2025

RITN Tabletop Exercise (TTX) After-Action Report/Improvement Plan

Exercise Date: June 26, 2025
Report Date: June 30, 2025

EXERCISE OVERVIEW

Exercise Name	2025 RITN Tabletop Exercise (TTX)
Exercise Date	June 26, 2025
Scope	The exercise was a distance-based tabletop exercise scheduled for 2 hours. Exercise play was limited to RITN facilities to examine the response by RITN hospitals to accommodate patient surge and care to include activating family reunification centers, identifying mental health resources, and coordinating with local, state, and federal public health agencies to track and report patient conditions.
Mission Area(s)	Response
Capabilities	Medical Surge Healthcare and Medical Response Coordination Community Resilience Information Sharing
Objective	**Objective 1:** Participants will describe the procedures for activating a family reunification center, including identifying staff, location, required resources, and the timing for activation. They will also identify potential challenges to activation and propose solutions. **Objective 2:** Participants will explain the integration of hospital-level family reunification processes with county and regional efforts, including coordination with healthcare coalitions and local public health agencies, and outline any necessary support from these partners. **Objective 3:** Participants will describe the mental health resources and educational support services to be activated in response to a radiological emergency, including how to address the psychological impact on healthcare workers, patients, families, and vulnerable populations, while ensuring accurate public messaging and coordination with external agencies. **Objective 4:** Participants will outline how the hospital coordinates with local, state, and federal public health agencies to track and report patient conditions, manage long-term health effects of radiation exposure, and share data for population health monitoring during a radiological event.
Hazard	Radiological
Scenario	Medical surge from a distant radiological incident
Sponsor	Radiation Injury Treatment Network® (RITN) Office of Naval Research (ONR)
Participating Organization	Children's Mercy Hospital – Kansas City (MO) Cleveland Clinic (OH)

	Oregon Health & Science University (OR) Presbyterian St. Luke's Medical Center (CO) Stanford Health Care Tri-Valley (CA) Temple University Hospital (PA) University of Iowa Health Care (IA)
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EXERCISE SUMMARY

On June 26, 2025, seven Radiation Injury Treatment Network (RITN) centers participated in an online tabletop exercise (TTX) to determine their hospitals' capacities for activation of family reunification and mental health support to healthcare workers, patients, families, and vulnerable populations following a mass casualty radiological event. 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 points illustrate the scenario events considered for participant discussion:

Exercise Scenario:

- A 10 kiloton Improvised Nuclear Device (IND) was detonated in a major metropolitan area.
- Infrastructure and hospitals are severely damaged in the area surrounding the blast (at least 25-mile radius).
- The blast occurred at least 500 miles from your hospital and there is no concern of fallout affecting your location.
- RITN Control Cell staff begin to monitor the situation and start sending out daily Situation Reports (SitReps).
- The nuclear explosion and fallout is expected to result in thousands of casualties with marrow toxic injuries who will need to be transported to other healthcare facilities across the country.
    - Those with mild to moderate trauma and those seeking evaluation for radiation exposure will self-evacuate to other metro areas.
    - Other patients experiencing radiation exposure will be evacuated in the coming days through the National Disaster Medical System (NDMS).

ANALYSIS OF CAPABILITIES

Module 1: Family Reunification

All seven facilities reported having procedures in place for activating a Family Reunification Center (FRC). These procedures commonly involved activation through the Hospital Incident Command System (HICS), with roles such as a Family Reunification Branch Director and designated areas for intake, safe holding, and reunification. Five (5) out of seven facilities indicated that their plans included operational readiness within one hour of activation, supported by communication systems like dedicated phone lines and electronic medical record (EMR) tools.

Despite established frameworks, six out of seven facilities cited significant challenges to activation primarily related to staffing, space, and sustaining operations for extended durations. Five (5) facilities confirmed that they would escalate requests to their healthcare coalitions for support, with anticipated needs including trained personnel, social work assistance, and space or logistics support. Integration with county or regional systems was well-established: all seven facilities indicated coordination through existing relationships with public health or emergency management partners, often using systems like ReddiNet, EMResource™, or internal EMRs to track patients and support reunification efforts.

Five (5) out of seven facilities had established EMR-based or manual processes for tracking of self-transport patients and verification of arriving family members. Four (4) facilities referenced standardized forms or internal systems to support tracking and communication, while two acknowledged gaps in their current capabilities. When asked about coordination with the federal National Disaster Medical System (NDMS), three out of seven facilities reported limited understanding or formal processes. For public messaging, all seven designated a Public Information Officer (PIO) or marketing team and emphasized the importance of unified communication strategies developed in coordination with healthcare coalitions and public agencies.

Strengths

The following strengths were demonstrated:

Strength 1: All facilities have defined procedures for activating a FRC, including command structure, staffing roles, and physical setup areas.

Strength 2: All facilities reported active integration with county or regional partners through emergency coalitions, local public health, and information-sharing platforms like ReddiNet or EMResource™.

Strength 3: All facilities assigned PIOs or communications staff, demonstrating strong awareness of the need for coordinated public communication during reunification efforts.

Areas for Improvement

The following areas require improvement:

Area for Improvement 1: Nearly all facilities (six out of seven) noted staffing, especially the availability of specialty-trained professionals, as a key vulnerability. This concern extended to both initiating reunification operations and sustaining them over prolonged incidents, suggesting a need for staffing surge plans, volunteer integration strategies, or pre-trained staff rosters.

Area for Improvement 2: Several (three out of seven) facilities expressed limited understanding or unclear processes for coordinating with the federal system (NDMS) when family members inquire about transferred patients. This gap indicates a need for clearer protocols and federal liaison training.

Area for Improvement 3: Although electronic systems are in place, some hospitals (five out of seven) acknowledged informal or underdeveloped processes for tracking self-transport patients or verifying identities of arriving family members. Strengthening standardized tracking protocols and documentation procedures and testing these procedures in a small-scale exercise would reduce the risk of misidentification or lost contact.

Module 2: Mental Health Support Considerations

Five (5) facilities reported having established mechanisms to coordinate with local public health agencies for patient condition reporting, including standardized EMR-based processes or transplant registry data sharing. However, only three out of seven had specific procedures for tracking the long-term health effects of radiation exposure, while the other four facilities acknowledged this function either as outside their current scope or reliant on external guidance (e.g., RITN or federal partners).

To meet increased mental health demands during a prolonged incident, six out of seven hospitals described plans to maximize in-house resources such as social work departments, behavioral health teams, and Emergency Operations Center (EOC)-coordinated staffing redeployments. Five (5) of these six indicated they would also require supplemental support from local, state, or non-governmental organizations (NGO) and agencies including mobile crisis teams and trauma-trained personnel. All seven facilities identified critical considerations such as age-appropriate care, legal guardianship, cultural sensitivity, and informed consent processes when dealing with vulnerable populations.

For managing psychological impacts and addressing the "worried well," all seven hospitals indicated coordination with local public health messaging through PIOs. Five (5) of seven facilities described formal messaging protocols that integrate with healthcare coalitions or regional partners to ensure consistency and avoid misinformation. However, two facilities reported more reactive or ad hoc communication strategies, emphasizing a need for pre-established public-facing mental health messaging plans during radiological emergencies.

Strengths

The following strengths were demonstrated:

Strength 1: Five (5) out of seven hospitals already have systems in place for submitting patient data (e.g., transplant registries, standardized reporting) and maintain regular contact with local public health authorities. These established relationships provide a solid foundation for expanding data sharing related to radiation exposure and long-term health surveillance.

Strength 2: Six (6) out of seven hospitals are equipped to activate social work, counseling, chaplaincy, and behavioral health services through their Hospital Incident Management Team (HIMT) or EOC structures. Several participating facilities indicated they could scale these resources internally in the early phases of a radiological event, including plans for staff redeployment and just-in-time mental health training.

Strength 3: All seven hospitals acknowledged the need to prioritize children and other vulnerable groups with age-appropriate, culturally sensitive approaches. Legal considerations like guardianship and privacy were frequently mentioned, showing strong ethical awareness and planning.

Areas for Improvement

The following areas require improvement:

Area for Improvement 1: While general data-sharing protocols exist, few hospitals (three out of seven) reported having specific processes for tracking long-term radiation exposure effects. There was a clear reliance on external entities (e.g., RITN, state/federal agencies) for this function, pointing to a gap in internal capability and continuity planning.

Area for Improvement 2: Despite leveraging in-house assets, many (six out of seven) hospitals acknowledged that internal resources would be quickly overwhelmed during a prolonged or large-scale radiological event. Hospitals should develop additional partnerships with mobile crisis teams, NGOs, and state mental health systems to meet long-term behavioral health demands.

Area for Improvement 3: While hospitals have designated PIOs, coordination of messaging with federal and state partners, especially around mental health and addressing the "worried well," was not well-developed across the board. Two (2) out of seven facilities reported uncertainty or ad hoc planning, indicating a need for improved messaging coordination and public communication training.

APPENDIX A: IMPROVEMENT PLAN

This improvement plan template has been developed specifically for the RITN centers participating in the 2025 RITN Tabletop Exercise conducted on June 26, 2025. RITN centers can utilize this table to organize the opportunities for improvement to augment and develop their own corrective actions. The improvement plan is intended to strengthen the response of RITN hospital core capabilities identified in this report.

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

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APPENDIX C: PARTICIPANT FEEDBACK

RITN Centers were asked to provide feedback via an online questionnaire following the exercise. The comments below are organized by observed strengths, challenges, and recommendations for future exercises.

Participating hospitals in the June 26, 2025, exercise were asked to rank the usefulness of the tabletop exercise; **71% rated it as "Very Useful" and 29% rated it as "Somewhat Useful."**

Strengths

- *A strong desire to become more educated and aware of how we will work together during a crisis. We have several team members with great background knowledge who want to serve and support community needs.*
- *Our organization has worked to strengthen our connections with local healthcare coalitions, federal partners with NDMS, etc., so coordinating with them during such a scenario would be much more streamlined than our historical capabilities.*
- *We have developed a robust family reunification plan and process, and although there would need to be some modifications for this being a prolonged event, we are in a better position to provide family reunification support should a radiation mass casualty incident occur.*
- *We are currently updating a lot of our plans. We have a strength that we have the plans in place, however, need to make sure that they are feasible.*
- *We have strong relationships with our Healthcare Coalition and strong support from our SHC partners.*
- *We are a very large, well-resourced academic medical center. Therefore, using our extensive resources and expertise, we are able to respond quickly/nimbly to such a mass casualty event.*
- *We are very confident in our connections with state and local agencies.*
- *Our center has built a strong network within our social services and patient family relations department.*

- *We have a robust network of hospitals within our health system along with a working agreement with other local hospitals, state and local agencies to work together to provide safe patient care.*
- *We have a strong structure associated with our reunification process. Our senior leadership is well versed in HICS and the utilization to address issues.*
- *We have great expertise in the treatment area that would guide our ability for a successful response and recovery.*

Challenges

- *We have had several staff assume new positions and this is a great opportunity to increase knowledge and awareness of role descriptions.*
- *One challenge we encountered was the lack of a clear understanding of our local community support apart from our HCA organization.*
- *Combating staff and the public's knowledge around a radiation incident would be a challenge.*
- *As a pediatric facility, coordinating with local adult hospitals could be challenging in terms of how to best provide care while limiting potential exposures.*
- *Staffing is always a concern. Another concern is space. We have outgrown our facilities which limits our options. We are starting construction to expand, which will give more opportunities for various areas to utilize.*
- *Despite being a relatively large center, our existing Blood and Marrow Transplant inpatient unit is consistently near capacity. Therefore, a challenge would be offloading non-acute patients to allow for care for radiation casualties.*
- *We recognized staffing and space are going to be major hurdles.*
- *We need to establish resources for "worried well" given that we are the only RITN center in a large geographic area and therefore it is difficult to predict numbers who will report to our site.*
- *Clarification of how or which test to use when determining radiation levels when there is a surge of patients. A system that would be reliable. Blood work may not be reliable during a surge.*

- *Integration of state and local mental health resources into our EOP.*
- *The discussion around the long-term nature of the need vs the acute nature we have mostly panned/drilled for could pose challenges.*
- *We were missing some key personnel today due to a mock accreditation survey taking place at the same time.*

Future Exercises

- *Future RITN exercises that would be helpful include radiation-specific courses.*
- *Workflow of how it would actually look from transferring a patient from one facility to another. What notifications are needed? How would these be done? What can a hospital have in place to receive these patients?*
- *Public awareness: more hospital wide training utilizing AHLS and with our local police, fire and EMS. This year's focus was excellent as it pointed out specific areas that are often overlooked. KUDOS.*
- *How does the RITN collaborate in an event such as this? Is there some coordination that would exist between the hospitals or would that be left to individual hospitals to figure out?*

APPENDIX D: ACRONYMS

Acronym	Term
AAR	After Action Report
EMR	Electronic Medical Center
EOC	Emergency Operations Center
FRC	Family Reunification Center
HICS	Hospital Incident Management System
HIMT	Hospital Incident Management Team
IND	Improvised Nuclear Device
NDMS	National Disaster Medical System
NGO	Non-Governmental Organization
ONR	Office of Naval Research
PIO	Public Information Officer
RITN	Radiation Injury Treatment Network
TTX	Tabletop Exercise