

ASPR TRACIE Technical Assistance Request

Request Receipt Date (by ASPR TRACIE): 30 October 2018

Response Date: 31 October 2018

Type of TA Request: Standard

Request:

The requestor asked if ASPR TRACIE had examples of power outage plans for local health departments, both general and specific to refrigeration failure and the storage of vaccines.

Response:

The ASPR TRACIE Team reviewed existing Topic Collections, namely the [Utility Failures, Continuity of Operations \(COOP\)/ Failure Plan, Recovery Planning](#) and [Pharmacy](#) Topic Collections. We also conducted an online search for additional materials.

Section I includes resources specific to power outages with a focus on the storage of vaccines and refrigeration. Section II provides general materials on power/ utility failure plans for healthcare facilities. Finally, Section III includes additional resources related to the loss of other services (e.g., water), continuity of operations (COOP), and other materials that may be helpful for local health departments.

I. Resources Specific to Storage of Vaccines/ Refrigeration

California Hospital Association. (n.d.). [Loss of Utilities/Services](#). (Accessed 10/31/2018.)

This webpage includes links to many resources that can help healthcare facilities prepare for and respond to utility outages. There are links to presentations, tools categorized by utility system, best practices, and lessons learned. **NOTE:** There is a section on chillers under the section “Hospital Utilities Management Preserving Critical Systems.”

Centers for Disease Control and Prevention. (2014). [Impact of Power Outages on Vaccine Storage](#).

This resource provides tips on maintaining the integrity of vaccine supplies during a power outage.

II. Utility/ Power Failure-Specific Resources

California Emergency Medical Services Authority. (2017). [Incident Planning Guide: Utility Failure](#).

This document includes a series of questions to guide hospitals in planning for utility failures associated with systems such as power, water, heating, ventilation, air conditioning, medical air, vacuum, or medical gases.

Centers for Disease Control and Prevention. (2014). [Power Outages](#).

This webpage includes links to general informational resources related to power outages and resources specific to worker safety and healthcare facilities.

Children's Hospital and Research Center Oakland. (n.d.). [Loss of Electrical Power Incident Response Guide](#). (Accessed 10/31/2018.)

This response guide includes steps healthcare facility staff can take to maintain emergency power systems, patient care and safety, operations and clinical services, and other functions during a power outage. It can be customized by emergency planners from other healthcare facilities.

Federal Emergency Management Agency. (2016). [IS-815: ABCs of Temporary Emergency Power](#).

This course can help emergency planners and responders understand the requirements associated with providing temporary generator power to facilities.

Healthcare & Public Health Sector Coordinating Councils. (n.d.). [Planning for Power Outages: A Guide for Hospitals and Healthcare Facilities](#). (Accessed 10/31/2018.)

This checklist can help emergency planners prepare for and respond to power outages in their facilities.

Stymiest, D. (2008). [Taking Care of Business – How Hospital Electrical Shutdowns Can Facilitate Emergency Management](#).

The author shares a comprehensive approach to managing hospital electrical power shutdowns in light of the increasing complexity of hospital infrastructures and operational constraints. He illustrates how using an electrical "shutdown" as a pre-planned and scheduled exercise can help train staff; sample shutdown resources are included in the appendices.

U.S. Army Corps of Engineers. (2015). [The Emergency Power Facility Assessment Tool](#). (Users must register for free and create profile.)

Healthcare and other critical infrastructure organizations can enter and store the information regarding their respective critical public facility generator requirements

(along with required connection materials) into this online tool. The data is stored in a protected database and can help expedite delivery and installation of generators at prioritized and approved facilities during emergencies or disasters where commercial power is unavailable. This web site also offers facilities a permanent storage location and the ability to update the information as facility requirements change.

U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response. (2015). [HHS emPOWER Map](#).

The map features de-identified population data, down to the zip code level, for Medicare beneficiaries that rely upon certain life maintaining electricity-dependent medical and assistive equipment. It also features real-time National Oceanic and Atmospheric Administration severe weather tracking capabilities to help community partners identify areas that may be impacted by severe weather and thus at risk for prolonged power outages. Together, this data assists community partners, such as hospitals, EMS, emergency managers, electric companies, and civic organizations, to better anticipate, plan for, and rapidly assist electricity-dependent populations within their communities.

U.S. Food and Drug Administration. (2015). [Medical Devices Requiring Refrigeration](#).

Tips for storing common medical devices and other products during and after a power outage are listed on this webpage.

III. Additional Resources

ASPR TRACIE. (2016). [Public Health Continuity of Operations Planning](#).

This ASPR TRACIE TA response provides COOP resources and templates specific to state and local health departments.

ASPR TRACIE. (2018). [Durable Medical Equipment in Disasters](#).

This ASPR TRACIE fact sheet provides information on general durable medical equipment (DME) categories and focuses on electricity-dependent DME that may be affected by disasters and emergencies, including power failures. It also includes information to assist healthcare system preparedness stakeholders plan for medically vulnerable populations who rely on DME.

ASPR TRACIE. (2018). [Going with No Flow: Coping with Hospital Water Supply Issues](#).

ASPR TRACIE interviewed Craig DeAtley (PA-C, Director, Institute for Public Health Emergency Readiness, MedStar Washington Hospital Center) to discuss the facility's response to a 2018 water outage.

Centers for Disease Control and Prevention. (2011). [Emergency Water Supply Planning Guide for Hospitals and Health Care Facilities](#).

This comprehensive document provides a four-step process for the development of a hospital emergency water supply plan and includes tips for assembling the right planning team, performing a water use audit, analyzing alternatives, and developing and exercising the plan.

Novation. (n.d.). [Emergency Disaster Plan Template](#). (Accessed 10/31/2018.)

Healthcare facility emergency planners can use this template when developing their emergency operations plan. It features 12 disaster scenarios, including: hurricane, tornadoes, structure fires, earthquakes, and extreme cold.

Spectrum Health. (n.d.). [96 Hour Operations Impact Chart](#). (Accessed 10/31/2018.)

This chart can help healthcare facility staff plan responses for various types of outages (e.g., gas, electric, water). The second table indicates estimated time frames for activating agreements and rebooting systems.

Spectrum Health. (n.d.). [Risk Ranking Emergency Outlets](#). (Accessed 10/31/2018.)

This Excel spreadsheet can help medical facility planners prioritize and calculate a "risk rank" for electrical outlets during an outage.

U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response. (2018). [Healthcare and Public Health \(HPH\) Risk Identification and Site Criticality \(RISC\) Toolkit](#).

This objective, data-driven all hazards risk assessment can be used to inform emergency preparedness planning and risk management activities. The toolkit consists of three self-assessment modules allowing healthcare facilities to: identify site-specific threats and hazards; assess site-specific vulnerabilities; and evaluate criticality and consequences.