FY2017 RITN Boston Regional Response

Full Scale Exercise

After-Action Report/Improvement Plan

August 2, 2017

Prepared by:

MASSACHUSETTS GENERAL HOSPITAL

CENTER FOR DISASTER MEDICINE

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EXERCISE OVERVIEW

Exercise Name	FY2017 Radiation Injury Treatment Network (RITN) Boston Regional Response Full Scale Exercise
Exercise Dates	August 2, 2017
Scope	This exercise is a full scale exercise, planned for 4 hours at multiple sites within the Boston Region. Exercise play is limited to actions taken by command-level staff at Regional RITN Treatment Centers, EMS agencies, and local, state, and federal stakeholders involved in activation of the RITN and Boston Patient Reception Area (PRA).
Mission Area(s)	Response
Core Capabilities	Operational Communications Operational Coordination Public Health, Healthcare, and Emergency Medical Services Situational Assessment
Healthcare Preparedness & Response Capabilities	Capability 2: Health Care and Medical Response Coordination Capability 3: Continuity of Health Care Service Delivery Capability 4: Medical Surge
Objectives	Objective 1: Evaluate the ability of Incident Command Teams at participating RITN Treatment Centers to prepare and submit a RITN Capabilities Report to the RITN Control Cell within 14 hours of being notified of an incident, as outlined in the RITN Concept of Operations Objective 2: Examine the ability of assigned organizations to coordinate and support the consistent triage and treatment of patients arriving at the Patient Reception Area by utilizing local resources as outlined in the Boston FCC Operations Plan and in conjunction with RITN SOPs. Objective 3: Examine the ability of assigned organizations to oversee the distribution and transport of patients arriving at the Patient Reception Area within the Region 1 Federal Coordinating Center (FCC) as identified in the Boston FCC Operations Plan. Objective 4: Evaluate the ability of Incident Command Teams at RITN Treatment Centers to coordinate the delivery of all definitive care elements for patients arriving from the Federal Coordinating Center as part of an RITN activation as outlined in the RITN Concept of Operations and described in site-specific RITN SOPs. Objective 5: Assess the ability of Incident Command Teams at RITN Treatment Centers to report all required information, including bed availability and patient condition update reports as outlined in the Boston FCC Operations Plan, and casualty reports to the National Marrow Donor Program (NMDP) per the RITN Concept of Operations. Objective 6: Examine the ability of the US Department of Health and Human Services (HHS) Service Access Team (SAT) and the US Department of Veterans Affairs (VA) Boston Healthcare System (BHS) to effectively function in liaison roles

	outlined in the SAT and FCC Concept of Operations documents in the context of an RITN activation scenario.
Threat or Hazard	Patient surge resulting from remote large scale radiation incident
Scenario	Detonation of 1 kiloton improvised nuclear device within Chicago metropolitan area. Local healthcare infrastructure has been overwhelmed with patients seeking specialized care, and the Radiation Injury Treatment Network has been activated. Approximately 96 hours post-incident, the RITN confirms that Boston will receive patients from this event.
Sponsor	Massachusetts General Hospital Center for Disaster Medicine (MGH CDM) *This exercise was made possible by funding awarded through the FY2017 Radiation Injury Treatment Network (RITN) Functional Exercise Grant, with support from the National Marrow Donor Program (NMDP) and the Department of the Navy, Office of Naval Research for the NMDP (ONR)*
Participating Organizations	Command-level staff at Regional RITN Treatment Centers, EMS agencies, and local, state, and federal stakeholders involved in activation of the RITN and Boston Patient Reception Area (PRA). For a full list of participants, please see Appendix B.
Points of Contact	**Robert Krupa**, MS, AEM, MEP Planning, Training, & Exercise Program Manager, Center for Disaster Medicine Massachusetts General Hospital rkrupa@partners.org **Jacquelyn Nally**, BSN, MA, RN, CEM Senior Program Manager, Center for Disaster Medicine Massachusetts General Hospital jnally@partners.org

EXERCISE OBJECTIVES AND ASSOCIATED CAPABILITIES

The following exercise objectives in Table 1 describe the expected outcomes for the exercise. The objectives are linked to core capabilities, which are distinct critical elements necessary to achieve the specific mission area(s). The objectives and aligned core capabilities are guided by elected and appointed officials and selected by the Exercise Planning Team. Also included are aligned Department of Health and Human Services (HHS) Assistant Secretary for Preparedness and Response (ASPR) Healthcare Preparedness and Response Capabilities.

Exercise Objective	Core Capability	Healthcare Preparedness and Response Capability
Evaluate the ability of Incident Command Teams at participating RITN Treatment Centers to prepare and submit a RITN Capabilities Report to the RITN Control Cell within 14 hours of being notified of an incident, as outlined in the RITN Concept of Operations	Situational Assessment	Health Care and Medical Response Coordination
Examine the ability of assigned organizations to coordinate and support the consistent triage and treatment of patients arriving at the patient reception area (PRA) by utilizing local resources as outlined in the Boston FCC Operations Plan and in conjunction with RITN SOPs.	Public Health, Healthcare, & EMS	Health Care and Medical Response Coordination
Examine the ability of assigned organizations to oversee the distribution and transport of patients arriving at the Patient Reception Area within the Region 1 Federal Coordinating Center as identified in the Boston FCC Operations Plan.	Public Health, Healthcare, & EMS	Continuity of Health Care Service Delivery
Evaluate the ability of Incident Command Teams at RITN Treatment Centers to coordinate the delivery of all definitive care elements for patients arriving from the Federal Coordinating Center as part of an RITN activation as outlined in the RITN Concept of Operations and described in site-specific RITN SOPs.	Public Health, Healthcare, & EMS	Medical Surge
Assess the ability of Incident Command Teams at RITN Treatment Centers to report all required information, including bed availability and patient condition update reports as outlined in the Boston FCC Operations Plan, and casualty reports to the NMDP per the RITN Concept of Operations.	Operational Communications	Health Care & Medical Response Coordination
Examine the ability of the US Department of Health and Human Services (HHS) Service Access Team (SAT) and the US Department of Veterans Affairs (VA) Boston Healthcare System (BHS) to effectively function in liaison roles outlined in the SAT and FCC Concept of Operations documents in the context of an RITN activation scenario.	Operational Coordination	Health Care & Medical Response Coordination

Table 1. Exercise Objectives and Associated Core Capabilities and Healthcare Preparedness and Response Capabilities

ANALYSIS OF CORE CAPABILITIES

Aligning exercise objectives and core capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis. Table 2 includes the exercise objectives, aligned core capabilities, and performance ratings for each core capability as observed during the exercise and determined by the evaluation team.

Objective	Core Capability	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
Evaluate the ability of Incident Command Teams at participating RITN Treatment Centers to prepare and submit a RITN Capabilities Report to the RITN Control Cell within 14 hours of being notified of an incident, as outlined in the RITN Concept of Operations	Situational Assessment		**S**		
Examine the ability of assigned organizations to coordinate and support the consistent triage and treatment of patients arriving at the patient reception area (PRA) by utilizing local resources as outlined in the Boston FCC Operations Plan and in conjunction with RITN SOPs.	Public Health, Healthcare, & EMS	**P**			
Examine the ability of assigned organizations to oversee the distribution and transport of patients arriving at the Patient Reception Area within the Region 1 Federal Coordinating Center as identified in the Boston FCC Operations Plan.	Public Health, Healthcare, & EMS		**S**		

Objective	Core Capability	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
Evaluate the ability of Incident Command Teams at RITN Treatment Centers to coordinate the delivery of all definitive care elements for patients arriving from the Federal Coordinating Center as part of an RITN activation as outlined in the RITN Concept of Operations and described in site-specific RITN SOPs.	Public Health, Healthcare, & EMS		**S**		
Assess the ability of Incident Command Teams at RITN Treatment Centers to report all required information, including bed availability and patient condition update reports as outlined in the Boston FCC Operations Plan, and casualty reports to the NMDP per the RITN Concept of Operations.	Operational Communications				**U**
Examine the ability of the US Department of Health and Human Services (HHS) Service Access Team (SAT) and the US Department of Veterans Affairs (VA) Boston Healthcare System (BHS) to effectively function in liaison roles outlined in the SAT and FCC Concept of Operations documents in the context of an RITN activation scenario.	Operational Coordination		**S**		

Table 2. Summary of Core Capability Performance

Ratings Definitions:

Performed without Challenges (P): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.

Performed with Some Challenges (S): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.

Performed with Major Challenges (M): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.

Unable to be Performed (U): The targets and critical tasks associated with the core capability were not performed in a manner that achieved the objective(s).

The following sections provide an overview of the performance related to each exercise objective and associated core capability, highlighting strengths and areas for improvement.

Objective 1: Evaluate the ability of Incident Command Teams at participating RITN Treatment Centers to prepare and submit a RITN Capabilities Report to the RITN Control Cell within 14 hours of being notified of an incident, as outlined in the RITN Concept of Operations.

The strengths and areas for improvement for the core capability aligned to this objective are described in this section.

Core Capability: Situational Assessment

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Participating RITN Treatment Centers received activation message and communicated activation with internal stakeholders and Subject Matter Experts (e.g. Admitting / Registration, Bone Marrow Transplant, etc.) in a timely manner.

Strength 2: Participating RITN Treatment Centers reviewed their capabilities as outlined in the RITN Capabilities Report, gathering data within 14 hours of request as outlined in the RITN Concept of Operations.

Strength 3: RITN Treatment Center staff submitted completed Capabilities Reports electronically to the RITN Control Cell via HealthCare Standard system within appropriate timeframes, and demonstrated their ability to submit manual capabilities reports via email.

Areas for Improvement

The following area requires improvement to achieve the full capability level:

Area for Improvement 1: The ability to consolidate and share information among RITN Treatment Centers and local, state, regional and federal partners is limited.

Reference: National Disaster Medical System Boston, MA FCC Operations Plan (2015)

Analysis: During an activation of the NDMS due to a large-scale radiation incident, bed availability information is currently reported to the MA Department of Public Health (MA DPH) as well as directly to the RITN. The FCC then receives bed availability information from MA DPH via the online incident management portal WebEOC. The information reported to DPH does not clearly identify specialty beds, such as those required to treat patients with complex radiation injuries. It is unclear as to how RITN information reported to the federal level (HHS Emergency Management Group (EMG) at the HHS Secretary Operation Center (SOC) is shared with state entities.

Objective 2: Examine the ability of assigned organizations to coordinate and support the consistent triage and treatment of patients arriving at the patient reception area (PRA) by utilizing local resources as outlined in the Boston FCC Operations Plan and in conjunction with RITN SOPs.

The strengths and areas for improvement for the core capability aligned to this objective are described in this section.

Core Capability: Public Health, Healthcare, & EMS

Strengths

The full capability level can be attributed to the following strengths:

Strength 1: EMS personnel and Bone Marrow Transplant (BMT) physician subject matter experts triaged patients upon their arrival to the PRA, identifying patients that may have decompensated during transport and appropriately diverting patients in need of rapid access to definitive care.

Strength 2: Changes to patient information or destination location were communicated by the triage team to FCC leadership and the Joint Patient Assessment and Tracking System (JPATS) team leader.

Strength 3: FCC leadership communicated with RITN Treatment Facilities to ensure changes were recognized by all involved parties, providing a redundancy to JPATS updates.

Areas for Improvement

The following areas may be improved to enhance the current capability level:

Area for Improvement 1: The role of subject matter experts in acute radiation sickness (ARS) at the Patient Reception Area requires additional investigation.

Reference: National Disaster Medical System Boston, MA FCC Operations Plan (2015)

Analysis: Regional planning discussions surrounding activation of the Boston FCC following a large-scale radiation incident identified a potential need for acute radiation syndrome (ARS) subject matter expertise at the patient reception area to assist in triage. Through the exercise it was determined that, due to the extended timeline of the coordination and execution of transporting patients with radiation illness following a large-scale event, that other clinicians without ARS expertise would likely be equally sufficient in triaging patients upon arrival, and ARS expertise may be more valuable onsite at the Treatment Centers. It was observed that attempting to review patients in a more detailed manner created the potential for a bottleneck in patient flow, and that patients should instead be prioritized for transfer to definitive care.

Objective 3: Examine the ability of assigned organizations to oversee the distribution and transport of patients arriving at the Patient Reception Area within the Region 1 Federal Coordinating Center as identified in the Boston FCC Operations Plan.

The strengths and areas for improvement for the core capability aligned to this objective are described in this section.

Core Capability: Public Health, Healthcare, & EMS

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: EMS personnel coordinated distribution of patients to appropriate RITN Treatment Centers based on aircraft manifests provided by the FCC.

Strength 2: EMS personnel referenced standing transport capability documents to determine available transport resources.

Strength 3: EMS personnel efficiently allocated transport resources, utilizing busses and other means of transport for non-critical transport when appropriate.

Strength 4: JPATS team members ensured tracking of patients in JPATS system through collaboration with EMS personnel.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: FCC personnel will need a local liaison to facilitate human services requests for patients arriving at the PRA.

Reference: National Disaster Medical System Boston, MA FCC Operations Plan (2015)

Analysis: It was acknowledged during exercise play that human services needs identified upon patient arrival (e.g. unaccompanied minors, functional / access needs, etc.) may not be communicated in a timely manner to the Medical Intelligence Center due to the many competing priorities of PRA / FCC personnel. It was recognized that an onsite representative from the MIC at the PRA may expedite recognition of these needs and prompt timely action at the MIC to anticipate and coordinate appropriate resources. Players took care to note that onsite representatives at the PRA should possess the necessary decision-making authority to respond to concerns involving human service needs (e.g. releasing of unaccompanied minors to authorized agencies / individuals). Further, in the event of an FCC activation, activation of state-level emergency management resources would be required to support both ESF-6 and ESF-8 requirements.

Objective 4: Evaluate the ability of Incident Command Teams at RITN Treatment Centers to coordinate the delivery of all definitive care elements for patients arriving from the Federal Coordinating Center as part of an RITN activation as outlined in the RITN Concept of Operations and described in site-specific RITN SOPs.

The strengths and areas for improvement for the core capability aligned to this objective are described in this section.

Core Capability: Public Health, Healthcare, & EMS

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Hospital Incident Command System (HICS) teams convened rapidly at Treatment Centers to coordinate the delivery of all definitive care elements for patients.

Strength 2: HICS team discussions included patient reception procedures, including location for Point of Entry and process for electronic patient tracking.

Strength 3: HICS team discussions included considerations for radiological screening and decontamination – while command personnel were aware that patients had been screened multiple times prior to arrival at their facility, employee safety and public concern were discussed at length.

Strength 4: Participating RITN Treatment Centers established Points of Entry (POEs) to accept, register, triage, and treat patients arriving as part of an RITN activation. Based on the individual priorities of participating centers, focus was placed either on set up and operation of the POE, registration and tracking of patients, or a combination of the two.

Strength 5: Treatment Centers screened patients upon arrival to determine whether patients would receive inpatient or outpatient care. Treatment Centers with established criteria exercised this process, while others used the opportunity to discuss patients with subject matter experts to develop screening processes and appropriate triggers for inpatient vs outpatient care evaluations.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Entities within the region require additional collaborative planning to formalize the process for coordination of patients requiring outpatient care.

Reference: RITN Concept of Operations (ConOps); Treatment Center RITN SOP

Analysis: Treatment Centers exercised individual processes for caring for patients in need of outpatient care while registered as patients at their respective facilities; however, the transition of patients from inpatient to outpatient, specifically including coordination with local, state, and federal partners for tracking of support, needs additional planning to

ensure that logistical support for outpatients can be provided, tracked, and reimbursed among the region's facilities. Consideration should be taken to include Treatment Centers receiving patients from the Boston FCC that are not located within the City of Boston, and the additional planning considerations that must take place among local and state agencies.

Objective 5: Assess the ability of Incident Command Teams at RITN Treatment Centers to report all required information, including bed availability and patient condition update reports as outlined in the Boston FCC Operations Plan, and casualty reports to the NMDP per the RITN Concept of Operations.

The strengths and areas for improvement for the core capability aligned to this objective are described in this section.

Core Capability: Operational Communication

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Participating RITN Treatment Centers used JPATS reporting functions to run reports within JPATS of patients within their facilities.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Reporting for patient condition updates was inconsistent among RITN Treatment Facilities.

Reference: RITN Concept of Operations (ConOps); Treatment Center RITN SOP

Analysis: Reports received by the exercise Control Cell included a variety of JPATS reports outlining patient conditions and patient tracking data. Efforts to ensure understanding of reporting requirements and streamlined information sharing among local, state, and federal partners may improve situational awareness and ensure a common operating picture among those involved.

Area for Improvement 2: Some participating RITN Treatment Centers did not submit updated bed availability data / capabilities report to the Exercise Control Cell following arrival of simulated patients.

Reference: RITN Concept of Operations (ConOps); Treatment Center RITN SOP; NDMS Boston, MA FCC Operations Plan (2015)

Analysis: Updated capability report documents were not received from all participating Treatment Centers following the conclusion of the exercise. This may be an artificiality of

the event, as reporting of data extended past ENDEX, and appropriate effort to ensure reporting following exercise play may not have been prioritized at all sites. Effort should be taken to ensure full understanding of reporting requirements among all participants during a real-world event.

Objective 6: Examine the ability of the US Department of Health and Human Services (HHS) Service Access Team (SAT) and the US Department of Veterans Affairs (VA) Boston Healthcare System (BHS) to effectively function in liaison roles outlined in the SAT and FCC Concept of Operations documents in the context of an RITN activation scenario.

The strengths and areas for improvement for the core capability aligned to this objective are described in this section.

Core Capability: Operational Coordination

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Local response agencies increased understanding of Service Access Team roles and capabilities through collaboration with SAT personnel.

Strength 2: SAT representative worked with Medical Intelligence Center (Simulating the Multi Agency Coordination Center (MACC) function) personnel to coordinate collection of information to facilitate matching patients to required services.

Strength 3: JPATS dashboard provided current “snapshot” of patients included in event and was a useful tool to maintain situational awareness at the MIC.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: SAT personnel have the potential to assist in a variety of critical functions – it was identified that the process by which the SAT coordinates with local response agencies is not fully developed, and the potential exists that SAT assistance may be delayed or unavailable, in which case certain functions may not be adequately addressed in a timely manner.

Reference: National Disaster Medical System Boston, MA FCC Operations Plan (2015); Service Access Team (SAT) ConOps (2011)

Analysis: Participating SAT personnel shared the roles and responsibilities of the SAT, as well as capabilities for response. It was discussed that for an incident such as the exercise scenario, SAT members would be physically located at the PRA, MIC, and outpatient receiving sites. The SAT member noted that SAT members located at the PRA

would be working to determine patient needs and would work with the MIC to address those needs.

Given the limited SAT resources for a national-level event, effort should be taken to identify all functions that SAT would assist with and determine a plan of action for the event that SAT resources are delayed or unavailable.

Area for Improvement 2: MIC personnel experienced difficulties in citywide tracking of patients that would receive outpatient care during an RITN activation.

Reference: National Disaster Medical System Boston, MA FCC Operations Plan (2015); Service Access Team (SAT) ConOps (2011)

Analysis: Discussion among MIC personnel and the SAT representative included significant discussion surrounding whether patients would be designated as inpatient or outpatient in the JPATS system. MIC staff are most interested in this designation as it relates to the human services they would provide and/or support for outpatients. Questions were raised regarding how a patient's JPATS status may designate inpatient / outpatient status prior to patients moving to a designated JPATS location (to anticipate the care needs required), or how the MIC would be informed of an accurate list of patients scheduled to receive outpatient care.

Area for Improvement 3: The process by which lodging and human services needs would be coordinated for outpatients (as well as non-medical attendants) is not completely outlined.

Reference: National Disaster Medical System Boston, MA FCC Operations Plan (2015); Service Access Team (SAT) ConOps (2011)

Analysis: During exercise play, there was initial confusion as to potential locations where outpatient populations would be housed. The MIC SAT representative shared that a joint effort between state and federal parties would be conducted to designate appropriate housing locations. It was determined that the SAT would manage the mission to find housing, but that they would need local support to provide contact lists for community facilities and organizations.

Area for Improvement 4: The financial responsibilities of involved agencies, including billing and reimbursement, are not well understood by all participants.

Reference: National Disaster Medical System Boston, MA FCC Operations Plan (2015); Service Access Team (SAT) ConOps (2011)

Analysis: The process for billing and reimbursement among participating agencies was discussed at the MIC (Simulating the MACC function) during the exercise among city agency representatives and SAT personnel. It was stated that, while HHS would handle the financial aspects of lodging, and the SAT member would coordinate it, RITN Treatment Centers needed additional details/training surrounding the processing of bills and invoices.

Appendix A: Improvement Plan

This IP has been developed specifically for participant agencies as a result of the FY2017 RITN Boston Regional Response Full Scale Exercise conducted on August 2, 2017.

Core Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization(s)	Organization POC	Start Date	Completion Date
Situational Assessment	The ability to consolidate and share information among RITN Treatment Centers and local, state, and regional partners is limited.	Develop method for sharing of specialty bed information with local, state, and regional entities. Consider addition of a provisional bed category for patients with radiation sickness to the MA DPH WebEOC bed board.	Planning	RITN Treatment Centers Massachusetts Department of Public Health (MA DPH) US Department of Veterans Affairs (VA)	[redacted]	2018	
Public Health, Healthcare, and EMS	The role of subject matter experts in acute radiation sickness (ARS) at the Patient Reception Area requires additional investigation.	Align HHS/ ASPR/ NDMS patient movement operations with ongoing statewide patient placement planning.	Planning	MA DPH	[redacted]	2017	2018
		Include *Clinical Tool for Radiation Exposure* (available from RITN) to FCC	Planning	VA	[redacted]	2017	2018

		Operations Plan for distribution during activation, to be used by clinical staff involved in triage, bed placement, and treatment of patients with ARS.					
		Continue advocating for national-level bed classification with increased detail to address ARS patients.	Planning	Radiation Injury Treatment Network (RITN)	[redacted]	2018	
	FCC personnel will need liaison to facilitate human services requests for patients arriving at the PRA.	Update FCC plan to include representative from MACC at PRA. Involve Massachusetts Emergency Management Agency (MEMA) representation.	Organization	VA Massachusetts Emergency Management Agency (MEMA)	[redacted] [redacted]	2017	2018
	Entities within the region require additional collaborative planning to formalize the process for coordination of patients requiring outpatient care.	Consider updating the JPATS program to include designation of inpatient and outpatient patient assignment. Update local agency response plans within the region to include specifications for	Planning	HHS / ASPR Patient Movement Branch (HHS/ASPR) RITN Treatment Centers	[redacted] [redacted]	2017	2018

		locations for outpatient treatment (e.g. update outpatient locations to reflect treatment facility: MGH-Hilton_ Longwood)					
		Develop just-in-time training materials to be disseminated upon RITN activation, outlining naming convention for outpatient locations within JPATS	Training	VA	[redacted]	2017	2018
		Advocate for nationwide implementation of outpatient specifications as outlined above	Planning	HHS / ASPR	[redacted]	2018	
Operational Communications	Reporting for patient condition updates was inconsistent among RITN Treatment Facilities.	Ensure coordination of reporting requests is processed through multi-agency coordinating center (MACC) to ensure common operating picture.	Planning	Massachusetts Department of Public Health (MA DPH) VA	[redacted] [redacted]	2018	
	Some participating RITN Treatment Centers did not submit updated bed availability data /	Develop tools to increase hospital awareness / remind treatment centers of	Training	Massachusetts Department of Public Health (MA DPH)	[redacted]	2017	2018

	capabilities report to the Exercise Control Cell following arrival of simulated patients.	reporting requirements, to be distributed upon FCC activation. Consider recurring training for hospital partners and PRA personnel.					
Operational Coordination	HHS ASPR Service Access Team (SAT) personnel have the potential to assist in a variety of critical functions – it was identified that the process by which the SAT coordinates with local response agencies is not fully developed, and the potential exists that SAT assistance may be delayed or unavailable, in which case certain functions may not be adequately addressed in a timely manner.	Ensure MACC planning is aligned with SAT Concept of Operations through ongoing statewide patient placement planning. Review roles, responsibilities, and capabilities of SAT to ensure roles are covered by other entities in the event that SAT is unavailable. Involve MEMA representation.	Planning	MA DPH VA HHS / ASPR	[redacted]	2018	
	Local coordinating center personnel experienced difficulties in citywide tracking of patients that would receive outpatient care during an RITN activation.	*See above comments re: JPATS identifiers.*	Planning	MA DPH VA HHS / ASPR	[redacted]	2018	
	The process by which lodging and human	Ensure coordination of	Planning	RITN Treatment Centers	[redacted]	2018	

	services needs would be coordinated for outpatients (as well as non-medical attendants) is not completely outlined.	operations according to Massachusetts Statewide Mass Care and Shelter Coordination Plan (MEMA)		MA DPH	[redacted]		
	The financial responsibilities of involved agencies, including billing and reimbursement, are not well understood by all participants.	Incorporate the distribution of reimbursement-focused training materials to local partners into the FCC activation process	Planning	RITN Treatment Centers VA HHS / ASPR	[redacted] [redacted] [redacted]	2018	

APPENDIX B: EXERCISE PARTICIPANTS

Participating Organizations
Boston Children's Hospital
Boston Emergency Medical Services
Boston Public Health Commission, Office of Public Health Preparedness
Brigham and Women's Hospital
Conference of Boston Teaching Hospitals
Dana Farber Cancer Institute
Fallon Ambulance Service
HHS Assistant Secretary for Preparedness and Response Region 1, Service Access Team (SAT)
Massachusetts Department of Public Health, Office of Preparedness and Emergency Management
Massachusetts General Hospital
Radiation Injury Treatment Network
US Department of Health and Human Services, Patient Movement Branch
US Department of Veterans Affairs