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PREPARATION PAYS OFF

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BY JENIFER GOODWIN



This winter, more than seven years after Hurricane Katrina devastated New Orleans, the city found itself in the crosshairs of a different kind of threat—call it Superstorm Mardi Gras/Super Bowl XLVII. The two events overlapped one another, bringing more than 1 million visitors to New Orleans for parades, parties and pageantry.

For public health and safety officials, preparing for almost three weeks of crowds and craziness was a massive undertaking. Tasks included:

- >> Coordinating with dozens of local, state and federal agencies;
- >> Contemplating all of the possible scenarios, natural and man-made, that could derail the events;
- >> Deciding which resources, including new technologies, to deploy; and
- >> Setting up an extensive command and control structure to handle the influx of visitors and the readiness to respond quickly as needed.

Like the football players themselves, “the health and public safety community only has one shot at the game, too,” says Ed Klima, emergency preparedness consultant for the Medical Sports Group, a team of physicians and emergency response professionals

with a background in fire, hazmat and EMS that is contracted by the NFL to assist local responders with preparedness.

PLANNING STARTS EARLY

For local public health and safety agencies, preparations started in earnest about 18 months before the event, says Ken Bouvier, deputy chief of New Orleans EMS, who figures he or a member of his team attended at least one planning meeting daily for about a year with officials from the U.S. Department of Homeland Security, FBI, police, fire, the NFL and the Mercedes-Benz Superdome. “I can’t express how important the planning portion is,” says Bouvier, who oversees a staff of 147.

New Orleans hosted the Super Bowl in 2002, so they had some experience, Bouvier says. Still, a lot had changed in the city’s emergency management system since Katrina. Technology had advanced, too.

A key part of planning was determining which new technology to deploy. To make sure EMS and police could communicate with non-English-speaking tourists, New Orleans EMS and police used a mobile interpreter device that connects to live translators who can speak directly to patients in

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TECHNOLOGY MAKES THE DIFFERENCE





The New Orleans geo-fence was a virtual perimeter and denotes high-threat areas.

180 languages and dialects. Made by RTT Mobile Interpretation in Minneapolis, the device, called ELSA, enables responders to connect to translators with a single button push while the microphone/speakers inside the device pick up and broadcast voices loudly enough so that responders don't need to hold the device while they work the call.

Although not used for a Super Bowl-related incident, EMS recently used ELSA when responding to a call for a burned toddler whose family only spoke Arabic. "There is extensive research that shows in any situation if you are able to speak to somebody in their native language at the first encounter, the series of events that follow will go so much better for both parties," says Linda Stanton, RTT Mobile Interpretation vice president of marketing.

To monitor health-related threats, New Orleans turned to the FirstWatch Real-time Situational Awareness System, which is used by systems throughout the world. The sophisticated system tracks information entered into computer-aided dispatch (CAD) systems in real-time, and immediately sends an alert via email or text message to designated public health and safety officials if it detects certain symptoms or trends of concern. (The system was also used to monitor fire, EMS and police calls that came in through the New Orleans

9-1-1 system, evaluating specific incident types classified as suspicious and alerting officials on a sentinel basis.)

Prior to the Super Bowl and Mardi Gras, New Orleans officials, led by Jeb Tate, a paramedic, registered nurse and project lead with the City of New Orleans Office of Homeland Security and Emergency Preparedness, worked with FirstWatch to identify "triggers" that could indicate a chemical or biological attack, such as a sudden spike in calls, or specific symptoms including seizure, abdominal pain, breathing problems, sudden headaches or fainting episodes.

Other uses for the triggers also included looking out for signs of illness outbreaks, such as food poisoning or infectious diseases that could sicken a large number of visitors, health and safety personnel needed to work the event, or the NFL players themselves, says Raoult Ratard, a Louisiana epidemiologist and chief of the infectious disease section.

A virulent strain of foodborne norovirus had already sickened significant numbers this season around the nation, so officials were taking no chances. Norovirus infections, which cause vomiting and diarrhea and can be deadly to the very young and the very old, are both easily transmissible and resistant to common disinfection

agents, Ratard says. Knowing right away whether there was an outbreak could help contain it, he adds. "More or less the message was, 'if you see anything unusual that you haven't seen throughout the year, let us know,'" he says.

COVERING ALL THE BASES

To establish a baseline, FirstWatch analyzed CAD data for the year leading up to the event to determine what was considered "normal" for the volume and types of calls anticipated on any given day and time. "If they suddenly had 10 cases of gastrointestinal illness, that might set off alarm bells. But a quick look at the historical data and they would know that, last year, they actually had 20 cases at the same time, so that was still within the normal range," says Debbie Gilligan, the company's product strategist.

They also set up several "geo-fence" triggers—a virtual perimeter—around high-threat areas, such as several blocks north and south of the parade route; the area around the Superdome; several blocks around the Ernest N. Morial Convention Center; the site of the media center; the NFL-sponsored hotels and the NFL Experience, a week of events, appearances and activities attended by 90,000 fans in the week leading up to the big game.

FirstWatch has been deployed at other high profile events, including the 2012 Democratic and Republican National Conventions, the U.S. Open, the NCAA Final Four Tournament and the G8 Summit, among others.

"At these large special events, the command and control structure is extremely large and the ability to share information in a timely and efficient manner has been greatly enhanced in recent years due to programs such as FirstWatch," Klima says.

Other surveillance technology deployed during the event included:

>> A hospital-based syndromic surveillance system, which "mined" data from 40 area hospitals every 12 to 24 hours looking for key words that could indicate bioterrorism or an outbreak. While potentially useful in spotting trends at hospitals, a drawback of the system is the lag time in getting the data, New Orleans officials said. By alerting officials moments after an event has occurred, FirstWatch provides

more immediate information, they added.

>> BioWatch, a federal government system for detecting biological attacks. Launched in 2003, BioWatch has air samplers located atop buildings and in other public places in many major cities. Once every 24 hours, the filters are taken to local public health labs to be analyzed for traces of pathogens. Ratard says BioWatch representatives placed sensors in strategic locations a week before the Super Bowl, and removed them after the game.

>> U.S. Customs and Border Protection helicopters that flew over the crowds, transmitting a live video and infra-red feed into the Emergency Operations Center (EOC) so that officials would know where the crowds were located or where they were moving, in case of emergency.

COOPERATION IS ESSENTIAL

With events as large as the Super Bowl and Mardi Gras, cooperation is essential. So too is learning from others' experiences, Klima says. "One of the challenges for local agencies is that they have to do all this preparation for an event they may not host again for another six or seven years, if ever again," says Klima, whose firm has been involved with more than 20 Super Bowls.

New Orleans emergency response officials toured the interior of the Superdome, making sure they had visualized where each elevator, staircase and exit was located, Bouvier says. They had roundtable discussions involving multiple agencies, in which responders were asked how they would respond to 10 scenarios, such as a power outage in the Superdome, or if a suspicious package was found outside the facility, or if there was a major incident at a cruise ship on the river.

Early on in the process, representatives from New Orleans EMS and other public safety agencies traveled to Indianapolis, during the 2012 Super Bowl, to shadow and learn from even officials there. "That opened our eyes to what was going to be needed from us," says Jeff Elder, an emergency physician and medical director of New Orleans EMS.

Indianapolis officials were very willing to help their successors, Bouvier says, including passing on their staffing and deployment strategy. "We used it and tweaked it to fit New Orleans," Bouvier



Officials attend a briefing in the New Orleans Emergency Operations Center (EOC).

says. "The folks in Indianapolis told us that they had used the written plan from the previous Super Bowl, so the lessons learned each year from Super Bowl to Super Bowl helped us."

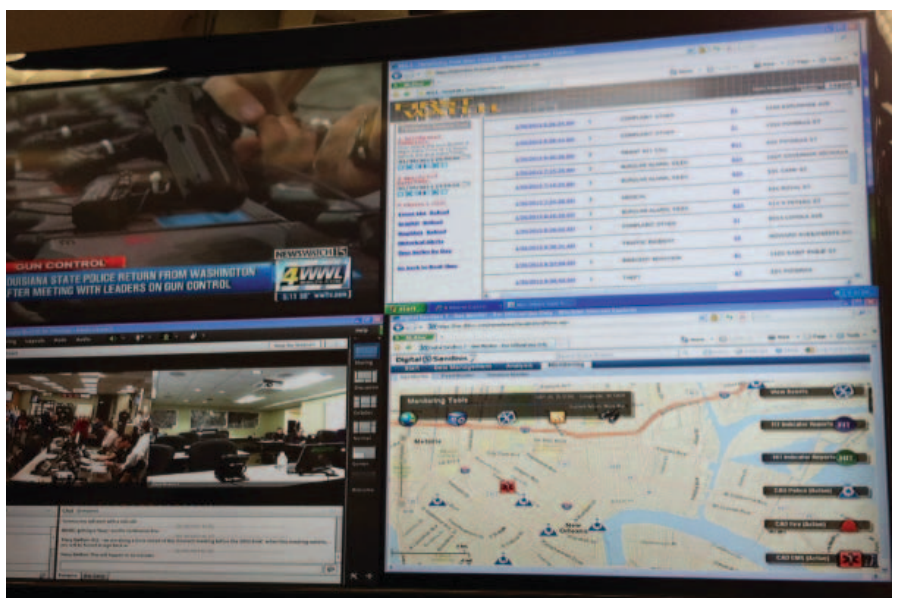
Among the recommendations from Indianapolis used in New Orleans: the deployment of small specialty vehicles to get through the crowds, including bike medics and ATVs.

Another lesson stressed by Indianapolis officials was the importance of having interoperability of communications, so that every agency involved could communicate with one another with ease,

Bouvier says.

There's more to good communicating than just sharing radio frequencies, Klima noted. The various agencies have to be committed to keeping one another informed about what they're doing, what they're seeing and how they're responding, he says. "You've got to be able to communicate with one another. Sometimes it's through radio systems and sometimes it's through other means—email, text or the old telephone," he says.

New Orleans partners were also key, Elder noted. That included the American Red Cross, whose volunteers helped staff



Information from FirstWatch is displayed on a monitor in the EOC.



Emergency response vehicle in front of city hall.

first-aid tents along the parade route, and fellow EMS organizations, including Acadian Ambulance, which handled EMS inside the Superdome, and East Baton Rouge EMS, which provided bike medics, as well as Care Ambulance Service, A-MED Ambulance Service, East Jefferson EMS and West Jefferson EMS—all of which enabled New Orleans to not only staff the events but keep up with the day-to-day responses.

“We had to stretch our resources out over three weeks. Our employees worked hard. They got maybe one or two days off in that whole period,” Elder says. “It was their effort, and that of our mutual aid partners, that made it a success.”

THE FINAL COUNTDOWN

The NFL began arriving in New Orleans about a month before the game. Streets were closed, trees planted, potholes filled and construction was completed on a temporary “mini-city” around the Superdome. Nearly every hotel from Baton Rouge to Pascagoula was sold out. New Orleans was ready.

Because the FirstWatch surveillance system is Web-based, officials at the three major command and coordination centers (the EOC, the Joint Operations Center and the Tactical Operations Center), as well as officials in vehicles in other areas of the city, could view the information coming out of the CAD and be presented clearly and interpreted by FirstWatch software on dashboards on their computers or laptops.

“As something happens in the system,

the communications center personnel are working the incident, while FirstWatch is alerting them and other key personnel in the field, getting that information into the hands of the decision makers right away,” Gilligan says.

Except for the blackout that darkened a portion of the stadium during the game, the events went off without any major hitches. The surveillance technology detected nothing out of the ordinary, Tate says. “When you combine the 10 days of Carnival, Super Bowl and our everyday 9-1-1 calls all together, we answered over 2,800 calls for service resulting in over 1,900 transports,” Tate says. That included 535 calls related to the parades, and 250 related to the Super Bowl. Most were medical. There were several calls for pedestrians struck by cars, although none resulted in serious injury, and several for allergic reactions. “A lot of visitors who know they have shellfish allergies press their luck with our seafood,” he says.

There were also alcohol-related mishaps. “In New Orleans, visitors, and even residents, tend to overindulge in our copious amounts of adult beverages while enjoying our liberal alcohol laws. It’s this combination that gets plenty of folks a visit from our paramedics,” Tate says.

EMS also responded to two cardiac arrest calls along the parade route. One was a woman who experienced sudden cardiac arrest and received bystander CPR. New Orleans EMS responded, applied the heart monitor and shocked her once. “We continued to work the code and she had an ROSC [return of spontaneous circulation] in the field,” Bouvier says.

The second was a man who went down in the median along the parade route. A bystander also started CPR. An American Red Cross volunteer who was about a block and a half away responded with a defibrillator, which revived him, and EMS continued treatment when responders arrived. “We’ve heard he’s doing well,” Bouvier says.

CONCLUSION

The experience of hosting the Super Bowl and Mardi Gras will assist New Orleans EMS in offering enhanced service throughout the year, Elder says. “It showed us how well we can work together, and how we can work together with our mutual aid partners, as well as the entire public safety and public

health community, whether it be local federal law enforcement or our regional EMS partners,” Elder says.

Even when it isn’t Mardi Gras and without the Super Bowl, New Orleans is a colorful town that keeps responders busy all year round. Super Bowl strategies that will remain a key part of New Orleans EMS daily operations include RTT’s ELSA Mobile Interpretation device and FirstWatch, Tate says.

Although some of the FirstWatch triggers specifically implemented for the Super Bowl have been deactivated pending future events, New Orleans EMS continues to use triggers established to alert key personnel to serious incidents such as electrocutions, drownings, shootings, stabbings, sudden cardiac arrests and prehospital deaths, enabling supervisors to know about the call as it’s unfolding, and making it easier for them to analyze the response and follow up with responders shortly after the call to ensure patients received the timely care. Another important trigger occurs if five or more units are called to any scene, which could indicate a mass casualty event, Tate says.

New Orleans EMS also uses FirstWatch to monitor performance-based measures in the communications center and in operations, from call processing times, to dispatch performance, to out-of-chute, response time and hospital drop-time performance.

And finally, since New Orleans is notorious for its floods, New Orleans EMS monitors FirstWatch reports of flooded streets from 9-1-1 callers and responders. Dispatchers can use the FirstWatch alerts and data to direct the actions of responders and keep the public informed via a map displayed on the city’s web site, Tate says.

“FirstWatch is one of the key resources we use on a day-to-day basis. It’s how our administrators, supervisors and command staff gets our situational awareness throughout the day and night,” he says. “We can’t all carry and use a radio 24-7. But, with the FirstWatch system, we can pick up and look at our cell phones and see what major events are going on at any time of day.” **JEMS**

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