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HARVARD

SCHOOL OF PUBLIC HEALTH

Emergency Preparedness and Response
Exercise Program



MDPH HOSPITAL EVACUATION TOOLKIT





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Dear Hospital Representative,

The 2014 edition of the Massachusetts Department of Public Health (MDPH) Hospital Evacuation Toolkit was developed by the Harvard School of Public Health Emergency Preparedness and Response Exercise Program (HSPH-EPREP) in collaboration with the MDPH Office of Preparedness and Emergency Management. Since the initial 2012 publication of the toolkit, Superstorm Sandy devastated New York City prompting multiple hospital evacuations under varying circumstances. The events surrounding Superstorm Sandy served to validate the original guidance in the toolkit, but these events also helped HSPH-EPREP to identify areas where hospitals needed additional information to inform evacuation planning efforts. As a result, HSPH-EPREP has updated the original MDPH Hospital Evacuation Toolkit and added shelter-in-place guidance to the 2014 version.

The toolkit is meant to serve as a resource for hospitals to prepare their own comprehensive evacuation plans, and also to review their provisions and planning for sheltering in place. The toolkit draws from the extensive literature review, review of hospital plans, interviews with hospitals that have had to evacuate, other activities that occurred in preparation for the MDPH statewide hospital evacuation exercise program, and from lessons learned during the execution and evaluation of the exercise series. The Massachusetts General Hospital evacuation plan, in particular, was used as a reference for many of the specific tools and job action sheets in this toolkit. We gratefully acknowledge the outstanding hard work of many MGH leaders who contributed time and energy to create the plans and tools from which several of the toolkit items are adapted.

The MDPH Hospital Evacuation Toolkit and all related documents have been developed through a contract with the Office of Preparedness and Emergency Management at the Massachusetts Department of Public Health, with funding from the Office of Assistant Secretary for Preparedness and Response (ASPR) Hospital Preparedness Program. The views and opinions expressed as part of the MDPH Hospital Evacuation Toolkit and all related documents do not necessarily represent the views and opinions of the Office of Assistant Secretary for Preparedness and Response (ASPR) Hospital Preparedness Program.

Sincerely,

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INTRODUCTION

Purpose of the MDPH Hospital Evacuation Toolkit

Although rarely required, both full and partial hospital evacuations are extremely complicated and potentially dangerous events. Careful and detailed planning that supports orderly and safe evacuation operations under a wide array of conditions must be included in any hospital emergency operations plan. Further, hospital emergency operations plans must also support robust procedures to shelter-in-place. Developing clear shelter-in-place procedures may reduce the likelihood that a hospital will need to evacuate and/or may limit the scope of an evacuation following a catastrophic event. There are many plausible scenarios that may push any hospital to consider evacuation. Similarly, there are many different timelines within which a hospital must evacuate. These conditions complicate planning efforts as hospitals work to balance the practicality of creating a common set of evacuation procedures and supporting documents with developing specific procedures and resources that will be useful in response to a diverse set of evacuation scenarios. This toolkit is designed to assist hospitals with evacuation planning efforts by providing guidance and tools that are useful in the majority of anticipated disaster scenarios.

This toolkit has been designed with the following assumptions and principles in mind:

- Evacuation may be required immediately following a no-notice event such as a tornado or fire, required in a delayed fashion following a structural or systems failure such as a loss of heat, or required in anticipation of an event, such as for a hurricane.
- Hospitals may be required to partially or fully evacuate.
- Hospital evacuation may be preceded by a period of sheltering in place.
- Each patient care unit must be able to both automatically and autonomously prepare their patients for evacuation in order to facilitate evacuation efforts with limited reliance on central communications and command.
- All patient care units may potentially need to evacuate their units before transportation resources and/or receiving destinations are available. Hospitals should undertake an internal horizontal evacuation if it is both possible and can be safely accomplished. Because safe horizontal evacuation sites may not be available, hospitals must also plan to pre-designate Assembly Points on or adjacent to the hospital campus that can accommodate every care unit.
- Assembly Point operations can rapidly become chaotic. Hospital evacuation plans must include structures that will minimize the chaos and risk to patients while they are at an Assembly Point including procedures to ensure administrative leadership, medical leadership, and continuity of effective patient care until patients can be safely moved.
- The process of matching evacuating patients with receiving facilities is an extraordinarily complicated and resource intensive endeavor that requires close collaboration with public health authorities, EMS, and neighboring health care institutions. Hospitals must centralize their team that makes transport destinations for their evacuating patients to minimize confusion and streamline communications.
- Receiving evacuated patients may be taxing on receiver hospitals and emergency departments. Receiver hospitals should activate their emergency operations plans immediately upon notification that a nearby hospital is evacuating or considering evacuation.



Using the MDPH Hospital Evacuation Toolkit

This toolkit is designed to assist hospitals as they review and update their plans for evacuation, both full and partial, and for sheltering in place on an annual or more frequent basis. The section that follows this introduction, the Hospital Evacuation Guide, describes the evacuation planning process from start to finish. The Hospital Evacuation Guide section presents best practices for facilitating communications between Hospital Incident Command and clinical staff in support of optimizing patient movement, patient tracking, and the coordination of operations at the Assembly Point. In addition, the Hospital Evacuation Guide section of the toolkit explains the rationale behind many of the specific recommended evacuation processes that are explained in further detail in the other sections of the toolkit.

Supplementing the main guidance document are several other tools designed to clarify roles and specific responsibilities in order to assist with evacuation planning and evacuation operations. For example, on page 66 there is a guide to help hospital personnel prepare inpatients for evacuation depending upon the patient's condition and current treatments. In section IX, there is a comprehensive checklist of items to consider when reviewing the complete hospital evacuation plan.

This toolkit is not a one-size fits all resource for hospitals; however, the resources included in this toolkit can serve as a strong foundation for any hospital's evacuation plan. The job action sheets, tools, spreadsheets, and other resources in this toolkit can be easily adapted and incorporated into any hospital's evacuation plan. Any tools that are adapted should be read thoroughly and edited so that they reflect the specifics of the individual hospital, patient population, and surrounding environment before they are used under emergency conditions.

Scope of the MDPH Hospital Evacuation Toolkit

This toolkit focuses on preparing hospitals to safely conduct the various operations required during a shelter-in-place event, a partial evacuation, or a full evacuation. Following an evacuation, hospitals will need to consider how they will repopulate their healthcare facility. The issues that hospitals should consider when working on repopulation planning prior to an evacuation are outside of the scope of this toolkit. Hospitals can review the [Hospital Assessment and Recovery Guide](#) developed with funding from the Department of Health and Human Services (DHHS) to find information on the initial assessment that will be required prior to repatriation of an evacuated hospital. Hospitals can also review the [Hospital Repopulation after Evacuation Guidelines and Checklist](#) developed by the California Hospital Association (CHA) to find information on the operations that may be required when repopulating a hospital. The CHA guide also summarizes the regulatory issues that hospitals in California would need to consider following an evacuation. Hospitals outside of California should engage the local and state regulatory agencies that govern their healthcare operations to determine the specific regulatory requirements that will apply to their hospital following an evacuation.

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II. HOSPITAL EVACUATION PLANNING GUIDE



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PREFACE

Purpose

The Hospital Evacuation Planning Guide is meant to provide planning assistance and assist a hospital in refining and augmenting its efforts to prepare for the possible evacuation of part or all of the facility. This guidance is meant to complement and integrate with the institution's Emergency Operations Plan (EOP), and not replace, duplicate, or conflict with the structures, roles, or guidance offered by the EOP. Not all portions of the guidance will necessarily be appropriate for all hospitals. Hospitals are encouraged to review this document and adapt and incorporate those sections and tools they deem useful and appropriate to their needs.

Current Scope of Planning Guidance

While this guidance contains principles and procedures applicable to all healthcare facility evacuations, the specific tools in this document address evacuation procedures for inpatient care units only. Hospitals must, of course, consider all spaces within their campus including outpatient care sites, procedural suites, public spaces, research programs, and other areas when developing their EOPs and during evacuation planning.

Assumptions

The general assumptions upon which this toolkit is based are listed in the Introduction (found in Section I, page 1).

For this guidance, it is assumed that the systems, structures, and tools within this guidance will always be used after the hospital's EOP has been activated. Therefore, it is also assumed that the Hospital Incident Command System (HICS) will be used throughout the duration of a hospital's evacuation response. Because each hospital may have its own unique HICS structure specified within its EOP, this planning guidance does not replace or alter the institution's fundamental HICS structure, but rather proposes to add additional specific functional components that may be activated during a hospital evacuation when needed. Whenever relevant, this planning guidance will show where a proposed function specific to evacuation may fit within a general Hospital Incident Command System.

As also mentioned in the Introduction, there are many reasons why a hospital would need to evacuate and different constraints that hospitals will need consider when conducting an evacuation. Because some emergency planners may feel more comfortable specifying a timeline within which evacuation must occur in a "basic" evacuation planning scenario, the core planning assumption in this guidance is that full evacuation of the hospital must be completed within 4-6 hours. Nonetheless, this planning guidance is relevant for other, including less and more, urgent evacuation scenarios. In a gradual or planned evacuation, the same steps are followed but with more time to complete them. In an immediate evacuation, while there is no time for anticipation of the incident, the efforts a hospital makes to adapt the guidance and tools within this document are anticipated to help staff better know what to do without needing specific direction and where to go to protect their patients and themselves.



GUIDING PRINCIPLES

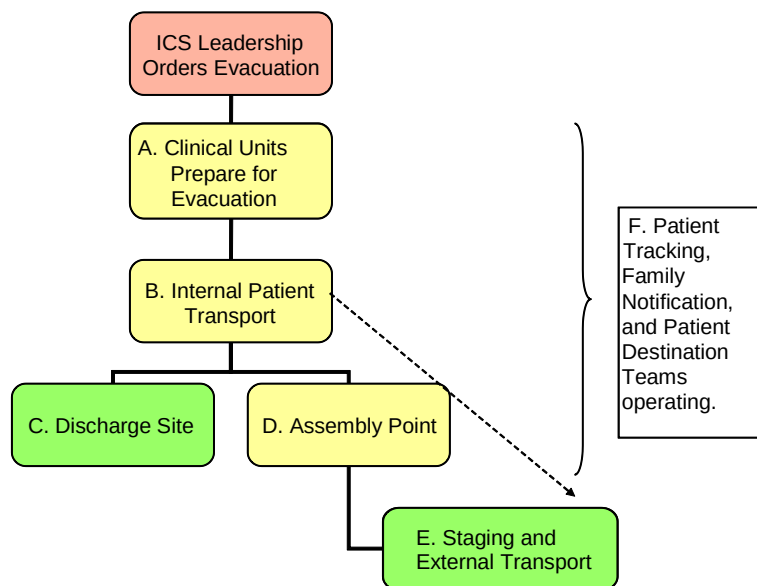
Moving all patients, visitors and staff out of dangerous and/or damaged facilities as safely as possible is always the goal of an evacuation. **It is important to recognize that routine care and processes will not be optimal in response an evacuation scenario.** To that end, understanding key principles will help staff make good decisions during a challenging event.

- Full evacuation of a hospital should generally be considered as a last resort when mitigation or other emergency response efforts are not expected to maintain a safe care environment.
- Safety is always the primary concern.
- Simplicity is key; the staff will need a simple plan to follow in an emergency.
- Flexibility is vital because the procedures must be able to be adapted to a variety of situations.
- Self-sufficiency at the unit level is important because timely communication from hospital leaders may be difficult or even impossible, requiring employees at every level to know immediately what to do in their area.
- It may be necessary to evacuate patient care sites before transportation resources and/or receiving destinations are available. Because horizontal safe sites may not always be available, hospitals must also identify and designate Assembly Points located away from the main clinical areas for every patient care unit that will accommodate essential patient care functions while patient transport is being arranged.
- Individual patient care units should stay together at the Assembly Points whenever possible (instead of dividing their patients into separate groups by ambulatory status). This is because the unit teams familiar with their patients will be better able to manage them in a chaotic situation away from the care unit.
- EMS and other external patient transporters should generally not be asked to come onto the hospital units to load patients because of the risks, time delays, and inefficiency in this process when large numbers of patients are involved. Instead, evacuating patients should be brought to meet their transporting ambulances and other vehicles in rapid-throughput staging areas.
- When difficult choices must be made, leaders and staff must focus on the “greatest good for the greatest number.”

The primary consideration when deciding whether to evacuate a hospital is the safety of both patients and staff^{1, 2}. How patient and staff safety is evaluated will drastically affect whether or not a hospital evacuates. Hospitals should strive to develop a clear, comprehensive, and consistent decision-making matrix that can be used when they are considering whether to evacuate or not.

PROCESS OVERVIEW

The process of evacuating a hospital can be organized into several key components. Each component is described in detail in this guidance. As detailed in the [AHRO Hospital Evacuation Decision Guide](#), the decision to evacuate is a difficult one that will likely be made with the input of a team of leaders in the hospital and/or external authorities after carefully assessing the safety threats and all possible alternatives. However, once the decision to evacuate has been made, then the process of hospital evacuation is fairly linear. Below is an example schematic of the core stages in the hospital evacuation process:



A. Clinical Unit Preparation is managed by a “Unit Leader” on each care unit (typically a resource nurse or other site leader). This stage begins with the preparation of medical records, medications, and equipment needed to accompany each patient during transport and ends when patients are ready for transport from the unit. The Unit Leader is also responsible for working with responsible clinicians to identify which patients may be safely discharged from the hospital immediately and not require transfer to another unit or hospital.

B. Internal Patient Transport is arranged by a “Floor Coordinator” who works with the Unit Leader to ensure all patients are transported off the unit to the Discharge Area, Assembly Point, or Staging Area via stairs or elevator, as appropriate. On the ground level, “Transport Coordinators” ensure that patients are transported to either the pre-designated Assembly Point or Discharge Site.

C. Discharge Site Operations personnel take charge of care for patients who, following the evacuation order, have been deemed appropriate for safe, rapid discharge from the hospital. Discharge site leaders ensure that supplies and staff are ready and organized to supervise patients while they wait for transport to their home or another appropriate location. The Discharge Site takes responsibility for patients when they “check-in” and provides support until they leave the hospital.

D. Assembly Point Operations leaders ensure that supplies, equipment, and staff are available and organized to care for patients in the Assembly Point. The Assembly Point takes responsibility when patients “check-in” and manages patient care until patients are ready to be transferred to another facility.

E. Staging and External Transport staff manage patients as they “check-out” from the Assembly Point and load into ambulances and other transport vehicles to be taken to other hospitals. Leaders ensure that the patients’ travel needs are met (records, equipment, staff supervision if necessary), confirm patient identity and transfer destination, and document that the patients have left the hospital.



F. Patient Tracking, Family Notification, & Patient Destination Team:

Patient Tracking staff are responsible for tracking and reporting on the location of patients throughout the evacuation process to provide continual accountability.

Family Notification unit members are responsible for attempting to notify family members and other related and responsible parties about patient transfer destinations, answering calls and responding to questions from family members about patient welfare and location. Unit members should also carefully track which notifications have been successfully made and which families could not be reached.

Patient Destination Team staff begin work as soon as the evacuation plan is activated to match evacuating patients with appropriate available beds in other facilities. Because of the complexity of this process, the Team should include representation from the Chief Medical Officer, senior nurses, admitting office representatives, and case managers. The Team works closely with public health and EMS officials to identify available beds and ambulances for patient transfers.

Hospital Emergency Operations Plans and evacuation plans should both anticipate the possibilities of catastrophic failures of their usual communication systems and develop appropriate contingency strategies.

For example, during Superstorm Sandy, some evacuating hospitals lost their telephone, internet, and radio systems at once. When that happened, maintaining communication with the patient care floors to coordinate transfers out of the hospital was a significant challenge^{4, 6}.



PLAN ACTIVATION

Authority to Order Evacuation

An appropriate and available official must retain or be delegated the authority to order partial or full evacuation of the hospital. This authority may generally rest with the CEO, the Administrator On-Call (AOC), and/or the Incident Commander in an activation of the hospital EOP. All hospital evacuation plans must delegate the authority to order an evacuation to a leader who is on-site 24 hours a day, 7 days per week so s/he may act immediately to respond to an extraordinary situation. Hospitals must also be prepared to receive and immediately act upon an evacuation order issued by an external authority.

In the review of 68 facilities evacuation events described by Rojek et al., the primary decision-maker for hospital evacuation was most often a single individual, such as the hospital CEO³.

In many cases, however, it is not immediately obvious that evacuation is the safest course of action for a hospital in response to a threat. Deciding to evacuate may require input from a variety of clinical and non-clinical leaders. When time permits, hospitals may wish to consider convening a pre-established Evacuation Decision Team that has representation from nursing, physicians, safety, facilities maintenance, security, and others so hospital leaders can quickly weigh the risks of evacuation against the risks of staying in place.

Making the Decision

In most emergencies, a full evacuation of the hospital will not be required. Evacuation is generally considered as a last resort due to the complex needs and unstable nature of many hospital patients. An evacuation should only be ordered when it is absolutely necessary. For example, evacuation would be necessary when there is an imminent or potential unmitigated hazard that threatens patient and staff safety. Hospital leadership must monitor and carefully consider the situation outside the hospital when making the evacuation decision. Any hospital evacuation puts a strain on community resources, often in a situation when those resources are already strained. Consideration should be given to bolstering hospital capabilities and resources if an evacuation could cause greater harm to patients by putting them into a setting that cannot provide an appropriate environment of care.

For further information regarding the decision making process, please review the [AHRQ Hospital Evacuation Decision Guide](#). Excerpted from that guide below is a partial list of situations that may warrant evacuation:

- Fire and smoke
- Facility or structural damage
- Loss of major utilities
- Potential exposure to hazardous materials
- Terrorism or violent, armed visitor(s)
- Credible bomb threat

Prior to Superstorm Sandy, some hospitals implemented a rapid and focused patient discharge effort in advance of the storm as part of a shelter-in-place strategy. Although one hospital later had to evacuate because of subsequent systems failures, the fact that it had discharged 50% of its inpatients in advance of the storm made a difference in getting everyone out quickly and safely⁴.

It is important to remember that the decision to evacuate is not necessarily an “all or none” action. When additional time is needed to assess the danger posed by the event, hospitals should consider issuing a “Prepare Only” order as long as delaying the evacuation decision does not place patients and staff at risk. Under such an order, hospital staff should prepare for evacuation, but not actually remove patients from their care units (i.e. packing patients, moving supplies to Assembly Point, etc.) Subsequently, if the hospital needs to evacuate, it will have saved valuable time and minimized risks to patients. If the hospital does not need to



evacuate, no patients will have been placed at risk in transit and the preparatory work will have served as excellent practice for staff.

Notification of Hospital Employees

Once the decision is made, the full institution should be notified of the evacuation. If available, an automated Emergency Notification System that contacts all hospital leaders and managers should be utilized to broadcast the evacuation order. Overhead pages, emails, text messages, notification of news outlets, and other means of contacting employees and staff should be also be considered and used if necessary.

Facilities that incorporated the fewest outside agencies when developing their disaster and evacuation plans took the longest amount of time to evacuate during Hurricane Rita⁵.

Notification of External Agencies

As should be described in the Hospital EOP, all appropriate agencies must be immediately notified of any plans to evacuate the facility. At a minimum, state public health, local public health, local EMS, local fire, and local police representatives should be notified of this decision.

Key Decisions for the Incident Commander

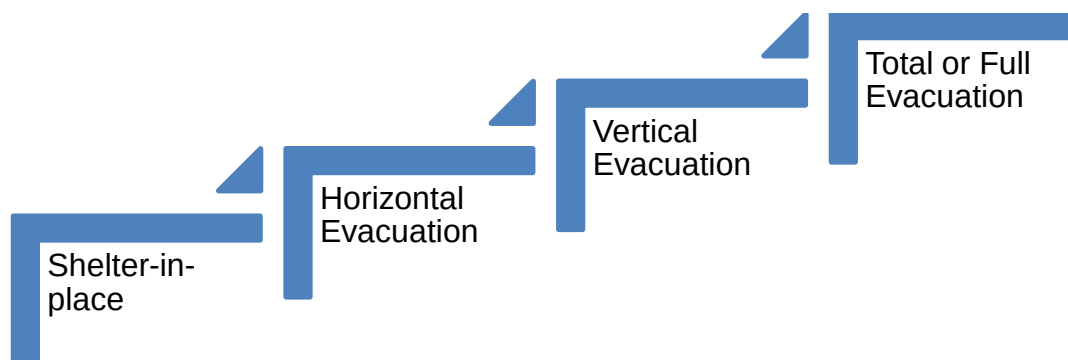
Once the decision to evacuate has been made, there are several additional key decisions that must be made quickly and communicated to both internally to hospital employees and among external partner agencies. The following pages will explore important considerations for each of these decisions.

1. Level of Evacuation
2. Type of Evacuation
3. Evacuation Time Frame (Immediacy of Evacuation)
4. Patient Prioritization
5. Assembly Point and Discharge Site Locations
6. Labor Pool Activation
7. Evacuation Coordinator Assignment
8. Patient Destination Team Activation

Hospital Emergency Operations Plans and evacuation plans should anticipate the catastrophic failures of communication systems. During Superstorm Sandy, evacuating hospitals lost telephone, internet, and radio communication capabilities. Maintaining effective lines of communication among patient care floors and HICS leadership to coordinate transfers was a significant challenge for these hospitals^{4, 6}.

1. Level of Evacuation

The scope of any evacuation can change over time depending on the nature and course of the event. Below is the full list of options for evacuation in order of increasing scope and severity:



A. Shelter-in-place: This level of evacuation requires cessation of all routine activities in preparation for an impending threat, such as a hurricane or toxic cloud. Specific preparations should be made to mitigate against the anticipated threat. In general during a no-notice event, patients, visitors and staff remain where they are until they receive further instructions. In most cases, the safest place for the patient is in his/her room. Closing doors/windows provides initial protection from fire, smoke, and other hazards. During a shelter-in-place response, preparations should also be taken to enable immediate evacuation of patients should the situation change and evacuation become necessary. For an event with notice, such as impending hurricane, numerous activities should be undertaken to mitigate risk and prepare to support patient care in a resource-constrained environment. These activities include rapidly discharging patients, increasing on-site staffing levels and securing extra food, linen, and supplies.

B. Horizontal Evacuation: This level of evacuation involves moving patients who are in immediate danger away from the threat. Patients remain on the same floor of the hospital as the area that they are evacuating. Horizontal evacuation typically involves moving patients to an area of refuge in an adjacent smoke/fire zone or in some cases, at the opposite side of the building. Most evacuations of a single department or patient care unit can be done horizontally, which is the fastest option and has the simplest re-entry process. Evacuation of an entire building may even be accomplished horizontally if every floor of the evacuated building connects to another building.

C. Vertical Evacuation: This level of evacuation refers to the complete evacuation of a specific floor in a building. In general, patients and staff evacuate vertically towards ground level whenever possible. Moving patients and staff to lower levels helps to prepare for total or full evacuation of the facility should the situation worsen. For most localized incidents, vertically evacuated patients and staff are sent to an area of refuge elsewhere in the hospital typically at least two floors away from the incident floor. During the vertical evacuation of one floor, other floors may be ordered to shelter-in-place or prepare only for their own evacuation.

D. Total or Full Evacuation: This level of evacuation is used only as a last resort and involves a complete evacuation of the facility. There are many different ways that a total or full evacuation can be planned for and managed.



2. Type of Evacuation

In addition to determining the level of an evacuation, the hospital Incident Commander needs to determine the priority for moving groups of patients based on the conditions of the event. The underlying principle is to maximize lives saved with respect to the constraints of available resources and time. Incidents requiring evacuation can evolve quickly. Remembering the underlying principle can enable rapid decision-making that can positively impact the number of lives saved. Generally, a hospital evacuation will be conducted in one or a combination of three previously described Response Models based on the amount of time available for a given evacuation and the other resources (especially transport resources) available:

A. Geographic Model: This systematic evacuation focuses on the evacuation of areas at greatest risk within the hospital or selects individual care units to evacuate sequentially as entire units. This may occur when a hospital has significant advance notice and/or has the required time to evacuate based on the geographic location of patient units.

<i>Pro(s)</i>	<i>Con(s)</i>
Allows for partial evacuation that will not disrupt the entire hospital and allows units to stay together throughout the evacuation process supporting the consistent delivery of medical care.	Requires considerable evacuation time.

B. Resource Model: This evacuation focuses on utilizing resources in the most efficient manner possible. Evacuation would occur vertically (top to bottom if elevators are available, or reversed if not) while identifying evacuees that require scarce resources. Therefore, patient prioritization would be directly linked to resource availability (e.g. ICU patients would be evacuated in a way that makes the best use of ambulances equipped to handle ICU patients).

<i>Pro(s)</i>	<i>Con(s)</i>
Utilizes available resources effectively; effectively streamlines evacuation process in a top-down or bottom-up method.	Requires significant real-time planning and logistical management to best allocate scarce resources at a time of crisis.

C. Acuity Model: This evacuation process attempts to account for patient acuity in the prioritization of patients during the evacuation operation. In this model, evacuation is conducted in the same top-down or bottom-up method as described in the Resource Model, however, in this model, patient acuity is the primary driver of the evacuation order decisions. In general, it is advisable to evacuate the most ill and most resource-intensive patients first if there are sufficient transport resources and receiving facilities to accommodate them. This model rapidly decreases the medical workload on the evacuating hospital staff as high-acuity patients are transferred, and also protects those patients if power, suction, oxygen, or other systems fail as the evacuation progresses. However, some experts have suggested that the very most medically fragile patients may be evacuated last to ensure that they are not removed from ventilators and other life support equipment until absolutely necessary and/or because their risk of death in transfer is exceedingly high.

<i>Pro(s)</i>	<i>Con(s)</i>
Evacuates patients in an order that ensures the greatest good for the greatest number of patients. Partial evacuation can be accomplished in the shortest amount of time of all three models.	Does not account for the allocation of scarce resources so could induce a situation where ICU patients would have to wait a long time for the appropriate transport vehicles.



3. Evacuation Time Frames

The time frame for evacuation may be different depending on the nature of the threat and how much time can be taken to prepare for moving patients. The chart below contains specific orders that may be used:

Example Evacuation Orders	
Immediate/Emergent:	No time for preparation – evacuate immediately
Rapid/Urgent:	Limited time for preparation (1-2 hours) – everyone out in 4-6 hours
Gradual/Planned:	Extended time for preparation – phased evacuation to occur over many hours or even days
Prepare Only:	Do not move patients, but begin preparation for evacuation

4. Patient Prioritization

Prioritizing patients for the limited physical resources available for evacuation, such as personnel, elevators, stairwells, transport sleds, etc., is among the most logistically and ethically challenging tasks required in hospital evacuation. There is no single priority model that will work equally well for all hospitals and all circumstances. Nonetheless, it is worthwhile for hospital leaders to consider how they may prioritize patients under certain example scenarios in their particular facility. Listed below are some general potential priorities of evacuation in selected scenarios. Because of the physical locations of different units within a given hospital, the elevator and stairwell locations, and other factors, these priority lists may or may not be appropriate for that hospital. Hospital leaders should use these scenarios to discuss patient prioritization on their own as part of their planning efforts.

In any evacuation that is severely time-sensitive, where there are immediate and broad threats to life safety, the priority must be to get as many patients out as possible. Therefore, a different version of the acuity model may be adopted requiring patients needing the most assistance and most time to “package” for transportation to be the last to move. The default priority in these situations may be:

1. Patients who are in immediate danger
2. Ambulatory patients
3. Patients on general care units who require some transport assistance
4. Patients on intensive care units

If time is critical and a version of the acuity model is adopted, ICU patients may be moved after many or all of the general care units have been evacuated. In addition to maximizing patients evacuated in the least amount of time, this plan model anticipates that critical care patients have access to medical gases, suction, and monitoring for as long as possible. (If a resource model evacuation is possible, ICU patients should be evacuated as transport resources become available.) Although ICU patients may be the last to leave the hospital, they should be the first to leave the Assembly Point, as they are the highest priority for transfer to other hospitals. . Obviously, if a given ICU is more unsafe than the rest of the hospital, the patients within that ICU should be given a higher priority for evacuation, even in a critically time sensitive situation.

In Superstorm Sandy, patients at NYU Langone Medical Center were prioritized so that the most critical patients in the most damaged part of the building were moved first⁴.

In a *rapid or urgent (but not immediate) evacuation*, the default transport plan for evacuation should be based on an orderly, rapid process where entire patient care units are moved sequentially. Units of different acuity (i.e. a general medical/surgical unit and an ICU) may be evacuated in parallel when possible to avoid uneven demand on EMS resources (i.e. avoid heavy use of ALS ambulances only at the beginning or end of the evacuation). There is controversy about the order of floor evacuations, but one



recommended plan is to evacuate from the top of the building to the bottom if elevators are available, or from the bottom of the building to the top if only stairs are available.

In a *gradual or planned evacuation*, hospitals may not require the use of Assembly Points, but rather may choose to send patients directly from their units to waiting EMS assets in the staging area. In such a circumstance, communication between the staging area and the floors is critical to ensure that the flow of patients out of the units anticipates available EMS units and prevents bottlenecks of ambulances waiting at the curb for arriving patients to transport.

5. Assembly Point(s) and Discharge Site Locations

The hospital should identify several locations surrounding the hospital that could be used as either an Assembly Point or a Discharge Site.

Assembly Point: The place, or set of places, where patient care units gather (outside the main clinical buildings of the hospital) to receive basic care and await transfer, or re-entry back into the hospital. Internal locations should be considered if circumstances outside the hospital prohibit safe transport. *The Assembly Point(s) should not be a comprehensive field hospital. The Assembly Point(s) should be designed as a holding area with only essential care resources needed to support patient care while patients await transportation assets to leave the hospital grounds.*

Discharge Site: The place where patients who are being discharged home wait for family or friends to pick them up. Ideally, the Discharge Site is located at some distance away from the Assembly Point to minimize traffic congestion and competition for roadways.

It is important to consider proximity and size when determining suitable Assembly Point and Discharge Sites. An Assembly Point that is close to the hospital can aid in the effort to relocate fragile patients during an evacuation; however, a short distance between the Assembly Point and the hospital may also be of concern for any event involving an explosive device, chemical hazards, or other potentially expansive threat that is acting upon the hospital. Ideally, both the Assembly Point and Discharge Site will permit sheltering indoors. It is also important to remember economies of scale when choosing assembly points and discharge sites. It is much more difficult for clinical support services, including Pharmacy and others, to support patient care in multiple locations.

Several nearby sites should be identified, and their willingness to help in the event of an emergency should be confirmed upon the incorporation of this guidance into hospital emergency operation and evacuation plans. In the event of an emergency, these sites should be contacted immediately. For capacity and capabilities of other Assembly Point/Discharge Site options, reference the Assembly Point Guide, Section VI, page 89.

6. Labor Pool Activation

Evacuation is an enormously labor-intensive process. Using the hospital EOP, the Labor Pool should be activated immediately to identify and assign staff to support the evacuation. The Labor Pool may need to call in staff from home for any evacuation, but is much more likely to need to do so if an evacuation happens on the evening shift, the night shift, during a weekend or holiday. At a minimum, the Labor Pool should be put on standby if staff may need to be called into the hospital to support operations. Standby lists should include both clinical and general staff.

The following chart identifies the functions and supervisors that may be required to effectively evacuate a hospital. Space has been left to calculate the estimated resources needed for the key functional areas involved. These numbers are highly dependent upon the normal patient demographics of the hospital that requires evacuation. Note that many of these resources can be re-deployed as the evacuation progresses. For example, some of the staff transporting patients out of the main campus buildings can be re-assigned as runners at the Assembly Point once the majority of patients have been evacuated.



Example of Labor Pool Staffing Chart

Function	Estimated Staff Needed	Supervised By
Prepare/pack patients on inpatient care units (# clinicians and # administrative staff per unit – Identify those only needed for night shift events as well)	<i>Fill in clinical staff requirements</i>	Inpatient Unit Leaders
Transport to Assembly Point (<u>with</u> elevators working)	<i>Fill in general staff requirements</i>	Transport Unit Leader
Transport to Assembly Point (<u>without</u> elevators working)	<i>Fill in general staff requirements</i>	Transport Unit Leader
Monitor/assess patients at Assembly Point	<i>Fill in clinical staff requirements</i>	Assembly Point Transport Supervisor
Patient assessment at Assembly Point (one clinician/patient care unit) as supplemental staffing until all the inpatient unit nurses and clinicians have arrived at the Assembly Point	<i>Fill in clinical staff requirements</i>	Assembly Point Section Leaders
Care for patients/support nurses with vitals, feedings, etc. at Assembly Point (# staff members per unit)	<i>Fill in clinical staff requirements</i>	Inpatient Unit Leaders
Relay information and/or transport supplies and medications between Assembly Point and main hospital (# runners per Assembly Point)	<i>Fill in general staff requirements</i>	Assembly Point Section Leaders
Load patients into vehicles and ensure readiness to travel	<i>Fill in general/clinical staff requirements</i>	Staging and External Transport Unit Leader
Care for/assist patients at Discharge Site	<i>Fill in clinical staff requirements</i>	Discharge Site Leader
Answer calls from families in Phone Bank	<i>Fill in general/clinical staff requirements</i>	Social Services

7. Evacuation Coordinator Assignment

The key link between Incident Command and the patient care units during evacuation are the *Evacuation Coordinators* (see Job Action Sheet found in Section V: Evacuation Staffing Guidance, page 80). Staff who serve in this role are responsible for communicating with hospital leaders and their assigned patient care units and monitoring each unit's progress to ensure that they safely evacuate in a timely manner. Ideally, following the ICS principle of span of control, each Evacuation Coordinator would be assigned between three and seven patient care units to manage. Hospitals should consider the total number of patients in each unit, the acuity of patients in each unit, and the size and layout of the hospital when deciding how many Evacuation Coordinators the hospital will need to properly organize and manage evacuation operations. The Incident Commander should designate the minimal number of Evacuation Coordinators needed to effectively monitor the progress of patient care units during evacuation.



As mentioned previously, each patient care unit should specifically designate a “Unit Leader”. Upon receiving the order to evacuate or prepare for evacuation, the Unit Leader should be prepared to discuss the following questions with their Evacuation Coordinator to help the hospital effectively prepare for evacuation.

1. *Time for units to prepare:* How much time is available to pack patients before transport begins?
2. *Assembly Point location:* Should the unit move to its default Assembly Point, or is there modification based on the scenario?
3. *Discharge Site location:* Should the unit send discharged patients to the default site, or is there modification based on the scenario?
4. *Priority sequence for evacuation:* In what order will units be evacuated?
5. *Elevator assignment:* Per plan or are there modifications based on the scenario?
6. *Stairwell assignment:* Per plan or are there modifications based on the scenario?
7. *Non-unit staff:* should any hospital staff currently on the unit, but not based on that care unit (such as physical therapy or respiratory therapy) return to their home department or stay on the patient care unit and help evacuate patients?
8. *Staff recycling back into building:* Transporters and security staff may re-enter the building when needed, but what about other unit staff? Should nurses escort patients to the Assembly Point and then return for another group of patients or not?
9. *Labor Pool staging area/phone:* Where should extra staff report for assignment?
10. *Family Notification Center location/phone:* Where should families be directed for support?

8. Activation of the Patient Destination Team

If it seems likely that re-entry (into the hospital) will not be possible in a timely manner, the Chief Medical Officer should activate this team immediately. The team is activated to match evacuating patients with appropriate available beds in other facilities. Because of the complexity of this process, the Team should include representation from the Chief Medical Officer, senior nurses, admitting office representatives, and case managers. The Team works closely with public health, emergency management, and EMS officials to identify available beds and ambulances for patient transfers.

The Team should have primary and backup locations designated both in and nearby the hospital that have sufficient computer, telephone, and meeting space resources to permit it to function efficiently. All physicians, physician assistants, and nurse practitioners must be notified that the Patient Destination Team has been activated and is working with public health authorities and receiver facilities to arrange for appropriate destinations for all patients. It is vitally important to the success of the Patient Destination Team that individual physicians do not circumvent the Patient Destination Team and attempt to arrange transfer beds on their own. This will cause unnecessary competition for beds and furthermore creates the potential for significant confusion and introduces potential errors into the process.

Hospitals should discuss how placement efforts will occur among hospitals who are members of their Health and Medical Coordination Coalition (HMCC) and other nearby hospitals that may receive patients during an evacuation. In the absence of previously agreed upon processes made through coalitions or other regional efforts, the Team should be prepared to work under different processes at different institutions.



One major lesson learned from Hurricane Irene that was beneficial in Superstorm Sandy was the realization that not all hospitals receiving patients in transfer have the same process for accepting patients in an emergency. Some hospitals prefer to work with nursing leadership, others with physician leadership, other hospitals had no preference. It is essential that all hospitals develop a multidisciplinary Patient Destination Team in order to facilitate effective patient placement activities during an evacuation.

Additionally, the use of common language instead of acronyms, codes, or organization-specific terms is an important part of patient placement efforts. Not all hospitals use the same language or categories to identify or define their patients and clinical capabilities among hospitals also may vary. For example, a step-down unit patient at one hospital may be a critical care patient at another hospital.



GENERAL EVACUATION RESPONSIBILITIES

(BY DEPARTMENT)

The following table summarizes key evacuation responsibilities by department in a hospital. Depending on the administrative structure of each hospital, these responsibilities may fit into the department listed, or they may be better assumed by another department. For smaller hospitals, many of these responsibilities may need to be combined under one department or ICS function. All of the responsibilities listed are in addition to the general responsibilities that will be otherwise listed in the hospital EOP.

Department	Responsibilities	Notes
Admitting	<u>Patient Tracking</u> • Assembly Point check-in and discharge • Discharge Site check-In and discharge <u>Other</u> • Provide data to Social Services • Assist Patient Destination Team	Social Services may also need a list of patients by unit with “next of kin” information including contact phone numbers
Biomedical Engineering	• Identify all available equipment for internal and external patient transport • Transport appropriate medical equipment to Assembly Point • Troubleshoot malfunctioning equipment during evacuation • Track any equipment that leaves facility • Coordinate maintenance of equipment with receiving hospitals	
Blood Bank	• Inventory available blood products • Identify coolers and other resources available to support blood transport • Transport blood products to Assembly Point • Consider transporting additional blood to receiving facilities as needed if hospital will not be reoccupied quickly	
Case Management	• Assist with Patient Destination Team • Identify non-acute care transfers (on unit) that may be discharged to skilled nursing facilities • Staff the Discharge Site as needed • Assist at the Family Support Center as needed	
Emergency Department	• Notify appropriate authorities of need to go on diversion and/or close • Staff emergency resuscitation and stabilization area at the Assembly Point • Respond to injuries/illness during evacuation as requested • Provide staff to support loading teams	



Department	Responsibilities	Notes
Environmental Services	• Set up Assembly Point and Discharge Site • Provide staff for patient transport	
Facilities Maintenance	• Activate emergency elevator control systems • Monitor system utilities • Assist with Assembly Point site setup • Assist with patient transport as needed	
Food/Nutrition Services	• Transport emergency supplies to Assembly Point and Discharge Site, distribute as needed • Provide food for staff	Includes standard TPN bags
Health Information Systems	• Retrieve or track medical records before patient transfer to other facility • Assist receiving institutions with obtaining medical record data	Or print/email abstracts
Human Resources	• Provide Labor Pool resources • Assign Assembly Point Labor Pool representative • Track staff who travel to other facilities • Monitor emergency challenges to labor agreements	Clinical staff may be needed for transport
Interpreter Services	• Provide interpreter staff at the Assembly Point and Discharge Site • Assist with the translation in the Family Notification Center	
Materials Management	• Manage patient transport process • Transport medical supplies, linens, other items to Assembly Point Discharge Site	
Pharmacy	• Transport medication “cache” and IV fluids to Assembly Point and dispense as needed • Support Discharge Site with needed medications and dispensing as possible • Secure narcotics and other pharmaceuticals	
Respiratory Therapy	• Deploy staff to critical care units for internal and external transport • Transport respiratory equipment to Assembly Point • Provide emergency care as needed in the resuscitation and stabilization area at the Assembly Point	



Department	Responsibilities	Notes
Security	• Communicate with outside agencies • Lockdown facility and secure roads • Unlock all stairwell doors • Assign additional staff to units that are usually secured – pediatrics, nursery, NICU, psychiatry • Manage access to/from secure units • Clear evacuation route • Manage routes/checkpoints • Check units after closing (if possible) • Support care units and Family Waiting Areas at the Assembly Point • Assist with psychiatric patient transport • Provide staff to manage ambulance flow • Coordinate with local police as needed	
Social Services	• Manage family call center • Manage family notification/waiting areas	
Telecommunications	• Use overhead paging system to communicate information as appropriate • Setup phone bank at Assembly Point, Discharge Site, Family Notification Center	



PATIENT TRACKING

During an evacuation, a functional internal patient tracking system, even if simple and paper-based, is crucial to provide clinicians, families, and leaders with situational awareness of the appropriate location and status of all patients throughout the event. A system that reports selected “check-in” and “check-out” data for patients at various touch-points in the process is ideal. Those touch-points include:

Check-in Points

- ☐ Inpatient census
- ☐ Arriving at the Assembly Point
- ☐ Arriving at the Discharge Site
- ☐ Arriving at the Staging Area
- ☐ Arriving at the receiving hospital

Check-out Points

- ☐ Leaving the patient care unit
- ☐ Leaving the Assembly Point
- ☐ Leaving the Discharge Site
- ☐ Leaving the Staging Area

The Admitting Department may be best tasked with the responsibility for the Patient Tracking function. Their role may include the following responsibilities:

- Checking-in patients to both the Assembly Point and the Discharge Site
- Discharging patients from both the Assembly Point and the Discharge Site
- Updating patient location information in electronic information systems and/or using manual paper logs as backup
- Providing routine patient tracking reports for the hospital EOC
- Participating in the Patient Destination process
- Providing reports with contact information for Social Service staff working in the phone bank
- Notifying receiving hospitals when patients are en route
- Contacting receiving facilities to confirm patient arrivals
- Obtaining location and contact information data from the receiving hospitals for sending to clinicians and patient families

Tracking systems must be robust enough for single & multiple transfers. Reliance on manual tracking system posed a logistical challenge for hospitals during recent evacuation events. Electronic tracking systems such as barcoded patient wristbands may be more effective for tracking patient during evacuation but they must be used and tested regularly prior to an evacuation^{5, 7}.



Sample Guidelines for Patient Tracking:

1. The Admitting Department will create a detailed inpatient census at the time of the evacuation order to provide accountability for all inpatients in the facility at the time of the order.
2. Patients will be tracked upon arrival at either the Assembly Point or the Discharge Site. In addition, each Unit Leader will use their Patient Tracking Log to verify that all of their patients arrived at the Assembly Point. The Admitting Department will be notified if any patients are missing. The Admitting Department will notify the appropriate supervisor according to HICS.
3. The Admitting Department will need to notify the Patient Destination Team of patients who eloped without notifying staff, left the hospital against medical advice (AMA) prior to transfer, or were discharged directly from the units. The Admitting Department will track all such patients in order to reconcile the final transfer and discharge lists with the inpatient census as created at the beginning of the evacuation.
4. At the Assembly Point, the Admitting Department will periodically verify the census to ensure accuracy of Patient Tracking information. Admitting will provide regular reports on the status of tracking information to the EOC.
5. The Admitting Department will track all patients who leave the hospital campus from the Discharge Site and Staging Area.
6. The Admitting Department will attempt to contact all receiving hospitals to verify the arrival of the transferred patient and will obtain location and contact information data from the receiving hospitals. This information will be sent to clinicians and patient families.

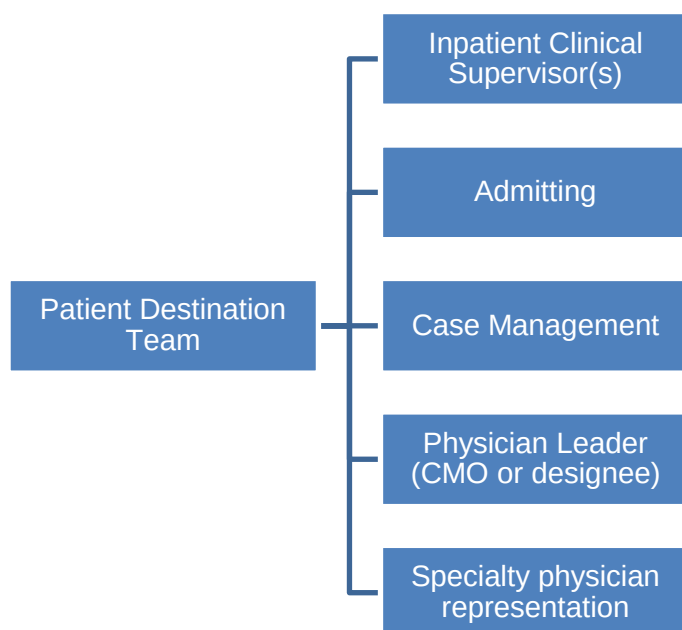
When preparing your facility's patient tracking plan it is important to remember that undocumented equipment (e.g. ventilators) transported with patients have been a major source of financial loss for institutions⁵. Consider assigning staff from biomedical engineering to document serial numbers of equipment being transported to other facilities.

PATIENT DESTINATION TEAM

The Incident Commander will need to mobilize a Patient Destination Team *as soon as it becomes clear that evacuation is necessary and/or that timely re-entry to the facility will not be possible*. This team will match all patients who need to be transferred with appropriate beds at other facilities.

The Patient Destination Team may report to the Chief Medical Officer, nursing supervisor, or the admitting office in a hospital's EOP. The Team will work with the EMS liaison from the community, public health officials, and any other coordinators or organizations involved such as a regional organization of hospitals, etc. The hospital staff below should be included in the Patient Destination Team. Clinicians providing care to special inpatient populations (such as pediatrics, obstetrics, specialty surgical, psychiatric, etc.) should work with the Team to help coordinate unique bed needs and care networks. These networks may include Level III nurseries, burn centers, specialty ICUs, inpatient psychiatric facilities, or other facilities.

It is essential for the Patient Destination Team to have a resource guide complete with the region's hospital contact information and clinical capabilities. Even if computers are functioning, it can be faster and easier to work with a paper directory that has essential contact and capability information.



It is important to determine the site where this group will gather with sufficient computer, telephone, and meeting space resources to permit it to function efficiently. There must be a plan for backup sites and support in case the first area is not available and/or safe. All physicians, physician assistants, and nurse practitioners must be notified that the Patient Destination Team has been activated and is working with public health authorities to arrange appropriate destinations for all patients. It is vitally important to the success of the Team that individual physicians not compete with the Patient Destination Team and attempt to arrange transfer beds on their own. This creates significant confusion and introduces potential errors into the process. However, providers with strong working relationships with colleagues at other facilities, especially in specialty areas, have been instrumental in actual evacuations as well as drills at facilitating the transfer process and bed placement of patients. Therefore, these providers would ideally be assigned to the Patient Destination Team.

Hospitals need to identify potential receiving facilities in their evacuation plan including specific details regarding those facilities capabilities and the types and numbers of patients they can potentially accommodate. This can simplify the communication that occurs during an actual evacuation event^{1, 6}.



PHYSICIAN ROLES

(STAFF PHYSICIANS, HOUSE STAFF [IF APPLICABLE] AND PHYSICIAN EXTENDERS)

In the event of either an emergency that requires preparation for possible evacuation or an actual evacuation of the facility, all responsible and responding clinicians (i.e. MDs, PAs, NPs) with patients in the hospital must be notified of the event immediately by an electronic notification system or other mechanism. All Chiefs of each hospital service should also be notified. Clinicians should follow the direction of their immediate supervisor or Department Chief, as specified within the Hospital Incident Command System (HICS). Clinicians should not attempt to contact the Incident Commander or other institutions directly during the evacuation process as this may interfere with ongoing evacuation operations and put both patients and staff at further risk.

The first responsibility of clinicians with active responsibility for inpatients is to prepare their inpatients for evacuation. If a clinician has patients on multiple units, s/he should prioritize the most critical patients – specifically, any patients who will not be able to move without clinician input and/or assistance. Clinicians should:

1. Reassess each patient's clinical status.
2. Review all active medications and clinical interventions (i.e. oxygen, monitoring, etc.).
3. Minimize all medications and clinical interventions until the patient is successfully evacuated and arrives at another hospital. Only continue essential treatments.
4. Write/print a summary of the patient's inpatient course and treatment plan to assist clinicians at the receiving hospital in assuming safe care of the patient. Clinicians should include multiple forms of their own contact information in this documentation.
5. Give report to receiving clinicians at the receiving hospital.

“What information would I need to manage an influx of patients?”

This should be the guiding question in preparing a summary of patient information before evacuation⁶.

Key Points/Issues:

During Superstorm Sandy, it was learned it is essential for qualified clinical staff from the evacuating hospital to accompany critically ill patients when large numbers of them are transferred to a receiver hospital. This helps to both maintain continuity of care and supports surge operations at the receiver hospital^{4, 8}.

- Commonly, physicians are not aware of their roles during an evacuation. Evacuation plans should ensure the communication of job roles and functions for physicians.
- Clinicians without active inpatient responsibilities, or clinicians who can be safely relieved of those responsibilities, may be asked to assist with other functions. Some clinicians will be sent to the Assembly Point to receive and care for patients evacuated from their floors.
- Clinicians should still retain primary responsibility for their patients at the Assembly Point. Discharge or transfer notes should be written if possible before patients leave the Assembly Point, though this may not be possible in all cases.
- *Clinicians MUST NOT attempt to arrange transfer destinations for their inpatients on their own.* This function should be performed by the Patient Destination Team.



CLINICAL UNIT PREPARATION

In order to prepare patients for the safest possible evacuation, a number of steps must be taken to ensure the appropriate staff; equipment, medications, medical records, and other necessary items accompany the patient during the process. A complete “tool” for inpatient care units has been developed to guide staff in preparing individual floors or units for evacuation. This tool provides structured mechanisms to gather and report data on the patients and their needs, on available resources, and to help package patients for safe transfer (see Section IV: Evacuation Floor Guide, page 57 for related and expanded documents, including step-by-step instructions for Unit Leaders on page 64). This general guidance has been designed to support either a rapid or gradual evacuation. However, many of the preplanning efforts and patient tracking forms in this section may be impossible to complete given a lack of time during an immediate evacuation.

If patients are clinically stable, they may be discharged from the unit at the time of the evacuation order to minimize transfer needs. Because it may be difficult to contact patient families to arrange to have the patient picked up and/or it may be dangerous to let families into the facility, it is generally preferable to have a centralized discharge site away from the main buildings of the hospital and away from the Assembly Point(s). All patients from a given clinical unit should be sent to either the Discharge Site or Assembly Point. Any patients who leave the hospital without notifying staff or who leave against medical advice should be clearly tracked and reported to the Admitting Department /Tracking team.

Shelter-in-place plans should include guidance for how to prepare patient records for evacuation. Interviews with hospital employees at facilities that received evacuated patients during Superstorm Sandy indicated that the records of evacuated patients’ were missing a wide range of information⁶.

Sample Procedure for Clinical Unit Preparation:

1. Staff will receive the order to evacuate or prepare for evacuation. Each clinical unit will designate a “Unit Leader” according to a specified procedure. A designated “Floor Coordinator” may provide logistical support to the Unit Leader.
2. The Unit Leader will open and use the Evacuation Floor Guide and associated tools.
3. Nursing and other staff will complete the tools in the Floor Guide. The Unit leader will send unit-level patient and resource reports to the EOC per hospital protocol.
4. Patients will be individually “packaged” for transport with their necessary medical equipment, records, medications, and assistive/adaptive devices to maintain independence.
5. Patients “off the unit” for testing or treatment at the time of evacuation may not return to the unit. Instead, they may be transported to the Assembly Point, and will rejoin the unit there, depending on the required urgency of the evacuation. Clinical staff caring for the patient “off-unit” will contact the Unit Leader to confirm this transport request and location. If patients do not return to the unit, clinical staff on the unit will bring a completed tracking form, and any necessary medical equipment, records, medications, and assistive/adaptive devices to maintain independence to meet the patient at the Assembly Point.

Following the Joplin tornado, it was determined that shelter-in-place plans should include keeping patients’ shoes with them in the event of an immediate evacuation⁹.

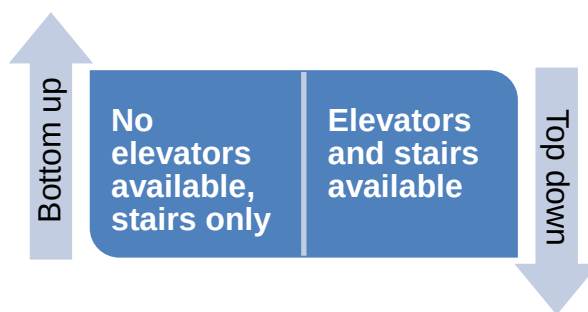


6. Visitors may either stay with the patient or be directed to leave per direction of the Unit Leader.
7. Ambulatory patients and visitors may take the stairs. Non-ambulatory patients will wait for their turn on the elevators, or the med-sled stair route.
8. Discharges may be made directly from the unit, at the assembly point or at a separate designated discharge site.
9. The Unit Leader should communicate with the Evacuation Coordinator and Transport Coordinator to learn the order of unit evacuations and ensure that all patients are safely transported to the Assembly Point or Discharge Site. Floor Coordinators will assist the Unit Leader with tracking and communications.

Knowledge about evacuation plans and emergency policies and procedures varies widely among hospital personnel. Staff should be encouraged to participate in the planning process. Staff should also routinely exercise the specific roles that they will be expected to fill during an evacuation^{10, 11}.

TRANSPORT PROCESS

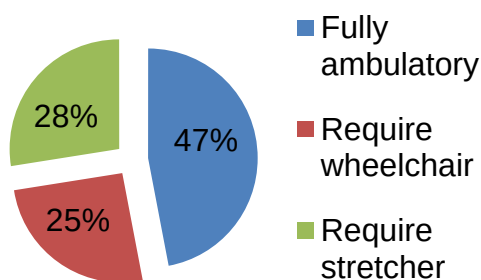
Patient transport resources including personnel, elevators, stairwells, transport sleds, etc. will be limited during any evacuation. Prioritizing patients under urgent conditions, when available transport resources are more scarce and there is less time to make decisions, is among the most logistically and ethically challenging tasks required in hospital evacuation. There is no single priority model that will work equally well for all hospitals under all circumstances. Hospital leaders and emergency planners should consider the physical locations of different units within a the hospital, the elevator and stairwell locations, and other factors, in order to create a patient transport evacuation plan that supports an orderly, rapid process where entire patient care units are moved one after the other. Units of different acuity (i.e. a general medical/surgical unit and an ICU) may be evacuated in parallel when possible to avoid an uneven demand on EMS resources (i.e. avoid heavy use of ALS ambulances only at the beginning or end of the evacuation). There is controversy about the order of floor evacuations, but one recommended plan is to evacuate from the top of the building to the bottom if elevators are available, or from the bottom of the building to the top if only stairs are available.



If time is critical, evacuation of ICUs and other critical care units should be coordinated based on the resource model to maximize efficiency in transportation resources. In addition to maximizing the number of patients evacuated, an evacuation plan should endeavor to ensure critical care patients have access to central medical gases for as long as possible to minimize demand on portable tanks.

The results of a cross-sectional survey of one academic teaching hospital are shown below. Acquiring this type of type of data periodically and taking the average of survey results helps to inform evacuation planning. However, if there is time to discharge ambulatory patients during a shelter-in-place response, then the proportions of patients requiring assistance may change. Also, some patients may be physically capable but not emotionally or psychologically able to walk out of the hospital unassisted or unsupervised during an emergency.

**Survey of Ambulatory Ability
Among Patients in a
Teaching Hospital¹⁰**



Patients/visitors who are able to travel down stairs on foot should not necessarily have to wait for their unit's turn on the elevators if time is critical. During the evacuation the Assembly Point should be established with at least minimal staffing as soon as possible. Then patients should be escorted by unit staff and guided along the evacuation route to the Assembly Point by other hospital personnel manning checkpoints throughout the hospital, when possible.

Hospitals with several vertical floors may wish to explore purchasing transport sleds to assist with transporting non-ambulatory patients down stairwells if elevators cannot be used. The experience of California hospitals that have four or fewer stories and have evacuated after earthquakes suggests that such devices may not be necessary; however, hospitals with

multiple stories may find staff availability and fatigue to be a factor when repeatedly carrying patients down multiple floors during the evacuation. No specific product or procedure is endorsed by this guidance.

In general, patients may require internal transportation in two stages: 1) from the unit to the Assembly Point (or Discharge Site) and 2) from the Assembly Point to the Staging and External Transport Area(s). It may be useful to have separate ALS (and/or critical care transportation) and BLS transport areas at



different staging points to accelerate the distribution and loading of patients who requiring different types of ambulance transport and limit bottlenecks.

Evacuation Routes

Patients, visitors, and transporters from all areas should be directed to take specific, pre-specified routes to the Assembly Point(s) and the Discharge Site (or other locations if necessary). Security and other designated hospital staff should make sure the route is clear and monitor the route for problems or bottlenecks. Manned checkpoints should be created at selected locations along these routes where staff can give directions and provide help. Staff in high-rise hospitals in particular may be unfamiliar with where emergency stairs exit. Staff should be stationed at all exits to guide transport teams out of the building. A reference map should be outlined containing this information in the hospital's written evacuation protocols.

Sample Procedure for ELEVATOR Transport Process:

1. Start at the top patient care unit in each building, with critical care units being prioritized based on the external transport and receiving destination resources available.
2. Transport stretchers and wheelchairs should be dropped off immediately on the top floors early in the process to speed patient loading. As soon as sufficient stretchers and wheelchairs are delivered, staff should begin delivering stretchers and wheelchairs to the next units to evacuate to permit them to begin to package their patients.
3. Floor Coordinators should assist unit staff with elevator loading and provide direction to the elevator operators.
4. Patients are loaded onto elevators and taken to the Assembly Point in the order in which they become ready for internal transport. A clinical staff member will accompany the first transported patient(s) to ensure that the Assembly Point has at least one medical worker who can begin to care for the unit.
5. Other clinical staff members will accompany patients in transport as needed for medical monitoring and care. When the last patient leaves the unit, the Unit Leader and Floor Coordinator will travel to the Assembly Point to oversee care in the Assembly Point area.
6. Transport staff may need to re-enter the building to transport more patients to the Assembly Point(s) and Discharge Site. There should be separate, designated routes for transporters to re-enter and re-ascend the floors so that they do not interfere with patient evacuation processes.
7. As patients arrive in the Assembly Point, it may be necessary to take them off of the transport stretchers and wheelchairs in order to retrieve additional patients from the hospital. Transporters should work with clinical staff to identify which patients can be removed from the stretchers and chairs and assist with patient movement as appropriate when directed by clinical staff.

Sample Procedure STAIRS-ONLY Transport Process:

1. Immediately gather any designated equipment for stairs-only transport process and identify vendors or other partners that can be contacted for required manpower and equipment. Specialty transport sleds or other devices will need to be dropped on the units early in the process. Ideally, there will be enough sleds so that while one unit is evacuating into the stairwells, the next unit already has sleds and is packing patients and lining up for their turn.
2. Fire department and other public safety staff may be requested for lifting and moving of patients and to help with obtaining specialty equipment such as backboards, scoop stretchers, stair chairs, etc., however, such personnel may not be available in a major community event. Staff unfamiliar with such equipment or with procedures for carrying patients in stairwells should not carry patients except in cases of immediate life threatening emergencies. Advance discussion with public safety officials is critical to understanding what external agencies will do to support an evacuation.
3. Start at the bottom patient care unit in each building, with critical care units being prioritized based on the external transport and receiving destination resources available. Separate stairwells should be designated for ambulatory and non-ambulatory patients if possible. ***Do not forget to assess the ability of your staff and visitors to walk down multiple flights of stairs. Patients, visitors, and staff may require assistance.***
4. Floor Coordinators should assist with distributing transport sleds and other transportation equipment and staging of patients for transport via stairwells.
5. The stairwell teams should manage transport sleds and transport patients to the ground floor. Then the transport team should move patients to stretchers/wheelchairs and transport to the Assembly Point.
6. Patients are taken down the stairs and taken to the Assembly Point in the order in which they become ready for internal transport. A clinical staff member will accompany the first transported patient(s) to ensure that the Assembly Point has at least one medical worker who can begin to care for the unit.
7. Transport staff may need to re-enter the building to transport more patients to the Assembly Point(s) and Discharge Site. There should be separate, designated routes for transporters to re-enter and re-ascend the floors so that they do not interfere with patient evacuation processes.
8. Other clinical staff members will accompany patients in transport as needed for medical monitoring and care. When the last patient leaves the unit, the Unit Leader and Floor Coordinator will travel to the Assembly Point to oversee care in the Assembly Point area.



Lessons learned from the Joplin tornado⁹:

- *Store disaster equipment and supplies (including evacuation equipment) in storage areas on patient units*
- *During a crisis hospital personnel can use doors, mattresses, and other flat surfaces for rapid evacuation of patients*
- *Hospitals cannot plan to depend on local fire and emergency response personnel to assist with an evacuation during a community-wide disaster*
- *Sufficient emergency lighting is crucial when conducting emergency response operations*

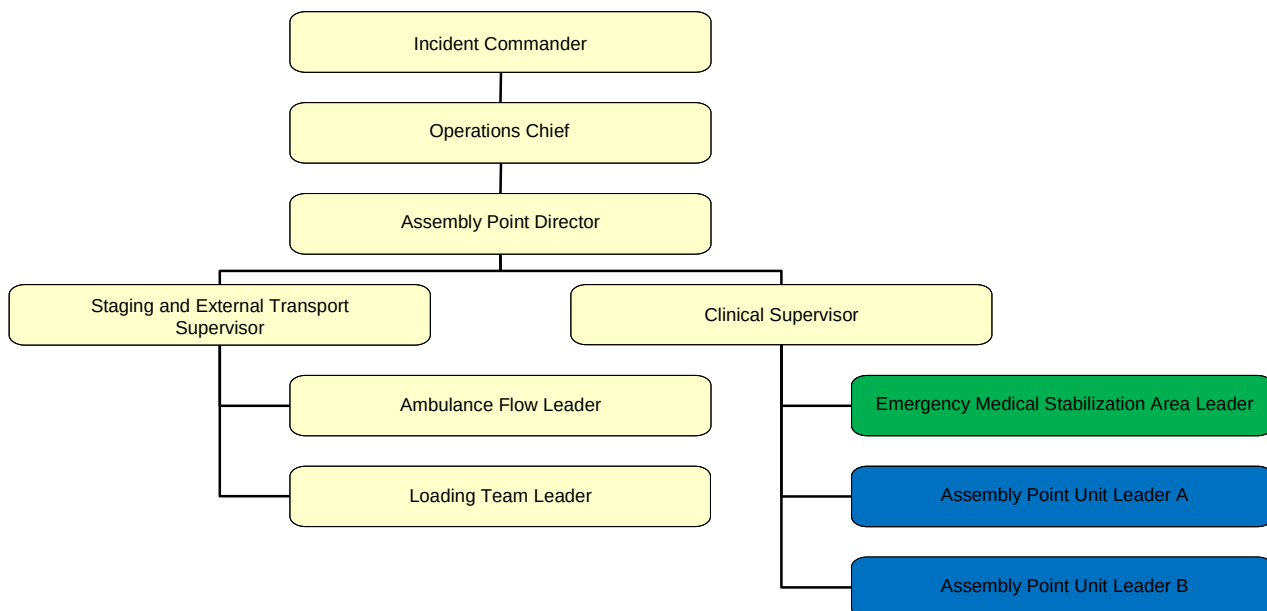
ASSEMBLY POINT ORGANIZATION

It may be necessary to evacuate patient care sites before transportation resources and/or receiving destinations are available. Assembly Points (AP) can serve as temporary care sites during an evacuation. Hospitals should identify and designate Assembly Points located away from the main clinical areas for every patient care unit and plan to continue essential patient care functions at Assembly Points while patient transport is being arranged. Instead of dividing patients into separate groups by ambulatory status, individual patient care units should stay together at the Assembly Points whenever possible. This is because the unit teams familiar with their patients will be better able to manage them in a chaotic situation away from the care unit. *The Assembly Point(s) should not attempt to serve as a comprehensive field hospital. The Assembly Point(s) should be designed as a temporary holding area with only essential care resources.*

Each hospital unit should identify primary and secondary Assembly Points based on proximity to the primary hospital facility. This ensures that the primary AP can be reached rapidly during the most time sensitive emergencies that only affect the hospital facility. The secondary AP can be utilized if more distance from the hospital is required.

An “Assembly Point Director” is responsible for the overall operations at the Assembly Point. The hospital Incident Commander or Operations Chief will designate an Assembly Point Director, who, in turn will designate a Clinical Supervisor and a Staging and External Transport Supervisor (see Section V: Evacuation Staffing Guidance, page 73 and pages 86-87 for these JAS). These supervisory positions will report to the AP Director. The Clinical Supervisor will oversee the individual patient care Unit Leaders at the AP. If there are too many units at a single AP for the Clinical Supervisor to manage, s/he may create Section Leaders to oversee groups of clinical units. The number of supervisory positions required will depend on the size of the AP, the number of patients, the acuity of the units located there, and the specifics of the physical space.

Sample Organizational Chart of the Assembly Point Positions



1. All of the Patient Care Units at the **Assembly Point** are managed by a Unit Leader. The Unit Leaders report to a “Clinical Supervisor” in the **Assembly Point**.
2. The **Emergency Medical Stabilization Area** should be created, staffed, and led by the Emergency Department. This area should stabilize patients who decompensate during transport, and treat injuries suffered during the evacuation process. In addition, one or two mobile ED physician/nurse teams should be available to respond to care needs along the evacuation route.



Assembly Point Area Map

An Assembly Point Map should be developed as part of the evacuation plan. The map and corresponding Assembly Point procedures will detail how a space will be temporarily converted into an Assembly Point capable of supporting essential patient care operations. The map should detail the Occupancy Plan for the Assembly Point including: a patient check-in area, specific sites for each clinical care unit's patients, a location of common basic medical supplies, a biomedical equipment holding area, and an Emergency Medical Stabilization Area. It may also include routes to the Staging and External Transport Area.

Additionally, key departments should have designated locations in the Assembly Point that can be designated on the Assembly Point Map. The following departments may require detailed information:

- Where the Pharmacy will dispense medications from their satellite location.
- Where Food and Nutrition Services will distribute basic foods.
- Where Materials Management will stage and distribute from the various supply/linen areas already distributed throughout the facility.
- Where Environmental Services will locate and empty biomedical and routine waste containers.

Pathways should be marked on the map. Traffic coordinators should guide transporters who are entering the Assembly Point with patients or bringing patients down to the Discharge Area. The locations of traffic coordinators should also be identified in the map. Upon receiving his/her assignment, the first responsibility of the Assembly Point Director is to ensure the AP is setup appropriately in accordance with the AP map.

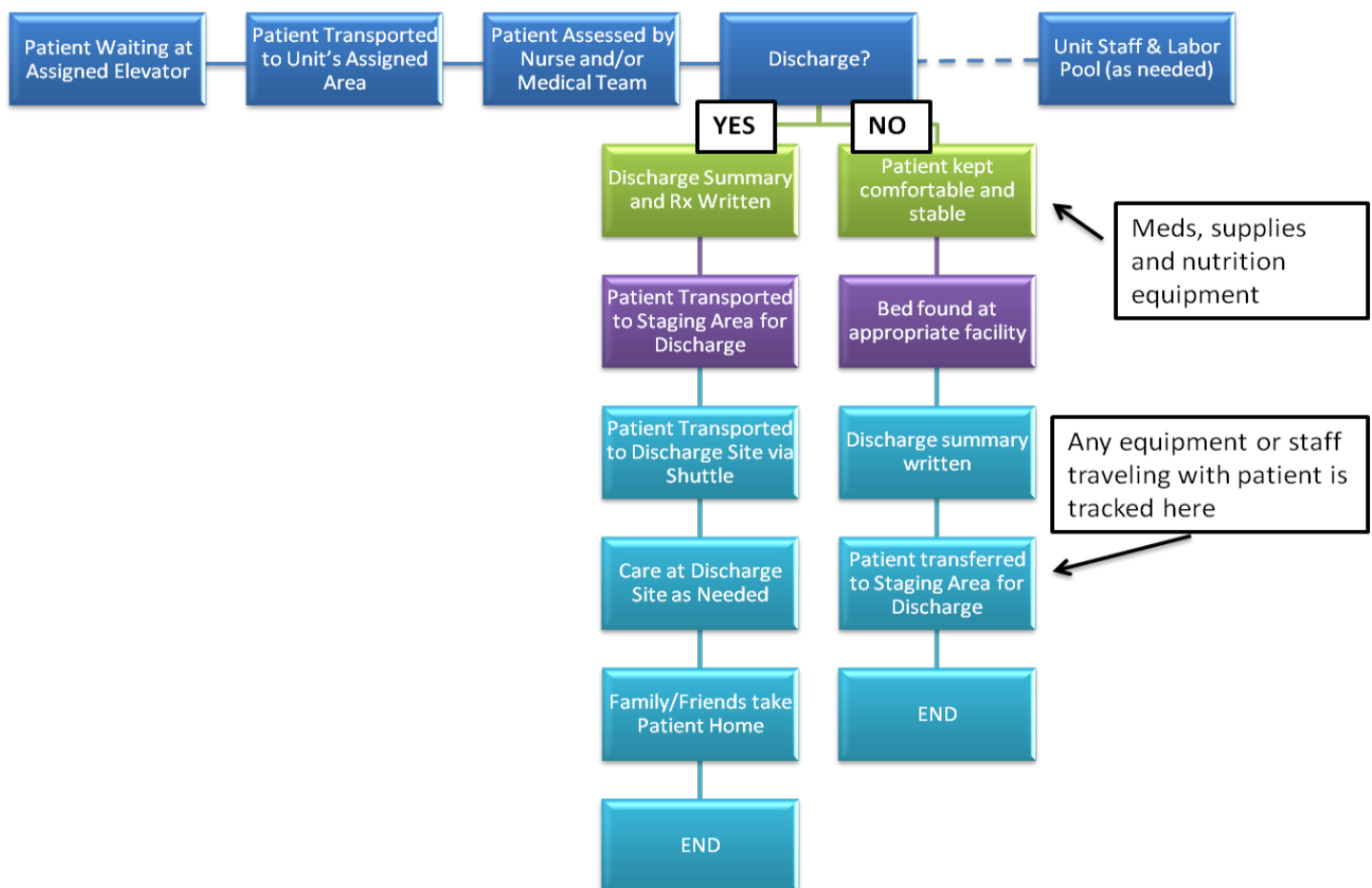


ASSEMBLY POINT CARE

Assembly Point care should be conducted for only as long as it takes to arrange for appropriate transfer resources and destinations for all evacuated patients or until it is safe to re-enter the building. Once patients arrive at the Assembly Point, only the minimum required care interventions should be continued as directed by the patient's providers. Some additional patients may be deemed appropriate for discharge after they arrive at the Assembly Point. A sample process flow for patients being cared for in the AP is below.

Under certain circumstances, an Assembly Point may not be needed if the flow of patients is staggered and patients are not in immediate danger on their units. Under these circumstances, it may be possible to shelter-in-place until transportation is available and waiting outside to immediately receive patients who are being transferred to other facilities.

Sample Process Flow for Assembly Point Care





Sample Guidelines for Assembly Point Care

1. The hospital Operations Chief will designate an Assembly Point Director.
2. The Assembly Point Director will designate a Clinical Supervisor and a Staging and External Transport Supervisor.
3. The Clinical Supervisor will oversee the individual patient care Unit Leaders at the Assembly Point. If there are too many units at a single Assembly Point for the Clinical Supervisor to manage, s/he may create Section Leaders to oversee groups of clinical units.
4. Every patient care unit should have a designated space in the Assembly Point. Similar units should be grouped together whenever possible.
5. All the critical supplies needed at the Assembly Point should have been pre-determined (see Section VI: Assembly Point Guide in this toolkit, page 89) and should be transported to the AP by the responsible department. In addition, patient care units should have pre-planned lists of special supplies/equipment that they will need to bring with them to support essential care. In some rare scenarios, it may be necessary to hold patients in the Assembly Point(s) for up to 24 hours. While hospitals may not plan to bring 24 hours of supplies to the Assembly Point initially, they should have plans for resupply of the Area(s) if patients remain in these areas before supplies become scarce or are depleted.
6. Oxygen conservation will be a critical issue if patients on oxygen cannot be transferred to other facilities quickly. Oxygen concentrators should be aggressively utilized if available.
7. In general, patients on contact and droplet infection control precautions should not be cohorted in one area. Patients should remain with their units to maintain the integrity of their diagnosis/infection as much as possible but still adhere to the type of precautions required as possible. This approach enhances the staff's ability to identify and manage the specific infection control needs. However, patients on airborne precautions may be segregated or cohorted by the Unit with patients with the same diagnosis (e.g. TB with TB, Varicella with Varicella), in a separate location or at some distance from others if possible.



DISCHARGE SITE ORGANIZATION/CARE

Discharge Site Operations staff take charge of care for patients who, following the evacuation order, have been deemed appropriate for safe, rapid discharge from the hospital. Discharge Site leaders ensure that supplies and staff are ready and organized to supervise patients while they wait for transport to their home or other appropriate location. The Discharge Site takes responsibility for patients when they “check-in” and provides support until they leave the hospital. In a gradual or planned evacuation, patients may be discharged directly from the unit. The care units should send the patients with all medications that may be needed for a 4-6 hour stay at the Discharge Site. However, if additional medications are needed while at the Discharge Site, a pharmacist should be responsible for obtaining those medications.

Process for Opening Discharge Site and Discharge Criteria

Upon issuing the order to evacuate, the hospital Incident Commander (or designee) may decide to open a dedicated discharge site to facilitate rapid and safe discharge of inpatients who would otherwise need to be transferred away from the hospital to other institutions.

Sample Patient Criteria

- Patients whose ongoing medical diagnostic and/or treatment needs do not require inpatient hospitalization
- Patients who can be safely cared for at home
- Transportation to home/family will occur within a 4-6 hour timeframe
- Patients able to tolerate sitting up for 4-6 hours

Sample Discharge Site Staffing Criteria

- Leadership: one physician or nursing leader who is responsible for Discharge Site operations
- Registered nurses: one RN for approximately every 6-8 patients
- Clinical support staff: one nursing assistant for approximately every 12-16 patients
- Administrative support staff: one clerical staff and two volunteers for approximately every 20 patients
- Case manager: two case managers for approximately every 30 patients
- Pharmacy: one pharmacist per Discharge Site
- Medical staff: one physician, PA or NP per Discharge Site
- Medical records: one representative per Discharge Site
- Patient tracking/admitting: one person per Discharge Site
- Security: one officer per Discharge Site

Discharge Site Supplies

General supply needs for the Discharge Site may include:

- Desk space for staff with computers, printers and phones
- Chairs/recliners/couches
- General medical supplies
- Paper supplies (progress note paper, medication sheets, blank computer paper)
- Linens (blankets, towels)
- Dietary supplies (snacks and meals)
- Toileting facilities/supplies
- Medical record processing (discharge chart management)
- Code cart



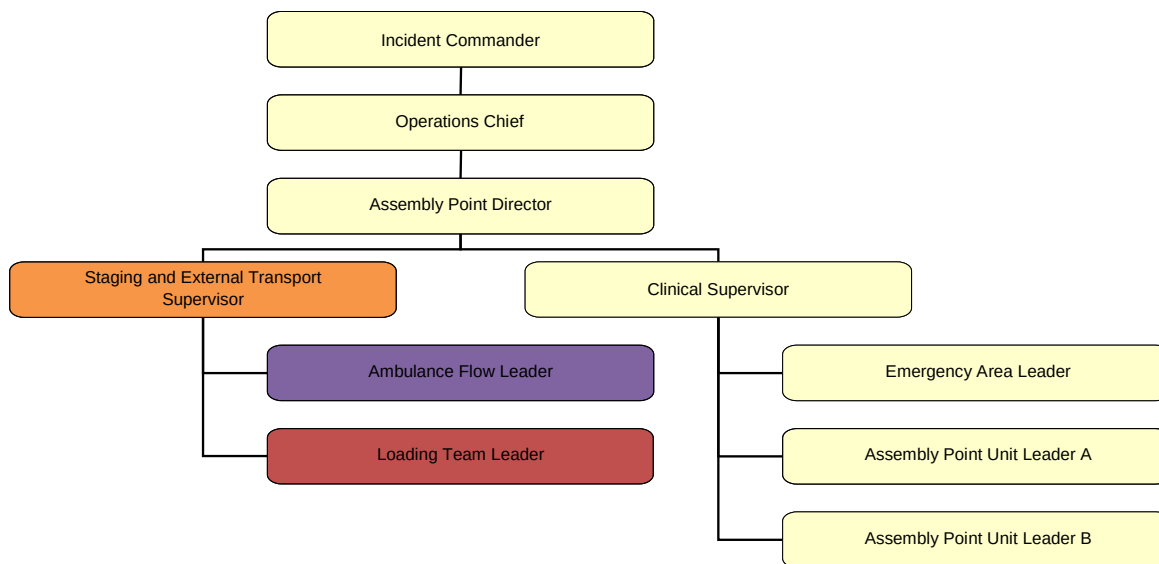
Sample Process for Transferring Patients to and from the Discharge Site

The following steps should be taken to transfer patients to the Discharge Site:

1. Each patient's clinician (MD, NP, or PA) determines, based upon the patient's clinical situation, that the patient is suitable for discharge from the hospital.
2. The clinician documents a brief summary of all of the items below in the patient's chart, or will communicate this information to the patient's nurse. *If the patient's responsible or responding clinician is not immediately available, the patient should be transported to the Assembly Point.*
 - a. The patient is suitable for discharge and a discharge order is written
 - b. All necessary prescriptions are written
 - c. All treatments required following discharge are specified
 - d. The patient's follow up plan following discharge is clarified
 - e. Any pertinent signs or symptoms the patient may need to watch for following discharge
3. Family members should be contacted about discharge and pick-up location if time allows. Information regarding who and how patient will be transported home should be noted on the Patient Evacuation Form. (If time does not allow, this step can be completed at the Discharge Site.)
4. All patients should have an identification bracelet documented to be in place before transfer to the Discharge Site.
5. Staff nurses who are preparing patients for transfer to the Discharge Site should provide the following information:
 - a. Completed Patient Evacuation Form summarizing key information
 - b. A short nursing discharge note
6. All personal items and relevant medical data should travel with the patient including:
 - a. Medical record
 - b. Medications and treatment supplies
 - c. Belongings
 - d. Place card
7. Patient may then be transported to the Discharge Site, accompanied by staff or volunteer if possible.
8. The patient's name and medical record information should be added to the tracking sheet upon arrival at the Discharge Site.
9. Patients will be discharged from the Discharge Site when family or other appropriate individuals arrive to transport the patient. The patient's name and medical record information should be documented with the time of discharge. Patient tracking staff should routinely report the number of discharged patients to the hospital EOC.

STAGING AND EXTERNAL TRANSPORT

Staging and external transport staff manage patients as they “check-out” from the Assembly Point and load into ambulances and other transport vehicles to be taken to other hospitals. Leaders ensure that the patients’ travel needs are met (records, equipment, staff supervision if necessary), confirm patient identity and transfer destination, and document that the patients have left the hospital. The process of managing patient flow out of the Assembly Point(s) and into the Staging area, in addition to managing waiting ambulances and other vehicles can rapidly become disorganized and/or create bottlenecks if the appropriate vehicles, equipment and staff are not available in a very timely manner. The Site is managed by a **Staging and External Transport Supervisor**, who is, in turn, supported by an **Ambulance Flow Leader** and a Loading Team Leader.



The **Staging and External Transport Supervisor** is responsible for the overall flow and accuracy of loading patients onto transport vehicles. S/he must maintain close communications with the Patient Destination Team to obtain continual updates on the destinations of the evacuating patients and ensure that all patients are sent to the correct facility and receiving unit. The Supervisor should try to keep the flow of patients into the Staging Area constant, calling for patients from the Assembly Point in anticipation of arriving ambulances so that traffic through the loading area remains brisk and efficient.

The **Ambulance Flow Leader** monitors the flow and rate of arriving ambulances and other transport vehicles, ensuring that ALS, BLS, chair car and other vehicles are continually arriving to transfer patients to their evacuation destinations. S/he should work with the local EMS liaison to discuss transport vehicle needs or problems. S/he should also work closely with hospital security officials and the local police liaison to ensure smooth traffic flow into and out of the Staging Area. The hospital may choose to designate separate arrival and loading sites for ALS and BLS ambulances in the evacuation procedures to minimize confusion about the capabilities of the arriving crews, and to speed throughput of lower acuity patients.

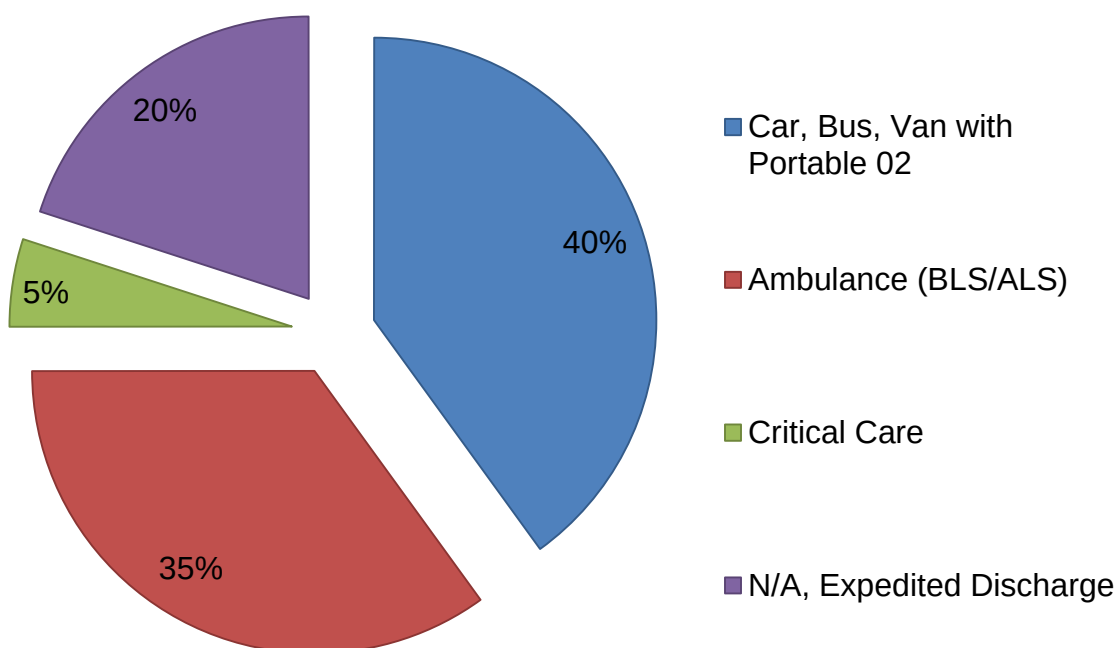
The **Loading Team Leader** is responsible for the final matching of patients with their transporting vehicle and crew. S/he will maintain a log of which patients have left the hospital, noting the specific vehicle transporting them, the time they left, and what hospital equipment and/or personnel traveled with the patients.

During Superstorm Sandy, ambulances from around the country were called upon to support the evacuation of hospitals in New York City. When responding to the evacuation, many of these ambulances were not provided with local maps or GPS. Hospitals were initially unprepared to provide EMS crews with driving directions, causing confusion early in the response.



Patients should be loaded onto the first available vehicle with the appropriate clinical capabilities to get them safely to their transfer destination. Ambulances without higher clinical capabilities (such as BLS ambulances) can be permitted to take higher acuity patients if hospital nurses or physicians travel with the patients with all necessary additional equipment and medications (including syringes and pumps). The Staging and External Transport team should identify cases where transport of hospital staff, supplies, and equipment may be necessary and request the needed supplies, medications and equipment as early as possible in the process to minimize loading and transfer delays.

Transportation Requirements of Hospital Patients - Survey of 62 hospitals in LA County¹¹





FAMILY NOTIFICATION PROCESS

Family Notification unit members are responsible for attempting to notify family members and other related and responsible parties about patient transfer destinations, answering calls and responding to questions from family members about patient welfare and location. The Social Services Department, or similar functioning department, should take the responsibility for keeping families informed about the locations of the patients and their condition (when known). The Unit's role includes:

- Contacting patients' families to notify them about the impending evacuation.
- Managing a phone bank that will answer calls from families looking for information.
- Rounding at the Assembly Point to support patients, gathering information about their condition, and updating families as possible.
- Managing and determining locations for the primary and secondary family waiting areas for families that are on-site during the evacuation if they will not or cannot leave.

Key Points/Issues:

- Given the understandable anxiety that may surround a hospital evacuation, preparing evacuation risk communication messages ahead of time may help considerably in the family notification process. Quickly and accurately disseminating a reassuring message to families that also describes the process for obtaining further information about the status of their loved one may help prevent family members from arriving onsite, potentially threatening everyone's safety, and further complicating an already chaotic situation.
- Social Services may need to gather support from the Labor Pool to help staff the phone bank. They should consider what other staff within the hospital may best be suited to this task. They may also need runners to help relay information to and from the social workers on the floors.

The phone bank should be maintained even after evacuation is complete and all families have been notified. Several disasters have demonstrated that families do not always communicate well with each other. Even though one family member may have been notified, other members of the same family may still call the hospital looking for their loved ones¹.

Sample Guidelines for Family Notification

1. Many patients will want to call their families when the evacuation process begins. When time allows, nursing staff should encourage patients to place these calls while waiting for transport. Pre-written "talking points" may be given to patients as they contact their families to help support the hospital response (i.e. "the hospital has a plan for this event", "please do not come to the hospital", "please call the following hotline for more information", "please do not call the main hospital number", "please share this information with other family members", "I will call you again once I have arrived at the receiving hospital", etc.)
2. Public Affairs should encourage families to stay home until the patient has been transferred to a new facility (or until the hospital buildings are safe to re-enter).
3. A primary and secondary location should be designated that can handle and place calls to and from families during an evacuation.
4. Admitting will need to provide the Family Notification Unit with current lists of patients by unit with "next of kin" information for the phone bank.



SPECIAL PATIENT POPULATIONS

Although much of evacuation planning for the different individual care units can be generalized across the entire hospital, there are, of course, special populations within hospitals that need special planning and procedures. Below is an overview of guidance that may be given when planning for some of the special populations within a hospital.

Emergency Department Patients

All Emergency Department patients who have received a medical screening exam and do not have an emergency medical condition should be discharged. All others must be transferred to another facility, along with the hospital's inpatient population. Overall, patients in the ED should be handled based on acuity, with the highest acuity patients transferred out first. Critical care patients may be grouped with the ICUs, depending on hospital plans.

Infants and Pediatric Patients

Being prepared to keep children safe during an evacuation requires special consideration during the planning process. *Infants and children should stay with their parent at all times, unless their parent is not on-site at the time of the evacuation.* Before leaving the patient care unit, staff should band parents with their child's information. Name bands should also be created for parents who aren't present, so they can be banded at the time of reunification. Hospital staff *must continuously* accompany any children without parents to the Assembly Point.

All the pediatric patient care units should be kept together at the Assembly Point. The location of the pediatric units within the Assembly Point should be chosen for its safe perimeter (i.e. limited number of monitorable access points and child-safe outlets and fixtures). Door monitors should be assigned to make sure ambulatory children don't wander. In addition, the Unit Leaders for each of the pediatric units should ensure that all other necessary equipment for the essential care for children are available at the Assembly Point (i.e. code carts, IV supplies, medications and pumps, etc.).

If parents do present to the Assembly Point, social work staff and security should work with pediatric staff to confirm identities and reunite the family. For verbal children without parents present, staff may use a form to ask questions and document answers (for example, what is your pet's name?). This form can be used later for family reunification. If a parent is not present at the time of transfer to another facility, this form should travel with the child. If possible, photos should be taken of children before they are transported to another facility.

Obstetric Patients

Patients in active labor, or who appear to be approaching active labor should generally not be transferred prior to delivery, except as directed by the obstetrics clinician. If a woman in labor needs to be transferred to another facility, the hospital should use its standard protocols for staffing and care of the patient. Such patients should be prioritized for immediate transfer.

Psychiatric Patients

For a variety of reasons, evacuating inpatient psychiatric patients will be challenging. The event will certainly exacerbate anxiety levels and other mental health issues for some patients. Further, there are real safety concerns when moving secured patients out of the secure environment. Evacuating psychiatric patients requires close collaboration with psychiatric clinicians and with hospital security. In general, security staff should be in place *before* patients begin to move. The Unit Leader of a psychiatric unit should identify the different types of psychiatric patients for which separate transportation may need to be considered and relay this information to the Evacuation Coordinator and others in the hospital ICS.



Patients who are violent or have extreme behavioral issues should bypass the Assembly Point. They should instead travel with a clinician and security and have secure transport arranged to a receiving facility. Patients who are not violent or medically complicated could be evacuated directly to a nearby psychiatric facility or other hospital via shuttle bus. They should be accompanied by both nursing and security staff during transport.

Bariatric Patients

Bariatric patients may need specialized equipment and additional staff for transport. Ideally, the hospital should have access to bariatric stretchers, wheelchairs, and transportation sleds for evacuation and staff trained to use these devices in an emergency. If these items are not available, the hospital evacuation protocols should indicate where they can be found in the event of an emergency evacuation. Because of resource demand issues, hospitals may wish to consider pre-evacuating their bariatric patients in an anticipatable event and/or evacuating them early in a no-notice event if possible.



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2014



HARVARD

SCHOOL OF PUBLIC HEALTH

Emergency Preparedness and Response
Exercise Program



MDPH HOSPITAL EVACUATION TOOLKIT

III. EMERGENCY SHELTER-IN-PLACE GUIDANCE



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INTRODUCTION

Purpose of the Shelter-In-Place Guidance

The creation of detailed Shelter-in-place plans is an essential component of overall emergency operations planning for hospitals and other healthcare facilities in order to be prepared for both incidents where advanced warning is possible, and for no-notice events. For a no-notice event where the external environment threatens to pose a significant danger to patients, staff, and visitors (for example, a chemical, biological, or nuclear event near the hospital), sheltering in place can offer a safer alternative to traveling through hazardous conditions. Additionally, for an event that occurs with advanced warning, such as an impending hurricane, sheltering in place may be appropriate as a choice to care for some or all patients within the hospital and minimize the need to evacuate, if the risks and benefits are adequately considered. In making the decision whether to shelter-in-place, hospitals should consider the degree of known or anticipated community infrastructure damage and/or limited support that may be available from external partners due to competing emergency operations. In addition, when considering whether to shelter-in-place, hospitals should consider that difficulty accessing the hospital may make immediate evacuation impossible (i.e. during a major earthquake, wildfire, or flood).

This hospital Shelter-in-place guidance is meant to prompt the development and documentation of specific criteria regarding the sheltering decisions, identify critical factors in the decision-making process, and assist with the drafting of concrete plans to permit safer sheltering through pre-assessment of the structural and material needs for sheltering. This guidance is meant to be integrated into the institution's Emergency Operations Plan (EOP). Shelter-in-place planning should not replace, duplicate, or conflict with the structures, roles, or guidance offered by the EOP. Not all portions of this guidance will necessarily be appropriate for all hospitals. Hospitals are encouraged to review this document and adapt and incorporate those sections and tools they deem useful and appropriate to their needs.



EMERGENCY SHELTER-IN-PLACE GUIDANCE

Activation of the Hospital EOP

Upon learning of an event that may warrant sheltering in place, hospitals should strongly consider activation of their Emergency Operations Plan (EOP). The leadership and communications structures that are provided for within a hospital's EOP should be used to facilitate smoother communications with partner agencies and support better situational awareness within the hospital. In addition, should the decision to shelter-in-place quickly change to an evacuation decision, the mechanisms to do so will already be in place.

Deciding Whether to Shelter-in-place

Most decisions to shelter-in-place occur in practice in response to an anticipated threat, such as a hurricane or regional flooding. While shelter-in-place decisions are made somewhat commonly, the actual decisions to shelter-in-place are often merely the de facto consequence of decisions not to evacuate, rather than the result of considered deliberation or specific planning. Optimal planning for sheltering in place should include a detailed assessment of the specific facility vulnerabilities, checklists for preparation of the facility, and operational considerations needed to support sheltering. For example, any areas of the facility at higher risk for wind damage, flooding, or other threats should be identified, and patients should be moved out of those areas during sheltering operations. Mechanisms to limit or manage the air handling requirements should be planned for, both to limit demand and to protect the facility from ambient air quality issues if they occur. The support services and mechanical supports available in the areas of the hospital used for sheltering, such as food, water, toiletry, and others should be hardened if possible and additional supplies should be stored in close physical proximity. In addition to the facility considerations, sheltering in place may involve altering clinical operations as well to limit the demand on the system. Active steps that should be considered include proactively managing (downward) the hospital inpatient census, cancelling elective procedures and admissions, and discharging or transferring especially vulnerable patients. Decreasing pre-event census not only reduces the burden on the facility's infrastructure but makes an evacuation, should one become necessary, less burdensome. Categories of patients who may be especially vulnerable if sheltering options fail may include, depending on the facility and threat, bariatric patients, ventilator-dependent patients, neonatal patients, among others. Prophylactically transferring such patients ahead of the impending threat may both prevent subsequent harm to them in an evacuation, and also decrease staff and facility demands on staff during sheltering operations.

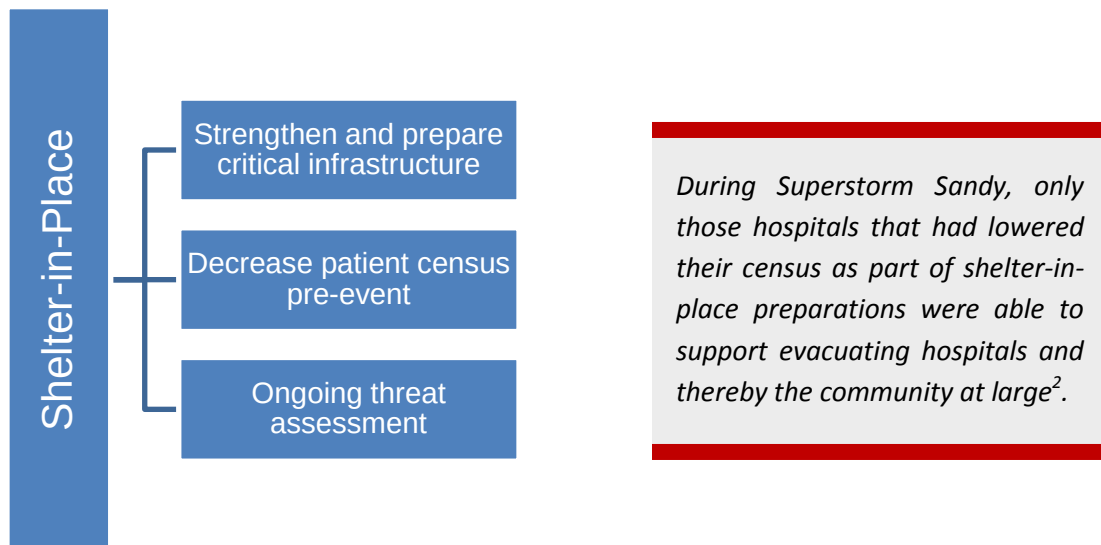
A decision to shelter-in-place is not necessarily irrevocable or permanent. Hospital decision teams should constantly reassess the threat that the event poses to patient and staff safety as the event evolves. Recent hospital evacuations following from an advanced warning event (e.g. hurricanes) show that the decision of whether to shelter-in-place or evacuate can change very quickly as the event occurs. For example, with hurricanes, the predicted and actual dynamics of the storm including direction, wind speed

Examples of shelter-in-place and evacuation decisions taken during Superstorm Sandy¹:

- *NYU Langone Medical Center: Discharged approximately 250 patients, canceled elective procedures pre-event and decided to shelter-in-place. The remaining 300+ patients were eventually evacuated during the event as a result of failure of multiple utilities.*
- *Coney Island Hospital: Discharged 150 patients, canceled elective procedures, and transferred 33 electrically-dependent patients out prior to the event. When the power failed the remaining patients were safely cared for until a post-event evacuation could be arranged.*

(category), storm surge, rainfall etc. commonly change within 24-48 hours pre-landfall posing a significant challenge to hospital decision maker(s). Local emergency management and other experts are often the best sources of information on event characteristics, and therefore it is essential that hospitals maintain constant communication with partner agencies (state or local health authority, emergency management and other partner agency) in order to have access to the most accurate and up-to-date information to support their decision-making.

The diagram below depicts key elements of sheltering in place:



Further details describing the decision making process for hospital shelter-in-place can be found in Section VIII: Hospital Shelter-in-place Checklist, on page 109.

Staffing

For a no-notice event, onsite staffing numbers and adequacy should be quickly assessed. If it seems that sheltering in place may develop into an extended operation, staff may need to be redeployed to support continuity of care. Off-duty staff should be notified of the incident with instructions on when/whether they should report for duty to avoid confusion, and keep staff off of the roads who are not needed or requested. If there is a significant hazard outside the hospital, staff should be directed to stay away so they are not exposed to the hazard.

For an event with notice, essential functions should be identified, and those functions should be staffed to up to 150% of projected need over the duration of the sheltering operation. Non-essential functions should be discontinued to limit the need to feed and shelter staff who are not involved in essential operations. Staff who are sheltering on site are considered the Stay Team. While staffing plans for the Stay Team are being developed, a staffing plan should also be developed for the resumption of normal activities so that the Stay Team can be relieved as quickly and efficiently as possible.

A Labor Pool is a critical part of the Stay Team for their ability to meet a variety of needs as the incident evolves. The Labor Pool may be formed from staff whose departmental functions are suspended due to sheltering operations.

All staff staying onsite must be provided with the option of accommodations and available food. Staff should be instructed to arrive for duty with sufficient clothing, toiletries, and personal medications. Staff should work in a rotation and with responsibilities as close to daily operations as possible.

Staff tracking and accountability is critical during sheltering operations. Hospital leadership must be able to account for all staff on the premises and primary work locations. This is essential both for safety and financial purposes.

Human Resources should pre-prepare plans for compensation of Stay Team staff if standard policies do not provide appropriate guidance and coverage.

Supplies

For a no-notice event, the institution will have to subsist with the supplies that are on hand. As most hospitals have moved to just-in-time inventory systems, this can present a significant challenge for sheltering. Therefore, it is essential that hospitals consider their inventories of supplies when planning for sheltering operations, and also when deciding whether to shelter-in-place. As soon as the decision to shelter is made, the hospital must institute appropriate conservation strategies to limit the burn rates for supplies. As one example, assigning staff to hand out linens instead of allowing carts to be opened can prevent excess and/or avoidable consumption.

During Superstorm Sandy, food, water, and supplies were lost because they were not stored higher than the flood waters. Lack of food and water made challenging sheltering and evacuation operations even more challenging¹.

For a planned sheltering event, the hospital should increase par levels of all critical supplies such as food, linen, and clinical supplies. These items should be stored in places where they can be secured and where potential damage from the event would be limited. In some cases, this might mean storing items in non-traditional spaces. Provisions for medications must be included in material and supply planning. If there is a threat of loss of power or other systems that would

impact the ability to access pharmaceuticals, measures to provide appropriate and monitored access must be taken. Efforts should be made to ensure that the supplies are secured as appropriate and carefully monitored.

Patient Care

When sheltering, it may be desirable to limit clinical operations and interventions to only the essential functions and actions. This may limit use of scarce supplies, as well as avoid unnecessary risks (such as travelling by elevator when the power may go out). In a dynamic and evolving situation, the hospital should not conduct procedures that would make a patient more vulnerable, if they can be safely delayed.

For an incident with advance notice, non-critical and all valuable patient belongings should be sent home with family members. Visitors and family members should also be kept to a minimum to avoid undue demands on the facilities and supplies, recognizing that some patient companions may be essential to assist with mobility, translation, simple provision of care, and/or emotional support during sheltering.

When considering sheltering, hospitals should conduct contingency planning that will help support effective patient care if utility or other services fail during sheltering operations. An example of effective contingency planning would be printing portions of the medical record and essential radiology images so that patient care can continue with minimal disruption if the IT and/or power systems fail. Printed medical records should be re-printed or updated at regular intervals if sheltering continues for an extended period.

Evacuation Contingency Plan

If a hospital is forced to consider Sheltering in place, it must consider that evacuation is also a possibility if sheltering operations fail. In anticipation of sheltering, and also while sheltering, hospitals



should encourage key managers and leaders to review the hospital's evacuation plan, specifically focusing on their departmental roles and responsibilities. Depending on the circumstances, hospitals may even wish to consider activating portions of their evacuation plan, such as creating a detailed inpatient census organized by medical, functional and/or durable medical equipment needs, identifying potential receiving facilities, or other actions.

Patients should be reviewed for their clinical acuity and mobility levels. Because the priorities and resources available for evacuation can change as an incident evolves, knowing the acuity and mobility levels of patients will help quickly identify who should be moved first. Remember that, if rapid discharge has taken place, the remaining patients may be at a higher overall acuity level than the baseline hospital population.

Any evacuation equipment should be inspected and just-in-time training should be conducted as necessary whenever evacuation is considered, even during sheltering operations.

Patients who are ambulatory day-to-day may not be ambulatory in an emergency. During Sandy, patients who were otherwise considered ambulatory preferred to be moved on evacuation equipment because they were fearful of walking down the stairs in the dark¹.

Facility Preparation

Facilities preparing to shelter-in-place must perform an in-depth assessment of the specific strengths and vulnerabilities of their facilities to identify areas where patients and staff may be safer or at higher risk of injury. Vulnerability to high winds and risks from surrounding flying debris (which may come from nearby neighborhoods or businesses) must be assessed, as should flood risks. The likelihood of loss of power, lighting, medical gasses or air handling should be assessed on a building-by-building and floor-by-floor basis to guide decisions about whether to shelter, and also where to shelter-in-place.

Facilities should also identify safer zones or hardened areas of the facility to which staff and patients may retreat when facing threats such as tornadoes or hurricanes. Access to and egress from these safer/hardened areas should receive special attention in facility planning efforts.

Facilities must also have both clear mechanisms as well as clear chains of command to be able to rapidly shut off air handling and outside air intake systems when the ambient air may be hazardous, such as in a chemical release.

Communication

During sheltering operations, hospitals should communicate regularly with staff, patients, and visitors regarding the threat situation and the measures that they should take to protect themselves. Frequent and open communications have the potential to diffuse conflicts as tensions can run high when patients and staff shelter for a prolonged period. The rapid ability to print signage that was placed on all external doors explaining a Governor's order to shelter-in-place was cited as a very important part of one Boston hospital's communications response to a citywide shutdown following the Boston Marathon bombing of 2013. Town halls held within the facility for the Stay Team can be especially beneficial in bringing the team together and allowing people to ask questions of senior leadership.

Security

Sheltering in place will likely require additional security measures around the facility and also require restrictions on ingress and egress. Areas of the hospital that are vacated during sheltering operations will need regular patrol as long as it is safe to do so. Additionally, the identified safer and/or hardened areas of the hospital may become congested with staff, patients, and visitors and security patrols should be frequent and observe for escalating tensions or obstructions of life safety pathways.



Security assistance may also be required to assist with maintaining accountability for staff, patients, and visitors during sheltering. Hospitals may wish to establish check-in/check-out stations during sheltering in order to maintain good accountability monitoring for all.



SECTION III REFERENCES

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MDPH HOSPITAL EVACUATION TOOLKIT

IV. EVACUATION FLOOR GUIDE



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INTRODUCTION

Purpose of the Evacuation Floor Guide

This Guide has been developed to assist individual patient care units in both the pre-planning and the response phases of evacuation. Enclosed in this Guide are documents and tools that, when combined together, form a floor-level “toolkit” for evacuation. Once the documents and tools of this Guide are adapted to meet the needs of a hospital and individual patient care units, the resulting toolkit may be distributed among all patient care units. Storing the toolkit in patient care areas will both expedite and help provide structure to response operations if a hospital has to evacuate. Staff on each unit should regularly review the toolkit’s contents and routinely conduct exercises using the toolkit to ensure that they are familiar with its contents.

Upon receiving the order to evacuate or to prepare to evacuate, nurses and others on the individual care units should open the toolkit and complete the appropriate checklist.



UNIT EVACUATION PROCESS CHECKLIST

Complete all steps on this checklist upon receiving the order to evacuate or to prepare to evacuate

- ☐ The senior nurse on the unit (or other appropriate designee) should assume the role of “Unit Leader.” That individual should read and follow the “Unit Leader Job Action Sheet” in this toolkit.
- ☐ The Unit Leader should seek to be briefed by the hospital “Evacuation Coordinator” or other senior leader in the hospital. If communication with leadership has been disrupted because of the emergency event, then the unit should continue to prepare its patients and staff for evacuation by following the steps below.
- ☐ All unit staff should gather to briefly discuss the situation and communicate the response and evacuation plan (if known).
- ☐ Visitors may stay with the patient, or may be directed to leave per the direction of the Unit Leader. In some cases, it is preferable to have visitors stay with patients when it will clearly benefit the patient’s emotional wellbeing (e.g. a parent staying with a child).
- ☐ The patients’ responsible and responding clinicians should report to the unit to:
 - Reassess each patient’s clinical status.
 - Review and minimize all active medications and clinical interventions (i.e. supplemental oxygen, monitoring, etc.). Only those medications and interventions that will be essential until the patient is successfully evacuated and arrives at another hospital should be continued.
 - Write a brief summary of the patient’s inpatient course and treatment plan to assist clinicians at the receiving hospital in assuming safe care of the patient. Clinicians should include their own contact information in this documentation.
 - Give report to receiving clinicians at the receiving hospital (when possible).
- ☐ All nurses should complete one *Patient Evacuation Form* for each patient that they are providing care to on the unit. One copy of this form will travel with the patient when they leave the unit. The other copy of this form stays with the unit for recordkeeping.
 - If the Unit Leader has patient assignments at this point, s/he should assign those patients to someone else to complete the forms and prepare the patients for evacuation.
 - Patients “off the unit” for testing or treatment at the time of evacuation might not return to the unit. Instead, depending on the required urgency of the evacuation, they may be transported to the Assembly Point where they will rejoin the unit. Clinical staff caring for patients “off-unit” will contact the Unit Leader to confirm this transport request and location. If patients do not return to the unit, nurses on the unit will bring a completed tracking form as well as any necessary medical equipment, records, and medications to meet the patient at the AP.
- ☐ The Unit Leader will work with all staff on the unit to complete the *Evacuation Tracking Log* to ensure every patient is accounted for.
 - Once completed, this log must be faxed (or delivered) to the hospital Emergency Operations Center (EOC) so that hospital leaders have an accurate patient census and can begin arranging for beds to transfer evacuating patients.
- ☐ Determine if evacuation operations will require additional staff or transport equipment after reviewing the Patient Evacuation Forms. Develop a comprehensive list of these needs on the enclosed *Request Form* and fax (or deliver) to the EOC.
- ☐ Patients’ families should be notified of the evacuation if possible. When possible, patients’ families should be provided a status update and further instructions at regular intervals.



- ☐ The Unit Leader should direct the staff nurses to package patients for transport. This includes packaging medications, essential medical equipment, and supplies the patient will need during transport as well as essential belongings. Assume that patients may be in transit for as long as 12 hours. If possible, extraneous patient belongings should be sent home with each patient's family.
- ☐ When notified by the hospital Evacuation Coordinator or Transport Coordinator, begin to send patients and staff to the Assembly Point and Discharge Site.
 - All patients who will be evacuated away from the hospital should be taken to the unit's Assembly Point. Your unit's default Assembly Point is: _____
 - All patients who will be discharged from the hospital should be taken to the hospital Discharge Site. The hospital's default Discharge Site is: _____
- ☐ The Unit Leader should communicate with the Evacuation Coordinator and Transport Coordinator to learn the order of unit evacuations and ensure that all patients are safely transported to the Assembly Point or Discharge Site. Floor Coordinators will assist the Unit Leader with tracking and communications.
- ☐ Patients are loaded onto elevators and taken to the Assembly Point in the order in which they become ready for internal transport. A clinical staff member will accompany the first transported patient(s) to ensure that the Assembly Point has at least one medical worker who can begin to provide medical care for patients from the unit as soon as they arrive at the Assembly Point.
- ☐ Other clinical staff members will accompany patients in transport to provide appropriate medical monitoring and care as needed. When the last patient leaves the unit, the Unit Leader and Floor Coordinator will travel to the Assembly Point to oversee care at Assembly Point.
- ☐ As patients arrive in the Assembly Point, it may be necessary to immediately move them from the transport stretchers and wheelchairs in order to retrieve additional patients from the hospital. Transporters will work with clinical staff to identify which patients can be moved from stretchers and chairs and assist with patient movement as appropriate when directed by clinical staff.
- ☐ Once patients arrive at the Assembly Point, only the minimum required care interventions should be continued as directed by the patient's providers. All the critical supplies needed at the Assembly Point will be transported to the AP by the responsible department. In addition, patient care units should have pre-planned lists of special supplies/equipment that they will need to bring with them to support essential care.
- ☐ In general, patients on contact and droplet infection control precautions should not be cohorted in one area in the Assembly Point. Patients should remain with their units to maintain the integrity of their diagnosis/infection but still adhere to the type of precautions required as possible. This approach enhances the staff's ability to identify and manage the specific infection control needs. However, patients on airborne precautions may be segregated or cohorted by the Unit with patients with the same diagnosis (e.g. TB with TB, Varicella with Varicella), in a separate location or at some distance from others, if possible.
- ☐ Patients will be taken from the Assembly Point to a Staging Area for loading and transportation when EMS resources and a receiving institution bed is available. In the Staging Area, patients should be loaded onto the first available vehicle with the appropriate clinical capabilities to safely transport them to their transfer destination. Ambulances without higher clinical capabilities (such as BLS ambulances) can be permitted to take higher acuity patients if hospital nurses or physicians travel with the patients with all necessary additional equipment and medications (including syringes and pumps).



UNIT LEADER JOB ACTION SHEET

YOU REPORT TO AN

EVACUATION COORDINATOR: Name: _____ Contact Number: _____

Your Evacuation Coordinator should brief you on the following:

- Time available to prepare for leaving the unit: _____
- Assembly Point Assignment (where to gather after leaving the building):

- Discharge Site Location: (where discharged patients wait for rides) _____
- Elevator Assignment: _____ Stairwell Assignment: _____
- Directions for Non-Unit Staff: Stay and help / Report back to home unit
- Sequence of Evacuation: _____
- Staff Recycling: (Can/should clinicians return to unit after leaving?) Yes / No
- Labor Pool: Directions for staff at home who can come in to help _____
- Family Support Center Phone Number: _____

You should notify your Evacuation Coordinator about the following:

- Any critical patients who will be at high risk if evacuated/moved
- Any physical damage or other immediate threats to the building/systems in your area

1. Find the Unit Evacuation Process Checklist. Review the document, then read this entire document before you begin. You will be responsible for completing the Checklist in its entirety.
2. Find the **Unit Leader** vest in the Evacuation Toolkit and put it on so you can be easily identified.
3. Gather all staff on the unit and communicate the following:
 - Amount of time available to prepare for transport, and how transport will occur
 - Location of the Assembly Point and the Discharge Site
 - The elevator and/or stair assignments for your unit
 - Whether non-unit staff should stay and help, or report back to their home departments
4. Assign staff to the roles below, and distribute the *Role Description Sheet* and nametag to each.
 - Assign an administrative assistant or coordinator to:
 - Print the medical record of the patient's current hospitalization (if electronic)
 - Print each patient's active orders
 - Print patient identification labels and label bags for packing of the patients' active medications
 - Deliver the printed orders and the patients' med sheets with the patients' charts to patient rooms
 - Assign an administrative assistant or coordinator to:
 - Man the phones and/or radio, fielding calls and responding appropriately
5. With staff, review the location and status of each patient and quickly record decisions on the *Tracking Log*. Be sure EVERY patient is accounted for, including those who are away from the unit temporarily for testing or other reasons.
 - Any patient who is off the unit will go straight to the Assembly Point and rejoin your unit there.
 - Fax/deliver copy of the tracking log (per instructions on form) so the process of identifying available beds at other receiver facility can begin.



6. Complete the *Request Form* and send per instructions on form.
 - Make a quick estimate of any additional staff needed to safely evacuate patients.
 - Determine any transport needs beyond wheelchairs and stretchers (oxygen, monitors, etc).
 - If no extra resources are needed, check the appropriate box on the form and send.
7. Ask staff nurses to complete individual *Patient Evacuation Forms* and begin packaging patients:
 - Critical medications (and supplies to administer) need to be packed with the patient.
 - Nurses should still complete the form and pack meds for any patients who are off the unit.
 - Special needs, assistive/adaptive devices required.
8. Patients may be discharged directly from the unit if medical staff are available and there is time to process the discharge. Send these patients directly to the Discharge Site so they can await transportation.
 - Patients who elect to leave Against Medical Advice (AMA) should sign the routine form.
9. Locate the *Unit-Specific Packing List* in the Evacuation Toolkit and assign someone to collect and transport those items to the Assembly Point.
10. Ambulatory patients who can manage climbing/descending stairs will leave the unit first.
 - If possible, send an experienced nurse with this first group of patients. This person will be in charge of the unit at the Assembly Point until you arrive there.
 - There will also be some extra clinical staff at the Assembly Point to help receive patients.
11. Work with staff to move patients to stretchers or wheelchairs as appropriate.
 - The Internal Transportation Director will automatically bring more wheelchairs/stretchers to each floor as their turn for transport approaches.
 - There will be a **Transport Coordinator** who will work with you to help get patients ready to board the elevators and/or enter the stairwells.
12. Ensure all staff and patients leave the unit safely.
 - Have the last nurse on the unit quickly pack and take any extra meds, syringes, etc. in the supply area.
13. Contact your **Evacuation Coordinator** when the unit is completely empty of all patients, staff, and visitors and ready for closing.
14. After closing, rejoin unit at the Assembly Point.
 - Notify "Patient Tracking" if any of your patients, staff, or visitors are missing.



COMMUNICATIONS UNIT LEADER JOB ACTION SHEET

1. Read this entire sheet before you begin.
2. Find **Communications Unit Leader** name tag in the Evacuation Tool Kit and put it on. It is important for everyone with an official role to be identified.
3. Each **Unit Leader** will report to an **Evacuation Coordinator**. Note his/her name and contact information below for quick reference.

Our Unit Reports to: _____ Phone: _____

4. If phones are working, field calls and respond or triage as needed. If radios are working, monitor communications and manage radio traffic as needed.

Calls from hospital leaders should be handled appropriately.

- Respond to questions and provide information as requested.
- Relay instructions immediately to your **Unit Leader**.
- Consult with your **Unit Leader** for any decisions that must be made.

Calls from staff should be handled as directed by your **Unit Leader**. Typically, staff responding to an emergency will report to a central Labor Pool.

Fill In Specific Instructions Here (i.e. where to report, where to call, etc.)

Calls from patient families should be answered as quickly and completely as possible. Give whatever information you are able to provide, including where the patient will be going. If they need additional information, refer them to the Family Support Center.

Family Support Center Phone: _____

5. If phones are NOT working, communication will take place via cell phone or hand held radios.

- Locate at least 2 cell phones that work on the unit. *Fill in Cell Phone Numbers Here:*

- If phones and other methods of communication are not working, it will be your responsibility to coordinate runners.

6. After the unit has been evacuated, check with your **Unit Leader** for further instruction.

- When directed to do so, contact an/the **Evacuation Coordinator** to report the unit is empty.
- Leave the unit and rejoin staff at the designated Assembly Point.



PATIENT RECORD PREPARATION JOB ACTION SHEET

1. Read this entire sheet before you begin.
2. Find **Patient Record Preparation** name tag in the Evacuation Tool Kit and put it on. It is important for everyone with an official role to be identified.
3. Before starting record preparation, you need to create individual medication bags for patients. Find the plastic bags in the Evacuation Toolkit and stick a patient label on each bag.
 - Create a bag for every patient, even those who are “off the floor” or who may be discharged.
 - Leave labeled bags in the med room/area for nurses to fill.
4. Print orders and med sheet for each patient from the computer.
 - Print orders and med sheet for every patient, even those who are “off the floor” or who may be discharged.
5. Find the chart(s) for each patient and insert the printed orders in the front of the chart.
 - Include extra labels in the front of each chart if possible.
 - Provide orders for patients who are “off the floor” to your **Unit Leader**.
6. Bring the charts and orders to each patient in his/her room.
7. Check with your **Unit Leader** for further instruction.



SAMPLE PATIENT EVACUATION TRACKING LOG

Directions for Unit Leader:

1. Review patients with staff and record information.
2. As soon as form is completed, **FAX** to hospital Emergency Operations Center.

Unit Name: _____

Unit Leader: _____

Pager/Cell Phone: _____

Patients (Use Labels)	Visitors?	Status	Acuity Category	Equipment Needs	Mode of Transport	Destination	Time Pt Left	Has Meds?	Pt Arrived
		Evacuate D/C Home Left AMA Off Unit	ICU Step Down General Care ----- Wtg for SubAcute	Pump Oxygen Monitor Vent Suction None	Ambulatory Wheelchair Stretcher Bed Crib Bassinet Isolette	Assembly Point Discharge Site Other (list below)			
		Evacuate D/C Home Left AMA Off Unit	ICU Step Down General Care ----- Wtg for SubAcute	Pump Oxygen Monitor Vent Suction None	Ambulatory Wheelchair Stretcher Bed Crib Bassinet Isolette	Assembly Point Discharge Site Other (list below)			
		Evacuate D/C Home Left AMA Off Unit	ICU Step Down General Care ----- Wtg for SubAcute	Pump Oxygen Monitor Vent Suction None	Ambulatory Wheelchair Stretcher Bed Crib Bassinet Isolette	Assembly Point Discharge Site Other (list below)			
		Evacuate D/C Home Left AMA Off Unit	ICU Step Down General Care ----- Wtg for SubAcute	Pump Oxygen Monitor Vent Suction None	Ambulatory Wheelchair Stretcher Bed Crib Bassinet Isolette	Assembly Point Discharge Site Other (list below)			
		Evacuate D/C Home Left AMA Off Unit	ICU Step Down General Care ----- Wtg for SubAcute	Pump Oxygen Monitor Vent Suction None	Ambulatory Wheelchair Stretcher Bed Crib Bassinet Isolette	Assembly Point Discharge Site Other (list below)			



REQUEST FORM

Completed By: Unit Leader or Dept Head

Date: _____

Fax To: Emergency Operations Center

Time: _____

Requestor Information

Unit/Dept Name: _____

Building/Floor: _____

Your Name: _____

Contact Number: _____

Type of Staff (Role)	Number Requested	Comments

Equipment	Number Requested

Please be specific when making your request!

Request the specific capability you need, not specific resources.



PREPARING INPATIENTS FOR EVACUATION

Information Sheet for Staff

Assembly Points

- Patient Care Units will stay together at the Assembly Point.
- There should be a few clinicians available at the Assembly Point to receive and help care for your patients.
- If time allows for discharge, appropriate patients may go straight to the Discharge Site.

Medications

- Pack 2 doses of each CRITICAL med in a bag that can accompany your patient.
- You should also pack any necessary IV fluids and/or tube feeds with your patient (Standard tube feeds should also be available at the Assembly Point).
- Additional meds (including narcotics) and blood products should be available at the Assembly Point.

Supplies

- Any supplies *readily available* in patient rooms can be packed with the patient.
- General medical supplies will be available at the Assembly Point, so do not take time to pack from the supply room.
- *Unit-specific* supplies and/or equipment (see back of this page) will be transported to the Assembly Point by the person assigned by your Unit Leader.

Patients on Oxygen

- If possible, any patient currently on oxygen should remain on oxygen during transport.
- Patients should stay on room oxygen as long as possible to preserve portable oxygen resources.

Patients on Ventilators

- During an evacuation, respiratory therapists will be dispatched to the units to assist you.
- If a travel ventilator isn't available, the patient will be bagged during transport. The ventilator should accompany the patient and be reconnected if possible at the Assembly Point.

Patients on Monitors

- Only patients who have a potentially life-threatening indication will travel with portable monitors.

Patients "Off the Unit"

- Patients who are off the unit will go straight to the Assembly Point, and will re-join your unit there.
- Do **not** take extra time to pack their belongings but do make sure their critical meds, assistive devices, and *Evacuation Form* go to the Assembly Point.

Don't Forget About You

- Take your purse/keys/etc. with you before you leave the unit.



PATIENT EVACUATION FORM

Completed By: Staff Nurses

Main Diagnosis: _____

Allergies: _____

Attending/Team: _____

Family Notified: No Yes _____ (who)

Patient's Language: _____

DNR: Yes No

DNI: Yes No

Precaution Status:	None	Contact	Airborne	Droplet	Neutropenic
Mental Status:	Oriented	Lethargic	Confused	Suicide Precautions	
Acuity Category:	General Care	Step Down	ICU	Wtg for SubAcute	

Priority Issues/Safety Concerns: _____

Critical Meds: _____
Include all needed to maintain patient stability

CLINICAL REQUIREMENTS (check boxes that apply)

IV (List Med):	☐ Saline Lock	☐ Continuous Infusion	☐ None
Oxygen:	☐ Need for Travel	☐ Need at Assembly Point	☐ None
Monitoring:	☐ Need for Travel	☐ Need at Assembly Point	☐ None
Vent/Respirator:	☐ Yes		☐ No
Suction:	☐ Need for Travel	☐ Need at Assembly Point	☐ None
Diet:	☐ NPO	☐ Tube Feeding	☐ (list) _____
Transport Mode:	☐ Stretcher/ICU Bed	☐ Wheelchair	☐ Ambulatory
Supervision During Transport:	☐ Needed – Clinical	☐ Needed – Non Clinical	☐ Not Needed

PACKING LIST (check for readiness to travel)

____ Meds ____ MD Orders ____ ID Band ____ Pt Belongings ____ Mobility Device
____ IV Fluids ____ Chart ____ Special Equipment/Supplies

COMMENTS/UNIT SPECIFIC INFORMATION

PATIENT DESTINATION ☐ Assembly Point ☐ Discharge Site
Estimated Pickup Time _____ ☐ Home (Direct) ☐ AMA

CLINICIAN SIGNATURE _____ ☐ Ready to Move

Directions: Original form stays with patient. Give carbon copy to your Unit Leader.



SAMPLE UNIT-SPECIFIC EQUIPMENT ASSEMBLY POINT PACKING LIST

Each inpatient care unit will be required to identify specific items they will need when caring for their patient population at the Assembly Point. They must pack and transport these items to the Assembly Point to be used for care of their population if required.

Below is an example of such a list.

UNIT XX ASSEMBLY POINT PACKING LIST
#6, #7, and #8 Trachs (1 of each)
Ab Visor (patient specific)
Atrium closed drainage kits (2)
Battery Charging Strips for portable equipment
Bovie Machine (if present on the unit)
Bronchoscope
Central Line Insertion Kit
Chest Tubes/Chest Tube Drainage – these will be available at the AP
CO2 Detector
CVVH Machine with disposables and replacement fluids
Doppler
Fluid Warmer + Tubing (patient specific)
Internal Defibrillator Paddles
Internal paddles (1)
Kelly Clamps for chest tubes
Kerlix Bandage 4.5 in X 4.1 yd
Line Cart
Medtronic pacer box (4)
Monitor with pressure monitor capabilities
Open Chest Kit
Open chest tray (1)
PiCCO + Lines
Plastic Sheets (patient specific –hypothermia)
Pulmonary Artery Catheter
PVU, emergency batteries, hand pump, controller with integrated reserve battery, wearable battery, charger and accessories
Resuscitation Fluid (patient specific – e.g. Lactated Ringers, Albumin)
Specific items for Thoratec and Levacor
Temporary pacemaker wires, generators and magnets
Thoracentesis Kit
Trach Ties (3)
Transducer Set-ups

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V. EVACUATION STAFFING GUIDANCE



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INTRODUCTION

Purpose of the Evacuation Staffing Guidance Section

The Evacuation Staffing Guidance Section describes a few key specific job functions that may be needed in a Hospital Incident Command System (HICS) to fill integral roles in the event of an evacuation and supplies sample Job Action Sheets (JAS) for those functions. These select job functions are meant to supplement, but not replace, the usual HICS positions. This section also supplies a staffing checklist that the Incident Commander of the hospital can use to help ensure that positions with both the appropriate capabilities to support evacuation operations are filled. Hospitals will need to carefully review this guidance and decide which of these suggested roles and functions are useful relative to their own evacuation plan and adapt these suggested job functions as necessary to compliment hospital and local response system and structures.



EVACUATION STAFFING CHECKLIST FOR INCIDENT COMMAND

1. Decide and Communicate

- ☐ What level of evacuation is necessary?
- Shelter in Place
 - Horizontal
 - Vertical
 - One Unit, Multiple Units, Single Building, Multiple Buildings, or Entire Campus
- ☐ Which evacuation order should be used? How long do staff have to prepare to move patients?
- Immediate: no time for preparation
 - Rapid: limited time to prepare (1-2 hours with everyone out in 4-6 hours)
 - Gradual: extended time to prepare (wait for further direction)
 - Prepare Only: do not move patients, prepare to move patients

When in doubt, consider issuing a PREPARE ONLY order. Then, if evacuation becomes necessary, operations will progress more rapidly than if a hospital only took a “wait-and-see” stance. If evacuation is not necessary, no patients will be put at risk by preparatory activities and the preparations will have served as excellent practice for staff.

- ☐ Where will clinical care units be internally evacuated (i.e. Assembly Points)?

Assembly Point location(s):

(add additional lines below as needed)

- ☐ Where will patients be directed to so they may wait if they are being discharged?

Discharge Site location: _____

- ☐ Should staff be called in from home to help? Should staff be put on notice that they may be needed?

(Evacuation is VERY staff intensive. It is strongly recommended that all hospital staff are put on alert or called in ASAP if evacuation may be required or is warranted)

2. Make Specific Assignments for Evacuation (in addition to usual ICS assignments)

- ☐ Assign one or more EVACUATION COORDINATORS:

Staff serving in this role are responsible for communicating with each unit and monitoring their progress as they prepare to evacuate and package their patients to ensure each unit is safely evacuated. Each Evacuation Coordinator should have approximately 5, and not more than 7, patient care units to manage during evacuation. Use the form Evacuation Tracking Sheet by Unit in Section IV, page 64 in this toolkit to record which units are assigned to each Evacuation Coordinator.

Evacuation Coordinators are responsible for telling their assigned units about these decisions:

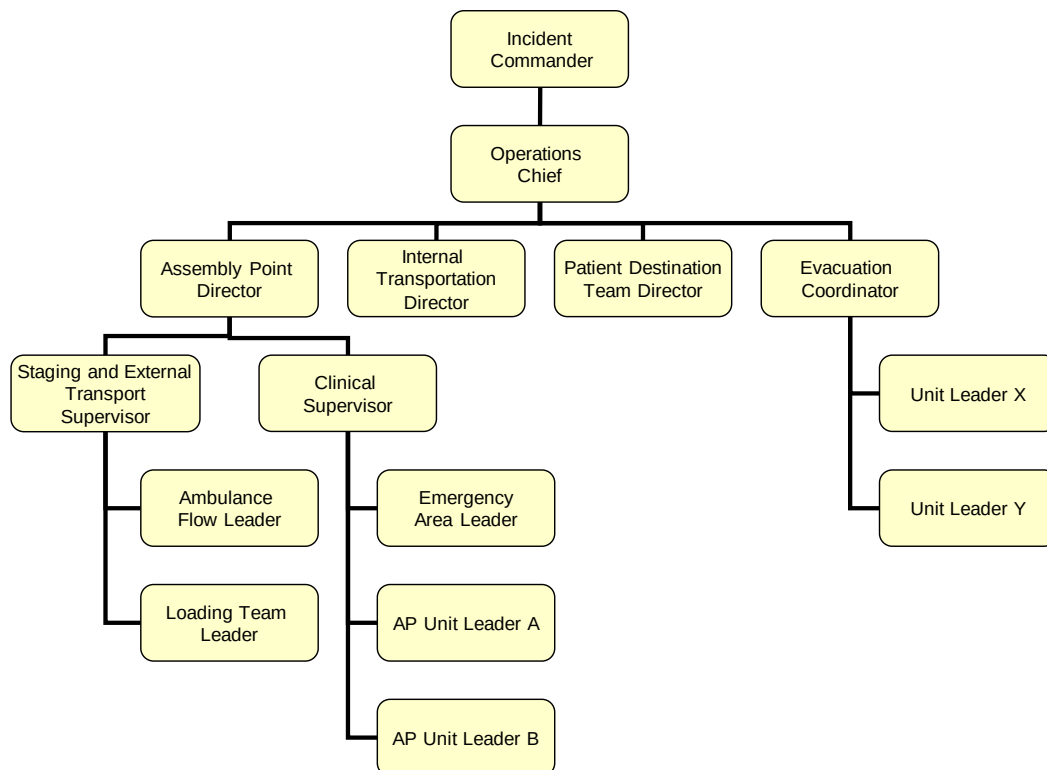
- Can elevators be used (if so, which ones)? If not, which stairwells will be used?
- Are transport sleds or other specialty equipment available? (see plan for details)
- Should non-unit staff return to their departments or stay where they are and help to evacuate patients in those areas?
- Can/should staff recycle back into main campus buildings after exiting with evacuated patients?
- Where should unassigned staff report to for Labor Pool assignments?
- What is the anticipated order of evacuation for each unit?



2. Make Specific Assignments for Evacuation (continued)

- ☐ Assign one: **INTERNAL TRANSPORTATION TEAM DIRECTOR:**
The position is responsible for deploying and managing staff who will transport patients from the individual care units to the Assembly Point(s), Discharge Site, and Staging Area(s). S/he will monitor available elevator and stairwell usage and will work with external public safety representatives (i.e. fire, EMS, and police) to coordinate hospital personnel and equipment that is being used to transport patients with any supplemental external resources needed to transport patients to the Assembly Point(s), Discharge Site, and Staging Area(s).
- ☐ Assign one: **PATIENT DESTINATION TEAM DIRECTOR:**
The Patient Destination Team Director will need to assemble and lead this team as soon as it is suspected that building re-entry may not be feasible.
- ☐ Assign one or more: **ASSEMBLY POINT DIRECTOR(S):**
This position will be in charge of each Assembly Point (AP) and be filled with a senior manager who has excellent operational skills. The Assembly Point Director will designate a Clinical Supervisor and a Staging and External Transport Supervisor who will report to the AP Director. The Clinical Supervisor will oversee the individual patient care Unit Leaders at the Assembly Point.

If there are too many units at a single Assembly Point for one Clinical Supervisor to manage, the Assembly Point Director may name Section Leaders to oversee groups of clinical Unit Leaders under the Clinical Supervisor.





EVACUATION COORDINATOR JOB ACTION SHEET

YOU REPORT TO THE

OPERATIONS CHIEF: Name: _____ Contact Number: _____

YOUR ASSIGNED PATIENT CARE UNITS ARE: _____

You are responsible for:

- Making sure your units have been notified about the evacuation and have been given all necessary information
- Providing guidance to each Unit Leader
- Monitoring the pace of preparations for each unit's evacuation
- Troubleshooting any issues while preparing for evacuation
- Coordinating with the Internal Transportation Director to obtain sufficient transportation resources to evacuate your assigned units
- Knowing when each of your units has evacuated
- Escalating issues as appropriate

You should notify the HICS Operations Chief immediately about the following:

- Any units where patients/staff are in immediate danger
- Any units where building/systems have significant damage
- Any unmet needs for additional resources

1. Read this entire sheet before you begin.
2. Put on the vest/nametag labeled **"Evacuation Coordinator"** so you can be easily identified. Get a radio/phone for communication. Use a runner if all communication systems are offline.
3. Contact each of your assigned patient care units and ask to speak with the Unit Leader.
 - a. Confirm the evacuation order and amount of time they have to prepare to leave.
 - b. Give the Unit Leader your contact number.
 - c. Find out if anyone is in immediate danger or if there is significant damage to the building/systems on that unit (If so, relay information back to HICS Operations Leader immediately).
 - d. Direct staff to find, follow, and complete their unit's Evacuation Toolkit.
4. After completing the first round of calls to each unit, call each unit again to provide more information including:
 - a. Assembly Point location
 - b. Discharge Site location
 - c. Elevator and/or stairwell assignment
 - d. Whether staff can re-enter building after leaving (i.e. recycle)
 - e. Family Support Center location and phone number (for families on-site or for those who need to call the hospital for information about their loved ones)
5. Direct the Unit Leader to gather staff and quickly complete the patient tracking log. This log must be faxed or delivered to the Admitting Office as soon as possible.
 - a. Ask the Unit Leader about any fragile/critical patients who may not survive being moved.
 - b. Work with Incident Command and unit leader to make decisions about moving these patients.
6. Continually check-in with units often to answer questions and support staff. Units **MUST** contact you when they begin leaving the unit and when they have completed their evacuation.
 - a. Ask the Unit Leader specifically: are all the patients gone?
 - b. Ask the Unit Leader specifically: are all the staff gone?
7. Notify the Operations Chief as each unit evacuates. Communicate any problems as appropriate.



INTERNAL TRANSPORTATION TEAM DIRECTOR JOB ACTION SHEET

YOU REPORT TO THE

OPERATIONS CHIEF: Name: _____ Contact Number: _____

You are responsible for:

- Identifying which elevators and stairwells may be used for evacuation.
- Communicating with the Operations Chief to determine the order of unit evacuation.
- Mustering sufficient staff to transport all hospital patients to the Assembly Point(s), Discharge Area, and Staging Area(s).
- Identifying available and needed equipment for patient transportation (stretchers, wheelchairs, transportation sleds, stair chairs, etc.).
- Coordinating use of personnel and equipment with external public safety authorities (i.e. fire, EMS, police).
- Managing transportation assets to ensure the most efficient flow of patients out of the institution possible.
- Communicating with the Evacuation Coordinator(s) to inform them of the timing and availability of transportation assets to the individual units.
- Identifying and troubleshooting any bottlenecks in flow.

You should notify the OPERATIONS CHIEF about the following:

- Need for more staff or resources
- Obvious bottlenecks in flow

1. Read this entire sheet, including the attached diagram, before you begin.
2. Put on vest/nametag labeled "**Internal Transportation Team Director**" so you can be easily identified.
3. Muster staff to transport all hospital patients to the Assembly Point(s), Discharge Area, and Staging Area(s). Work with the Labor Pool as needed to obtain additional staff. Determine the training, fitness and physical capabilities of responding staff to lift and move patients.
4. Identify and gather available and needed equipment for patient transportation (stretchers, wheelchairs, transportation sleds, stair chairs, etc.).
5. Communicate with the Operations Chief and/or Security to identify which elevators and stairwells may be used for evacuation.
6. Communicate with the Operations Chief to determine the order of unit evacuation. Begin to deploy equipment and staff to the units that will be first to evacuate.
7. Coordinate use of personnel and equipment with external public safety authorities (i.e. fire, EMS, police).
8. Manage transportation assets to ensure that there is an efficient flow of patients out of the institution. Monitor for bottlenecks to flow and troubleshoot those bottlenecks.
9. Routinely communicate with the Evacuation Coordinator(s) to inform them of the timing and availability of transportation assets that will support the individual evacuating units.



PATIENT DESTINATION TEAM LEADER JOB ACTION SHEET

YOU REPORT TO THE

OPERATIONS CHIEF: Name: _____ Contact Number: _____

You are responsible for:

- Identifying all patients who require transfer to other hospitals
- Working with admitting, nursing, physician, case management, and other hospital representatives to identify the destination and transportation needs of the evacuating patients
- Working with local and state public health authorities to ensure that the process of bed finding runs smoothly
- Identifying the timeline for bed availability at receiving hospitals and communicating that timeline to the Operations Chief and Incident Commander
- Ensuring that patient placement decisions are communicated to the Assembly Point and Staging Leaders
- Escalating issues as appropriate

You should notify the Operations Chief about the following:

- Any tracking logs from the patient care units that are missing
- Physicians who are circumventing the process
- Need for additional resources

1. Read this entire sheet before you begin.
2. Put on the vest/nametag labeled “**Patient Destination Team Leader**” so you can be easily identified.
3. Obtain a radio/phone for communication. Use a runner if all communication systems are offline.
 - a. Also, get a list of the Assembly Point and Staging Area Leaders so your team can communicate placement and transfer decisions
4. Assemble the team, making sure it includes the following role groups:
 - a. Admitting
 - b. Inpatient clinical supervisors
 - c. Case management
 - d. Inpatient physician representatives
 - e. Specialty service representatives as appropriate
5. Quickly have team review the number and types of patients in-house to gain basic situational awareness of the evacuation needs.
6. Contact public health authorities to begin discussions on the numbers and types of patients that will require evacuation. Maintain continual contact with them in person or electronically during the process.
7. Review patient tracking logs from all patient care units as they are faxed or delivered.
 - a. If logs are missing, inform Operations Chief ASAP
8. Determine which patients will be a priority for direct transfer to another facility.
 - a. Patients requiring direct transfer to an OR or ICU (bypassing the Assembly Point)
 - b. Patients requiring secure transfer (bypassing the Assembly Point)



9. Begin matching patients with appropriate beds and level of EMS transport required. Assign team members to be responsible for specific functions.
 - a. Recording decisions
 - b. Contacting other facilities and/or Department of Public Health (DPH) to confirm bed availability
 - c. Contacting Assembly Point and Staging Leaders with decisions or requests for more information
 - d. Contacting the “Evacuation Coordinators” to facilitate the timing for the direct, priority transfers
10. Every hour, provide a status update to the Operations Chief.
 - a. Number of patients discharged home (or left AMA)
 - b. Number of patients “matched” with another facility
 - c. Number of patients left to match
 - d. Estimated time remaining to match all patients
11. Escalate any problems or issues that need resolution.



ASSEMBLY POINT DIRECTOR JOB ACTION SHEET

YOU REPORT TO THE OPERATIONS CHIEF:

Name: _____

Contact Number: _____

You are responsible for:

- Making sure all of the key departments are present to set up the Assembly Point (AP)
- Ensure the AP is set-up correctly
- Appointing a Clinical Supervisor and a Staging and External Transportation Supervisor
- Ensuring appropriate signage is displayed at AP
- Monitoring the arrival of individual patients and units to the AP
- Monitoring the care of patients in the AP
- Responding to requests for information from the Incident Commander or Operations Chief
- Assessing Assembly Point operations and solving any problems or bottlenecks as they surface
- Ensuring any resource shortages are identified quickly and addressed
- Communicating with the Patient Destination Team and Staging Area leaders to ensure patients flow out of the AP as quickly as possible
- Escalating any other issues as appropriate

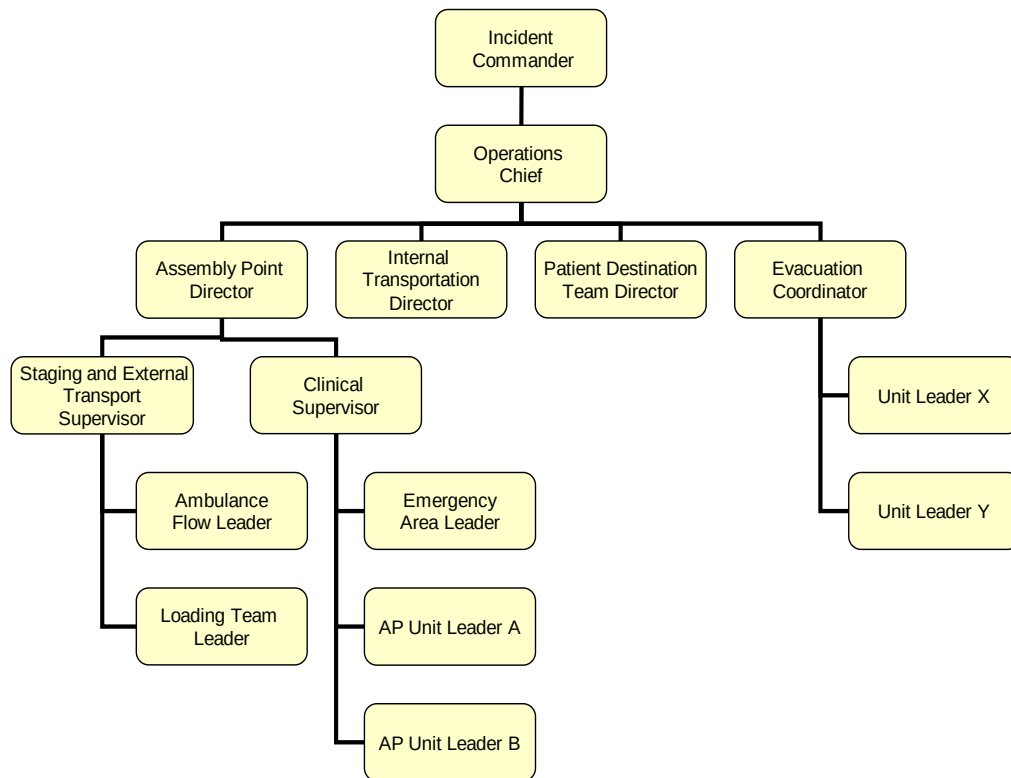
You should notify the Operations Chief about the following:

- Need for additional resources

1. Read this entire sheet before you begin.
2. Put on the vest/nametag labeled “**Assembly Point Director**” so you can be easily identified.
3. Get a radio/phone for communication.
4. Work with the Operations Chief to assign staff to the positions reporting to you at the Assembly Point (see organization chart on next page).
5. Give job action sheets/role descriptions to your reports, and provide additional direction as needed.
6. Ensure all relevant departments are present and working to set up support at the AP.
 - a. ED (Emergency Medical Stabilization Area)
 - b. Admitting (Patient Tracking)
 - c. Environmental Services (Supply and Signage Setup)
 - d. Buildings and Grounds (Power, Lighting, Heating/Cooling Setup)
 - e. Social Services (Call Center and Family Waiting Areas)
 - f. Pharmacy
 - g. Materials Management
 - h. Blood Bank (if needed)
 - i. Food and Nutrition Services
 - j. Security
7. Ensure signage is posted in lobby/entrance/key areas.
8. Communicate regularly with the Clinical Supervisor to monitor and assess activities for problems or bottlenecks. Address issues and resolve. Communicate issues as needed.
9. Work with leaders of the supply departments to ensure adequate resources are available.



10. Communicate with the Patient Destination Team and Staging Area leaders to ensure patients flow out of the AP as quickly as possible.
11. Monitor staff for signs of fatigue. Request replacement staff if needed.





ASSEMBLY POINT CLINICAL SUPERVISOR JOB ACTION SHEET

YOU REPORT TO THE

ASSEMBLY POINT DIRECTOR: Name: _____ Contact Number: _____

You are responsible for:

- Providing support and guidance to the Emergency Medical Stabilization Leader and the individual Unit Leaders
- If there are more than 5-7 Units to supervise, designating Section Leaders to supervise groups of approximately 5 Unit Leaders and report to you directly
- Ensuring a Rapid Response team is available for codes or acute medical emergencies
- Communicating with the Assembly Point Director to ensure that there are sufficient clinical staff and medical supplies present to support essential care
- Escalating issues as appropriate

You should notify the Assembly Point Director about the following:

- Issues that cannot be resolved
- Need for more staffing or resources

1. Read this entire sheet before you begin.
2. Put on the vest/nametag labeled **"AP Clinical Supervisor"** so you can be easily identified.
3. Get a radio/phone from the AP Director for communication. Use a runner if all communication systems are offline.
4. If there are more than 5-7 Units to supervise, appoint sufficient Division/Group Supervisors to supervise groups of approximately 5 Unit Leaders (individual patient care units). These Division/Group Supervisors will report directly to you.
5. Identify the Emergency Medical Stabilization Area and confirm that it is set up and able to provide care. Designate a physician/nurse team from this area who can respond to medical emergencies at the Assembly Point.
6. Periodically contact the Unit Leaders and the Emergency Medical Stabilization Leader for status updates. Ask them about resource needs and any problems.
7. Notify the AP Director of any unresolved issues or concerns.



STAGING AND EXTERNAL TRANSPORT AREA SUPERVISOR JOB ACTION SHEET

YOU REPORT TO THE

ASSEMBLY POINT DIRECTOR: Name: _____ Contact Number: _____

You are responsible for:

- Making sure appropriate EMS and other vehicles are requested for transport
- Making sure staff are in place for staging and loading of patients who are being transferred to other facilities
- Assessing the process, solving problems, and eliminating bottlenecks
- Providing direction to the loading teams
- Communicating regularly with the EMS liaison
- Communicating with Security and Police representatives to identify and resolve any traffic flow issues
- Escalating issues to Assembly Point Director when appropriate

You should notify the Assembly Point Director about the following:

- Need for additional staff
- Need for additional vehicles
- Any issues that need resolution

1. Read this entire sheet before you begin.
2. Put on the vest/nametag labeled “**Staging and External Transport Supervisor**” so you can be easily identified.
3. Get a radio/phone from Assembly Point Director for communication. Use a runner if all communication systems are offline.
4. Ensure pathways/areas for staging patients in the lobby are clearly identified and ready.
5. Ensure vehicles are requested, staged and ready to transport patients. EMS will have a liaison to assist with ambulance staging.
6. There should be at least two teams who will be responsible for loading patients into vehicles and ensuring patients can safely be transported to their destination. Each team will include a:
 - a. Clinician (experienced ED clinician who can confirm that the appropriate staff, supplies, and equipment needed are present)
 - b. Biomedical engineer (to retrieve or track hospital equipment travelling with the patient)
 - c. Loader (anyone physically fit who can help lift patients into vehicles) NOTE: must be supervised by EMS to ensure that they do not injure themselves or the patients with improper loading/lifting techniques
 - d. Patient tracking representative to document the specific vehicle used for transport and time of departure for each patient
7. Ensure all relevant departments/staff are in place and ready to move, discharge, and load patients.
8. Supervise process and ensure any bottlenecks are resolved. Monitor personnel for fatigue. Periodically evaluate need for more loading teams, and more clinical staff in the travel pool.
9. Escalate any issues to the Assembly Point Director.

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VI. ASSEMBLY POINT GUIDE



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INTRODUCTION

Purpose of Assembly Point Guide

The hospital should identify several locations surrounding the hospital that could be used as Assembly Points in the event that a rapid evacuation must take place and patients will need to be immediately relocated to a safe location.

This Assembly Point can serve as the place where patients would gather (outside the hospital) to receive basic care and await transfer, or re-entry back into the hospital. *The Assembly Point should not be a comprehensive field hospital. The Assembly Point should be designed as a holding area with limited care resources.*

This guide provides the direction required to ensure that supplies, equipment, and staff are ready and organized to care for patients. The Assembly Point should take responsibility when patients “check-in” and manages care until patients are ready to transfer to another facility or be discharged home via the Discharge Site.



ASSEMBLY POINT SET-UP GUIDELINES

The Assembly Point Director should coordinate the work of the various departments involved in Assembly Point set-up. The following departments should have primary responsibility for getting the Assembly Point ready to receive patients:

Environmental Services: cleaning supplies; tables/chairs; trash cans/gloves/masks

Facilities Maintenance: electrical support; extra lighting; heating or cooling as needed

Materials Management: clean supply areas; medical equipment and oxygen; code carts

In addition, the departments below are responsible for setting-up appropriate areas so they can support patient care at the Assembly Point:

- Pharmacy
- Food and Nutrition Services
- Blood Bank
- Clinical Labs
- Social Services (Family Waiting Areas)
- Biomedical Engineering
- Respiratory Care
- Admitting (Patient Tracking areas)
- Telecommunications (Phone Bank)
- Security

Entrance Area

Basic supplies (trash cans, hand hygiene liquid, gloves/masks) will be needed throughout the entrance area.

Clear pathways and signage are critical for ensuring a high volume of patients can move quickly through Patient Tracking and into the patient care areas. Pathways to enter and exit the Assembly Point should be tested and documented.

Emergency Medical Stabilization Area

Medical supplies and equipment should be transported and organized by Emergency Department staff with support from Pharmacy, Biomedical Engineering, and Respiratory Care, if available. Pharmaceuticals (especially narcotics) will need to be secured. However they may also need:

- Dirty Utility area (see list on next page)
- Oxygen tanks
- Electrical support
- Portable lights (if needed)
- Portable heat or cooling (if needed)

Patient Care Areas

The Assembly Point Director should have primary responsibility for directing the set-up process. S/he should ensure signage is visible, and make decisions about where items are placed if there is a need to deviate from the basic plan. Each care unit space should have:

- Clean supply station with basic medical supplies
- Dirty utility area
- 1 Code cart
- Oxygen tanks/oxygen concentrator
- Charging station for batteries
- Electrical support
- Portable lights (if needed)
- Portable heat or cooling (if needed)



Clean Supplies

- Linens – sheets, blankets, pillows, towels
- Infection control – gloves, masks, disinfectant wipes
- Medical supplies – per list
- Admin supplies – forms, clipboards, and pens

Dirty Utility Supplies

- Trash cans
- Sharps disposals
- Linen hampers
- Admitting (Patient Tracking areas)

Most of the medical and general clean supplies should be kept in the centralized clean supply stations. However, as part of the set-up process, heavily used items (gloves, hand hygiene liquid, hooks for hanging IVs, etc.) should be placed throughout the section.

It is essential to sketch out a diagram of the Assembly Point set-up as it would appear in the designated location chosen for the Assembly Point before using the space in an emergency.

In Superstorm Sandy, Assembly Points were not always used. In many cases, the patients were safer and more comfortable in their rooms and were only moved from the floor to an ambulance when a bed at a receiving facility had been located.



ASSEMBLY POINT SURVEY TOOL

In deciding where to designate your Assembly Point, it is important to survey internal and external facilities to find the most suitable location. Below is an example of a survey tool that a hospital may use to review the potential patient and resource capacity of available locations to determine if they would serve as an adequate assembly points.

Location	Potential for Patients			Power	Phone	Distance	Computer	Vehicle Access	Weather Limiting
	Seated	Wheelchair	Stretcher						
Hospital Procedural Suite			5 to 20	Yes	Yes	500 yds	Yes	Yes	No
Ambulatory building 2nd floor conf. rooms	50	40	15	Yes	Yes	350 yds	Yes	Yes	No
Ambulatory building 4th floor conf. rooms	40	30	10	Yes	Yes	350 yds	Yes	Yes	No
Ambulatory building 4 th OB/GYN			20+	Yes	Yes	350 yds	Yes	Yes	No
Neighboring Hotel Function rooms	100+	50	58	Yes	Yes	700 yds	No	Yes	No
Neighboring Church	150+	50	10 to 20	Yes	Yes	750 yds	No	Yes	No
Adjacent Parking Garage #	200	200	50	Yes	No	300 yds	No	Yes	Limited
Adjacent Health Club	100	100	25	Limited	No	.25 mile	No	Limited	Yes
Adjacent Soccer Field *	All	All	200+	No	No	1000 yds	No	Limited	Yes
*Ground conditions would hamper wheelchairs and stretchers – seats would need to be supplied to the area as well #Elevator is not large enough to transport hospital beds/stretchers unless they were disassembled									



NUTRITIONAL DISASTER SUPPLY LIST FOR ASSEMBLY POINT

(Supporting approximately 1,000 patients, staff, and visitors for 24 hours)

Non-Perishable Food Items

Energy Bars	25 cases/72 bars
Tuna, can individual, 3 oz	75 cases/12
Crackers, Saltine individual	6 cases/500
Mayonnaise, packet	4 cases/500
Applesauce/Peaches, individual	25 cases/72 each
Milk, shelf stable	10 cases 12/32 oz
Cold Cereal, assorted individual boxes	13 cases/70 boxes

Nutritional Supplements

Meal Replacement, 8 oz bottle	50 cases/24 bottles
Meal Replacement, 8 oz bottle (Diabetics)	25 cases/24 bottles

Infant Formula

Enfamil 20 cal-ready to use, 6 oz bottles	4 cases/24 bottles
Standard Nipples	1 case/240 each
Pedialyte- ready to use, 2 oz bottles	4 cases/48 bottles

Tube Feedings

Meal Replacement, 1.0 Ready to Hang	5 cases/8 liters
Meal Replacement, 1.0 Ready to Hang	1 case/8 liters

Water/Juices

Juice, can 5.5 oz Apple/Cranberry	38 cases/48 cans
Water, Spring 16.9 oz bottle	165 cases/24 bottles

Paper Supplies

Bowls, 12 oz	2 case/1000
Bag, brown 10#	6 bundles/500
Napkin, dinner	2 cases/3000
Spoon, Soup plastic	3 case/1000
Knife, plastic	1 case/1000
Cup, 7 oz plastic	3 cases/2500

Meal #1

Energy Bar
Cold Cereal
Milk
Juice
Water

Meal #2

Energy Bar
Meal Replacement
Applesauce
Juice
Water

Meal #3

Canned Tuna
Crackers
Mayonnaise
Peaches
Meal Replacement
Water

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VII. EMERGENCY RECEIVER GUIDANCE



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INTRODUCTION

Purpose of the Emergency Receiver Guidance

If one hospital is forced to evacuate all or a significant portion of its inpatient population, the evacuation event will undoubtedly create significant challenges for the other hospitals in its Region. Whether from the Regional effects of a loss of an Emergency Department, thereby diverting ambulances and other walk-in patients towards other area Emergency Departments, or from the disruptions to inpatient admissions caused by a major influx of transferred patients, a hospital evacuation is always a Regional emergency event that requires more than just the evacuating hospital to use its emergency plans to manage the incident well. This Emergency Receiver Guidance describes the possible actions that neighboring hospitals (“Emergency Receivers”) may take to help support the evacuating hospital and avoid creating a secondary disaster in their own institutions.

EMERGENCY RECEIVER GUIDANCE

Activation of the Hospital EOP

Upon learning that another hospital in the Region is evacuating, all neighboring hospitals should be encouraged to activate their hospital's EOP, at least in a limited fashion. Information from the evacuating hospital may be sporadic, limited, and dynamic. Rapid responses to requests for assistance may be required. The leadership and communications structures activated within a hospital's EOP will facilitate smoother communications with the evacuating facility and better situational awareness in the receiving institution. In addition, should the receiving hospital accept large numbers of transferred patients from the evacuating institution, significant coordination of administrative and clinical efforts will be required to avoid major disruptions to the Emergency Department and inpatient care areas as transferred patients arrive.

Designation of a Receiving Area and/or Team(s)

Despite the best efforts of the sending institution to manage the evacuation process, evacuated patients may arrive at a receiving hospital with some deterioration in their clinical status, with incomplete clinical data, and/or have diagnoses or conditions that are different than expected. Many patients will arrive feeling the emotional impact of the incident and will be frightened and stressed. Many receiving hospitals may not be comfortable accepting rapidly transferred patients directly into specific inpatient care beds without an initial brief clinical evaluation, while others may do so but require an immediate evaluation by a clinical team to review the patient's current status and diagnoses.

Receiving hospitals may be tempted to request that all evacuated patients be transferred to the Emergency Department for this clinical evaluation, but in general this should be discouraged.

Hospital Emergency Departments are typically crowded on a daily basis, and an additional Influx of transferred inpatients would severely exacerbate this crowding and limit the ability of the Emergency Department to care for new, ill patients. Further, since the evacuating hospital's Emergency Department will be closed, it is likely that all neighboring hospital Emergency Departments will see increases in volume.

Receiving hospitals should instead designate an alternate clinical location in their institutions for the receipt of transferred patients, if those patients will not be transferred directly to inpatient beds. This alternate location should be able to support registration of new patients, conduct basic medical care and emergency resuscitation if needed, and be staffed with the appropriate personnel to speed patients into their ultimate inpatient locations.

- *Regional preparation allowed undamaged hospitals to function as receiving hospitals for those severely impacted by Superstorm Sandy. Hospitals that did not prepare were unable to support a regional emergency and the community at large. Some advance preparations include^{1, 2}:*
- *Proactive management of inpatient census (discharging 10% to 25% of pre-event census, cancellation of elective surgeries)*
- *Augmentation of clinical and administrative staff (staffed to 150% of projected need)*
- *Planning for employees to remain on site for 72 hours (meals & sleeping quarters provided)*
- *Suspension of elective procedures*
- *Securing additional supplies in advance of storm*



Whether transferred patients are sent to a specially designated receiving area, or directly to their inpatient beds, hospitals should be encouraged to create and use rapid response teams of physicians and nurses who will meet patients immediately on arrival and begin the difficult process of reviewing the patient's care to date and initiating further clinical interventions if needed. Because of occasional differences among hospitals in the services to which patients are admitted, this team should have immediate available access to specialty expertise, should questions or issues arise.

Credentialing of Personnel from Other Facilities

The evacuation of a facility poses a significant burden on surrounding hospitals. The varied reasons for facility evacuations mean that the surge experienced by receiving facilities could last for a significant amount of time. However, regardless of the length of the evacuation and subsequent surge, receiving facilities would likely benefit from the ability to incorporate outside personnel in to their staff. Facilities should develop plans on how to rapidly and/or temporarily credential outside personnel to augment their own staff in these scenarios. To the extent possible, regions and coalitions should undertake efforts to standardize credentialing documentation requirements across institutions in order to expedite the credentialing process during an emergency.



Elements of a Receiver Hospital's Patient Receiving Plan

- 1) Activate EOC/EOP
 - a. Consider implementing mass casualty plan in ED if the affected hospital is nearby
 - b. Consider implementing medical surge plan to create additional available beds
- 2) Establish internal communication throughout the hospital
 - a. Limit outreach by floors/units
 - b. Clarify internal communication structure
- 3) Establish external communication with affected hospital and regional partners
- 4) Assess available bed space and ability to surge
- 5) Ready hospital for the arrival of evacuated patients
 - a. Discharge patients
 - b. Discharge location/staging
 - c. Transfer patients internally
 - d. Setup arrival location for EMS
 - e. Establish meet and greet/screening/triage/assessment/registration team
 - i. Team should have immediate life-saving capability
 - ii. Team should include escorts for arriving EMS crews to direct them to receiving units
 - f. Identify resource shortages
 - i. Beds
 - ii. Clinical staff
 - iii. Pharmaceuticals
 - iv. Medical equipment
 - v. Dietary resources
 - vi. Non-clinical staff (security, engineers, interpreters)
 - vii. Confirm readiness and reassess as patients arrive
- 6) Continue services for discharged patients
 - i. Organize staging / discharge area
 - ii. Monitor health
 - iii. Coordinate transportation
 - iv. Locate discharge operations far from intake/receiving
- 7) Receive evacuated patients
 - a. Avoid Emergency Department if/when possible using direct admitting process
 - b. Establish screening triage/re-triage process for sending patients to new areas/ED
 - c. Register patients as they arrive
 - d. Reassess available beds and identify beds that are:
 - i. Occupied
 - ii. Occupied and pending transfer (estimated time of transfer)
 - iii. Occupied and pending discharge (estimated time of discharge)
 - iv. Available
 - v. Surge bed space that will become available (estimated time of availability)



SECTION VII REFERENCES

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VIII. HOSPITAL SHELTER-IN-PLACE PLAN CHECKLIST



Hospital Shelter-In-Place Plan Checklist

INITIAL DECISION MAKING AND INCIDENT MANAGEMENT

Assessment of Initial Priorities

Following notification of a threat and/or disaster event, does your plan specify:

- ☐ How a structured threat assessment is being performed with respect to the facility's ability to successfully shelter-in-place?
- ☐ Who is assessing critical infrastructure and key resources? How is that information being reported?
- ☐ How the unit-level situation reporting is being aggregated and communicated to hospital leadership?
- ☐ How long it will take to perform a full assessment of the hospital's operational capabilities prior to and following the threat?

Establishment of Incident Command Structure

Does your plan specify:

- ☐ How do you rapidly compile, verify and share information/reports?
- ☐ When do you need your first Incident Action Plan (IAP) to be completed?
- ☐ Who is responsible for the development of a staffing plan for HICS leadership when sheltering? When will this be performed?

Determination of Shelter-in-Place Trigger Points

Does your plan specify:

- ☐ What are the specific triggers that you will use to decide whether to shelter-in-place?
- ☐ Is there a decision tree or matrix that would help with the decision either to activate the shelter-in-place or evacuation plans?
- ☐ What are the critical pieces of infrastructure that are required to safely shelter-in-place?
- ☐ What is needed to maintain these operations for essential infrastructure?

Authority to Make Shelter-In-Place Decisions

Does your plan specify:

- ☐ Who has authority to order shelter-in-place?
- ☐ How do personnel begin to shelter-in-place or evacuate without instruction from leadership or incident management if they perceive an impending life threat?
- ☐ Is there someone on-site 24/7 who has the authority to order a partial or full evacuation?
- ☐ Does the CEO/Board of Directors reserve the right to overrule operational decisions regarding evacuation or sheltering?
- ☐ What input/influence outside agencies will have on decisions to shelter-in-place (i.e. state or local public health, fire department leadership, emergency management, etc.)?



Contact with Local Public Safety Incident Command System(s), Surrounding Communities, & Other Response Partners

Does your plan specify:

- ☐ What mechanisms are used to send and receive information regarding evacuation or sheltering decisions?
- ☐ What types of information you need from local public safety and local public health representatives to make a sheltering decision?
- ☐ Are there any permissions needed from external agencies or partners when deciding to shelter-in-place?
- ☐ Have you identified all of the partners whom you need to notify after deciding to shelter-in-place?
- ☐ How and when will you notify these partners after deciding to shelter-in-place?
- ☐ How frequently will you update your partners with information regarding your sheltering operations and operational status?



SHELTER-IN-PLACE OPERATIONS

Primary Operational Objectives in Conducting a Hospital Shelter-In-Place

- ☐ Do you have pre-specified primary operational objectives after deciding to shelter-in-place?
- ☐ Are these objectives planned to be communicated to staff?
- ☐ Does your plan specify which section of your IC structure is primarily responsible for each objective?

Hospital Departments Involved in Sheltering Operations

- ☐ Does every department in the hospital know its respective role(s) during shelter-in-place operations?
- ☐ Does the plan specify how the labor pool will operate differently during sheltering operations from other types of EOP activations?
- ☐ Are there specific guidelines for which services and functions may be automatically suspended during sheltering operations?

Roles of Partner Agencies

Does your plan specify:

- ☐ The operational supports that partner agencies may be able offer that would be of assistance in sheltering operations?
- ☐ The specific resources that may be available to you from your partner agencies if you choose to shelter?
- ☐ How soon these external assets may be available?

Primary Methods of Communication

Does your plan specify:

- ☐ Your primary methods of internal and external communication?
- ☐ How you will communicate the shelter-in-place decision to staff, patients, and families who are on the hospital premises during sheltering?
- ☐ How you will communicate the shelter-in-place decision to staff, patients, and families who are not on the hospital premises during sheltering?
- ☐ How you will communicate changes to the plan as they occur?

Ongoing Threat Assessment

Does your plan specify:

- ☐ Specific trigger points/metrics that can be used to decide whether to evacuate as the event evolves? When reassessment is planned to occur?
- ☐ Who is responsible for the ongoing threat assessment?
- ☐ How frequently will this information be assessed?
- ☐ What information is necessary to inform the decision?



Strengthen Critical Infrastructure

Does your plan specify:

- ☐ How you will meet your immediate staffing needs?
- ☐ How you will meet your extended staffing needs (if needed)?
- ☐ How you will ensure the provision of water and food for patient care and consumption?
- ☐ How you will protect/maintain your generators?
- ☐ How you will obtain essential supplies (fuel, food, water) if the event is prolonged?
- ☐ How you will obtain/provide other supplies (linen, specialty items, etc.) if the event is prolonged?
- ☐ How you will support patient and staff toileting if plumbing systems are not functional during sheltering operations?

Altering Staff Plans

Does your plan specify:

- ☐ Your primary methods of external communication with staff?
- ☐ Considerations for changing staff schedules to meet needs (extended shifts, re-tasking)?
- ☐ How you will meet your staff's personal needs (transport, sleeping, food, etc.)?
- ☐ Consideration for staffs' family safety needs?
- ☐ Consideration for staffs' pet care needs?

Establishment of Appropriate Security

Does your plan specify:

- ☐ The priorities, in order, for hospital security at the outset of shelter-in-place operations?
- ☐ If there are adequate resources to maintain security at all operational sites?
- ☐ Additional options for internal and external security and crowd control other than local law enforcement?
- ☐ How these resources be will accessed and who has authority over them?
- ☐ How this will be coordinated and supervised?
- ☐ How you will maintain security for special patient populations?
 - ☐ Infants ☐ Children ☐ Psychiatric patients ☐ Prisoners

Patient Assessment and/or Prioritization for Expedited Discharge

Does your plan specify:

- ☐ Uniform and specific standards for reverse triage within the institution?
- ☐ If reverse triage standards are known to providers?
- ☐ Who (specifically) will be tasked with making patient assessment and discharge decisions?
- ☐ How staff oversee the process (centralized vs. decentralized) of discharge?
- ☐ How will information on potentially dischargeable patients be compiled and incorporated into IAPs?
- ☐ How care coordination will happen for shelter-in-place patients who may need services at home?



Who is responsible for this?
☐ How patients are prepared for rapid and safe discharge in anticipation of, or after sheltering?
☐ If patients will receive a supply of needed medications on discharge if it is likely that pharmacies will not be open in the community?
☐ How to discharge patients who may elect to leave AMA during a shelter-in-place? What to do if patients cannot be located during sheltering and may have eloped?
☐ A place for discharged patients and/or families of inpatients to be cared for if they are unable to safely leave the facility?
Resources Needed for Shelter-in-Place Operations Does your plan specify:
☐ The additional resources you require that are unique to sheltering operations?
☐ The contents of a specific cache of supplies that each unit would need to successfully shelter-in-place?
☐ A mechanism for rapidly shutting down the HVAC?
☐ A mechanism for rapidly sealing the facility (e.g. sealing vents, doors and windows with tape and plastic)
☐ A mechanism to rapidly move patients to Shelter-in-place locations (i.e. for a tornado or other immediate threat)?
☐ Specific safe refuge locations and routing options to those locations within the facility?
☐ How patient and staff safety will be monitored and supported during operations?
☐ Mechanisms to identify staff capable of performing heavy physical labor if needed?
☐ Methods of patient transport that will be utilized to execute transfers to designated shelter-in locations?
Maintaining Patient Care Does your plan specify:
☐ How to maintain continuity of care if the usual equipment is not available during the sheltering process?
☐ Special measures for sheltering patients who are actively receiving or needing surgery during sheltering operations?
☐ Special measures to provide care for acute or critically ill patients?
☐ Procedures to document clinical information, particularly for long sheltering operations if routine information systems assets are not available?
☐ Special measures for pediatric (including neonatal) patients while sheltering?



RECOVERY

Recovery Objectives

Does your plan specify:

- ☐ Pre-scripted recovery objectives following sheltering operations?
- ☐ How to terminate sheltering operations and return to normal operations?

Process of Recovery

Does your plan specify:

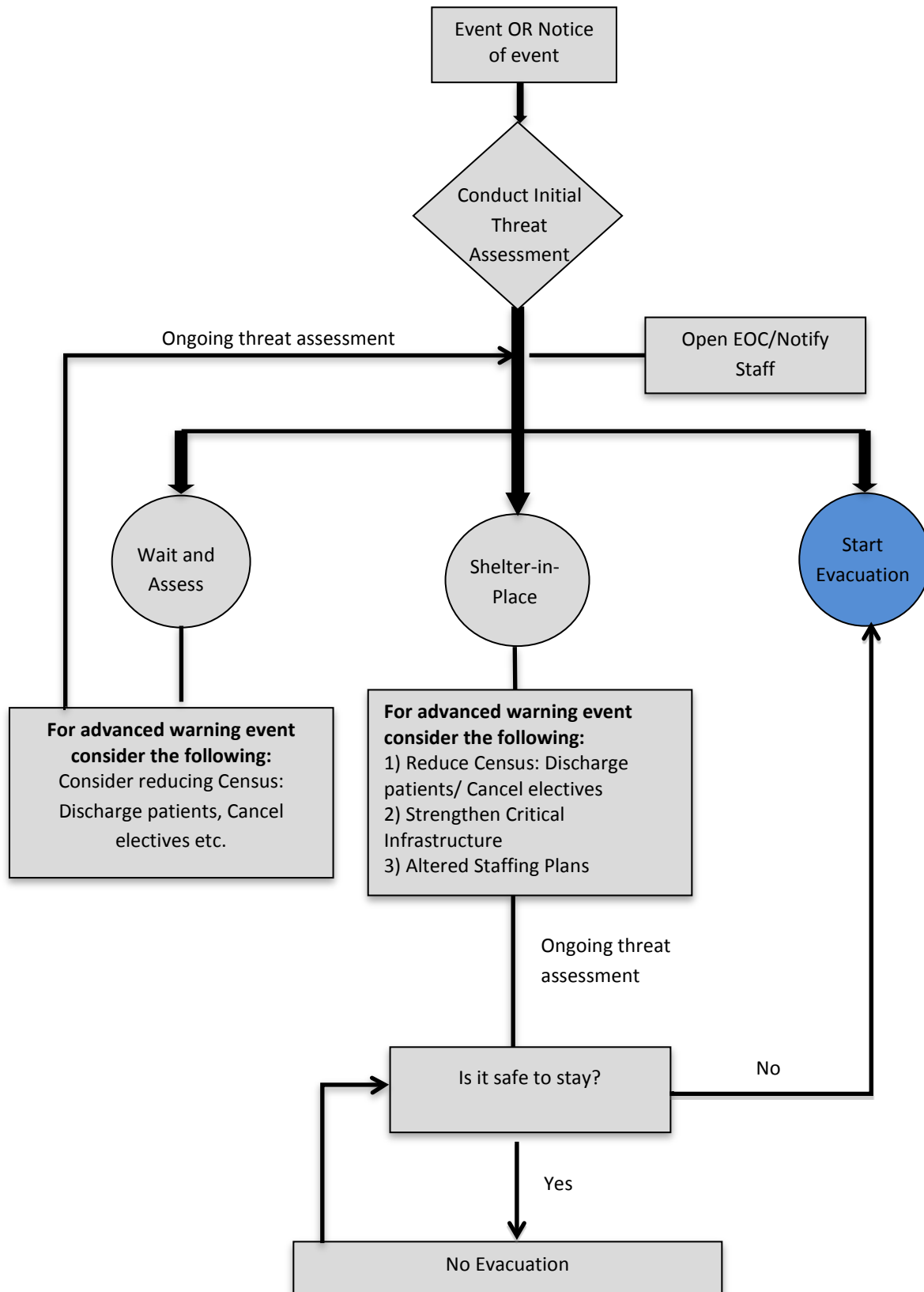
- ☐ Who has the authority to initiate return to normal operations?
- ☐ The procedure to return to normal operations?
- ☐ Defined triggers for going back to normal operations?
- ☐ Unique facility considerations that may be needed after sheltering in place?
- ☐ The resources that are needed for full recovery after sheltering?

Communication During Recovery

Does your plan specify:

- ☐ Who you are communicating with during recovery?
- ☐ How hospital staff, patients, and visitors will be notified about the return to normal operations?
- ☐ How you will notify the public that the hospital has returned to normal operations?
- ☐ What role(s) partner agencies will play in the recovery process after sheltering?

Appendix 1: Evacuations and Shelter-in-place decision paths



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MDPH HOSPITAL EVACUATION TOOLKIT

IX. HOSPITAL EVACUATION PLAN CHECKLIST



Hospital Evacuation Plan Checklist

INITIAL DECISION MAKING AND INCIDENT MANAGEMENT

Assessment of Initial Priorities

Following notification of a threat and/or disaster event, does your plan specify:

- ☐ How a threat assessment is being performed?
- ☐ Who is assessing critical infrastructure and key resources?
- ☐ How to automatically conduct & submit unit-level situation and/or damage reports to hospital leadership?
- ☐ The trigger for units to submit damage reports?
- ☐ Who is compiling the damage reports and how long it will take?
- ☐ How long it will take to perform an assessment of the hospital's operational capabilities?

Establishment of Incident Command Structure

Does your plan specify:

- ☐ How you will rapidly compile, verify, and share information/reports?
- ☐ When you will need your first Incident Action Plan (IAP) to be completed?

Determination of Evacuation Trigger Points and Type of Evacuation

Does your plan specify:

- ☐ Specific trigger points that you will use to decide whether to evacuate?
- ☐ Formalized "pre-evacuation" stages with defined actions?
- ☐ Any alternatives to evacuation that you can use?
- ☐ Distinct types of evacuation? (Pre-evacuation staging, single unit, multi-unit, single/multiple buildings, entire campus)
- ☐ How each evacuation stage is triggered?

Authority to Make Evacuation Decisions

Does your plan specify:

- ☐ If the staff or any other designated personnel have the authority to completely vacate an adjacent (unaffected) unit in case of a possible immediate life threat (e.g. fire) if they perceive an impending threat?
- ☐ A predefined location to evacuate to?
- ☐ If multiple units are competing for the same location, how to resolve this?
- ☐ Someone on-site 24/7 who has the authority to order a partial or full evacuation?
- ☐ If the CEO/Board of Directors reserve the right to overrule operational decisions?
- ☐ What input/influence outside agencies will have on hospital decisions (State or local health department,



State or local emergency management authority, EMS, local fire command)? Can external agencies overrule a hospital's decision to shelter in place?

- ☐ How a dispute between the local fire department and hospital administration would be resolved if the hospital disagreed with a specific portion of the evacuation order/recommendation?

Contact with Local Public Safety Incident Command System(s), Surrounding Communities, & Other Response Partners

Does your plan specify:

- ☐ Mechanisms to use in sending/receiving information from local public safety and local public health representatives?
- ☐ Types of information you need from local public safety and local public health representatives?
- ☐ The type of information you are sending them, the format you are using and when you are sending it?
- ☐ Which other response partners with whom you will be communicating?
- ☐ How you will be communicating with other response partners?
- ☐ What specific information you need from other response partners?
- ☐ What information you need to share with other response partners?



EVACUATION OPERATIONS

Primary Operational Objectives in Conducting a Rapid Response Hospital Evacuation

Does your plan specify:

- ☐ Your primary operational objectives?
- ☐ How these objectives are communicated to staff?
- ☐ Which section of your IC structure is primarily responsible for each objective?

Hospital Departments Involved in the Operation

Does your plan specify:

- ☐ The respective roles of hospital departments involved in evacuation operations?
- ☐ Roles for departments not directly involved in evacuation?

Roles of Partner Agencies

Does your plan specify:

- ☐ The operational support your partner agencies can be expected to offer?
- ☐ The specific resources available to you from your partner agencies?
- ☐ How soon the external assets will be expected to be available?

Primary Methods of Communication

Does your plan specify:

- ☐ Your primary methods of internal and external communication?
- ☐ How you will communicate the evacuation decision to staff, patients, and families?
- ☐ How you will communicate changes to the plan as they occur?

Establishment of Appropriate Security

Does your plan specify:

- ☐ The priorities (in order) for hospital security at the outset of evacuation operations?
- ☐ If there are adequate resources to maintain security at all operational sites?
- ☐ Additional options for security and crowd control other than local law enforcement?
- ☐ How these resources be will accessed and who has authority over them?
- ☐ How this will be coordinated and supervised?
- ☐ How traffic will be managed?
- ☐ If discharge/egress routes will be segregated from transfer departures?
- ☐ Alternate routes for both?
- ☐ How you will maintain security for special patient populations?
 - ☐ Infants
 - ☐ Children
 - ☐ Psychiatric patients
 - ☐ Prisoners



Triage and/or Prioritization for Evacuation

Does your plan specify:

- ☐ Uniform and specific standards for triage within the institution?
- ☐ If triage standards are known to providers?
- ☐ If the units should perform and report a manual patient census prior to evacuation?
- ☐ How and to whom the units report the result of census performed?
- ☐ How evacuation triage is prioritized: acuity, mobility status (stretcher-bound/wheelchair/ambulatory), location of the unit within the hospital, availability of a known transfer destination or some combination?
- ☐ Who (specifically) will be tasked with making triage decisions?
- ☐ If the people making triage decisions received any formal training in the evacuation plan or evacuation triage?
- ☐ A framework for ethical decision-making related to triage?
- ☐ Mechanisms for resolving disputes over triage within the facility?
- ☐ How triage information will be compiled and incorporated into IAPs?
- ☐ Mechanism to allow for re-triage and resuscitation if necessary if patients deteriorate during evacuation (or while waiting)?
- ☐ How triage tactics will change if your elevators were not operational?
- ☐ How medical equipment is prioritized for evacuation?
- ☐ How you will compile a list of the number of available equipment assets (e.g. portable cardiac monitors, portable ventilators, oxygen cylinders, suction machines, IV pumps with battery, etc.) and the location of those assets?
- ☐ How you will ensure that the available equipment is matched to the evacuating patients?
- ☐ Situations where portable medical equipment is allowed to leave the institution?
- ☐ How patients are prepared for transfer?
- ☐ If patients receive a supply of needed medications for the next 8-12 hours to support them during transfer?
- ☐ If a copy of the patient's medical and medication record, and radiography, physically accompanies the patient?
- ☐ A mechanism to instruct EMS and receiving facilities on the important therapies the patient may need over the next 8-12 hours?

Patient Tracking System (including patient records)

Does your plan specify:

- ☐ Multiple check-in/check-out data collection points throughout the evacuation process?
- ☐ How check-in/check-out data are collected and reported centrally?
- ☐ How tracking information will be available to the patient's treating clinicians?
- ☐ How tracking information will be available to the patient's family?
- ☐ If the patient tracking system is adaptable to adverse conditions (i.e. paper-only if there is no electricity)?
- ☐ Who is responsible for compiling/securing patient records?



- ☐ How the tracking system used for evacuation integrates into existing EMS patient tracking tools (MCI based)?

Patient Destination Planning

Does your plan specify:

- ☐ How transfer beds will be identified and secured for evacuated patients?
- ☐ Who will carry out the task of finding beds, apart and separate from patient tracking activities?
- ☐ How point-to-point communication will occur between hospitals?
- ☐ Who is expected to be the point of contact at the other hospitals?
- ☐ Redundancies in knowing the patient's destination?
- ☐ If there is a preference for hospitals within your network (if applicable) when determining patient destinations?
- ☐ Measures in place for the special patient populations in your hospital that need a special type of hospital for transfer (i.e. Level II nursery, burn center, tertiary hospital, etc.)?
- ☐ The role of EMS in destination planning?
- ☐ The role of local public health in destination planning?
- ☐ The role of DPH in destination planning?
- ☐ How the hospital IC structure will coordinate/communicate with the relevant external agencies (DPH, EMS) during the evacuation?

Patient Staging (Assembly Point)

Does your plan specify:

- ☐ Patient staging for all or a majority of the patients outside of the main hospital building(s)?
- ☐ If the patient staging site is usable year round?
- ☐ If the staging site has sufficient access to emergency electrical power for medical equipment?
- ☐ Supplying the staging area with extra medications (and possibly a pharmacist) if new medical needs arise?
- ☐ A resuscitation area within the staging location if patients destabilize during transfer?
- ☐ Ready access to medical supplies (i.e. IV fluids) and oxygen for resupply of critical patient care needs at the staging site?
- ☐ How patients will receive ongoing care during evacuation (i.e. medications, fluids, etc.)?
- ☐ Special measures are in place for acute or critically ill patients?
- ☐ Special measures in place for pediatric (including neonatal) patients?

Patient Discharge

Does your plan specify:

- ☐ How staff oversee the process (centralized vs. decentralized) of discharge?
- ☐ Where patients will be assembled while awaiting family/transport after discharge?
- ☐ A main assembly point for processing evacuees once they have departed the care units?
- ☐ A mechanism to discharge patients who simply leave the hospital during an evacuation and how such patients are noted?



Patient Movement and Support

Does your plan specify:

- ☐ Who will carry out the physical moving of patients from the units to the Assembly Point/egress?
- ☐ How routes will be established/marked and monitored for back-ups?
- ☐ If there are outdoor transit/exposure issues associated with routes?
- ☐ Mechanism in place for patient movement if the elevators are not operational?
- ☐ How will the mobility level of patients be assessed? Who can decide if an appropriate day to day ambulatory level cannot be considered ambulatory in an emergency?
- ☐ If you own special equipment for stair transport of stretcher-bound patients?
- ☐ If your staff is trained to “package” a patient with all necessary medical equipment for stair transports?
- ☐ If those expected to manually transport the patients down the stairs have practiced this transport?
- ☐ How long full evacuations by stairs take?
- ☐ How you will communicate with the floors to let them know when to evacuate?
- ☐ If the floors leave when possible, or if they must wait for a central order?
- ☐ How long you expect most patients to be in transit from original bed to destination bed?
- ☐ If the oxygen, medication, etc. and other patient supplies will last for the longest anticipated transit time?
- ☐ If EMS is expected to meet the patient at the curb or a staging area, or they are to come to the floors to pick up patients?
- ☐ How EMS knows the destination of the patient?
- ☐ If hospital medical staff (MD, RN, RT, etc.) are expected to accompany certain patients to their destinations and how they will return to the main campus?
- ☐ If your hospital medical staff is able to practice at other hospitals (pay, liability, etc.)?

Resources Needed for Evacuation Operations

Does your plan specify:

- ☐ The additional equipment you require?
- ☐ How resources are being tracked and located as they are used?
- ☐ Who is managing the labor pool?
- ☐ The labor needs at this time?
- ☐ Staff capable of performing heavy physical labor?
- ☐ Methods for addressing staff mobility issues?
- ☐ Methods of patient transport that will be utilized to execute transfers?
- ☐ With whom you are coordinating regarding the transport of patients (CMED, local EMS/Fire)?
- ☐ Roles other agencies will play in the hospital evacuation?
- ☐ How other agencies will be coordinated?
- ☐ If the outside agencies have adequate resources available to assist?
- ☐ The support outside agencies can offer?



☐ If your organization has enough resources?
☐ The Mutual Aid Agreements that are in place to support this kind of operation?
☐ Whom you would turn to for assistance and have you coordinated with them about this?
☐ How patient and staff safety will be monitored during operations?
☐ Who stays behind to secure the hospital?
☐ A checklist of items that need to be secured (i.e. pharmacy, utilities, etc.)?
☐ Source of the personnel and how long will they are available to be committed?
☐ The plan to handle shift changes?



RECOVERY

Recovery Objectives

Does your plan specify:

- ☐ Your recovery priorities?
- ☐ Who determines the recovery priorities?

Process of Reopening the Facility

Does your plan specify:

- ☐ Who has the authority to reopen the facility?
- ☐ Who is involved in the reopening process?
- ☐ The process to make this happen?
- ☐ Defined triggers for reopening?
- ☐ The process you will use to appraise the status of your hospital?
- ☐ The functions that must be in place before you can return?
- ☐ The resources that are needed for re-entry efforts?
- ☐ If it is possible to return to the hospital before the facility is fully operational?
- ☐ The security considerations that will be factored into the decision to reopen the hospital?
- ☐ If you have enough resources/personnel to assist in the recovery?

Communication During Recovery

Does your plan specify:

- ☐ Who you are communicating with at this point in time?
- ☐ How hospital staff will be notified about the reopening?
- ☐ How you will notify the public that the hospital is reopened for business?
- ☐ What role partner agencies will play in repopulating the hospital facility?
- ☐ What process will be followed to reconstitute the local response capability?

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X. EXERCISING EVACUATION PLANS



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INTRODUCTION

Purpose of Exercising Evacuation Plans

As previously mentioned, this document is designed to support hospitals as they develop and then annually update their evacuation plans. Once an initial plan is drafted the only way to test its feasibility is to then exercise that plan. When planned and executed properly, exercises that simulate response to major emergency situations can significantly help improve preparedness on two levels. At the *individual* level, exercises present an opportunity to educate staff members on disaster plans and procedures through hands-on practice. They also help staff improve their performance through constructive critiques of their actions. On a *system-wide* level, well-designed exercises can reveal gaps in resources, uncover planning weaknesses, and clarify specific roles and responsibilities.

All emergency plans, protocols, and procedures should be tested to ensure that the assumptions upon which they are based are valid. Because hospital evacuations are typically rare events, hospitals will generally not have the opportunity to examine the successes and failures of their plans without exercising.

Exercising evacuation plans can be difficult due to the 24/7 nature of hospital operations. This guidance includes suggestions and observed best practices to help hospitals test their evacuation plans.



EXERCISING EVACUATION PLANS

Emergency Preparedness Exercising

In general, there are four progressive levels of action in an exercise program. *Drills* test a single specified operation, such as activating a notification system or measuring response times. In contrast, *exercises* test multiple operations. *Tabletop exercises* are low-stress events designed to identify major gaps or conflicts in planning. Participants discuss which actions they would take when faced with a given emergency, but no real resources are used. *Functional exercises* are higher stress events where many participants simulate their actions within an Emergency Operations Center (EOC) and must make immediate, specific decisions, but real equipment and personnel are not deployed. *Full-scale exercises* are the most realistic, most complex, and most costly events where personnel perform as many of their actual duties as possible in a simulated emergency in order to best assess the true capabilities of the response system.

- *Evacuation exercises should involve both sending and receiving facilities to facilitate a well-coordinated relationship ahead of real events¹.*
- *In addition to exercising your facility's plan to evacuate, seek out opportunities to exercise receiving patients from other facilities as there are unique challenges to this type of patient surge. Planning to receive patients is discussed further in Section VII.*

A successful exercise depends on appropriate planning. In general, the leading reason that exercises fail is a lack of practicality in the planning process. Begin your planning process with a realistic, even generous, timeline. Choose dates well in advance and anticipate weather-related contingencies, holidays and vacations. Next, recruit participants as early as possible. Most importantly, the goals and scope of each exercise must also be kept realistic with respect to what can be performed and tested. A common pitfall of overly ambitious exercises is the desire to test all parts of a plan at once in one comprehensive exercise. In general, it is preferable to focus on assessing several specific, measurable objectives in each exercise and leave the remainder for future events. We recommend no more than five target objectives per exercise.

Be sure that the scenario for the exercise/drill and the evaluation forms are reviewed by other individuals with experience in these areas. The editing process often identifies prompts and injects that need clarification and allow for a more seamless exercise or drill.

Lastly, you must include assignments for both controllers and evaluators in the planning process:

- *Controllers* monitor the expected events and timeline of the exercise. Well-prepared controllers are critical to a successful exercise since nothing dulls the sense of realism more than a lull in the action or confusion about what is supposed to be happening in the sequence of events.
- *Evaluators* monitor the events of the exercise and offer objective measurements of how well exercise participants met the pre-specified objectives. Evaluators should be appropriately selected to be competent to assess their objectives. Also, adequate numbers of evaluators are vital since one of the most important products of an exercise is the independent assessment of the event.

On the following pages are some suggested Drills, Tabletop Exercises, Functional Exercises, and Full-Scale Exercises that may be conducted and/or adapted to test a hospital's evacuation planning.



DRILLS

Drills test a single specified operation, such as activating a notification system or measuring response times.

Suggestions for targeted hospital evacuation drills include:

- A floor (unit) level drill opening and using the Floor Evacuation Toolkit
 - Staff on a specific unit open their Floor Evacuation Toolkit and complete all of its contents with the patients currently on their unit. This exercise gives staff familiarity and comfort with the Toolkit and the Evacuation Plan.
 - It is suggested that this exercise be conducted annually.
- A patient packaging drill
 - Staff on a specific unit prepare patients for transport from the floor.
 - This exercise can be done with inanimate objects (i.e. boxes), mannequins, or with live volunteers.
 - All needed medical equipment, medications, and medical records are gathered and placed with the simulated patient on their wheelchair, stretcher or other transportation device.
 - This exercise is particularly helpful to better estimate times for preparing medical records, preparing medication packages for each patient, and for loading patients onto stretchers and wheelchairs.
- A stairwell drill moving an entire unit's ambulatory and non-ambulatory patients down the stairwells to the ground floor
 - This exercise can be done with mannequins that weigh the same as typical hospital patients, or with live volunteers.
 - Additional safety and expert support staff should be present to prevent injury during this exercise.
 - This exercise is particularly helpful to better estimate times for evacuation using stairs-only, and also to test any specialty devices (such as transport sleds or stair chairs) that may be part of the hospital's plan. Staff trained to use specialty devices must be present at any such exercise.
- An elevator evacuation drill moving an entire unit's ambulatory and non-ambulatory patients down the elevators to the ground floor
 - This exercise can be done with mannequins that weigh the same as typical hospital patients, or with live volunteers.
 - This exercise helps validate assumptions about the number of ambulatory, wheelchair, and stretcher patients that can maximally be loaded onto elevators. It also helps identify optimal configurations of such devices (i.e. 1 stretcher and 2 wheelchairs as an example).
 - This exercise also helps to better estimate times for evacuation using elevators.
- An internal transportation drill transporting patients from the floors to the Assembly Point(s)
 - The transportation drill can begin from the ground floor areas where patients would exit the stairwells and elevators (building on the drills above) or can begin on an individual patient care area.



- This exercise is particularly helpful to better estimate total times to evacuate the units to arrive in the Assembly Point(s)
- This exercise can be done with inanimate objects (i.e. boxes), mannequins, or with live volunteers.
- An Assembly Point set-up drill
 - This drill is conducted to estimate the times required to move necessary medical and other support equipment into the Assembly Point to prepare to care for evacuating patients.
 - The drill helps validate assumptions about the spaces required to support patient care and essential services in the Assembly Point.
- An Assembly Point operations drill
 - This drill is conducted to validate the assumptions of the Assembly Point to support essential care for evacuating patients.
 - The drill also helps validate assumptions about the spaces required to support patient care and essential services in the Assembly Point.
 - This exercise can be done with inanimate objects (i.e. boxes), mannequins, or with live volunteers.
 - Staff working in the Assembly Point should be required to perform basic medical care functions (i.e. medication administration, oxygen administration, suctioning, wound care, monitoring, and vital sign measurement, etc.) for their “patients” during this drill.
- A Staging Area drill
 - This drill helps estimate throughput times for loading patients into ambulances and to estimate the approximate number of ambulance transfers away from the hospital per hour at the selected Staging Area.
 - This exercise can be done with inanimate objects (i.e. boxes), mannequins, or with live volunteers.
 - This exercise requires participation with EMS providers and several ambulances that may be recycled after they “drive away” with the loaded patients.
- A Staff Credentialing drill
 - This drill is conducted to either send staff to be credentialed at another hospital or to receive staff to be credentialed at one's own hospital.
 - The drill serves to test the ability to produce and review necessary documentation.



TABLETOP EXERCISES

Tabletop exercises are low-stress events designed to identify major gaps or conflicts in planning. Participants discuss which actions they would take when faced with a given emergency, but no real resources are used.

Suggestions for hospital evacuation tabletop exercises include:

- A leadership exercise reviewing the decision to evacuate and initial command decisions required
 - This exercise would focus on the complexity of the decision to evacuate. Tools from the AHRQ Hospital Evacuation Decision Guide may be used.
 - The participants should activate the hospital EOP and assign ICS roles.
 - The participants should practice assigning evacuation-specific positions and making the required command decisions that support evacuation.
- A floor (unit) level tabletop exercise
 - This exercise would progress through the entire evacuation sequence from start to finish with all clinical representatives on a floor/unit.
 - Suggested invitees include:
 - 54Nursing
 - Physicians, NPs, PAs
 - Administrative support staff
 - Hospital leadership representatives
 - Respiratory therapy
 - Case management
 - Security
 - Materials management
 - Environmental services
 - Translators
 - Physical and Occupational therapy
 - Emergency management
 - This exercise is expected to reveal gaps in planning or understanding of evacuation efforts.
- A community tabletop exercise
 - This exercise would progress through the entire evacuation sequence from start to finish with all appropriate community representatives present
 - Suggested invitees include:
 - Hospital administrative and clinical leadership representatives
 - Hospital emergency management
 - State, regional, and/or local public health representatives
 - Local police
 - Local EMS
 - Local fire department
 - Local and/or regional emergency management
 - Local CMED representative
 - Regional healthcare coalition representatives (if applicable)



- This exercise is expected to reveal gaps in planning or understanding of local community evacuation plans as well as uncover errors in assumptions about others' plans or capabilities
- A Regional tabletop exercise
 - This exercise would progress through the entire evacuation sequence from start to finish with all appropriate Regional representatives present
 - Suggested invitees include:
 - Hospital administrative and clinical leadership representatives from all Regional hospitals
 - Hospital emergency management from all Regional hospitals
 - State, regional, and/or local public health representatives
 - Local police
 - Local EMS
 - Local fire department
 - Local and/or regional emergency management
 - Local CMED representative
 - Regional healthcare coalition representatives (if applicable)
 - This exercise is expected to reveal gaps in planning or understanding of local community evacuation plans as well as uncover errors in assumptions about others' plans or capabilities.



FUNCTIONAL EXERCISES

Functional exercises are higher stress events where many participants simulate their actions within an Emergency Operations Center (EOC) and must make immediate, specific decisions, but real field equipment and personnel are not deployed.

Suggestions for hospital evacuation functional exercises include:

- A hospital functional exercise
 - This exercise would progress through the entire evacuation sequence from start to finish.
 - This exercise would test communications capabilities, flow of information, and situational awareness among:
 - The hospital Incident Commander
 - The individual care units
 - The Assembly Point
 - The Staging Area
- A local community functional exercise
 - This exercise would progress through the entire evacuation sequence from start to finish.
 - This exercise would test communications capabilities, flow of information, and situational awareness among:
 - The hospital Incident Commander and EOC staff
 - The Assembly Point
 - The Staging Area
 - State, regional, and/or local public health representatives
 - Local police
 - Local EMS
 - Local fire department
 - Local and/or regional emergency management
 - Local CMED representative
 - Regional healthcare coalition representatives (if applicable)
 - Any planned local communications systems and services (such as 800 MHz radios, telephone hotlines, Nextel phones, web-based systems such as WebEOC, and others should be used in this exercise).
- A Regional functional exercise
 - This exercise would progress through the entire evacuation sequence from start to finish.
 - This exercise would test communications capabilities, flow of information, and situational awareness among:
 - Hospital administrative and clinical leadership representatives from all Regional hospitals
 - Hospital emergency management from all Regional hospitals
 - State, regional, and/or local public health representatives
 - Local police
 - Local EMS
 - Local fire department



- Local and/or regional emergency management
 - Local CMED representative
 - Regional healthcare coalition representatives (if applicable)
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- Any planned local communications systems and services (such as 800 MHz radios, telephone hotlines, Nextel phones, web-based systems such as WebEOC, and others should be used in this exercise).



FULL SCALE EXERCISES

Full-scale exercises are the most realistic, most complex, and most costly events where field personnel perform as many of their actual duties as possible in a simulated emergency in order to best assess the true capabilities of the response system.

Due to the 24/7 nature of hospital operations and the nature of medical care, comprehensive, full scale exercises of hospital evacuation are generally not performed. Hospitals may wish to combine elements of the several drills, tabletop exercises, and functional exercises in this guidance to create variations on a full scale exercise. These exercises can be done with inanimate objects (i.e. boxes), mannequins that weigh the same as typical hospital patients, or with live volunteers. Additional safety and expert support staff should be present to prevent injury during these exercises and avoid disrupting ongoing patient care within the hospital.

Hospitals that are accredited under the Commission on Accreditation of Rehabilitation Facilities (CARF) conduct numerous evacuation exercises on an annual basis. For at least one New York City hospital, lessons learned from these exercises positively influenced response actions during both Hurricane Irene and Superstorm Sandy¹.

Hospitals should also consider conducting full-scale exercises with a limited scope. For example, hospitals can test the full, vertical evacuation of a single unit. While this scenario is unlikely to play out in real-life, it affords the best opportunity to test all elements of an evacuation plan including communication coordination, patient movement, and use of evacuation equipment.



MEASURING PERFORMANCE

Every drill and exercise *must* have a structured evaluation and critique.

First, the independent evaluators who observe an exercise should be armed with specific, measurable, pre-specified objectives and record those observations on pre-prepared forms. Evaluators should be briefed ahead of time on the exercise scenario, timeline, and rules of play.

Second, following completion of the exercise, all participants should be given an opportunity to voice their observations and emotions in a group setting. This debriefing is often called a “*hot-wash*” and should be performed immediately following the exercise, since its utility diminishes very rapidly as emotions and immediate memories of events fade.

Third, a summary of the comments made by participants in the hot-wash and the structured critiques from the evaluators should then be compiled into an After-Action Report. This comprehensive report analyzes each achievement and each problem that was noted in the exercise.

Lastly, an improvement plan contains specific steps that will be taken by the participants after the exercise to address the issues discussed in the After-Action Report. The improvement plan should be circulated as widely as possible because the most important product that any exercise program can generate is visible, measurable, positive change. Participants may quickly lose interest in the exercise program if they do not see it leading to specific improvements in preparedness afterwards. Therefore it is very important to publicize the changes and improvements that result from exercises and drills to sustain interest in the program. It is important to keep the emphasis of evaluation on the objectives of the exercise and not on challenges created by the artificiality of the exercise itself. Participant “buy-in” to the exercise is key, but so is awareness of what would be different in an actual event as opposed to an exercise. We suggest creating a separate mechanism for participants to provide feedback on how to improve future drills and exercises.



SECTION X REFERENCES

1. Verni C. A hospital system's response to a hurricane offers lessons, including the need for mandatory interfacility drills. *Health Aff (Millwood)*. 2012 Aug; 31(8):1814-21.