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Children's Hospital of New Orleans**

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Code Gray: A Resident's Personal Account From Children's Hospital of New Orleans

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WE KNEW THERE was a storm coming. Its name was Katrina, and it was headed straight for Florida, which was unfortunate for those having just endured a recent hurricane. Katrina lulled the city of New Orleans, Louisiana, to sleep, and that night she swerved. In an unusual and ultimately devastating turn of events, the hurricane literally cut west and traversed the state of Florida to find itself brewing with room to grow in the Gulf of Mexico. Despite this, no one panicked. There still existed a wide area of uncertainty for its landfall, and New Orleans had been spared from a direct hit numerous times before. We had just been lucky, I suppose.

AUGUST 27: 2 DAYS BEFORE LANDFALL

It became apparent that New Orleans would see some part of this growing monster, and as a precaution (one to which we have become accustomed), an evacuation of the city was ordered. In the children's hospital setting, this translated to another "code gray." Given that patients are not in a position to leave the hospital during a storm, it falls on chance that a group of doctors must weather it with them. Therefore, on this day, 12 resident physicians received a call telling us that we should prepare our bags to stay at Children's Hospital of New Orleans. Neither I nor any of my resident peers had had disaster training as part of our curriculum. When I found I was chosen to be on-call, I did not envision it lasting more than 2 days. I packed only a bare minimum, invested in water and microwaveable meals, and, by sheer luck, decided to pack some important documents just in case.

AUGUST 28: 1 DAY BEFORE LANDFALL

The day was sunny and beautiful. As I drove to the hospital that morning, I was determined to remain in a chipper mood. I greeted everyone in an excited manner

and received many puzzled looks in return. I did not understand why everyone was operating in such a somber fashion, given that this hurricane would likely veer east as the others had. In the PICU, there was an element of excitement mixed with an air of concern. Efforts were already underway to move the children to higher floors, given that the PICU (on the first floor) was susceptible to flooding. As I wrote my daily notes, I asked one of the more experienced nurses about the necessity for all of the activity. She related her recollections of the last category 4 hurricane to hit the area, Betsy, in 1965 and told me of the tragedy in its aftermath. I soothed myself by saying, "This is not Betsy; this is Katrina," not knowing then that Katrina would demand her own place in history.

Over the course of the day, we transported each of the critical patients to the second floor, an area that could hardly be termed "ideal" for these children. But, we made the best of a bad situation with the expectation that we would return to the first floor in 1 or 2 days. No one predicted that these patients would not see the original PICU again. As the night wore on, sleep became an issue, given that 4 residents were sleeping in rooms built for 2. Many of us slept on the floor, and as we rested, we laughed and joked, unaware of what lay ahead.

Key Words: Hurricane Katrina, Children's Hospital New Orleans, Code Gray, disaster, evacuation

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AUGUST 29: LANDFALL

It was windy and stormy. At about 2 AM, I awoke to the sound of rain smashing against the call-room window and wondered if it would break. I could tell that I was not the only one awake. No one said a word; we just listened as the hurricane sounded its arrival. By daybreak, the winds were dying down, and newscasters confirmed my suspicion that the eye of the storm had landed east of New Orleans. This was perceived as good news for us since most of the damage of a hurricane historically lies east of the eye.

All remained quiet in the transplanted, makeshift ICU, so much so that I decided to take a brief walk to survey the surroundings in the neighborhood. Although there was no flooding (yet), there were a lot of fallen trees, scattered debris, and downed power lines. The hospital lost power and began operation via generators. Unfortunately, this marked the end of air conditioning in some noncritical parts of the hospital, but at least it ensured working medical equipment for as long as the generators would last.

Meanwhile, my colleague Dr Andrea Oleary, who was across town at the Alton Ochsner Foundation Hospital, was learning disaster pediatrics as well. She wrote:

“I woke up bright and early to write my PICU progress notes. At that time it didn’t matter how early I completed my notes, because it was taking hours for our daily labs to return. We were trapped in a bizarre situation as most of our treatment plans were based on the results from those labs. We mused that this must be how doctors practiced medicine out in the field, ‘medicine in the rough.’ It was amazing to discover how dependent we have become on labs and imaging studies. Nevertheless it was disquieting to be unable to monitor our progress. We had an acute renal failure patient on dialysis. How were we to determine his kidney function or dialysis without laboratory values? To add additional insult, we had lost our power and were running solely on generators. Both patients and staff were starting to notice the warmth.”

Overnight, all of Children’s Hospital’s resident call-room windows leaked, and water had soaked into the carpet, leaving the smell of mildew to fill the air and the damp floor to continue to serve as our sleeping environment. Cell phones were working only sporadically and were sometimes useless. The hospital telephones worked in house but had difficulty with outside messages because of overloaded circuits. We were isolated from the world, and we were beginning to feel it.

AUGUST 30: 1 DAY AFTER LANDFALL

It was gray and quiet outside. Then the floods came; more than the storm itself, Katrina’s aftermath stunned the city. When we awoke, we were shocked to learn that 80% of New Orleans and its surrounding area was under water.

Frustrated citizens who had not evacuated, predictably, began looting the stores and affected homes, un-

derstandably for water and food but later, horribly, for televisions and expensive equipment. What happened, and what would this mean for the hospitalized children? We were alone although, fortunately, part of the 20% of the city without flooding. It was a positive note for us, but also a worry, given that people on the streets might soon find their way to our haven, perhaps ready to shoot for food and water.

In the midst of the stressful, risky situation outside the hospital, one of our staff NICU physicians did the unimaginable—accepted the transfer of 2 very ill newborns. University Hospital was isolated with the flood and had no power or water to maintain life-saving care. Although our ICUs were not optimal, we had generator power, water, and support services. But how would we transport these very sick children out of a flooded area? No one had trained for this. With sheer resolve, courage, compassion, and knowledge, our staff physician drove by fire truck to the point of flooding near the hospital and received the patients coming from University Hospital by canoe through floodwaters mixed with raw sewage (see “The University Hospital NICU in the Midst of Hurricane Katrina: Caring for Children Without Power or Water,” pp S369–S374). They fought to keep these patients alive while being accosted by desperate, stranded Katrina victims who were looking for food and safety. In a moment of joy and pride, both infants made it to the hospital and were placed on life-saving breathing machines. I knew then that my hospital had outstanding staff, and their devotion to our patients linked everyone.

After a meeting of hospital leaders, we were informed that we would be staying there for an unknown length of time with an estimated 10-day supply of food. What began 2 days ago as normal meals served in the cafeteria shifted to slower service with fewer selections. Some cafeteria workers’ houses had been flooded and their families put at risk, which was associated with justifiable staffing issues. Cell-phone service remained intermittent, and questions abounded as to how we could continue to run a hospital in this way. The first whispers of evacuation were heard, but this was not an immediate option, given that other hospitals in the area were now flooded and without generators; they would need to be evacuated first.

AUGUST 31: 2 DAYS AFTER LANDFALL

Outside, the clouds were breaking and the sun was coming through. We wanted to get out of there. The despair was settling in and was not limited by race, religion, social status, or occupation. By this time, we had achieved contact with our families, who were all desperate as well. My own mother begged me to come home, and my father threatened to find a government plane to “rescue” me. I told them both that I had a duty to care for these children first. The staff had all resolved

that the children came first and that they were our foremost concern.

Along with the other residents and charge nurses, I gathered the information for all of my patients regarding their needs and ability for transport to other institutions in the event that evacuation was possible. The nurses for Children's Hospital New Orleans flew into full swing, taking care of all details and, as usual, doing their jobs with utmost care and the least appreciation. The ICU nurses were my pillars, and each of them made my job easier.

Staff morale declined even further when we learned that the toilets in the hospital were no longer functioning normally for lack of city water. We placed our personal waste into biohazard waste bins. No one felt that these were conditions under which to run a children's hospital because it was no longer sanitary for the patients. In terms of safety, firemen, staying in the hospital for our protection, alerted us to the fact that the hospital could no longer outlast a fire because there was no water.

The administration of the hospital made the decision to go into self-evacuation mode, which meant no longer waiting for government assistance and arranging ways out for all of our children, followed by staff and employees. Administrators used available telephone lines to request assistance from other children's hospitals in nearby states. Our calls were answered almost immediately, and in a scene warming to the heart, the ambulances found their way to our streets to transport less acutely ill patients, and the roar of helicopters was not far behind them.

ICU patients were shipped by helicopter one by one, which took the entire night and went into the next morning. These transporting physicians and medical personnel were heroes, willing to travel to an unsafe and unknown area to rescue children they did not even know. But, this is what defines the medical field. We take an oath to serve those who are unable to serve themselves, and that is what everyone in Children's Hospital New Orleans, in every hospital in the city, and everyone who helped transport these patients to safety holds as a creed.

The view outside the hospital that night was awe-inspiring. On the ground, 30 vans lined up in the darkness of a night no longer lit by streetlights, using their headlights as their guiding beacons. These 30 vans served as a caravan to transport to the airport patients who were healthy enough to make the ride. From there, military helicopters transported them further to nearby cities and states. Just beyond those vans were groups of helicopters on the field surrounding the hospital waiting to carry the ICU-level patients. They flew out only to return in short time to pick up the next in line. This lasted the entire night, until, at last, there was quiet.

SEPTEMBER 1: 3 DAYS AFTER LANDFALL

It was sunny and beautiful at 6 AM. My colleagues and I heard what sounded like the beginning of an important announcement over the public-announcement system: "Attention! Attention! All Children's Hospital employees and staff!" Then there was silence. About that time, rumors began to fly. All of us feared the worst. Were there looters? Was the operator hurt? Had the floodwaters reached us? We stood paralyzed while one of the residents investigated. She reported back that the announcement was still a mystery, but by the hurried look of other staff, and because all of the ICU patients had been transported, it was time to head out.

One of the residents took one of the few remaining patients and her mother to drive them out of the city. As we drove from the hospital, I glanced back and realized the oasis that it was, an island in a body of water that was once a thriving city. From then on, all eyes were fixed west. As we drove, I had a vantage point to assess the area in which I live. All that could be seen was water.

We forged forward, and on reaching the Causeway exit, there were people, hundreds, perhaps thousands, of people, standing, waiting on the interstate. I would later find out that these were just some of the evacuees, with hunger and thirst written on their faces. Was this America? The Statue of Liberty has a quote from Emma Lazarus etched on it, which has long been considered a motto for the United States:

"Give me your tired, your poor,
Your huddled masses yearning to breathe free,
The wretched refuse of your teeming shore.
Send these, the homeless,"

Here they were, the masses, the homeless, the tired, and the poor, and they were waiting. Waiting to be cared for by their country and given basic needs: shelter, clothing, and food. It would take days more for many of these people to find refuge.

Although we continued out, it was as if the area was a war zone. In fact, it was a war zone, with martial law in place, families displaced (even from one another), homes leveled to the ground, and disease and famine imminent. Inside my car, I cheered as 50 to 75 buses approached the city to pick up evacuees. Behind them drove lines of trucks from the US National Guard equipped with boats and military personnel riding in the back. I wondered if they knew the extent of misery that they were about to encounter, but at least they were there, and citizens in need could be rescued.

The next thing I remember is pulling up to my parents' house in Baton Rouge, Louisiana. I parked and just sat there for a moment, unaware if I was prepared to see anyone. Then I saw my mother's face and, as I embraced her, we wept. She wept for the daughter whose safety seemed questionable at times, and I wept knowing that now I, and my patients, were finally safe.

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