



# **2009 RITN Tabletop Exercise**

**Contents (11 pages total):**

**Pre-exercise Reading Material**

**Orientation memorandum**

**Exercise scenario:**

**Incident Message**

**Assumptions**

**Initial Incident Response Steps**

**Exercise Questions**

**Deadline for submission of answers to  
exercise questions is**

**July 30, 2009**

**(unless otherwise coordinated in advance).**

# Pre-exercise Reading Material

It will be helpful for members of the response team to review the following references before the exercise.

1. *Planning Guidance for Response to a Nuclear Detonation* ([http://hps.org/hsc/documents/Planning\\_Guidance\\_for\\_Response\\_to\\_a\\_Nuclear\\_Detonation\\_FINAL.pdf](http://hps.org/hsc/documents/Planning_Guidance_for_Response_to_a_Nuclear_Detonation_FINAL.pdf))
2. *Medical Response to a Radiological/Nuclear Event: Integrated Plan* from DHHS-ASPR (<http://download.journals.elsevierhealth.com/pdfs/journals/0196-0644/PIIS0196064407018999.pdf> )
3. *Emergency Support Function #8 – Public Health and Medical Services Annex* to the National Response Framework (<http://www.fema.gov/pdf/emergency/nrf/nrf-esf-08.pdf> )
4. *Altered Standards of Care in Mass Casualty Events* from the Agency for Healthcare Research and Quality, DHHS (<http://www.ahrq.gov/research/altstand/altstand.pdf>)
5. *Mass Medical Care with Scarce Resources* from the Agency for Healthcare Research and Quality, DHHS (<http://www.ahrq.gov/research/mce/mceguide.pdf>)
6. *Who Should Receive Life Support During a Public Health Emergency? Using Ethical Principles to Improve Allocation Decisions*, *Annals of Internal Medicine*, 20 January 2009, Volume 150 Issue 2, Pages 132-138
7. *About the Medical Reserve Corps* (<http://www.medicalreservecorps.gov/About>)

## MEMORANDUM

**TO:** Members of the Radiation Injury Treatment Network (RITN)  
**FROM:** [REDACTED]  
**DATE:** February 27, 2009  
**SUBJECT:** Radiation Injury Treatment Network (RITN) 2009 tabletop exercise

Attached you will find the tabletop exercise. This is one of your required RITN tasks.

Please review the scenario and answer the applicable questions enclosed to the best of your ability. Answers will only be accepted when submitted through the Internet link no later than July 30, 2009 (unless otherwise coordinated). Only one person should submit answers for each RITN center. Some questions may be repeated from previous exercises. Please determine the current answer. The web link for answer submission is:

[REDACTED]

This exercise presents a scenario that would be likely to involve RITN. This exercise should be completed with a group of appropriate staff members. Our intention is that this will be a low stress exercise to get everyone thinking and talking about incident response at your center.

The intent of this exercise is to stimulate communication about the possible ramifications resulting from the scenario with your staff and with your critical partners. This group of staff should meet for approximately two hours to review the scenario and determine the best possible answers to the questions. Each participant should review a copy of the standard operating procedures (SOPs) at his/her centers germane to RITN prior to participating in the exercise. SOPs related to RITN should be scrutinized for applicable updates and improvements.

Examples of possible participants include but are not limited to:

**Transplant Center:**

- Medical director
- Additional physicians
- Primary coordinator
- RITN point-of-contact (POC)
- Nurse leader
- Admission process representative
- Administrator/hospital executive
- Emergency management staff
- Pharmacy staff member
- Representative from Social Work
- Representative from Psychiatry/Psychology
- Blood center representative
- Other staff as needed

**Donor Center:**

- Medical director
- Primary coordinator
- RITN POC
- Representative from physical exam provider
- Representative from collection center/apheresis center
- Vendor/contractors (laboratory for IDMs, etc...)
- Other staff as needed

**Cord Blood Bank:**

- Medical director
- Primary coordinator
- RITN POC
- Administrator
- Other staff as needed

A panel that includes all of the above examples would be the “dream team” of exercise participants. Do what is reasonable at your center.

This scenario may not have all the information that you feel is necessary to provide a fully informed response. As with most emergency situations, decisions must be made with less than complete information. Therefore, please attempt to formulate your response based on the information provided. If you have questions, please feel free to contact [REDACTED] at email [REDACTED] or [REDACTED]. Thank you for your time and participation in this critical national response initiative.

## Initial Incident Response Steps

1. Assign an Exercise Controller (aka facilitator) to manage the exercise discussion.
  - a. The controller may participate in the exercise.
  - b. The controller keeps the exercise on task and within the scope of the scenario to maximize the value of time dedicated to the exercise.
  - c. The controller allows both sides to state their opinion if a conflicting discussion occurs, ensures the recorder captures the points from all sides and presses the group to continue.
2. Assign a recorder to capture your responses for submission, points for later discussion and recommendations for future SOP updates.
3. Activate center emergency response plans per your organizations SOP.
4. Gather your incident response team to determine your center's response capabilities.
5. Discuss your center's initial steps.
6. Answer exercise questions (submit online via: XXXXXXXXXX )

## Radiation Injury Treatment Network (RITN) 2009 Exercise

=====EXERCISE===== EXERCISE ===== EXERCISE =====  
===== RITN NOTIFICATION =====  
===== This message serves as NOTIFICATION OF ACTIVATION of RITN=====  
===== MESSAGE 1 - March 1, 2009 at 0800 CDT =====  
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### SITUATION:

Five days ago, foreign terrorists detonated a gun-type 10-kiloton nuclear device containing Highly Enriched Uranium (HEU) stolen from a nuclear facility. The ground burst occurred in a major metropolitan center. Most buildings within ½ mile of the detonation were severely damaged. Injuries from flying debris occurred up to 6 kilometers (~ 3.7miles) from the epicenter. An Electro-Magnetic Pulse (EMP) damaged many electronic devices within 5 kilometers (~ 3 miles) (See picture image on the following page). A mushroom cloud rose above the city and was televised around the world.

Emergency Support Function (ESF) #8 (*Public Health and Medical Services Annex* to the National Response Framework, see reference #3 ) was activated as part of the Federal response. Sorting of victims by local and federal authorities occurred in established tiered triage sites. Delayed and immediate patients were processed for care in accordance with the January 2009 *Planning Guidance for Response to a Nuclear Detonation* (see reference #1). Many patients are being sent from regional medical centers to evacuation centers for national distribution.

The RITN centers have been asked by The Department of Health and Human Services Assistant Secretary for Preparedness and Response (DHHS-ASPR) to accept **12,000** patients who are classified as immediate based on having received moderate to high radiation dose in the 200-600 rads (2-6 Gy) range. Approximately half of these have either minimal or no traumatic injuries.

Standard supportive care for acute radiation syndrome (ARS) will favorably impact the outcome for these victims. The scarcity of resources is expected to be a critical factor in the best use of supportive care for this population.

RITN submitted an initial estimate of 1,000 total available beds at its 42 transplant centers to DHHS-ASPR. The number of patients who will require intensive, specialized care far exceeds this number. RITN centers are asked to consider every contingency for how to expand their surge capacity, as well as which conditions will require the use of altered standards of care.

Each RITN transplant center will receive **300** patients over the next two days.

=====EXERCISE===== EXERCISE ===== EXERCISE =====

# 10 kiloton Improvised Nuclear Device detonation - Scenario planning



- Limited survival due to:
- 1) Overpressure (blast)
  - 2) Thermal damage
  - 3) Prompt radiation

- Fallout over 24 hours
- 1) > 400 REM exposure
  - 2) 202,000 non-fatal casualties (40,000 hospital beds in US)
  - 3) 180,000 fatalities

## Assumptions

1. National authorization for altered standards of medical care were requested but not yet authorized by the Department of Health and Human Services. State authorizations should be pursued through your state department of Public Health.
2. Several Medical Reserve Corps units have been activated. MRC units are community-based and function as a way to locally organize and utilize medical volunteers. MRC representatives are overwhelmed with requests but limited support may be available.
3. FDA Emergency Use Authorization is approved for the use of Neupogen/G-CSF for ARS treatment.
4. The Strategic National Stockpile (SNS) is authorized to provide Neupogen/G-CSF for use in reconstituting marrow function (to be requested through the NMDP).
5. Congress is considering the funding of emergency relief and medical cost reimbursement.
6. RITN composition: 42 transplant centers, 8 donor centers and 7 cord blood banks

## Exercise Questions

(submit online via: XXXXXXXXXX):

**RITN Centers will be expected to include detailed information answering these questions in the SOP update due at the end of fiscal year 2010. SOP submissions for FY2009 are encouraged, but are not required, to include this information.**

**All Centers answer questions 1-5**

**Transplant Centers ONLY answer questions 6-34**

**Cord Blood Banks ONLY answer questions 35-39**

**Donor Centers ONLY answer questions 40-42**

1. Contact information of person submitting answers to RITN 2009 Exercise questions: name, email, phone
2. Select the RITN center that you are associated with (Each center must submit separately)
3. How many people participated in your exercise (keep a list of all who participated by name)?
4. Identify all members of your incident response team (Select all that apply).
  - a. Medical director
  - b. Another physician
  - c. Physicians Assistant or Nurse Practitioner
  - d. Nurse (RN, LPN, etc..)
  - e. Emergency management staff
  - f. Executive management (administration)
  - g. Emergency medicine staff (ER)
  - h. Pharmacy staff
  - i. Health physicist
  - j. Logistics staff
  - k. Primary coordinator
  - l. RITN POC
  - m. Admission process representative
  - n. Social worker
  - o. Representative from psychiatry/psychology
  - p. Radiation oncologist
  - q. Blood bank representative
  - r. Other
5. Select the Center type you are responding for.
  - a. Transplant Center
  - b. Cord Blood Bank
  - c. Donor Center

**Transplant Centers ONLY answer questions 6-34, CBB advance to question 35, Donor Centers to question 40**



=====EXERCISE===== EXERCISE ===== EXERCISE =====

**Transplant Centers ONLY answer questions 6-34, CBB advance to question 35, Donor Centers to question 40**

6. What is your center's plan to increase available beds?
7. Will this plan include off-loading some of the 300 patients to other centers? If so, describe.
8. Will this plan include off-loading other patients already at your center to other centers? If so, describe.
9. If you plan to utilize alternate centers to supplement your surge capacity, what if any established understanding do you have with these centers?
10. What plans do you have to maintain adequate clinical staffing for the additional patients?
11. What plans do you have to maintain adequate non-clinical staffing for the additional patients?
12. Identify and list anticipated medical equipment and supply shortages and replenishment strategies.
13. How will those patients without identification be managed?
14. What plans do you have for managing the needs of family members who come to your city to be near the victims?
15. During a national emergency of this nature, what constitutes an acceptable bed with adequate staffing (e.g. BMT floor with 3:1 patient-to-RN ratio) for a neutropenic patient in stable condition at your center?
16. How, if at all, does this differ from your current standard of care?
17. Does your center have a written plan to implement altered standards of care?
18. What position at your hospital authorizes altered standards of care?
19. Has your hospital trained staff on the implementation of altered standards of care?
20. If standards of care must be altered because of inadequate resources or staffing, describe how your center would activate procedures for these altered standards.
21. What barriers do you envision to collecting and submitting demographic, treatment, and outcome data on victims at your medical center, as described in the RITN Data Collection Protocol?
22. What is the response of your center's administration to this call for surge capacity?
23. What is your administration's plan if the government indefinitely postpones deciding whether to reimburse for care provided to victims?
24. What other barriers that are not outlined in the previous answers do you envision to providing the best possible care?

**Transplant Centers ONLY continue and answer questions 25-34**

=====EXERCISE===== EXERCISE ===== EXERCISE =====

**The Exercise Controller should reveal the following questions only after the previous questions have been answered.**

**Announce: “300 patients have arrived at your nearby airport”**

25. For the service provider you will contract with to transport the patients to your hospital, does your plan include (Select all that apply):
  - a. Point of contact name (who will be called)
  - b. Email address
  - c. Daytime phone number
  - d. After hours contact number
  - e. N/A (needs to be developed and included in SOP)
26. Although all patients were externally decontaminated, 15 patients have internal contamination identified as curium. What decorporation agents do you have available for treatment (Select all that apply)?
  - a. Prussian blue
  - b. potassium iodide (KI)
  - c. Calcium- diethylenetriaminepentacetate (Ca-DTPA)
  - d. Zinc-diethylenetriaminepentacetate (Zn-DTPA)
  - e. None
27. Does your center have the expertise to employ decorporation agents?
28. Fifteen patients have 3<sup>rd</sup> degree burns over 20% of their body. Will your center (Select all that apply):
  - a. Admit them to the BMT unit
  - b. Admit patient to an internal burn unit
  - c. Admit patient to another internal hospital department
  - d. Transfer patient to a another hospital with a burn unit
  - e. Transfer the patient to another hospital that does not have a burn unit
  - f. Other/unknown
29. Fifteen patients have severe trauma (i.e., multiple fractures). Will your center (Select all that apply):
  - a. Admit patient in the BMT
  - b. Admit patient to another internal hospital department
  - c. Transfer the patient to another hospital
  - d. Other/unknown
30. Ten pediatric patients are not accompanied by legal guardians; 6 have parents reachable by phone, the parents of the remaining 4 are suspected to be deceased. How will you admit and treat these patients?
31. One pediatric patient will be accompanied by a well uncle who is not the legal guardian. What documentation is needed to treat this patient?
32. Several parents contact your center and state they will arrive by car and want to know where they can stay. What is your plan for housing family members?
33. Nearly all the patients are upset and concerned about friends and family. Outline your plans for psychological/psychiatric support.
34. In fiscal year 2010, RITN is considering sending an observer/controller to your center from another RITN center with checklists to observe your plan for admitting and caring for radiation victims in large numbers. (Please select one):
  - a. Our center is willing to receive an observer
  - b. Our center is willing to send an observer
  - c. Our center is willing to send and receive an observer
  - d. Our center is not willing to either send or receive an observer

**RITN Centers will be expected to include detailed information answering these questions in the SOP update due at the end of fiscal year 2010. SOP submissions for FY2009 are encouraged, but are not required, to include this information.**

**Question 34 is the final question for Transplant Centers**

**Cord Blood Banks Only answer questions 35-39**

- 35. RITN cord blood banks would experience increased activity. How many NMDP contingency cord blood shippers do you maintain?
- 36. If your center has NMDP contingency cord shippers do you:
  - a. Rotate them through routine use with other shippers
  - b. Keep them on-hand only for use during a contingency event
  - c. We have no NMDP contingency cord shippers
- 37. How many units of cord blood can safely be shipped in one cord blood shipper?
- 38. If you were asked to ship 100 cord blood units in the next month, please list what resources you would need to accomplish this?
- 39. Do you have the following contact information in your SOP (Select all that apply):
  - a. Primary shipping company for cord blood shippers
  - b. Back-up shipping company for cord blood shippers
  - c. Name of person to contact and day phone numbers
  - d. After hours phone numbers

**RITN Centers will be expected to include detailed information answering these questions in the SOP update due at the end of fiscal year 2010. SOP submissions for FY2009 are encouraged, but are not required, to include this information.**

**Donor Centers Only answer questions 40-43**

- 40. If you were asked to formally activate 300 donors for initial work-up in the next month, please list what resources you would need to accomplish this?
- 41. Do you have the following in your SOP (Select all that apply):
  - a. Primary hotel for donors
  - b. Back-up hotel for donors
  - c. Secondary back-up hotel for donors
  - d. Addresses for hotels
  - e. Names of persons to contact and day phone numbers at each hotel
  - f. After hours phone numbers for each hotel
  - g. Transportation assets for donors
  - h. Back-up transportation for donors
  - i. Secondary back-up transportation for donors
  - j. Names of persons to contact and day phone numbers for transportation companies
  - k. After hours phone numbers for each transportation company
  - l. Primary physical exam facility
  - m. Back-up physical exam facility
  - n. Secondary back-up physical exam facility
  - o. Addresses for physical exam facilities
  - p. Names of persons to contact and day phone numbers at each physical exam facility
  - q. After hours phone numbers for each physical exam facility
- 42. Who will be your primary spokesperson to the media and public?
  - a. Name
  - b. Position
- 43. Does your center SOP include pre-scripted messages to the public concerning the following:
  - a. Message for surge of spontaneous donors
  - b. Message to cease or limit donor drives
  - c. Message to continue with scheduled donor drives

**RITN Centers will be expected to include detailed information answering these questions in the SOP update due at the end of fiscal year 2010. SOP submissions for FY2009 are encouraged, but are not required, to include this information.**