



Disaster on Our Doorstep

THE LESSONS OF KATRINA

By Dennis C. Whitehead, MD '75

EDITOR'S NOTE: Dennis Whitehead, MD '75, author of the following article, is chief of emergency services at Dickinson County Healthcare System in Iron Mountain, Michigan, a rural community located in the state's Upper Peninsula. In the autumn 2005 issue of Buffalo Physician, Whitehead reported on a five-week medical-relief mission he undertook to western Indonesia in response to severe earthquakes that devastated that region in the months following the December 2004 tsunami.

As the autumn issue of Buffalo Physician was going to press, Hurricane Katrina hit the Gulf Coast. We contacted Whitehead and asked him if he had been involved in relief efforts. We learned he had just returned from New Orleans, where he had spent six days working in and around the city as a volunteer with the Louisiana Department of Health and Hospitals.

At our request, Whitehead agreed to report on his Gulf Coast experience in this issue of Buffalo Physician.



THE OWNER OF THIS HOME IN PASS CHRISTIAN, MISSISSIPPI, WAS IN THE PROCESS OF BUILDING A STEEL-REINFORCED CONCRETE HOUSE USING MANY FEMA BUILDING STANDARDS. THE HOUSE WAS THE ONLY ONE LEFT STANDING AFTER HURRICANE KATRINA PASSED THROUGH THE AREA.

PHOTO BY JOHN FLECK/FEMA



LEFT: THE FLOOD ZONE BEGAN JUST AT THE EDGE OF DOWNTOWN. AREAS ALONG THE MISSISSIPPI RIVER, SUCH AS DOWNTOWN AND MOST OF THE FRENCH QUARTER, WERE CLOSE TO SEA LEVEL AND STAYED FAIRLY DRY. **BOTTOM RIGHT:** THE DAMAGED SUPERDOME. **FAR RIGHT:** DON JACOBS, MD, LEFT, AND DENNIS WHITEHEAD, MD, RIGHT.



PHOTO BY DENNIS WHITEHEAD

PHOTO BY JOCELYN AUGUSTINO/FEMA

The October 2001 issue of *Scientific American* included an article predicting the worst natural disaster the United States would likely face in the next decade, and it was not about an earthquake on the West Coast.

“Drowning New Orleans” explored what would happen if the eye of a strong hurricane passed just to the west of the city, much of which lies below sea level, and discussed in detail how the levee system protecting the area was in dire need of reengineering.

National Geographic’s “Gone with the Water,” published in October 2004, described how the continued loss of coastal wetlands would significantly worsen the effect of a hurricane on the city.

On August 29, 2005, New Orleans’ luck ran out. Katrina, a Category 4 hurricane, came ashore just east of the city at the Louisiana-Mississippi border. Areas immediately east of the eye fall suffered the worst storm surge since Hurricane Camille in 1969. New Orleans, which had considerable wind and water damage, initially looked like

it had dodged the big bullet. Within a few hours, however, several levees, built to withstand Category 3 hurricanes, gave way. A day later much of the city was under water. Television showed us the devastation, the floating bodies, the desperation of those still trapped in the city.

Health-care services in the city and for those displaced by the disaster were strained beyond measure. I had a few days off and wondered if I could help. The American College of Emergency Physicians’ website (acep.org) stated that the Louisiana Department of Health and Hospitals (DHH) was hoping for outside medical assistance.

When I contacted DHH they asked for my Louisiana license number. Living in Michigan, I naturally didn’t have one, so they told me to make a written request for an application. This didn’t seem like an efficient way to handle their pressing medical needs. Fortunately, a few days

later, the Louisiana legislature passed emergency legislation, allowing DHH to grant temporary licenses to physicians from any state.

The day after this news was announced, I called DHH from work to confirm my arrival time for credentialing in Baton Rouge.

Don Jacobs, a family practitioner who at age 75 is the dean of our hospital’s medical staff, happened to be in the Emergency Department and overheard my conversation. Don had been quite interested in my Indonesia experience, and when he learned I was leaving the next day he announced he was coming too. Kathy, one of our emergency nurses, also decided to come, as did Sheryl, a critical care nurse married to one of my skydiving buddies. On September 4 we climbed into my four-seater plane for the five-hour flight to Louisiana.

Baton Rouge’s airport is normally not that busy, but with New Orleans International out of commission, air traffic there had tripled. We were put in a long queue for landing, as military helicopters were continuously arriving and departing from the Air National Guard base on the field. Once we landed, deafening swarms of Chinooks and Blackhawks hovered everywhere as we waited to be picked up.

Our DHH van driver surprised us when he turned into the sprawling Jimmy Swaggart Ministries compound on

the edge of Baton Rouge. The evangelist’s organization has fallen on hard times and now rents most of its considerable building space to state agencies.

DHH officials quickly credentialed us, then transported Kathy and Sheryl to Louisiana State University (LSU), where they worked with evacuated hospital patients at the basketball field house. Don and I received a terse briefing from one of the DHH coordinators, who told us to be ready for deployment to New Orleans at 5 a.m. the next day.

I asked where we would be staying and the coordinator shrugged and said, “Well, the population of Baton Rouge has more than doubled now, and there are no rooms anywhere. Hopefully something will turn up.”

One of the DHH staff overheard his remark and offered us her small office, since she would be working in the field for the next week. We grabbed two cots from a closet and found barely enough floor space for the two of us to sleep. I just had to remember not to sit up suddenly on awakening, as I kept hitting my head on the overhang of her desk.

A GOOD DAY’S WORK

Over 400 ambulances from 48 states were assembled at DHH headquarters, which served as the EMS staging area for Louisiana’s relief effort. The first day Don and I were assigned to a New Orleans Police Department (NOPD) precinct to accompany officers evacuating those still stranded in flooded areas of the city. We were teamed with two paramedics from California who had been helping evacuees at the Convention Center the day before.

Baton Rouge is 70 miles from New Orleans on Interstate 10, and only relief traffic was allowed within 15 miles of the city. Driving into the city on the deserted freeway was quite eerie and reminiscent of science-fiction movies.

Network television trucks bristling with satellite dishes jammed Canal Street at the Riverwalk. We reported to NOPD’s temporary headquarters at one of the big downtown hotels, only to be informed the precinct building to which we were assigned was under ten feet of water. We were told to hang around for a while to see if any emergencies came up, but there already were ambulances there with enough personnel to handle any problems likely to crop up in this makeshift bureaucratic zone.

As our team discussed what to do next, a police lieutenant approached and asked if we knew anything about a

TOP: DON JACOBS TRIES TO CONVINCE A SYMPTOMATIC DIABETIC WOMAN TO EVACUATE. HER HOME WAS ALMOST COMPLETELY DESTROYED BY WIND. SHE HAD NEVER USED HER GLUCOMETER KIT BEFORE AND SHE TESTED >500. SHE SAID SHE WOULD CONSIDER EVACUATING IF WE CAME BACK THE FOLLOWING DAY, WHICH, REGRETTABLY, WE WERE NOT ABLE TO DO. **BOTTOM LEFT:** THE INFAMOUS CONVENTION CENTER WAS EVACUATED JUST BEFORE WE ARRIVED. THE STENCH WAS OVERWHELMING; WE COULDN'T GET MORE THAN A FEW FEET INSIDE WITHOUT BEING OVERCOME BY THE SMELL. MANY BODIES REMAINED INSIDE. **BOTTOM RIGHT:** A RESIDENT WHO STAYED BEHIND, EATING AT A RED CROSS STATION. HE LIVED IN THE FRENCH QUARTER AND REFUSED TO EVACUATE WHEN TOLD HE'D HAVE TO LEAVE HIS DOG BEHIND.



We encountered many people still in the city who had medical problems, especially diabetics with uncontrolled sugars. Power was out and unrefrigerated insulin was going bad. We examined people wherever we found them, and got tips on shut-ins nearby whom we visited in their beds.



cholera outbreak. Since cholera might cause panic among those still in the city I asked where she got this information and how I could confirm it.

She took us to a clinic in one of the hotels where rumor had it three patients had been so diagnosed. The emergency physician who had just come on duty reported that the doctor he had relieved mentioned treating three firefighters with diarrhea, but he had not heard anything about cholera.

With cell service down in most of the city, I asked the lieutenant to get me a satellite phone to call the Orleans Parish Health Department. After an hour of phone calls I was finally able to determine that the diagnosis was idle speculation by the first clinic physician. I was able to help squelch the potential rumor, which had already been heard by some of the news media. The Orleans Public Health Department issued a statement that no cholera had been detected in the parish and the rumor died out.

Following my brief stint as a public-health official we examined NOPD SWAT team members who had been wading through filthy flood waters for days. Several had infections, which we treated.

We then stocked up on food and water before leaving for downtown to assist with a sweep of a large public housing project for the elderly. There were rumors that many ill patients remained in the high rises, although after two hours of searching we didn't find anyone.

Everywhere inside these sweltering buildings there was an overpowering smell of decaying flesh, but it all came from food rotting in refrigerators. In the lobby I noticed a newspaper box that still had the August 28 issue of the *Times-Picayune* in it, advising residents to evacuate before Katrina hit.

While driving away from the projects, many people in the poorer neighborhoods came out to greet us, most of whom had remained inside when the ubiquitous APCs (armored personnel carriers) had been patrolling the

streets. We offered water and MREs (meals ready to eat) to anyone we saw. Many accepted our offer to take them to the helipad near the Convention Center for evacuation. (Everything you heard about how bad things were at the Convention Center was true; it was an astounding mess.)

During the days that followed the storm, there were many news stories about people who stayed behind because they were not allowed to take their pets; however, we encouraged people to bring them. After all, the primary idea was to get people out, not leave pets behind. We did not hear of any military personnel refusing transport of properly restrained pets during our stay there.

We encountered many people still in the city who had medical problems, especially diabetics with uncontrolled sugars. Power was out and unrefrigerated insulin was going bad. We examined people wherever we found them, and got tips on shut-ins nearby whom we visited in their beds. We convinced a few folks who had been thinking about evacuating to come along with us, prompting one dispatch sergeant at the helipad to ask, "Where are you guys finding all these people?"

It seems that quite a few of New Orleans' citizens were wary of APCs but comfortable with an ambulance.

Several families wanted to have time to gather their things and asked if we could come back the following day to pick them up, so we took their names and addresses before leaving.

Driving back to Baton Rouge that night, we all felt we had done a good day's work and looked forward to doing the same thing the following day. Don and I grabbed a quick bite at the DHH cafeteria and crawled into our sleeping bags for a few hours sleep.

DISASTER UNPREPAREDNESS

The next morning I went to the DHH physician coordinator and told him of the success we had the previous day. I requested we be assigned the same ambulance



crew and allowed to resume our evacuations in the neighborhoods we had covered. The coordinator cut me off in midsentence: "Look, we can't have a cowboy operation here and we expect you to fulfill whatever assignment we give you."

I was quite surprised by his tone, and told him that disaster-site managers I had worked with in the past had actively solicited information on what was effective in the field and that I was trying to be a helpful member of the relief team. When I asked him to reconsider, he barked, "That's not going to happen, and if you try to go back there without authorization you will be arrested!"

He had an assignment for Don and me in Baton Rouge, helping to triage 11 busloads of critical patients arriving from the medical staging area at the New Orleans airport. I gave the irate coordinator the list of potential evacuees who were waiting for us, but I have no idea if that information was ever transmitted.

Don and I hitched a ride with some Tennessee nurses to a recently closed Kmart well suited for triage. The facility already had cots and partitions, ancillary supplies, and facilities for registration. As we entered, the pharmacy area was being stocked with medications.

We met up with three other doctors and several more nurses who had also been assigned to the site. We were told patients would be arriving within the hour, and in fact a few patients came in after driving from rural areas on the Mississippi border that morning, having heard the facility was being opened. I treated four patients and got them discharged quickly.

We were told the buses would be arriving any moment, but after another 90 minutes went by I began to wonder what was going on. As noontime rolled around an apologetic state trooper came in and said there had been a decision to close down the facility. He said he would try to find out where the buses were going and was back in a few minutes to say the facility would indeed be staying open to receive the patients, which were due to arrive at any time.

After another hour of staring at one another, we were told to go immediately to the LSU baseball stadium, as the buses had been diverted there instead. I rode in the back of a pickup truck in sweltering heat for the 20-minute drive to the campus.

There wasn't any excitement evident at the stadium, and there certainly weren't any buses. I found an open side entrance and talked with two groundskeepers resodding the

infield. They were surprised to hear patients were coming there, and one of them called campus police to see what was going on. Within a few minutes a dozen armed national guardsmen showed up, saying there were reports of possible troublemakers on the buses and that we should let them board the buses first before attempting any triage.

Several more ambulances pulled up. Eight doctors, seven nurses, ten paramedics, and two physician's assistants waited expectantly in the heat. A disaster team from Illinois pulled up in a van, briefed us on correct "bus-triage techniques," then promptly left.

After another hour, the baseball team showed up for wind sprints and long tosses in the outfield.

It began to get dark, and one of the ambulance squads left in disgust. MREs were brought in for us to eat, and I found some baseballs in the dugout to juggle. Three doctors and a few nurses left.

At 9 p.m. we were told the buses were just pulling into the city and to get prepared. Don put on some gloves.

At 10 p.m. we were told the buses were entering the campus.

At 10:30 p.m. a campus officer pulled up and announced: "There was one bus, only two patients were on it, and it went to the football stadium. Thanks for sticking around."

We rode back to DHH in an ambulance driven by a couple of Wyoming paramedics whose cursing was so inspired I was tempted to offer them a job. On our return I looked for the dogmatic coordinator to repeat some of what I had heard, but I couldn't find him, which is probably just as well.

UNsung HEROES

The following morning a different coordinator was on duty and I told him to give us an assignment that involved real patients. He had heard of the previous day's fiasco and asked if we'd be willing to help in St. Tammany's Parish on the Mississippi border just north of Lake Pontchartrain. The parish's disaster coordinator, an internist, had asked DHH for doctors to visit outlying shelters and do EMS site assessments in several rural villages. We left in an ambulance with two Ohio paramedics to meet with Dr. Rachael Murphy in the parish seat of Covington. Dr. Murphy is one of those unsung heroes who keeps civilization afloat when disaster strikes. Equal parts pit boss, pit bull, and cheerleader, she was an inspiration to everyone she worked with, doling out hugs,

reassuring patients, giving encouragement, drying tears. Don and I agreed she was the most remarkable person we met on the trip.

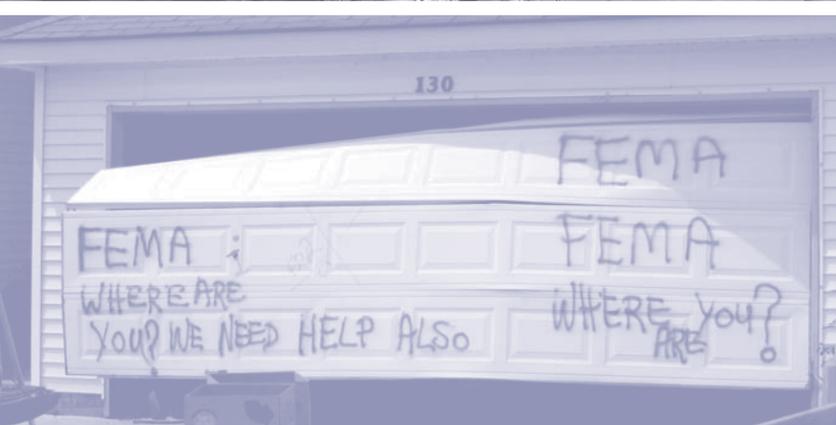
Katrina's eye had passed over St. Tammany's Parish, making travel difficult because of the damage. We visited several rural areas to do EMS assessments, stopping at several shelters in each town we visited. We wrote plenty of prescriptions for people who did not have their regular medicines. The biggest problems were with hypertensives and diabetics, with several of the latter having to be put on oral hypoglycemics temporarily until the power could be restored.

Dr. [Rachael] Murphy is one of those unsung heroes who keeps civilization afloat when disaster strikes. Equal parts pit boss, pit bull, and cheerleader, she was an inspiration to everyone she worked with . . . Don and I agreed she was the most remarkable person we met on the trip .



We met another remarkable person in a shelter in tiny Bush, Louisiana. Anita, a nurse midwife from Los Angeles, had been driving through the area on her way home from visiting friends in Atlanta when Katrina came onshore. She found the Bush shelter as the storm hit. A few minutes after she arrived a young woman there went into labor and during the height of the storm delivered a healthy baby with Anita's help. Anita had stayed on to help with other patients there, and she was most grateful to have us come by to examine them and refill prescriptions. She directed us to the nearby hamlet of Isabel, where we set up a clinic in the ambulance outside a general store.

We briefed Dr. Murphy on our way back to Baton Rouge, and I got her to promise to take off the next day. (Actually, I strongly doubted she would do that.)



PHOTOS BY DENNIS WHITEHEAD

TOP: THE INDOMITABLE DR. RACHAEL MURPHY, CENTER, AND ONE OF OUR PARAMEDICS. I HOPE ST. TAMMANY'S PARISH PROCLAIMS A DAY IN HER HONOR. **CENTER:** EVERY HOME IN THIS SLIDELL, LOUISIANA, NEIGHBORHOOD ON THE SHORE OF LAKE PONTCHARTRAIN HAD CONSIDERABLE DAMAGE. SEVERAL RESIDENTS SPRAY PAINTED MESSAGES FOR FEMA, MOST OF WHICH WERE UNPRINTABLE. **BOTTOM LEFT:** WORKING IN BANDA ACEH AND LOUISIANA THIS YEAR, I'VE SEEN A LOT OF BOATS WHERE THEY SHOULDN'T BE. **BOTTOM RIGHT:** THIS VENDING MACHINE WAS IN THE LOBBY OF THE RETIREMENT HIGHRISE WE SWEEPED. EVERYTHING THE PAPER WARNED OF HAPPENED.



When we got back to DHH we found out she had already reserved our services for the next day. Don had made such a hit with the rural patients—just as he does in our rural community—that she was assigning him to other shelters the following day.

In my written briefing to DHH, I emphasized how much damage St. Tammany's Parish had suffered and how much help they still needed, so the coordinator on duty promptly agreed to send us back there. I was so tired I didn't even bother eating after we got back. Don and I collapsed on the cots in the little office and fell fast asleep.

In my career as an EMS director I've driven ambulances a few times, but never for a long distance. I was surprised how fast this new ambulance went and how quickly traffic got out of the way.

All relief efforts were considered to be top priority by the state of Louisiana, and all crews had been instructed to use lights and sirens in transit on official missions. Most of the crews we were with only did that in heavy traffic, however, as drivers were starting to ignore the constant wail of sirens with emergency vehicles buzzing by all the time.

the I-10 bridge from Slidell. However, because Katrina had destroyed the interstate in both directions, we were forced to detour around the west side of the lake to get into the city.

All National Guard and Coast Guard boats were deployed in the flood area when we arrived; however, I did go out on a bayou boat with a woman and her boyfriend. The woman's mother lived in the flood area and was missing, so they wanted to check her house to be certain she was not trapped in the attic as so many others had been in the city. Fortunately she was not trapped in her home as they had feared (she was later discovered to be safe with a relative), so we stopped by other addresses the authori-

were glad to get back to the staging area and out of the stink.

We returned to Covington to collect Don, who was effusively happy and looked ten years younger as he described his day treating patients in shelters.

After being delayed in traffic jams in Baton Rouge—which will be the norm in that city for some time to come—we found a place to have a nice meal with our medics and turned in for 10 hours of sleep in the office.

The following morning we briefed DHH coordinators on our experience and made some written recommendations. After meeting Kathy and Sheryl at the airport we were lucky to get a good tailwind home and made it nonstop.



PHOTOS BY DENNIS WHITEHEAD

THE MIASMA

The next day we were teamed with a pair of paramedics from Illinois who had just arrived in Baton Rouge after driving all night. It was obvious that both these young women were completely beat, and I asked them half jokingly if they'd like me to drive. "Oh God, that would be great, do you mind if we sleep in the back?"

Don and I readily climbed up front after he elicited a promise from me that I wouldn't kill him.



We dropped Don off with Dr. Murphy in Covington, where he got a driver to take him to various shelters throughout the parish.

Dr. Murphy asked the medics and me to do a site assessment and take pictures for her in Slidell, where the eye of the storm had passed directly over. Sitting on the northeast shore of Lake Pontchartrain on the Mississippi state line, Slidell took a big storm surge and was one of the most heavily damaged towns in the state.

After finishing the survey and meeting with police officials there we received a radio call asking for assistance in New Orleans. Rescue boats in the flood areas had found new evacuees with medical problems, and available doctors were being asked to report to the Lakeview area to assist.

Normally New Orleans is a 20-minute commute across

FAR LEFT: MOTHER HOLDING HER BABY, WHICH SHE DELIVERED IN THE STORM SHELTER WITH THE ASSISTANCE OF ANITA, THE MIDWIFE. **OPPOSITE, TOP RIGHT:** OUR GROUP OUTSIDE THE SHELTER IN BUSH, LOUISIANA. DESPITE THE PROLONGED POWER OUTAGE, THE SHELTER WAS EXTREMELY WELL RUN. RIGHT IS ANITA, THE MIDWIFE, A TRUE GOOD SAMARITAN; FAR LEFT IS A LOCAL VOLUNTEER AND A NURSING HOME OWNER FROM OKLAHOMA WHO DROVE TO THE AREA ON HER OWN TO HELP OUT. **OPPOSITE, BOTTOM LEFT:** SHORTLY AFTER I TOOK THIS PHOTOGRAPH IN THE LAKEVIEW FLOOD ZONE, WE HIT THE TOP OF A CAR AND HAD TO ROCK OUR BOAT OFF IT. EVERYTHING SMELLED OF SEWAGE, WHICH IN FACT IT WAS. **OPPOSITE, BOTTOM RIGHT:** THESE AMBULANCE DRIVERS DROVE ALL NIGHT FROM CHICAGO AND UPON ARRIVAL WENT RIGHT TO WORK.

ties had asked us to check. We never did find any potential evacuees, but the experience was unforgettable.

Located on the northwest corner of New Orleans, Lakeview is one of the lowest sections of the city. Water was up to the roof gutters on single-story houses, most of which seemed to be a total loss. I can't adequately describe the pervasive miasma of the floodwater, more like condensed sewage with chemicals floating on top.

I cringe to think this slop was pumped into shallow Lake Pontchartrain. Water splashed on bare skin resulted in stinging and a red rash soon after. A myriad of objects—basketballs, toys, tool sheds, boats still attached to their trailers—floated serenely through the fetid muck.

Although we mostly stayed in the middle of streets, every so often we would hit something underwater, which usually turned out to be the top of a vehicle. I wondered how many of them contained victims who had been caught in the rapidly rising flood.

After two hours of patrolling it was near dusk, and we

HINDSIGHT AND HUMILITY

One thing is certain about disasters: you never know what you'll encounter until you actually get there. Elected officials, disaster coordinators, and field personnel at all levels can better appreciate missed opportunities and mistakes in hindsight, and I'm reluctant to criticize anyone who genuinely tries to help. I have less tolerance for those who stubbornly maintain they would not have done anything differently even though things could clearly have been done better.

If I had a wish for New Orleans, it would be that we let the coastal marshlands regenerate. It would also be nice if the world's largest convoy of dump trucks could bring in enough fill to raise the city above sea level, but that isn't going to happen.

Katrina taught us much, as was almost immediately evident in the response to Hurricane Rita. Future disasters will teach us new lessons, as long as we have the humility to heed them. **BP**