Super-Storm Sandy and the Human Element

As a first-year pulmonary and critical care fellow, I anxiously awaited my rotation in the Bellevue Medical Intensive Care Unit. I looked forward to hours spent at the bedside learning the fundamentals of mechanical ventilation, placing central lines, and teaching housestaff what I knew about the physiology of shock. I never expected that I would have a lesson in disaster medicine or be thrust into a resource-limited setting in midtown Manhattan. However, on 29 October 2012, Super Storm Sandy came to New York City, bringing massive flooding and power outages to most of the city.

Our day started out like most days in any medical intensive care unit (ICU). We made rounds, titrated ventilator settings, met with family, and worked up new admissions. However, by late afternoon, my attending and I stood in awe as we watched from a patient’s window as the Franklin Delano Roosevelt East River Drive flooded with water. As flooding from the East River became more severe, a large electrical transformer exploded on 14th Street, rendering most of lower Manhattan, including Bellevue Hospital, without power.

As expected, our emergency generators, located on the 13th floor, quickly turned on. Unfortunately, the fuel pumps for these generators were located in the basement, which was submerged in water by 10:00 p.m. The generators had only 2 hours of reserve fuel remaining, which would leave us without any power by midnight. Generator electricity was diverted to essential areas like the ICUs and the operating rooms. The rest of the hospital, including the emergency department and the wards, was left in the dark.

Through this darkness, a medical resident found his way to our medical ICU and asked my attending and me to evaluate a patient on the 17th floor who acutely developed shortness of breath. He provided us with the history that he had received during his sign-out rounds. This patient had been receiving treatment for *Pneumocystis jiroveci* pneumonia and had developed a pneumothorax earlier in the day that was treated with the placement of a small-bore chest tube.

After placement of the chest tube, his symptoms had improved but then suddenly worsened after the power went out. There was concern that the chest tube had migrated out of place, and with flashlights in hand, my attending and I quickly followed the intern through several pitch-black corridors to the stairwell because the elevators were no longer functioning. When we entered the stairwell, we came across a human chain of hospital staff carrying 5-gallon jugs of diesel fuel from the basement to the 13th floor. The chain consisted of attending physicians, nurses, housestaff, students, custodial staff—anyone who could stand and carry fuel. We moved to the patient’s bedside, and he ultimately had a second chest tube placed under the glow of several flashlights.

As we went back to the stairs, we found that the human chain had even more volunteers helping to move fuel up the seemingly endless flights of stairs. This chain fed the generators throughout the course of the night, taking the place of the flooded fuel pumps. It sustained critical areas of the hospital with electricity and literally kept the lights and ventilators on in our ICU. We would later lose all running water and the ability to check laboratory results and perform radiography, but the human chain had bought us enough time to evacuate the sickest patients in a safe and orderly fashion.

I have had experience caring for patients in resource-limited settings before, working in Tanzania as a senior resident. In that situation, I learned that it is not laboratory tests or advanced imaging studies that care for patients but, rather, people. Similarly, our hospital in midtown Manhattan became a resource-limited setting, and, again, I bore witness to the difference that the human element makes. Volunteers from all over the hospital, standing side by side, spent the night passing 5-gallon jugs of diesel fuel up 13 flights of stairs. Great things are possible when we stand together for our patients, no matter the barriers or circumstances. Few lessons in my medical education have left such an impact.

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