2019

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

Exercise Date: August 7, 2019
Report Date: September 3, 2019

EXERCISE OVERVIEW

Exercise Name	2019 RITN Tabletop Exercise (TTX)
Exercise Date	August 7, 2019
Scope	This exercise was a distance-based tabletop exercise occurring over 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 RITN Hospitals	Cleveland Clinic (Ohio) Dartmouth-Hitchcock Cancer Center (Lebanon, NH) Oklahoma University Medical Center (Oklahoma City, OK) Penn Medicine (Philadelphia, PA) Spectrum Health (Grand Rapids, MI) Stanford Cancer Center (Palo Alto, CA) University of Colorado (Denver, CO) – *conducted independently* University of Iowa Hospitals and Clinics (Iowa City, IA) University of Miami Health System (Miami, FL)
Point of Contact	RITN Control Cell RITN@NMDP.ORG (612) 884-8276

EXERCISE SUMMARY

On August 7, 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
Cleveland Clinic	ED Staff: ED Staff, then BMT Unit	ED (outside tent) Staff: ED	ED (outside tent) Staff: ED	ED (if treated there); also inpatient and outpatient capabilities Staff: ED and cancer center social workers	On Campus Hotel Staff: Per decision of Incident Commander
Spectrum Health	Hospital (not specified) and airport Staff: Patient Access	Airport upon patient arrival Staff: 51st CST	Airport upon patient arrival Staff: Grand Rapids Fire Department	Inpatient resources and Multi-Agency Resource Center (MARC) Staff: local and hospital staff	Airport and/or County Emergency Management Staff: hospital and community

Hospital	Initial Admission	Radiological Screening	Decontamination (if necessary)	Counseling/ Behavioral Health	Family Assistance/ Information
Stanford Cancer Center	ED extension area (Kappa Zone) Staff: Admissions and Registration	Entry to Kappa Zone Staff: Health physics	ED ambulance bay (self-presenting patients, not NDMS) Staff: ED team	Kappa Zone Staff: Social work, chaplaincy volunteers	Hospital Auditorium Staff: Social work, chaplaincy volunteers
University of Colorado	Conference Center, ED for those needing urgent care Staff: hospital staff	Outside conference center entrance; adverse weather then indoor room used Staff: hospital staff	As part of screening operation (conference center) Staff: hospital staff	Auditorium Staff: external community partners	Auditorium Staff: external community partners
University of Iowa	Airport and surgery outpatient clinic Staff: 71st CST and transplant staff to augment	Airport and surgery outpatient clinic Staff: 71st CST and transplant staff to augment	Not specified	Top floor location Staff: managed through IC	Not specified.
University of Miami	Designated area within Radiation Oncology waiting area Staff: Patient Access Dept.	Prior to arrival at the hospital and/or portable monitor Staff: Radiation Control	Not designated; coordinate with affiliated hospitals on campus if needed Staff: Hospital Emergency Management and Operations	Courtelis Center; referred to social workers following distress screen Staff: Social Work	Designated family assistance center Staff: UHealth Emergency Management

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 any of the participating hospitals; all currently conduct operations indoors/closed space or could easily convert to that if necessary. Also all hospitals were able to receive patients arriving either via ambulance or dual-use vehicle (DUV) without issue.

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

Cleveland Clinic: Not needed.

Oklahoma University Medical Center: No volunteers needed; internal resources sufficient.

Spectrum Health: Training and need dependent on the activity; all training would be provided. Could leverage other regional hospitals for staff support and community partners for non-medical needs.

Stanford Cancer Center: Only chaplaincy volunteers for additional emotional support if needed; they are internal volunteers and already trained.

University of Colorado: Used primarily with the Family Assistance Center (FAC); American Red Cross (ARC) Just-In-Time (JIT) training would be utilized.

University of Iowa: Not needed at this time; large numbers already in the system.

University of Miami: Volunteers would be coordinated through the Miami-Dade County Healthcare Preparedness Coalition. Training based on the activities they are expected to perform, but at a minimum would receive basic radiation safety and exposure education.

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. Hospitals indicated activating Incident Command to support messaging needs (amongst other things). Mechanisms to communicate with staff included: email, text, call in number for information, and the intranet. Some of the key content and delivery mechanisms for internal messaging are as follows:

- Staff communications would include instruction regarding staffing, patient receipt locations/plans, and that the patients will have been screened and pose no radiation exposure hazard to personnel. Also, information on when/how future information will be provided to staff.
- Stanford also ensured staff that additional information and optional huddles would be available for staff.
- Contact information for the Radiation Safety Officer was also provided in at least one of the crafted messages.

- Messages to staff and patients/families would be very similar in most cases; either omitting some of the staffing information, directing patients/families/public to a rumor hotline and/or further collaboration with the community via a Joint Information Center.

Message to Current Patients and Families (External Messaging)

- Background information was provided on the incident and the role the cancer center plays in the nationwide RITN program as to why they will be receiving patients. Also very similar messaging to the staff in that there would be no risk to them from radiation and that patients would be received in a separate area.
- Hotlines, social media outlets, and press conferences were mentioned as a way to communicate with current patients and the public regarding the hospital response activities.

Strengths

The following strengths were demonstrated:

Strength 1: Hospitals had plans to support receiving patients for 24 hours as the waves of RITN patients arrived to their area. Staffing plans typically could be bolstered by existing staff, affiliated/regional hospitals, or internal volunteer resources and not require external volunteers.

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 and ensure staff and patient safety.

Areas for Improvement

The following areas require improvement:

Area for Improvement 1: Not all hospitals identified locations for each of the response activities (e.g., initial assessment, radiation screening, family assistance) or indicated that it would be done at the airport upon patient arrival to the local area. These organizations should consider more planning and specific documentation of the approaches for handling these attributes of patient arrival.

Area for Improvement 2: RITN should share the messages crafted by all hospitals during the 2019 Planning and Messaging Tabletop exercises with all hospitals so that these can be leveraged to create templates. In addition, 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: Further discussion and clarification is needed at some of the participating RITN centers as to the status of the patients arriving to the PRA with regards to screening and decontamination. While it is assumed that the patients are decontaminated before boarding the federal aircraft, it is a best practice for radiological screening and decontamination (if needed) be done in the local jurisdiction; however it needs to be written into local plans as to which location that is occurring at (or both).

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 August 7, 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	
Cleveland Clinic	Kristin Ricci
Cleveland Clinic	Mark Myers
Cleveland Clinic	Joshua Kubit
Cleveland Clinic	Prya Rayadurgam
Cleveland Clinic	Andy Miller
Cleveland Clinic	James Meola
Cleveland Clinic	Brian Colcombe
Cleveland Clinic	Carol Dumont
Cleveland Clinic	Robert Dean
Cleveland Clinic	Ron Subecks
Cleveland Clinic	Patti Akins
Cleveland Clinic	Heather Koniaroy
Cleveland Clinic	Theresa Urban
Cleveland Clinic	Sheila Serafino
Dartmouth-Hitchcock Cancer Center	Karen Punska
Dartmouth-Hitchcock Cancer Center	Charlotte Coughenour
Dartmouth-Hitchcock Cancer Center	Dorie McKenna
Dartmouth-Hitchcock Cancer Center	Neal Boucher
Dartmouth-Hitchcock Cancer Center	Beverle Fillingame
Dartmouth-Hitchcock Cancer Center	Ben Williams
Dartmouth-Hitchcock Cancer Center	Jaime Peyton
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Dartmouth-Hitchcock Cancer Center	Josh Hickman
Penn Medicine	Joanne Hinkle
Penn Medicine	Rachel Golding
Penn Medicine	David Porter
Penn Medicine	Kathleen Cunningham
Penn Medicine	Ross Richards
Penn Medicine	Katie Delach
Penn Medicine	Justin Curley
Penn Medicine	Roger Osbourn
Penn Medicine	Stephen Roth

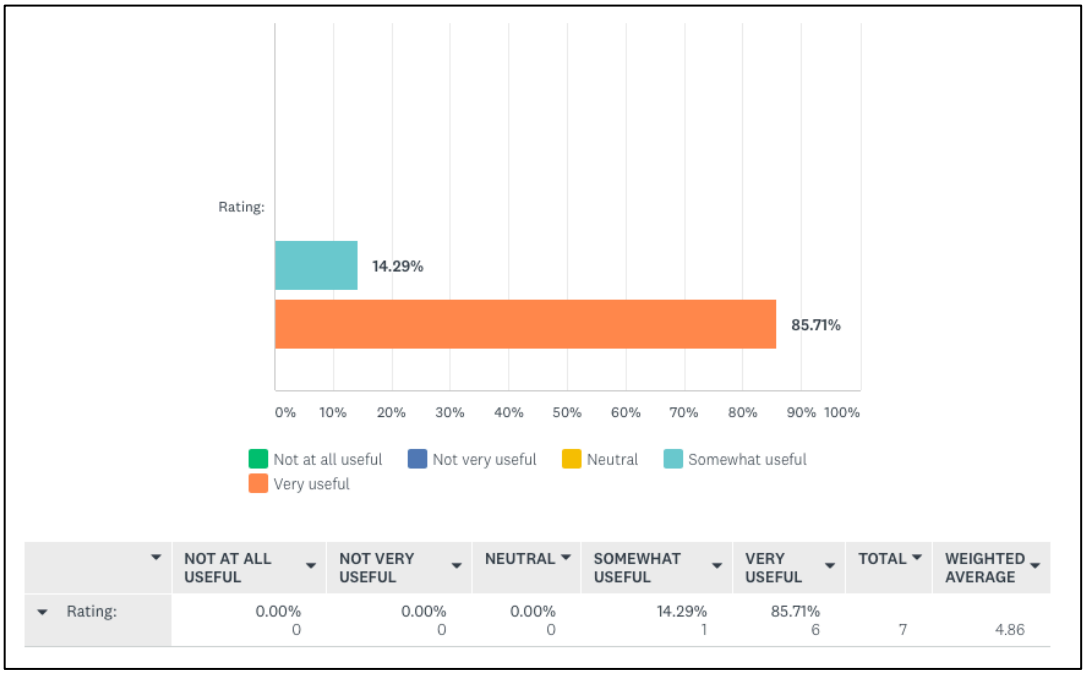
Participating Organizations	
Penn Medicine	John Wierzbowski
Penn Medicine	Cathy French
Penn Medicine	Nick Pirizizzotto
Penn Medicine	Jeff Henne
Penn Medicine	Elizabeth Hexhere
Spectrum Health	Luke Aurner
Spectrum Health	Lon Hunt
Spectrum Health	Pat Draper
Spectrum Health	Karlee Black
Spectrum Health	Han Gul Lee
Spectrum Health	Jessica VanSollema
Spectrum Health	Stephanie Willirup
Spectrum Health	Lisa Carr
Spectrum Health	Joe Dancz
Spectrum Health	Ssteven Vliestra
Spectrum Health	Glen Culbest
Spectrum Health	Jeff Skinner
Spectrum Health	Ken Shawl
Spectrum Health	Jeffrey Weber
Spectrum Health	Mark VanDyke
Spectrum Health	Melissa Rykse
Spectrum Health	Dough DeVries
Stanford Cancer Center	Tom Roussin
Stanford Cancer Center	Trisha Jenkins
Stanford Cancer Center	Kathy Harris
Stanford Cancer Center	Julie Greicius
Stanford Cancer Center	Shellee Laubersheimer
Stanford Cancer Center	Lori Klein
Stanford Cancer Center	Michele Blazer
Stanford Cancer Center	Torey Benoit
Stanford Cancer Center	Donna Healy
Stanford Cancer Center	Sally Arai
Stanford Cancer Center	John Kwofie
Stanford Cancer Center	Hannah McClellen
Stanford Cancer Center	Marc Gautreau
Stanford Cancer Center	Laura Jackson

Participating Organizations	
Stanford Cancer Center	Shaunee Moreland
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 = 7.



	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	14.29% 1	85.71% 6	7	4.86

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.	
Cleveland Clinic	*Our size and available resources would enable us to handle this size of a casualty (60 patients) without initiating our Surge Plan.*
Spectrum Health	*Great community partnership. Changes made through exercises in the past.*
Stanford Cancer Center	*Communications team was incredibly quick in crafting a message. The group was collaborative and helpful in the given scenario and we felt that we could manage the incident as described.*
University of Miami	*Experienced multi-disciplinary team with understanding of emergency response requirements. Excellent communication between the various clinical and non-clinical departments under these circumstances. Willingness of the team to help and facilitate processes.*

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.	
	Accommodating facility with plans in place for emergency response.

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.	
Cleveland Clinic	*The challenge we identified during this exercise is the process necessary to deal with outpatients that arrive during the night. We would continue to use the ED as the admission location but will have to create a plan as to where to triage them at that hour. Hopefully the 12-24 hour leeway time will allow enough time to create that plan. We discussed creating a standard order set for the Emergency Department to follow should this scenario occur.*
Spectrum Health	*Could be more difficult with more patients Triage methods for rad event.*
Stanford Cancer Center	*Need very clear direction before receiving patients from the PRA about whether decontamination is needed or not. The exercise question threw the group off because we would have assumed they would have all been decontaminated if coming from the PRA. This would change our workflow dramatically if there were any question about needing decon.*
University of Miami	*In our cancer center, we only have 40 inpatient beds that is typically at capacity. Transplant services can only be provided at this facility. We do not have an emergency receiving facility attached to the Cancer Center. We are landlocked due to our location in a metropolitan area.*

List and briefly discuss elements to address for future RITN exercises.	
Cleveland Clinic	*Nothing in particular at this time*
Spectrum Health	*More victims at each site. 70 patients really did not push the response.*
Stanford Cancer Center	*Less time spent listening to other centers' answers. 15 minutes of "exercise set up" so that we can do some ground*

List and briefly discuss elements to address for future RITN exercises.	
	work in the room prior to the exercise starting. People come to meetings just in time or 5 minutes late and need the intro. Would LOVE the messages crafted by other groups to add to our plan as templates.
University of Miami	*Additional information for facilities who do not have full-scale capabilities such as an emergency room and radiation decontamination services on site. RITN coordinators should provide feedback to the participating centers based on the responses after the exercise is completed.*

APPENDIX D: ACRONYMS

Acronym	Term
AAR	After Action Report
ARC	American Red Cross
ARS	Acute Radiation Syndrome
CST	Civil Support Team
DUV	Dual Use Vehicle
ED	Emergency Department
FAC	Family Assistance Center
FAQ	Frequently Asked Questions
FCC	Federal Coordinating Center
HCC	Healthcare Command Center
HCS	Healthcare Standard
IND	Improvised Nuclear Device
JIT	Just In Time
MARC	Multi-Agency Resource 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
TTX	Tabletop Exercise