2019

RITN Tabletop Exercise (TTX) After-Action Report/Improvement Plan Planning and Messaging Focus

Exercise Date: July 9, 2019
Report Date: July 21, 2019

EXERCISE OVERVIEW

Exercise Name	2019 RITN Tabletop Exercise (TTX)
Exercise Date	July 9, 2019
Scope	This exercise is a distance-based tabletop exercise planned for 1 ½ hours. Exercise play is limited to RITN facilities and their response partners' collective challenges and considerations for improved and effective response.
Mission Area(s)	Response
Capabilities	Public Health & Medical Services
Objectives	**Objective 1:** RITN hospitals are able to describe their plans for receiving, screening, and admitting a surge of NDMS patients following a distant radiological incident. **Objective 2:** RITN hospitals are able to develop messages for internal (staff and response partners) and external (patients and visitors) to keep them informed and alleviate fear and misinformation.
Hazard	Radiological
Scenario	Medical surge from a distant radiological incident
Sponsor	Radiation Injury Treatment Network® (RITN) National Marrow Donor Program (NMDP) Office of Naval Research (ONR)
Participating Organizations	City of Hope National Medical Center (Duarte, CA) Huntsman Cancer Institute, University of Utah (Salt Lake City, UT) Veterans' Health Administration Office of Emergency Management (Oklahoma) University of Minnesota Medical Center – Fairview (Minneapolis, MN) University of Utah – Primary Children's Medical Center University of Wisconsin – Madison Wake Forest Baptist Medical Center (Winston-Salem, North Carolina)
Point of Contact	RITN Control Cell RITN@NMDP.ORG (612) 884-8276

EXERCISE SUMMARY

On July 9, 2019, RITN centers and the RITN Control Cell participated in a tabletop exercise to describe plans for receiving, screening, and admitting a surge of NDMS patients following a distant radiological event as well as develop internal and external messages regarding the incident and actions. A facilitated series of exercise tasks were provided to participants for their consideration, response, and group discussion organized by the exercise scenario summary below.

Scenario Summary: The following illustrate the scenario events considered for participant discussion:

Exercise Scenario Ground Truth

- A 10-kiloton Improvised Nuclear Device (IND) was detonated in a major metropolitan area.
- The blast occurred at least 500 miles away from your facility and there is no concern of fallout affecting your location.
- RITN Control Cell staff begins to monitor the situation and start sending out daily Situation Reports (SitReps).
- All centers are requested to submit daily Healthcare Standard (HCS) capabilities matrix.

Day 4

- The National Disaster Medical System (NDMS) issues activation protocol for your region and the local Federal Coordinating Center (FCC) establishes a Patient Reception Area (PRA) and expects patients to start arriving in the next 24-48 hours.

Day 5

- The first NDMS aircraft arrives at PRA carrying patients with traumatic injuries.
- These patients are sent to NDMS hospitals in the area, but your facility has not received patients at this time.

Day 9

- PRA staff contact your facility to indicate that patients will radiation injuries will begin to arrive within the next 24 hours. Patients will be sent to your facility.

ANALYSIS OF CAPABILITIES

Exercise Discussion Module: Preparing for a Surge

Scenario Update: Patients will arrive in waves over a multi-day period from the PRA.

	Wave 1 (event +10)	Wave 2 (event +11)	Wave 3 (event +11)
Estimated number of patients	20 12 outpatients 8 inpatients	20 18 outpatients 2 inpatients	20 17 outpatients 3 inpatients
Transportation method from the PRA	12 – Dual Use Vehicle (DUV) 8 – Ground ambulance	18 – Dual Use Vehicle (DUV) 2 – Ground ambulance	17 – Dual Use Vehicle (DUV) 3 – Ground ambulance
Arrival Time	2:00 PM	12:00 AM	10:00 AM

Patient Receipt at the Hospital

Participating hospitals were asked where the following actions would take place as patients from the blast site arrived as well as how the functions would be staffed. The responses are below.

Hospital	Initial Admission	Radiological Screening	Decontamination (if necessary)	Counseling/ Behavioral Health	Family Assistance/ Information
City of Hope	Rear of hospital (portable tents) Staff: Nursing Staff	Rear of hospital (portable tents) Staff: Radiation Safety	Portable showers Staff: Radiation Safety	Platt Auditorium Staff: Clinical social work	Platt Auditorium Staff: Clinical social work and pastoral care
University of Minnesota Medical Center - Fairview	ED Staff: BMT physicians, APPs, nursing staff	Ambulance garage/bay, portal monitors at ED entrances Staff: ED and Radiation Safety (hand held monitors)	Ambulance garage/bay Staff: ED	ED Staff: social work, behavioral health psych associates and nurses	East Bank - Mayo auditorium; West Bank - Wilf auditorium Staff: Social work, administrator as assigned, child family life staff, volunteers, nutritionist

Hospital	Initial Admission	Radiological Screening	Decontamination (if necessary)	Counseling/ Behavioral Health	Family Assistance/ Information
University of Utah – Huntsman Cancer Center	ED Staff: ED	Blue Med tents Staff: Radiation Safety Officer & BMT physicians	Blue Med tents Staff: Radiation Safety Officer & BMT physicians	Designated conference room Staff: Patient and Family Support	Designated conference room Staff: Patient and Family Support
University of Utah – Primary Children's Medical Center	ED Staff: hospital staff	ED Staff: Radiation Safety Officer and Emergency Management	ED Staff: Radiation Safety Officer and Emergency Management	Inpatient floor, clinic, auditorium, cafeteria Staff: Social work, psychology	Hospital auditorium and cafeteria Staff: Social work, psychology
Wake Forest Baptist Medical Center	Adult ED, Peds ED (if present) Staff: ED with assistance from float pools and other departments	Adult ED, Peds ED (if present) Staff: Radiation Safety and others with training to screen	Adult ED, Peds ED (if present) Staff: Emergency management, ED, others with training	Initially in ED Discharge Lounge, then patient conference rooms Staff: Behavioral Health, Social Workers, Cancer Services	Space next to main cafeteria Staff: Patient Family Services, Chaplain, Volunteer Services, Navigators and Nurse Coordinators

All hospital plans adequately staff the above functions so that patients could be received during a full 24 hour period as the waves of RITN patients arrived to the area.

Adverse weather would not affect the University of Utah hospitals. City of Hope would utilize tents. Wake Forest pediatric and adult ED entrances have permanent awnings but if needed they could set up a field hospital unit. University of Minnesota currently is undergoing construction (until August 2019) on the East Bank campus which would affect decontamination operations, but reported that a tent system would be utilized if an event occurred during this timeframe.

Also all hospitals were able to receive patients arriving either via ambulance or dual-use vehicle (DUV); several indicated that hospital security would be responsible for appropriately directing traffic for patient arrivals.

With regards to whether volunteers would be utilized to handle the incoming RITN patients, the hospitals reported the following:

City of Hope: American Red Cross Volunteers and internal hospital volunteers with radiation safety training

University of Minnesota: Internal volunteer bank and would only be utilized for the Family Assistance Center (FAC) so no additional training required. Same messaging as all staff.

University of Utah – Primary Children's Medical Center: No volunteers at this time.

University of Utah – Huntsman Cancer Center: Trains and houses own volunteers.

Wake Forest: North Carolina Medical Radiation Core have been trained for events; also work with Local Emergency Medical Service (EMS), other affiliated hospitals

Advance notice of the patient arrival approximately 9 days after the blast in a remote city would enable internal staffing plans to be adjusted/augmented to support the surge, limiting the need for volunteers.

Message to Hospital Staff (Internal Messaging)

In the second exercise activity, hospitals were tasked with creating both internal (staff) and external messages that would be delivered prior to ARS patient arrival. Immediately upon finding out about the incident, hospitals would activate Incident Command (at least partially) including Communications Specialist/Public Information Officer to begin crafting messages well in advance of patient arrival. Some of the key content and delivery mechanisms for internal messaging are as follows:

- Staff would receive messaging through a number of different channels such as email, text message, alerting system, hotline, and face-to-face communications.
- Staff communications would include basic statements such as continue to come to work, business as usual, our hospital has expertise that will be utilized to help patients, no concerns for staff, and direct to managers with questions.
- Several hospitals stated that internal and external messages would be very similar for all recipients (staff, patients, families, news/media, public). Also that consistency across RITN centers would be a critical factor.
- Requests to staff for blood donations was also part of the internal messaging at the University of Minnesota and City of Hope.

Message to Current Patients and Families (External Messaging)

- Mechanisms to communicate with patients and their families included face-to-face, flyers, televising in waiting rooms, and hotlines for Frequently Asked Questions (FAQs).

- Several of the hospitals that reported out during the online exercise (University of Wisconsin and University of Utah) would coordinate messages with county/local partners through the use of a Joint Information Center (JIC).
- Hospitals would leverage experience in pro-active messaging from recent real world situations such as legionella outbreaks and the 2014 Ebola response.

The University of Utah Hospital (Huntsman Cancer Institute) and Primary Children's Hospital developed a joint message for this exercise. The content below is an example of similar messages created by all participating hospitals that submitted messages as part of the tabletop exercise.

Exemplar: *The VA Hospital and Huntsman Cancer Institute will be taking in about 60 patients who were injured in the blast earlier this month. These patients will arrive in the next 24 hours. We do not anticipate these patients to be a danger to anyone around them. Generally, patients exposed to radioactivity do not continue to be radioactive. To be sure, we will enact measures to ensure safety. Safety to our patients and staff is our first priority. All patients will be screened. Those identified as contaminated will be decontaminated in an isolated room away from other patients. Patients admitted to hospital spaces do not continue to emit radiation. There is no risk to patients and caregivers near or caring for patients with radiation injuries. Patients who have more severe contamination who would pose a risk to others will be cared for in hospitals with capabilities for such isolation, including Huntsman Cancer Institute and the VA Hospital. Radiation safety officer is available these hospitals.*

Add for Staff message: This is a surge status. We will follow normal operations in surge status, and normal procedures for caring for immunocompromised patients.

Strengths

The following strengths were demonstrated:

Strength 1: Hospitals had clearly identified locations for the various patient receiving activities as well as staffing plans to support those functions for 24 hours as the waves of RITN patients arrived to their area. Staffing plans included the integration of hospital volunteers and/or calling in additional staff with the 9-10 day lead time from the time of incident recognition to patient arrival.

Strength 2: Locations identified for receiving RITN patients at the hospital have been selected so that adverse weather conditions would not impact operations; similarly the locations are capable of receiving patients either by ambulance or DUV at all of the participating hospitals.

Strength 3: All hospitals would take a proactive approach to staff and patient messaging given the lead time between incident recognition and patient arrival; there was a good understanding of the type of information that would need to be communicated to alleviate fears, prioritize patient care, and continue business as usual. Several other best practices were developing FAQ responses/resources and staffing hotlines.

Areas for Improvement

The following areas require improvement:

Area for Improvement 1: Continue to provide opportunities for the BMT unit to work with the hospital communications team to ensure accurate and appropriate messaging. As possible, templates and key messages can be developed in advance then tailored for the specific incident.

Area for Improvement 2: RITN should consider creating templated information (e.g., overarching message) regarding expectations for hospitals that are accepting patients to streamline the process for individual hospitals to create messages and ensure consistency across the centers (and public health partners).

Area for Improvement 3: RITN centers should be sure that planning and messaging elements for a RITN response are coordinated with other RITN hospitals in the geographic area.

Area for Improvement 4: RITN hospitals should continue to offer education opportunities to both medical and support staff such as administrative and environmental services, for example:

- RITN Training Materials (https://ritn.net/training/)
- Radiation Emergency Assistance Center/Training Site (REAC/TS) training for medical personnel (https://orise.orau.gov/reacts/capabilities/continuing-medical-education/default.aspx)

As possible the training should be adapted and/or accessible in a Just-In-Time format so that additional staff can become trained to support this type of response.

Area for Improvement 5: RITN hospitals Exercise fostered good discussion at some hospitals about the location for the Family Assistance Center; locations were identified but need to be documented into plans and tested through drills.

Area for Improvement 6: While staffing for the number of patients in this scenario would be possible for most hospitals, concerns were expressed about the need to surge for even more patients from a bed availability and staffing perspective. Plans should be reviewed to ensure that decompression and use of external triage/care areas such as field hospitals/tents are incorporated.

Patient flow and receipt procedures at the individual facility should also be defined. Staff should develop awareness of these protocols and participate in future trainings/drills as needed.

APPENDIX A: IMPROVEMENT PLAN

This improvement plan template has been developed specifically for the RITN centers participating in the 2019 RITN Planning and Messaging Tabletop Exercise conducted on July 9, 2019. RITN centers can utilize this table to organize the opportunities for improvement to augment and develop their own corrective actions.

Core Capability	Issue/Area for Improvement	Corrective Action	Capability Element[1]	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Core Capability 1: [Capability Name]	1. [Area for Improvement]	[Corrective Action 1]					
		[Corrective Action 2]					
		[Corrective Action 3]					
	2. [Area for Improvement]	[Corrective Action 1]					
		[Corrective Action 2]					

[1] Capability Elements are: Planning, Organization, Equipment, Training, or Exercise.

APPENDIX B: EXERCISE PARTICIPANTS

Participating Organizations	
City of Hope	Haris Ali
City of Hope	A. Nademame
City of Hope	K. Gendzekhadze
City of Hope	Barbara Bearman
City of Hope	Ernestine Hepner
City of Hope	Lesley Han
City of Hope	Kathryn Nicoles
City of Hope	Kelly Tomlinsen
City of Hope	Gerry Gorospe
City of Hope	Zhi Zhang
City of Hope	Monica Munareho
City of Hope	Arminda Pamintuan
Veterans' Health Administration Office of Emergency Management - Oklahoma	Richard Henry
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University of Minnesota Medical Center – Fairview	Jonathon Grube
University of Minnesota Medical Center – Fairview	Pat Kearns
University of Minnesota Medical Center – Fairview	Diane Kroll
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University of Minnesota Medical Center – Fairview	Holly Ringhofer
University of Minnesota Medical Center – Fairview	Quaratalain (Ainy) Saeed
University of Minnesota Medical Center – Fairview	Kim Nelson
University of Utah – Huntsman Cancer Institute	Francesca Paglione
University of Utah – Huntsman Cancer Institute	Kip Thompson
University of Utah – Huntsman Cancer Institute	Annette Neuman
University of Utah – Primary Children's Medical Center	Kevin Arthur
University of Utah – Primary Children's Medical Center	Rebekah Hoffner

Participating Organizations	
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Wake Forest Baptist Medical Center	Aaron Eaton
Wake Forest Baptist Medical Center	Emily Wilson
Wake Forest Baptist Medical Center	Emmanuel Hadey
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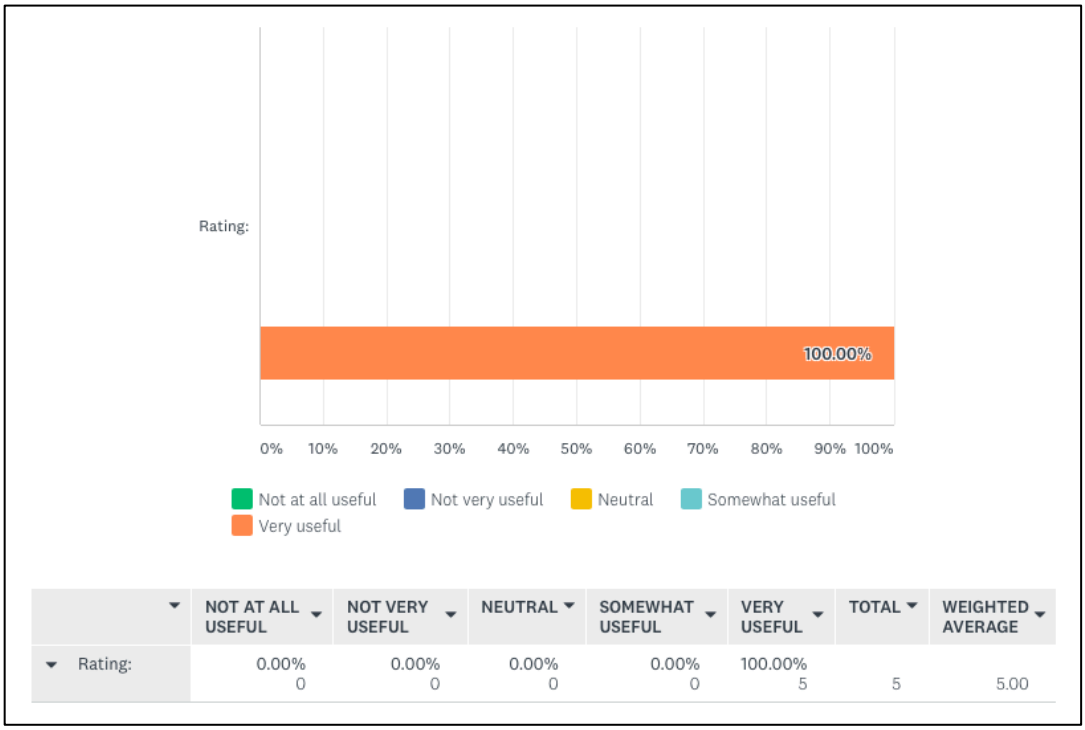
Wake Forest Baptist Medical Center	Dawn Burke
Wake Forest Baptist Medical Center	C. Bricollo
Wake Forest Baptist Medical Center	Charlotte Chandler
Wake Forest Baptist Medical Center	M. Payre
Wake Forest Baptist Medical Center	Dianna Howard
Wake Forest Baptist Medical Center	Karen High
Wake Forest Baptist Medical Center	Karen Rike
Wake Forest Baptist Medical Center	Nicole Yailogh

APPENDIX C: PARTICIPANT FEEDBACK

RITN Centers were asked to provide some brief feedback on an online questionnaire following the exercise. The comments below are not in any particular order and are provided unedited to avoid intent changes.

Note: The average rating provided by the participating RITN centers regarding the usefulness of this exercise was 5.0 (out of 5.0). Number of responses = 5.



	NOT AT ALL USEFUL	NOT VERY USEFUL	NEUTRAL	SOMEWHAT USEFUL	VERY USEFUL	TOTAL	WEIGHTED AVERAGE
Rating:	0.00% 0	0.00% 0	0.00% 0	0.00% 0	100.00% 5	5	5.00

Based on discussions today, please briefly describe the 1 or 2 strengths demonstrated by your organization's ability to respond to a radiation mass casualty incident as described in this exercise scenario.	
City of Hope	*Our Radiation Safety officer and our MUD Clinical director are very knowledgeable in handling Radiation injuries . It was a great team effort to work it out in case of a Radiation disaster like this one*
University of Minnesota Medical Center	*Our communications team is very strong in responding quickly to both internal and external communications. We have a very strong BMT program, particularly our pediatric BMT program, and are confident we can respond quickly. We are a large organization with multiple community hospitals that can flex to assist in patient placement as well as assist in staffing up with any role needed for this type of situation.*

Based on discussions today, please briefly describe the 1 or 2 strengths demonstrated by your organization's ability to respond to a radiation mass casualty incident as described in this exercise scenario.	
University of Utah – Huntsman Cancer Institute	*We have the necessary equipment, staff and infrastructure to manage an influx of patients due to radiation mass casualty.*
University of Utah – Primary Children's Medical Center	*From a space standpoint we would be able to handle housing a lot of patients and families. Between the Blue Med tents of Primary Children's, University Hospital and with the help of Hill AF Base and Ft Douglas Army base we feel we can handle the number of patients. We have a strong media relations department that is geared up and ready to assist us in educating both staff and families in our area.*
Wake Forest Baptist Medical Center	*Team was able to think broadly regarding how to provide care, were familiar with previous training exercises and were able to think about how to utilize resources.*

Based on discussions today, please briefly describe the 1 or 2 challenges demonstrated by your organization's ability to respond to a radiation mass casualty incident as described in this exercise scenario.	
City of Hope	*Getting enough beds for patients who might need to be admitted. Also, having enough staffing and volunteers to handle these patients*
University of Minnesota Medical Center	*We see some gaps in how our communications department would function in this situation in relation to how our BMT program had defined messaging to staff. We will revise our RITN policy to address this. Our RITN policy does not define the flow of receiving patients in our facilities. We will work with our Emergency Management team to define this in the coming months.*
University of Utah – Huntsman Cancer Institute	*It was identified the Emergency Department and Huntsman Intensive Care Unit need to be included in all RITN discussions Staff in the Burn Center, Emergency Department, Outpatient BMT Clinic and Huntsman Intensive Care Unit should consider making RITN training part or their ongoing education.*
University of Utah – Primary Children's Medical Center	*Staffing may be an issue. With the number of patients in this exercise we would be able to handle it. If we were needing to activate the tents then that might become a problem. We need to develop just in time education so that we are not having to scramble at the time of the incident to put something together.*

Based on discussions today, please briefly describe the 1 or 2 challenges demonstrated by your organization's ability to respond to a radiation mass casualty incident as described in this exercise scenario.	
Wake Forest Baptist Medical Center	*Bed capacity and coordination of patient transfers to new affiliates.*

List and briefly discuss elements to address for future RITN exercises.	
City of Hope	*Address blood shortage as a problem too - when it comes to handling these patients.*
University of Minnesota Medical Center	*The new scenario of messaging helped in defining some of our gaps. Could we address how to assist patients with placement back in their homes/back with their primary care providers and how would our RITN centers accomplish that?*
University of Utah – Huntsman Cancer Institute	*The topics of this tabletop were beneficial. For future tabletops, I suggest discussing triaging a patient through intake until discharge.*
University of Utah – Primary Children's Medical Center	*There was some interest in running through how to receive and care for ICU level or Burn unit patients.*
Wake Forest Baptist Medical Center	*Possibly other types of radiation exposure or scenarios.*

APPENDIX D: ACRONYMS

Acronym	Term
AAR	After Action Report
ARS	Acute Radiation Syndrome
DUV	Dual Use Vehicle
FAC	Family Assistance Center
FAQ	Frequently Asked Questions
FCC	Federal Coordinating Center
HCC	Healthcare Command Center
HCS	Healthcare Standard
IND	Improvised Nuclear Device
JIC	Joint Information Center
NDMS	National Disaster Medical System
NMDP	National Marrow Donor Program
ONR	Office of Naval Research
PRA	Patient Reception Area
RITN	Radiation Injury Treatment Network
SME	Subject Matter Expert
TTX	Tabletop Exercise