April 15, 2013 is a day most everyone in Boston will never forget; it was a day both of joy and of horror. Those who work in healthcare, at the hospitals in the city, were tested to the limits of their skills and emotional endurance, trying to give aid to those most in need. For those at Boston Medical Center (BMC), a Level 1 Trauma Center, this day was both a test of capabilities as a team as well as a test of inner strength. Each and every person needed both that day.

Every year, the major hospitals in the city send teams of physicians, usually residents, to man medical tents at the Boston Marathon finish line. Those staffing the tents expect blisters, exhaustion, dehydration, etc. They did not expect to go running into what can only be described as a war zone to rescue and treat hundreds of injured people, many so severely injured that time was of the essence to get them to a hospital. According to the manager of disaster preparedness, the events of April 15th were unlike any that those in Boston have experienced before. The first victims began arriving a mere eight minutes following the first blast. According to Boston EMS, the last victim transported arrived at a hospital only 28 minutes following the blast. This was unprecedented in its efficiency and is wholly due to the medical plan in place each year for the marathon.

The first BMC patient rolled into the emergency department (ED), both legs missing, before anyone even knew what had happened, followed almost immediately by a woman who had lost her foot. Word was received minutes later there had been a bombing, but by then the ED was starting to fill up with severely wounded people. If there had to be a silver lining, it was shift change, and so there was double staffing in all areas. Everyone got to work.

The events of a disaster and its aftermath often focus on what the doctors and nurses did to treat the victims. The ancillary departments, such as radiology, respiratory, phlebotomy and lab, housekeeping, and food services, all play a very important role as well. During the Boston Marathon disaster, everyone at BMC helped by doing something: mopping blood off the floors, running for yellow gowns, spiking saline bags, getting stretchers and wheelchairs, feeding family members and staff, and transporting patients. It was chaotic, but organized; overwhelming, but calm. Everyone just did what needed to be done, regardless of official roles.

Radiology played a very important role in treating the victims, but there were lessons to be learned from the experience nonetheless. Staff participate in drills routinely to prepare for such events, and had just recently participated in one with mass casualties, but the sheer volume was beyond the scope of comprehension. Even so, everyone remembered the recent drill, remembered the corrections made to processes, and worked as quickly as possible in getting quality images for the physician staff.
The diagnostic technologists worked tirelessly to process images and complete orders in both the ED and the OR. The manager of diagnostic imaging coordinated the ED techs and the OR techs, pulling equipment from some areas where it wasn’t needed to areas it was desperately needed in order that no patient had to wait long. She kept a dry erase board listing every staff member and where they were, so she could account for everyone and relieve as necessary. There were runners assigned to each technologist in the ED, to expedite and facilitate the CR processing and keep physicians informed. She made sure staff called their own families as soon as they were able. We were getting an enormous amount of calls from staff’s family members wanting to know everyone was okay. By calling home, the techs were better able to get back to work undistracted.

At that time, I was the manager for both CT and MRI. My supervisor and I got CT ready, and the MR staff was standing by. She would check the ED for a sense of what we were getting for patients so we could coordinate and prepare with the other modalities. Many of the MR techs were trained in CT, so came into that area to assist in any way they could. We coordinated rooms and staff and kept patients moving. Additionally, the supervisor made sure all outpatient exams were cancelled and no routine inpatients were called for, in order to leave both CT tables open for the patients being brought to the hospital from the marathon site.

There were moments during all of this when we realized just what a great team we were that day. We are all very proud of that.

The lessons came after. While the disaster itself lasted about four hours, what we didn’t think of was that the night shift had to image all the post op patients, alone and with no full support like what was available during the disaster itself. A debriefing session was held a few days later for radiology, moderated by counselors, for anyone who wanted to talk about what happened. There was a standing room only crowd. The director, who had been at the marathon and was sheltering at a friend’s house, felt incredibly guilty she wasn’t there to help, while everyone was just relieved to know she was safe. Technologists were walking around seemingly in a daze days later, still trying to process what had happened. The day after was the worst for everyone; we were all on autopilot. We realized that, for future disasters, counselors needed to be available to the staff quicker, and a debriefing session specific to radiology was necessary right away. Many attended a debriefing session the next day, but the focus was on the nurses and physicians who played roles in the disaster, so radiology staff felt a bit like outsiders. A session just for radiology was the best thing we could have done. We now also realize that any disaster has a beginning and an end for the event itself, but the reverberations continue long after and staff need to be prepared for that beforehand.

The ultrasound manager was the disaster liaison and the point of communication between the ED and radiology. She said it was “surprisingly calm” amongst the chaos, and the team response was impressive. It was shocking to her how quickly things happened, even before the disaster pages had gone out to management. She did feel, however, that improvement could be made, even though everyone there that day did a stellar job handling the casualties. She also felt that the radiology disaster liaison role needed to be better defined for future disasters, as there was some questioning by a few radiology staff members as to whose direction to follow. In future disasters, the disaster liaison needs to be in charge and able to delegate tasks to anyone in the department without question, in order to efficiently handle whatever is happening at that moment. Also for future disasters, jobs should be assigned to staff by department, so that everyone has a way to contribute and efforts aren’t duplicated. Finally, vests should be worn by all disaster team liaisons, to readily identify them to staff.

Disaster training for the disaster liaison had been computer based, but during the marathon disaster she couldn’t get to a computer, pagers set up for communication weren’t being used, and cell phones didn’t work. She couldn’t communicate with the Command Center or the Clinical Operations Group to give information and/or get direction, and ended up depending on a runner for information.

Most of the technologists and managers in radiology were frightened, especially when several unsubstantiated bomb reports started to filter into the hospital in the midst of the disaster. One report was at a hospital right up the street from BMC. There were responders on campus
from the Boston Police Department, the FBI, Homeland Security, and the ATF. A SWAT team was positioned outside, and we were on strict lock down. There were bomb sniffing dogs on campus. For days after, all bags were checked, as well as all persons entering and leaving the building. There was no feeling of safety and security, no normalcy. It was worse at the end of the week, when the entire city went into a “shelter in place” order, as law enforcement officials attempted to apprehend the suspect. It was much like opening a wound all over again.

During the week following the disaster, some good things did happen. BMC had visits from many celebrities, including members of the New England Patriots and Red Sox. Members of the military, including a group of military personnel who had lost limbs, visited both patients and staff members. Our hospital therapy dogs visited as many people as they could, to bring comfort and a break from reality for a few moments. President Obama visited a church right down the street, and several staff members were afforded the opportunity to attend. They were able to sit near the front, and were thrilled to have had the chance to see the president and listen to him speak. The corporate communications department gave any staff member who wanted to the opportunity to record a video recounting their experiences that day; the final product was put on the hospital intranet for all to be able to watch. It was a very powerful and cathartic experience for those who participated.

Figure 1 is a photo taken in our department one week to the minute after the bombing. It was a hospital wide moment of silence that we all participated in.

The one year anniversary of the bombing is coming up and no one has forgotten; it is as fresh in our minds as if it had happened yesterday. We are still proud of the teamwork displayed that day, and prouder still of the accomplishments of the entire staff. There exists that pervasive sense of having gone through something life changing together that no one outside our hospital walls will even begin to understand. But we do.

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