



RADIOLOGICAL RESPONSE FUNCTIONAL EXERCISE



After Action Report and Improvement Plan (AAR-IP)

The After-Action Report and Improvement Plan (AAR/IP) summarizes exercise information required for preparedness reporting and trend analysis by aligning exercise objectives with preparedness doctrine, related frameworks, and national guidance. This information is compiled into recommendations and corrective actions in the improvement plan to improve local and regional preparedness, response, and recovery activities.

EXERCISE OVERVIEW

Exercise Name	2023 Radiological Response Tabletop Exercise
Exercise Date	April 12, 2023, 1300-1600
Scope	This exercise is a functional exercise, planned for 1300-1600 at Houston Transtar, CMOC. Exercise play is limited to CMOC staff on site and participating facilities at their respective locations.
Mission Area	Response
Capabilities	<ul style="list-style-type: none">• Capability 2: Health Care and Medical Response Coordination• Capability 4: Medical Surge
Objectives	<ol style="list-style-type: none">1. CMOC demonstrates the ability to share information effectively among positions.2. CMOC demonstrates the ability to coordinate patient transport and load balancing in a timely manner.3. CMOC should provide clear and coordinated messaging to facilities.4. Ensure hospitals know who to contact for information and how to request resources or assistance.5. Facilities are prepared to use EMResource, EMTrack, and WebEOC with minimal difficulty.6. Ensure facilities are prepared to hold radiation injury patients for an extended period.
Hazard	Radiological Release
Scenario	Cesium-137 (powder) is released into the air system of a Houston METRO Rail car transporting fans to the NCAA Championship Game on a Monday night. Approximately 36 hours following contact with Cs-137, riders of the rail car begin showing symptoms of radiation injury and present to emergency rooms throughout the region. When news of the release reaches the public, a surge of worried-well begin to flood hospitals, FSEDs, and E-911 services.
Sponsor	Hospital Preparedness Program (HPP) Regional Healthcare Preparedness Coalition (RHPC) Southeast Texas Regional Advisory Council (SETRAC)

Exercise Name

2023 Radiological Response Functional Exercise

**Participating
Agencies**

This exercise is intended to test acute care facilities, first responder agencies, local emergency management, and public health agencies in their ability to respond to and cope with a radiological incident.

Point of Contact

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EXERCISE SCENARIO

Cesium-137 (powder) is released into the air system of a Houston METRO Rail car transporting fans to the NCAA Championship Game on a Monday night. Approximately 36 hours following contact with Cs-137, riders of the rail car begin showing symptoms of radiation injury and present to emergency rooms throughout the region. When news of the release reaches the public, a surge of worried-well begin to flood hospitals, FSEDs, and E-911 services. Scenario begins Wednesday morning. CMOC must respond to facilities' requests for support and provide information based on incoming intelligence.

CAPABILITY PERFORMANCE RATINGS

Aligning exercise objectives and preparedness capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis nationwide. The core capabilities include Operational Coordination, Critical Transportation, Public Health and Medical Services, and Mass Care Services; however, the table below include performance ratings for each Health Care Preparedness and Response capability objective written by the planning team and observed with average ratings based on the evaluator notes during the exercise.

Table 1: Summary of Health Care Preparedness & Response Capability Performance Ratings

Capability	Exercise Objectives	Rating
Healthcare and Medical Response Coordination	CMOC demonstrates the ability to share information effectively among positions.	S
Healthcare and Medical Response Coordination	CMOC demonstrates the ability to coordinate patient transport and load balancing in a timely manner.	S
Healthcare and Medical Response Coordination	CMOC should provide clear and coordinated messaging to facilities.	S
Foundation for Healthcare and Medical Readiness	Facilities are prepared to use EMResource, EMTrack, and WebEOC with minimal difficulty.	P
Medical Surge	Ensure facilities are prepared to hold radiation injury patients for an extended period of time.	S
Medical Surge	Ensure hospitals know who to contact for information and how to request resources and assistance.	S

Capability	Exercise Objectives	Rating
<p>Ratings Definitions:</p> <ul style="list-style-type: none"> • Performed without Challenges (P): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. • Performed with Some Challenges (S): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified. • Performed with Major Challenges (M): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws. • Unable to be Performed (U): The targets and critical tasks associated with the core capability were not performed in a manner that achieved the objective(s). 		

ANALYSIS OF CAPABILITY OBJECTIVES

This section provides a summary of observations for each objective evaluated with its corresponding capability. The observations are compiled below as either strengths or areas for improvement with an analysis of factors identified and discussed by participants, then recorded by exercise evaluators.

Capability 1: Foundation for Healthcare and Medical Readiness

Objective:

1. Facilities are prepared to use EMResource, EMTrack, and WebEOC with minimal difficulty.

Strengths:

- Facilities had adequate warning ahead of the exercise date to ensure all accounts to be used during the exercise.
- Most users were able to log in and enter the requested information within the 60-minute window.

Areas for Improvement:

- None. Ensure accounts are maintained and users are trained.

Capability 2: Health Care and Medical Response Coordination

Objective:

1. CMOC should demonstrate the ability to share information effectively among positions.
2. CMOC should demonstrate the ability to coordinate patient transport and load balancing in a timely manner.
3. CMOC should provide clear and coordinated messaging to facilities.

Strengths:

- CMOC staff were quick to activate the CMOC, and were able to maintain a calm working order, despite demands of SimCell.
- Expertise available within the CMOC

The following areas of improvement are required to achieve the full capability level:

Areas for Improvement:

- Communication among staff unclear at times.
- EMResource announcement time delayed due to lack of information at the beginning of the exercise.
- EMTF-6 and Logistics Coordinators need to be seated close together.
- The STAR search process was delayed at times due in combination to system bugs and insufficient training.
- The Radiation Response Plan was not available on the SETRAC website for facilities to access.
- The expertise in the room was not utilized to its fullest potential.
- Discrepancies appeared at times regarding resource availability in the region.

Analysis:

Because there were initial issues upon activation, some CMOC staff were working off of expired or incorrect information that was then sent out to the region. A team brief was not provided at the beginning or throughout the duration of the exercise, leading to confusion regarding roles and critical information. Additionally, because of the constant coordination between EMTF-6 and Logistics, these seats need to be next to one another in the CMOC to alleviate issues regarding the discrepancies in resource availability. Finally, CMOC staff should use initial brief as an opportunity to learn what subject matter experts are staffed in the CMOC, and who can be called upon for advice and information about niche topics.

Capability 4: Medical Surge

Objective:

1. Ensure hospitals know who to contact for information and how to request resources or assistance.
2. Facilities should be prepared to hold radiation injury patients for an extended period (at least 3 days).

Strengths:

- Organizations were prepared to participate in the exercise well in advance.
- Many facilities activated HICS to participate in the exercise.
- Participating facilities were quick to seek assistance when confusion arose during the exercise.

The following areas of improvement are required to achieve the full capability level:

Areas for Improvement:

- Some facilities did not know to contact the CMOC for information.
- Not all participating facilities responded to regional announcements within the required time frames.

Analysis:

Overall, the facilities who participated did a spectacular job in the Medical Surge portion of the exercise. They overcame confusion and pressed on despite delays in initial activation. The majority of facilities maintained strong lines of communication with the CMOC and were quick in their responses to requests for information from CMOC staff.

APPENDIX A: REGIONAL IMPROVEMENT PLAN

This Improvement Plan (IP) was developed with the following recommendations and corrective actions for the Regional Healthcare Preparedness Coalition (RHPC) based on the Radiological Response Functional Exercise conducted on April 12, 2023.

Capability	Recommendations	Corrective Actions	Capability Element	Responsible Party	Status
Foundation for Healthcare and Medical Response	Maintain quality	N/A	Training & Planning	All Organizations	Ongoing
Healthcare and Medical Response Coordination	More training and education for CMOC staff.	Provide CMOC-101 courses to on-call hospitals. Provide in-service opportunities to SETRAC staff.	Training	SETRAC Training & Exercise Team	Ongoing
Healthcare and Medical Response Coordination	Work out STAR issues on WebEOC.	Work with WebEOC administrators to reconcile issues and train users.	Technological & Training	SETRAC & Juvare	In-progress. ETA October 2023
Healthcare and Medical Response Coordination	Update CMOC seating chart to place EMTF-6 and Logistics Coordinators side-by-side.	Seating chart update.	Administrative	SETRAC	Complete
Healthcare and Medical Response Coordination	Make Radiological Response Plan available to Coalition on SETRAC website.	Publish Radiological Response Plan to SETRAC website.	IT	SETRAC	Complete
Medical Surge	Continued training & review of facility surge plans, including the management of scare resources during prolonged activations.	Encourage regular plan reviews by hospitals. Provide literature and sample plans to healthcare emergency planners.	Planning	SETRAC & individual facilities	Ongoing

Authorizing Signature: _____

Date: _____

PARTICIPATING ORGANIZATIONS

Advanced Diagnostic Hospital East
America's ER-Cypress
Atrium Medical Center*
Baptist Beaumont
CHG Cornerstone Hospital Conroe*
CHI St. Luke's Memorial Livingston
CHI St. Luke's Memorial San Augustine
CHI- St. Luke's Patients Medical Center*
CHI St. Luke's Sugar Land Hospital
Columbus Community Hospital
Dunn Behavioral Sciences Center
El Campo Memorial Hospital
Encompass Health & Rehabilitation Hospital Cypress
Encompass Health & Rehabilitation Hospital of Pearland
Encompass Health & Rehabilitation Hospital Sugar Land
Encompass Health Rehab Hospital Humble*
Harris County Psychiatric Center
Harris County Public Health
HCA Houston Healthcare Clear Lake
HCA Houston Healthcare Pearland
HCA Houston Healthcare West
HCOHSEM
Hospice in the Pines
Houston Mayor's Office of Public Safety & Homeland Security
Houston Methodist Sugar Land
Houston Methodist TMC
Houston Methodist West Hospital
Houston Methodist Willowbrook
Houston Police Department
Huntsville Memorial*
Kindred Hospital - Clear Lake
Kindred Hospital Sugar Land
Kingwood Emergency Hospital
Liberty Dayton Regional Medical Center
Lyndon B Johnson Hospital
Matagorda Regional Medical Center
MD Anderson
Memorial Hermann Children's (Level I)*
Memorial Hermann Cypress
Memorial Hermann Greater Heights
Memorial Hermann Katy
Memorial Hermann Memorial City
Memorial Hermann Northeast
Memorial Hermann Rehabilitation-Katy*
Memorial Hermann Southwest
Memorial Hermann the Woodlands
Memorial Hermann TIRR
Memorial Hermann TMC
Oak Bend Medical Center
Rice Medical Center
River Oaks Hospital
Sabine County Hospital
SETRAC
Southeast Texas ER Hospital
Spring Hospital
St. Joseph Medical Center
St. Michael's Elite Hospital
Surgery Specialty Hospitals of America
Sweeny Hospital
TDEM
Texas Children's Med Center (Level I)*
Texas Children's West Campus (Level IV)*
Texas Children's Woodlands (Level IV)*
Texas DSHS
UT Health

