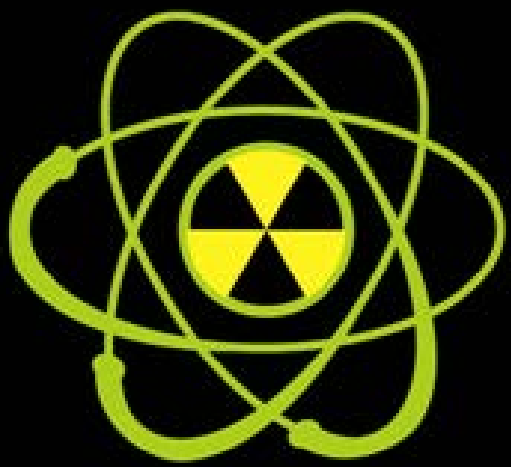
2018

RITN Tabletop Exercise (TTX) Situation Manual (SitMan)



Deadline for submission of answers to exercise questions is

August 31, 2018

PREFACE

There are two options for how your organization completes the RITN Tabletop Exercise in 2018; 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 highly recommend hospitals participate in the web-based exercises vs. conducting it on your own. If you plan to participate in the web-based exercise, please register for one of the five sessions through this link by June 1, 2018
https://register.gotowebinar.com/rt/3309281899165196802.
If your hospital plans to conduct the exercise on your own, please use these materials to coordinate and conduct the exercise and then submit the answers to the questions in this packet. Be sure to review this packet in its entirety prior to sending invitations to ensure the proper attendees are invited

Exercise Survey Requirements

- Hospitals **participating in one of the web-based TTXs** must complete the exercise survey within three days of participating.
- Hospitals **conducting the exercise on their own** must complete the exercise survey three days after the exercise. The last day to submit answers is August 31, 2018.
- Only one person shall submit answers for each RITN hospital. The web link for answer submission is: https://www.surveymonkey.com/r/FY18_TTX_Answers

Continuing Education Credit
To claim continuing education credit for nurses or a certificate of completion, please complete the separate evaluation sent via email after the activity. This must be completed within 30 days.

Please contact Lauren Marks at lmarks@nmdp.org if you do not receive the link within 1 week of the activity.

Accreditation
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 June 12, 2018 to August 9, 2018.

Participation will be verified and a certificate of continuing education will be issued.

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

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 or organizations are required. The departments/organizations listed below are only examples and should not be considered as a definitive list of recommended participants.

See page 5 for the exercise objectives to assist in identifying who to invite as 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	2018 RITN Tabletop Exercise (TTX)				
Web Based Exercise Dates --- ***Registration Required***		**Eastern Time**	**Central Time**	**Mountain Time**	**Pacific Time**
	June 12, 2018	Start: 1:00PM End: 3:30PM	Start: 12:00PM End: 2:30PM	Start: 11:00AM End: 1:30PM	Start: 10:00AM End: 12:30PM
	June 21, 2018	Start: 10:30AM End: 1:00PM	Start: 9:30AM End: 12:00PM	Start: 8:30AM End: 11:00AM	Start: 7:30AM End: 10:00AM
	July 12, 2018	Start: 1:00PM End: 3:30PM	Start: 12:00PM End: 2:30PM	Start: 11:00AM End: 1:30PM	Start: 10:00AM End: 12:30PM
	July 19, 2018	Start: 1:00PM End: 3:30PM	Start: 12:00PM End: 2:30PM	Start: 11:00AM End: 1:30PM	Start: 10:00AM End: 12:30PM
	July 25, 2018	Start: 10:30AM End: 1:00PM	Start: 9:30AM End: 12:00PM	Start: 8:30AM End: 11:00AM	Start: 7:30AM End: 10:00AM
	Aug. 9, 2018	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: RITN hospital staff are able to identify staffing strategies and plans to ensure adequate staffing during a surge caused by a distant radiological event.	Public Health & Medical Services
Objective 2: RITN 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
Objective 3: RITN hospital staff are able to discuss their procedures for the use of medical countermeasures and other pharmaceuticals in high demand.	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: Messaging and Staffing
Module 2: Patient Triage and Medical Countermeasures

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 separate evaluation sent via email after the activity in order to receive credits. See continuing education section on page 2.

EXERCISE SCENARIO

Incident Occurs

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

Day 4

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

Day 5

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

Day 9

- PRA staff contact your facility to indicated that they plan to start receiving patients with radiation injuries within the next 24 hours and will begin sending patients to your facility.

Day 10

- The first NDMS aircraft evacuating patients with radiation only injuries arrives at the PRA. NDMS officials expect there will be multiple aircraft a day arriving for the next several days. Given your facility is one of the few that can provide specialized care for ARS you'll be asked to accept as many as you can.

Module 1

Module 2

REFERENCE MATERIALS

Encourage exercise participants to review the following before the exercise:

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

RITN Bed Definitions
https://ritn.net/soptemplates/

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

MODULE 1: MESSAGING AND STAFFING

Scenario Update

- In the days following the incident your hospital started experiencing a number of staff not reporting for work. This issue has escalated over the last two days since rumors and misinformation started being circulated around the hospital and online about the dangers of radioactive patients.
- In addition to staffing shortages numerous inquiries are being made by patients and their families asking if it's still safe to be in the hospital.

Discussion Questions

1. What steps would your facility take to ensure staff feel safe coming to work?
2. What message is being communicated to staff? To patients and their families?
    a. Who is drafting/approving these messages?
3. What communication methods are being used to disseminate internal and external messages?
4. What strategies does your hospital have to increase staffing during a surge of NDMS patients?
    a. Pull staff from other units/departments and conduct Just-In-Time (JIT) training.
    b. Work with in-network hospitals to bring in additional staff.
    c. Request additional staff through your Healthcare Coalition (HCC).
    d. Utilize volunteers (MRC, DHV, etc).
5. Radiation training:
    a. What percentage of your medical staff have completed the RITN Radiation Safety Communication Course?
    b. What percentage of your non-medical staff have completed the RITN non-medical radiation awareness course?
6. Does your Radiation Safety Officer (RSO) have a predefined course for non-medical staff radiation training?
7. In order to utilize volunteers what process does your hospital have in place to ensure credentials are appropriate?
8. What limitations would be placed on volunteers working at your hospital? (i.e. must partner/shadow with regular staff)
9. Does your hospital have a process in place to request a waiver so staff/patient ratios can be adjusted?
    a. If so, what is the process for requesting the waiver?

MODULE 2: PATIENT TRIAGE AND MEDICAL COUNTERMEASURES

Scenario Update

- Since the incident several vendors have been unable to provide scheduled deliveries of medical supplies due to supply chain disruptions as well as nationwide shortages of critical supplies. Specifically, shortages of antibiotics (IV and PO), growth factors, IV fluids, and reagents for lab analyzers. This has caused your hospital to start operating under contingency conditions for supplies.

Table Source: Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response

	Conventional	Contingency	Crisis
Space	Usual patient care space fully utilized	Patient care areas re-purposed (PACU, monitored units for ICU-level care)	Facility damaged/unsafe or non-patient care areas (classrooms, etc.) used for patient care
Staff	Usual staff called in and utilized	Staff extension (brief deferrals of non-emergent service, supervision of broader group of patients, change in responsibilities, documentation, etc.)	Trained staff unavailable or unable to acequately care for volume of patients even with extension techniques
Supplies	Cached and usual supplies used	Conservation, adaptation, and substitution of supplies with occasional re-use of select supplies	Critical supplies lacking, possible re-allocation of life-sustaining resources
Standard of care	Usual care	Functionally equivalent care	Crisis standards of care[a]
Normal operating conditions		Indicator: potential for crisis standards[b]	Trigger: crisis standards of care[c] Extreme operating conditions

Dosage calculator is available at: http://www.remm.nlm.gov/ars_wbd.htm

Discussion Questions

1. Where will patients arriving from the Patient Reception Area (PRA) be triaged and processed?
2. Does this process differ for ambulatory patients that do not have immediate life threatening issues?
3. Does your hospital have a formal plan outlining this process?

For questions 4-6 use the patient profiles provided in Appendix A. None of the patients have received any growth factors prior to arriving at your hospital. **Only provide answers for either the adult or pediatric patients, do not mix the two.**

4. Based on your initial triage of the patients answer the following questions:
    a. Which patients would be admitted to a BMT bed?
    b. Which patients would be admitted to a hematology/oncology bed?
    c. Which patients would be treated as an outpatient?
    d. Which patients would be discharged to an area shelter?
    e. Which patients would receive palliative care only?
5. Which patients would receive cytokines?

6. Which patients would be started on antibiotics?
7. Which patients would you order HLA typing for?
8. What information would be provided to patients identified for outpatient care? How would these patients be monitored?
9. What processes/procedures could be implemented to reuse and sterilize otherwise disposable equipment during critical shortages?

APPENDIX A: ADULT PATIENT PROFILES

All lab values expressed as (x 10^9 cells/L)

Patient ID: 001
Sex: Male Age: 22 Height: 6'1" Weight: 180lbs
Comorbidities/Symptoms: None
Lab result 4 days after exposure: Lymphocytes: 0.20
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.09 Platelets: 70 Granulocytes: 0.8

Patient ID: 002
Sex: Male Age: 19 Height: 5'8" Weight: 245lbs
Comorbidities/Symptoms: Diabetes
Lab result 4 days after exposure: Lymphocytes: 0.15
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.07 Platelets: 30 Granulocytes: 0.8

Patient ID: 003
Sex: Female Age: 22 Height: 5'6" Weight: 135lbs
Comorbidities/Symptoms: Fever, stomatitis
Lab result 4 days after exposure: Lymphocytes: 0.17
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.08 Platelets: 15 Granulocytes: 0.7

Patient ID: 004
Sex: Male Age: 31 Height: 5'11" Weight: 170lbs
Comorbidities/Symptoms: None
Lab result 4 days after exposure: Lymphocytes: 0.40
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.20 Platelets: 60 Granulocytes: 0.3

Patient ID: 005
Sex: Male Age: 64 Height: 5'10" Weight: 170lbs
Comorbidities/Symptoms: Hypertension, coronary artery disease, stomatitis
Lab result 4 days after exposure: Lymphocytes: 0.25
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.15 Platelets: 60 Granulocytes: 0.3

Patient ID: 006 IP
Sex: Female Age: 55 Height: 5'9" Weight: 140lbs
Comorbidities/Symptoms: Rheumatoid arthritis
Lab result 4 days after exposure: Lymphocytes: 0.31
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.17 Platelets: 60 Granulocytes: 0.4

Patient ID: 007
Sex: Female Age: 21 Height: 5'6" Weight: 125lbs
Comorbidities/Symptoms: Severe depression
Lab result 4 days after exposure: Lymphocytes: 0.04
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.01 Platelets: 4 Granulocytes: 0.1

Patient ID: 008
Sex: Female Age: 73 Height: 5'6" Weight: 155lbs
Comorbidities/Symptoms: Multilobar pneumonia, fever, cough
Lab result 4 days after exposure: Lymphocytes: 0.15
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.06 Platelets: 18 Granulocytes: 0.4

Patient ID: 009
Sex: Male Age: 61 Height: 5'9" Weight: 175
Comorbidities/Symptoms: None
Lab result 4 days after exposure: Lymphocytes: 0.10
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.03 Platelets: 70 Granulocytes: 0.5

Patient ID: 010
Sex: Male Age: 20 Height: 6'4" Weight: 195lbs
Comorbidities/Symptoms: Crohn's disease, diarrhea
Lab result 4 days after exposure: Lymphocytes: 0.10
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.04 Platelets: 15 Granulocytes: 0.1

Patient ID: 011
Sex: Female Age: 74 Height: 5'1" Weight: 115lbs
Comorbidities/Symptoms: Stage IV breast cancer
Lab result 4 days after exposure: Lymphocytes: 0.78
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.58 Platelets: 165 Granulocytes: 1.6

Patient ID: 012
Sex: Female Age: 57 Height: 5'7" Weight: 315lbs
Comorbidities/Symptoms: Morbid obesity, hypertension, diabetes
Onset to vomiting: Approximately 2hrs after the blast
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.09 Platelets: 12 Granulocytes: 0.1

Patient ID: 013
Sex: Female Age: 24 Height: 5'4" Weight: 135lbs
Comorbidities/Symptoms: ITP, diarrhea
Lab result 4 days after exposure: Lymphocytes: 0.05
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.02 Platelets: 15 Granulocytes: 0.2

Patient ID: 014
Sex: Male Age: 57 Height: 6'2" Weight: 180lbs
Comorbidities/Symptoms: Fever, rhinorrhea
Lab result 4 days after exposure: Lymphocytes: 1.00
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.70 Platelets: 73 Granulocytes: 0.8

Patient ID: 015
Sex: Male Age: 22 Height: 5'2" Weight: 135lbs
Comorbidities/Symptoms: fever
Onset to vomiting: Approximately 1hr after the blast
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.06 Platelets: 20 Granulocytes: 0.4

Patient ID: 016
Sex: Female Age: 81 Height: 5’ Weight: 150lbs
Comorbidities/Symptoms: Glaucoma, Parkinson’s, UTI
Lab result 4 days after exposure: Lymphocytes: 0.37
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.22 Platelets: 60 Granulocytes: 0.4

Patient ID: 017
Sex: Male Age: 20 Height: 6'2" Weight: 170lbs
Comorbidities/Symptoms: Anorexia, fatigue, stomatitis
Lab result 4 days after exposure: Lymphocytes: 0.04
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.01 Platelets: 3 Granulocytes: 0.1

Patient ID: 018
Sex: Female Age: 66 Height: 5'4" Weight: 140lbs
Comorbidities/Symptoms: COPD, history of larynx cancer, oral HSV lesion
Lab result 4 days after exposure: Lymphocytes: 0.06
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.02 Platelets: 11 Granulocytes: 0.2

Patient ID: 019
Sex: Male Age: 46 Height: 5'6" Weight: 150lbs
Comorbidities/Symptoms: None
Onset to vomiting: Approximately 1.5hrs after the blast
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.09 Platelets: 40 Granulocytes: 0.5

Patient ID: 020
Sex: Male Age: 23 Height: 5'2" Weight: 185lbs
Comorbidities/Symptoms: Down syndrome (functional adult), asthma
Lab result 4 days after exposure: Lymphocytes: 0.19
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.09 Platelets: 18 Granulocytes: 0.4

PEDIATRIC PATIENT PROFILES

All lab values expressed as (x 10^9 cells/L)

Patient ID: 021
Sex: Male Age: 6 Height: 3'10" Weight: 45lbs
Comorbidities/Symptoms: None
Lab result 4 days after exposure: Lymphocytes: 0.20
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.09 Platelets: 60 Granulocytes: 0.6

Patient ID: 022
Sex: Male Age: 9 Height: 4'7" Weight: 75lbs
Comorbidities/Symptoms: Diabetes
Lab result 4 days after exposure: Lymphocytes: 0.15
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.07 Platelets: 74 Granulocytes: 0.8

Patient ID: 023
Sex: Female Age: 10 Height: 4'6" Weight: 100lbs
Comorbidities/Symptoms: Fever, stomatitis
Lab result 4 days after exposure: Lymphocytes: 0.17
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.08 Platelets: 77 Granulocytes: 0.9

Patient ID: 024
Sex: Male Age: 7 Height: 4'3" Weight: 60lbs
Comorbidities/Symptoms: None
Lab result 4 days after exposure: Lymphocytes: 0.40
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.20 Platelets: 60 Granulocytes: 0.3

Patient ID: 025
Sex: Male Age: 11 Height: 3'5" Weight: 45lbs
Comorbidities/Symptoms: Kawasaki's in remission, diarrhea, stomatitis
Lab result 4 days after exposure: Lymphocytes: 0.25
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.15 Platelets: 60 Granulocytes: 0.3

Patient ID: 026
Sex: Female Age: 8 Height: 4'0" Weight: 60lbs
Comorbidities/Symptoms: Asthma
Lab result 4 days after exposure: Lymphocytes: 0.31
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.17 Platelets: 60 Granulocytes: 0.4

Patient ID: 027
Sex: Female Age: 14 Height: 5'3" Weight: 150lbs
Comorbidities/Symptoms: diarrhea, fever
Lab result 4 days after exposure: Lymphocytes: 0.04
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.01 Platelets: 4 Granulocytes: 0.1

Patient ID: 028
Sex: Female Age: 11 Height: 4'9" Weight: 100lbs
Comorbidities/Symptoms: Multilobar pneumonia, fever, cough
Lab result 4 days after exposure: Lymphocytes: 0.20
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.09 Platelets: 18 Granulocytes: 0.4

Patient ID: 029
Sex: Male Age: 16 Height: 5'10 Weight: 170lbs
Comorbidities/Symptoms: Mouth sores, low fever
Lab result 4 days after exposure: Lymphocytes: 0.10
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.03 Platelets: 95 Granulocytes: 0.7

Patient ID: 030
Sex: Male Age: 13 Height: 5'2" Weight: 135lbs
Comorbidities/Symptoms: Crohn's disease
Lab result 4 days after exposure: Lymphocytes: 0.10
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.04 Platelets: 15 Granulocytes: 0.1

Patient ID: 031
Sex: Female Age: 14 Height: 5'6" Weight: 120lbs
Comorbidities/Symptoms: Anal fissure, fever
Lab result 4 days after exposure: Lymphocytes: 0.78
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.58 Platelets: 165 Granulocytes: 1.6

Patient ID: 032
Sex: Female Age: 8 Height: 4'2" Weight: 120lbs
Comorbidities/Symptoms: Morbid obesity
Onset to vomiting: Approximately 2hrs after the blast
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.09 Platelets: 22 Granulocytes: 0.3

Patient ID: 033
Sex: Female Age: 11 Height: 4'8" Weight: 95lbs
Comorbidities/Symptoms: ITP, diarrhea
Lab result 4 days after exposure: Lymphocytes: 0.05
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.02 Platelets: 15 Granulocytes: 0.2

Patient ID: 034
Sex: Male Age: 14 Height: 6'1" Weight: 170lbs
Comorbidities/Symptoms: Fever, rhinorrhea
Lab result 4 days after exposure: Lymphocytes: 1.00
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.70 Platelets: 73 Granulocytes: 0.8

Patient ID: 035
Sex: Male Age: 10 Height: 4'5" Weight: 65lbs
Comorbidities/Symptoms: None
Onset to vomiting: Approximately 1hr after the blast
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.06 Platelets: 80 Granulocytes: 1.1

Patient ID: 036
Sex: Female Age: 9 Height: 4'6" Weight: 85lbs
Comorbidities/Symptoms: Congenital blindness
Lab result 4 days after exposure: Lymphocytes: 0.37
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.22 Platelets: 60 Granulocytes: 0.4

Patient ID: 037
Sex: Male Age: 12 Height: 4'9" Weight: 55lbs
Comorbidities/Symptoms: Anorexia nervosa, fatigue, stomatitis
Lab result 4 days after exposure: Lymphocytes: 0.04
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.01 Platelets: 3 Granulocytes: 0.1

Patient ID: 038
Sex: Female Age: 14 Height: 4'11" Weight: 90lbs
Comorbidities/Symptoms: Acute asthma exacerbation
Lab result 4 days after exposure: Lymphocytes: 0.06
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.02 Platelets: 11 Granulocytes: 0.2

Patient ID: 039
Sex: Male Age: 15 Height: 5'9" Weight: 130lbs
Comorbidities/Symptoms: None
Onset to vomiting: Approximately 1.5hrs after the blast
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.09 Platelets 35 Granulocytes: 0.5

Patient ID: 040
Sex: Male Age: 6 Height: 3'10" Weight: 50lbs
Comorbidities/Symptoms: Severe Down syndrome, asthma
Lab result 4 days after exposure: Lymphocytes: 0.19
Lab result upon arrival (10 days after exposure):
Lymphocytes: 0.09 Platelets: 18 Granulocytes: 0.2

APPENDIX B: ACRONYMS

Acronym	Term
AAR	After Action Report
ARS	Acute Radiation Syndrome
ASPR	Assistant Secretary for Preparedness and Response
BMT	Bone Marrow Transplantation
CNE	Continuing Nursing Education
COA	Commission on Accreditation
DHV	Disaster Health Volunteer
FCC	Federal Coordinating Center
G-CSF	Granulocyte-Colony Stimulating Factor
Gy	Gray
HCC	Healthcare Coalition
HCS	Healthcare Standard
HCT	Hematopoietic Cell Transplantation
HEM	Hematology
HHS	Health and Human Services
HLA	Human Leukocyte Antigen
HPP	Hospital Preparedness Program
IND	Improvised Nuclear Device
IV	Intravenous
JIT	Just-In-Time
MRC	Medical Reserve Corps
NMDP	National Marrow Donor Program
NDMS	National Disaster Medical System
ONC	Oncology
ONR	Office of Naval Research
PACU	Post-Anesthesia Care Unit
PO	Orally
PRA	Patient Reception Area
RITN	Radiation Injury Treatment Network
RSO	Radiation Safety Officer
SITREP	Situation Report
SME	Subject Matter Expert
TTX	Tabletop Exercise

APPENDIX C: 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/FY18_TTX_Answers

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. What steps would your facility take to ensure staff feel safe coming to work?

7. What message is being communicated to staff? To patients and their families?
   - Who is drafting/approving these messages?

10. What communication methods are being used to disseminate internal and external messages?

9. What strategies does your hospital have to increase staffing during a surge of NDMS patients?
    - Pull staff from other units/departments and conduct Just-In-Time (JIT) training.
    - Work with in-network hospitals to bring in additional staff.
    - Request additional staff through your Healthcare Coalition (HCC).
    - Utilize volunteers (MRC, DHV, etc).
    - Other (please provide specific actions)

10. Radiation Training
    - What percentage of your non-medical staff have completed the RITN non-medical radiation awareness course?
    - What percentage of medical staff have completed the RITN Radiation Safety Communication Course?

11. Does your RSO have a predefined course for non-medical staff radiation training?

12. In order to utilize volunteers what process does your hospital have in place to ensure credentials are appropriate?

13. What limitations would be placed on volunteers working at your hospital? (i.e. must partner/shadow with regular staff)

14. Does your hospital have a process in place to request a waiver so staff/patient ratios can be adjusted?
    - If so, what is the process for requesting the waiver?

15. Where will patients arriving from the Patient Reception Area (PRA) be triaged and processed?

16. Does this process differ for ambulatory patients that do not have immediate life threatening issues?

17. Does your hospital have a formal plan outlining this process?

18. Which patient set did you complete?

19. Adult/Pediatric initial triage of the patients:
    a. Which patients would be admitted to a BMT bed?
    b. Which patients would be admitted to a hematology/oncology bed?

c. Which patients would be treated as an outpatient?
d. Which patients would be discharged to an area shelter?
e. Which patients would receive palliative care only?

20. Adult/Pediatric treatment of the patients
    a. Which patients would receive cytokines?
    b. Which patients would be started on antibiotics?
    c. Which patients would you order HLA typing for?

21. What information would be provided to patients identified for outpatient care? How would these patients be monitored?

22. What processes/procedures could be implemented to reuse and sterilize otherwise disposable equipment during critical shortages?

23. Based on discussions today, please briefly describe 1 or 2 strengths demonstrated by your organization's ability to respond to a radiation mass casualty incident as described in this exercise scenario.

24. On a scale on 1 to 5, how would your center rate the usefulness of this exercise (where 1=not at all useful 5=very useful)?

25. Based on discussions today, please briefly describe 1 or 2 challenges to respond to a radiation mass casualty incident as described in this scenario.

26. List and briefly describe elements to address for future RITN exercises.