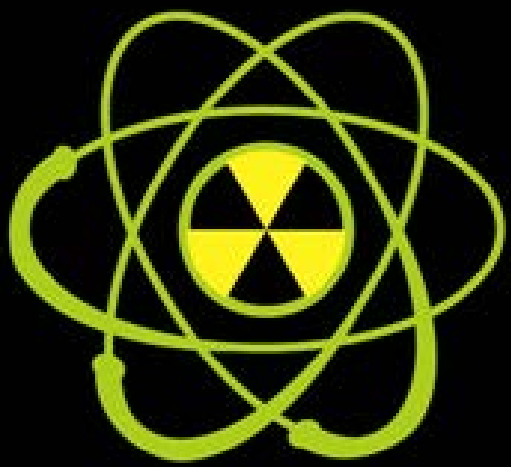
2017

RITN Tabletop Exercise (TTX) Situation Manual (SitMan)



Deadline for submission of answers to exercise questions is

August 31, 2017

PREFACE

There are two options for how your organization completes the RITN Tabletop Exercise in 2017; the first is to participate in a web-based exercise facilitated by the Mier Group and the RITN Control Cell. The second option is to conduct the exercise independently, as you have in the past. We encourage you to participate in the web-based exercise, if convenient. If you plan to participate in the web-based exercise, please register for one of the five sessions through this link by May 26, 2017 **https://register.gotowebinar.com/rt/5968571709667407107**. If you plan to coordinate the exercise yourself, please use these materials to coordinate and conduct your exercise and then submit the answers to the questions in this packet.

If participating in one of the web-based TTXs survey answers must be submitted within 10 days from the exercise to receive credit. For centers conducting the exercise on their own, answers must be submitted by **August 31, 2017**. Only one person should submit answers for each RITN center. The web link for answer submission is:

https://www.surveymonkey.com/r/FY17Exercise

CONTINUING EDUCATION

Nurses: The National Marrow Donor Program is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation (COA).

Up to 2.5 contact hours may be claimed for this educational activity.

Continuing education credits are available for participants who attend one of the web based exercises offered from May 30, 2017 to August 3, 2017. Each participant must complete and submit the online evaluation. Participation will be verified and a certificate of continuing education will be issued within 30 days upon completion of the requirements for this course.

All others completing this course will receive a certificate of completion.

Please note: Continuing education credits are NOT available for those participants who complete the RITN tabletop exercises independently.

EXERCISE PARTICIPANTS

This exercise should be completed with a group of appropriate staff members. To determine exercises participants the **RITN Coordinator should work with hospital emergency management staff to review the exercise materials** and identify what departments/organizations would be required. The departments/organizations listed below are only examples and should not be considered as a definitive list of participants.

Internal Staff:

RITN Medical Director
RITN Primary Coordinator
RITN Alternate Coordinator
Additional physician(s)
Advanced practitioner
Nursing staff
Admission process representative
Administrator/hospital executive
Emergency management staff
Radiation safety officer/Health physicist
Social services representative
Blood center representative
Emergency department representative
Lab representative
Environmental health and safety representative
Public information representative
Ethicist

External Partners:

VA/NDMS representative
Public health representative
Healthcare coalition representative
Other staff or partners as needed

Thank you for your time and participation in this critical national response initiative.

EXERCISE OVERVIEW

Exercise Name	2017 RITN Tabletop Exercise (TTX)				
Web Based Exercise Dates --- ***Registration Required***		**Eastern Time**	**Central Time**	**Mountain Time**	**Pacific Time**
	May 30, 2017	Start: 1:00PM End: 3:30PM	Start: 12:00PM End: 2:30PM	Start: 11:00PM End: 1:30PM	Start: 10:00AM End: 12:30PM
	June 19, 2017	Start: 10:30AM End: 1:00PM	Start: 9:30AM End: 12:00PM	Start: 8:30AM End: 11:00AM	Start: 7:30AM End: 10:00AM
	June 28, 2017	Start: 1:00PM End: 3:30PM	Start: 12:00PM End: 2:30PM	Start: 11:00PM End: 1:30PM	Start: 10:00AM End: 12:30PM
	July 19, 2017	Start: 1:00PM End: 3:30PM	Start: 12:00PM End: 2:30PM	Start: 11:00PM End: 1:30PM	Start: 10:00AM End: 12:30PM
	August 3, 2017	Start: 10:30AM End: 1:00PM	Start: 9:30AM End: 12:00PM	Start: 8:30AM End: 11:00AM	Start: 7:30AM End: 10:00AM
Core Capabilities	Public Health & Medical Services				
Threat or Hazard	Radiological				
Scenario	Medical surge from a distant radiological incident				
Sponsors	Radiation Injury Treatment Network (RITN) National Marrow Donor Program (NMDP) Office of Naval Research (ONR)				
Point of Contact	RITN Control Cell RITN@nmdp.org (612)884-8276				

GENERAL INFORMATION

Exercise Learning Objectives and Core Capabilities

The following exercise learning objectives in Table 1 describe the expected outcomes for the exercise. The objectives are linked to core capabilities, which are distinct critical elements necessary to achieve the specific mission area(s). The objectives and aligned core capabilities are guided by elected and appointed officials and selected by the Exercise Planning Team.

Table 1. Exercise Learning Objectives and Associated Core Capabilities

Exercise Learning Objective	Core Capability
Objective 1: Hospital staff are able to determine their hospital's capability to receive casualties (inpatient and outpatient) through the National Disaster Medical System (NDMS) following a mass casualty radiological incident	Public Health & Medical Services
Objective 2: Hospital staff are able to discuss the procedures for implementing Crisis Standards of Care (CSC) at their hospital.	Public Health & Medical Services
Objective 3: Hospital staff are able to describe their approaches for triaging patients and determining initial treatment actions for patients with Acute Radiation Syndrome (ARS).	Public Health & Medical Services

Participant Roles and Responsibilities

The term *participant* encompasses many groups of people, not just those playing in the exercise. Groups of participants involved in the exercise, and their respective roles and responsibilities, are as follows:

Players. Players are personnel who have an active role in discussing or performing their regular roles and responsibilities during the exercise. Players discuss or initiate actions in response to the simulated emergency.

Observers. Observers do not directly participate in the exercise. However, they may support the development of player responses to the situation during the discussion by asking relevant questions or providing subject matter expertise.

Facilitators. Facilitators provide situation updates and moderate discussions. They also provide additional information or resolve questions as required. Key Exercise Planning Team members also serve as subject matter experts (SMEs) during the exercise.

Evaluators. Evaluators are assigned to observe and document certain objectives during the exercise. Their primary role is to document player discussions, including how and if those discussions conform to plans, polices, and procedures.

Exercise Structure

This exercise will be a facilitated exercise. Players will participate in the following modules:

Module 1: Planning for Patient Arrival
Module 2: Crisis Standards of Care
Module 3: Patient Treatment

Exercise Guidelines
This exercise will be held in an open, low-stress, no-fault environment. Varying viewpoints, even disagreements, are expected.

Respond to the scenario using your knowledge of current plans and capabilities (i.e., you may use only existing assets) and insights derived from your training.
Decisions are not precedent setting and may not reflect your organization's final position on a given issue. This exercise is an opportunity to discuss and present multiple options and possible solutions.

Issue identification is not as valuable as suggestions and recommended actions that could improve response efforts. Problem-solving efforts should be the focus.

Exercise Assumptions and Artificialities
In any exercise, assumptions and artificialities may be necessary to complete play in the time allotted and/or account for logistical limitations. Exercise participants should accept that assumptions and artificialities are inherent in any exercise, and should not allow these considerations to negatively impact their participation. During this exercise, the following apply:

The exercise scenario is plausible and events occur as they are presented.

The scenario may not have all the information that you feel is necessary to provide a fully informed response. Please attempt to formulate your responses based on the information provided.

Exercise Evaluation
Players will be asked to complete participant feedback forms. These documents, coupled with facilitator observations and notes, will be used to evaluate the exercise and compile the After-Action Report (AAR).

Participants requesting continuing education credits must complete and submit the evaluation in order to receive credits.

EXERCISE SCENARIO

Initial Incident

- 1 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 begin to monitor the situation and start sending out daily Situation Reports (SitReps).
- RITN Control Cell requests all RITN centers to submit their Healthcare Standard (HCS) capabilities matrix and to ensure alternate communications are functioning (sat phone, GETS card).

Day 5

Module 1

- The National Disaster Medical System (NDMS) issues activation protocol for your region and the local Federal Coordinating Center (FCC) has indicated your center will be receiving patients from the incident and expects them to arrive within 24-48 hours.

Day 6

Module 2

- Your center has started receiving patients from the Patient Reception Area (PRA). Upon arrival patients were screened to ensure they were not contaminated and triaged to determine the level of care needed.

Day 7

Module 3

- Your hospital has received an additional 3 patients (unknown if they require inpatient or outpatient care). Upon arrival CBC with differential was performed.

PRE-EXERCISE QUESTIONS

- The following questions should be completed prior to the start of the exercise and are being used to develop baseline information for the network. If you have completed a capabilities matrix within HCS in the last 60 days that information may be used for the purpose of the exercise.
- Scenario information for completing the matrix:
    - An improvised Nuclear Device (IND) was detonated 500 miles away from your hospital. Shortly after the detonation you started receiving Situation Reports (SITREPs) from the RITN Control Cell and have been requested to complete your capabilities matrix within Healthcare Standard (HCS).
    - Your hospital has not received any patients at this time and there is no threat from fallout.
    - Appendix A can be referenced for bed type definitions.

HCS Matrix

1. # staffed Adult Hem/Onc beds (Now)
2. # staffed Adult Hem/Onc beds (24)
3. # staffed Peds Hem/Onc beds (Now)
4. # staffed Peds Hem/Onc beds (24)
5. # staffed Adult BMT-type beds (Now)
6. # staffed Adult BMT-type beds (24)
7. # staffed Peds BMT-type beds (Now)
8. # staffed Peds BMT-type beds (24)
9. Outpatient Supportive Care Capability – Adult
10. Outpatient Supportive Care Capability – Peds
11. # G-CSF: Filgrastim (Neupogen or Granix) Doses Available
12. # G-CSF: Pegylated (Neulasta®) Doses Available
13. # GM-CSF: Sargramostim (Leukine) Doses Available

NDMS Administration

14. What is your hospital's National Provider Identifier (NPI) number? *This is a 10 digit number and should be a Type 2 institutional number and not a Type 1 physician number.*

15. Does your hospital have a current MOA signed with the National Disaster Medical System (NDMS)?
    a. If yes, what year was the MOA signed?
    b. If no, what is the primary reason your hospital has not signed an NDMS MOA?
16. Who is your hospital's POC for the NDMS?

MODULE 1: PLANNING FOR PATIENT ARRIVAL

Scenario Update

- It's been six days since being alerted by the Radiation Injury Treatment Network of the incident and the Department of Health and Human Services (HHS) is beginning to move patients via the National Disaster Medical System (NDMS).

Discussion Questions

17. What difficulties does your hospital have completing the capabilities matrix in Healthcare Standard (HCS)?
18. How many patients (inpatient) could your hospital receive with aggressive changes (aggressive discharges/transfers, delayed admissions) and spill-over into other areas of your hospital (med/surg, ICU, PACU), assuming some alterations in standards of care?
19. How many patients (inpatient) could your hospital receive now with the changes identified in the previous question plus incorporating large austere emergency treatment facilities that have been previously planned for (e.g. pre-defined: dormitories, gymnasiums, domed stadiums, and assuming implementation of crisis standards of care)?
20. If requested by the RITN Control Cell to communicate bed availability directly to your assigned Federal Coordinating Center (FCC) does your hospital have a process in place to communicate this information with them?
21. Does your hospital already have hotels or other accommodations identified to house outpatients during a RITN activation? If so, do you have a formal agreement in place (i.e. contract, MOU/MOA, etc)?

MODULE 2: CRISIS STANDARDS OF CARE

Scenario Update

- It's now been seven days post detonation and your hospital is providing care for the number of patients identified in your capabilities matrix. Due to the volume of casualties requiring treatment around the country and interruptions to critical supply chains concerns are being raised about the availability of critical resources.

Discussion Questions

1. What is your hospital's current plan for implementing Crisis Standards of Care (CSC)?
2. Does your individual hospital have their own CSC or would they rely on overarching guidance from the state or other entity (i.e., so all implement the same standards of care)?
3. Is there a committee that would decide or is there a specific authority position that would make the CSC determinations? If so, what is the makeup of this committee or the specific position?
4. Is a national disaster declaration sufficient to implement CSC or is there a legal authority at the state level that must make a determination?
5. Are ethical codes/guidance in place in your state/county/city?
6. If CSC codes/guidance do not exist (and this happened today), what would be the priority factors to consider in this scenario for making decisions on use of resources?
    a. Examples: age, comorbidities, severity of exposure/likelihood of survival (as determined by who? How much workup is reasonable in a surge?)
7. What support would your hospital need from public health or emergency management agencies in order to implement CSC?
8. How can/should CSC guidance be integrated into public messages?
9. What laboratory resources would be in greatest demand during this response (I.e., removed from the detonation and receiving patients ~ two weeks later)? Consider staff/supplies.
10. What, if any, laboratory testing might be delayed/deferred in this type of scenario?
11. What is the maximum number/throughput of CBC with differentials your lab can process daily given expected resources constraints?

MODULE 3: PATIENT TREATMENT

Scenario Update:

- Following the initial wave of patients transported to your facility from the Patient Reception Area (PRA) three additional patients have been transported to your hospital. Currently your hospital only has the capability to admit one of the three patients.
- Cytokines available have not changed from what was indicated on your capabilities matrix and the vendor is unable to provide a date for resupply.
- For centers that treat both adult and pediatric patients you can choose between the adult or pediatric patient sets, but do not mix them.
- Information found in the Joint Patient Assessment and Tracking System (JPATS) manifest for each patient has been intentionally left vague and the use of terms/acronyms that may be unfamiliar included to mimic what may be found in a real world scenario. All acronyms can be found in Appendix B.

Adult Patients

JPATS Patient Manifest Info:

Patient ID: 0001
Name: Maude Lebowski **Gender:** Female **DOB:** 5/21/96
Notes:

Day +3 1000: Pt arrived at AC via RTR3 site. Pt stated she sheltered in place for 48hrs before leaving her home, did report H/A with N&V approximately 3hrs after the explosion. Pt referred to MC for further screening.
Day +3 1700: Estimated dose 3-4 Gy, no G-CSF administered due to shortage. Recommendation made for Pt to be evacuated to MTF for treatment of potential ARS.
Day +4 1200: Transferred to Westbrook Shelter.
Day +4 1730: Daily checkup with shelter medical staff conducted. Pt reports intermittent HA, sometime with N, has not felt much like eating.
Day +5 1500: Daily checkup conducted. No change in status.
Day +6 1300: Transferred to APOE for evacuation to definitive care hospital.
Day +6 1400: Arrived at APOE and preflight processing completed.
Day +7 0900: Pt arrived at PRA
Day +7 1000: Pt departed PRA en route to RITN hospital.

Upon arrival at your hospital the following actions/information was obtained:
Medical History: No significant medical problems, did indicate a history of migraines.
Labs (results are represented as $\times 10^9$ C/L): Lymphocytes 0.11, Granulocytes 0.38, Platelets 20
Radiological survey: No contamination found
Family: Patient arrived alone, stated she has a sister who lives with her parents approximately 500 miles away from the RITN center.

Discussion Questions:

1. What is the patients estimated dose upon arrival?
2. Admit or keep outpatient? *(due to hospital constraints only 1 of the 3 may be admitted)*
3. Would G-CSF be administered?
4. Prophylactic antimicrobials vs. treatment antimicrobials? Which antimicrobials would be used?
5. Hydration or other treatment?
6. Follow-up lab work? When and what?
7. Consultations?
8. HLA typing?
9. Other management?

JPATS Patient Manifest Info:

Patient ID: 0002
Name: Robin Jones **Gender:** Female **DOB:** 7/3/1949
Notes:

Day +3 1300: Pt arrived at Assembly Center (AC), reported nausea the day of the explosion. Pt referred to Medical Center (MC) for further screening.
Day +3 1900: Based on location data estimated dose 5-6 Gy, no G-CSF administered due to shortage. Recommendation made for Pt to be evacuated to MTF.
Day +4 1000: Transferred to Westbrook Shelter.
Day +4 1600: Daily check up with shelter medical staff conducted. Pt given medication for diabetes.
Day +5 1500: Daily checkup conducted. No change in status.
Day +6 1300: Transferred to APOE for evacuation to definitive care hospital.
Day +6 1400: Arrived at APOE and preflight processing completed.
Day +7 0900: Pt arrived at PRA, during disembarking Pt injured her leg.
Day +7 1000: Pt departed PRA en route to RITN hospital.

Upon arrival at your hospital the following actions/information was obtained:
Medical History: Adult onset diabetes and a recent diagnosis of stage II breast cancer. Pt received her third cycle of dose dense chemotherapy the morning of the detonation.
Mucosal membranes are dry. Small erythematous wound on her L foreleg
Labs (results are represented as $\times 10^9$ C/L): Lymphocytes 0.24, Granulocytes 0.41, Platelets 60
Radiological survey: No contamination found
Family: Patient did not provide any info for relatives.

Discussion Questions:

10. What is the patients estimated dose upon arrival?
11. Admit or keep outpatient? *(due to hospital constraints only 1 of the 3 may be admitted)*
12. Would G-CSF be administered?
13. Prophylactic antimicrobials vs. treatment antimicrobials? Which antimicrobials would be used?
14. Hydration and other management? Leg wound?
15. Follow-up lab work? When and what?
16. Consultations?
17. HLA typing?
18. Other management?

JPATS Patient Manifest Info:

Patient ID: 0003
Name: Walter Sobchak **Gender:** Male **DOB:** 9/13/1976
Notes:

Day +3 1300: Arrived at AC, Pt reported he was outside at the time of the explosion and doesn't recall how long he was outside before going inside. Thinks he vomited more than once before entering the building where he was found. Location where he was found was in the high radiation zone (9-11 Gy). Pt referred to MC for further screening.
Day +3 1900: Pt refused to have CBC done. Recommendation made for Pt to be evacuated to MTF, no G-CSF administered due to shortage.
Day +4 1000: Transferred to Westbrook Shelter.
Day +4 1530: Daily check up with shelter medical staff conducted. Pt inquired if he needs to stay at the shelter, was informed if he left medical care could not be provided.
Day +5 1700: Daily checkup, no change in status
Day +6 1300: Transferred to APOE for evacuation to definitive care hospital.
Day +6 1400: Arrived at APOE and preflight processing completed.
Day +7 0900: Pt arrived at PRA.
Day +7 1000: Pt departed PRA en route to RITN hospital.

Upon arrival at your hospital the following actions/information was obtained:
Medical History/Info: No medical history available, pt indicates it's been over 10 yrs since seeing a doctor. Mucosal membranes are dry. Pt reports generally not feeling well but stated that it's because they made him stay in a shelter.
Labs (results are represented as $\times 10^9$ C/L): Lymphocytes 0.03, Granulocytes 0.16, Platelets 17
Radiological survey: No contamination found
Family: Patient did not provide any info for relatives.

Discussion Questions:

19. What is the patients estimated dose upon arrival?
20. Admit or keep outpatient? *(due to hospital constraints only 1 of the 3 may be admitted)*
21. Would G-CSF be administered?
22. Prophylactic antimicrobials vs. treatment antimicrobials? Which antimicrobials would be used?
23. Hydration and other management?
24. Follow-up lab work? When and what?
25. Dicentric chromosome assay is available – do you want to send it for this patient?
26. Consultations?
27. HLA typing?
28. Other management?

Pediatric Patients

JPATS Patient Manifest Info:

Patient ID: 0004
Name: Theodore Kerabatsos **Gender:** Male **DOB:** 12/11/2001
Notes:

Day +3 1000: Pt and family arrived at Assembly Center (AC). Pt parents stated they sheltered in their home for two days before leaving, pt reported headache with vomiting and nausea 2hrs after the explosion. Pt referred to Medical Center (MC) for further screening.
Day +3 1700: Estimated dose 6 Gy, no G-CSF administered due to shortage. Recommendation made for Pt to be evacuated to MTF for treatment of potential ARS.
Day +4 1200: Transferred to Westbrook Shelter.
Day +4 1730: Daily check up with shelter medical staff conducted. Pt reports intermittent HA, sometime with nausea, parent's state he has not been eating.
Day +5 1500: Daily checkup conducted. No change in status.
Day +6 1300: Transferred to APOE for evacuation to definitive care hospital.
Day +6 1400: Arrived at APOE and preflight processing completed.
Day +7 0900: Pt and 02 non-medical attendees arrived at PRA
Day +7 1000: Pt and 02 non-medical attendees departed PRA en route to RITN hospital.

Upon arrival at your hospital the following actions/information was obtained:
Medical History: No significant medical problems, did indicate a history of migraines.
Labs (results are represented as $\times 10^9$ C/L): Lymphocytes 0.15, Granulocytes 0.48, Platelets 20
Radiological survey: No contamination found
Family: Patient arrived with his parents.

Discussion Questions:

1. What is the patients estimated dose upon arrival?
2. Admit or keep outpatient? *(due to hospital constraints only 1 of the 3 may be admitted)*
3. Would G-CSF be administered?
4. Prophylactic antimicrobials vs. treatment antimicrobials? –Which antimicrobials would be used?
5. Hydration or other treatment?
6. Follow-up lab work? When and what?
7. Consultations?
8. HLA typing?
9. Other management?

JPATS Patient Manifest Info:

Patient ID: 0005
Name: Larry Sellers **Gender:** Male **DOB:** 10/8/2002
Notes:

Day +3 1300: Pt arrived at Assembly Center (AC), reported nausea the day of the explosion. Pt referred to MC for further screening.
Day +3 1900: Estimated dose 3-4 Gy, no G-CSF administered due to shortage. Recommendation made for Pt to be evacuated to MTF.
Day +4 1000: Transferred to Westbrook Shelter.
Day +4 1600: Daily check up with shelter medical staff conducted. Pt given medication for diabetes.
Day +5 1500: Daily checkup conducted. No change in status.
Day +6 1300: Transferred to APOE for evacuation to definitive care hospital.
Day +6 1400: Arrived at APOE and preflight processing completed.
Day +7 0900: Pt&NMA arrived at PRA.
Day +7 1000: Pt &NMA departed PRA en route to RITN hospital.

Upon arrival at your hospital the following actions/information was obtained:
Medical History: Type 1 diabetes.
Labs (results are represented as $\times 10^9$ C/L): Lymphocytes 0.32, Granulocytes 0.73, Platelets 95 Glucose of 400, BUN/Cr are 30/1
Radiological survey: No contamination found
Family: Patient arrived with his 18yo brother who doesn't have any medical issues, parent's location unknown.

Discussion Questions:

10. What is the patients estimated dose upon arrival?
11. Admit or keep outpatient? *(due to hospital constraints only 1 of the 3 may be admitted)*
12. Would G-CSF be administered?
13. Prophylactic antimicrobials vs. treatment antimicrobials? Which antimicrobials would be used?
14. Hydration and other management? Leg wound?
15. Follow-up lab work? When and what?
16. Consultations?
17. HLA typing?
18. Other management?

JPATS Patient Manifest Info:

Patient ID: 0006
Name: Jennifer Lamb **Gender:** Female **DOB:** 9/13/2008
Notes:

Day +3 1300: Pt & non-medical attendee arrived at AC. Parent reports the child got sick after the blast, but doesn't remember how long after the blast occurred. Thinks it might have been 3-6 hrs. Pt referred to Medical Center (MC) for further screening.
Day +3 1900: Estimated dose 4-5 Gy. Recommendation made for Pt to be evacuated to MTF, no G-CSF administered due to shortage.
Day +4 1000: Transferred to Westbrook Shelter.
Day +4 1530: Daily check up with shelter medical staff conducted.
Day +5 1700: Daily checkup, no change in status
Day +6 1300: Transferred to APOE for evacuation to definitive care hospital.
Day +6 1400: Arrived at APOE and preflight processing completed.
Day +7 0900: Pt and non-medical attendee arrived at PRA.
Day +7 1000: Pt and non-medical attendee departed PRA en route to RITN hospital.

Upon arrival at your hospital the following actions/information was obtained:
Medical History: Parent did not indicate any previous medical conditions.
Labs (results are represented as $\times 10^9$ C/L): Lymphocytes 0.24, Granulocytes 0.41, Platelets 60
Radiological survey: No contamination found
Family: Accompanied by his father who received an exposure of less than 1 Gy.

Discussion Questions:

19. What is the patients estimated dose upon arrival?
20. Admit or keep outpatient? *(due to hospital constraints only 1 of the 3 may be admitted)*
21. Would G-CSF be administered?
22. Prophylactic antimicrobials vs. treatment antimicrobials? Which antimicrobials would be used?
23. Hydration and other management?
24. Follow-up lab work? When and what?
25. Consultations?
26. HLA typing?
27. Other management?

APPENDIX A: CAPABILITIES MATRIX

Center Type	Category	Fill-In Data Here	What it's Asking
TC	# staffed Adult Hem/Onc beds (Now)		Total number of staffed adult beds at time of report submission appropriate for providing inpatient supportive care akin to that provided to adults with cancer admitted for fever and neutropenia. Under routine circumstances, care overseen by adult Hematology/Oncology medical staff and restricted to facilities with capacity for neutropenic dietary restrictions, blood product irradiation, and adult intensive care unit.
TC	# staffed Adult Hem/Onc beds (24)		Total number of staffed adult beds available 24 hours from time of report submission appropriate for providing inpatient supportive care akin to that provided to adults with cancer admitted for fever and neutropenia. Under routine circumstances, care overseen by adult Hematology/Oncology medical staff and restricted to facilities with capacity for neutropenic dietary restrictions, blood product irradiation, and adult intensive care unit.
TC	# staffed Peds Hem/Onc beds (Now)		Total number of staffed pediatric beds at time of report submission appropriate for providing inpatient supportive care akin to that provided to pediatrics with cancer admitted for fever and neutropenia. Under routine circumstances, care overseen by pediatric Hematology/Oncology medical staff and restricted to facilities with capacity for neutropenic dietary restrictions, blood product irradiation, and pediatric intensive care unit.
TC	# staffed Peds Hem/Onc beds (24)		Total number of staffed pediatric beds available 24 hours from time of report submission appropriate for providing inpatient supportive care akin to that provided to pediatrics with cancer admitted for fever and neutropenia. Under routine circumstances, care overseen by pediatric Hematology/Oncology medical staff and restricted to facilities with capacity for neutropenic dietary restrictions, blood product irradiation, and pediatric intensive care unit.
TC	# staffed Adult BMT-type beds (Now)		Total number of staffed adult beds at time of report submission appropriate for inpatient management of adult patients undergoing autologous or allogeneic bone marrow transplantation. Under routine circumstances, care provided by adult bone marrow transplantation specialists with the same requirements as an Adult Hematology/Oncology bed, as well as HEPA air filtration and positive pressure within BMT rooms.

TC	# staffed Adult BMT-type beds (24)		Total number of staffed adult beds available 24 hours from time of report submission appropriate for inpatient management of adult patients undergoing autologous or allogeneic bone marrow transplantation. Under routine circumstances, care provided by adult bone marrow transplantation specialists with the same requirements as an Adult Hematology/Oncology bed, as well as HEPA air filtration and positive pressure within BMT rooms.
TC	# staffed Peds BMT-type beds (Now)		Total number of staffed pediatric beds at time of report submission appropriate for inpatient management of pediatric patients undergoing autologous or allogeneic bone marrow transplantation. Under routine circumstances, care provided by pediatric bone marrow transplantation specialists with the same requirements as an pediatric Hematology/Oncology bed, as well as HEPA air filtration and positive pressure within BMT rooms.
TC	# staffed Peds BMT-type beds (24)		Total number of staffed pediatric beds available 24 hours from time of report submission appropriate for inpatient management of pediatric patients undergoing autologous or allogeneic bone marrow transplantation. Under routine circumstances, care provided by pediatric bone marrow transplantation specialists with the same requirements as an pediatric Hematology/Oncology bed, as well as HEPA air filtration and positive pressure within BMT rooms.
TC	Outpatient Supportive Care Capability - Adult		Total number of adult patients facility is able to provide supportive care.
TC	Outpatient Supportive Care Capability - Peds		Total number of peds patients facility is able to provide supportive care.
TC	# G-CSF: Filgrastim (Neupogen or Granix) Doses Available		Number of filgrastim doses ≥300mcg available at time of report submission
TC	# G-CSF: Pegylated (Neulasta®) Doses Available		Number of pegfilgrastim ≥6mg doses available at time of report submission
TC	# GM-CSF: Sargramostim (Leukine) Doses Available		Number of sargramostim doses ≥250mcg available at time of report submission

APPENDIX B: ACRONYMS

Acronym	Term
AAR	After Action Report
AC	Assembly Center
APOE	Aerial Port of Embarkation
ARS	Acute Radiation Syndrome
ASPR	Assistant Secretary for Preparedness and Response
BMT	Bone Marrow Transplantation
CBC	Complete Blood Count
CSC	Crisis Standards of Care
FCC	Federal Coordinating Center
G-CSF	Granulocyte-Colony Stimulating Factor
GETS	Government Emergency Telecommunications Service
Gy	Gray
H/A	Headache
HCS	Healthcare Standard
HCT	Hematopoietic Cell Transplantation
HEM	Hematology
HEPA	High-Efficiency Particulate Air
HHS	Health and Human Services
HLA	Human Leukocyte Antigen
HPP	Hospital Preparedness Program
IND	Improvised Nuclear Device
JPATS	Joint Patient Assessment and Tracking System
MC	Medical Center
MTF	Medical Treatment Facility
N	Nausea
NMA	Non-Medical Attendant
NMDP	National Marrow Donor Program
NDMS	National Disaster Medical System
ONC	Oncology
ONR	Office of Naval Research
PACU	Post-Anesthesia Care Unit
PRA	Patient Reception Area
Pt	Patient
REMM	Radiation Emergency Medical management
RITN	Radiation Injury Treatment Network

Acronym	Term
RTR	Radiological Triage Treatment and Transport
SITREP	Situation Report
SME	Subject Matter Expert
TTX	Tabletop Exercise
V	Vomiting

APPENDIX C: REFERENCES

Encourage exercise participants to review the following before the exercise:

REMM Dose Estimator for Exposure:
https://www.remm.nlm.gov/ars_wbd.htm

RITN Training Materials:
http://ritn.net/Training/

RITN ARS Treatment Guidelines:
http://ritn.net/WorkArea/DownloadAsset.aspx?id=2147483696

HHS TRACIE Topic Collection: Crisis Standards of Care
https://asprtracie.hhs.gov/technical-resources/63/crisis-standards-of-care/60

APPENDIX D: SURVEY QUESTIONS

A copy of the survey questions are listed below for you to reference during the exercise. **All responses must be submitted through the online link:**

https://www.surveymonkey.com/r/FY17Exercise

1. Contact information (name, email, phone)

2. Select your RITN transplant center.

3. In which TTX session did your center participate?

4. How many people participated in your exercise (keep a list of all who participated by name)?

5. Identify all members of your incident response team (Select all that apply).
   a. RITN Medical Director
   b. RITN Primary Coordinator
   c. RITN Alternate Coordinator
   d. Additional physician(s)
   e. Advanced practitioner
   f. Nursing staff
   g. Admission process representative
   h. Administrator/hospital executive
   i. Emergency management staff
   j. Pharmacy staff member
   k. Radiation safety officer/Health physicist
   l. Social services representative
   m. Psychiatry/psychology representative
   n. Blood center representative
   o. Emergency department representative
   p. Quality representative
   q. Regulatory representative
   r. Cell processing lab representative
   s. Environmental health and safety representative
   t. Ethicist
   u. Burn center representative
   v. Public Information representative
   w. VA/NDMS representative
   x. Public Health representative
   y. County/city/state emergency manager
   z. Infectious disease specialist
   aa. Poison Control Center representative
   bb. Healthcare coalition representative
   cc. Law enforcement
   dd. Fire/EMS
   ee. Other staff or partners (Please list in the block below

6. # staffed Adult Hem/Onc beds (Now)

7. # staffed Adult Hem/Onc beds (24)

8. # staffed Peds Hem/Onc beds (Now)

9. # staffed Peds Hem/Onc beds (24)

10. # staffed Adult BMT-type beds (Now)

11. # staffed Adult BMT-type beds (24)

12. # staffed Peds BMT-type beds (Now)

13. # staffed Peds BMT-type beds (24)

14. Outpatient Supportive Care Capability – Adult

15. Outpatient Supportive Care Capability – Peds

16. # G-CSF: Filgrastim (Neupogen or Granix) Doses Available

17. # G-CSF: Pegylated (Neulasta®) Doses Available

18. # GM-CSF: Sargramostim (Leukine) Doses Available

19. What difficulties does your hospital have completing the capabilities matrix?

20. What is your hospital's National Provider Identifier (NPI) number?

21. Does your hospital have a current MOA signed with the National Disaster Medical System (NDMS)?
    a. If yes, what year was the MOA signed?
    b. If no, what is the primary reason your hospital has not signed an NDMS MOA?

22. Who is is your hospital's POC for NDMS?

23. NDMS POC email?

24. How many patients (inpatient) could your hospital receive with aggressive changes (aggressive discharges/transfers, delayed admissions) and spill-over into other areas of your hospital (med/surg, ICU, PACU), assuming some alterations in standards of care?

25. How many patients (inpatient) could your hospital receive now with the changes identified in the previous question plus incorporating large austere emergency treatment facilities that have been previously planned for (e.g. pre-defined:

dormitories, gymnasiums, domed stadiums, and assuming implementation of crisis standards of care)?

26. If requested by the RITN Control Cell to communicate bed availability directly to your assigned Federal Coordinating Center (FCC) does your hospital have a process in place to communicate this information with them?

27. Does your hospital already have hotels identified to house outpatients during a RITN activation? If so, do you have a formal agreement in place (i.e. contract, MOU, etc)?

28. What is your hospital's current plan for implementing Crisis Standards of Care (CSC)?

29. Does your individual hospital have their own Crisis Standards of Care (CSC) policy or would you rely on overarching guidance from the state or other entities (e.g., so all implement the same standards of care)?
    a. Hospital policy
    b. Hospital coalition policy
    c. Local/county policy
    d. State policy
    e. Other (lease specify)

30. Is there a committee that would decide or is there a specific authority position that would make the CSC determinations? If so, what is the makeup of this committee?
    a. Committee
    b. Specific position
    c. Other (please specify)

31. Is a national disaster declaration sufficient to implement CSC or is there a legal authority at the state level that must make a determination?

32. Are ethical codes/guidance in place in your state/county/city?

33. If CSC codes/guidance do not exist (and this happened today), what would be the priority factors to consider in this scenario for making decisions on use of resources? Examples: age, comorbidities, severity of exposure/likelihood of survival (as determined by who?)

34. What assistance if any would your hospital request from public health or emergency management agencies in order to implement CSC?

35. How can/should CSC guidance be integrated into public messages?

36. What laboratory resources would be in greatest demand during this response (i.e. removed from the detonation and receiving patients ~ two weeks later)? Consider staff/supplies.

37. What, if any, laboratory testing might be delayed/deferred in this type of scenario?

38. What is the maximum CBC with differentials your lab can process daily given expected resources constraints?

39. Which patient set did you complete?
    a. Adult
    b. Pediatric

Adult Patient Questions: (only complete one set of patients)

40. Estimated dose upon arrival
    a. Patient 0001?
    b. Patient 0002?
    c. Patient 0003?

41. Which patient did you admit?
    a. Patient 0001
    b. Patient 0002
    c. Patient 0003

42. Which patients would receive G-CSF?
    a. Patient 0001
    b. Patient 0002
    c. Patient 0003

43. Which patients would receive prophylactic antimicrobials?
    a. Patient 0001
    b. Patient 0002
    c. Patient 0003

Which antimicrobials would be used?

44. Which patients would receive treatment antimicrobials?
    a. Patient 0001
    b. Patient 0002
    c. Patient 0003

45. Which patients would have HLA typing completed?
    a. Patient 0001
    b. Patient 0002
    c. Patient 0003

46. Patient 0001: Indicate follow-up lab work, consultations and other treatments that would be conducted

47. Patient 0002: Indicate follow-up lab work, consultations and other treatments that would be conducted

48. Patient 0003: Indicate follow-up lab work, consultations and other treatments that would be conducted

Pediatric Patient Questions: (only complete one set of patients)

49. Estimated dose upon arrival for
    a. Patient 0004?
    b. Patient 0005?
    c. Patient 0006?

50. Which patient did you admit?
    a. Patient 0004
    b. Patient 0005
    c. Patient 0006

51. Which patients would receive G-CSF?
    d. Patient 0004
    e. Patient 0005
    f. Patient 0006

52. Which patients would receive prophylactic antimicrobials?
    g. Patient 0004
    h. Patient 0005
    i. Patient 0006

Which antimicrobials would be used?

53. Which patients would receive treatment antimicrobials?
    j. Patient 0004
    k. Patient 0005
    l. Patient 0006

54. Which patients would have HLA typing completed?
    m. Patient 0004
    n. Patient 0005
    o. Patient 0006

55. Patient 0004: Indicate follow-up lab work, consultations and other treatments that would be conducted

56. Patient 0005: Indicate follow-up lab work, consultations and other treatments that would be conducted

57. Patient 0006: Indicate follow-up lab work, consultations and other treatments that would be conducted