

## Devastation in Katrina's Wake

An initial report on the EMS response to one of the worst natural disasters in U.S. history

### THE BIG PICTURE

**A**mong thousands of apocalyptic images still surfacing in the wake of Hurricane Katrina, one in particular illustrates the altruistic EMS response: A lone ambulance, taking a hazardous chance, fords through floodwaters toward a stranded community. Ignoring naysaying officials unfamiliar with the area and its residents, David Hussey, an EMT-B with Acadian Ambulance Service, found a back way into St. Bernard Parish, La. More rescuers followed his lead, bringing aid to one of many stricken areas eclipsed by near-anarchy in neighboring New Orleans.

Even before Katrina slammed into the Louisiana, Mississippi and Alabama coasts on Aug. 29, 2005, emergency crews knew damage from the Category 4 hurricane would be catastrophic. The below-sea-level city of New Orleans was especially vulnerable, doomed by the same, unique geography that had sustained centuries of commerce and culture.

Initial post-storm attention focused on the ravaged Mississippi and Alabama coasts, where a 20-foot storm surge wiped out entire coastal communities. Major highways disappeared beneath surge-driven sand, and highway bridge decks toppled into water, eliminating hope of quick mutual aid from rescuers eager to assist stricken areas. Responding flight crews found few landmarks. The storm had been so vicious that some barrier islands (and at least one lighthouse) were swallowed by the Gulf of Mexico.

Katrina's wrath continued hundreds of miles inland, where tornadoes and straight-line winds shredded trees, peeled the eaves off buildings and left many communities

without electricity or standard phone service for weeks.

At first, New Orleans sustained similar wind damage but did not flood. Then aging levees began to fail.

"They've been telling us for years and years that this [was] going to happen," says Ken Bouvier, a native of New Orleans and president of the National Association of EMTs. "We'd dodged the big storms. We'd gotten lucky before, but now our time had come."

Within hours, nearly 80% of the city famous for its Cajun ambience was deluged with a floodwater roux of sewage, debris and stagnating chemicals. Decomposing

bodies added to the already biohazardous mess. The heralded French Quarter was spared major flooding, but the rest of the city (largely areas that tourists rarely see but EMS crews know well) was inaccessible to rescuers without boats.

Coast Guard helicopters immediately began hoisting stranded residents, one by one, from the roofs of their swamped homes. But air rescuers were overwhelmed: Thousands of residents had lacked the means to leave New Orleans prior to Katrina's landfall. More than 40,000—encouraged by officials—sought shelter in the New Orleans Superdome and Ernest N. Morial Convention Center,



COURTESY ACADIAN AMBULANCE SERVICE

An Acadian ambulance traverses the floodwaters of New Orleans.

believing that the hurricane itself would be the extent of their nightmare.

After winds died down, restless crowds attempting to leave either facility found that the city was flooding. They were stranded with little food or water, no working toilets, no power for lights or air-conditioning—and an already overwhelmed public safety contingent.

Promised federal aid did not arrive for days, leaving rescuers to improvise care under the worst of circumstances. Horrifying media images remain impossible to forget: outnumbered rescuers triaging angry masses of dehydrated people, bodies of the dead lying and floating across the city, the days-long wait for evacuation, and subsequent descent into violence.

Medical and rescue helicopters, rescuers in boats and hundreds of personnel with EMS, fire and law enforcement agencies found themselves under gunfire, and rescue operations were temporarily suspended until the National Guard and U.S. military were cleared to regain control of the city several days after the hurricane struck.

But in the midst of post-Katrina finger-pointing, EMS response consistently is drawing bipartisan praise. Hundreds of EMS personnel continued on the job despite losing their own homes in the disaster. Army Gen. Russell Honore, a Louisiana native who minces no words with either military or media, offered compliments to civilian EMS. “We’ve got 300 helicopters and some of the finest EMS workers in the world down there in New Orleans, and they are making it happen,” Gen. Honore said to a news reporter who had suggested apathy within rescuer ranks. “That’s BS,” he added. “I will say that on behalf of every first responder down there.”

Ironically, days before Katrina struck, plenty of EMS personnel were in the Big Easy, attending the annual EMS Expo at the convention center. When Katrina deviated from its initially forecast course and aimed straight at New Orleans, Expo organizers cancelled Saturday evening activities and urged attendees to evacuate.

Most Expo attendees did leave, but some at the mercy of airlines were stranded in the city. A few others volunteered to stay and formed their own first response groups within the city’s hotels. Bouvier, a supervisor with New Orleans EMS, stayed in his hometown, as did NAEMT Past President John Roquemore, who works in neighboring Jefferson Parish.



PHOTO CARRIE PYNE

A victim is evacuated through the use of a standard kitchen chair.



PHOTO JESSE COX

Thousands of hospitalized patients and nursing home residents were evacuated by ground and air from New Orleans prior to hurricane landfall. Dozens of municipal and private ambulance agencies descended on the city and then found the gridlock of ground evacuation prevented quick return trips.

As winds rose with the storm’s approach, calls for evacuation grew more frequent—and frantic.

“The sense of urgency was huge,” says Mike Burney, operations manager of the communications center at Acadian, which transferred by air and ground more than 700 patients in the 36 hours prior to the storm’s arrival. Evacuations were suspended late Sunday night, when wind-driven debris made the streets too dangerous for ambulance crews.

A military Black Hawk lands to evacuate triaged patients.

Even before the storm made landfall, EMS personnel outside the targeted area prepared for the largest mutual aid response in organized EMS history. Service directors throughout the United States were swamped with their own flood of personnel who volunteered to be part of the rescue effort.

Knowing they would need to be completely self-sufficient in an area left with no electricity or running water, rescuers crammed supply trailers with everything from oxygen cylinders to sleeping bags, stacks of water bottles, bags of beef jerky and thousands of pounds of medical supplies. Once activated by state offices, hundreds of urban search and rescue crews,

## PRIORITY TRAFFIC

ambulances, and command and support vehicles descended in waves upon staging areas.

One of the largest staging areas was in Baton Rouge, La., where out-of-state EMS providers filled out paperwork necessary for emergency certification from the Louisiana Bureau of EMS office. Many crews assigned to New Orleans lined up their ambulances on Interstate 10, beneath the Causeway Blvd. South overpass.

Coast Guard helicopters ferried people from rooftops, and within hours National Guard and multiple branches of the U.S. military began arriving in the beleaguered areas, although, controversially, they weren't immediately deployed to aid those stranded in the city, nor those in outlying Louisiana, Mississippi or Alabama.

Desperation festered among those remaining in New Orleans, where reeking floodwater had risen to waist level in some city hospitals. Drowning generators fizzled out, cutting power to the entire facility and every electricity-dependent item within it. Staff at Tulane University Hospital created their own helipad by knocking over light poles atop an adjacent parking garage so helicopters could land there and evacuate patients from nearby facilities.



PHOTO COURTESY MCCAIN

Houston fire, EMS and police units were pre-staged well in advance of receiving evacuated Louisiana residents.

The situation at Charity Hospital became so desperate that Norman McSwain, MD, chief of trauma surgery at Charity, appealed directly to the Associated Press news service for assistance. Food, water and power were running out, patients were dying, and remaining medical personnel were at risk from looters. They huddled together on upper floors

of the hospital for safety. McSwain e-mailed the AP for assistance in evacuating Charity and University hospitals.

"We have been trying to call the mayor's office. We have been trying to call the governor's office," McSwain said in an e-mail obtained by *JEMS*. "We have tried to use any inside pressure we can. We are turning



Each rescue worker has a continuing, unique story. And more than a few are shrugging off the "hero" tag.

PHOTO JESSE COX



PHOTO JESSE COX

For several days, street law ruled New Orleans.

to you. Please help us.”

With outnumbered police officers deserting the New Orleans Police Department in record numbers, street law ruled New Orleans for several days. EMS personnel standing by in the Superdome and convention center soon found themselves endangered by roving gangs.

The more time passed, the worse their situation got. Accumulated human waste and temperatures above 100° F drove thousands of desperate, dehydrated people outside. They brought their dead with them, laid them beneath sheets and tarps alongside both buildings, and waited for an evacuation that finally commenced days after the hurricane.

Once the National Guard and U.S. military were finally unleashed on the city's lawless, hundreds of civilian and military helicopters orchestrated mass airlifts, releasing some evacuees to the Causeway triage area and others to another triage area at the New Orleans International Airport, where dozens of C-130 aircraft whisked patients away to available facilities across the United States.

Roof-top rescues continued even as October JEMS went to press. Each rescue worker involved with the hurricane response has a continuing, unique story. And more than a few are shrugging off the “hero” tag. Many worked for days without adequate food, water or sleep, running solely on adrenaline and the ongoing need to assist thousands.

Numb survivors are dispersing throughout the United States, beginning anew with a mix-

ture of resignation and hope. Following their initial rescue from New Orleans, evacuees joined a complex exodus to nationwide communities. Most were relieved to be out of the city but just as desperate to find their families, who in some cases had been ferried, flown and driven to other states.

One-quarter of those evacuees—nearly 250,000 people—arrived in Texas, 130,000 to the Houston area alone. In Houston's Reliant Park, multiple venues (including the Astrodome) swelled with so many refugees that the U.S. Postal service created a ZIP code for the newly dubbed “Reliant City.”

In a massive organizational challenge, Houston area public safety agencies quickly developed response parameters for the tens of thousands arriving in the city. Using an organizational structure tested in 2001 by Tropical Storm Allison, Houston area EMS, fire and law enforcement agencies set protocol for the public safety and emergency medical phase of creating a city for 25,000 people. Additional thousands were housed in shelters throughout the city.

Many patients who had spent days in the New Orleans maelstrom were traumatized and dehydrated. Others who had been without needed medication for days were staggering from hypertension, skyrocketing blood sugar and renal insufficiency, among the many pathologies that were exacerbated.

A partitioned field hospital (complete with a full pharmacy, minor surgery center and multi-specialty ED) was set up within Reliant City to handle the influx of people. Evacuees needing hospitalization were transported by ambulance to Houston area hospitals, which despite a chronically high census still made room for the city's new population.

With its own future uncertain, New Orleans nonetheless is beginning its recovery.

At press time, New Orleans EMS, which runs emergency calls within the city, is transporting its trauma patients straight to the Mississippi River, where the medical ship USS Iwo Jima is docked where cruise ships once were moored.

“There are still a lot of people who don't want to evacuate,” Bouvier said. Although much of the city's populace has left, those remaining (plus those who are in the city to clean up) still need ambulance coverage, so New Orleans EMS has set up temporary shop in a nursing home building that wasn't flooded.

“It's brought us closer together because

we're all kind of camped out together,” Bouvier said. “Some of our (former) employees who moved away have come back to help us. They saved their old uniforms and came back.”

The topography of every service area has changed. Familiar landmarks and even street signs are gone. Sometimes, crews “can't get there from here” and must be creative to reach their patients. Many services throughout the affected states have accepted out-of-state assistance from other agencies that have shared their ambulances, equipment and personnel.

Because snipers targeted New Orleans rescue crews during the darkest days after the hurricane, EMS personnel there now respond with long-rifle protection from U.S. Customs officers. They fuel their ambulances directly from tanker trucks. Radio communication has improved, but cell phones are dicey, depending on the carrier and area code. All emergency responders working in or around New Orleans have been inoculated against tetanus, and hepatitis A and B.

Despite the blow dealt to the Gulf Coast and New Orleans, service directors and supervisors remain optimistic and proud of the above-and-beyond performance of EMS personnel during the continuing crisis.

“Some of our employees are continuing to work even though they've lost their homes,” says Julie Mahfouz, public information officer for Acadian. “They've lost everything but they haven't stopped working.”

Numerous relief funds have been set up to assist EMS personnel who have lost or sus-



PHOTO CARRIE PYNE

Rescuers were fueled by a need to help.

tained serious damage to their homes in the wake of Hurricane Katrina:

The NAEMT has an extensive database of EMS-related relief funds, temporary housing and opportunities for volunteering within the damaged area, posted on its Web site at [www.naemt.org](http://www.naemt.org). The site receives continuous updates and includes links to its EMS Rescuer and Relief Fund, which was initially established after 9/11 but remains operational.

Acadian Ambulance Service, which provides emergency coverage to the entire state of Louisiana, part of Mississippi and non-emergency service to Baton Rouge and New Orleans, has established a relief fund for personnel whose homes were lost to Hurricane Katrina. More information is available online at [www.cfacadiana.org](http://www.cfacadiana.org), or contact Raymond Herbert at 337/266-2145.

—Courtney McCain

## FLYING INTO THE STORM

As the air ambulance pilot banked the chopper and slowed his descent toward the Superdome, he asked again, “Are you sure you want to do this?”

The pilot, my editors and my family all had issues with my plan to wade into New Orleans without a way to get out. Thugs were shooting after dark, and I didn’t have any idea where I was going. I was on my own.

“Positive,” I said, trying to hide my own fear. This, I had to see.

I wanted to find what was left of New Orleans EMS, a group I’d met while investigating EMS in the nation’s 50 largest cities. I wanted to see first-hand how they handled a historic crisis.

I had dropped into mass casualty events repeatedly since becoming a *USA TODAY* reporter in 1992. Plane and train crashes, shooting rampages, hurricanes like Andrew, and terrorist attacks on Oklahoma City and 9/11 were among the massive, national tragedies I’d covered.

As a former paramedic, I’m always curious to see how EMS responds to these unforeseen challenges when I reach the scene of a Big One.

The Superdome was emptying fast when I arrived on Friday morning, four days after Katrina roared through. But few people across the nation knew the downtown convention center still had about 20,000 people baking, without food or water by day, and being vic-

timized by whacko vermin each night.

I first rolled down Convention Center Blvd. in front of the Ernest N. Morial Convention Center midday Friday with police officers as they moved into the area in force for the first time. They had refused to go in until they had scores of SWAT officers. The area was still considered by typical measures too dangerous, but the military was on its way, bringing food and water.

But, by modern American rules, cops—not soldiers—had to go in first.

As I rode in the back seat of a command car, the police chiefs looked nervous. It was as if the first arriving cops in bulletproof vests and carrying assault rifles were walking across a lake covered by a thin layer of ice.

When they stopped just a few feet from a corpse covered by a blanket in the median, police explained to angry residents that military trucks with food and water were rolling in behind them. They listened as people told of murders, more bodies inside the convention center and sick people dying.

As we left the area, it was clear that the people posed little threat. They just wanted help—desperately.

A few miles away, the city’s EMS crews were

By Wednesday, Aug. 31, a disaster medical assistance team from New Mexico had arrived at the Superdome to assist in care and evacuation.

itching to help them. They knew that some very sick people had gone four days without insulin, dialysis and life-sustaining medicines. They knew people had already died. And they knew more would likely die overnight. But with just a few ambulances and no working hospitals in the city, the traditional method—assess, treat and transport—was not an option.

New Orleans EMS needed massive resources to rescue these people. But without good communication with the outside world, they had trouble getting the resources they needed. Then the military arrived.

When choppers from every branch of the armed forces started landing in the convention center parking lot on Saturday, the city’s EMS was back. Finally, they could get their neighbors to hospitals.

And the way the city, and in particular New Orleans EMS, treated its residents reminded me of what EMS is really all about. Assessing and evacuating 20,000 people in eight hours required grit. The desire to help, combined

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PHOTO: JESSE COX

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with an instinct to act, drives EMS.

Police stayed away. The military deployed troops elsewhere. Yet the 80 staffers who remained in the battered New Orleans EMS could not be stopped from going into the mob looking for those who could still be saved.

The crews marched in to help the sickest people I'd ever seen—miles and miles and miles of them. All kinds of organ failure. All kinds of suffering.

It was triage by attitude. If people were healthy enough to argue about why they should go first, then they weren't sick enough—yet. We loaded enough critically ill people to fill several hospital ICUs onto anything we could find with wheels and rolled them to the parking lot for rapid air evacuation.

Every few steps, medics took to a knee, held a hand, touched a shoulder, rubbed a back and even cleaned feces from one elderly woman lying, for the fourth consecutive day, on the hot, stinky sidewalk.

By dusk, the job was done. The place was nearly empty. Thousands of people were finally at hospitals getting quality medical care.

In the end, it was New Orleans EMS that moved people forgotten by the nation.

The brilliance within the Star of Life, in a way I had never seen before, is simple, deep-rooted and unending compassion.

At its most basic level, EMS is simply people caring for people on the street in a time of unimaginable need. As a medic, I used to wonder what The Big One would be like. Turns out it's what EMS takes on every day.


—Robert Davis

## STRANDED PROVIDERS PITCH IN TO HELP

Bill Brown, RN, executive director of the National Registry of EMTs, who was in New Orleans for EMS Expo, decided to stay behind to help the sick and injured. He contacted Acadian Ambulance Service, which provides EMS coverage for much of Louisiana, and was rapidly assigned to assist at the medical aid station established at the Superdome.

By 9 a.m. Sunday, Aug. 28, Brown says chaos had taken over the loading dock area where the special needs patients/evacuees were being processed. "Throughout the day," says Brown, "the Superdome had received oxygen-dependent patients. Many told me they came to the dome because that's where they were instructed to go after calling the hurricane hotline.

"Unfortunately, a football stadium does not have oxygen supplies. Many of these misinformed patients needed a continuous supply of oxygen, and when I told them no oxygen was available at the dome many of them had a stare of panic in their faces. Toward 7 p.m., the New Orleans Health Department made arrangements with Tulane University Hospital to accept over 40 oxygen-dependent patients. Since Acadian was the only ambulance service with drivers and moving trucks in the area, the health department commanded the ambulances. ... It took until past 10 p.m. on Sunday night to identify the patients who were going to Tulane Hospital, get them loaded onto ambulances or wheel-







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chair vans and get them transported away from the Superdome. We had evacuated all oxygen-dependent patients so none would die in the Superdome.”

Another stranded paramedic, Stephanie Korzyk, also connected with Acadian and helped at the Superdome aid station. “At one time I was threatened by a man who said he was going to stick me with a needle,” she says. “He wanted out.”

She describes another patient encounter: “This one very young woman came in having an acute asthma attack, which we treated with the usual medications. We had to start ventilating her and almost had to intubate her, which would have been really bad since we had no vents and couldn’t just send her out on an ambulance. After treating her, we sent her upstairs to the special needs area. She came back down.

“She repeated this process three times. She was in status asthmaticus. A doctor who happened to come in said that after we treated her this time we were to have her sit in the hall, and—whatever happened—we were not to continue to treat her. We could not waste all our resources on one person. He said this plainly, clearly and loudly right in front of the patient.

“She started to cry and said, ‘I don’t want to die.’ I think someone brought her to an area where they were transporting some patients to a hospital by that time. I don’t know what happened to her. It was a true MCI.”

Paramedic Valarie Ziminsky was stranded after her flight home was cancelled. She decided to help and hooked up with New Orleans EMS. After EMS and fire activities were suspended due to the high winds on Sunday night, she and approximately 40 other EMS providers took shelter in the Louisiana State University Dental Clinic. On Monday, after the storm passed, she says, “We began talking about getting out of the building and quickly realized we were going to need rescuing ourselves.”

On Tuesday, the group finally escaped the clinic and found themselves an on overpass. “I was immediately drawn into assisting with patient care—chest pain with nitro, an unconscious female, an asthmatic, a man possibly suffering a massive stroke, a 36-week pregnant dehydrated mother,” says Ziminsky. “My first concern was medical command, but what medical command? There was no one to call. People were looking for me and the others to help them to the best of our ability, and so we did. The worst cases were prioritized, and as the Black Hawks came in, three patients went out on each helicopter along with a medic. I still don’t know where they went. As far as I knew, based on limited radio communication, most of the city hospitals were closed due to flooding and power failures. ...

“You could see it in the faces of nearly every single person—EMTs, medics, police, the citizens on the bridge—stunned disbelief. And they were all pretty much in the same boat. They had lost their homes, cars, clothing, everything they owned. As EMTs and paramedics, we are trained to help and find a way to make everything work. But in this case, it was a powerless feeling. What do you do when everything is flooded, there is minimal road transportation, hospitals are closed?”

Many EMS providers have shared their experiences with JEMS. Above, we provide just a taste of their stories. Stay tuned for the November issue, which will contain extended coverage of these and many other exclusive reports. JEMS



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