

Insight to Action

# Emergency Preparedness in Healthcare:

Learning from the Past to Improve the Future



In emergency situations, hospitals often become the epicenter of the local response, providing core support for catastrophic emergencies and mass casualty events. Given this vital role, disaster or emergency preparedness is critical. When standard protocols and processes aren't enough, and hazards are not proactively addressed, hospitals may themselves become victims.

Lessons learned from the 2017 hurricane season and other recent natural catastrophes provide valuable insight into vulnerabilities and how the healthcare industry must move beyond standard emergency plans to improve future preparedness. In this report, we'll examine specific issues of concern to assist hospitals and other healthcare facilities to identify gaps in existing emergency preparedness plans, and to help develop new plans.



## Making Progress and the Quest for Constant Improvement

In 2017, our nation was hit hard by a variety of natural disasters, from two powerful hurricanes — Harvey and Irma — to a number of record snowstorms, tornadoes, and wildfires. The unpredictability and severity of these and previous events such as Superstorm Sandy and Hurricane Katrina, are prompting federal regulators and accreditors to make sure facilities are prepared. While the industry has learned some valuable lessons and made improvements to emergency preparedness efforts, there is still much more to be done.

Much of the progress in emergency preparedness over the past 15 years is a result of federal programs and stricter accreditation requirements of the Joint Commission.<sup>1</sup> While valuable, the National Disaster Medical System doesn't have the capacity to handle large-scale disasters.<sup>2</sup>

Weather events have become more extreme and often compound each other, making it difficult for healthcare facilities to be completely prepared. Learning from prior events is helping the industry understand vulnerabilities and mitigate risks.

# Improve Future Preparedness

## Three Areas of Concern

Key takeaways from past events suggest that the industry should think beyond standard emergency plans and approach both preparedness and recovery efforts in a more holistic manner. This includes identifying and evaluating issues that can affect response and recovery both locally and across the country.

We've identified three critical, largely unaddressed areas of concern in emergency preparedness that can be improved upon. They include credentialing difficulties, Medicare/Medicaid requirements, and emerging infrastructure issues.

<sup>1</sup> [NCBI U.S. National Library of Medicine National Institutes of Health](#), Eric Toner; Published by Mary Ann Liebert, Inc. Health Security. Healthcare Preparedness: Saving Lives, February 2017, 15(1): 8-11.

<sup>2</sup> [John Hopkins Bloomberg School of Public Health](#), Center for Health Security. The National Disaster Medical System: Past, Present, and Suggestions for the Future. Franco C, Toner E, Waldhorn R, Inglesby T, O'Toole T. The national disaster medical system: past, present, and suggestions for the future. Biosecure Bioterror 2007;5(4):319-325. Accessed November 28, 2016 [PubMed].

## Credentialing Difficulties

The surge of patients during emergencies may create a need for additional qualified medical staff and medical professionals to be brought in from other locations. Once the emergency management plan is activated, credentialed medical staff are assigned to specific emergency management teams.

Unfortunately, the credentialing process can take several weeks or months to complete, leaving many facilities unprepared in an emergency situation. In many states, allowing noncredentialed professionals to treat patients may leave care providers open to liability issues.

Credentialing was a big challenge after Superstorm Sandy in 2012. Since then, it's recommended that organizations demonstrate how they respond to and overcome credentialing challenges as part of their emergency planning efforts — particularly when it comes to specialty medical units such as neonatal and intensive care. A proactive credentialing plan includes taking a look at the credentialing protocols and database, and identifying providers as part of the emergency preparation plan.



## Meeting Medicare/Medicaid Requirements

For patients who depend on Medicare or Medicaid for vital treatments and care, the coordination between facilities in nearby cities or states has become particularly problematic because there remains a serious breakdown in communications.

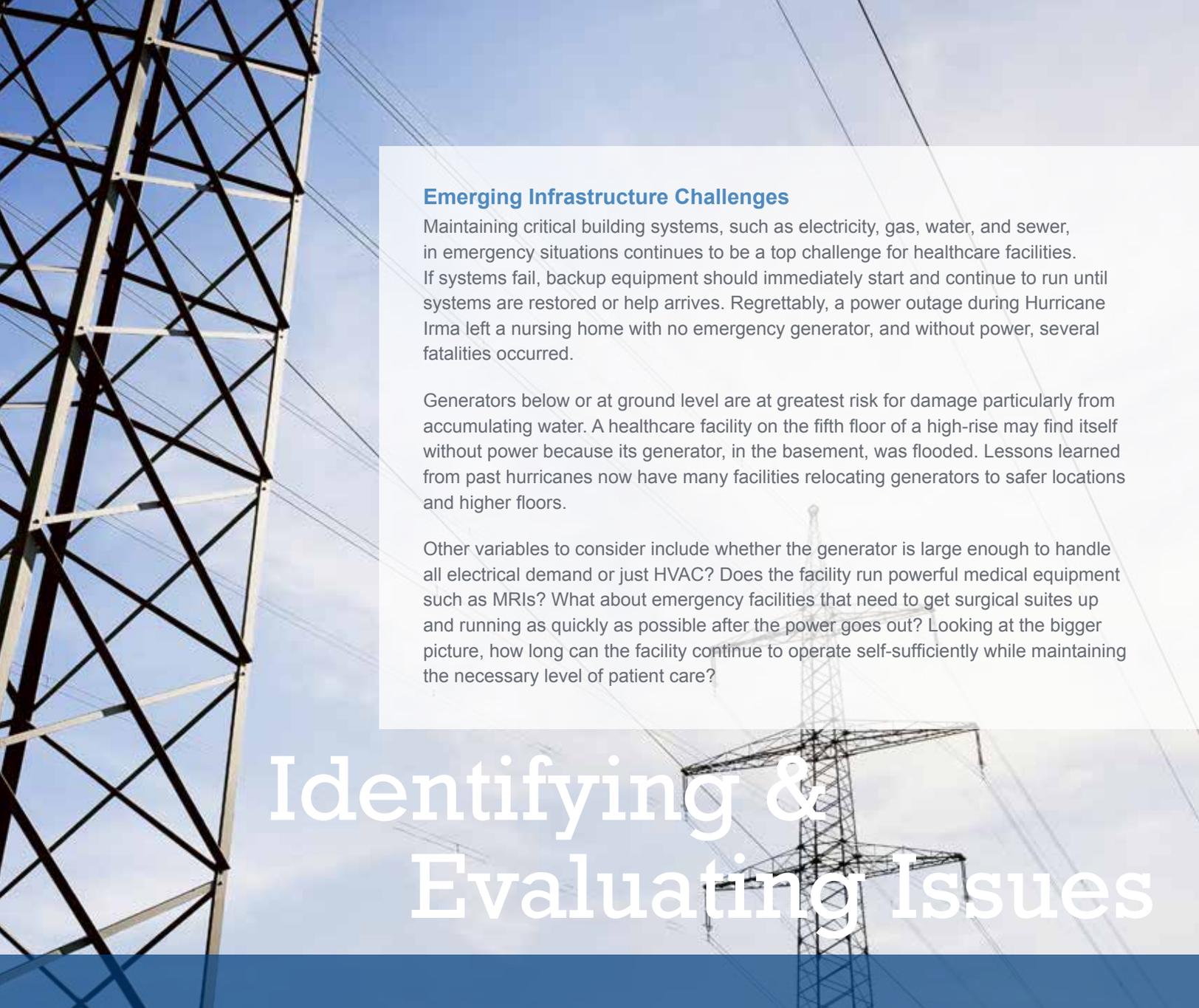
According to the Centers for Medicare and Medicaid Services (CMS), a review of Medicare regulations revealed that requirements weren't comprehensive enough to address the complexities of emergency preparedness. For example, CMS regulations didn't address the need for a communication system to coordinate with other healthcare facilities in nearby cities or states, or for contingency planning and training.<sup>3</sup>

As a result, the CMS introduced updated emergency preparedness requirements, which facilities were required to comply with as of November 2017. With these new communication requirements, hospitals and other facilities can better serve the needs of patients during and after a disaster by allowing cities, counties, and multistate regions to ensure minimal disruption of essential healthcare services.

CMS supported these requirements. Healthcare providers and suppliers that don't comply are not allowed to participate in Medicare or Medicaid, and are potentially subject to a civil monetary penalty.<sup>4</sup>

<sup>3</sup> [RAC Monitor](#), CMS Issues Final Rule for Emergency Preparedness; James M. Randolph, February 22, 2017.

<sup>4</sup> [Centers for Medicare & Medicaid Services](#), Emergency Preparedness Rule.



## Emerging Infrastructure Challenges

Maintaining critical building systems, such as electricity, gas, water, and sewer, in emergency situations continues to be a top challenge for healthcare facilities. If systems fail, backup equipment should immediately start and continue to run until systems are restored or help arrives. Regrettably, a power outage during Hurricane Irma left a nursing home with no emergency generator, and without power, several fatalities occurred.

Generators below or at ground level are at greatest risk for damage particularly from accumulating water. A healthcare facility on the fifth floor of a high-rise may find itself without power because its generator, in the basement, was flooded. Lessons learned from past hurricanes now have many facilities relocating generators to safer locations and higher floors.

Other variables to consider include whether the generator is large enough to handle all electrical demand or just HVAC? Does the facility run powerful medical equipment such as MRIs? What about emergency facilities that need to get surgical suites up and running as quickly as possible after the power goes out? Looking at the bigger picture, how long can the facility continue to operate self-sufficiently while maintaining the necessary level of patient care?

# Identifying & Evaluating Issues

After Hurricane Sandy hit the East Coast in 2012, the U.S. Department of Health and Human Services discovered that **nearly 90 percent** of hospitals in the area experienced substantial challenges in reacting to the storm.

— [Sandy After Action Report](#)



## Taking the EOP a Step Farther: Emergency Preparedness Programming

State licensing requires hospitals in the U.S. to have an emergency operations plan (EOP) outlining how the facility will respond to and recover in the event of an emergency. An EOP should be considered a starting point for a healthcare facility's emergency preparedness program. A good EOP includes facility- and community-based risks to address patient needs and to ensure the business continues to operate.

According to a recent study conducted by the Medical Group Management Association, 78 percent of healthcare leaders who had a disaster preparedness plan said their plans were designed to cover natural disasters, fires, and tornadoes, as well as other emergency issues such as loss of computer systems, workplace violence, and active shooters.

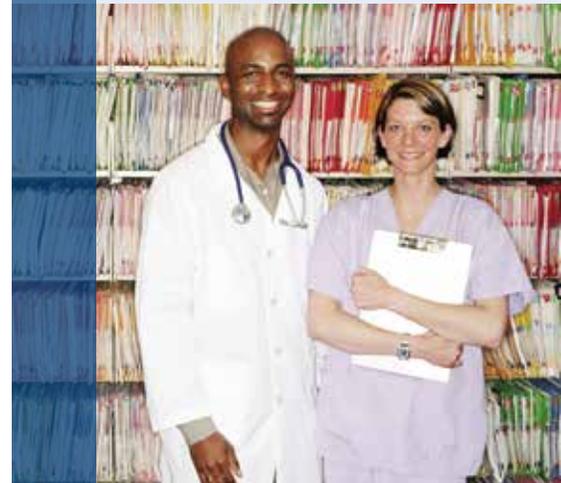
To formulate a holistic disaster plan, we stress taking a more proactive approach that includes:

- Addressing the foreseeable impact on patients, depending on where they receive care, and employee needs
- Responding to care-related emergencies such as patients on critical life support, dialysis needs, and emergency generator systems
- Implementing disaster drills and training — at the facility and community level

No disaster plan is foolproof. Part of your plan must incorporate lessons learned for continuous improvement.

5 Medical Group Management Association MGMA 2017 Stat Poll.

**18 percent** of healthcare leaders surveyed admitted to not having any type of emergency preparedness plan.<sup>5</sup>



**4 percent** said they weren't sure if they even had a plan.<sup>5</sup>



# Taking a More Proactive Approach



# 2017 Disaster Case Studies

## Hurricane Harvey and Texas Medical Center<sup>6</sup>

Harvey, the most destructive hurricane ever to strike the U.S., hit South Texas, bringing with it 24.83 inches of rain in just three days.

Hit hard was the Houston area, with more than a dozen hospitals and medical facilities, including the Texas Medical Center (TMC) — the largest medical complex in the world.

### An Improved Response

While prepared, the TMC had no way to predict the vast amount of water that would impact the facility.

- Lessons from previous storms suggested that deploying a shelter-in-place strategy would be best because evacuating patients in certain situations can be medically dangerous; for example, traffic jams may keep patients stuck in ambulances for long periods of time.
- Not knowing how long they would have to act self-sufficiently, the center knew it had to conserve supplies and resources. This included canceling all elective surgeries and any nonessential appointments.
- Other proactive efforts included contacting individual patients who required timely chemotherapy or dialysis treatments, urging them to come into the hospital before the storm hit, or assisting them in locating a nearby facility.
- Previous hurricanes and tropical storms prompted the TMC to install submarine doors to protect basement floors from flooding. As a result, the facility experienced only minor leaks, while other area hospitals were forced to evacuate.

## Hurricane Irma and Baptist Health South Florida

In the aftermath of Harvey, Florida was struck by Hurricane Irma, which spent three days as a Category 5 hurricane and maintained winds of 185 mph or more.

The area's health system, Baptist Health South Florida (BHSF) — with 10 acute care inpatient facilities; more than 70 outpatient facilities, urgent care, imaging, and surgery center locations; and more than 41 physician offices in the region — braced itself for the worst.

BHSF created emergency preparedness plans designed specifically for large-scale hurricanes to serve patients, employees, and members of the community.

### An Improved Response

- Although considering itself a veteran of hurricanes, Baptist Health South Florida is always preparing and updating its emergency preparedness plans. This includes enterprise-wide monthly team meetings and an annual live emergency drill that simulates an actual catastrophic event — everything from a plane crash or a storm to an epidemic.
- While the members of the organization felt they performed well during and after Irma, they still identified areas for improvement:
  - Not only did they discover a shortage of beds, but also fuel; 25 percent of employees were unable to drive to the hospital and outpatient facilities due to fuel concerns. Preparedness for the next emergency will include bringing a fuel tanker to BHSF's main supply warehouse, along with beds and stretchers that are typically held in a storage facility during renovations.

## Key Takeaways

Develop a **proactive plan** that considers the challenges and situations inherently unique to various types of disasters and how healthcare will be provided.

**Establish mutual aid agreements** with other community healthcare facilities and vendors to assist with supplies, equipment, transportation, etc.

Examine the premises to determine **how a disaster can affect the structure, vital equipment, and supplies.**

Address how the facility will **meet the needs of outpatients and patients in need of critical treatments.**

Determine **how long a facility can operate self-sufficiently** after a disaster and the level of patient care that can be provided and maintained.

Develop and implement an **effective credentialing** and privileging process.

Understand how the emergency preparedness rule will impact your ability to participate in **Medicare and Medicaid programs.** Ensure compliance and mitigate the risk of liability.



For additional information on emergency preparedness or managing risk in the healthcare industry, contact your Liberty Mutual or Ironshore representative.

### A Valuable Partner in Preparation

Past natural catastrophes such as Hurricanes Harvey and Irma, as well as other extreme events, have brought valuable lessons to the forefront. With these lessons, healthcare facilities can begin to develop improved models for how to prepare and put emergency planning into action.



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