadliest earthquake disasters in recent history.

Baez returned to Universidad Iberoamericana, where he serves as associate dean and chairman of emergency and critical care medicine at the Hospital General Plaza de la Salud, to find a dire situation following the January 12 earthquake that devastated neighboring Haiti. With only 70 public intensive care unit (ICU) beds in the Dominican Republic and Haitian earthquake victims flooding hospitals, he understood that steps had to be taken to augment critical care capacity. Recognizing SCCM as a leading organization in this arena, he reached out to President Judith Jacobi, PharmD, BCPS, FCCM. The Society, with help from many dedicated members, formed the Disaster Field Team: Randy Wax, MD, FCCM; Marie Baldisseri, MD, FCCM; Dana Braner, MD, FCCM; M.J. Reed, MD, FCCM, and SCCM staff members Gervaise Nicklas, MS, RN, and Michael Huerta. The team deployed to the Dominican Republic on January 24 to tour and assess hospitals and clinics, make recommendations, and identify areas where SCCM could help. They also held meetings with various support organizations, including the Pan American Health Organization, Project HOPE and the Dominican Republic Ministry of Health.

"The earthquake resulted in a bi-national and island-wide problem where the health system of one country had collapsed" explained Baez. "The Dominican infrastructure was deficient to start. Working in a very austere and resource-limited environment while caring for very

complex patients, it quickly became evident that there was a great need to strengthen critical care services. As such, we felt that the expertise and leadership of SCCM was a fundamental necessity to the response efforts."

We Can Never Rest

For Wax, who serves as chair of both the SCCM Fundamental Disaster Management Subcommittee and the H1N1 Task Force, the events were an important reminder that "from a disaster preparedness standpoint, we can never rest. We were concluding Congress thankful that H1N1 wasn't worse than it was, and then this massive earthquake hit Haiti. Immediately, there was discussion among the SCCM leadership about how we could help."

One of the first stops for the Disaster Field Team was an improvised hospital in Jimani, about five miles from the Haitian border. "As we got closer to the border, I remember listening to the radio and noting the sorrow and frustration; there was a feeling of desperation at the lack of help. That was the moment when I first got an appreciation for how bad things were," Wax said. Patients at the Jimani clinic were being treated for a variety of conditions including tetanus, infection and complications from chronic illness. A converted chapel, orphanage and newly built outpatient clinic housed patients, though many – frightened by aftershocks – refused to stay inside buildings. Boxes of supplies were stacked high, and numerous volunteers rushed about.

"We saw very quickly that this facility was not meant to look after so many acute patients," said Wax. "While that's true, the initial impression of chaos was incorrect. The clinic was doing a very good job of organizing their system under the circumstances." Wax stressed the most important interventions: basic medical care, recognition of seriously ill patients and basic resuscitation skills.



Above: As patients flood hospitals, beds are placed in hallways and extra rooms.

Below: Tents and trailers serve as postoperative recovery stations, but many patients become critically ill and must be transferred to other hospitals, straining critical care resources.



However, it was clear that the sickest patients could not be properly treated at facilities such as these. As patients were transferred to hospitals in the Dominican Republic, resources were being exhausted quickly. Even in the best of circumstances, ICUs in the Dominican Republic are stressed. About 75% of the country's 9.7 million people rely on public hospitals with limited critical care equipment and staff; the country has no respiratory therapists, and nurses have limited training in critical care. As the team toured hospitals in the capital city of Santa Domingo, they saw hospital hallways crowded with beds; elective surgeries were canceled, and intensivists were focused almost exclusively on earthquake victims.

"Our proposed solution was to have an intermediate unit on the border where one could admit seriously ill patients to try to stabilize them and get them better. That would relieve some of the surge the hospitals were seeing," Reed said. "Not to mention that it takes five hours to drive a patient from the border to the nearest Dominican Republic hospital. The patient can get sicker during transport, and there may not even be an ICU bed or a physician available when he or she gets to the hospital."

The Role of FCCS

From that assessment, the team quickly understood their next step: to bring FCCS to the Dominican Republic. "That's the whole premise of FCCS: to identify the seriously ill patients and intervene before they become critically ill," Reed said.

"We recognized that the FCCS course was really an incredibly valuable course and exactly what was needed. It introduces critical care concepts to those who are not intensivists and who may have very limited skills in dealing with the patients they are seeing in their hospitals and clinics," Baldisseri said.

The Disaster Field Team worked with SCCM staff and volunteers to quickly establish plans for an FCCS program, exemplifying the important role of this course and its related programs, Fundamental Disaster Management (FDM) and Pediatric Fundamental Critical Care Support (PFCCS).

It took only three days to pull together a customized course. On February 1 and 2, an FCCS course that incorporated earthquake disaster-relevant elements of the FDM and PFCCS programs was held at Iberoamerican University in Santo Domingo, educating 60 medical residents and nurses, many of whom would return to the Jimani medical clinic along the border. Course ventilators were donated by the Pan-American Health Organization via the United Nations Centralized Emergency Release Funds (CERF), the Society shipped Spanish-language FCCS material and English-language FDM textbooks, and educational slides and other resources were posted online for easy access.

Week, Months, Years

Baldisseri and Reed returned weeks later to hold a second FCCS course February 24 and 25 at Jaime Moto Hospital in Barahona, training 30 more residents and nurses who would staff an additional six-bed ICU established there. "Our task was to get



Above: Members of the Disaster Field Team discuss the logistics of organizing an FCCS course in the Dominican Republic to educate frontline non-intensivists.

Left: Postoperative patients spill out into the open at a makeshift clinic in Jimani, Dominican Republic.

the FCCS program started so the Dominican physicians could then teach it and expand it," Reed said. "They don't have enough intensivists, so there needs to be a workforce more prepared to identify and treat patients both at the border facilities and within regular hospitals."

"While Haiti was receiving a lot of attention and aid, there wasn't much recognition from the outside that there was a need for critical care in the Dominican Republic. We certainly saw a lot of action on the border, but those patients needed to go somewhere eventually," Wax explained. "I'm proud that we were able to identify this educational opportunity to help."

The 7.0 magnitude earthquake and the strain it put on critical care resources is an island-wide problem, one that will have lasting effects on both Haiti and the Dominican Republic for weeks, months and even years. While the launch of the FCCS program within the Dominican Republic came under unexpected and tragic circumstances, it was in many ways an ideal tool to fulfill a critical need during a critical time.

"It gave me great pleasure to know that when a member calls in need, the Society is able to respond quickly. We are grateful that our organization had this opportunity," Wax said.

The Society will continue to have a presence within the Dominican Republic and identify new ways of helping in post-disaster efforts. Its specific goals include training in-country providers to become FCCS instructors to make the program self-sustaining. Special thanks goes to all those involved in the Disaster Field Team and all SCCM members who contributed to relief efforts – whether through donations of time, funds, resources or other means.

The travels and efforts of many of these members have been chronicled in new and exciting ways – the SCCM blog, Twitter and Facebook feeds – that serve not only to tell an important story, but also to inspire and spark conversation and engagement. Learn more at www.sccm.org/connect. Read more about SCCM members who volunteered in the wake of the disaster on page 1.

