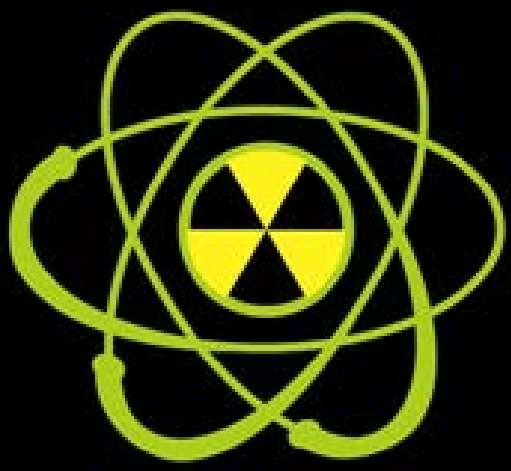
Minnesota Regional Radiation Injury Treatment Network Tabletop Exercise 2015

After Action Report/ Improvement Plan

Exercise Date: August 19, 2015

Report Date: Sept 11, 2015



EXERCISE OVERVIEW

Exercise Name	2015 Minnesota Regional RITN Tabletop Exercise (TTX)
Exercise Date	August 19, 2015 0900 – 1600
Capabilities	Medical Surge Emergency Operations Coordination Information Sharing Mass Care
Objectives	**Objective 1:** Clarify the organizational roles and responsibilities of participating agencies in responding to a surge of casualties with radiological injuries to Minnesota through the National Disaster Medical System (NDMS). **Objective 2:** Identify the critical resources available to assist hospitals and treatment centers during the surge of radiological casualties and discuss resource gaps. **Objective 3:** Identify processes for providing support to patients receiving care in an outpatient status. **Objective 4:** Identify guidance that non-Radiation Injury Treatment Network (RITN) hospitals will need with regard to receiving radiological casualties; of particular concern is triaging, treatment and tracking/surveillance of self-referral cases from the incident area and distribution of medical countermeasures **Objective 5:** Identify the process for casualty reception and distribution within the Federal Coordinating Center (FCC) model. **Objective 6:** Identify processes for family support/assistance **Objective 7:** Identify public/joint information strategies and messages to address scenario issues.
Threat or Hazard	Radiological – 10 kT Improvised Nuclear Device
Scenario	Medical surge of radiological casualties through the NDMS due to a distant Improvised Nuclear Device (IND) detonation.
Sponsors	Radiation Injury Treatment Network® (RITN) Office of Naval Research (ONR) Mayo Clinic
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EXERCISE SUMMARY

Radiation Injury Treatment Network (RITN) Exercise

On August 19, 2015, representatives from Mayo Clinic, the University of Minnesota, Olmsted Medical Center (OMC), Olmsted County, City of Rochester Office of Emergency Management (OEM), Elgin EMS, Gold Cross, the Rochester Library, SCHC, American Red Cross, Veterans Health Administration, RITN program, and U.S. Department of Health and Human Services (HHS) ASPR participated in a tabletop exercise to discuss the organizational roles and responsibilities of key agencies, identify resources required to provide treatment for a surge of radiation injury patients, describe medical management of patients (to include inpatient, outpatient, and self-referral), discuss casualty reception and receipt within the Federal Coordinating Center (FCC) model, and identify resources for mass care/sheltering operations. Exercise participants addressed these objectives in a scenario-driven, facilitated discussion based on a surge of casualties with radiological injuries arriving to Minnesota.

Purpose

The purposes of the tabletop exercise included:

- Provide an opportunity for Regional RITN hospitals and their local, regional, and federal emergency response partners to assess capabilities to respond to a national level event (e.g., improvised nuclear device explosion) resulting in marrow-toxic patients arriving to RITN facilities as well as other supporting hospitals for care,
- Provide an opportunity for disaster response partners to participate in facilitated discussions of their roles, responsibilities, and anticipated activities in response to scenario events that require movement of patients with marrow toxic injuries through the NDMS to hospitals for care,
- Help the participants better understand roles and responsibilities related family support/assistance in response to a mass casualty incident resulting in marrow toxic injuries, and
- Provide participants an opportunity to improve awareness about and to evaluate current response concepts, plans, and capabilities for care during an incident involving a receipt of patients with marrow toxic injuries.

Scope

Prior to the exercise, the following topics were presented to establish a baseline of knowledge for all participants:

- Radiation 101 (Kyle Underwood, Mayo Clinic)
- Radiation Injury Treatment Network (RITN) (REPP) (Cullen Case, RITN)
- National Disaster Medical System (Diane Kroll, Veterans Health Administration)

The scope of play for the exercise involved discussion-based activities (single discussion group). Players had an opportunity to both respond to defined questions and discuss topics freely within an established time frame.

ANALYSIS OF CORE CAPABILITIES

Aligning exercise objectives and capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis. Table 1 includes the exercise objectives, aligned capabilities, and performance ratings for each capability as observed during the exercise and determined by the evaluation team.

Table 1. Exercise Objectives and Capability Performance Summary

Objective	Capability	P	S	M	U
Objective 1: Clarify the organizational roles and responsibilities of participating agencies in responding to a surge of casualties with radiological injuries to Minnesota through the National Disaster Medical System (NDMS).	Emergency Operations Coordination				
Objective 2: Identify the critical resources available to assist hospitals and treatment centers during the surge of radiological casualties and discuss resource gaps.	Medical Surge				
Objective 3: Identify processes for providing support for radiological patients receiving care on an outpatient basis.	Medical Surge				
Objective 4: Identify guidance that non-Radiation Injury Treatment Network (RITN) hospitals will need with regard to receiving radiological casualties; of particular concern is triaging, treatment and tracking/surveillance of self-referral cases from the incident area and distribution of medical countermeasures.	Medical Surge				
Objective 5: Identify the process for casualty reception and distribution within the Federal Coordinating Center (FCC) model.	Emergency Operations Coordination				
Objective 6: Identify processes for family support/assistance to families with patients receiving care in Minnesota.	Mass Care				

Objective	Capability	P	S	M	U
Objective 7: Identify public/joint information strategies and messages to address scenario issues.	Information Sharing/ Communications				

Ratings:
Performed without Challenges (P); **Performed with Some Challenges (S)**; **Performed with Major Challenges (M)**; **Unable to be Performed (U)**

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

Objective 1. Clarify the organizational roles and responsibilities of participating agencies in responding to a surge of casualties with radiological injuries to Minnesota through the National Disaster Medical System (NDMS).

Capability: Emergency Operations Coordination

Observations

Exercise participants described initial actions that would be taken in response to a surge of causalities with radiological injuries as follows:

Organization	Actions
Mayo Clinic	• Stand up internal response functions upon notification of incident in Chicago • Determine which patients must stay at Mayo and those that can be moved to another facility • Brief leadership • Plan for staff and resources based on current census and +24, +72 hour appointment load; supplies to provide supportive care and treatment for bone marrow injury patients • May not need to rapidly discharge; there is time to clear beds through routine discharge given the time lag to receiving patients from Chicago
Non-RITN Hospitals	• Situational awareness on impacts to the healthcare community; receive/participate in ongoing communications from the HMAC • Potentially be able to share resources • Report hospital status (i.e., bed updates)
Veterans Health Administration	• Call the 133rd or 934th airlift wing to see if the space is available to use for the FCC • Request bed availability numbers from hospitals (MNTrac)

	• Communicate with EMS to determine transport resource availability/priorities before opening FCC/PRA
Rochester OEM	• Mass care coordination
RITN	• Receive local bed information and provide that information to HHS/ASPR who then sends it to NDMS to determine how to move patients

The early notification/communication process was also discussed. The Veterans Health Administration would send a pre-scripted message to West Metro Regional Coordinating Center (MRCC), which then pushes the information out via MNTrac to alert NDMS hospitals of the incident and the expectation that patients will be arriving to Minnesota. The Southeastern Minnesota Healthcare Multi-Agency Coordination (HMAC, consisting of pre-hospital and hospital partners) would activate early to establish more routine communications with hospitals in that region of the state. This would also be the mechanism to assess available EMS assets in SE Minnesota in case there is a need to support patient movement out of the Twin Cities metro area. The HMAC would also facilitate increasing capacity at Mayo by sending routine patients to other locations (e.g., Mankato, Eau Claire, LaCrosse) in order to free up RITN beds in Rochester.

It was noted that MNTrac (HAvBED) does not contain RITN specific bed categories. It is a manual process to tease out the overlap in bed types locally (e.g., are critical care beds the same as RITN beds) and ensure that beds are not double counted. Processes are in place and people familiar with determining the counts are able to make sure this doesn't happen. Mayo and the U of M suggested zeroing out available beds in MNTrac in order to preserve those for the RITN patients (i.e., biasing their reports to the RITN capability since it is the unique capability that they are bringing to the table and the rest of the hospitals can support the non-radiological needs).

Strengths

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

Strength 1.1: Hospitals (RITN and non-RITN) had a good understanding of the immediate actions in this scenario; i.e., bed reporting, communications and situational awareness information sharing, and reviewing current patient census).

Strength 1.2: The Veterans Health Administration was able to clearly describe their role in setting up the FCC locally, including rapidly communicating with key partners such as the air lift wing, EMS (Allina as the partner for coordinating transport), and NDMS hospitals.

Strength 1.3: Use of the SE Minnesota HMACC to lean forward on situational awareness and assessment of available assets is an effective mechanism for a RITN scenario.

Areas for Improvement

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

Area for Improvement 1.1: Personnel available to perform manual identification of RITN beds from the MNTrac/HAvBED data.

Analysis: There was concern that doing this process manually requires some expertise in knowing which bed types can accommodate different levels of radiological injury patients. There is capability locally to do this, but ensuring that there is sufficient backup and maintaining proficiency is critical.

Recommendations

Area for Improvement	Recommendation/ Corrective Action
1.1.1.	Continue to drill bed counts for RITN scenarios (i.e., marrow toxic injuries) to ensure proficiency with the manual process of reviewing the bed types in MNTrac and translating those to available RITN bed counts.
1.1.2.	Ensure that sufficient number of people are trained to know which bed types are necessary to handle patients suffering from radiological injury.

Area for Improvement 1.2: Reporting bed availability by RITN hospitals.

Analysis: It may be beneficial for the U of M and Mayo Clinic (RITN facilities) to bias their bed reporting to preserve beds for RITN patients and let other non-RITN facilities take people with other injuries.

Recommendations

Area for Improvement	Recommendation/ Corrective Action
1.2.1.	Conduct a follow on meeting for the RITN hospitals in Minnesota to continue this discuss and analyze the benefits and tradeoffs to this approach.
1.2.2.	If it is determined that this approach is optimal, develop a process/protocol for zeroing out available beds in MNTrac and a mechanism to report the RITN available beds through the FCC to RITN (and to HHS).
1.2.3	Test this process in exercises and share it as a best practice through the RITN.

Area for Area for Improvement 1.3: Mass care and sheltering roles and responsibilities in Olmsted County.

Analysis: Roles and responsibilities within Olmsted County and the City of Rochester as it pertains to coordinating shelter, mass care, and family assistance are not clear; this is compounded by what is perceived to be limited resources available for sheltering, particularly in a radiological incident.

Recommendations

Area for Improvement	Recommendation/ Corrective Action
1.3.1.	Continue planning discussions to determine which agency will have the lead in coordinating mass care and which agencies will support. *See also recommendations for mass care beyond roles and responsibilities provided for Objective 6 below.*

Objective 2. Identify the critical resources available to assist hospitals and treatment centers during the surge of radiological casualties and discuss resource gaps.

Capability: Medical Surge

Observations

Beds

Immediate bed availability reports would be submitted by hospitals, then facilities would look at what beds could be available in the next 24 hours by reviewing patients for possible discharge. At Mayo Clinic, approximately 35% of patient population comes from outside of Minnesota and given the IND it's expected that the number of incoming patients will drop significantly. In addition, Mayo discharges 20% of the 1000-1500 patients each day (routine, not rapid discharge). Both of these situations are likely to result in approximately 500 open beds so having space is not anticipated to be an issue, but having the right type of beds and the staff and supplies to care for this type of injury is less well-characterized.

Other hospitals in Southeastern Minnesota are small critical care facilities (7-25 beds) without much capacity to accept patients. Staff would quickly be tapped out in critical access care. Also, they typically care for transitional (e.g., long term pneumonia acute patients) who cannot be easily discharged. These hospitals won't be able to support

much patient off-loading. However, they may be able to provide resources (supplies and equipment).

It will be important for these hospitals to stay informed of the patient surge as they may get other types of patients/injuries if the RITN and other Twin Cities metro hospitals are already overloaded. Olmsted Medical Center said they would be able to help with the regular local patient load in order to assist Mayo in taking RITN patients.

Regarding receipt of pediatric patients (per the scenario), Mayo is fairly limited on the pediatric floor. Looking across the entire hospital, many can be absorbed but it does depend what else is going on at the time; for example, the day of the exercise the hospital was very busy so many of the pediatric patients would have to be admitted into adult units. If the kids are older than 5 it is easier and they can be triaged up to adult beds. Again, it was noted that elective procedures would be canceled and there would be a fear factor reducing the number of patients coming to the hospital that will help to open up beds.

Intensive supportive care for RITN patients includes admission in a Bone Marrow Transplant (BMT) unit with access to antibiotics and Neupogen. Not all of the arriving patients (80) are anticipated to need this level of care. If there were 80 that required marrow transplants this would be very difficult, even half that number would be hard given the laboratory capability and capacity. It is unlikely that Mayo and the U of M combined could handle a rapid marrow transplant for 80 patients (because of the cell work ups and finding donors). The availability (or process to get additional) of medications was not discussed during the exercise.

Staff

With regards to staffing, generally staffing up at Mayo is not a problem (i.e., there are 3000 nurses and 70% are part time, another ~3000 registered nurses that work in other positions at the hospital – could leverage these assets to rapidly increase staffing; for physicians, staffing could be expanded by discontinuing research time). However, getting staff that is proficient in the care of radiation injury patients and marrow transplants would be more difficult. It might be possible to pull staff from Mayo campuses in other states (Jacksonville, FL and Scottsdale, AZ) as they are licensed to practice in multiple states.

RITN cannot move staff across state lines. They can offer telemedicine to assist RITN centers in receiving patients and sharing best practices.

Behavioral/Mental Health Assets

A lot of anxiety would be anticipated following an IND detonation in the United States and with bringing patients to Minnesota hospitals. Behavioral/mental health would focus on three groups: patients, staff, and the local communities. Messages to hospital staff would focus on resilience and empower them to use their skills to take care of themselves and others. Since the 2015 Ebola event, Mayo has implemented new procedures to more effectively deal with employee health issues associated with the stresses of these types of events. Some things that were mentioned include:

- Collaboration with local agencies to set up places where people can come and talk
- Training staff on psychological first aid not only for themselves but for patients and their family members (this should be done in advance of an emergency)
- Olmsted County has a behavioral health team and can provide this resource during an emergency
- Medical Reserve Corps (MRC) has a memorandum of agreement (MOA) with 10 other counties in the region to pull in behavioral/mental health resources or can request state behavioral health resources (state MRC) to reach to other areas
- Employee Assistance Programs to augment behavioral health
- EMS have Critical Incident Stress Management (CISM) teams to support mental health of pre-hospital providers

Strengths

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

Strength 2.1: Mayo, even without implementing rapid discharge procedures, will have a significant number of open beds and can greatly increase their staff by shifting part time staff to full time hours.

Strength 2.2: The behavioral health support both at Mayo Clinic and within Olmsted County Public Health are a strong asset and would be able to provide adequate support for staff, patients, families, and the community. If the local assets were overwhelmed there are MOAs in place to reach to other trained mental health partners across the state of Minnesota.

Strength 2.3: Existing infrastructure such as the SE MN HMACC and Metro Regional Coordinating Centers are effective means to share information with hospital and other healthcare partners and to assess available resources in the community.

Areas for Improvement

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

Area for Improvement 2.1: Ability to surge laboratory capacity and capability to accommodate an influx of patients requiring marrow transplants.

Analysis: It would be very difficult for both Minnesota RITN facilities (combined) to accommodate a large surge of patients requiring marrow transplants primarily because of the extensive laboratory work ups required and skilled laboratory staff to be able to perform the work. In addition, the process of finding/matching donors would be very time consuming.

Recommendations

Area for Improvement	Recommendation/ Corrective Action
2.1.1.	Determine the maximum number of marrow transplant workups that could be performed in a given time frame and where the bottlenecks in the process exist.
2.1.2.	Identify resources/support that would be needed to increase throughput (e.g., reliance on the NMDP to help with donor matching).

Area for Improvement 2.2: Staff augmentation in the first 24 hours to care for a surge of radiation injuries.

Resources: RITN http://www.ritn.net

REAC/TS https://orise.orau.gov/reacts/

REMM http://www.remm.nlm.gov

Analysis: Educating staff to not be “afraid” of radiation (beyond clinical staff) and do we provide just in time training to nurses on this type of care? Emergency Declaration to relax licensure and allow people from across state lines to work at Mayo/U of M for RITN patient care. RITN look into pre-emergency licensure exception policies to enact in a disaster? Locally (within Minnesota) have looked at this as it relates to staff in Wisconsin, a pre-scripted executive order for the governor but as much of the planning with state agencies in advance so that it is a smooth process in a disaster is recommended.

Recommendations

Area for Improvement	Recommendation/ Corrective Action
2.2.1.	Explore staffing options for specialty care of radiation injury patients; for example just-in-time training for nurses, licensure exemptions to acquire staff from across state lines, and/or staff from other Mayo locations that are able to practice in Minnesota.

Area for Improvement	Recommendation/ Corrective Action
2.2.2.	Conduct pre-planning for licensure issues with state agencies in advance of a disaster and develop pre-scripted executive orders for the governor that can be implemented in a disaster.
2.2.3	Educate staff (clinical and non-clinical) on radiation response to help reduce the fear and increase the number that will come to work in this type of scenario. An advance training course and a just-in-time training course on radiation is recommended. Leverage existing resources (links above) and tailor materials for the Minnesota facilities.

Objective 3. Identify processes for providing support for radiological patients receiving care on an outpatient basis.

Capability: Medical Surge

Observations

It may be difficult to tell initially if the patient needs inpatient or outpatient care. Outpatient monitoring strategies were not discussed in great deal during the exercise except that they should be housed near the hospital with their family members to make continued care and monitoring more easy and efficient. Home health was noted as an untapped resource that should be included in medical surge plans to include the scenario used for this tabletop exercise. Connecting (in advance) with both individually owned and national providers for home health care to work together on planning and exercising. These organizations could support mass shelter or longer-term shelter/ residence care needs.

With regards to patient tracking for outpatients (either discharged or triaged directly to outpatient), it is anticipated that normal policies and procedures would be followed (e.g., track which hotel they were discharged to). The patient flow branch of the HICS structure (pre-hospital through discharge) within the Medical Operations Section is responsible for coordinating patient flow and tracking activities.

Strengths

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

Strength 3.1: Home health was identified in previous events (e.g., Ebola, RadResponse 2013) as a potentially large resource that could be leveraged for medical surge incidents where a significant number of patients can be treated in an outpatient setting.

Strength 3.2: Patient tracking procedures at Mayo Clinic exist for pre-hospital to hospital and can support patient tracking from the FCC to Mayo Clinic.

Areas for Improvement

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

Area for Improvement 3.1: Incorporation of home health (and other healthcare resources) into the outpatient medical surge operational plan.

Analysis: While the recognition of the home health resource for outpatient care and monitoring is a strength, additional work should be done to formalize these relationships and plans for how to incorporate them into the medical surge plan.

Recommendations

Area for Improvement	Recommendation/ Corrective Action
3.1.1.	Continue to build relationships with home health and other non-traditional partners to augment medical surge plans.
3.1.2	Plan, train, and exercise with these partners in advance to identify gaps in the response and the potential support/resources that are available to augment hospitals in an event such as a surge of radiation injury patients.

Area for Improvement 3.2: Patient tracking between ED/inpatient and outpatient status is challenging due to different electronic systems currently in place.

Analysis: Current patient flow processes have challenges with moving patients from an ED status or inpatient status to an outpatient care status. Migration to a single electronic health record by 2018 will address this current information management gap.

Objective 4. Identify guidance that non-Radiation Injury Treatment Network (RITN) hospitals will need with regard to receiving radiological casualties; of particular concern is triaging, treatment and tracking/surveillance of self-referral cases from the incident area and distribution of medical countermeasures.

Capability: Medical Surge

Observations

The RITN program can provide phone consultation to non-RITN hospitals to help them manage patients with radiation injuries. This is in addition to organizing calls for the RITN centers to allow information sharing, best practices discussion, and to support them in providing expertise to non-RITN hospitals that may be caring for radiation injury patients.

Further discussion of guidance for non-RITN hospitals was not addressed in this exercise due to time constraints.

Strengths

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

Strength 4.1: RITN serves as a resource to coordinate conference calls during an event to facilitate discussion and disseminate information.

Areas for Improvement

Area for Improvement 4.1: Content and process for sharing guidance on triage and treatment of radiological casualties.

References: RITN Website (http://www.ritn.net)

Analysis: Minnesota RITN facilities should be able to provide guidance to other hospitals in the area that may be supporting receipt of radiation casualties as to the particular triage, treatment, and tracking/surveillance to manage these types of injuries.

Recommendations

Area for Improvement	Recommendation/ Corrective Action
4.1.1.	Leverage available resources and subject matter expertise to have guidance available for other hospitals; the base information should be able to be quickly tailored for specific incidents.

Area for Improvement	Recommendation/ Corrective Action
4.1.2.	Continue to offer training and exercise opportunities (such as this exercise on August 19) to familiarize other hospital, healthcare, and response partners in the community with the particular considerations related to radiation injuries (and RITN).

Objective 5. Identify the process for casualty reception and distribution within the Federal Coordinating Center (FCC) model.

Capability: Emergency Operations Coordination

Observations

FCC Patient Reception

The operational support that would be needed to establish the FCC and Patient Reception Area (PRA) minimally includes the Air National Guard support and access to one of their hangars at the Minneapolis-St. Paul International Airport to have a physical location to set up the FCC/PRA. The Veterans Health Administration (VHA) will establish incident command to manage operations at the FCC and to coordinate with EMS. The patient reception process will align with existing protocols for how EMS utilizes the MNTrac system to take patients to hospitals. For unloading patients from the aircraft, this would likely be the responsibility of the National Guard and/or VHA staff.

The FCC is responsible for providing personnel (medical, security, administrative), equipment (triage, treatment, food), and transportation.

Patient Triage and Distribution

The most ill patients will go to RITN centers (Mayo Clinic, University of Minnesota), the next group to non-RITN hospitals with hematology/oncology capabilities, and beyond that to other hospitals with consultation support for patient care. An ASPR regional coordinator may provide a manifest with the arriving patients identifying a destination and work with the FCC to make patient placement decisions. If the patient destination is not pre-identified those decisions are made upon arrival to the FCC.

When NDMS is activated, an ASPR Emergency Management group convenes to make national level patient placement decisions. The RITN hospital bed report and other

guidance is sent to this group to help ensure that patients are being placed appropriately.

Patient Tracking

A paper system is used locally to track patient movement between the FCC, EMS and hospitals using a unique patient identifier. The FCC has trained on and utilized the Joint Patient Assessment and Tracking System (JPATS) in past exercises. Hospitals do not know JPATS and are not expected to learn it; JPATS is a tracking system internal to the FCC and HHS.

A patient that is being transported to Mayo would be assigned to an EMS unit and that unit would call Mayo. The Mayo call center would have lead time to get the patient into internal tracking systems while the person was in transit from the FCC (1.5-2 hours). The FCC would follow up with Mayo to verify that the patient was received.

Strengths

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

Strength 5.1: The coordination between the FCC and the local EMS assets follows (as much as possible) day-to-day processes of using the MNTrac system to transport patients throughout the hospital network. This enables an increased patient throughput through the FCC.

Strength 5.2: Allina (as the transport coordinator) has existing MOUs and access to other transport vehicles in the Twin Cities to quickly augment the transport capability from the FCC to hospitals.

Strength 5.3: Patient triage/distribution decisions may be directed by ASPR at the national level; if not, the local triage process was well understood as far as which hospitals would take certain acuity level patients.

Areas for Improvement

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

Area for Improvement 5.1: Service Access Team integration into FCC operations.

Analysis: Service Access Teams (SATs) have never been utilized during a real world activation or exercise at the FCC.

Recommendations:

Area for Improvement	Recommendation/ Corrective Action
5.1.1.	Conduct an exercise (e.g., HHS/ASPR sponsored) to explore the integration of SAT into local FCC operations.

Objective 6. Identify processes for family support/assistance to families with patients receiving care in Minnesota.

Capability: Mass Care

Observations

In the Twin Cities metro area, the Xcel Center could be used for mass care, an alternative that was suggested was Camp Ripley because this is secure, private, and is less impacted for future use by the public perception of radiation. The difficulty is that it is not close to the hospitals to support outpatient care and monitoring needs.

Within the Rochester area, the City OEM would be responsible for coordinating ESF-6 sheltering operations but no single department can (or is designated to) arrange mass care. There is a housing authority in Olmsted County but housing is very limited even for county residents. At ~~the~~ both the city (Rochester) and county (Olmsted) level there is no agency that can handle mass care per this scenario. The State of Minnesota has mechanisms (e.g., funding from the Federal Emergency Management Agency [FEMA] to find and reimburse housing) and Olmsted County may also be able to obtain housing resources in certain circumstances.

During Ebola response, Mayo Clinic HICS communicated with the Rochester Visitors Bureau to help find housing when hotels and faith-based organizations did not want to house people being quarantined for Ebola. This was in coordination with county public health that, in the circumstance of an infectious disease, is legally obligated to set up shelter for quarantine situations. However, legal language and state response plans vary in the event of persons exposed to radiation (as opposed to infectious disease).

The Red Cross has many registered volunteers to support mass care shelter operations; however the number of available volunteers may be impacted by fear requiring the Red Cross may need to pull from a wider area.

The other element noted with the NDMS patient movement to the RITN centers is that there may be housing reimbursement issues because the disaster has not directly impacted the community; rather people from another area are impacting the hospital (Mayo Clinic) and the surrounding area.

Strengths

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

Strength 6.1: The outstanding issues related to mass care and shelter is recognized in Olmsted County and the City of Rochester; there is demonstrated progress through discussion-based exercises and this work needs to continue to drive forward collaborative planning initiatives.

Strength 6.2: The local Red Cross is well integrated into the response network and has assets that can support sheltering operations in Southeastern Minnesota.

Strength 6.3: In situations where patients and family members/caregivers will be displaced and transported into Minnesota, keeping these patients primarily in the Twin Cities metro area may afford more options/resources for housing and services than moving large numbers to Rochester.

Areas for Improvement

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

Area for Improvement 6.1: Sheltering/housing options for NDMS patients arriving to the MSP FCC.

Analysis: There are limited sheltering resources in Olmsted County and the surrounding area of Mayo Clinic along with no designated city or county agency that leads the mass care response. It may be worthwhile to determine if centralizing mass care and services in the Twin Cities metro area for displaced NDMS patients and their families is a more viable option than even distribution of RITN patients between Mayo and the University of Minnesota.

Recommendations

Area for Improvement	Recommendation/ Corrective Action
6.1.1.	Convene a working group to look at the option of not evenly splitting the RITN patients between Mayo and the University of Minnesota. This analysis should include a detailed characterization of what sheltering options and resources to support those are available and link it to the number of patients and caregivers that could realistically be transported to Rochester in a radiological scenario.
6.1.2	Consider looking at other emergency sheltering plans to see if there is a model that can be leveraged for development of a radiological family assistance/sheltering scenario (e.g., cold emergencies or joint planning with the State of Minnesota Radiological Emergency Preparedness (REP) program as it pertains to evacuations).

Area for Improvement 6.2: City and County Roles for Mass Care and Sheltering Operations (in advance and aligned to State plans).

Reference: "Examination of Legal Language Authorizing Responses to Incidents Involving Contamination with Radioactive Material". CDC. May 2014. Web. http://www.cdc.gov/phlp/docs/php-radioactive.pdf

Analysis: The City of Rochester and Olmsted County need to continue planning efforts for mass care and sheltering in the region. This can include determination of a lead agency (and supporting agency[s]) as well as identifying sheltering needs that cannot be addressed locally and the triggers for elevating those needs to the State level.

Recommendations

Area for Improvement	Recommendation/ Corrective Action
6.2.1.	Delineate agency responsibilities within Olmsted County and the City of Rochester when it comes to plans for mass care. Sync these plans with existing County and State plans where there is authority to establish shelters and reimburse for those locations. The lead agency may vary depending on the circumstances of the disaster.
6.1.2	Determine whether Olmsted County public health has authority to establish shelters in a radiological incident by consulting the reference above. Develop or refine plans as necessary.

Objective 7. Identify public/joint information strategies and messages to address scenario issues.

Capability: Communications/Information Sharing

Observations

The primary consideration with messaging in this scenario was identifying credible sources for both internal and external messaging early on in the incident to quell staff and public fear. This includes a Radiological Subject Matter Expert (SME) that sits within the HICS structure to support message development and answer questions. Also having law enforcement and county liaisons available to deliver the messages to talk to what is being done as an emergency preparedness initiative for the region and educate the public early on. It also is important to know the audience and message appropriately; key audiences were identified as: family members whose loved ones have been taken from the impacted area, hospital/healthcare staff, hotels/housing providers, and the local community. Proactively educating and delivering regularly scheduled media updates will help counter the likelihood of the public and/or media creating their own scenarios about the incident.

Messaging strategies would vary by audience and as the event unfolded. Very soon (i.e., first 24 hours) after the incident media strategies would be looking to address the question of "what caused this?" Days 2-4 following the IND detonation, people would start to be more focused on themselves – questions such as "Could this happen here?", "Will affected people come here?", "What can we do to protect ourselves?". Public concerns bounce between global impact and individual/local impacts.

Some other key messages included:

- How to locate people moved from the area and where to go for information
    - There are Red Cross resources but this scenario would elevate to FEMA for both ESF-6 and ESF-8 functions and reunification
- Type of patients being cared for locally and what is being done to care for them
- What people/volunteers can do to help (both internal hospital messaging as well as to the community volunteers)

It is also possible to use the lead-time before patients arrive to the local community to refine and tailor messages further. Mayo Clinic would look to the local government (e.g., public health) to be the lead for messaging and public information strategies.

Strengths

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

Strength 7.1: The public information officers at Mayo Clinic and the local agencies have a strong network with established relationships and were able to anticipate the key audiences and type of information that should be provided soon after the event.

Strength 7.2: Messaging strategies were strong to include the use of subject matter experts on radiation to develop the messages as well as joint press conferences to have both local leaders and experts talking to the community.

Areas for Improvement

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

Area for Improvement 7.1: PIO networks for planning and incident communications.

Analysis: Networks and regularly occurring meetings are in place for the PIOs the SE Minnesota area; however, there is a need to ensure that backup representatives and all relevant agencies are informed/included on contact list and quarterly meeting schedules. It also would be valuable to expand the available contact information to statewide or Twin Cities metropolitan area PIO partners.

Recommendations

Area for Improvement	Recommendation/ Corrective Action
7.1.1.	Establish PIO networks in advance of an emergency by developing/sharing contact information lists and participating in regular planning meetings.
7.1.2	Identify functional in person and virtual means of coordinating during an incident with redundancy to ensure that information can be shared with all partners and to facilitate joint information strategy development. These platforms may exist but ensure that all are aware, have access, and the opportunity to practice using it.
7.1.3	Develop relationships in advance with key community leaders (e.g., minority populations) to build trust prior to an incident.

Area for Improvement 7.2: Communication to family members about patient whereabouts and condition

Analysis: Questions about patient whereabouts and condition are anticipated when being moved to other states for radiation injury treatment and it is not well understood what type of information can be released and to whom. It is also necessary to gather data on the types of family reunification systems that will be utilized during an NDMS patient movement scenario such as this so that public messaging can rapidly provide contact information for those resources out to family members looking for their loved ones.

Recommendations

Area for Improvement	Recommendation/ Corrective Action
7.2.1.	Continue working on protocols for how information is shared with family members to include what level of information can be provided and the process to do so
7.2.2	Ensure that the protocols for information sharing to family members are synced up early on with PIOs so that (as much as possible) public messaging is anticipating and in front of the questions/concerns related to family assistance and reunification.

Area for Improvement 7.3: Radiation incident (e.g., RITN) specific messaging

Resources: Health Physics Society – “Ask the Expert” (www.hps.org)

U.S. HHS Radiation Emergency Medical Management (REMM) website – Information Resources for Public Information Officers. http://www.remm.nlm.gov/remm_pio.htm

FEMA. " Improvised Nuclear Device Response and Recovery: Communicating in the Immediate Aftermath" – June 2013. http://www.fema.gov/media-library-data/20130726-1919-25045-0618/communicating_in_the_immediate_aftermath__final_june_2013_508_ok.pdf

Analysis: Additional resources and access to local subject matter experts to help craft messages for radiological incidents were discussed during the exercise. There can be pre-event templates that can be tailored to meet the needs of a specific radiological emergency such as this IND scenario as well as having the resources available to support public information strategies during a response.

Recommendations

Area for Improvement	Recommendation/ Corrective Action
7.2.1.	Continue working on protocols for how information is shared with family members to include what level of information can be provided and the process to do so
7.2.2	Ensure that the protocols for information sharing to family members are synced up early on with PIOs so that (as much as possible) public messaging is anticipating and in front of the questions/concerns related to family assistance and reunification.

HOTWASH

This exercise was conducted to evaluate Minnesota's RITN centers and supporting partners capability to execute its mission responsibilities for response to a surge of radiological casualties. Participants gained awareness of each other's processes, capabilities, limitations and assumptions. Both strengths and areas for improvement were identified which will serve as the foundation for future performance improvement.

Feedback elicited during the hotwash is captured below:

Strengths

- Ability to meet response partners and share resources
- Exercise was an opportunity to test Mayo's new plan on family support system
- Exercise was an effective learning opportunity about the different organizations that would be involved in responding to this type of incident
- Opportunity to broaden perspective of coordinated patient movement
- ASPR is looking to identify gaps and to fund activities to close those gaps
- Recognize the library role in closing some gaps – a trusted resource with local connections

Areas for Improvement Planning

- Continue planning to coordinate family accommodations at the local community level; progress has been made since previous tabletop exercises and relationships are in place but the effort must continue
- Explore how to best leverage community support
- Patient tracking remains an issue
- Advance training and education on this type of incident to alleviate assumptions; both advance and just-in-time training options
- Look into how the public health/healthcare organizations can tap into private industry reunification systems (e.g., ReUnite mobile application)
- Need to be able to identify and access radiological subject matter experts quickly to assist with public information (local experts ideally)

APPENDIX A: IMPROVEMENT PLAN

This Improvement Plan has been developed specifically for the SEMN Disaster Coalition, and its partners, as a result of MN Regional RITN exercise.

Capability Elements: Planning, Organization, Equipment, Training, Exercise

Capability	#	Recommendation/ Corrective Action	Capability Element	Primary Responsible Organization	Organization POC	Priority	Due Date
Information Sharing/Communications							
Information Sharing/Communications							
Information Sharing/Communications							
Information Sharing/Communications							
Information Sharing/Communications							
Information Sharing/Communications							
Information Sharing/Communications							
Information Sharing/Communications							
Information Sharing/Communications							
Information Sharing/Communications							

Capability	#	Recommendation/ Corrective Action	Capability Element	Primary Responsible Organization	Organization POC	Priority	Due Date
Information Sharing/Communications							
Information Sharing/Communications							
Information Sharing/Communications							
Information Sharing/Communications							
Information Sharing/Communications							
Information Sharing/Communications							
Information Sharing/Communications							
Emergency Operations Coordination							
Emergency Operations Coordination							
Emergency Operations Coordination							
Emergency Operations Coordination							
Emergency Operations Coordination							

Capability	#	Recommendation/ Corrective Action	Capability Element	Primary Responsible Organization	Organization POC	Priority	Due Date
Emergency Operations Coordination							
Medical Surge							
Medical Surge							
Medical Surge							
Medical Surge							
Medical Surge							
Medical Surge							
Medical Surge							
Mass Care							
Mass Care							
Mass Care							
Mass Care							

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APPENDIX C: ACRONYMS

Acronym	Term
AAR	After Action Report
ARS	Acute Radiation Sickness
ASPR	Assistant Secretary for Preparedness and Response
BMT	Bone Marrow Transplantation
CDC	Centers for Disease Control and Prevention
DHS	Department of Homeland Security
EMS	Emergency Medical Services
FCC	Federal Coordinating Center
FEMA	Federal Emergency Management Agency
HAvBED	Hospital Available Beds for Emergencies and Disasters
HHS	Health and Human Services
HMAC	Healthcare Multi-Agency Coordination
HPP	Hospital Preparedness Program
IND	Improvised Nuclear Device
JPATS	Joint Patient Assessment & Tracking System
MCI	Mass Casualty Incident
MRCC	Metro Regional Coordinating Center
NMDP	National Marrow Donor Program
NMDS	National Medical Disaster System
OEM	Office of Emergency Management
OMC	Olmsted Medical Center
PRA	Patient Reception Area
REAC/TS	Radiation Emergency Assistance Center/Training Site
REMM	Radiation Emergency Medical Management
REP	Radiological Emergency Preparedness
RITN	Radiation Injury Treatment Network
SAT	Service Access Team
TTX	Tabletop Exercise
VHA	Veterans Health Administration