

AmTrust Property Zone

Preparing Healthcare Facilities for the Next Disaster

Healthcare facilities are vulnerable to extensive damage due to extreme weather conditions. Disruption of healthcare operations can adversely impact the community's well-being and economic recovery. Disaster planning is important for all organizations, but it's especially important for healthcare facilities. In both inpatient facilities, such as hospitals, hospices and nursing homes, and outpatient facilities, such as medical offices and clinics, steps must be taken to mitigate the serious risks posed by disasters.

- Mold, bacteria and other contaminants in damaged buildings can threaten the health of vulnerable patients
- Power outages and mechanical failure can disrupt life-saving equipment
- Moving patients can put them at an increased threat of additional issues
- Downtime and disruptions can delay important treatments and procedures, putting patients at risk

Understanding basic risk management strategies, from building design to having an emergency response plan, will help your healthcare facility to be prepared for potential disasters.

Build with Resilience in Mind

Disaster resilience starts with a building's design. A well-designed building can help protect the people inside from damage caused by natural disasters.

The National Oceanic and Atmospheric Administration (NOAA) warns that natural disasters are increasing in terms of both number and cost, and that climate change is making extreme disasters more frequent. In 2019, the U.S. experienced 14 separate billion-dollar disasters, which included inland floods, severe storms, tropical cyclones and wildfires.

Worsening disasters are a cause for concern for everyone, but healthcare facilities must be especially vigilant about meeting high building codes and standards, including:

- National Fire Protection Association (NFPA) Health Care Facilities Code, NFPA 99
- The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Standard for Ventilation of Health Care Facilities

- Facility Guideline Institute (FGI) Guidelines for Design and Construction of Hospitals and Outpatient Facilities
- American Society of Civil Engineers (ASCE) Standards
- All local codes



Know the Disasters Most Likely to Strike Your Location

Where the health care facility is located will have a significant impact on the types of disasters that are seen. However, disasters, natural and man-made are possible anywhere.

- **Flooding:** Flooding can occur in both coastal and inland areas. In fact, according to the Federal Emergency Management Agency (FEMA), flooding is the most common hazard in the United States. When designing a healthcare facility, the location and elevation can have a significant impact on flood risk. FEMA 577 Chapter 3, outlines measures that can be taken in flood-prone areas, including earthen levees and floodwalls.
- **Wind:** High-wind events include hurricanes, tornadoes, derechos and other severe storms. FEMA 577 Chapter 4 outlines the importance of building hospitals to be wind resistant, with special attention to roof design.
- **Storms:** Storms may include wind and flood dangers simultaneously. FEMA states that designers in areas with high winds, including coastal areas, should pay careful attention to the roof-to-foundation load path and ensure that connections can withstand simultaneous wind and flood forces.
- **Fire:** Fires can include building fires and wildfires. National Fire Protection Association (NFPA) Health Care Facilities Code, NFPA 99, establishes criteria to minimize fire, explosion and electricity fires.
- **Earthquakes:** Earthquakes are most common in high-seismic areas, such as the "Ring of Fire." However, earthquakes can occur in other locations as well. In California in 2018, where earthquakes are common, 6% of hospital buildings had an SPC-1 rating, indicating a significant chance of collapse.

Create a Backup Power Plan

A power outage at a healthcare facility can be a deadly disaster. Many patients depend on life-saving equipment, while HVAC systems protect vulnerable patients from inhospitable conditions. If the power goes out, people can die.

- To keep the power on no matter what, healthcare facilities need a redundant power plan that includes backup power sources for worst-case scenarios
- Backup power systems must be maintained to ensure that they are ready whenever a disaster might strike
- Run emergency power tests to check that all backup systems are working correctly
- If running generators, ensure you have enough fuel supply to last for at least 96 hours

Write an Emergency Response Plan

A disaster can create many issues for healthcare facilities. When creating an emergency response plan, consider the following questions:

- How will the facility deal with a potential surge in patients related to the disaster?
- Which essential services must be prioritized?
- What measures will be taken to ensure patient safety?
- How long will the supply of essential items and medicines last?
- How will you communicate with employees, patients' families and other stakeholders?
- Does the facility have a reliable backup power source?
- How will you ensure hygiene during a disaster, including safe water and waste disposal?
- How will the evacuation of patients proceed if it is deemed necessary?
- How will the recovery process proceed, including assessment of damage and repairs?

An emergency response plan can ensure that a healthcare facility is prepared to meet these and other issues.



Continuously Assess and Improve Your Readiness

Disaster preparedness is not a 'one and done' effort. It requires ongoing attention – every week, month and year. This is particularly important for healthcare facilities because so many lives are at stake.

- Assemble a disaster response team
- Analyze and discuss the risks every month
- Assess the impact of recent changes – new patients, new conditions, new employees and new equipment, for example
- Create an emergency response plan
- Train your team
- Practice the plan
- Review and update the plan frequently

Sources

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