

Blog

Teamwork in Action: How We Worked Together to Keep Patients Safe During a Hurricane

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By John Reed, MD, FACEP

North Carolina is no stranger to hurricanes. We've all seen Jim Cantore on The Weather Channel, broadcasting from the shores of Cape Hatteras or Nags Head during major storms. But as the medical director of an emergency department nearly 100 miles from the ocean, our facility is rarely impacted by hurricanes. That all changed in October.



The track of Hurricane Matthew was changing by the hour; some projections had it drifting out to sea, while others had it breaking up over the Atlantic. Very few predicted that the hurricane would gain strength and travel significantly inland.

Southeastern Regional Medical Center is located in Lumberton, N.C., near the banks of the Lumber River. Southeastern Regional is the only hospital in the county. We serve a medically fragile population with high incidence of chronic illnesses and limited access to primary care. Our ED typically sees about 180 patients a day. We staff with double physician coverage, three advanced practice provider shifts and four to five scribe shifts augmented with residents from our emergency medicine residency program.

Before the hurricane made landfall, our area received about 9 inches of rain. The sandy soil of the region was soaked, and the Lumber River was swollen with rain. When the outer bands of the hurricane reached us, trees became uprooted, snapping power lines as they went down.

My colleague Elizabeth Gignac, DO, associate director of the ED at Southeastern Regional, was leading our team on Saturday, Oct. 8, when the rain and wind picked up. She made reservations for herself and a few other clinicians at a local hotel for the night to ensure that they would be able to make their shifts the next day.

The hospital lost power on Saturday as roads flooded. Like most medical facilities, we have detailed disaster plans in place to mobilize quickly to deal with most natural and manmade emergency scenarios. The emergency generator at the hospital kicked on, but getting to the hotel wasn't possible due to flooding, so they slept on cots.

I was stuck at home with no passable roads between my home and Lumberton. I spent the time in frequent communication with the ER to ensure that our shifts

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were covered. I also was on the computer and ham radio, mapping out ways to get to Lumberton for those people coming in to work.

Sunday was sunny and somewhat quiet, and some of the staff was able to return home and get some rest. We thought it was the calm after the storm, but it was a temporary lull. I made it in on Monday in time for the river to flood south Lumberton and send us into crisis mode. The river was at record flood stage, trapping people in their homes. Roads and bridges were washing away, taking residents with them. The National Guard and other first responders were using boats to rescue those trapped by the rising water. I-95, the behemoth traffic artery that runs from Maine to Florida, had closed, forcing people to exit the interstate in Lumberton and neighboring Fayetteville, further adding to the chaos.

It's then that we began to realize the enormity of the public health threat: People couldn't use their home oxygen machines, couldn't refrigerate insulin, began running out of medications. People were setting up camp in the hospital lobby because they had nowhere else to go. We had to close the cafeteria to residents for fear that we'd run out of food for patients and staff.

Communicating with other colleagues and administrators was difficult. The hurricane knocked out cell service, so we switched to email, and then that went down, too. Text messaging worked sporadically, but not inside the hospital. We tried a variety of means to learn about road conditions and inform incoming staff about the safest routes to travel. Advanced practice providers and scribes shared traffic updates, and a state trooper helped direct some staff to our facility. It was a nightmare that presented a challenge at every turn, but our team remained focused and committed to serving patients and ensuring that we didn't have to turn anyone away.

"I've never dealt with a situation like this before. Nobody had," said Dr. Gignac. "Every time that you thought things couldn't get worse, they did. But our staff stayed positive. They thought on their feet to develop solutions. Emergency medicine clinicians are used to the unconventional. It's what we do."

Then the hospital lost water pressure, which meant no way to clean, cook, flush toilets or provide services like dialysis and laboratory testing. Administration began to question how long the hospital could continue to function on generators and bottled water. And then everything went black – literally. The generator failed, plunging staff and patients into darkness and nearly 90-degree heat due to failure of the hospital air conditioning system. A doctor with a head lamp walked from room to room to check on patients as staff manually ventilated those who were critical. The ICU was ultimately evacuated and eight patients were transported to nearby facilities by helicopter and ambulance.

In the ED, we saw patients with chronic illnesses like COPD and diabetes, as well as those experiencing flood-induced conditions, like skin infections from dirty water. We even treated a patient who suffered a snake bite in waist-deep water.

It was at that point that Will McCammon, DO, and I used our EMS contacts and experience to help hospital administration mobilize the state medical assistance team. Within 24 hours, the Carolinas MED-1 Mobile Hospital Unit dispatched a caravan of trucks and medical supplies from Charlotte to support our team. A 15-bed emergency department with its own water, power, lab, low-acuity OR suite and two-room ICU suite was assembled in the parking lot. I've never seen anything like it!

Tanker trucks of potable water arrived, which helped, but the hospital still didn't have full water pressure for services like dialysis. We heard that sections of Lumberton and surrounding communities were experiencing car jackings, lootings, armed robberies and violence. The National Guard was stationed at the hospital to protect staff, patients and supplies, while other guardsmen and women patrolled the streets to maintain order.

Our residents were particularly extraordinary. Some had only been physicians for three months, but they showed bravery, ingenuity and commitment. One resident, Jenna Santiago-Wickey, DO, worked at shelter clinics and with EMS. One of the duties at the clinic was to accept the bodies of the deceased. That's not an easy task at any career level. Thank you to Daniel Schroder, DO; Greg Capece, DO; Bill Gartlan, DO; Erin Hogue, DO; Jordana Ruffner, DO and Dr. Santiago-Wickey for their extraordinary efforts.

"They grew up quickly throughout this event," said Dr. Gignac, who is the director of the emergency medicine residency program. "I'm extremely proud of these young physicians."

Slowly, the water began to recede. About a week later the river was back within its banks and the community could begin the process of cleaning up. During this time, we saw an uptick in carbon monoxide poisoning, power washing injuries and GI issues as residents returned to compromised homes.

It's going to take a while for this area to recover. On a good day, the majority of residents barely has the basic necessities that they need. Now they have nothing. Medications were left behind or washed away. Hundreds of residents lost their homes and are living in shelters or other temporary housing.

Recognizing Our Team

I need to recognize our outstanding team, who truly went above and beyond their normal duties. There were no call-outs, everyone showed up, and worked extra if needed, despite limited access to the city.

Thank you to:

- Dr. Gignac, who provided outstanding leadership and commitment. She spent the weekend at the hospital sleeping on an army cot in between shifts.
- Phillip Stephens, PA-C, Lead APP, for his extraordinary work throughout this difficult time
- Joseph Deese, MD, for staying on duty all weekend during the hurricane
- Katie Fredlund, MD, for making the trip from Raleigh to work Sunday morning
- Jimmi Jones, NP, who stayed at the hospital for several days and worked every day
- Will McCammon, DO, for working a split shift with Dr. Service to cover open shifts
- Kaitlyn Reti, DO, for working nights all weekend, even without power or water. She was the only attending on duty that Saturday
- Kirk Service, MD, for working a split shift with Dr. McCammon to cover open shifts
- Frank Trenery, PA, who drove in a day before his shift just to be sure he could get to work

- Derek Yee, PA, who stayed and worked the weekend of the hurricane
- Scribes Brandon Blackwell, Algenis De Jesus, Megan Godwin, Brianna Jones, Cassie King, Nikki Kinlaw, Mary Mariyampillai, Carolyn Mohr, Kathleen Nin, Sara Rigsbee, Caitlin Walters, Connie Wingerter, who demonstrated true teamwork during this challenging time, especially when the ED was at 85 degrees and running on generator power

One lesson that I learned in all of this is to be prepared for anything, and never underestimate the power of teamwork.



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Unknown

I know several nurses that worked 16 plus hours, slept on cots, weren't able to shower or leave to see their families.. sacrifice was made by many from CNA's to MD's... everyone deserves recognition!

1/7/2017 4:29:24 PM

Nobody

Don't forget the nurses and everyone else that's works on the department.

12/20/2016 12:00:31 PM
