

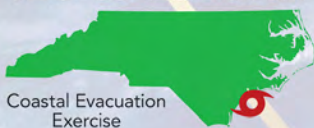


# 120 to Landfall: 2.0 Tabletop Exercise

Practices for Consideration

February 2021

120 to Landfall



Coastal Evacuation Exercise

**SHPR**

SOUTHEASTERN HEALTHCARE  
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## 120 to Landfall: 2.0 Tabletop Exercise Practices for Consideration

This is a compilation of lessons learned, best practices, and recommended standards from across the United States prepared specifically for your exercise. The ideas presented in this material are linked directly to the capabilities and objectives being validated in the *120 to Landfall: 2.0 Tabletop Exercise*. We recommend this document be shared with all members of your organization to better prepare them in their planning, training, and exercise efforts.

Information on numerous planning and preparedness topics can be found on The Naval Post Graduate School Center for Homeland Defense and Security's *Homeland Security Digital Library* (<https://www.hsdl.org/>). Additionally, the Emergency Management Institute (<http://training.fema.gov/EMI/>) offers free on-line courses for continuing education credit regarding emergency preparedness and response for federal, state, and local emergency management professionals.

Derek Rowan, President  
Ascenttra, Inc.

## **Courage to Care: Family Planning for Disasters: The Health Consequences of Disasters and Evacuation, What Patients Need to Know to Prepare**

**Source:** Uniformed Services University of the Health Sciences

**Date:** N/A

**Link:** <https://www.hsdl.org/?view&did=692439>

**Summary:** This installment of Courage to Care is designed to facilitate doctor patient dialogue around the health implications of exposure to disasters, especially those that require the need for evacuation. The talking points below can help you ask the questions that will help your patients assess, prepare for and respond to an evacuation, and do so in a way that is responsive to their unique health needs. There is also a separate fact sheet for individuals and families that your office can download and distribute in your waiting area or clinic. In addition, you may disseminate this electronically to colleagues, and/or put it on your own organization's website to enhance your health outreach in the community. On the reverse side is a box to customize local contact information and health resources useful during disasters. As a healthcare provider to our Uniformed Services, your care impacts not just your patients and their families, but our national security, our national defense and our nation's health. The aftermath of major disasters, such as Hurricane Katrina, provide valuable opportunities to reinforce important public health measures such as preparedness and evacuation.

## **Disaster and Emergency Planning for Preparedness, Response, and Recovery**

**Source:** Oxford Research Encyclopedia

**Date:** September 2015

**Link:** <https://doi.org/10.1093/acrefore/9780199389407.013.12>

**Summary:** Emergency and disaster planning involves a coordinated, co-operative process of preparing to match urgent needs with available resources. The phases are research, writing, dissemination, testing, and updating. Hence, an emergency plan needs to be a living document that is periodically adapted to changing circumstances and that provides a guide to the protocols, procedures, and division of responsibilities in emergency response. Emergency planning is an exploratory process that provides generic procedures for managing unforeseen impacts and should use carefully constructed scenarios to anticipate the needs that will be generated by foreseeable hazards when they strike. Plans need to be developed for specific sectors, such as education, health, industry, and commerce. They also need to exist in a nested hierarchy that extends from the local emergency response (the most fundamental level), through the regional tiers of government, to the national and international levels. Failure to plan can be construed as negligence because it would involve failing to anticipate needs that cannot be responded to adequately by improvisation during an emergency.

### **Disaster Preparedness: Preliminary Observations on the Evacuation of Hospitals and Nursing Homes Due to Hurricanes - Briefing for Congressional Committees**

**Source:** United States General Accounting Office

**Date:** February 2006

**Link:** <https://www.hsdl.org/?view&did=460431>

**Summary:** This GAO report assesses evacuation policies employed by hospitals and nursing homes in times of natural disaster. The investigators found that administrators, not state or local entities, are often the ones who decide whether or not to evacuate patients during emergencies since health care facilities are, in many cases, exempt from official evacuation orders. Hospitals and nursing home administrators reported that they "evacuate only as a last resort and that facilities' emergency plans are designed primarily to shelter in place." Issues taken under consideration when deciding whether to evacuate or shelter in place are "availability of adequate resources to shelter in place, the risks to patients in deciding when to evacuate, the availability of transportation to move patients and of receiving facilities to accept patients, and the destruction of the facility's or community's infrastructure." Administrators responsible for nursing homes are presented by additional considerations as their residents often have no other home to go to and could not care for themselves even if they did. Any receiving facilities would also need to accommodate residents for an extended period. Further, while National Disaster Medical System (NMDS) is prepared to provide assistance with evacuation of hospital patients, it is neither set up nor configured to provide assistance evacuating nursing homes. This report is part of an ongoing review that will continue to examine "the vulnerabilities of nursing homes in future disasters, particularly hurricanes.

### **Evacuating a Region: How a Healthcare Coalition Helped Evacuate 1504 Patients from 45 Facilities After Hurricane Harvey**

**Source:** Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response

**Date:** N/A

**Link:** <https://www.hsdl.org/?view&did=827579>

**Summary:** Floodwaters from Hurricane Harvey inundated 23 out of 25 southeast Texas counties covered by the Southeast Texas Regional Advisory Council's (SETRAC) Regional Healthcare Preparedness Coalition (RHPC). Many hospitals and nursing homes were evacuated while others closed their submarine doors, sheltered in place, and received critical supplies via helicopter and high-water vehicles.

### **Fact Sheet: NIMS Implementation Activities for Hospitals and Healthcare Systems**

**Source:** Federal Emergency Management Agency

**Date:** September 2006

**Link:** <https://www.hsdl.org/?view&did=38685>

**Summary:** This fact sheet on National Incident Management System (NIMS) implementation activities for hospitals and healthcare systems includes information on: NIMS organizational adoption; command and management - incident command system (ICS), multi-agency coordination system, public information system; preparedness planning - NIMS implementation tracking, preparedness funding, updating plans, mutual-aid agreements; preparedness training; preparedness exercises; resource management; and communication and information management.

### **FEMA Mitigation Best Practices: Advanced Mitigation Planning Allows Hospital to Stay Dry During Tropical Storm Lee**

**Source:** Federal Emergency Management Agency

**Date:** N/A

**Link:** <https://www.hsdl.org/?view&did=787692>

**Summary:** Broome County, New York - Lourdes Hospital, located in the picturesque city of Binghamton and surrounded by rolling hills and rivers, averted major storm damage thanks to hazard mitigation and a new floodwall. The floodwall with passive floodgates, built with hazard mitigation funds from the Federal Emergency Management Agency (FEMA) and New York State, protected this vital property from floodwaters that devastated other parts of the city during Tropical Storm Lee. City officials estimated that as many as 2,000 buildings suffered flood damage from the storm. After being forced to evacuate patients and shut down operations in the Flood of 2006, Lourdes Hospital decided that it couldn't happen again. The 2006 flood, causing an estimated \$20M in damages due to up to 20 inches of contaminated floodwaters on its ground floor, had forced the hospital to close for two weeks, cutting off critical services to the community. The hospital power plant, particularly vulnerable to flooding, had integrated costly measures such as temporary earth berms and stormwater pumps to ensure continuation of hospital operations. However, these berms were breached during the flood causing severe damage to the pumps and emergency generators, as well as fuel and water supply infrastructure.

## **Gaps Continue to Exist in Nursing Home Emergency Preparedness and Response During Disasters: 2007-2010**

**Source:** Department of Health and Human Services, Office of Inspector General

**Date:** April 2012

**Link:** <https://www.hsdl.org/?view&did=705729>

**Summary:** Federal regulations require that Medicare- and Medicaid-certified nursing homes have written emergency plans and provide employees with emergency preparedness training. In a 2006 report about nursing homes that experienced hurricanes, we found that emergency plans lacked many provisions recommended by experts. In response, the Centers for Medicare & Medicaid Services (CMS) issued guidance checklists for emergency planning of health care facilities, long-term care (LTC) ombudsman programs, and State survey agencies (SA). We conducted this study to assess emergency preparedness and response of nursing homes that experienced more recent disasters.

## **Healthcare System Recovery Guide: Hurricane Harvey**

**Source:** Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response

**Date:** N/A

**Link:** <https://www.hsdl.org/?view&did=813977>

**Summary:** Disasters have a direct and immediate impact on healthcare systems. These impacts affect not only the facilities and their operations, but also the demand for the critical services provided by those facilities. By most accounts, the healthcare systems in Texas performed with a focus and determination to support survivor needs. Many of them, in particular the larger systems, consider themselves to be fully recovered from the impacts of Hurricane Harvey. In support of Texas recovery operations, the Health and Social Services (HSS) Recovery Support Function (RSF) reviewed healthcare facility concerns realized through the landscape assessment and engaged in onsite recovery work to inform development of this guide to assist small to medium facilities with long-term recovery. This Healthcare Recovery Guide is intended to: [1] Identify common post-disaster recovery planning issues for small to medium sized facilities. [2] Propose courses of action to assist short through long-term recovery and improve future preparedness/response. [3] Identify relevant support resources.

### **Healthcare System Recovery Timeline: A White Paper for Texas**

**Source:** Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response

**Date:** October 2017

**Link:** <https://www.hsdl.org/?view&did=812377>

**Summary:** Following a number of related technical assistance requests and in anticipation of future information needs from healthcare systems impacted by current and future disasters, ASPR TRACIE developed this white paper to answer the question: 'How long does it take the healthcare system to recover from a major hurricane?' ASPR TRACIE conducted an extensive literature review of published and grey literature and open source media accounts of past disaster recovery reports.

### **Hospital Emergency Preparedness and Response During Superstorm Sandy**

**Source:** Department of Health and Human Services, Office of Inspector General

**Date:** September 2014

**Link:** <https://www.hsdl.org/?view&did=757768>

**Summary:** Federal regulations require that hospitals prepare for emergencies including natural disasters. The strength of Superstorm Sandy and the population density of the affected areas placed high demands on hospitals and related services. Prior studies by the Office of Inspector General found substantial challenges in health care facility emergency preparedness and response. In a 2006 study, they found that many nursing homes had insufficient emergency plans or did not follow their plans. In a 2012 follow-up study, they found that gaps continued to exist in nursing home emergency preparedness and response. For this study, they surveyed 174 Medicare-certified hospitals located in declared disaster areas in Connecticut, New Jersey, and New York during Superstorm Sandy. They also conducted site visits to 10 purposively selected hospitals located in areas most affected by the storm. Additionally, they examined information from State survey agency and accreditation organization surveys of hospitals conducted prior to the storm and spoke to surveyors about their survey process related to emergency preparedness. They also interviewed State hospital associations and health care coalitions in the three States.

## Hospital Evacuation Decision Guide

**Source:** United States Agency for Healthcare Research and Quality

**Date:** May 2010

**Link:** <https://www.hsdl.org/?view&did=22777>

**Summary:** This Hospital Evacuation Decision Guide is designed to: 1. provide hospital evacuation decision teams with organized and systematic guidance on how to consider the many factors that bear on the decision to order an evacuation, and 2. assist decision teams in identifying some of the special situations, often overlooked, that may exist in their facility or geographic area that could affect the decision to evacuate. No single formula or algorithm could possibly capture all of the nuances involved in the decision or the myriad different disaster scenarios that may lead to a hospital evacuation, and this Guide does not offer a formulaic approach to evacuation decision-making. Instead, the Guide is intended to supplement hospital emergency plans, which frequently lack specific guidance on how to make that critical decision, including what factors to consider and for how long the decision may be safely deferred. This Guide does not recommend or present best practices for carrying out an evacuation or for sheltering-in-place during and after a disaster other than to stress the critical need for comprehensive plans for both evacuating patients and for sheltering-in-place. The Guide is based on an extensive literature search; discussions at an expert panel meeting; telephone interviews with experts having hospital evacuation experiences in different types of disasters; and a series of meetings with disaster planners, medical staff, and facilities experts from Partners Healthcare (Massachusetts General Hospital and Brigham and Women's Hospital) in Boston. The technical expert panel (see Appendix A) also reviewed a draft version of the Guide. The Guide includes a pre-disaster hospital self-assessment and discussions of both pre- and post-event evacuation decision-making.

## Hurricane Resources at Your Fingertips

**Source:** Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response

**Date:** August 2017

**Link:** <https://www.hsdl.org/?view&did=812371>

**Summary:** This document provides numerous hurricane-related resources applicable to a variety of stakeholders and audiences. Appendix A contains U.S. Department of Health and Human Services (HHS) Office of the Assistant Secretary for Preparedness and Response (ASPR)-specific resources and contact information. Appendix B includes all the citations with annotations if you'd like to dive deeper into a resource. ASPR TRACIE (Technical Resources, Assistance Center, and Information Exchange) Topic Collections provide a wide array of materials and resources for further research.



### **Incident Planning Guide: All Hazards**

**Source:** California Association of Health Facilities

**Date:** 2017

**Link:**

[http://www.cahf.org/Portals/29/DisasterPreparedness/NHICS/AllHazards\\_IPG%202017.pdf](http://www.cahf.org/Portals/29/DisasterPreparedness/NHICS/AllHazards_IPG%202017.pdf)

**Summary:** The purpose of this Incident Planning Guide (IPG) is to identify issues that should be considered when planning for emergencies and unforeseen situations that may impact your nursing home. This IPG identifies planning considerations to assist the nursing home in 4 important areas: [1] Mitigation; [2] Preparedness; [3] Immediate and Intermediate Response; [and 4] Extended Response and System Recovery. This is an 'all hazards' IPG and the issues presented will apply to many different types of emergencies. It is not uncommon for one emergency to lead to another, e.g., a fire may trigger evacuation procedures, or an extended utility failure may warrant a response to cold or heat exposure. Nursing homes are encouraged to customize this IPG to meet their specific requirements which should take into account the vulnerabilities and risks identified in your nursing home's Hazard Vulnerability Analysis (HVA). It is also advised to consult with local emergency management officials to understand the hazards specific to the community.

### **LLIS Best Practice: Regional Emergency Planning for Healthcare Facilities: Regional Information Management Systems**

**Source:** Lessons Learned Information Sharing (LLIS)

**Date:** N/A

**Link:** <https://www.hsdl.org/?view&did=765552>

**Summary:** Effective information management is essential for a coordinated regional emergency response by healthcare facilities. Regional emergency planning and agreements need to establish information management systems among the participating healthcare facilities. These should also delineate protocols that govern the system, especially in an emergency.

### **LLIS Best Practice: Regional Emergency Planning for Healthcare Facilities: Transfer of Resources, Personnel, and Patients**

**Source:** Lessons Learned Information Sharing (LLIS)

**Date:** N/A

**Link:** <https://www.hsdl.org/?view&did=765551>

**Summary:** A large-scale disaster or terrorist incident is likely to overwhelm the capacity of any single healthcare facility. A coordinated regional response to such events may require the transfer of resources, personnel, and patients between healthcare facilities.

### **LLIS Good Story: Incident Management: The Central Ohio Trauma System's Hospital Incident Liaison**

**Source:** Lessons Learned Information Sharing (LLIS)

**Date:** February 2012

**Link:** <https://www.hsdl.org/?view&did=777158>

**Summary:** The Central Ohio Trauma System established the Hospital Incident Liaison (HIL) role to support central Ohio hospitals and partnering agencies in the event of a disaster, regardless of its scale. The HIL serves as a conduit for situational awareness and information sharing, assists with regional resource allocation, and facilitates the coordination of response activities for 29 trauma and acute care hospitals throughout central Ohio. The HIL operates within an Incident Command System structure and is able to deploy regional medical assets during emergencies.

### **Major Hurricanes: Potential Health and Medical Implications**

**Source:** Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response

**Date:** July 2018

**Link:** <https://www.hsdl.org/?view&did=829123>

**Summary:** This ASPR TRACIE resource was developed to provide a short overview of the potential significant health and medical response and recovery needs facing hurricane and severe storm-affected areas, based on past experience and lessons learned from Hurricanes Katrina, Sandy, Harvey, Maria, and others. The list of considerations is not exhaustive, but does reflect a thorough environmental scan of publications and resources available on past storm response and anecdotal information from first responders who were on scene. The intent of the document is to aid the "ESF-8 Family" in thinking through the different potential problems that may present as Requests for Assistance and unmet needs. Our hope is that this document can aid

readers in anticipating some of these potential issues to either avoid them or be ready to respond to them as needed. Those faced with leading the response and recovery from a hurricane may use this document as a reference, while simultaneously focusing on the actual assessments and issues specific to their communities and the unmet needs as they develop.

### **Nursing Home Emergency Preparedness and Response During Recent Hurricanes**

**Source:** Department of Health and Human Services, Office of Inspector General

**Date:** August 2006

**Link:** <https://www.hsdl.org/?view&did=705727>

**Summary:** Federal law requires that Medicare and Medicaid-certified facilities have written plans and procedures to meet all potential emergencies and provide training to employees in emergency procedures. State surveys assess whether facilities meet these requirements. Four of the five Gulf States also have additional emergency preparedness requirements which are typically expected to be included in facility emergency plans. For this study, we reviewed State survey data for emergency preparedness measures both nationally and for Gulf States (Alabama, Florida, Louisiana, Mississippi, and Texas) and visited selected communities to interview nursing home staff, local authorities, and other stakeholders. We also compared emergency plans for 20 selected nursing homes affected by hurricanes in the 5 Gulf States against a list of suggested provisions compiled from all Gulf State requirements and guidance, a variety of published works from authoritative sources such as the American Journal of Public Health, and other health care, elder care and emergency preparedness experts.

### **Nursing Home Incident Command System (NHICS) 2017**

**Source:** California Association of Health Facilities

**Date:** 2017

**Link:** <https://www.hsdl.org/?view&did=836077>

**Summary:** All nursing homes should be prepared for and exhibit resiliency when faced with any type of incident, ranging from an internal emergency that affects only one facility to a large, regional disaster that simultaneously affects many healthcare facilities and the community. The Incident Command System (ICS) provides a practical, proven approach to disaster management that is an integral part of the National Incident Management System (NIMS). The streamlined approach presented in this Guidebook and Toolkit reflects the need to prioritize resident care and acknowledges the staffing limitations faced by many facilities. However, it is important to recognize that there are certain unalterable tasks that must occur when responding to any emergency; these

NHICS [Nursing Home Incident Command System] documents provide a road map for accomplishing those essential tasks. NHICS provides standardization that can markedly improve the ability of an organization to successfully respond to a disaster. The purpose of this document is to provide the information necessary for nursing home administrators and staff to understand the principles of NHICS and embrace its implementation before it's needed.

### **Regional Emergency Planning for Healthcare Facilities: Regional Agreements**

**Source:** Lessons Learned Information Sharing (LLIS)

**Date:** N/A

**Link:** <https://www.hsdl.org/?view&did=765554>

**Summary:** Agreements are critical components of the regional emergency planning efforts of healthcare facilities. They enable a region's healthcare facilities to respond to a large-scale disaster or terrorist event in a rapid, coordinated, and effective manner. Such agreements establish a formal relationship among signatories by setting roles and responsibilities in emergencies.

### **Sheltering in Danger: How Poor Emergency Planning and Response Put Nursing Home Residents at Risk During Hurricanes Harvey and Irma**

**Source:** United States Congress, Senate Committee on Finance

**Date:** November 2018

**Link:** <https://www.hsdl.org/?view&did=818963>

**Summary:** Every time a hurricane strikes the United States, hundreds of thousands, even millions, of people face a difficult decision: heed the warnings of local officials and evacuate the area, or ride out the storm by 'sheltering in place.' This decision can be a matter of life or death, especially for people living in low-lying areas vulnerable to flooding and storm surges. For nursing homes and assisted living facilities entrusted to take care of frail residents with complex medical needs, the decision to evacuate or shelter-in-place takes on even greater weight. Administrators of these facilities are not only considering their own safety, but that of residents unable to fend for themselves, and the staff who care for them. Many nursing homes and assisted living facilities chose to shelter-in-place when hurricanes Harvey and Irma struck Texas and Florida, respectively, late in the summer of 2017. While most of these facilities weathered the storms without incident, the exceptions were glaring and tragic. [...] This report examines the decisions that were made before, during and after the 2017 storms, as well as gaps in federal regulations currently on the books. It makes recommendations on how to avoid these types of tragedies in the future.

### **Topics for Healthcare Facilities: Major Earthquake and Cascading Events: Potential Health and Medical Implications**

**Source:** United States, Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response

**Date:** December 2018

**Link:** <https://www.hsdl.org/?view&did=819596>

**Summary:** This tip sheet summarizes the ASPR [Assistant Secretary for Preparedness and Response] TRACIE [Technical Resources, Assistance Center, and Information Exchange] document, Major Earthquakes & Cascading Events: Potential Health and Medical Implications, which provides a high-level overview of the potential significant health and medical response and recovery needs facing areas affected by a major earthquake with or without additional cascading events.

### **Using Highways During Evacuation Operations for Events with Advance Notice**

**Source:** Federal Highway Administration

**Date:** December 2006

**Link:** <https://www.hsdl.org/?view&did=479496>

**Summary:** Disasters can come in infinite varieties and can happen anywhere at any time, often without warning. Regardless of where in the spectrum the disaster falls, transportation is critical to evacuation operations, bringing responders to the scene, and transporting the ill and injured to medical facilities. To achieve an efficient emergency management response, transportation assets must be effectively utilized. A 2003 report issued by the U.S. Nuclear Regulatory Commission (NRC) provided selected case studies on evacuations that occurred across the country from January 1, 1990, through June 30, 2003. The NRC observed that a large-scale evacuation involving 1,000 or more people occurs approximately every three weeks. The leading cause of evacuations was natural disasters (58 percent), with wildfires accounting for 23 percent of these evacuations. Technological disasters accounted for 36 percent of evacuations. These causes included hazardous material releases, train derailments, and traffic incidents. Malevolent acts, including terrorist attacks, accounted for six percent of evacuations. Due to the frequency of events leading to localized evacuations, local and state agencies, particularly in larger metropolitan areas, have become familiar with evacuation planning and its related issues and areas of concern such as transportation-disadvantaged and vulnerable populations, identification of decision makers, and the effects of an evacuation order. Local and State agencies routinely handle evacuations from wildfires, floods, tornadoes, hazardous material accidents, or significant transportation crashes. The 2003 NRC study found that only 17 of the 230 evacuations over the past 12½ years involved 100,000 people or more.