ASPR TRACIE Technical Assistance Request

Requestor: [Redacted]
Requestor Phone: [Redacted]
Requestor Email: [Redacted]
Request Receipt Date (by ASPR TRACIE): 16 August 2016
Response Date: 23 August 2016
Type of TA Request: Standard

Request:
[Redacted] is requesting any flooding topic collections or resources that have best practices for hospitals.

Response:
ASPR TRACIE has a number of resources that may be helpful to jurisdictions currently experiencing flooding and those jurisdictions planning for flooding or flood-related health issues.

- The Natural Disasters Topic Collection includes a section on Flooding – Lessons Learned and Flooding – Plans, Tools, and Templates.
- We have numerous individual resources on flooding in our Resource Library, which is also connected to the National Library of Medicine Disaster Lit database.
- The following redacted responses to technical assistance requests are available on the Information Exchange Flooding Resources Topic and also attached for convenience.
  - ASPR TRACIE Hurricane: Resources At Your Fingertips document
  - El Nino Health Effects TA Response
  - Public Messaging on Mold TA Response

Section I below includes an excerpt of resources that are most applicable to hospitals.

I. Flooding Resources for Hospitals


In this article, the authors discuss infection prevention and control experiences related to the reopening of medical facilities after recent disasters in Thailand and the U.S.


The authors provide information for clinicians caring for flood victims. They describe the conditions seen in patients following floods, and characterize the causative agents of these conditions. Treatment is also discussed.

This article discusses the impact of the Mumbai floods and the provision of shelter-based and community care for over 150,000 cases of diarrhea, many consistent with leptospirosis by hospital staff and medical students, detailing the substantially increased risk of communicable disease during flooding events with poor sanitary conditions.


This article documents how facility staff from Memorial Hermann Hospital incorporated lessons learned after Tropical Storm Allison flooded the facility with almost 40 feet of water in 2001.


The author recounts the challenges associated with providing care in a university hospital’s neonatal intensive care unit before, during, and after Hurricane Katrina made landfall.


The author describes her experience in Charity Hospital following Hurricane Katrina, with a focus on the unexpected necessities (e.g., shoes, extra underwear, shift work/sleep, morale-boosting activities, a team of professionals who care about patients and each other, etc.) that arose, and how they were addressed.


The authors retrospectively reviewed their hospital's disaster plan and compared it with actual events that occurred after Hurricane Katrina. They evaluated and scored vital support areas as adequate (3 pts), partially adequate (2 pts), or inadequate (1 pt), with the following results: water-3.0, food-2.4, sanitation-1.5, communication-1.4, and power-1.5. The authors concluded that, despite writing and exercising plans, the hospital was still not fully prepared.


The authors describe a novel approach to reestablishing connectivity with the electronic
health records server for a hospital affected by Superstorm Sandy through resource-sharing of a disaster response asset from a hospital in a neighboring state.


This plan was designed to help prevent floodwaters from entering the ground floor of the medical school and hospital and can be used by medical facility planners faced with similar challenges.


This guidance document includes two hospital-specific case studies that illustrate the successful use of floodwalls.


The authors describe how their hospital system's response plans were revised after Hurricane Rita in anticipation of Hurricane Ike in 2008. They note that, despite planning and exercising their plan, there were still a number of lessons learned that could be helpful to other hospitals during future disaster responses.


The author discusses the circumstances surrounding the arrest of a physician and two nurses for allegedly euthanizing four elderly patients at Memorial Hospital in Louisiana after Hurricane Katrina. Issues such as altered standards of care, scarce resource allocation, triage, and indemnification and/or immunity for health professionals are included.


The authors discuss lessons learned from this flood and landslide event in 2011, with a focus on pre-hospital and hospital organization and management of patients. They also describe the most common injuries treated (injuries were to the extremities, most requiring only wound cleaning, debridement, and suture), and note that the primary cause of death was from asphyxia due to drowning or mud burial.

This article discusses lessons learned from the evacuation of two NYC area hospitals in response to Hurricane Sandy in 2012.


The authors discuss the challenges and benefits of transferring their patients to other hospitals along with their care teams in preparation for, and following Hurricane Sandy.

World Health Organization, Regional Office for Europe. (2014). *Floods and Health: Fact Sheets for Health Professionals.*

These fact sheets are geared towards health professionals and describe steps to take during a flood, in the absence of a flood health preparedness and response plan. The sheets cover a variety of strategies including: vaccination during flood events, food safety, water and hygiene in healthcare facilities during and after flood events, and post flood disinfection strategies.


This case study explores the lessons learned when the North Shore-Long Island Jewish Health System evacuated three hospitals at high risk of flooding from Hurricane Irene in August 2011. The event resulted in the evacuation, transport, and placement of 947 patients without any resulting deaths or serious injuries. This case demonstrates the utility of having a functional evacuation plan in place, such as the one North Shore-Long Island Jewish Health System developed through its own full-scale exercises in the years following Hurricane Katrina in 2005.