HOSPITAL KEY RESPONSE ACTIONS BY TOPIC

PRESIDENT, KENNETH E. RASKE • 555 WEST 57TH STREET, NEW YORK, NY 10019 • T (212) 246-7100 • F (212) 262-6350 • WWW.GNYHA.ORG

From the summer of 2018 to the summer of 2019, GNYHA collaborated with the New York City Department of Health and Mental Hygiene to conduct a series of workshops with hospital and government representatives to determine key hospital response strategies during the 72 hours immediately following the detonation of a nuclear device in the New York City region. Coinciding with a broader New York City planning process, this initiative's objectives were threefold:

1. To produce a planning document to help hospital emergency mangers and their colleagues develop response strategies for a nuclear detonation scenario
2. To help local, State, and Federal partners understand likely postures and actions of the hospital sector during the first 72 hours after detonation of a nuclear device in the New York City region
3. To identify what the health care sector will need from State, regional, and Federal partners to improve the response to such an incident

After an initial scoping meeting, workgroup members were assigned to one of three zone-based groups—the Moderate Damage Zone (MDZ), the Light Damage Zone (LDZ), and the Beyond Damage Zone (BDZ)—as defined by existing documents and modeling. During three workshops—each focused on a distinct 24-hour time period—workgroup members discussed key hospital response actions based on The Joint Commission's (TJC) six critical areas of emergency management—communication, resources and assets, safety and security, staff responsibilities, utilities management, and patient clinical and support activities—plus a section for incident command. The full workgroup validated the recommendations at the final meeting.

Since an improvised nuclear device (IND) detonation could occur anywhere in the region, the documents provide advisable actions for whichever zone a hospital facility is in, based on the incident's location. As per the modeling, the MDZ is a half-mile to one mile from the place of detonation, the LDZ is one to three miles, and the BDZ is all locations farther than three miles.

KEY HOSPITAL ACTIONS DOCUMENTS

This document is organized by TJC critical area, and then by zone and time period. A companion document is organized by zone, and then by critical area and time period.

TOPIC: INCIDENT COMMAND

Moderate Damage Zone

0–24 HOURS POST-DETONATION Themes: Surviving, Assessing & Planning	24–48 HOURS POST-DETONATION Themes: Surviving, Gathering Information & Preparing to Leave	48–72 HOURS POST-DETONATION Theme: Evacuating
• Activate Hospital Incident Command System (HICS); fill roles with onsite staff. Stand up Emergency Operations Center (EOC). Ensure a staff person with radiation knowledge is on the leadership team. • Establish forward planning team. • Establish brief operational periods to continuously reassess needs and approaches. • Create taskforce to manage altered standards of care/degradation of services. Taskforce should include: clinical subject matter experts, legal, facilities, supply chain, and ethicist if available. Consider patient age and co-morbidities, especially when using equipment in short supply such as ventilators. • IC should focus on obtaining situational awareness, maintaining safety and security, and communications. • Work closely with communications group; use available situational awareness information to inform actions.	• While Shelter in Place (SIP) order will likely be lifted at ~24 hours, facility will likely continue to SIP for safety and security reasons. • Use brief operational periods to continuously reassess needs and approaches; use situation reports (Sit Reps) to drive frequent communication with staff and others in the hospital. • Shift forward planning to evacuation. • Obtain situational awareness of the incident via communications pathways and area reconnaissance methods such as drones to inform actions. • Based on ongoing environmental monitoring and situational awareness, determine when fallout risk subsides. • IC should focus on obtaining situational awareness, maintain safety and security, and communications.	• Use brief operational periods to continuously reassess needs and approaches; use Sit Reps to drive frequent communication with staff and others in hospital. • Continue to focus on obtaining situational awareness, maintaining safety and security, and communications. Work closely with communications group; use available situational awareness information to inform actions. • Seek information from local fire and police (via precincts or firehouses nearby). Police and fire personnel may visit hospitals to ascertain status. Be prepared to articulate staffing and other priority needs. • Goal is to prepare hospital for evacuation, focusing on moving least-acute patients first to reduce overall census. • Termination of hospital operations in coordination with government response partners will be a secondary goal after evacuation.

Light Damage Zone

0–24 HOURS POST-DETONATION Themes: Self-Defense & Managing the Surge	24–48 HOURS POST-DETONATION Themes: Gathering Information, Making Connections & Managing the Surge	48–72 HOURS POST-DETONATION Theme: Creating Pathways & Deciding Whether to Evacuate
• Activate HICS; fill roles with onsite staff. Stand up EOC. Ensure a staff person with radiation knowledge is on the leadership team. • Establish forward planning team.	• Though SIP order will likely be lifted at ~24 hours, facility will likely continue to SIP for safety and security reasons.	• Use brief operational periods to continuously reassess needs and approaches; use Sit Reps to drive frequent communication with staff and others in hospital.

0–24 HOURS POST-DETONATION Themes: Self-Defense & Managing the Surge	24–48 HOURS POST-DETONATION Themes: Gathering Information, Making Connections & Managing the Surge	48–72 HOURS POST-DETONATION Theme: Creating Pathways & Deciding Whether to Evacuate
• Establish brief operational periods to continuously re-assess needs and approaches. • Create taskforce to manage altered standards of care/ degradation of services. Taskforce should include: clinical subject matter experts, legal, facilities, supply chain, and ethicist if available. Consider patient age and co-morbidities, especially when using equipment in short supply such as ventilators. • IC should focus on obtaining situational awareness, maintaining safety and security, and communications • Work closely with communications group; use available situational awareness information to inform actions.	• Obtain situational awareness of internal capabilities, hospital condition/burden, and external situation to protect staff, patients, and others in the facility, and maintain operations as possible. • Use brief operational periods to continuously reassess needs and approaches; use Sit Reps to drive frequent communication with staff and others in the hospital. • IC should focus on obtaining situational awareness, maintain safety and security, and communications. • Use ongoing monitoring to determine when fallout risk subsides. • Depending on infrastructure, surrounding environment, and security situation, forward planning might need to shift to evacuation.	• Continue to focus on obtaining situational awareness, maintaining safety and security, and communications. Work closely with communications group; use available situational awareness information to inform actions. • Seek information from and report needs to local fire and police (via precincts or firehouses nearby). Police and fire personnel may visit hospitals to ascertain status. Be prepared to articulate staffing and other priority needs. • IC should locate offsite areas to transport patients that do not require serious care. Offsite transport will allow hospital to decompress, either toward evacuation or to begin receiving patients from the MDZ. • Prioritize assessing needs for two specific situations: 1) what is needed to remain open/operational (even if for a limited time), and 2) what is needed to close/ evacuate.

Beyond Damage Zone

0–24 HOURS POST-DETONATION Themes: Self Defense	24–48 HOURS POST-DETONATION Themes: Managing the Surge	48–72 HOURS POST-DETONATION Theme: Beginning to Establish the New Normal
• Activate HICS; fill roles with onsite staff. Stand up EOC. Ensure a staff person with radiation knowledge is on the leadership team. • Establish forward planning team. • Establish brief operational periods to continuously re-assess needs and approaches.	• Obtain situational awareness of internal capabilities, hospital condition/burden, and external situation to protect staff, patients, and others in the facility, and maintain operations as possible. • Three main objectives will be: 1) protect the facility, staff, patients, and others inside, 2) treat the injured who arrive from the MDZ and LDZ, and 3) know where to send worried well/concerned survivors who do not need medical treatment in order to preserve resources.	• Anticipate activation of larger Command Element; connect with government representatives to obtain situational awareness, coordinate efforts related to assembly centers and broader evacuation planning, and to communicate current and anticipated facility needs.

0–24 HOURS POST-DETONATION Themes: Self Defense	24–48 HOURS POST-DETONATION Themes: Managing the Surge	48–72 HOURS POST-DETONATION Theme: Beginning to Establish the New Normal
• Anticipate arrival of off-duty staff and spontaneous volunteers from other health systems and the broader community. Enact plans to screen and use these individuals as appropriate. • Create a taskforce to manage altered standards of care. Taskforce should include: clinical subject matter experts, legal, facilities, supply chain, and ethicist if available. Consider patient age and co-morbidities, especially when using equipment in short supply such as ventilators. • IC should focus on obtaining situational awareness, maintaining safety and security, and communications. • Work closely with communications group; use available situational awareness information to inform actions.	• Communicate with EOCs of other hospitals within and outside of your health system and other key stakeholders. • Use brief operational periods to continuously reassess needs and approaches; use Sit Reps to drive frequent communication with staff and others in hospital and external staff. • Consider implementing taskforce model (for mental health, security, staffing, etc.).	• Continue to communicate with EOCs of other hospitals within and outside of your health system and other key stakeholders to anticipate self-referrals and transfers from the MDZ and LDZ. • Use brief operational periods to continuously reassess needs and approaches; use Sit Reps to drive frequent communication with staff and others in hospital and external staff. • Continue using taskforce model (for mental health, security, staffing, etc.) if implemented successfully.

TOPIC: COMMUNICATIONS
Moderate Damage Zone

PRE-PLANNING	0–24 HOURS POST-DETONATION Themes: Surviving, Assessing & Planning	24–48 HOURS POST-DETONATION Themes: Surviving, Gathering Information & Preparing to Leave	48–72 HOURS POST-DETONATION Theme: Evacuating
• All facilities should have emergency capabilities to receive messages such as 700/800MHz radios and hand-crank radios. • All facilities should have communication mode(s) to broadcast external information near the hospital (i.e., loudspeakers). • Facilities should have pre-developed safety messages that can be modified and used at the time of an event. • Hospitals in health systems should develop protocols to enable remote users or other in-network facilities to take over external communications if a hospital in the network is compromised.	• Participate as possible in jurisdictional roll call and update protocol, and share information gleaned with facility's IC. • Assess communication infrastructure. Determine available external communication modes (i.e., satellite phones, radios). • Gather information from first responders when possible. • Activate communication plan. Communicate available details to staff, patients, and visitors. Emphasize that everyone should stay inside the hospital and that going outside could result in significant injury or death. Provide frequent updates and clear instructions. Emphasize the danger to staff who depart the hospital and the importance of staying safe for their families and patients. • With in-house radiologists and Radiation Safety Officers, craft staff messages or adapt existing ones about the safety of being inside the building and recommended actions. • If possible, send communications about what is happening to off-duty staff and set expectations for the next 24-hour period.	• Participate as possible in jurisdictional roll call and update protocol, and share information gleaned with facility's IC. • Continue all communication activities from initial 24-hour period. • In anticipation of the lifting of SIP orders, develop external communication strategies (i.e., signage, loudspeakers) to tell those outside that the hospital has very limited capabilities and can only service those experiencing life-threatening emergencies. Use available information to direct others to mass sheltering and information locations. Direct those needing medical care to specific, staffed entry points. • Obtain general situational awareness and updates on other parts of the health care system to inform evacuation planning. • Establish communication with first responder services, if possible (consider all communication resources, including 800MHz radios). Use jurisdictional catastrophic communications protocols as available.	• Participate as possible in jurisdictional roll call and update protocol, sharing information gleaned with facility's IC. • Continue all communication activities from previous period. • Relay updates to patients and staff as appropriate, including the need to evacuate, evacuation routes, and destinations. • Communications will likely be decentralized. Contact the nearest police precinct and firehouse to provide details on facility status and needs, and to obtain situational awareness. Representatives at those locations will likely be better positioned to push information to whatever overarching IC structure is in place. • Continue supporting the staff information function, including staff's ability to contact their families.

PRE-PLANNING	0–24 HOURS POST-DETONATION Themes: Surviving, Assessing & Planning	24–48 HOURS POST-DETONATION Themes: Surviving, Gathering Information & Preparing to Leave	48–72 HOURS POST-DETONATION Theme: Evacuating
	• Collect external details about the detonation, public messaging, and available services and assistance. Use this information to inform messaging for internal staff, patients, and external staff. • Support staff information function *(see Staff Responsibilities section).*	• Continue to provide frequent updates to internal staff; request that staff stay at the facility if possible. Underscore that staff are likely safer staying in the hospital rather than attempting to travel. Share established rest and work schedules. • Continue to support staff information function.	

Light Damage Zone

PRE-PLANNING	0–24 HOURS POST-DETONATION Themes: Self-Defense & Managing the Surge	24–48 HOURS POST-DETONATION Themes: Gathering Information, Making Connections & Managing the Surge	48–72 HOURS POST-DETONATION Theme: Creating Pathways & Deciding Whether to Evacuate
• All facilities should have emergency capabilities to receive messages such as 700/800MHz radios and hand-crank radios. • All facilities should have communication mode(s) to broadcast external information near the hospital (i.e., loudspeakers). • Facilities should have pre-developed safety messages that can be modified and used at the time of an event.	• Participate as possible in jurisdictional roll call and update protocol, and share information gleaned with facility's IC. • Assess communication infrastructure. Determine available external communication modes (i.e., satellite phones, radios). • Gather information from first responders when possible.	• Participate as possible in jurisdictional roll call and update protocol, and share information gleaned with facility's IC. • Continue all communication activities from initial 24-hour period. • In anticipation of the lifting of SIP orders, develop external communication strategies (i.e., signage, loudspeakers) to tell those outside that the hospital has very limited capabilities and can only service those experiencing life-threatening emergencies. Use available information to direct others to mass sheltering and information locations. Send those needing medical care to specific, staffed entry points.	• Participate as possible in jurisdictional roll call and update protocol, sharing information gleaned with facility's IC. • Continue all communication activities from previous period. • Relay updates to patients and staff as appropriate, including the need to evacuate, evacuation routes, and destinations.

PRE-PLANNING	0–24 HOURS POST-DETONATION Themes: Self-Defense & Managing the Surge	24–48 HOURS POST-DETONATION Themes: Gathering Information, Making Connections & Managing the Surge	48–72 HOURS POST-DETONATION Theme: Creating Pathways & Deciding Whether to Evacuate
• Hospitals in health systems should develop protocols to enable remote users or other in-network facilities to take over external communications if a hospital in the network is compromised.	• Activate communication plan. Communicate available information to staff, patients, and visitors. Emphasize need to stay inside and that going outside could result in significant injury or death. Provide frequent updates and clear instructions. Emphasize the danger to staff who leave the hospital and the importance of staying safe for their families and patients. • With in-house radiologists and Radiation Safety Officers, craft staff messages or adapt existing ones about the safety of staying inside the building and recommended actions. • If possible, send communications about what is happening to off-duty staff, and set expectations for the next 24-hour period. • Collect external information about detonation, public messaging, and available services and assistance. Use this information to inform messaging for internal staff, patients, and external staff. • Support staff information function *(see Staff Responsibilities section).*	• Obtain general situational awareness and updates on other parts of the health care system to inform evacuation planning. • Establish communication with first responder services, if possible (consider all communication resources, including 800MHz radios). Use jurisdictional catastrophic communications protocols as available. • Continue to provide frequent updates to internal staff; tell staff to stay at the facility if possible. Underscore that they are likely safer staying in the hospital rather than traveling. Share established rest and work schedules. • Update off-duty staff as possible. Direct those available to work to sister facilities in the BDZ. • Continue to support the staff information function.	• Communications will likely be decentralized. Contact the nearest police precinct and firehouse to provide details on facility status, needs, and to obtain situational awareness. Representatives at those locations will likely be better positioned to push information to the overarching IC structure in place. • Continue supporting the staff information function, including staff's ability to contact their families.

Beyond Damage Zone

PRE-PLANNING	0–24 HOURS POST-DETONATION Themes: Self Defense	24–48 HOURS POST-DETONATION Themes: Managing the Surge	48–72 HOURS POST-DETONATION Theme: Beginning to Establish the New Normal
• All facilities should have emergency capabilities to receive messages such as 700/800MHz radios and hand-crank radios. • All facilities should have communication mode(s) to broadcast external information near the hospital (i.e., loudspeakers). • Facilities should have pre-developed safety messages that can be modified and used at the time of an event. • Hospitals in health systems should develop protocols to enable remote users or other in-network facilities to take over external communications if a hospital in the network is compromised.	• Participate as possible in jurisdictional roll call and update protocol, and share information gleaned with facility's IC. • Assess communication infrastructure. Determine available external communication modes (i.e., satellite phones, radios). • Gather information from first responders when possible. • Activate communication plan. Communicate available information to staff, patients, and visitors. Provide frequent updates and clear instructions. Highlight the danger to staff who leave the hospital and the importance of staying safe for their families and patients. • With in-house radiologists and Radiation Safety Officers, craft staff messages or adapt existing ones about safety of staying in the building and recommended actions. • If possible, share updates with off-duty staff and set expectations for the next 24-hour period. Unless the hospital is confirmed to be outside the fallout zone, staff should not travel to the facility. • Formulate and communicate anticipated staffing needs to outside entities and the public at large.	• Participate in jurisdictional roll call and update protocol as possible, sharing information gleaned with facility's IC. • Continue all communication activities from first operational period. • Reiterate public messages to keep concerned survivors away from the hospital (those who were not exposed but think they are or need verification that they aren't); know which communication vehicles are operational and use all that are available (including social media). Communication strategy MUST align with the facility's security posture. • Consider using signage, loudspeakers, and other means to tell those outside about the hospital's capabilities and priorities, and to tell concerned survivors where to go for mass care, information, and radiation screening. • Obtain details on general situational awareness and status on other parts of the health care system to inform transfers and evacuation planning. • Communicate frequently with internal and external staff, relay messaging about safety of traveling, and facility's ability to hotel family and pets. • Work with broader health care system and sister systems to communicate surge staffing needs.	• Participate in jurisdictional roll call and update protocol as possible, sharing information gleaned with facility's IC. • Continue all communication activities from previous operational period. • Prioritize communications with medical care and mass care sites established in the surrounding area, stressing importance of aligning messages. • Ensure alignment of messages related to volunteers and donations. • Continue prioritizing communication with on-duty and off-duty staff. • Rebroadcast information from government sources about the incident, recovery, mass care, and sheltering operations, to staff, patients, and community members.

PRE-PLANNING	0–24 HOURS POST-DETONATION Themes: Self Defense	24–48 HOURS POST-DETONATION Themes: Managing the Surge	48–72 HOURS POST-DETONATION Theme: Beginning to Establish the New Normal
	• Collect external news about the detonation, public messaging, the fallout zone, and available services and assistance, including on decontamination and mass sheltering operations. Use this to inform messaging for internal and external staff, patients, and families. • Redirect individuals without acute medical needs to other areas. • Inform concerned survivors in the community not near the detonation to stay away from the hospital to preserve resources. • Communicate with State and Federal government agencies as is possible. • Support staff information function. • Rebroadcast official information from government sources to staff, patients, and community members.	• Continue to support staff information function.	

TOPIC: PATIENT CLINICAL AND SUPPORT ACTIVITIES
Moderate Damage Zone

0–24 HOURS POST-DETONATION Themes: Surviving, Assessing & Planning	24–48 HOURS POST-DETONATION Themes: Surviving, Gathering Information & Preparing to Leave	48–72 HOURS POST-DETONATION Theme: Evacuating
• Undertake internal evacuation to safe areas of the hospital. Meet with buildings and engineering staff and radiation safety experts to determine pathways, considering building assessments and radiation monitoring results. • Rapid internal evacuation to basement or internal areas could be difficult with some patient types, such as intensive care unit (ICU) and bariatric patients; could require inward rather than vertical movement. Elevators may not work or could be unsafe.* • Create a census of existing patients and visitors. Cohort existing patients. • Establish an alternate morgue and ensure tracking of decedent information to report when/if communications are established. • Triage and manage incoming individuals with medical needs based on existing mass casualty response protocols. *Injuries should always trump radiation sickness.* • If possible, ensure all existing and incoming patients have/maintain identification. • Use existing tools to triage and cohort those exhibiting signs of Acute Radiation Sickness. • Create alternate medical record for existing patients, visitors, staff, and evacuees/new patients. Each should have a record on their person as well (e.g., paper or writing on clothing).	• Move patients as needed based on ongoing radiation monitoring and physical assessment of building. • Continue priority actions from previous period. • Based on available supplies, services, staff, and utilities, maintain the highest standard of patient care possible, including comfort care. Reassess standards of care at determined intervals, and communicate updates to medical staff. If Incident Command (see IC section) establishes a taskforce, rely on it to develop and reassess altered standards of care and aligned clinical protocols. The standards of care protocol will likely include modified triage based on survivability (i.e., age, co-morbidities). • Maintain temporary morgue operation with enhanced staffing, including use of available pre-determined Body Collection Points.	• Continue modifying standards of care based on available supplies, services, staff, and utilities, including comfort care. Reassess standards of care at determined intervals and communicate updates to medical staff. If Incident Command (see IC section) establishes taskforce, rely on it to develop and reassess altered standards of care and aligned clinical protocols. • Use existing facility triage methods at the beginning of every shift to categorize and prioritize patients for level of care, including expectant patients. Use this information to allocate resources and prepare a priority list for evacuation. • Maintain a temporary morgue with enhanced staffing. • Based on direction from IC, shift focus to patient evacuation and census reduction. • Based on available information from receiving hospitals and available transport vehicles, decide whether to prioritize more-acute or less-acute patients for evacuation. • Send appropriate staff with patients. Request volunteers when identifying which staff should go with the first wave of patients evacuated. Consider what staff types the facility still requires (e.g., the only pharmacist) and each staff person's situation.

* Elevators act like pistons and move great volumes of air throughout a building. Elevator shafts are open to the elevator machine rooms, which in turn are open to the exterior trough windows or vents. If left open, elevator shafts will pull contaminated air in and push it throughout the building.

0–24 HOURS POST-DETONATION Themes: Surviving, Assessing & Planning	24–48 HOURS POST-DETONATION Themes: Surviving, Gathering Information & Preparing to Leave	48–72 HOURS POST-DETONATION Theme: Evacuating
• With existing medical and trauma information, ensure the recording of data relevant to potential radiation sickness (proximity to detonation/location, including amount of shielding; if vomiting, time of first vomit and frequency; lymphocyte count if possible). • If medical countermeasures are onsite, determine who should receive them and distribute as part of a larger, ongoing altered standards of care process at the IC level. • Provide Psychological First Aid to staff, patients, and others onsite.		• If an interim or temporary health care facility location is found or established further from the detonation site, determine which patient types and patients to transport there based on available resources at the site, and which supplies, and staff should go with patients.

Light Damage Zone

0–24 HOURS POST-DETONATION Themes: Self-Defense & Managing the Surge	24–48 HOURS POST-DETONATION Themes: Gathering Information, Making Connections & Managing the Surge	48–72 HOURS POST-DETONATION Theme: Creating Pathways & Deciding Whether to Evacuate
• Undertake internal evacuation to safe areas of the hospital. Meet with buildings and engineering staff and radiation safety experts to determine pathways, considering building assessments and radiation monitoring results. • Rapid internal evacuation to basement or internal areas could be difficult with some patient types, such as ICU and bariatric patients who could require inward rather than vertical movement. Elevators may not work or could be unsafe.*	• Move patients as needed based on ongoing radiation monitoring and physical assessment of building. • Continue other priority actions from previous period. • Based on available supplies, services, staff, and utilities, maintain the highest standard of patient care possible, including comfort care. Reassess standards of care at determined intervals and communicate information to medical staff. If IC establishes a taskforce (see IC section), rely on it to develop and reassess altered standards of care and aligned clinical protocols. The standards of care protocol will likely include modified triage based on survivability (i.e., age, co-morbidities).	• Prepare to receive patients from the MDZ. With government response partners (if possible), potentially adopt a waystation strategy to stabilize acute patients to the greatest degree possible, and then move them further toward definitive care. Hospitals in the LDZ could focus on damage control and resuscitation, then move patients to the BDZ. • Continue modifying standards of care based on available supplies, services, staff, and utilities, including comfort care. Reassess standards of care at determined intervals and communicate information to medical staff.

* Elevators act like pistons and move great volumes of air throughout a building. Elevator shafts are open to the elevator machine rooms, which in turn are open to the exterior trough windows or vents. If left open, elevator shafts will pull contaminated air in and push it throughout the building.

0–24 HOURS POST-DETONATION Themes: Self-Defense & Managing the Surge	24–48 HOURS POST-DETONATION Themes: Gathering Information, Making Connections & Managing the Surge	48–72 HOURS POST-DETONATION Theme: Creating Pathways & Deciding Whether to Evacuate
• The hospital could receive patients from the MDZ in latter operational periods and will need space for them until the hospital can evacuate patients/decant. • Create a census of existing patients and visitors. Cohort existing patients. • Provide only necessary care to inpatients to preserve human resources and supplies. • Triage and manage incoming individuals with medical needs based on existing mass casualty response protocols. *Injuries should always trump radiation sickness.* • If possible, ensure all existing and incoming patients have/maintain identification. • Use existing tools to triage and cohort those exhibiting signs of Acute Radiation Sickness. • Create alternate medical record for existing patients, visitors, staff, and evacuees/new patients. Each should have a record on their person as well (e.g., paper or writing on clothing). • Along with existing medical and trauma information, ensure capture of data relevant to potential radiation sickness (proximity to detonation/location, including amount of shielding; if vomiting, time of first vomit and frequency; lymphocyte count if possible). • If medical countermeasures are onsite, determine who should receive them, and distribute them as part of a larger, ongoing altered standards of care process at the IC level. • Provide Psychological First Aid support for staff, patients, and others onsite.	• Based on security situation, and available staff and resources, facility may accept individuals with medical emergencies only vs. those with other medical needs. Internal triage will need to consider these various patient types, including concerned survivors. • If patients with medical needs (vs. emergencies) are accepted, set up large patient care zones, likely in non-traditional spaces in the hospital. • Based on facility's overall posture (continuing operations vs. evacuation), prepare appropriate patients for evacuation to either an interim facility (waystation model) or a receiving hospital. • Maintain temporary morgue operation with enhanced staffing, including use of available pre-determined Body Collection Points.	• Use existing facility triage methods at the beginning of every shift to categorize and prioritize patients, including expectant patients. Use this information to allocate resources. • Direct those who do not need medical care to assembly points (if known). • Contact community partners (e.g., churches) about possibility of housing staff and visitors. Also consider sending less-critical patients from the emergency department (ED) there, along with appropriate staff. • Maintain a temporary morgue with enhanced staffing. Determine whether to establish a secondary morgue and communicate this information to IC. • If possible from a staffing standpoint, send appropriate staff with patients. This will likely depend upon the larger posture and plan for the facility. • If possible, identify which staff can go with the first wave of evacuated patients by requesting volunteers. Consider what staff types the facility still requires (e.g., the lone pharmacist) and known each staff person's situation.

0–24 HOURS POST-DETONATION Themes: Self-Defense & Managing the Surge	24–48 HOURS POST-DETONATION Themes: Gathering Information, Making Connections & Managing the Surge	48–72 HOURS POST-DETONATION Theme: Creating Pathways & Deciding Whether to Evacuate
• Adapt existing standing order sets to include additional categories, such as expectant (comfort care meds only). • Establish an alternate morgue and ensure tracking of decedent information to report when/if communications are established.		

Beyond Damage Zone

0–24 HOURS POST-DETONATION Themes: Self Defense	24–48 HOURS POST-DETONATION Themes: Managing the Surge	48–72 HOURS POST-DETONATION Theme: Beginning to Establish the New Normal
• Cease all non-emergent procedures. • Assess current patient census. Decant the facility once it is deemed safe. Discharge patients and send high-acuity patients to outlying facilities. • Once SIP order is lifted, prepare to receive self-evacuating patients and patients brought in by first responders. • Prepare to triage and manage incoming individuals with medical needs based on existing mass casualty response protocols. *Injuries should always trump radiation sickness.* • Use existing tools to triage and cohort those exhibiting signs of Acute Radiation Sickness. Employ a basic documentation system to record location at time of detonation and symptoms.	• Anticipate arrival of patients from the MDZ and LDZ after SIP order is lifted. • Cancel all elective surgery and aggressively decant the hospital by discharging low-acuity patients to skilled nursing facilities or home, and higher-acuity patients to outlying facilities. • Use mutual aid agreements for patient transfer and movement to other facilities. • Based on available supplies, services, and staff, maintain the highest standard of patient care possible. This could necessitate minimal intervention or comfort care for expectant patients. Reassess standards of care at determined intervals and communicate information to medical staff. • Cohort incoming exposed patients in alternative care spaces such as auditorium, outpatient, or conference spaces; cohorting reduces the number of staff exposed and overall requirements for staff who understand ARS.	• Continue to discharge or transfer patients to make room for patients from MDZ and LDZ. Anticipate large numbers of patients with trauma, respiratory issues, and burns. • Based on available supplies, services, and staff, maintain the highest standard of patient care possible. This may necessitate minimal intervention or comfort care for expectant patients. Reassess standards of care at determined intervals and communicate information to medical staff. • With government response partners and based on maturity of broader evacuation pathway from the region, adopt a waystation strategy whereby acute patients are stabilized to the greatest degree possible and then moved further toward definitive care. If using this strategy, the facility should focus on damage control, resuscitation, stabilization, and then transfer.

0–24 HOURS POST-DETONATION Themes: Self Defense	24–48 HOURS POST-DETONATION Themes: Managing the Surge	48–72 HOURS POST-DETONATION Theme: Beginning to Establish the New Normal
• Based on available supplies, services, staff, and utilities, maintain the highest standard of patient care possible, including comfort care. Reassess standards of care at determined intervals and communicate information to medical staff. If Incident Command establishes taskforce (see IC section), rely on it to develop and reassess altered standards of care and aligned clinical protocols. The standards of care protocol will likely include modified triage based on survivability (i.e., age, co-morbidities). • If medical countermeasures are onsite, determine who should receive them. • Maintain separation of individuals already in hospital from those arriving post-detonation. • If available, adapt existing standing order sets to include additional categories such as expectant (comfort care meds only).	• Prepare for arrival of subject matter experts in radiation and radiation sickness management and determine how to integrate them into your facility to help with monitoring, safety, and patient care (both from those evacuating MDZ and those arriving from BDZ).	• If the facility is not a burn center, stabilize burn patients and move them toward definitive care. Stabilized burn patients can wait three to five days for definitive care. • Cohort similar patients to increase space and minimize stress on staff. • Due to anticipated high volume of incoming patients, use tents and parking lots as alternate care sites within the hospital. • Establish or connect to alternate care sites for individuals with less-acute injuries. Seek support from primary care or urgent care centers as alternate care sites (e.g., CityMD) to treat minor injuries. • Determine which patients will go to Assembly Centers (e.g., low-acuity ED population, the uninjured, and those determined to have Acute Radiation Sickness) if nearby and operational vs. who will stay in the hospital (e.g., those requiring emergency care).

TOPIC: RESOURCES & ASSETS
Moderate Damage Zone

0–24 HOURS POST-DETONATION Themes: Surviving, Assessing & Planning	24–48 HOURS POST-DETONATION Themes: Surviving, Gathering Information & Preparing to Leave	48–72 HOURS POST-DETONATION Theme: Evacuating
• Based on damage, assess and prioritize what supplies are onsite and available. Key resources include: pharmaceuticals, food, linens, and fuel. Inform IC about supply status as it will impact patient care and other critical decisions. • Determine what supplies will be needed immediately, and in the intermediate phase. Determine likely burn rate of existing supplies. • Manage supplies for radiation monitoring and decon, and sheltering of staff, patients, and community members. Dosimeters will likely be in short supply.* • Assess supplies that can be repurposed for new needs, including staff care, care of families and community members, and temporary morgue operations. • Access and use Chempack supplies as appropriate. • Assess resources to support other critical areas. Coordinate through IC. • Consider any changes to use of medical gases if patients are moved to other areas of facility.	• Continually monitor supplies and project burn rate (sustainability grid based on likely SIP time); ration resources as needed, using an altered/crisis standards of care posture. • If in-house radiation experts determine that it is safe to do so post-fallout, seek additional resources from neighboring businesses, institutions, and offsite storage locations; ability to do this will depend on security situation. • Based on resource availability and rationing plan, decide with clinical leadership which services can no longer be maintained. • Manage supplies for radiation monitoring, decon, and sheltering of staff, patients, and community members. Dosimeters will likely be in short supply. • Support needs of temporary morgue operations. • In anticipation of re-supply, develop receipt and distribution plan. • With clinical team, identify resource needs associated with high-priority patients. • Be prepared to articulate facility needs to government response representatives who may contact the facility.	• If safe, continue seeking additional resources from neighboring businesses, institutions, and offsite storage locations. Use any jurisdictional resource request processes available. • Perform continuous inventory assessment; continue rationing resources as needed using an altered/crisis standards of care posture. • Determine whether some patients could safely be moved to interim health care facility locations further away from the site of detonation where they could more easily be reached for definitive evacuation. Coordinate this effort with government entities if possible. • Continue supporting needs of temporary morgue operations. • Consider receiving supplies by air and water routes depending on geography and capabilities. • Implement receipt and distribution plan.

* Dosimeters available from Radiation Safety Officer likely will be the type requiring offsite readout by vendor (no readout will be available at the facility). Staff will learn their total dose reading much later if RSO initiates a procedure to collect dosimeters before staff depart health care facility. Staff readings may be used later to estimate total doses experienced by patients.

Light Damage Zone

0–24 HOURS POST-DETONATION Themes: Self-Defense & Managing the Surge	24–48 HOURS POST-DETONATION Themes: Gathering Information, Making Connections & Managing the Surge	48–72 HOURS POST-DETONATION Theme: Creating Pathways & Deciding Whether to Evacuate
• Based on damage, assess and prioritize what supplies are onsite and available. Key resources include pharmaceuticals, food, linens, and fuel. Inform IC about supply status, as it will impact patient care and other critical decisions. • Determine what supplies will be needed immediately, and in the intermediate phase. Determine likely burn rate of existing supplies. • Manage supplies for radiation monitoring and decon, and sheltering of staff, patients, and community members. Dosimeters will likely be in short supply. • Assess supplies that can be repurposed for new needs, including staff care, care of families and community members, and temporary morgue operations. • Access and use Chempack supplies as appropriate. • Assess resources to support other critical areas. Coordinate through IC. • Consider any changes to medical gases if patients are moved to other areas of facility.	• Continually monitor supplies and project burn rate (sustainability grid based on likely SIP time); ration resources as needed, using an altered/crisis standards of care posture. • If in-house radiation experts determine that it is safe to do so post-fallout, seek additional resources from neighboring businesses, institutions, and offsite storage locations; ability to do this will depend on security situation. • Based on resource availability and rationing plan, decide with clinical leadership which services can no longer be maintained. • Manage supplies for radiation monitoring, decon, and sheltering of staff, patients, and community members. Dosimeters will likely be in short supply. • Support needs of temporary morgue operations. • In anticipation of re-supply, develop receipt and distribution plan. • Identify with clinical team resource needs associated with high-priority patients. • Be prepared to articulate facility needs to government response representatives who may contact the facility. • Use system-owned vehicles to transport resources between facilities if road accessibility allows (may include sending resources to MDZ facilities).	• Based on IC guidance, support continuing operations with transports or evacuation planning. • Perform continuous inventory assessment; continue rationing resources as needed using an altered standards of care posture. • If safe, continue seeking additional resources from neighboring businesses, institutions, offsite storage locations, and other hospitals and facilities within the health network. • Consider receiving supplies by air and water routes, depending on geography and capabilities. • If planning a partial or full evacuation of patients, identify potential transportation resources. Use buses to transport patients if possible. • Continue supporting needs of temporary morgue operations. • Implement receipt and distribution plan.

Beyond Damage Zone

0–24 HOURS POST-DETONATION Themes: Self Defense	24–48 HOURS POST-DETONATION Themes: Managing the Surge	48–72 HOURS POST-DETONATION Theme: Beginning to Establish the New Normal
• Assess supply and resource levels; develop resource management plan that includes food, fuel, water, and other necessities. Inform IC about supply status as supply levels and availability will impact patient care and other critical decisions. • Determine what shortages are likely to occur and when. • Assess ability to access offsite supplies and suppliers. • Manage supplies for radiation monitoring and decon, and sheltering of staff, patients, and community members. Dosimeters will likely be in short supply. • Assess supplies that can be repurposed for new needs, including staff care, care of families and community members, and temporary morgue operations. • Assess resources to support other critical areas. Coordinate through IC. • Access and use Chempack supplies as appropriate. • Seek guidance from government response partners on resource and asset availability in coming operational periods.	• Continually monitor supplies and project burn rate (sustainability grid based on likely SIP time); begin rationing resources, as needed. Assess ability of vendors to restock supplies or access new supplies. • Based on resource availability and rationing plan, with clinical leadership decide which services can no longer be maintained. • Seek immediate resupply and additional resources from traditional (on-campus and within network) and non-traditional sources (neighboring businesses, institutions, schools). As able, assist hospitals in and out of network that need resources in the LDZ and MDZ. • Replenish supplies for radiation monitoring, decon, and mass sheltering, which will likely be low. • Use system-owned vehicles to transport resources between facilities if possible (may include sending resources to MDZ facilities if passage is feasible and radiation exposure rate allows). • Support needs of temporary morgue operations. • In anticipation of re-supply, develop receipt and distribution plan. • With clinical team, identify resource needs associated with high-priority patients. • Determine if facility or region will receive supplies from Strategic National Stockpile (SNS) or other State or Federal stockpiles.	• Continue tasks from previous period. • Compile and maintain a list of current and anticipated needs. • Request resources from local health departments, network clinics, urgent care centers, and other facilities in the hospital network if possible. Contact vendors and hospitals farther north and west of the event. • Use any jurisdictional resource request processes available. • Designate local areas to serve as logistics center/stockpile locations. • Consider supporting operational facilities in the LDZ by pushing supplies to them. • Determine whether local, State, or Federal stockpiles are accessible and if so, how to garner supplies for facility use. • Consider receiving supplies by air and water routes, depending on geography and capabilities. • Continue use of receipt and distribution plan.

TOPIC: SAFETY & SECURITY
Moderate Damage Zone

0–24 HOURS POST-DETONATION Themes: Surviving, Assessing & Planning	24–48 HOURS POST-DETONATION Themes: Surviving, Gathering Information & Preparing to Leave	48–72 HOURS POST-DETONATION Theme: Evacuating
• Activate lockdown procedures to secure the building. Maintain lockdown (no ingress/egress) until assessments are completed, internal evacuation has occurred, and mass sheltering and decon areas are established.* • Conduct radiation monitoring with available subject matter experts and equipment to determine whether areas are safe or unsafe. If possible, conduct swipe tests outside of building to determine exterior levels of radiation. • Train additional staff on radiation monitoring and set up a monitoring protocol and data collection method. • Conduct a physical assessment of the building to determine the structure's integrity and to identify hazards. Fix broken windows, gaping holes, and other areas of exposure as possible. Establish an interval to repeat assessments. • Based on infrastructure damage and results of radiation monitoring, reduce the hospital's footprint to areas deemed safe for staff and patients. Be prepared to move inward and downward if radiation levels around the established perimeter rise to dangerous levels due to fallout. • Augment existing security resources with available staff; maintain the integrity of newly established areas and perimeters from a security standpoint.	• Prioritize the physical security of the building using available security personnel and other security resources, including bollards, fencing, and other available items. • Develop and enact a security plan for high-demand resources, including diesel for generators. • Develop cadre of staff or volunteers to provide information to maintain crowd control both within and outside the building. Include plan to vet volunteers, which will be an important complement to security. • Continue monitoring radiation and building functionality/damage. Based on findings, make adjustments to building footprint (used by staff/patients). • Maintain points of entry from outside and establish decon capabilities at the entry points if in-house radiation experts determine it is safe to do so. If possible, based on the external situation, create and maintain staging area outside the hospital to perform gross decon to prevent secondary contamination within facility. • Maintain mass sheltering area within hospital. If facility believes SIP order is lifted and based on other information obtained, inform individuals about what to do and where to go.	• Prioritize the physical security of the building using available security personnel and other security resources, including bollards, fencing, and other available items. • Continue monitoring radiation and building functionality/damage. Based on findings, make necessary determinations regarding building footprint (used by staff/patients). • Anticipate an increase in walk-in patients seeking medical care. Develop signage and messaging to appropriately direct them based on facility capabilities. • If in contact with government response agencies, request assistance from National Guard or local law enforcement to help with hospital security. • Consider vetting and deputizing appropriate volunteers, including those with law enforcement experience. • Continue to use cadre of staff or volunteers to provide information and maintain crowd control both within and outside the building. This will be an important complement to security. • Continue maintaining security procedures for mass sheltering and external individuals seeking medical care, and make adjustments as needed.

* Elevators act like pistons and move great volumes of air throughout a building. Elevator shafts are open to the elevator machine rooms, which in turn are open to the exterior trough windows or vents. If left open, elevator shafts will pull contaminated air in and push it throughout the building.

0–24 HOURS POST-DETONATION Themes: Surviving, Assessing & Planning	24–48 HOURS POST-DETONATION Themes: Surviving, Gathering Information & Preparing to Leave	48–72 HOURS POST-DETONATION Theme: Evacuating
• Reduce points of entry. Maintain order at entry points. • Within the hospital's new perimeter, establish a mass sheltering area for uninjured individuals seeking shelter, with appropriate staff and resources. Within mass sheltering area, staff should monitor individuals for signs of Acute Radiation Sickness. If identified, send individuals to a medical triage area. • Institute gross decon procedures for incoming individuals. Ideally, everyone should remove clothes and wear scrubs/garbage bags and hair bonnets. Once decon is finished, send individuals either to the mass shelter area or the established medical care area. • If available, use colored arm bands or other designations to identify different types of patients and visitors (i.e., those seeking shelter, previous patients, those suspected to have Acute Radiation Sickness) to support cohorting within the hospital.	• Set up security procedures so individuals with medical emergencies can enter. Expand security perimeter, depending on resources; consider using fencing or barriers to direct incoming patients to decon area. • Depending on the facility's location within the MDZ, maintaining security could be difficult, which will impact the facility's ability to serve those with medical needs vs. medical emergencies only.	

Light Damage Zone

0–24 HOURS POST-DETONATION Themes: Self-Defense & Managing the Surge	24–48 HOURS POST-DETONATION Themes: Gathering Information, Making Connections & Managing the Surge	48–72 HOURS POST-DETONATION Theme: Creating Pathways & Deciding Whether to Evacuate
• Activate lockdown procedures to secure the building. Maintain lockdown (no ingress/egress) until assessments are completed, internal evacuation has occurred, and mass sheltering and decon areas are established.*	• Continue to prioritize the physical security of the building using available security personnel and other security resources, including bollards, fencing, and other available items.	• Continue to prioritize the physical security of the building using available security personnel and other security resources, including bollards, fencing, and other available items.

* Elevators act like pistons and move great volumes of air throughout a building. Elevator shafts are open to the elevator machine rooms, which in turn are open to the exterior trough windows or vents. If left open, elevator shafts will pull contaminated air in and push it throughout the building.

0–24 HOURS POST-DETONATION Themes: Self-Defense & Managing the Surge	24–48 HOURS POST-DETONATION Themes: Gathering Information, Making Connections & Managing the Surge	48–72 HOURS POST-DETONATION Theme: Creating Pathways & Deciding Whether to Evacuate
• Conduct radiation monitoring with available subject matter experts and equipment to determine whether areas are safe or unsafe. If possible, conduct swipe tests outside of building to determine exterior levels of radiation. • Train additional staff on radiation monitoring and set up a monitoring protocol and data collection method. • Conduct a physical assessment of the building to determine the structure's integrity and to identify hazards. Fix broken windows, gaping holes, and other areas of exposure as possible. Establish an interval to repeat assessments. • Based on infrastructure damage and results of radiation monitoring, reduce the hospital's footprint to areas deemed safe for staff and patients. Be prepared to move inward and downward if radiation levels around the established perimeter rise to dangerous levels due to fallout. • Augment existing security resources with available staff; maintain the integrity of newly established areas and perimeters from a security standpoint. • Reduce points of entry. Maintain order at entry points. • Within the new perimeter of the hospital, establish a mass sheltering area for uninjured individuals seeking shelter, with appropriate staff and resources. Within mass sheltering area, have staff monitor individuals for signs of Acute Radiation Sickness. If identified, send individuals to an established medical triage area. • Institute gross decon procedures for incoming individuals. Ideally, everyone should remove clothes and wear scrubs/garbage bags and hair bonnets. Once decon is finished, send individuals either to the mass shelter area or the established medical care area.	• Develop and enact a security plan for high-demand resources, including diesel for generators. • Develop cadre of staff or volunteers to provide information and maintain crowd control, both within and outside the building. Include plan to vet volunteers, which will be an important complement to security. • Continue monitoring radiation and building functionality/damage. Based on findings, make adjustments regarding building footprint (used by staff/patients). • Maintain points of entry from outside and establish decon capabilities at points of entry if in-house radiation experts determine it is safe to do so. If possible, based on external situation, create and maintain staging area outside of hospital to perform gross decon to prevent secondary contamination within facility. • Maintain mass sheltering area within hospital. If facility believes SIP order is lifted and based on information facility obtains, inform individuals about what to do and where to go. • Set up security procedures so individuals with medical emergencies can enter. Expand security perimeter, depending on resources; consider using fencing or barriers to direct incoming patients to decon area. • Depending on the facility's location within the MDZ, maintaining security could be difficult, which will impact the facility's ability to serve those with medical needs vs. medical emergencies only.	• Maintain a limited number of entry points with as much security as possible. • Maintain security procedures for entry of individuals with medical emergencies, if safe to do so. • Continue monitoring radiation and building functionality/damage. Based on findings, make necessary determinations regarding building footprint (used by staff/patients). • Anticipate an increase in walk-in patients seeking medical care. Develop signage and messaging to appropriately direct them based on facility capabilities. • If in contact with government response agencies, request assistance from National Guard or local law enforcement to help with hospital security. • Consider vetting and deputizing appropriate volunteers, including those with law enforcement experience. • Continue using cadre of staff or volunteers to provide information and maintain crowd control both within and outside the building. This will be an important complement to security. • Continue maintaining security procedures for mass sheltering and external individuals seeking medical care and make adjustments as needed.

0–24 HOURS POST-DETONATION Themes: Self-Defense & Managing the Surge	24–48 HOURS POST-DETONATION Themes: Gathering Information, Making Connections & Managing the Surge	48–72 HOURS POST-DETONATION Theme: Creating Pathways & Deciding Whether to Evacuate
• If available, use colored arm bands or other designations to identify different types of patients and visitors (i.e., those seeking shelter, previous patients, those suspected of having Acute Radiation Sickness) to support cohorting within the hospital.		

Beyond Damage Zone

0–24 HOURS POST-DETONATION Themes: Self Defense	24–48 HOURS POST-DETONATION Themes: Managing the Surge	48–72 HOURS POST-DETONATION Theme: Beginning to Establish the New Normal
• Activate lockdown procedures to secure the building. Maintain lockdown (no ingress/egress) until assessments are completed, internal evacuation has occurred, and mass sheltering and decon areas are established.* • Conduct radiation monitoring with available subject matter experts and equipment to determine whether areas are safe or unsafe. If possible, conduct swipe tests outside of building to determine exterior levels of radiation. • Train additional staff on radiation monitoring and set up a monitoring protocol and data collection method. • Conduct a physical assessment of the building to determine the structure's integrity and to identify hazards. Fix broken windows, gaping holes, and other areas of exposure as possible. Establish an interval to repeat assessments.	• Continue safety and security measures from previous period. • Consider augmenting the facility's security force by seeking volunteers with law enforcement experience. Determine how they can safely augment current operations; using them for crowd direction/information-sharing is recommended. • Monitor radiation levels and physical building. Based on findings, make necessary determinations regarding the hospital's operational footprint. • Emphasize need to protect facility from secondary contamination. • Expand footprint (reversing and likely exceeding consolidated SIP footprint); establish rings of protection by surging security staff and using barriers, signage, etc., to protect facility and staff. • Determine entry points for emergency response vehicles transporting patients from the LDZ and MDZ.	• Continue all previous radiation monitoring and decon procedures. • Assess any new security concerns and how to address them using personnel and communication strategies. • Examine the option of pulling security resources from other agencies and companies not open (e.g., courts, banks). • Determine whether State or Federal resources (e.g., National Guard) will be available to augment hospital security. • As possible, provide security, radiation monitoring, and decon to any off-site facilities being used to treat minor injuries, or provide mass care or screening.

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0–24 HOURS POST-DETONATION Themes: Self Defense	24–48 HOURS POST-DETONATION Themes: Managing the Surge	48–72 HOURS POST-DETONATION Theme: Beginning to Establish the New Normal
• Based on infrastructure damage and results of radiation monitoring, reduce the hospital's footprint to areas deemed safe for staff and patients. Be prepared to move inward and downward if radiation levels around the established perimeter rise to dangerous levels due to fallout. • Augment existing security resources with available staff; maintain the integrity of these newly established areas and perimeters from a security standpoint. • Reduce points of entry. Maintain order at entry points. • Within the new perimeter of the hospital, establish a mass sheltering area for uninjured individuals seeking shelter, with appropriate staff and resources. Within mass sheltering area, staff should monitor individuals for signs of Acute Radiation Sickness. If identified, send them to a medical triage area. • Institute gross decon procedures for incoming individuals. Ideally, everyone should remove clothes and wear scrubs/garbage bags and hair bonnets. Once decon is finished, send individuals either to the mass shelter area or the established medical care area. • If available, use colored arm bands or other designations to identify different types of patients and visitors (i.e., those seeking shelter, previous patients, those suspected of having ARS) to support cohorting within the hospital.	• Require that patients go through multiple screening levels and decon as needed before entering (control ingress/egress, and if available, use rad-detection equipment to measure radioactivity to maintain low levels of contamination inside hospital). • Concerned survivors will put pressure on the facility; have a security and communication plan in place for these individuals.	

TOPIC: STAFF RESPONSIBILITIES (STAFF CARE)
Moderate Damage Zone

PRE-PLANNING	0–24 HOURS POST-DETONATION Themes: Surviving, Assessing & Planning	24–48 HOURS POST-DETONATION Themes: Surviving, Gathering Information & Preparing to Leave	48–72 HOURS POST-DETONATION Theme: Evacuating
• Determine at the organizational level how to account for all employees using paper and electronic methods; also note which HICS role will fulfill this task. • Develop protocols and procedures to support a staff information function—specifically, to gather and maintain information about onsite staff's loved ones.	• Assume facility will only have staff who are presently onsite for the next 24-plus hours. Adapt existing staff management and hoteling plans to maximize use of onsite staff. Due to potential radiation exposure, staff should work brief shifts (i.e., two hours) and rotate often. • Create a list of staff who are present and the known locations of their loved ones at the time of the detonation (if in the region). Relying on social work staff and family reunification plans, establish a staff support function to gather and report information about staff's loved ones. • Institute Psychological First Aid for staff. • Ensure provision of additional staff to support radiological monitoring, and safety and security functions. Safety and security are critical to staff's ability to function. • With IC, identify new tasks and associated roles. Develop modified job descriptions and plans to fulfill the roles.	• Maintain staff information function. • Maintain enhanced staffing for safety and security functions. • Continue providing Psychological First Aid supports for staff. • Assume replacement staff's arrival will be blocked by road closures, hazards/dangers, and lack of transportation/power infrastructure. • Maintain a continuity of operations posture with staffing. • Maintain in-house staff by communicating that it is safer to stay; maintain shift plan with those who stay to ensure rest periods. Staff will likely take on new and multiple roles. • Tell staff who leave after the SIP order is lifted where to go/what to do based on available information. • With IC, identify new tasks and associated roles. Develop modified job descriptions and plan to fulfill the roles.	• Maintain staff information function. • Maintain enhanced staffing for safety and security functions. • Continue to provide Psychological First Aid supports for staff. • If there are safe ways to leave the area, implement plan to decant staff from the hospital. • If patient evacuation is implemented, send some staff with patients. • Consider creating quotas for how many staff are needed per unit and send staff out accordingly. Use information about where staff live and their needs/concerns to prioritize when staff leave and where they go. • With IC, continue to identify new tasks and associated roles. Develop modified job descriptions and plan to fulfill these roles. • For staff who remain, maintain a continuity of operations posture with staffing; maintain shift plan with those who stay to ensure rest periods. • Determine which members of the stay team will remain at the facility until it is fully shuttered.

Light Damage Zone

PRE-PLANNING	0–24 HOURS POST-DETONATION Themes: Self-Defense & Managing the Surge	24–48 HOURS POST-DETONATION Themes: Gathering Information, Making Connections & Managing the Surge	48–72 HOURS POST-DETONATION Theme: Creating Pathways & Deciding Whether to Evacuate
• Determine at the organizational level how to account for all employees using paper and electronic methods; also note which HICS role will fulfill this task. • Develop protocols and procedures to support a staff information function—specifically to gather and maintain information about onsite staff's loved ones.	• Assume facility will only have staff who are presently onsite for the next 24-plus hours. Adapt existing staff management and hoteling plans to maximize use of onsite staff. Due to potential radiation exposure, staff should work brief shifts (i.e., two hours) and rotate often. • Create a list of staff who are present and the known locations of their loved ones at the time of the detonation (if in the region). Relying on social work staff and family reunification plans, establish a staff function to gather and report information about loved ones to staff. • Institute Psychological First Aid for staff. • Ensure provision of additional staff to support radiological monitoring, and safety and security functions. Safety and security are critical to the staff's ability to function. • With IC, identify new tasks and associated roles. Develop modified job descriptions and plans to fulfill them.	• Maintain staff information function. • Maintain enhanced staffing for safety and security functions. • Continue providing Psychological First Aid supports for staff. • Assume replacement staff cannot arrive due to danger in surrounding area and lack of transportation infrastructure. • Maintain a continuity of operations posture with staffing. • With IC, continue identifying new tasks and associated roles. Develop modified job descriptions and plans to fill them. • Maintain in-house staff by communicating that it is safer to stay; maintain shift-plan with those who stay to ensure rest. Staff will likely take on new and multiple roles. • If facility believes SIP order was lifted, and based on information the facility obtained, inform staff that leave about what to do and where to go. • Direct off-site staff to support hospitals in the BDZ hospitals, especially within their own health system.	• Maintain staff information function. • Maintain enhanced staffing for safety and security functions. • Continue to provide Psychological First Aid supports for staff. • With IC, continue identifying new tasks and associated roles. Develop modified job descriptions and plan to fulfill the roles. • Implement plan to use staff and volunteers who arrive spontaneously, including using emergency credentialing, supervision, and labor pool. • Depending on the hospital's overall posture (continuing operations vs. evacuation), and if there are safe ways to leave the area, implement a plan to decant staff from the hospital. • Maintain a continuity of operations posture with staffing; maintain shift plan with those who stay to ensure rest periods. • If there are plans to close the facility, determine which members of the stay team will remain at the facility until it is fully shuttered.

PRE-PLANNING	0–24 HOURS POST-DETONATION Themes: Self-Defense & Managing the Surge	24–48 HOURS POST-DETONATION Themes: Gathering Information, Making Connections & Managing the Surge	48–72 HOURS POST-DETONATION Theme: Creating Pathways & Deciding Whether to Evacuate
		• Develop and implement plan to use staff and volunteers who arrive spontaneously. Plan should include disaster credentialing, supervision, and use of labor pool.	

Beyond Damage Zone

PRE-PLANNING	0–24 HOURS POST-DETONATION Themes: Self Defense	24–48 HOURS POST-DETONATION Themes: Managing the Surge	48–72 HOURS POST-DETONATION Theme: Beginning to Establish the New Normal
• Determine at the organizational level how to account for all employees using paper and electronic methods; also note which HICS role will fulfill this task. • Develop protocols and procedures to support a staff information function—specifically to gather and maintain information about onsite staff's loved ones.	• Assume facility will only have staff who are onsite for the next 24-plus hours. Adapt existing staff management and hoteling plans to maximize use of onsite staff. • Create a list of staff who are present and the known location of their loved ones at the time of the detonation. • Relying on social work staff and family reunification plans, set up a staff function to gather and report information about loved ones to staff. • Institute Psychological First Aid for staff. • Forward plan to surge staffing levels once SIP order is lifted. Plan to bring in available facility staff and staff from sister facilities in the LDZ and MDZ who cannot report to work. Anticipate new roles and develop modified job action sheets.	• Maintain staff information function. • Maintain enhanced staffing for safety and security functions. • With IC, continue identifying new tasks and associated roles. Develop modified job descriptions and plan for how to fulfill the roles. • Continue providing Psychological First Aid supports for staff. • Once SIP order is lifted, oversee departure of current staff and entry of new staff. • Debrief current workers who want to leave (focus on mental health/well-being); have a clear plan for when they will be needed again. • Provide support such as shelter, clothing, and food to staff who live in the MDZ or LDZ.	• Maintain staff information function. • Maintain enhanced staffing for safety and security functions. • With IC, continue identifying new tasks and associated roles. Develop modified job descriptions and plan to fulfill the roles. • Communicate with facility and health system staff regarding staffing needs. • Continue to incorporate staff from other facilities who come to assist and volunteers. • As local Assembly Centers (for uninjured) and other community areas are established, work with government representatives to maximize use of volunteers across these locations.

PRE-PLANNING	0–24 HOURS POST-DETONATION Themes: Self Defense	24–48 HOURS POST-DETONATION Themes: Managing the Surge	48–72 HOURS POST-DETONATION Theme: Beginning to Establish the New Normal
	• Anticipate arrival of off-duty staff and spontaneous volunteers from other health systems and the broader community. With IC and clinical leadership, develop plans to screen and use these individuals as appropriate. • Ensure provision of additional staff to support radiological monitoring and safety and security functions. Safety and security are critical to the staff's ability to function.	• Enable incoming staff to bring family and pets with them; set up shifts with expectation that staff will stay for an extended period of time. Establish on/off shift cohorts to ensure adequate rest cycles. • Incorporate staff from other facilities and volunteers. Consider using a buddy system. • Leverage available transportation resources to bring in needed staff. • Continue to provide *Just In Time* training and orientation for Acute Radiation Sickness screening.	• Use nearby facilities (e.g., ambulatory care facility, office buildings) as hoteling/sheltering for staff who cannot leave and/or working staff. Maintain a safe hoteling space. • Maintain communication strategies on the need for staff to remain in the area and return to work after their shifts end, and provide mental health care for staff. • Continue to provide *Just In Time* training and orientation for Acute Radiation Sickness screening.

TOPIC: UTILITIES
Moderate Damage Zone

0–24 HOURS POST-DETONATION Themes: Surviving, Assessing & Planning	24–48 HOURS POST-DETONATION Themes: Surviving, Gathering Information & Preparing to Leave	48–72 HOURS POST-DETONATION Theme: Evacuating
• Turn off heating, ventilation, and air conditioning (HVAC) systems and chillers. • Seal off labs. • Check/shut off oxygen lines and other medical gases. • Assess power; check and use generators as needed. • Assess water lines to determine if incoming water is usable or if back-up water supply needs to be used. • Assess elevators. Free anyone who is trapped.* • Refer to 96-hour sustainment plan and adapt as needed for the situation. • Provide information to IC and clinical staff to inform internal evacuation of patients to safer areas of the building.	• Reference utility plans and conduct full reassessment (critical equipment, medical gases, water, HVAC, etc.). With clinical leadership, determine how this will affect services, such as loss of steam for sterilization. • Continually monitor supplies for utilities, including alternate water sources and generator fuel; project burn rate and ration resources. • After 12 hours, fallout will diminish. If HVAC filters need replacement due to high resistance, replace only if exposure rates will not result in significant doses to workers; otherwise, allow more time for decay. Unfiltered HVAC systems may need assessment before resuming operations. More decay time may be warranted if measurements so indicate. • Restore services as possible and work with what is available (e.g., multiple services on different electric grids may require movement of patients or equipment).	• Water, generator-supplied electricity, and other utilities dependent on finite resources will be grave concerns. Maintain operations based on availability and facility rationing plan/degradation of services plan. Conserve fuel by running generators for only six hours, use electricity only at night if possible, and prioritize which areas of the hospital will get power. • Determine if some utilities can run on alternate power sources such as natural gas.

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Light Damage Zone

0–24 HOURS POST-DETONATION Themes: Self-Defense & Managing the Surge	24–48 HOURS POST-DETONATION Themes: Gathering Information, Making Connections & Managing the Surge	48–72 HOURS POST-DETONATION Theme: Creating Pathways & Deciding Whether to Evacuate
• Assume facility is in the fallout zone until proven otherwise. • Turn off HVAC systems and chillers. • Seal off labs. • Check/shut off oxygen lines and other medical gases. • Assess power; check and begin using generators as needed. • Assess water lines to determine if incoming water is usable or if back-up water supply needs to be used • Assess elevators. Free anyone who is trapped.* • Refer to 96-hour sustainment plan and adapt as needed for the situation. • Provide information to IC and clinical staff to inform internal evacuation of patients to safer areas of the building.	• Based on ongoing monitoring, determine when fallout risk subsides. • Reference utility plans and conduct full reassessment (critical equipment, medical gases, water, HVAC, etc.). With clinical leadership, determine how this will affect services, such as loss of steam for sterilization. • Continually monitor supplies related to utilities, including alternate water sources and generator fuel; project burn rate and begin rationing resources. • After 12 hours, fallout diminishes. Replace HVAC filters only if exposure rates will not result in significant doses to workers, otherwise, allow more time for decay. Unfiltered HVAC systems may need assessment before resuming operations. More decay time may be warranted if measurements so indicate. • Restore services as possible and work with what is available (e.g., multiple services on different electric supplies may require movement of patients or equipment).	• Water, generator-supplied electricity, and other utilities dependent on finite resources will be grave concerns. Maintain operations based on availability and facility rationing plan/degradation of services plan. Ration generators by running them for only six hours to conserve fuel, use electricity only at night where possible, and prioritize which areas of the hospital will get power. • Determine whether some utilities can run on alternate power sources such as natural gas.

* Elevators act like pistons and move great volumes of air throughout a building. Elevator shafts are open to the elevator machine rooms, which in turn are open to the exterior trough windows or vents. If left open, elevator shafts will pull contaminated air in and push it throughout the building.

Beyond Damage Zone

0–24 HOURS POST-DETONATION Themes: Self Defense	24–48 HOURS POST-DETONATION Themes: Managing the Surge	48–72 HOURS POST-DETONATION Theme: Beginning to Establish the New Normal
• Assume facility is in the fallout zone until proven otherwise. • Turn off HVAC systems. • Seal off labs. • Check/shut off oxygen lines and other medical gases. • Assess power; check and use generators as needed. Assess how long the facility can run on generator with current supplies. • Assess water lines and determine if incoming water is usable or if back-up water supply should be used. • Once situation has stabilized, begin forward planning for likely patient surge, which will increase stress on utilities.	• Based on ongoing monitoring, determine when risk of fallout subsides. • Refer to utility plans and conduct full reassessment (critical equipment, medical gases, water, HVAC, etc.). • After 12 hours, fallout diminishes. Replace HVAC filters only if exposure rates will not result in significant doses for workers (otherwise, allow more time for decay). Unfiltered HVAC systems may need assessment before resuming operations. More decay time may be warranted if measurements so indicate. • If power is available, return to grid power; otherwise, continue using generators (fuel and related supplies will likely be needed to run generators for extended periods). • Restore services as possible and work with what is available (e.g., multiple services on different electric supplies may require the movement of patients or equipment).	• Water, generator-supplied electricity, and other utilities dependent on finite resources will be grave concerns. Maintain operations based on availability and a rationing plan. Ration generators by running them for only six hours to conserve fuel, use electricity only at night where possible, and prioritize which areas of the hospital will get power. • Determine if some utilities can run on alternate power sources, such as natural gas. • Communicate utility needs and offer contingency strategies to government entities, emphasizing that the needs are high priority for the facility's continued operation.