

ASPR TRACIE Technical Assistance Request

Request Receipt Date (by ASPR TRACIE): 3 June 2020

Response Date: 5 June 2020

Type of TA Request: Complex

Request:

The requestor asked for guidance related to hospital infrastructural damage considerations after a disaster.

Response:

The ASPR TRACIE Team reviewed existing ASPR TRACIE resources and conducted a search online for relevant materials. The following resources in this document may assist hospitals plan for and assess infrastructure damage/ structural integrity after a disaster. This technical assistance (TA) response was also reviewed and commented on by the [ASPR Critical Infrastructure Protection \(CIP\) Program](#). CIP provided the following information:

The Department of Homeland Security, [Cybersecurity and Infrastructure Security Agency \(CISA\)](#), [Infrastructure Security Division](#) operates the Protective Security Advisor (PSA) Program. PSAs are trained critical infrastructure protection and vulnerability mitigation subject matter experts who facilitate local field activities in coordination with other Department of Homeland Security offices. They also advise and assist state, local, and private sector officials and critical infrastructure facility owners and operators during response to events. For additional information, please refer to the following resource on CISA's [Protective Security Advisor Program](#).

Note that ASPR TRACIE and CIP have numerous resources related to planning for and recovering from various infrastructure failures such as cybersecurity, water supply failures, utility outages, and supply chain issues. ASPR TRACIE-developed resources related to these topic areas can be found [here](#) and additional information from CIP can be found [here](#). The following resources focus primarily on general infrastructure and post-disaster assessment checklists.

We would like to highlight the following resources for additional information:

- This [ASPR TRACIE TA response](#) includes guidance and checklists for hospital facilities engineering staff to use when securing their facility during an evacuation and for re-opening the facility.
- The [ASPR TRACIE Natural Disasters Topic Collection](#), particularly the [Mitigation section](#), includes numerous resources related to improving resilience and safety of healthcare facilities and services.
- The [ASPR TRACIE Continuity of Operations Topic Collection](#), particularly the [Event-Specific Lessons Learned](#) and [Plans, Tools, and Templates](#) sections.
- The [ASPR TRACIE Healthcare Facility Evacuation/ Sheltering Topic Collection](#), particularly the [Post-Disaster Assessment and Repopulation](#) section.

I. Hospital Infrastructure Considerations Resources

American College of Emergency Physicians. (n.d.). [Hospital Disaster Preparedness Self-Assessment Tool](#). (Accessed 6/4/2020.) California Hospital Association.

This detailed checklist assessment can help hospital staff review their emergency operations plan components. This tool includes information on categories that should be considered in a post-disaster assessment (particularly sections 3-7).

ASPR TRACIE. (2017). Post-Disaster Hospital Assessment Tool. (Attached.)

This checklist can be used following a disaster to determine whether a healthcare facility can be reopened and operated safely. It utilizes elements from a number of existing assessments noted in Appendix A. The assessment is meant to be completed by staff from the facility including representatives from building/facilities, administration, and patient care areas.

California Emergency Medical Services Authority. (n.d.). [Hospital Incident Command System 251- Facility Systems Status Report](#). (Accessed 6/4/2020.)

This HICS form can be used to determine the status (functional, partially functional, nonfunctional) of a healthcare facility after an emergency event.

Greater New York Hospital Association. (2017). [Recovery Checklist for Hospitals After A Disaster](#).

Hospital staff can utilize this facility recovery checklist to check for potential issues in the facility after a disaster.

Loma Linda University School of Medicine. (n.d.). [Infrastructure Failure](#). (Accessed 6/4/2020.)

This document provides a critical infrastructure self-assessment worksheet (Appendix A) and considerations for hospitals (including NICUs) in the following areas: loss of water supply, steam, natural gas, boilers chillers, electricity, powered life support equipment, health information technology, telecommunications, and medical gas failure.

Ontario Renal Network. (n.d.). [Critical Infrastructure Checklist](#). (Accessed 6/4/2020.)

This checklist includes key areas of consideration when evaluating critical infrastructure requirements prior to an emergency.

World Health Organization. (2010). [Safe Hospitals in Emergencies and Disasters: Structural, Non-structural, and Functional Indicators](#).

This assessment tool provides a guide for hospitals to determine structural, non-structural, and functional vulnerabilities and determine if renovations or retrofitting is needed to ensure safety. See structural considerations and checklist starting on page 5.