Mid-South
Emergency Planning Coalition

Chemical Surge Tabletop Exercise

After-Action Report/Improvement Plan

November 15, 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 Chemical Surge Tabletop Exercise
Exercise Dates	November 15, 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	**Capability 2: Healthcare and Medical Response Coordination** ***Objective 1:*** Develop and Coordinate Healthcare Organization and Healthcare Coalition Response Plans ***Objective 3:*** Coordinate Response Strategy, Resources, and Communications **Capability 3: Continuity of Healthcare 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 Healthcare Evacuations and Relocation **Capability 4: Medical Surge** ***Objective 1:*** Plan for a Medical Surge ***Objective 2:*** Respond to a Medical Surge
Exercise Objectives	1. Review existing chemical emergency care assets. 2. Identify gaps that may occur during a chemical mass casualty incident. 3. Establish agency and facility roles during a chemical emergency incident. 4. Validate assumptions planned in the draft MSEPC Chemical Emergency Surge Annex. 5. Identify changes that need to be made in the MSEPC Chemical Emergency Surge Annex based on the roles and capabilities of the involved partners.

Threat or Hazard	Chemical exposure, Explosion, Trauma
Scenario	Explosion at a local chemical manufacturing plant. Plant is adjacent to areas populated with office buildings, retail spaces, and schools.
Sponsor	Mid-South Emergency Planning Coalition
Participating Organizations	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@midsouthepc.org Sandiayn AL Hayali, Vulnerable Populations Coordinator Mid-South Emergency Planning Coalition salhayli@midsouthepc.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 chemical emergency care assets.	Capability 2, Objective 3 Capability 3, Objective 3	P – resources are available and known
Identify gaps that may occur during a chemical 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 chemical 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 Chemical 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 Chemical 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:

- 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 specific to our participating organizations are included in the Strengths and Areas of Improvement section.

Module 1: Discussion Questions

1. How would you and members of your organization expect to be notified of the event?

   MFD/OEM – FAO (MFD DISPATCH)
   HRTS ALERT
   REGIONAL ONE/MEDCOM
   SC EM/HS—CONTACT FROM OEM & SHELBY COUNTY FIRE

2. What are your organizations' initial actions upon notification of the blast?

   - EMS – what are your plans for local distribution of casualties?

     1. TRANSPORTATION GROUP WOULD WORK WITH HRTS/MEDCOM TO COORDINATE PATIENTS TO HOSPITALS.
     2. UTILIZE MUTUAL AID WHEN INTERNAL RESOURCES ARE EXHUASTED
     3. LICENSURE RECIPROCISTY ISSUES WITH SCOPE OF PRACTICE

   - Hospitals – what are your actions to prepare for an influx of injured patients?

     1. MANAGE ED STAFF SHORTAGES BY BACKFILING WITH STAFF FROM OTHER DEPARTMENTS
     2. ACCOUNT FOR POSSIBILTY OF STAFF BEING CONTAMINATED AS INFLUX OF PATIENTS ARRIVE DUE TO UNKNOWN NATURE OF ILLNESS/SYMTOPS
     3. UTILIZE SOCIAL MEDIA, HRTS, MEDCOM TO GET ADVANCE NOTICE ON WHAT TYPE OF EVEN HAS OCCURRED TO RESULT IN PATIENT INFLUX
     4. REGIONAL ONE—ACTIVATE MAX SURGE PROTOCAL
     5. VA-RECEIVE APPROVAL FROM HOSPITAL DIRECTOR TO ACCEPT NON-VETERAN PATIENTS ON A HUMANATARIAN MISSION, THEN ACTIVATE SURGE PLAN
        1. FREES UP STAFFING RESTRICTIONS TO BACKFILL ED

   - EM and Public Health – what determines cause/timeline for activation.

     1. SHELBY COUNTY PH—SCALE OF THE EVENT

2. STATE OF TN—SCALE OF THE EVENT STARTING WITH INTIAL NOTIFICATIONS

- MSEPC – what further actions are provided for members?

1. HRTS UPDATE WITH PERTINET DATA

1. REQUIRES SOMEONE TO MONITOR UPDATES AS RECEIVED TO GUARD AGAINST NOTIFICAITON FATIGUE

2. MEDIA BRIEFINGS AND STAFF BRIEFINGS TO RELAY KEY INFORMATION

3. What steps will your organization take to determine if antidotes may be applicable for injured patients?

- DURING TRIAGE ANY SIGNS OF CONTAMINATION WOULD BE THE DECIDING FACTOR

4. Does your organization have access to local, regional, and/or national chemical experts?

- If yes, how would you contact them?

1. REGIONAL ONE—CHEMTRX?

2. EMS/PH—CURENTLY WORKING ON IDENTIFYING OPPORTUNITIES

- If no, how would your organization obtain guidance or additional clinical advice in real time?

5. Are facility/EMS prepared to provide proper screening, triage, decontamination, and treatment protocol for exposed or potentially exposed individuals?

- EMS

1. ON PAPER YES

2. A NEED FOR CONTINUED TRAINING AND EXERCISES

- HOSPITALS

1. REGIONAL ONE

1. ABILITY TO TREAD WATER AND CONTINUE TO IMPROVE WITH DRILLS AND TRAINING

6. What specialized resources/supplies will be needed to respond to a chemical attack? What does your organization have? What will they need?

- EMS—
  - MFD-HAVE SORT RESCUE COMPANIES WHICH DO HANDLE HAZMAT ISSUES, TRAILERS WITH DECON EQUIPMENT,

- Hospital
  - REGIONAL ONE—WELL STOCKED ON SUPPLIES, DECON SHOWERS
  - METHODIST—WORKING ON TRAINING SECURITY OFFICERS FOR EVENTS OF THIS NATURE. HAVE SUPPLY ON HAND FOR DECON
  - VA—STAFF SHUFFLING CANNOT IMPACT PATIENT CARE
- Public Health
  - SHELBY COUNTY—HAVE ANCILARY SUPPLIES BUT CURRENTLY RESTOCKING PPE
  - STATE—EMORY UNIVERSITY BUILIDNG OUT A REGIONAL DISASTER REPONSE SYSTEM
- EM
  - OEM—NOT PUTTING PEOPLE IN THE FIELD. RESOURCES AND INFORMATION ALLOCATION/COORDINATION

7. Is routine training offered on for specialty care and/or equipment (decontamination processes, equipment, or PPE)?

   - If yes, who conducts the training?
   - If no, how can training be instituted and maintained?
     - UTILIZING MSEPC TO ALIEVATE RESOURCES. HAVE MSEPC PUT ON REFRESHER TRAINING OR AN INITIAL BROAD-BASED TRAINING?
     - MFD WORKING WITH TEMA TO BECOME A TRAINING SITE FOR HAZMAT TECH/OPERATIONS
     - A NEED FOR STANDARDS ON THE STATE OR FEDERAL LEVEL THAT WOULD ENCOURAGE ADMINISTRATORS TO SPEND MONEY ON TRAINING?

8. Are there any at-risk populations that must be considered such as pediatric patients, those with access of functional needs, or the elderly? How may cultural beliefs that may prevent undressing for decontamination be addressed?
   1. SPECIFIC DISPARITIES
      1. NON-ENGLISH-SPEAKING GROUPS
      2. INDIVIDUALS ON OXYGEN, IMMOBILE, BLIND, DEAF, HOME VENT?
      3. PLUME MODELS (MFD)

Module 2: Discussion Questions

1. Who decides and communicates shelter-in-place or evacuation orders to the community? How would a hospital be informed of those orders? What actions would a hospital take if it was in the affected zone? DEPENDING ON CHEMICAL + PLUME MODELING; RELY ON OEM/EMA FOR PUBLIC NOTIFICATION; IF HOSPITALS IN HOT ZONE, SHELTER IN PLACE OR EVACUATE.

2. What plans does your facility have for a large number of contaminated, or potentially contaminated, patients? DECON SHOWERS

   Is there an alternate area for triage/assessment? MORE THAN ONE DESIGNATED AREA AS BACKUP.
   Do you have the ability to provide 'dry' decontamination (i.e., clothing removal, dry absorbent material for blotting skin, redress)? HAZMAT/DECON RESPONSE FROM MFD

3. Now that you know the chemical, what next steps are taken for treatment and contamination?

   POISON CONTROL NOTIFICATION
   - Hospitals – what resources do you currently have to treat organophosphate pesticide exposures? CHEMICAL-SPECIFIC (CHEMPACK); LOCAL SOPS
   - EMS – do you have capabilities to triage and treat at the scene? YES

4. What type of additional assistance and resources are needed now that the surge capacity threshold is being exceeded (e.g., extra staff, space, specialty resources/equipment)? LEO, EMS/FIRE, DECON EQUIPMENT

   - How does the HCC and its members support these needs? Are there other partners that you should coordinate with? CALL HEATHER/MSEPC; KNOWLEDGE OF EVENT + PUBLIC SAFETY PLAYERS
   - How would resource request be submitted, processed, and filled? ELECTRONIC REQ. VIA READYOP; OEM/EMA

5. If a surge of concerned citizens requires additional screening areas or treatment spaces (e.g., community screening centers, alternate care sites) how is that initiated? HEALTH DEPT; DESIGNATED SITES FOR LOWER ACUITY, EVAL

   - Who decides if a reception/screening center is activated? Who will operate the community reception center? HEALTH DEPT; CITY LEADERS
   - When/how would this be coordinated, managed, supplied? How will the community screening site be staffed? VOLUNTEERS. CITY/CO. STAFF; MUTUAL AID
   - Can dry or wet decontamination be provided on-site if needed? EMS/FD – YES; HOSPITALS – YES; DECON @ SCENE AND HOSPITAL.

6. With public concern high, who is coordinating messaging to the public? What are the key messages? DEPT/CITY/HOSPITAL PIO(S)

   - How will the EOC Joint Information Center (JIC) coordinate public information with HCC members? PIO – MEDIA STAGING AWAY FROM SCENE
   - How will you ensure clear and consistent risk communication messaging to the public and media to prevent/mitigate mass panic? FACT CHECK; FAMILY ASSISTANCE CENTER; REGULAR UPDATES FROM PIO/CITY/CO/EM
   - Are there readily available chemical release/sheltering-in-place/evacuation scripts available for patients, staff, public messaging? NOTIFICATION TEMPLATES FOR MFD/OEM; QR CODES FOR QUICK DISSEMINATION OF PUBLIC HEALTH INFO

Module 3: Discussion Questions

1. What does healthcare resource coordination look like at this point?
    - MSEPC – READYOP
    - Public Health – SCHD W/ LOCAL, STATE
    - Emergency Management – FLOW OF INFO; RESOURCE REQ FROM EOC; OPERATIONAL PERIODS
    - FIRE/EMS – REQ RESOURCES; MOU(S)
2. What experts will hospitals work with to address contaminated belongings and low-level contamination if needed? MFD HAZMAT, SCHD, EPA
3. For materials and waste that require special disposal, what partners can support the exponential increased need for collection and disposal of contaminated materials? EPA, SCHD
4. What types of staffing shortages and resource needs are likely to occur and how can the HCC help to address them? AMBULANCES, TRAINED HAZMAT STAFF, VOLUNTEERS, HOSP. STAFF,
5. What efforts can be made to divert concerned but not exposed residents to seek medical attention at facilities other than hospital settings? FREQ. UPDATES FROM PIO, CITY LEADERS, EM
6. Are there any specific training opportunities that MSEPC could help coordinate for your facility, service, or region-wide? TRAINING OPPORTUNITIES, MSEPC NEWSLETTER, BEST PRACTICE/TRAINING EXERCISES MORE THAN ONCE/YR; DEPENDING ON SHIFT, MAY HAVE GAPS IN RESPONSE TRAINING.
    - MSEPC HOTWASH; AAR TO BE SENT OUT TO PARTNERS IN ATTENDANCE

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 improve capabilities for all member healthcare organizations.

STRENGTHS

Partners demonstrate a robust understanding of notification systems including the Healthcare Resource Tracking System (HRTS), ReadyOp, and other industry specific communication methods as well. This redundancy ensures swift and efficient information dissemination across various platforms, which enhances situational awareness and structured response. The detailed breakdown of initial actions for different organizations, including EMS, hospitals, public health, and emergency management, allows for immediate and effective coordination. For instance, EMS plans to use mutual aid when internal resources are exhausted, and hospitals will backfill ED staff from other departments, highlighting a proactive approach to resource management.

Preparedness for contaminated patients is evident, with hospitals equipped with decontamination showers and backup triage areas. This indicates a proactive stance on managing large-scale emergencies involving potentially contaminated individuals. The use of technology, such as HRTS and ReadyOp, for advance notice and communication, further strengthens the response framework. Leveraging these platforms enables real-time information dissemination, which is vital for situational updates and enhancing overall preparedness.

Specialized resource management is well-defined within the Chemical Annex. It identifies necessary supplies and equipment for a chemical attack, including decontamination tools and personal protective equipment (PPE). This readiness highlights a thorough understanding of resource requirements and a commitment to maintaining a reliable stockpile. Additionally, the consideration for at-risk populations, such as non-English-speaking groups and individuals with disabilities, ensures inclusivity in emergency planning. Addressing specific disparities is crucial for comprehensive and equitable response efforts.

Regular training and exercises, facilitated through collaborations with entities like the MSEPC and TEMA for hazmat and general emergency response training, underscore the region’s commitment to continuous improvement. These efforts are vital for maintaining readiness and ensuring that personnel are well-prepared to handle emergencies. By emphasizing ongoing training, agencies ensure that staff are equipped with up-to-date skills and knowledge, laying a solid foundation for enhancing emergency response capabilities.

AREAS OF IMPROVEMENT

Although communication methods are comprehensive, clarity and consistency in their usage could be improved. Standardizing the format and ensuring clear instructions would enhance user-friendliness and make instructions and expectations easier to follow. This would be especially beneficial during emergencies when clear and concise communication is crucial.

Resource availability and addressing potential gaps require more concrete strategies. While mutual aid is mentioned, detailed mutual aid agreements or pre-arranged contracts with suppliers would provide a more sufficient solution to resource shortages. This would ensure that necessary resources are available when needed, enhancing overall preparedness and response capabilities.

Specificity in accessing chemical expertise and broader integration of community partners and volunteers are areas that need attention. The updated Chemical Annex should outline clear steps for contacting local, regional, and national chemical experts in real-time, along with detailed roles and responsibilities for community partners in various scenarios. This would strengthen the overall response framework, ensuring effective collaboration and resource allocation.

Including detailed Standard Operating Procedures (SOPs) for different scenarios and improving coordination and information flow are also essential. Appendices with SOPs would provide quick reference points for responders, while clearer protocols for information flow and decision-making processes would improve efficiency. Additionally, a more structured approach to incorporating lessons learned through regular review cycles and stakeholder feedback mechanisms would ensure continuous improvement and enhance the plan’s effectiveness.

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
Knox East TN Healthcare Coalition
Mid-South Emergency Planning Coalition
Southeast Regional Healthcare Coalition
Public Health
Mississippi Department of 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
Le Bonheur Children's Hospital
Methodist Le Bonheur Healthcare - Corporate
Methodist North Hospital
Regional One Health
Veteran's Affairs Memphis

APPENDIX C: IMPROVEMENT PLAN

This IP has been developed specifically for the Mid-South Emergency Planning Coalition as result of the Chemical Surge Tabletop Exercise conducted on November 15, 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 decontamination procedures	Facilities need to increase training and productivity of established decontamination teams. Training should include review of procedures, testing of equipment and supplies, and hands-on exercises. 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	2024	On-going. Offered quarterly.
Lack of specified experts to serve as support during events	MSEPC will identify subject matter experts, appropriate contact methods, and include them in the updated Annex	Planning	7/1/2024	12/31/2024

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