EXERCISE // Include any special handling instructions

Radiation Emergency Surge Annex
Tabletop Exercise
TEMPLATE

Situation Manual

Template developed by: ASPR TRACIE

TRACIE
HEALTHCARE EMERGENCY PREPAREDNESS INFORMATION GATEWAY

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PREFACE

This Radiation Emergency Surge Annex Tabletop Exercise (TTX) Toolkit Template has been developed by the U.S. Department of Health and Human Services (HHS), Office of the Assistant Secretary for Preparedness and Response (ASPR) Technical Resources, Assistance Center, and Information Exchange (TRACIE). It can be used by healthcare coalitions (HCCs) to enhance operational area awareness and capabilities to effectively address the needs of patients impacted by a radiological incident as part of a whole community emergency response framework. It can also be utilized to satisfy Funding Opportunity Announcement (FOA) requirements for the Hospital Preparedness Program (HPP) Cooperative Agreement.

HCCs are not required to use this template and may conduct a radiation emergency surge annex exercise using a radiological incident of their choosing and any acceptable Homeland Security Exercise and Evaluation Program (HSEEP) compliant format.

Note that most scenarios based on a large-scale radiological incident requiring care at specialized centers do not test overall surge. Planning for these scenarios is important and should be included in the coalition annex as well as exercise plans, but this toolkit uses a Radiological Dispersal Device (RDD) scenario to help jurisdictions anticipate the specific issues related to Strategic National Stockpile (SNS) request and deployment, radiation exposure screening, radiation illness, and specialized patient care needs that may create competing resource and coordination demands.

This toolkit template is intended to be edited and modified by the HCC Exercise Planning Team to satisfy the concepts and objectives each HCC intends to test. Blue text boxes and bracketed sections are included throughout the document and serve as notes to planners to enter your own text. *Please delete those boxes and bracketed areas once final planning decisions are made and text has been crafted*.

The complete toolkit template includes the following supporting materials for conducting a Radiological Emergency Surge Annex TTX:

1. Step-by-Step Guide to Implementing the Radiation Emergency Surge Annex Tabletop Exercise Template (compliant PDF, DOC)
2. Situation Manual (this document) (compliant PDF, DOC)
3. Radiation Emergency Surge Annex Tabletop Exercise Presentation (compliant PDF, PowerPoint)
4. Participant Feedback Form (compliant PDF, DOC)
5. Sign-in Form (compliant PDF, DOC)

For more information, access ASPR TRACIE's CBRN Resources Page, which includes links to an HCC Radiation Emergency Surge Annex Template, a Radiological and Nuclear Topic Collection, and the Major Radiological or Nuclear Incidents: Potential Health and Medical Implications document. Our Healthcare Coalitions Resources Page contains additional tools and templates. For more information, visit www.asprtracie.hhs.gov or contact our Assistance Center at 1-844-5-TRACIE or askasprtracie@hhs.gov.

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HANDLING INSTRUCTIONS

1. The title of this document is *Radiation Emergency Surge Annex Tabletop Exercise (TTX) Situation Manual (SitMan).*

2. This template is a publicly available document, however once downloaded and completed by any jurisdiction, this document is FOR OFFICIAL USE ONLY (FOUO). It contains information that may be exempt from public release under the Freedom of Information Act (5 U.S.G. 552) and State and local statutes. It is to be controlled, stored, handled, transmitted, distributed, and disposed of in accordance with jurisdictional policy relating to FOUO information.

3. [Insert any local statutes or regulations with regard to document handling.]

4. For more information or questions regarding this exercise, please contact:

   [Insert Contact Information]

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INTRODUCTION

Background

[May include additional background information specific to the coalition, member organizations, and threats/hazards as identified in the jurisdiction's risk assessment/ hazard vulnerability assessment and resource gap analysis.].

Purpose

The Radiation Emergency Surge Annex TTX provides HCC members and leadership with a useful exercise to address large numbers of patients seeking healthcare following an intentional radiological incident with large-scale exposure. The exercise allows participants to address key issues through a series of facilitated discussions.

Scope

This toolkit is an interactive, discussion-based exercise focusing on impacts to HCCs and healthcare facilities caused by the intentional release of a radiological dispersal device (RDD) resulting in a surge of confirmed and potentially exposed radiological patients.

The exercise is planned for a half day. The scenario consists of three chronological modules portraying a "dirty bomb" incident, and its aftermath, where people who may not need medical treatment but fear they have been exposed (i.e., "worried well") may overwhelm a health system. The emphasis on radiation exposure focuses on the need to assess patients for contamination, decontamination, injuries, and working with public health and emergency managers.

Healthcare Preparedness and Response Capabilities

[These are suggested related existing HPP program capabilities. Grantees will determine their current radiation emergency medical resources in the community under normal conditions and define how they work together to determine relevant capabilities, objectives, and activities that need to be addressed during the Initial Planning Meeting.]

- **Capability 2: Health Care and Medical Response Coordination**

  Objective 1: Develop and Coordinate Health Care Organization and Health Care Coalition Response Plans

  Objective 3: Coordinate Response Strategy, Resources, and Communications

- **Capability 3: Continuity of Health Care Service Delivery**

  Objective 3: Maintain Access to Non-Personnel Resources during an Emergency

  Objective 5: Protect Responders' Safety and Health

  Objective 6: Plan for and Coordinate Health Care Evacuations and Relocation

- **Capability 4: Medical Surge**

  Objective 1: Plan for a Medical Surge

  Objective 2: Respond to a Medical Surge

Exercise Objectives

The following exercise design objectives can help participants understand the concept of operations of the HCC Radiation Emergency Surge Annex and develop recommended actions and procedural adjustments to address potential gaps or problem areas:

1. Review existing radiation emergency care assets and identify gaps that may occur during a radiological mass casualty incident.
2. Review agency/facility role during a radiological emergency incident.
3. Validate assumptions in the HCC Radiation Emergency Surge Annex.
4. Identify changes that need to be made in the HCC Radiation Emergency Surge Annex based on the roles and capabilities of the involved partners.
5. [Other objectives identified by the Exercise Planning Team.]

Roles

- *Players* respond to the situation presented based on their current roles in their facility or HCC; expert knowledge of incident management procedures; current plans and procedures in place in their agency, jurisdiction, or organization; and insights derived from previous experience.
- *Observers* view all or selected portions of exercise play and support the group in developing responses to the situation during the discussion.
- The *Facilitator* provides situation updates and moderates discussions. They also provide additional information or resolve questions as required.
- *Data Collectors* observe and record the discussions during the exercise, participate in the data analysis, and assist with drafting the After-Action Report (AAR) that will be used to suggest improvements within the Radiation Emergency Surge Annex itself and future exercises.

Exercise Structure

The exercise will be a half day event. The TTX has three modules consisting of an initial incident subsequent response. Players in this exercise will participate in the following exercise module elements:

- Module 1 – Initial Recognition and Response
- Module 2 – Community Coordination and Collaboration
- Module 3 – Ongoing Healthcare Response

Each module begins with a scenario update that summarizes the key events occurring within that time period. A series of questions following the scenario summary will guide the facilitated discussion of critical issues in each of the modules

> **Planning Note:** The coalition may add, delete, or modify questions based on their local plans and resources. Based on exercise priorities, time dedicated to each module will be managed by the facilitator.

The following is an approximate schedule:

8:00-8:30 AM –	Introductions and opening remarks
8:30-9:00 AM –	Overview of the HCC Radiation Emergency Surge Annex/process during a large-scale radiological incident
9:00-9:20 AM –	Table discussion Module 1
9:20-9:40 AM –	Report out and discussion
9:40-10:00 AM –	Table discussion Module 2
10:00-10:10 AM –	Break
10:10-10:30 AM –	Report out and discussion
10:30-10:50 AM –	Table discussion Module 3
10:50-11:10 AM –	Report out and discussion
11:10-11:50 AM –	Wrap up and Hotwash

Planning Note: The Exercise Planning Team should use this information for planning purposes and delete this text box once decisions have been made.

This exercise could also be facilitated with a large group and no table discussion breakouts, based on Exercise Planning Team and Facilitator preference. If less than 20 people are participating in the exercise, full group facilitation is likely most effective. Facilitation will need to be adjusted if this is a virtually conducted exercise.

Attendees should sit together by facility and discipline. If there are few attendees from a specific discipline (e.g., emergency management) they should be assigned to a table that the planners feel would be most valuable from a contribution, learning, and relationship standpoint. Ideally, if there is a healthcare system participating in the TTX, the hospitals for that system should be seated together so they can discuss system-level, facility, and coalition-level responses to the incident. Planners should avoid having tables with fewer than six members if possible. Because public health and other agencies may have a significant response role, consider having a table set aside for special attendees.

This exercise could also be conducted virtually if needed.

Exercise Guidelines

- Open, low-stress, no-fault environment.
- Comments will be non-attributable.
- Be professional and respect other's opinions based on their knowledge.
- Responses should be based on knowledge of current plans and capabilities – you do not have to have all the answers.
- Exercise-based decisions are not precedent setting.
- Problem-solving efforts should be the focus; it is expected that more questions than answers may be generated.

- The situation updates, written material, and resources provided are the basis for discussion; it is not expected that participants will need to do additional research or review other materials prior to participation in this exercise.
- Participants are encouraged to use the SitMan as a reference and to fill out the Participant Feedback Form as you go; feedback is welcome!
- Use the notes pages available in the SitMan.

Exercise Assumptions and Artificialities

In any exercise, a number of assumptions and artificialities may be necessary to complete the exercise play in the time allotted. During this exercise, the following apply:

- The scenario for this exercise is artificial, however, it is plausible, and events occur as they are presented.
- There is no "hidden agenda" and there are no "trick questions."
- All players receive information at the same time.
- Assume cooperation and support from other responders, agencies, and organizational entities.

Planning Note:

- Planners may change the incident, or the scope, as needed to fit local considerations. Scenarios should still follow the modular approach in this sample.
- Planners should consider adjusting patient numbers and providing any other demographic or geographic information specific to your community and design to exceed day-to-day capabilities that test and/or "break" the system. It is important that the number of radiologically exposed, or potentially exposed, patient volumes overwhelm area capabilities without being so extreme that they are unrealistic and cause participants to lose focus or focus on issues that do not contribute to functional planning. The Facilitator should have license to adjust patient volumes during the exercise to move the exercise forward.
- Rural coalitions with few local hazards may elect to have the scenario occur in another jurisdiction where many individuals may flee from and seek evaluation and care in the rural coalition area.
- Planners should also be familiar with the radiation guidelines that are specific to their jurisdictional state or local radiation program.

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MODULE 1: INITIAL RECOGNITION AND RESPONSE

Monday morning, 10:00 am.

- Hospitals and other healthcare facilities in the area served by your HCC are at normal staffing and supply levels early in the morning (8:00 am). Hospitals were at their average daily occupancy for both general inpatient and intensive care unit (ICU) beds yesterday and into the evening.

- You are notified by your local EMS agency that a large explosion has occurred near a prominent high-rise office building in the downtown area. The location is populated by office workers, residents, and tourists.

- While the cause of the explosion is under investigation, within minutes local EMS begin transferring wounded to all nearby medical facilities for a variety of major and minor traumas including smoke inhalation and burns. (Note: While specific numbers are not indicated, the patient load for this portion of the scenario should remain manageable so that it taxes a healthcare system but does not overwhelm it. Small/rural coalitions may adjust numbers depending on the appropriate scale for their facility size and can select a different venue/location based on what is relevant locally).

- Nearly an hour later, after many patients have already arrived at the hospital, you are notified that radiation detectors at the explosion site indicate higher than normal levels of gamma radiation. HAZMAT teams, specialized investigators, and environmental agencies have been dispatched to further cordon and investigate the area. It is unclear if the increased readings are a by-product of the explosion being near a facility with radioactive material on premise (e.g., an outpatient radiology practice) or a criminal act.

Planning Note:

- This module focuses on the initial health care response to the incident where radiation contamination is not recognized until patients are in the facility. Exercise Planners can create sub modules, or adjust the scenario, if they prefer more detailed discussions regarding pre-hospital emergency operations activities, law enforcement/emergency responder responsibilities, or other non-medical efforts.
- This section requires coalition partners to understand their current resources as informed by a gap analysis or risk assessment. The following should be considered when shaping this module:
    - Who are the specialists able to provide radiological exposure care in your area?
    - What other regional resources are available for care and clinical advice within your jurisdiction (e.g., radiology imaging centers, oncology/hematology facilities, academic research institutes, state/local agencies), and how would they be accessed?
- Supply those who will be reporting-out with a note pad and pen/pencil at the beginning of the exercise and assign a scribe for each report-out team, preferably someone whose handwriting is legible for later review.

EXERCISE // Include special handing instructions

Module 1 Discussion Questions

1. What are your initial actions upon notification of the blast? Do you know/understand your role during an emergency? Prioritize those actions.
    a. What initial actions do you anticipate taking based on the location of the attack and the potential surge in emergency department and inpatient demand?

2. What actions would you take once you learn that radiation detectors are going off at the explosion site?
    a. Is this in accordance with coalition hospital/facility radiological response plan(s)?

3. If the HCC has an operations center, how is it activated and staffed and what functions does it serve during a radiological event? How does it interface with the Emergency Operations Center (EOC)?

4. Do you know who your local, regional, and/or national facility radiological experts are and how to contact them?
    a. Does your state have a FEMA certified Radiation Operations Support Specialist (ROSS) ?

5. Are facility staff familiar with proper radiological screening, triage, decontamination, and treatment protocol for exposed or potentially exposed individuals?
    a. Where would you obtain guidance or additional clinical advice if needed, in real time?

6. What specialized resources/supplies will be needed to respond to radiological attack? What is the role of the HCC in acquiring these resources? What other radiological response resources are available within the region?
    a. What detection equipment do your fire/EMS services have?
    b. What detection equipment do the hospitals have?
    c. What radiation response equipment does your state have and how will you request it?
    d. How are SNS assets requested and received if countermeasures are needed?
    e. Is there a protocol or are processes in place for resource sharing among coalition members and jurisdictional healthcare facilities?

7. Is additional just-in-time training needed/supported for specialty care, use of new/unfamiliar equipment (e.g., radiation detection, dosimetry, decontamination equipment)? Is the needed training readily available? Where is it located? Who conducts the training?

8. Who initiates information sharing for HCC members? What alerts and notification mechanisms are in place to ensure that HCC members and partners are aware of the incident and can share real-time information about the disaster and plans/strategies for patient care/ transport/distribution/ decontamination/supplies?

9. What essential elements of information will you collect from and share with HCC members?

Module 1 Note Page

MODULE 2: COMMUNITY COORDINATION & COLLABORATION

Monday afternoon, 12:00 pm (radiation identification + 2 hours)

- By 12:00 pm it is verified that the explosion was caused by a Radiological Dispersal Device (RDD) also known as a "dirty bomb." Investigators confirm the device contained cesium-137 after identifying particles at the site.
- The physical damage from the bombing is confined to the front of several buildings and their facing interiors. That block and a three-block downwind area are cordoned and evacuated; their surface contamination levels exceed 10mrem/h, with higher levels at the site of the detonation.
- Twelve persons are dead at the scene. About 60 injured patients require hospital admission. About 100 patients are being evaluated for minor injuries. (Note: While specific patient load numbers have been indicated for this module, facilities should adjust numbers so that the focus is NOT on the surge or patient/resource movement, but more specifically on **managing high numbers of people who may not need medical treatment but fear they have been exposed (i.e., "worried well") and evaluating patients for contamination/decontamination**).
- The governor declares a state of emergency to support federal requests for Strategic National Stockpile (SNS) assets and additional disaster services.
- Major news and social media outlets are reporting that the device was "radioactive" and in some cases erroneously "nuclear."
- 911 operators and Poison Control Centers are overwhelmed with calls from people concerned about radiation exposure.
- Hospitals, clinics, physician offices, and other healthcare facilities in the area are beginning to receive patients and EMS transports of people who were near the site and now worried about potential exposure.

Planning Note:

- The questions in this module may need to be changed based on coalition resources. The key focus of this module is defining what activities occur where (e.g., does transfer coordination occur at the hospital [particularly if there are only one/few hospitals in the coalition], jurisdictional EOC, coalition physical or virtual coordination center, or receiving hospital).
- Determine whether to add any at-risk populations to the patient mix, such as pediatric patients or those with access or functional needs.
- This section requires coalition partners to have situational awareness about their current surge capacity protocol. The following should be considered when shaping this module:
    - How would exposure, burn, injury referrals be prioritized, particularly across multiple facilities (e.g., by radiation exposure level and trauma combination injuries, more severely injured, or those with other trauma injuries)?
    - Where are additional support services, resources, and staff coming from?
    - Who is controlling risk communication messaging?

Module 2 Discussion Questions

1. Do the HCC and its members' response activities change now that this is a confirmed intentional radiological attack?

2. Who has the healthcare coordination role at this point? What is it?

3. Who is coordinating messaging to the public? What are the key messages to get out?

4. Who has responsibility for community screening locations for persons that are worried about contamination?

5. How are you triaging patients to distinguish between those needing medical evaluation, those needing community-based screening, and those that do not need screening?
    a. Who will operate the community reception center? When/how would those be coordinated, managed, supplied?
    b. How will hospitals assess their current patients for contamination? How will hospitals triage and refer those that are seeking contamination assessment only?

6. Do facility staff understand plans for radiological contamination control and workforce safety/exposure protocols?

7. Do the hospitals have a plan for evaluating those patients with significant radiological contamination for radiation injury and internal contamination (e.g., CBC+Diff for ALC counts and use of stool/urine monitoring)? If not, who will they work with to obtain these?

8. What is the EMS plan for local distribution of casualties (e.g., what patients go to which hospitals if there are multiple ones receiving varying levels of trauma)? What is the hospital's capacity? What are their treatment limits (e.g., not a level-1 trauma center, unable to receive high number of respiratory distress patients, specialize in burn care)?

9. What special considerations affect EMS patient transportation resources during a radiological emergency (e.g., EMS restrictions related to transportation and care of radiological casualties)?

10. How will the community reception center (i.e., radiological screening site) be staffed? Where will radiological screening equipment be sourced from?

11. How will requests for chelating agents such as Prussian Blue (PB) from SNS be made? Where will they be delivered?
    a. Who has information about local/federal stockpiles? How do you communicate with them?
    b. Will supplies require special storage conditions or security protocol?
    c. Is there a toxicologist with experience/knowledge for using PB available?

12. What agencies/contractors will the hospitals work with to address contaminated waste and low-level contamination of certain tile floors that do not respond to usual clean up procedures?

13. How is the EOC Joint Information Center (JIC) coordinating public information with the HCC(s)?
    a. How will you ensure clear and consistent risk communication messaging to the public and media to prevent/mitigate mass panic?
    b. Are there readily available RDD information packets/scripts available for patients and staff?

14. How will you address provider/public safety information needs to ensure that workers feel safe? (Note that only trivial levels of radiation have been detected outside of the cordoned area.)

15. How is HCC clinical and surge information being collected and distributed (e.g., via email, special portal, messaging boards) to ensure consistent care and guidance across facilities?
    a. Are special reporting requirements, metrics, or data being collected for situational awareness (e.g., hospital capacity, number exposed, transport needs, supply requests)?
    b. How will the HCC coordinate and share patient information across multiple facilities for patient tracking and family re-unification?

Module 2 Note Page

MODULE 3: ONGOING HEALTHCARE COORDINATION

Planning Note: This module focuses on the healthcare response to this incident. Exercise Planners can choose to create sub modules or adjust this scenario if they would prefer a more detailed discussion of post-exposure operations, law enforcement investigations, and other non-medical activities.

Tuesday morning, 8:00 am and beyond (Recognition + 14 hours)

- The number of new patients presenting to hospitals and calling 911 for evaluation of radiation exposure has increased dramatically as word spreads about the radiologic contamination.
- Federal agencies have been supporting the initial effort to contain and decontaminate the affected areas, however ongoing efforts to stabilize structures and close off impacted sites will be long-term with many residents remaining displaced.
- National media coverage remains intense, leading to the ongoing burden on emergency departments for evaluation and requests for (non-existent) prophylaxis. Misinformation regarding the dangers of radiological exposure to cesium-137 are growing online via social media leading to increased panic.
- Hospitals within the HCC are operating over capacity.
- A community reception center is operating to help conduct radiological screening of those worried about exposure. Residents have been asked to bag the clothing they were wearing, shower, and present to the site with their bag for evaluation—if they were inside of the area defined by the current cordon—though many others are presenting for evaluation.
- Many state and federal agencies including SNS are providing the necessary supplies and resources for screening, radiation countermeasures, personal protection, and decontamination.
- The medical examiner is asking for assistance with protocols and decontamination of decedents.
- As clean-up is ongoing, waste management and proper disposal of contaminated materials is becoming difficult.
- Hospital staff, concerned over exposure, are calling in sick. Overall, workforce across the region is being impacted.
- Mental health and wellness experts are warning of negative mental health issues among those affected by the bombing, the general public, and healthcare workers.
- Surveillance and long-term follow-up on transported patients and those presenting to the hospitals and the community reception center are difficult to track.
- There is confusion about the thresholds for referring an exposed person for countermeasure treatment (which, due to the limited number of persons that need it, is being given through the hospitals).

Module 3 Discussion Questions

1. How does the HCC Radiological Emergency Surge Annex address community radiological screening?

2. Does the HCC have a coordination role at this point? What is it? If not, who is coordinating healthcare resource issues?

3. How will the HCC, or coordination lead, work towards resupplying or redistributing needed equipment and supplies? How will it ensure proper supply levels are continuously available if response efforts take longer than anticipated?

4. What types of staffing shortages will occur for long-term response needs (e.g., over weeks) and how can the HCC help to address them? How many hospital staff, especially in the ER have been REAC/TS trained?

5. How will you address radiological waste issues; what agencies, partners can support exponential increased need for collection and disposal of contaminated materials?

6. How will the HCC coordinate with the Federal Bureau of Investigation to retain possible evidence from radiologically contaminated clothing? Where will evidence be stored? How will it be monitored to ensure it does not reach a hazardous level?

7. How are patients being tracked that were transported or who may need follow-up care, ongoing treatment? Does the tracking mechanism support family reunification efforts?

8. What is the process for providing ongoing situational awareness communication among the HCC facilities, or jurisdictional health facilities, regarding capacity, transported patients, updated treatment guidelines?

9. What is your communication strategy to alleviate public fear and misinformation? How are mental health services being offered to incident survivors and the workforce?

10. Under which state and federal emergency authorities and waivers has your HCC been operating? Are they sufficient to meet your requirements?
    a) Who is tracking disaster relief administrative needs (e.g., financial assistance, billing/coding issues, reimbursement requirements)?

11. How is information being tracked/documented for an after-action report (e.g., issues, gaps, lessons learned)?

12. What efforts can be made to divert concerned but not exposed residents to seek medical attention at facilities other than hospital settings?

13. What mass fatality management plans are in place to support a large-scale incident. What considerations should be made for storing and disposing of radiologically contaminated bodies?

Module 3 Note Page

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