

Mid-South Emergency Planning Coalition

Radiation Surge Table Top Exercise

After-Action Report/Improvement Plan

May 11, 2023

The After-Action Report/Improvement Plan (AAR/IP) aligns exercise objectives with preparedness doctrine to include the National Preparedness Goal and related frameworks and guidance. Specific to this report, the exercise objectives align with the Administration for Strategic Preparedness and Response's (ASPR) National Guidance for Healthcare Preparedness and the Hospital Preparedness Program Measures. Exercise information required for preparedness reporting and trend analysis is included; users are encouraged to add additional sections as needed to support their own organizational needs.

EXERCISE OVERVIEW

Event Name	Mid-South Emergency Planning Coalition Radiation Surge Table Top Exercise
Exercise Dates	May 11, 2023
Scope	The tabletop exercise is a discussion-based exercise conducted by the Mid-South Emergency Planning Coalition engaging participants from the Coalition.
Mission Area(s)	Response and Recovery
Core Capabilities, Objectives, and Activities	<p>Capability 2: Healthcare and Medical Response Coordination <i>Objective 1:</i> Develop and Coordinate Healthcare Organization and Healthcare Coalition Response Plans <i>Objective 3:</i> Coordinate Response Strategy, Resources, and Communications</p> <p>Capability 3: Continuity of Healthcare Service Delivery <i>Objective 3:</i> Maintain Access to Non-Personnel Resources during an Emergency <i>Objective 5:</i> Protect Responders' Safety and Health <i>Objective 6:</i> Plan for and Coordinate Healthcare Evacuations and Relocation</p> <p>Capability 4: Medical Surge <i>Objective 1:</i> Plan for a Medical Surge <i>Objective 2:</i> Respond to a Medical Surge</p>
Exercise Objectives	<ol style="list-style-type: none"> 1. Review existing radiation emergency care assets. 2. Identify gaps that may occur during a radiological mass casualty incident. 3. Establish agency and facility roles during a radiological emergency incident. 4. Validate assumptions in the draft MSEPC Radiation Emergency Surge Annex. 5. Identify changes that need to be made in the MSEPC Radiation Emergency Surge Annex based on the roles and capabilities of the involved partners.

Threat or Hazard	Radiation, Explosion, Trauma
Scenario	Explosion with a Radiation Dispersion Device (Dirty Bomb) generating many adult and pediatric casualties.
Sponsor	Mid-South Emergency Planning Coalition
Participating Organizations	Healthcare coalitions, Emergency Medical Services, public health, acute care hospitals, emergency management, and other healthcare organizations. Participating organizations are included in Appendix B.
Points of Contact	Heather Burton Fortner, Executive Director Mid-South Emergency Planning Coalition hfortner@midsouthepec.org

ANALYSIS OF HEALTHCARE PREPAREDNESS CAPABILITIES

Aligning exercise objectives and healthcare preparedness capabilities allows for a more consistent approach to exercise evaluation to support preparedness reporting and trend analysis. The table below includes the exercise objectives, aligned core capabilities, and performance ratings for each core capability as observed during the exercise and determined by the evaluation team.

Objective	HPP Capability and Objective	Performance Rating
Review existing radiation emergency care assets.	Capability 2, Objective 3 Capability 3, Objective 3	P – resources are available and known
Identify gaps that may occur during a radiological mass casualty incident.	Capability 2, Objective 1 Capability 2, Objective 3 Capability 4, Objective 1 Capability 4, Objective 2	S – high staff turnover has limits to preparedness capabilities
Establish agency and facility roles during a radiological emergency incident.	Capability 2, Objective 3 Capability 4, Objective 1 Capability 4, Objective 2	S – increase communication needed among responding agencies
Validate assumption in the Draft MSEPC Radiation Emergency Surge Annex.	Capability 2, Objective 1 Capability 2, Objective 3 Capability 4, Objective 1	P – plan edited to reflect discussion
Identify changes that need to be made in the MSEPC Radiation Emergency Surge Annex based on the roles and capabilities of involved partners.	Capability 2, Objective 1 Capability 2, Objective 3 Capability 4, Objective 1	P – plan edited to reflect discussion
Ratings Definitions: <ul style="list-style-type: none"> • Performed without Challenges (P): The targets and critical tasks associated with the healthcare preparedness 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 healthcare preparedness 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 healthcare preparedness 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 healthcare preparedness capability were not performed in a manner that achieved the objective(s). 		

EXERCISE FINDINGS

Questions utilized during the exercise are included below along with an abbreviated list of comments made during the discussion held as part of the exercise. A more complete evaluation of the overall strengths and areas of improvements specific to our participating organizations are included in the following section.

Module 1 Discussion Questions

1. How would you and members of your organization expect to be notified of the event?
FACEBOOK/SOCIAL MEDIA, 911 CALL, MSEPC, MEDCOM,
2. What are your organizations' initial actions upon notification of the blast?
 - MSEPC – what further actions are provided for members?
**RMCC, MEDCOM HRTS ALERT NOTIFICATION
UTILIZING READYOP/HRTS FOR COORDINATING RESOURCES,
PT TRACKING**
 - EMS – what are your plans for local distribution of casualties?
TRIAGE PROTOCOL
 - Hospitals – what are your actions to prepare for an influx of injured patients?
**INCIDENT COMMAND/NOTIFICATION, UPDATE HRTS-BED
AVAIL, START PREPARING, STANBY MODE FOR FACILITIES,
POSSIBLE VERIFICATION SOFTWARE**
 - EM – what determines cause/timeline for activation
NOTIFY SENIOR LEADERSHIP, COM PARTNERS, EOC ACTIVATE
 - PUBLIC HEALTH – **OEM OR SCEMA ALERT, NOTIFY KEY PLAYERS,
STANDBY**
 - WATCH – **ALERT FROM MSEPC, STANDBY**
3. What actions would your organization take once you learn radiation detectors are going off?
 - HOSP – **REACH OUT NOTIFY DECON TEAM, SENIOR LEADERS, STERN
+ ONCOLOGY [RADIATION CLINICS], EQUIPMENT NEEDED, SAFETY
OFFICERS, SX SURVEILLANCE [ICD CODES]**
 - EMS – **PERSONNEL SAFETY, RAD EQUIP, HAZMAT-MODE, DECON
TEAMS + AREA**
 - EM – **CONTACT APPROPRIATE RESOURCES, ALERT SENIOR MGMT**
4. Does your organization have access to local, regional, and/or national radiological experts?
 - If yes, how would you contact them? **LOCAL RAD/ONC NOTIFICATION, RAD
PARTNERS 24/7**
 - If no, how would your organization obtain guidance or additional clinical advice in real time? **TDEX, CITY/COUNTY RESOURCES, MPD, FBI, REAC/TS**
5. Are facility/EMS familiar with proper radiological screening, triage, decontamination, and treatment protocol for exposed or potentially exposed individual?
 - **YES**
 - **ROOM FOR IMPROVEMENT: SX WATCH, QUICKER IDENTIFICATION,
BETTER EQUIPMENT, DECON, VALID SUSPICION, TIME LAPSED**

6. What specialized resources/supplies will be needed to respond to a radiological attack? What does your organization have? What will they need?
 - EMS – **DOSE TYPE/AMOUNT DETECTOR**
 - Hospital – **SURVEY METER [ISOTOPE IDENTIFICATION], RAD ID**
 - Public Health – **RADIATION DETECTION EQUIPMENT**
 - EM – **RADIATION DETECTION EQUIPMENT (SHELBY COUNTY)**
 - MSEPC – **NOTIFICATION PROCESS – HRTS/READYOP TO SPECIFIC GROUP**

7. Is routine training offered on for specialty care and/or equipment (radiation detection, dosimetry, decon equipment)?
 - If yes, who conducts the training? **LOCAL, STATE**
 - If no, how can training be instituted and maintained? **ADDITIONAL TRAINING THROUGH STATE, REQUIRED ANNUALLY FOR STAFF, CONTINUING EDUCATION, JUST IN TIME TRAINING**

Module 2 Discussion Questions

1. How would your response activities change now that this is a confirmed intentional radiological attack?
 - **KEEP ALL EVIDENCE, FEAR OF ADDITIONAL ATTACKS,**
2. Who is coordinating messaging to the public? What are the key messages to get out?
 - **CITY PIO, CITY COMMS, LOCAL NEWS, LOCAL, STATE MESSAGING**
 - **DESIGNATED DECON/EVALUATION AREAS OR ZONES**
3. Who has responsibility for community screening locations for persons that are worried about contamination? **EMA, PUBLIC HEALTH**
 - How are the locations staffed? **PUBLIC HEALTH, VOLS**
 - How are locations identified, activated, and information shared? **PIO, NEWS, SOCIAL MEDIA**
 - What is the timeframe surrounding mobilization and activation? **3+ HOURS; MOU'S FOR BUILDINGS/TRANSPORTATION**
4. How will hospitals assess their current patients for contamination? How will hospitals triage and refer those that are seeking contamination assessment only?
 - **SECURING ZONES FOR CONTAM. PTS**
 - **FAMILY ASSISTANCE CENTER, PT TRACKING, FLOW OF INFO FOR REROUTING**
5. Does your organization staff/personnel understand plans for contamination control and workforce safety/exposure protocols?
 - Hospitals – **ASSUME WIDESPREAD CONTAMINATION, ANNUAL TRAINING**
 - EMS – **SURVEY PERSONNEL, EQUIPMENT**
 - Public Health – **AWARENESS LEVEL TRAINING; PUBLIC INFO**
 - EMA – **JUST-IN-TIME TRAINING**
6. Do the hospitals have a plan for evaluating those patients with significant 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?
 - **HOSPITAL STAFF, PUBLIC HEALTH, VOLS**

7. What special considerations affect EMS patient transportation resources during a radiological emergency (e.g., EMS restrictions related to transportation and care of radiological casualties)?
 - **RESPIRATORY PROTECTION/PPE**
8. What assets from the Strategic National Stockpile are available? Who has information about local/federal stockpiles? **FEMA REGIONS HAVE SNS COORDINATOR; DEPT OF HEALTH FOR ASSETS**
 - What is the process to make requests? **SPECIFIC ITEM REQUESTS; LIMITED SUPPLY; AVAILABILITY [STATE REQ -> SNS -> LOCAL]**
 - Will supplies require special storage conditions or security protocol? **CHEM-PACK**
 - How are items delivered? What is the timeline? **DELIVERED THROUGH LOCAL -> STATE LEVEL, DEPENDING ON LOCATION. PHARMACEUTICALS HAVE EXTENDED DELIVERY; MIN 24-72 HRS**

Module 3 Discussion Questions

1. How can patient tracking be utilized to provide family reunification and information, and assist local law enforcement in gathering victim information? **READYOP**
 - Are your facilities effectively trained? **YES**
 - Do you have processes/procedures in place to appropriately utilize patient tracking? **TRIAGE TAGS, WEB-BASED SYSTEM, HANDHELD DEVICES/TABLETS; MOBILE APPLICATION**
2. What is your communication strategy to alleviate public fear and misinformation?
 - **LOCAL PIO RESPONSE; PIO-TO-PIO CONVERSATION GROUP; JOINT INFORMATION CENTER; CLEAR FLOW OF INFO BETWEEN ORGANIZATIONS [MAYBE FUTURE TABLETOP?]**
3. What information is most relevant to receive during the active event to support your organizations' response activities?
 - **EM - INFO GATHERING FROM FIELD; REGULAR UPDATES ON STATUS/RESOURCES, INCLUDING HOSPITALS**
 - **HOSPITALS - HRTS MESSAGE BOARD FOR UPDATES**
 - **ROH - TRANSFER-SPECIFIC TRACKING & TRAINING**
4. What efforts can be made to divert worried well to seek medical attention at facilities other than hospital settings?
 - **DESIGNATED AND SCALABLE COMMUNITY RECEPTION CENTERS; BASED ON SIZE AND ACUITY**
5. 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?
 - **SPECIFIC BODY BAGS/DESIGNATED ZONE**
 - **5 MORGUE CUBES (HOLDS 12)**

STRENGTHS AND AREAS OF IMPROVEMENT

Several issues common to most or all the participating facilities were reported either as part of the exercise discussion or from facility evaluations submitted after the exercise concluded. Since these items represent trends across the entire region, the HCC may wish to consider addressing these in a more strategic approach to improving capabilities for all member healthcare organizations.

STRENGTHS

Most facilities reported a strong understanding of ICS activation procedures and the ability to adhere to the incident command structure, established protocols, and checklists. This further allows facilities to ensure a structured response and efficiently manage chaos handling during an emergency.

All regional hospital facilities have varying versions of patient placement centers. These dedicated programs effectively track and place of patients, both internally and externally, ensuring better coordination of patient care.

Effective interagency collaboration between multiple organizations enables a seamless exchange of information and resources to support emergency response efforts. Participating organizations reported that staff are willing to step up and take on additional responsibilities during events and committed to serving the community.

Hospitals, EMS, public health, and emergency management all reported access to radiation detection equipment. Additionally, appropriate decontamination supplies are readily available, ensuring a robust response to emergencies and providing timely assistance to those in need. Overall, these strengths serve as a foundation for continuous improvement and enhancing emergency response capabilities in the future.

AREAS OF IMPROVEMENT

Although collaborative support and resources are available, facilities discussed the need to enhance their response capabilities through increased training, establishing a decontamination (decon) team, improving patient tracking procedures, and recognizing the need for better management and upkeep of the detection equipment. Training for all staff members on radiation response is a critical area to focus on, and cross-training with checklists and utilizing the ReadyOp platform were identified as areas for improvement.

Additionally, some of the facilities emphasized planning for the long term, particularly for events extending beyond 10 hours. Participants recommended offering more extensive education and developing a comprehensive radiation response plan. More frequent training geared towards radiation and the use of an ICS structure can help support capabilities by addressing issues resulting from increased turnover rates within the workforce, along with reiterating the

importance of clearly defined roles and designated titles for senior leadership positions to ensure effective decision-making and communication. These areas of improvement will serve as valuable insights for the facilities to address gaps and enhance their emergency response capabilities, strengthening their preparedness for future incidents.

APPENDIX A: ACRONYMS

Acronym	Term
AAR	After Action Report
ASPR	Assistant Secretary of Preparedness and Response
EM	Emergency Management
EMS	Emergency Medical Services
HCC	Health Care Coalition
HCC	Hospital Command Center (VA)
HPP	Hospital Preparedness Program
HRTS	Healthcare Resource Tracking System
HSEEP	Homeland Security Exercise and Evaluation Program
ICS	Incident Command System
IP	Improvement Plan
MSEPC	Mid-South Emergency Planning Coalition
OEM	Office of Emergency Management
PPE	Personal Protective Equipment
RMCC	Regional Medical Communications Center
START	Simple Triage and Rapid Treatment

APPENDIX B: EXERCISE PARTICIPANTS

Participating Organizations
Healthcare Coalitions
Mid-South Emergency Planning Coalition
WATCH
Public Health
Tennessee Department of Health
Shelby County Health Department
Emergency Management
City of Memphis Office of Emergency Management
Shelby County Emergency Management and Homeland Security Agency
Emergency Medical Service (EMS)
Memphis Fire Department
Acute Care Hospitals
Baptist Memorial Healthcare – Corporate
Baptist Memorial Hospital Memphis
Le Bonheur Children’s Hospital
Methodist Le Bonheur Healthcare - Corporate
Methodist North Hospital
Methodist University Hospital
Regional One Health

APPENDIX C: IMPROVEMENT PLAN

This IP has been developed specifically for the Mid-South Emergency Planning Coalition as result of the Radiation Surge Table Top Exercise conducted on May 11, 2023.

MSEPC accepts responsibility for assuring that the improvement plan issues identified will be integrated into an exercise in the next budget period.

Issue/Area for Improvement	Corrective Action	Capability Element ¹	Start Date	Completion Date
Increase training on general topics and specific radiation technology	Facilities need to increase training in radiation technology by providing educational material to the staff and holding multiple training sessions. MSEPC will offer valuable support by providing needed educational supplies as well as holding quarterly meetings to ensure that facilities are on track with providing the proper training and education for their staff	Training	FY24	On-going. Offered quarterly.
Increasing training and education on patient tracking system (ReadyOp)	MSEPC will hold various educational and training sessions on navigating and using the patient tracking system (ReadyOP) for facilities. MSEPC will also hold quarterly meetings as a checking point to ensure that the facilities can operate the patient tracking system efficiently.	Training	FY24	On-going. Offered quarterly.

²Capability Elements are: Planning, Organization, Equipment, Training, or Exercise.