

Incident Response Guide: Radiation Incident

Mission

To provide a safe environment for patients, staff, and visitors within the hospital following a radiation incident that may or may not impact the safety and structural integrity of the hospital or availability of services; and to provide the safe continuation of care for patients, visitors, and those seeking care post-incident.

Directions

Read this entire response guide and review the Hospital Incident Management Team Activation chart. Use this response guide as a checklist to ensure all tasks are addressed and completed.

Objectives

- Provide safe and effective decontamination of incoming contaminated patients
- Protect patients, staff, and the hospital from contamination and safely restore normal operations
- Communicate effectively with the local Emergency Operations Center and emergency response partners

Immediate Response (0 – 2 hours)

Section	Officer	Time	Action	Initials
Command	Incident Commander		Receive notification of the incident. Notify the emergency department of incoming casualties that are possibly contaminated with radiation.	
			Activate the Emergency Operations Plan, Radiation Incident Plan, Decontamination Plan, Hospital Incident Management Team, and Hospital Command Center.	
			In conjunction with Medical-Technical Specialist: Radiological or Radiation Safety Officer, determine threat to the hospital any need for shelter-in-place or hospital evacuation.	
			Notify hospital Chief Executive Officer, Board of Directors, and other appropriate internal and external officials of situation status.	
			Establish operational periods, incident objectives, and regular briefing schedule. Consider use of Incident Action Plan Quick Start form for initial documentation of the incident.	
			Consider limiting or closing nonessential services.	
			Consider activation of ambulance diversion status.	
	Public Information Officer		Develop patient, staff, and community response messages to convey hospital preparations, services, and response.	
			Monitor media outlets for updates on the incident and possible impacts on the hospital.	
			Communicate information via regular briefings to Section Chiefs and Incident Commander.	
	Liaison Officer		Notify community partners in accordance with local policies and procedures (e.g., consider local Emergency Operations Center, other area healthcare facilities, local emergency medical services, and healthcare coalition coordinator), including requesting supplies, equipment, or personnel not available in the facility.	

			Contact appropriate authorities and experts to provide hospital status, and to request support and recommendations for radiological contamination.	
	Safety Officer		Monitor safe activation of the Radiation Incident Plan and the Decontamination Plan.	
			Evaluate for potential secondary hospital contamination and contain any detected contaminated areas within the hospital.	
			Conduct ongoing analysis of existing response practices for health and safety issues related to patients, staff, and hospital and implement corrective actions to address; complete HICS 215A.	
			Monitor safe and consistent use of appropriate personal protective equipment by all staff.	
	Medical-Technical Specialist: Radiological		Assist in obtaining specific information regarding radiological agent such as antidotes, treatment, decontamination procedures, etc.	
			Provide expert input in the Incident Action Planning process.	
			Assist the Incident Commander in determining the radiological threat to the hospital and the need for shelter-in-place or hospital evacuation.	

Immediate Response (0 – 2 hours)				
Section	Branch/Unit	Time	Action	Initials
Operations	Section Chief		Implement the Radiation Incident Plan.	
			Implement Shelter-in-Place or Evacuation Plan as directed by the Incident Commander.	
	Medical Care Branch Director		Conduct an inpatient and outpatient census and prioritize patients for safe discharge or cancellation of appointments and procedures.	
			Identify evacuation priorities and transfer requirements.	
			Determine patient capacity required to handle patient surge in shelter-in-place conditions.	
			Prepare for fatalities, including contaminated remains, in conjunction with medical examiner and coroner and local emergency management.	

	Infrastructure Branch Director		As directed, implement the hospital's Shelter-In-Place Plan, including heating, ventilation, and air conditioning shutdown, and sealing of the hospital.		
			Conduct a damage, structural integrity, and utilities assessment of the hospital.		
			Monitor hospital air quality for safe occupation.		
	Security Branch Director		Secure the hospital to prevent contaminated individuals from entering or leaving.		
			Establish and maintain a limited number of ingress and egress routes.		
			Establish and secure areas for collection of contaminated belongings and valuables.		
	HazMat Branch Director		<p>Implement the hospital's Decontamination Plan:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Establish triage and decontamination areas with a clear perimeter and directions on ingress and egress <input type="checkbox"/> Provide rapid triage and disposition of potentially contaminated patients, non-contaminated patients, media, family members, etc. <input type="checkbox"/> Access radiation monitoring equipment for use in decontamination operations <input type="checkbox"/> Implement staff monitoring in and rotation through the decontamination area <input type="checkbox"/> Consult with Medical-Technical Specialist: Radiological, Radiation Emergency Assistance Center/Training Site (REAC/TS) and Radiation Emergency Medical Management (REMM), and internal and external agencies or consultants to ascertain treatment protocols <input type="checkbox"/> Relocate medications and antidotes to clinical care and decontamination areas <input type="checkbox"/> Consider the need for evidence collection 		
	Planning	Section Chief		Establish operational periods, incident objectives, and the Incident Action Plan in collaboration with the Incident Commander.	
		Resources Unit Leader		Initiate personnel and materials tracking.	
Situation Unit Leader			Initiate patient and bed tracking.		
Logistics	Section Chief		Activate the Support Branch to provide the logistics needs of hospital staff and operations.		

	Support Branch		Manage labor pool and solicited or unsolicited volunteers.	
			Initiate staff call-in systems, if instructed and if it is safe to do so.	
			Inventory equipment, supplies, and medications on hand and prepare to ration materials as needed.	
			Anticipate an increased need for medical and surgical supplies, medications, and equipment and take actions to obtain when possible.	

Intermediate Response (2 – 12 hours)

Section	Officer	Time	Action	Initials
Command	Incident Commander		Reevaluate need to shelter-in-place versus evacuate.	
			Coordinate communications and decision making with external agencies and area hospitals as appropriate.	
			Direct implementation of any and all additional response plans required to address the incident.	
			Consider deploying a hospital representative to the local Emergency Operations Center.	
	Public Information Officer		Conduct briefings to media, patients, staff, visitors, and persons seeking shelter to update them on incident and hospital status.	
			Coordinate risk communication messages with the Joint Information Center, if able.	
			Assist with notification of patients' families about the incident and the likelihood of evacuation, if required.	
	Liaison Officer		Maintain contact with local Emergency Operations Center, local emergency medical services, regional medical resources, and area hospitals to relay status and critical needs, and to receive community updates.	
	Safety Officer		Continue to implement and maintain safety and personal protective measures to protect patients, staff, visitors, and the hospital.	

			Continue to monitor proper use of personal protective equipment and decontamination procedures.	
	Medical-Technical Specialist: Radiological		Support the Operations Section, as needed, by coordinating information regarding specific decontamination and treatment procedures; provide direct oversight to decontamination operations as directed.	
			Continue to provide expert input into the Incident Action Planning process.	

Intermediate Response (2 – 12 hours)

Section	Branch/Unit	Time	Action	Initials
Operations	Section Chief		Monitor continuation of medical mission activities.	
	Medical Care Branch Director		Continue patient, staff, and hospital monitoring for radiation exposure, and provide appropriate follow up as required.	
			Evaluate and update staff scheduling to accommodate decontamination team supplementation.	
			Activate the Fatalities Management Plan and management of contaminated remains.	
	HazMat Branch Director		Assess the need for continued decontamination and monitoring activities based on current and projected event status.	
	Patient Family Assistance Branch Director		Establish a patient information center in cooperation with the Liaison Officer.	
		With Public Information Officer, assist with the notification of patients' families about incident and the likelihood of evacuation, if required.		
Planning	Section Chief		Revise and update Incident Action Plan, including planning for supplies, staffing, and other needs.	
	Resources Unit Leader		Continue personnel and materials tracking.	
	Situation Unit Leader		Continue patient and bed tracking.	
Logistics	Section Chief		Refer to Job Action Sheet for appropriate tasks.	
	Support Branch		Continue to assess surge capacity and need for personnel and supplies (e.g., equipment, blood	

	Director		products, medications, etc.) in cooperation with Operations Section. Obtain supplies as required and available or continue supply rationing.	
			Initiate employee monitoring for radiation exposure and provide appropriate follow up care.	
			Establish Employee Family Care Unit, if required.	
			Continue staff call-in (if safe to do so) and provide additional staff to impacted areas.	
Finance/ Administration	Section Chief		Refer to the Job Action Sheet for appropriate tasks.	
	Time Unit Leader		Initiate tracking of hours associated with the emergency response.	
	Procurement Unit Leader		Facilitate procurement of needed supplies, equipment, and contractors.	
	Compensation/Claims Unit Leader		Assess and implement risk management and claims procedures for reported staff and patient exposures or injuries.	

Extended Response (greater than 12 hours)

Section	Officer	Time	Action	Initials
Command	Incident Commander		Reassess incident objectives and Incident Action Plan; revise as indicated by the response priorities and overall mission.	
			Continue regular briefing of Command Staff and Section Chiefs.	
			Reevaluate the hospital's ability to continue its medical mission.	
			Plan for return to normal services in coordination with Command Staff and Section Chiefs.	
	Public Information Officer		Continue regularly scheduled briefings to media, patients, staff, families, and persons seeking shelter.	
			Communicate regularly with the Joint Information Center to update hospital status and coordinate public information messages.	
	Liaison Officer		Maintain contact with local Emergency Operations Center, regional medical resources, and area hospitals to relay status and critical needs, and to receive incident and community updates.	

	Safety Officer		Continue to oversee safety measures and use of personal protective equipment for patients, staff, and visitors.	
			Monitor radiation exposures and decontamination operations.	
			Update HICS 215A with revised use of personal protective equipment, access to hospital and decontamination areas.	
	Medical-Technical Specialist: Radiological		Continue to support the Operations Section as needed by coordinating information regarding specific decontamination and treatment procedures.	
			Continue to provide expert input into the Incident Action Planning process.	

Extended Response (greater than 12 hours)

Section	Branch/Unit	Time	Action	Initials
Operations	Section Chief		Monitor the continuation of medical mission activities, including patient care and hazardous materials (HazMat) activities.	
			Ensure that all documentation, including damage assessments, repair costs, and materials tracking are submitted to Planning Section.	
	Medical Care Branch Director		Continue patient monitoring for radiation exposure and provide appropriate follow up care as required.	
	Infrastructure Branch Director		Continue infrastructure monitoring and air monitoring in collaboration with Safety Officer.	
			When safe and with Medical-Technical Specialist: Radiological, conduct an external inspection of the hospital for damage and determine need for decontamination of outside the hospital.	
			Complete a hospital damage report, progress of repairs, and estimated timelines for restoration of hospital to pre-incident condition.	
	Security Branch Director		Continue to ensure hospital security, traffic, and crowd control.	
			Monitor enforcement of hospital policies and cooperation with local, state, and federal law enforcement agencies when interviewing patients and collecting evidence.	

	Hazmat Branch Director		Provide for hospital and equipment decontamination where appropriate.	
Planning	Section Chief		Update and revise the Incident Action Plan in collaboration with the Command Staff and Section Chiefs.	
			Ensure that updated information and intelligence is incorporated into Incident Action Plan. Ensure the Demobilization Plan is being readied.	
	Situation Unit Leader		Update status boards and other communication devices with latest hospital and community status.	
Logistics	Section Chief		Refer to the Job Action Sheet for appropriate tasks.	
	Support Branch Director		Monitor and address the health status of staff that participated in, supported, or assisted in decontamination activities.	
			Restock and repair all supplies and equipment used in the response.	
Finance/ Administration	Section Chief		Refer to the Job Action Sheet for appropriate tasks.	
	Procurement Unit Leader		Facilitate procurement of needed supplies, equipment, and contractors.	
	Compensation/Claims Unit Leader		Assess and implement risk management and claims procedures for reported staff and patient exposure injuries.	
	Cost Unit Leader		Continue to track response costs and expenditures and prepare regular reports for the Incident Commander.	

Demobilization/System Recovery

Section	Officer	Time	Action	Initials
Command	Incident Commander		Determine termination of event or “all clear” in collaboration with Command Staff, Section Chiefs, local law enforcement, and HazMat officials.	
			Oversee and direct demobilization and system recovery operations with restoration of normal services.	

			Ensure that processes are mobilized to complete the response documentation for submission for reimbursement.	
	Public Information Officer		Conduct final media briefing and assist with updating staff, patients, people seeking shelter, families, and others of termination of the incident.	
	Liaison Officer		Communicate the final hospital status and termination of the incident to regional medical health coordinator, local Emergency Operations Center, local emergency medical services, and area hospitals.	
	Safety Officer		Monitor proper disposal of contaminated waste and wastewater.	
			Assist with monitoring completion of hospital repairs and decontamination, in conjunction with Operations Section.	
			Monitor and maintain a safe environment during return to normal operations.	
			Monitor safety practices related to patient care and services returning to normal operations.	

Demobilization/System Recovery

Section	Branch/Unit	Time	Action	Initials
Operations	Medical Care Branch Director		Coordinate patient care services returning to normal operations.	
	Infrastructure Branch Director		Restore heating, ventilation, and air conditioning systems to normal service.	
			Continue to monitor proper disposal of contaminated waste and wastewater.	
			Conduct or facilitate hospital repairs and return of hospital to normal operating conditions.	
	Security Branch Director		Return entry and egress restrictions, traffic flow, and security personnel to normal services.	
			Submit all section documentation to Planning Section for compilation in an After Action Report.	

	HazMat Branch Director		Ensure that all personnel, supplies, and equipment utilized in the response have been properly decontaminated and stored.	
			With Infrastructure Branch Director, monitor and manage decontamination of hospital.	
			Finalize and distribute Demobilization Plan.	
			Conduct debriefings and hotwash with: <input type="checkbox"/> Command Staff and section personnel <input type="checkbox"/> Administrative personnel <input type="checkbox"/> All staff <input type="checkbox"/> All volunteers	
			Write an After Action Report and Corrective Action and Improvement Plan for submission to the Incident Commander, including: <input type="checkbox"/> Summary of the incident <input type="checkbox"/> Summary of actions taken <input type="checkbox"/> Actions that went well <input type="checkbox"/> Actions that could be improved <input type="checkbox"/> Recommendations for future response actions	
	Documentation Unit Leader		Collect, correlate, and archive all electronic and written documentation generated in the event response.	
			Prepare summary of the status and location of all incident patients, staff, and equipment. After approval by the Incident Commander, distribute to appropriate external agencies.	
Logistics	Section Chief		Inventory all Hospital Command Center and hospital supplies and replenish as necessary, appropriate, and available.	
	Support Branch Director		Initiate long term monitoring of employees exposed to radiation or that participated in decontamination or patient care activities, including provision of behavioral health services, as required.	
Finance/ Administration	Section Chief		Refer to the Job Action Sheets for appropriate tasks.	
	Compensation / Claims Unit Leader		Contact insurance carriers to assist in documentation of structural and infrastructure damage and initiate reimbursement and claims procedures.	
	Cost Unit Leader		Compile final summary of response and recovery costs, expenditures and estimated lost revenues; submit to Planning Section Chief for inclusion in the After Action Report.	

Documents and Tools

Emergency Operations Plan, including:

- Radiation Incident Plan
- Decontamination Plan
- Shelter-in-Place Plan
- Evacuation Plan
- Surge Plan
- Triage Plan
- Patient, staff, and equipment tracking procedures
- Employee Health Monitoring and Treatment Plan
- Business Continuity Plan
- Behavioral Health Support Plan
- Alternate Care Site Plan
- Hospital Security Plan
- Fatality Management Plan
- Volunteer Utilization Plan
- Emergency Patient Registration Plan
- Risk Communications Plan
- Interoperable Communications Plan
- Demobilization Plan

Forms, including:

- HICS Incident Action Plan (IAP) Quick Start
- HICS 200 – Incident Action Plan (IAP) Cover Sheet
- HICS 201 – Incident Briefing
- HICS 202 – Incident Objectives
- HICS 203 – Organization Assignment List
- HICS 205A – Communications List
- HICS 214 – Activity Log
- HICS 215A – Incident Action Plan (IAP) Safety Analysis
- HICS 221 – Demobilization Checklist
- HICS 251 – Facility System Status Report
- HICS 253 – Volunteer Registration
- HICS 254 – Disaster Victim/Patient Tracking
- HICS 255 – Master Patient Evacuation Tracking

Job Action Sheets

Access to hospital organization chart

Access to HazMat/Terrorism/CBRNE annexes of local Emergency Operations Plan

Television/radio/internet to monitor news

Telephone/cell phone/satellite phone/internet/amateur radio/2-way radio for communication

Hospital Incident Management Team Activation: Radiation Incident

Position	Immediate	Intermediate	Extended	Recovery
Incident Commander	X	X	X	X
Public Information Officer	X	X	X	X
Liaison Officer	X	X	X	X
Safety Officer	X	X	X	X
Medical-Technical Specialist: Radiological	X	X	X	X
Operations Section Chief				
Medical Care Branch Director	X	X	X	X
Infrastructure Branch Director	X	X	X	X
Security Branch Director	X	X	X	X
HazMat Branch Director	X	X	X	X
Patient Family Assistance Branch Director		X	X	X
Planning Section Chief				
Resources Unit Leader	X	X	X	X
Situation Unit Leader	X	X	X	X
Documentation Unit Leader				X
Logistics Section Chief				
Support Branch Director	X	X	X	X
Finance /Administration Section Chief				
Time Unit Leader		X	X	X
Procurement Unit Leader		X	X	X
Compensation/Claims Unit Leader		X	X	X
Cost Unit Leader			X	X