APPLICABLE PROGRAMS: ALL

Is Your Facility Ready for Extreme Heat?

Tips for preparing for potential heat emergencies

Although the best time to start preparing for potential summer heat emergencies is early in the year or when your organization updates its Emergency Operations Plan (EOP), it's not too late to get your facility ready as July and August approach. Consider these tips for preparing your organization for heat emergencies:

- Be sure to have a staff member monitor National Weather Service forecasts for excessive heat watches and warnings in your facility's local area.
 - The National Weather Service issues an *excessive heat watch* when conditions are favorable for an excessive heat event occurring in the next 24 to 72 hours.
 - The National Weather Service issues an excessive heat warning within 12 hours of the onset of extremely dangerous heat conditions. Generally, it issues such a warning when the maximum heat index temperature is expected to be 105° or higher for at least two days and night-time air temperatures will not drop below 75°. But these criteria vary across the country, especially for areas that are not used to extreme heat conditions.
- If you don't already, consider extreme heat among the potential emergencies addressed in your facility's hazard vulnerability analysis (HVA), the comprehensive risk assessment required by Joint Commission Emergency Management (EM) Standard EM.11.01.01 (for the hospital, critical access hospital, and home care accreditation programs) and EM.01.01.01, Elements of Performance (EPs) 1–3 (for other accreditation programs).
- Remember that scientific studies indicate that climate change has been contributing to uncharacteristic weather events, according to the US Environmental Protection Agency. One example of this is the heat dome that trapped hot air over the Pacific Northwest in late June 2021 and caused temperatures to reach as high as 118°F in a region known for its mild climate.
- If your facility is in an area of the country that routinely experiences intense heat (such as the South or Southwest) or that experiences frequent summer heat waves, consider having a separate heat plan. (It could be an appendix to your EOP.) The website of the US Department of Health and Human Services (HHS) Administration for Strategic Preparedness and Response (ASPR) provides a link to a sample heat plan (from East Central [Georgia] Regional Hospital) as part of the HHS Technical Resources, Assistance Center, and Information Exchange (TRACIE). ASPR-TRACIE provides other resources pertaining to extreme heat as well, including a heat checklist. See also the article "Extreme Heat Events: Lessons from Seattle's Record Breaking Summers."

Remember that power outages are likely to occur during extreme heat. Facilities must keep up with the inspection, testing, and maintenance (ITM) activities required by Joint Commission Environment of Care (EC) Standard EC.02.05.07: The [organization] inspects, tests, and maintains emergency power systems. These activities include a weekly inspection of the emergency power supply system, including all components and batteries, as well as monthly testing of emergency generators



and manual and automatic transfer switches—on top of various quarterly, annual, and triennial requirements. (*See also* the article "Generator Battery Inspection, Testing, and Maintenance" in the February 2022 issue of *EC News*.)

- Prepare your organization's utilities for extreme temperatures. In a blog post, Angela Murray, MSN, RN, Project Director in The Joint Commission's Department of Standards and Survey Methods, emphasizes that for utilities-related guidance pertaining to extreme heat emergencies, accredited organizations must follow state law and regulation and the requirements set forth in the National Fire Protection Association (NFPA) *Health Care Facilities Code* (NFPA 99-2012), which are summarized and paraphrased here:
 - **12.5.3.3.6.5—Essential Utilities.** Prior to declaring any emergency, an organization must assess whether it has the infrastructure to support electricity and heating, ventilation, and air conditioning (HVAC).
 - 12.5.3.3.6.6—Exterior Connections. For essential utility systems in Category

 facilities only (and based on a facility's HVA), an organization must consider
 the installation of exterior building connectors to allow for the attachment of
 portable emergency utility modules.
 - 15.5.1.3—Emergency Generators and Standby Power Systems. Emergency generators and standby power systems, where required for compliance with NFPA 99-2012, must be installed, tested, and maintained in accordance with NFPA 110, Standard for Emergency and Standby Power Systems.
 - **15.5.1.4—Stored Electrical Energy Systems.** Stored electrical energy systems must be installed, tested, and maintained in accordance with NFPA

111, Standard on Stored Electrical Energy Emergency and Standby Power Systems.

- **B.12.3.2.5—Power Loss.** In getting a facility up and running after a power loss, the first operational priority is clinical care, and the second is infrastructure. When ordering backup generators, it is important to know the size needed and the method used to connect the generators to the facility.
- B.12.3.4—Activation of Emergency Utility Resources. Planning for a loss of utilities is essential. Organizations should evaluate their ability to be self-sufficient over a period of at least 96 hours, including the fuel they have on hand. An organization that has backup generators must establish how long it can operate on those generators if it loses electricity. Besides the preceding requirements, organizations should consider Occupational Safety and Health Administration (OSHA) guidance on optimizing the comfort of building occupants. OSHA's Standard 1910.1000 recommends temperature control settings in the range 68°F–76°F and relative humidity control settings in the range 20%–60%.
- Depending on the results of your facility's HVA, consider conducting a simulated extreme heat event as one of your organization's required emergency exercises. (See the June 2023 issue of EC News for more on emergency exercises.) If you actually do face an extreme heat emergency and activate your EOP, how your organization responds to the emergency could count for one of the required EM exercises, as long as the response is adequately evaluated and documented.
- Be prepared for a surge of patients with heat-related illnesses. Of course, maintaining operations is not the only challenge during an extreme heat emergency. Health care facilities—including hospitals, freestanding emergency departments, urgent care centers, and outpatient clinics—must be prepared to care for patients with varying degrees of heat-related illness, including heatstroke. During the extreme Pacific Northwest heat wave of 2021, body bags filled with ice and water were used to effectively lower the body temperature of heatstroke victims. Described in a 2020 article in the *Journal of the American College of Emergency Physicians*, this practice is gaining traction as a scalable, cost-effective heatstroke solution during heat emergencies.
- Prepare for an influx of people seeking shelter from the heat. When rolling brownouts and blackouts occur during an extreme heat event and people lose access to air conditioning in their homes, they may seek shelter in hospitals (and other air-conditioned public facilities with backup generators) whether or not they are sick. This puts additional strain on health care facilities. Organizations can prepare for such an influx ahead of time by procuring tents or modular structures—as well as portable air conditioners, portable generators, and portable lights—so that strategic cooling structures can be erected quickly outside the main health care facility. These tents/structures can be used for triage when the facility is at capacity.

- Be prepared to take steps to enhance the comfort of inpatients and residents. Consider these examples:
 - Block direct sunlight by using window awnings, shutters, and/or thermal curtains or blinds.
 - Use electric fans to increase airflow.
 - Make available cooling jackets, cooling blankets, ice packs, cold bottled water, and similar resources.
 - Monitor patient/resident room temperatures and evacuate rooms if temperatures become excessive.
 - Close doors to keep cold air in rooms.
 - Ensure that HVAC and exhaust systems are in working order.
 - Turn off all unnecessary lights.
 - Unplug unused equipment.
- Make sure health care staff, including facilities and maintenance staff, do not get overheated. OSHA provides the following heat exposure precautions for workers, especially new staff members and those who work outside in the summer or do hot work:
 - Allow staff to take frequent water and rest breaks.
 - Educate staff on heat stress, symptoms of heat-related illness, and the importance of rest and hydration.
 - Monitor workers for symptoms of heat-related illness.
 - If a staff member talks about or shows any symptoms of heat-related illness, allow that person to stop working. Initiate first aid. Never leave someone alone who is experiencing symptoms.
- Establish a heat-related illness prevention program for staff.
- Provide training for supervisors and workers to prevent, recognize, and treat heat-related illness.
- See the information sheet "Protecting Workers from Heat Illness," created by the National Institute for Occupational Safety and Health (NIOSH) and OSHA.

Remember that certain populations—such as elderly individuals, infants and young children, people who are overweight, and people who are ill or have chronic conditions—are particularly vulnerable during extreme heat. Consider posting signage in your facility to raise awareness of heat risks and precautionary measures to take.

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Catherine Chopp Hinckley, MA, PhD Contributing Writers: Elizabeth Brewster, Erik J. Martin

Technical Support and Review:

Department of the Physical Environment Director, Physical Environment Department

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