Mid-South
Emergency Planning Coalition

Surge Full Scale Exercise

After-Action Report/Improvement Plan

September 26, 2019

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 Assistant Secretary of 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.

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EXERCISE OVERVIEW

Exercise Name	Mid-South Emergency Planning Coalition (MSEPC) Surge Full Scale Exercise
Exercise Dates	September 26, 2019
Scope	This exercise is a Full Scale Exercise, planned for multiple locations within the jurisdiction of the Mid-South Emergency Planning Coalition Region.
Mission Area(s)	Response and Recovery
Core Capabilities, Objectives, and Activities	**Hospital Preparedness Program (HPP)** ***Capability 1: Foundation for Health Care and Medical Readiness*** **Objective 2: Identify Risk and Needs** Activity 2: Assess Regional Health Care Resources Activity 4: Assess Community Planning for Children, Pregnant Women, Seniors, Individuals with Access and Functional Needs, Including People with Disabilities, and Others with Unique Needs **Objective 4: Train and Prepare the Health Care and Medical Workforce** Activity 1: Promote Role-Appropriate National Incident Management System Implementation Activity 3: Plan and Conduct Coordinated Exercises with Health Care Coalition Members and Other Response Organizations Activity 5: Evaluate Exercises and Responses to Emergencies ***Capability 2: Health Care and Medical Coordination*** **Objective 2: Utilize Information Sharing Platforms** Activity 1: Develop Information Sharing Procedures Activity 3: Utilize Communications Systems and Platforms **Objective 3: Coordinate Response Strategy, Resources, and Communications** Activity 1: Identify and Coordinate Resource Needs during an Emergency Activity 3: Communicate with Health Care Providers, Non-Clinical Staff, Patients, and Visitors during an Emergency

	Capability 3: Continuity of Health Care Service Delivery **Objective 3: Maintain Access to Non-Personnel Resources during an Emergency** Activity 1: Assess Supply Chain Integrity **Objective 5: Protect Responders' Safety and Health** Activity 1: Distribute Resources Required to Protect the Health Care Workforce Activity 2: Train and Exercise to Promote Responders' Safety and Health ***Capability 4: Medical Surge*** **Objective 2: Respond to a Medical Surge** Activity 1: Implement Emergency Department and Inpatient Medical Surge Response Activity 4: Provide Pediatric Care during a Medical Response Activity 5: Provide Surge Management during a Chemical or Radiation Emergency Event Activity 7: Provide Trauma Care during a Medical Surge Response Activity 8: Respond to Behavioral Health needs during a Medical Surge Response Activity 11: Manage Mass Fatalities
Exercise Objectives	**1.** Evaluate the use of the Hospital Incident Command System (HICS) to effectively respond to a hazardous materials incident by quickly confirming initial alerts, timely activation and notification to staff, effective coordination with the Decon team and Emergency Department (ED), appropriate management of the incident as it relates to hospital operations during the event, and the ability to establish and maintain communications to include communications with area hospitals, the Regional Healthcare Coordinator, and others as needed, by utilizing the Healthcare Resource Tracking System (HRTS), internal communication tools, two way radios, HAM radio, and the 800 MHz radio system. **2.** Demonstrate decontamination procedures by establishing the emergency treatment area and donning appropriate personal protective equipment (PPE) within 30 minutes of the initial alert, effectively decontaminating patients that have chemical exposure-including vulnerable populations and patients that present with various functional needs, proper technical decontamination of first receivers, and safely doffing PPE.

	3. Demonstrate the ED's ability to manage a mass casualty, decontamination event by appropriate utilization of patient tracking tools from the time the patient presents until final disposition, effectively managing patient surge during the event to include communicating with the decontamination team and Incident Command with status updates and supply needs, and appropriate treatment through triage priority status.
Threat or Hazard	Chemical contamination requiring decontamination and treatment
Scenario	Chemical agent is released from a drone over a large, outdoor mass gathering. Many patients are contaminated with the chemical agent and others incur injuries associated with evacuation.
Sponsor	Mid-South Emergency Planning Coalition
Participating Organizations	Participating organizations include all Health Care Coalition (HCC) member hospitals, local emergency management officials, first responder agencies, public health, and local law enforcement agencies. A complete list of participating agencies is included in Appendix B.
Points of Contact	Heather Fortner, Regional Healthcare Coordinator Mid-South Emergency Planning Coalition Shelby County Health Department Heather.Fortner@shelbycountytn.gov Amy Cox, State Exercise Coordinator Tennessee Department of Health Amy.Cox@tn.gov

GENERAL INFORMATION

Exercise Objectives and Core Capabilities

The following objectives in Table 1 describe the expected outcomes for the exercise. These objectives are linked to Exercise Objectives and Core capabilities, which are distinct critical elements necessary to achieve the specific mission area(s). The objectives and aligned core capabilities are guided by elected and appointed officials and selected by the Exercise Planning Team.

Exercise Objective	HPP Capability, Objective, and Activity
1. Evaluate the use of HICS to effectively respond to a hazardous materials incident by quickly confirming initial alerts, timely activation and notification to staff, effective coordination with the Decon team and ED, appropriate management of the incident as it relates to hospital operations during the event, and the ability to establish and maintain communications to include communications with area hospitals, the RHC, and others as needed, by utilizing HRTS, internal communication tools, two way radios, HAM radio, and the 800 MHz radio system.	Capability 1, Objective 2, Activity 2 Capability 1, Objective 4, Activity 1 Capability 1, Objective 4, Activity 3 Capability 1, Objective 4, Activity 5 Capability 2, Objective 2, Activity 1 Capability 2, Objective 2, Activity 3 Capability 2, Objective 3, Activity 1 Capability 2, Objective 3, Activity 3 Capability 3, Objective 5, Activity 2
2. Demonstrate decontamination procedures by establishing the emergency treatment area and donning appropriate PPE within 30 minutes of the initial alert, effectively decontaminating patients that have chemical exposure-including vulnerable populations and patients that present with various functional needs, proper technical decontamination of first receivers, and safely doffing PPE.	Capability 1, Objective 2, Activity 4 Capability 3, Objective 5, Activity 1 Capability 3, Objective 5, Activity 2 Capability 4, Objective 2, Activity 4 Capability 4, Objective 2, Activity 5 Capability 4, Objective 2, Activity 7 Capability 4, Objective 2, Activity 8 Capability 4, Objective 2, Activity 11
3. Demonstrate the ED's ability to manage a mass casualty, decontamination event by appropriate utilization of patient tracking tools from the time the patient presents until final disposition, effectively managing patient surge during the event to include communicating with the decontamination team and Incident Command with status updates and supply needs, and appropriate treatment through triage priority status.	Capability 1, Objective 2, Activity 2 Capability 2, Objective 3, Activity 1 Capability 3, Objective 3, Activity 1 Capability 3, Objective 5, Activity 2 Capability 4, Objective 2, Activity 1 Capability 4, Objective 2, Activity 5

Table 1. Exercise Objectives and Associated Core Capabilities

Executive Summary

This exercise was conducted in response to the need for evaluating current plans and procedures that govern the way that the MSEPC manages its resources and information during a decontamination event that causes illness and injury with high numbers of casualties.

Accomplishing this task requires considerable coordination with governmental and private entities, including local law enforcement, Emergency Medical Services, fire departments, hospitals, communications centers, emergency management, health departments, and other resources. The MSEPC has worked collaboratively to define and explore this process, and this exercise represents a continuation of these efforts.

As for the exercise itself, 27 healthcare and emergency response entities including both acute short-term and rehab hospital facilities participated in the process.

Surge Calculation

This exercise included an Objective that required each hospital to manage an influx of patients that would create a 20% surge of staffed beds in order to meet Joint Commission requirements.

Therefore, the Coalition decided that it would calculate the number based on total staffed beds as reported in the Healthcare Resource Tracking System (HRTS). This resulted in a more realistic and useful exercise, while still being manageable.

Each facility received specialty patients, including “memory patients” or elderly, pediatrics, and fatalities. Although few specialty beds exist in the region, burn patients and serious trauma were not excluded. And at the request of the facilities, all acute care hospitals were given roughly 10% of their total anticipated patients designated as dead on arrival (DOA). These patients were added to their 20% surge numbers.

The numbers used for this exercise are different from those used in the last because of changing bed counts at various facilities. The method for calculation is unchanged. The following table illustrates the numbers of patients assigned to each facility in order to meet the surge requirements as established by Joint Commission and the MSEPC.

Surge Numbers

Mid-South Emergency Planning Coalition Full Scale Exercise Surge Numbers	
Facility	**Surge Numbers**
Baptist Memorial Hospital - Collierville	14, 2 DOA
Baptist Memorial Hospital – Crittenden	2, 1 DOA (all paper patients)
Baptist Memorial Hospital-Memphis	113, 12 DOA
Baptist Memorial Hospital-Tipton	24, 3 DOA
Baptist Memorial Hospital for Women and Children	28, 4 DOA
Baptist Rehabilitation Hospital	10 (paper patients)
Encompass North	10
Encompass Central	10
Lauderdale Community Hospital	5, 1 DOA (all paper patients)
Le Bonheur Children's Hospital	50, 6 DOA
Memphis Mental Health Institute	11 (paper patients)
Methodist Germantown Hospital	62, 6 DOA
Methodist Hospital North	39, 4 DOA
Methodist Olive Branch Hospital	15, 2 DOA
Methodist South Hospital	29, 3 DOA
Methodist University Hospital	90, 9 DOA
Regional One Health	66, 7 DOA
Saint Francis Hospital-Bartlett	31, 3 DOA
Saint Francis Hospital-Memphis	72, 7 DOA
Select Specialty Hospital	3 (paper patients)
VA Medical Center-Memphis	43, 4 DOA
Total	**801**

Table 2. Surge Capacity Numbers

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. Table 1 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. The following sections provide an overview of the performance related to each exercise objective and associated core capability, highlighting strengths and areas for improvement.

For detailed associated tasks and activities, refer to "Exercise Overview" section, "Core Capabilities, Objectives, and Activities" and "Exercise Objectives" beginning on page 2.

Objective	Healthcare Preparedness Capability	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
Evaluate the use of HICS to effectively respond to a hazardous materials incident by quickly confirming initial alerts utilizing both HRTS and TNHAN.	Capability 1 Capability 2 Capability 3		S		
Evaluate the use of HICS to effectively respond to a hazardous materials incident through timely activation and notification to staff.	Capability 1 Capability 3		S		
Evaluate the use of HICS to effectively respond to a hazardous materials incident by effectively coordination with the Decon team and ED.	Capability 1 Capability 3		S		
Evaluate the use of HICS to effectively respond to a hazardous materials incident through appropriate management of the incident as it relates to hospital operations during the event.	Capability 1 Capability 3		S		

Objective	Healthcare Preparedness Capability	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
Evaluate the use of HICS to effectively respond to a hazardous materials incident by quickly the ability to establish and maintain communications to include communications with area hospitals, the RHC, and others as needed, by utilizing internal communication tools, two way radios, HAM radio, and the 800 MHz radio system.	Capability 1 Capability 2 Capability 3		S		
Demonstrate decontamination procedures by establishing the emergency treatment area and donning appropriate PPE within 30 minutes of the initial alert.	Capability 1 Capability 3 Capability 4			M	
Demonstrate decontamination procedures by effectively decontaminating patients that have chemical exposure- including vulnerable populations and patients that present with various functional needs, proper technical decontamination of first receivers.	Capability 1 Capability 3 Capability 4			M	
Demonstrate decontamination procedures by safely doffing PPE.	Capability 1 Capability 3 Capability 4		S		
Demonstrate the ED's ability to manage a mass casualty, decontamination event by appropriate utilization of patient tracking tools from the time the patient presents until final disposition.	Capability 1 Capability 2 Capability 3 Capability 4		S		

Objective	Healthcare Preparedness Capability	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
Demonstrate the ED's ability to manage a mass casualty, decontamination event by effectively managing patient surge during the event to include communicating with the decontamination team and Incident Command with status updates and supply needs	Capability 1 Capability 2 Capability 3 Capability 4		S		
Demonstrate the ED's ability to manage a mass casualty, decontamination event by appropriate treatment through triage priority status.	Capability 1 Capability 3 Capability 4		S		

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).

Table 3. Summary of Healthcare Preparedness Capability Performance

Exercise Findings

Each participating facility was required to evaluate four broad categories of activities, and was required to note their findings on four different Exercise Evaluation Guides (EEGs). The categories were Medical Surge, Hospital Incident Command, Decontamination, and Communications.

For the purpose of reporting, the format for this report will document overall findings and observations from each facility and other participating organizations individually. Findings were provided by facility and organizational representatives and were compiled by reviewing information from all sources, including EEGs, participant evaluations, hotwash notes, and summaries compiled by evaluators in narrative form.

All findings have been divided into three sections based on facility type: Acute Care Hospital, Rehab Hospital, and Behavioral Health Hospital. In many cases, the findings at certain facilities may have no bearing on activities at other facilities, and would be properly addressed in Improvement Plans that the reporting facility should develop for internal use. At the conclusion of the individual facility data, a summary of trends and common issues will be documented for consideration by the HCC in determining what corrective actions might have broad implications for all its members. Such common issues might be of importance as the HCC engages in strategic planning and purchasing decisions.

Findings are recorded and compiled as submitted with only minor editing for clarity. The content or validity of each observation has been left to evaluator discretion. Irregularities or inaccuracies should be addressed at the facility level during the internal improvement planning process.

Any direct improvements or repeated weaknesses observed by the author when compared to previous exercise documents have been added where necessary.

Acute Care Hospital Findings

Baptist Memorial Hospital-Collierville

The following findings were reported from this facility, which received 16 patients.

Strengths:

- All departments answered radios
- Decon tent was set up quickly
- Participating staff were engaged in response
- Timely and sufficient posting to HRTS
- Registration/Admission staff very familiar with HC Standard – no issues to report *(improvement from last year's exercise –HBF)*

Opportunities for Improvement:

- Although all departments utilized the radios, the communication between departments and the command center could be improved – staffing to labor pool and checking in more frequently
- Additional training on how to use decon tent is necessary – water, soap, proper steps for set up
- More staff involvement – decon team to include more trained staff and more staff to assist with donning/doffing
- Replacement pieces for decon suits and PAPRs are needed
- Assign a team to be responsible for making sure wheelchairs, stretchers, and linens are available**.**

Baptist Memorial Hospital – Crittenden

The following findings were reported from this facility, which received 3 paper patients. This was this facility's first time participating in a MSEPC-sponsored, community-wide exercise.

Strengths:

- Incident command was set up quickly
- The ED was staffed to handle the surge that was mocked
- The tracking system was easily managed with the computer and the number of patients in the exercise

Opportunities for Improvement:

- We only had the ability to do gross decon. We had no decon suits (resolved since), 2 PAPR, no decon tent, and no one trained in decon
- Incident Command was very disorganized. There was very little experience in the room and some had not completed the incident command training. Since the drill, we only

have 3 of the 21 leaders not complete the NIMS training and we have scheduled a class with Chuck to have him critique us
- We were unable to communicate with the corporate teams. The only radios we have are Crittenden specific. All other communication will depend on cell and landline communication

Baptist Memorial Hospital-Memphis

The following findings were reported from this facility, which received 125 patients.

Strengths:
- Equipment in proper place to respond to disaster
- Communication was successfully established with all external partners
- Location to receive patients was optimal and process was effective

Opportunities for Improvement:
- Training on proper donning/doffing techniques is needed (buddy system, checklists)
- Baptist citywide radio channel 1A not operating properly
- We lacked personnel for effective crowd control
- Admissions management was new and unfamiliar with processes/expectations

Baptist Memorial Hospital-Tipton

The following findings were reported from this facility, which received 27 patients.

Strengths:
- Staff worked well with each other
- Internal and external staff and clinic call trees *(Improvement from last year –HBF)*
- EOP with defined processes and duties
- Communication within facility between departments
- Staff aware of new assigned responsibilities
- HAM Radio participation
- Included and utilized Cancer Center staff and tested call tree process with them
- HRTS, TNHAN, landlines, radios were used efficiently
- First Aid and overflow areas were establish within the triage process
- Triage staff members were able to quickly communicate needs and patient status to ED on request
- Staff familiar with using scanners and patient tracking system due to Triage Tuesdays *(Improvement from last year –HBF)*
- Additional supplies on hand were sufficient
- All departments reported to Command Center as appropriate
- Internal processes were modified based upon changes in staff and department relocation for the exercise worked well
- New treatment areas were identified
- Family members were included as part of the exercises – space and personnel for this function were identified

Opportunities for Improvement:

- Review the decon policy and process with all staff
- More sufficient and detailed communication with Command Center
- Decon triage staff need visual resources to help with quick triage for patients
- Command Center not consistently used to help with identified staffing needs, concerns, or transfers
- Reminder to ED to flow all communications and requests through the Command Center
- Clinical staff was used to scan patients and assist with registering – this should be done by clerical staff.
- Needed disbursement plan for additional handheld radios

Baptist Memorial Hospital for Women and Children

The following findings were reported from this facility, which received 32 patients.

Strengths:

- Set up command center quickly and getting notification out to staff
- Process of decontamination was implemented once the drill was called
- Triage staff quickly after decontamination drill was terminated
- The Yellow, Green, and Red Tarps worked well

Opportunities for Improvement:

- Failed to Identify a nurse to dress out the Decontamination room
- Took to long for newer staff donning their suits
- No roller or smaller stretchers to be used in the decontamination room. Will purchase a tent for this purpose
- Code Powder was never called
- RN from ED went out to assess patients without donning suits
- Staff was going to the Decon room when patients were in there, exposing themselves to the agent
- No Outside area was setup for the Morgue
- There were some issues with the hand held scanners

Lauderdale Community Hospital

The following findings were reported from this facility, which received 6 paper patients. This facility did not participate in 2018's exercise.

Strengths:

- Within the first fifteen minutes of the HRTS notification the decon tent was fully erected with water attached. The police, fire department, and homeland security were on site to secure the property and geared up to assist in the decon exercise

- Regular hospital operations were ongoing during the exercise in an organized manner
- Everyone participating in the exercise worked together as a team to take care of the casualties in a professional and expedient manner

Opportunities for Improvement:

- Intercom system did not work properly which created confusion and delay of the HRTS notification throughout the hospital. The safety office will solicit 3 bids to get the system operating properly
- Decon tents needs a bladder to catch contaminated water run-off. Need to include containers to hold brushes, rags, soap, towels, and cover ups. Safety officer is working with local fire department to help come up with a viable solution. Safety officer and purchasing manager are working to provide pre-stocked containers to be kept in a designated area of the materials stockroom.
- Command center had a hard time logging onto the HRTS system. It was determined that the Command Center needed more man power and designated the hospital CEO, the director of human resources, and the director of HIM and risk management to be additional back up. The IT director is checking into the issues logging into the HRTS system
- Housekeeping should have been notified during the exercise to keep water cleaned up from the dripping patients enter the emergency department. Towels and clothing need proper bagging and disposal
- The DOA casualty was not covered by a sheet after decontamination. This was noted and special care and respect will be given to the deceased in the future
- Other areas to be addressed internally with assigned ownership, corrective action, and timeline: pharmacy resources; back up water supply; adequate fuel to run the generator for a minimum of three days; adequate food supply for at least a week; proper animal staging area; proper contaminated water containment, storage, and disposal; have kiddie pool on hand in case of limited staffing

Le Bonheur Children's Hospital

The following findings were reported from this facility, which received 56 patients.

Strengths:

- Strong presence and focus by senior leadership
- Good use of all IC resources *(Improvement from last year –HBF)*
- Communication between departments was good

Opportunities for Improvement:

- More awareness and training on identifying and filling support positions is needed, Training will be offered in 2020
- HC Standard was not accessed in a timely manner. The EM Liaison will work with the associates on HC Standard processes by 12/31/2019

- There were issues with the inflatable decon tent (lanes too narrow, poor design, and interior of tent elevates the ambient temperature.). This will be addressed at the next EM Committee meeting for recommendations

Methodist Germantown

The following findings were reported from this facility, which received 68 patients.

Strengths:

- Updates within the Command Center were done every 30 minutes for situational awareness *(Improvement from last year –HBF)*
- Assignments of Labor Pool Staff were timely and efficient with requested staff reporting within 10 minutes of the request *(Improvement from last year –HBF)*
- ED staff worked well with Decon team to move patients from outside to exam rooms

Opportunities for Improvement:

- Assessment of supply needs for the ED or Decon was never demonstrated in Incident Command. EM Liaison would have normally offered gentle guidance to the IC team but was being used as a controller for this exercise. MLH will try to recruit additional controllers for the next exercise
- There was confusion on the routing of requests causing several requests to come directly to the Incident Commander unnecessarily. Additional ICS training will be offered in 2020
- Staff did not deploy all available resources. The statement was made that radios were needed but the request to deploy the available radios was never made

Methodist North

The following findings were reported from this facility, which received 43 patients.

Strengths:

- Labor pool had rapid response from associates
- HC Standard worked well, even from the parking lot
- Decon equipment was quickly deployed with appropriately trained staff

Opportunities for Improvement:

- Need additional training on cell phones and radios. The EM Liaison will provide disaster cell phone and radio training on an on-going basis for 2020
- Need a better plan to communicate provisions for staff and their families. Disaster plans will be reviewed and updated by June 2020
- Need a better plan specific to transportation in the event of evacuation of staff and patients. This will be discussed with the Emergency Management Committee at the next monthly meeting. Plans will be developed in 2020

Methodist Olive Branch

The following findings were reported from this facility, which received 17 patients.

Strengths:

- HICS set up was smooth
- Decon supplies were checked regularly
- Good turnout from Labor Pool

Opportunities for Improvement:

- Disaster radios were not charged. EM Liaison will re-evaluate processes for disaster equipment by 12/31/2019
- Patients did not enter the ED which caused an issue with the surge portion of the exercise
- Repeated issues with being locked out of HRTS and HC Standard because people were entering the wrong passwords. HRTS and HC Standard training will be offered in-house by knowledgeable users by 1/31/2019

Methodist South

The following findings were reported from this facility, which received 32 patients.

Strengths:

- Decontamination zones are spray painted on the ground which made set up easier
- HICS team was organized quickly *(Improvement from last year –HBF)*
- Communication between IC and ED was good

Opportunities for Improvement:

- Disaster radios are not programmed appropriately. EM Liaison will evaluate the disaster radios and program appropriately by 12/31/2019
- Did not have enough people trained for the decontamination team which caused the exercise to be stopped once people in suits reached the time limit. MLH Corporate EM has scheduled two decon classes per month for 2020 and these classes are available to all associates
- Staff members that did not have training or verified medical clearance for the decon suits were sent out into the hot zone and were removed from the exercise by the controller. The EM Liaison will work with the decon team and additional staff members to address the decon policy and team numbers

Methodist University

The following findings were reported from this facility, which received 99 patients.

Strengths:

- IC set up quickly
- Several physicians were available in the Emergency Treatment Area (Cold Zone)

- Disaster radios were utilized

Opportunities for Improvement:

- No zones were set up in the Emergency Treatment area which caused cross contamination several times. The Decon Team Leaders will work with the team on an ongoing basis to make sure they understand the decon policy and set up procedures
- There was no initial triage area which cause patients to walk up to the decon tent on their own. Patients that were non-ambulatory were not recognized until the ambulatory patients were through the decon process. Ongoing training for decon procedures is needed. Decon Team members will be encouraged to attend an additional 8 hour initial decon training class in 2020
- The functional needs of some patients were completely ignored. Reviewing the need for disaster exercises and the importance of utilizing the information provided will occur prior to the next exercise

Regional One Health

The following findings were reported from this facility, which received 73 patients.

Strengths:

- Appropriate methods for actual decon line worked well
- Bed control updating – using our software remotely instead of paper counts was new and worked well
- Credentialing with new badge maker for disaster volunteers worked well

Opportunities for Improvement:

- HC standard has issues on our end not the systems end… there was no signal in the hallway… will need to put some hot spots outside so that uploading can occur the time off and not later after paper recording has taken place. We also need more scanners. They work better than the tablets
- Not enough people on decon team. There is no way we could run an event longer than an hour with real victims at all. Will need multiple people… recruitment at orientation and with organization focus during leadership meeting presentations are in the works.
- Confusion on patient transport occasionally. Peri op needs acuity reports… went moderately ok this time but was a heavy preparatory focus… the trauma reports are not being automatically printed and transported. Will need a new disaster patient transport policy to keep holding areas informed and documented.

Saint Francis Bartlett

The following findings were reported from this facility, which received 34 patients.

Strengths:

- Immediate treatment leader prepared to bring patients into main ED post decon
- Communication across the hospital

- Staffing
- Personnel understood roles especially those involved in initial patient reception at ER triage and 1st degree treatment
- Key equipment readily available and in good shape
- Utilized seasoned staff familiar in roles and responsibilities, so able to anticipate and respond to inquiries and requests quickly
- Documentation/educational/reference materials were readily available on short notice
- Clinical supplies/materials well organized
- Personnel were knowledgeable about policies and procedures to quickly provide appropriate medical care
- Communication between triage leader and with minor treatment and immediate treatment team. Identifying patients correctly and directing them to the right waiting location
- Communication to team relating to time of patient arrive and number of patients
- Registration process for patients was quick and efficient
- Communication was excellent! Decon crew did a great job with limited resources
- Multiple staff present and helping – excellent teamwork noted

Opportunities for Improvement:

- Transportation unit leader should have a stretcher outside in preparation to treat nonambulatory patients, on a backboard or to take expired patients to the morgue
- Ensure we have EDP available who does not have patients in main ED
- Medical Director outside
- Streamline communication paths – more personnel need radio/walkie talkie – triage team lead especially as the first to encounter victims, in this case, triage team should have been dressed out
- Somewhat lax attitude by many observed staff, missing training opportunity on units not involved. For example, initial patient contact by patient access and triage team before decon. Some nursing floor personnel.
- Audit list of personnel who are included for the mass notification system (everbridge) and identify appropriate communication option (call, text, email). Update list to ensure all key personnel receive notifications in timely manner. Plant ops/IS to oversee and complete audit monthly
- Identify and organize staff/job functions and accompanying materials (vest, job sheets) to avoid redundancy in assignments and remove those that do not apply to the facility personnel. Plant ops to oversee and complete immediately and review annually
- Increase staff urgency: planned procedures overseen by unit director(s) that are formulated during training
- Ensuring that each individual understands their roles and tasks: distribute job action sheets that are specific to each role. These should be given out when staff begin their roles at the facility
- Decon crew did not have a medical group dedicated to them for pre and post physicals
- Decon tent needs heating and cooling capabilities and catch basin for runoff water
- Need training in SMART triage process for all triage personnel

Saint Francis Memphis

The following findings were reported from this facility, which received 79 patients.

Strengths:

- Teamwork – Timely response from appropriate staff after announcement. Incident Command Center and Triage were well-staffed, ready and willing to handle the event
- Resources – Excellent job identifying bed availability, status of existing patient and possible discharges. This made placement of admitted patients timely with fewer delays. This event occurred on a day with a high census (> 300)
- Communication – There were seven types/systems of communication used. Six of them were for communication with other facilities and outside community agencies

Opportunities for Improvement:

- Incident Command Center – Folders containing job duties, forms and charts were in disarray, not arranged and complete. Need to be ready for the next potential use *(Similar issue last year. –HBF)*
- Staff assigned radios for communication did not know how to use them. Need training on how to use and radio etiquette *(Same issue last year. –HBF)*
- Decontamination process was not a true representation of an actual event with no victims to wet down. Doffing of clothes, controlling storage of those contaminated clothes and caring for wet patients would have slowed down the decontamination process and added more potential issues
- Need better organization and security for triage, registration and decontamination. Labor Pool was not opened so extra security was not available

VA Medical Center Memphis

The following findings were reported from this facility, which received 47 patients.

Strengths:

- The HCC used a Common Operating Picture (COP) called Live Process to track needs and resources, keep a log of events and notify individuals with requests
- Area was set up with adequate supplies and good patient flow through process of decontamination
- HCC and staff were able to utilize multiple means of communication. They used email, phones, cell phones, radios, Live Process, HRTS, radio operator, and overhead PA system

Opportunities for Improvement:

- The HCC had to track down the Logistics and Finance Reps. A primary and secondary were identified but after neither one could be reached; no one knew who to contact next. If unavailable, alternates should be appointed to participate
- Labor Pool needs to be exercised/ trained. The staff did not have a place to report to on-scene. They did not know where to take patients inside the hospital. Someone needed

inside to direct patients. The on-scene IC did not request enough personnel from labor pool to assist with DECON/ and the surge. Staff in the labor pool need DECON training

- Mental Health was not addressed. Victims presented with MH issues and staff did not request any support. The HCC did not receive MH support requests to support on scene operations

Rehab Hospital Findings

Baptist Rehabilitation Hospital (Rehab)

The following findings were reported from this facility, which received 10 paper patients. This was this facility's first time participating in a MSEPC-sponsored, community-wide exercise.

Strengths:

- Code D/Code D Standby announced correctly and prompt response to the activation of the Incident Command Center. Staff was aware of their roles and duties were executed appropriately
- Staff and physician emergency numbers and on-call lists available and leaders from each department quickly responded with calling and total numbers of available staff
- Clinical team triaged and assessed patients appropriately and timely. Availability of space with ample square footage in therapy gym to assess and triage patients

Opportunities for Improvement:

- There was an issue in utilizing the HC Standard system to scan the barcodes of the "paper" patients that arrive at our facility after the disaster. Team still assessed and triaged patients (*Facility reported this system as HRTS rather than HC Standard. -HBF*)
- The 96 hour assessment of supplies was assessed by Nursing, Materials, Respiratory, Dietary, and Pharmacy. However, the amount of water within the building was a concern as the next shipment was due to arrive within a day
- The biggest barrier in the event of a true disaster is staffing within the clinical departments. The leaders were not able to successfully recruit additional staff for the disaster due to childcare concerns or other job commitments

Encompass Central (Rehab)

Formerly HealthSouth Central. The following findings were reported from this facility, which received 10 patients.

Strengths:

- Quick response from the decon team and HICS team. They were ready to response. Prepared for all types of patients *(Improvement from last year –HBF)*
- Location set up was excellent for decon procedures
- Multiple avenues of communication when one may not work. TNHAN, HC Standard, HRTS, email, phone

Opportunities for Improvement:

- New leadership staff struggled with taking charge and delegating instead of being the "doer"
- HC Standard would not allow access. We tested before exercise and we were ok. Did not work the day of the exercise *(Similar issue last year –HBF)*

- Not enough nursing staff was utilized for the exercise *(Last year it was found that bringing in more people specifically for the exercise made it less realistic. –HBF)*

Encompass North (Rehab)

Formerly HealthSouth North. The following findings were reported from this facility, which received 10 patients.

Strengths:

- Improvement utilizing HICS forms from previous exercises
- Patients tracking logged and completed in its entirety. Patients tracking from arrival through entire process *(No patients were entered as Encompass North patients into the patient tracking system. –HBF)*
- Hospital placed in lock down to maintain security controls
- Utilization of facilities employee call tree

Opportunities for Improvement:

- Discussion needed pertaining to steps in the demobilization/recovery aspects
- All patients tagged for transport to another facility for further testing. During disaster situations this would not occur. Patients would be admitted
- Additional training needed pertaining to triage tags
- Maintaining activity logs properly during an event
- Per policy, decontamination handled by outside resources. Training for basic decon procedures would be useful

Select Specialty Hospital (Rehab)

The following findings were reported from this facility, which received 3 paper patients.

Strengths:

- There was a coordinated effort and full participation and teamwork amongst the team
- There was effective and elevated communication amongst the participants (including staff and leaders), which was instrumental in ensuring an effective process
- The team responded promptly when the code was activated and immediately began to distribute assignments and to devise a plan of action

Opportunities for Improvement:

- Forms were not easily accessible initially in our hospital, which created some confusion and the leaders were not all educated in advance of where to access the forms, nor how to complete them.
- Due to the (small) size of our hospital, it was a challenge to assign all of the required roles; therefore, some individuals covered dual assignments. This reduced the effectiveness of the team's efforts

- Being a hospital within a hospital, Select Specialty could have benefited from some form of advanced communication or meetings with our host hospital to better delineate roles of each entity in advance. This would have mitigated some duplicity in processes

Behavioral Health Hospital

Memphis Mental Health Institute

Although this facility participated in the exercise as a hospital, its purpose is to provide mental health services. Therefore, the typical levels of medical supplies and other assets common to most hospitals are not readily available at this site. Evaluators recognized that this created some challenges during their participation. The following findings were reported from this facility, which received 11 paper patients.

Strengths:

- Communication was excellent on all facets
- Teamwork between Operations division
- ICS command staff stayed in assigned location which cut down on confusion and improved communications *(Improvement from last year –HBF)*
- ICS was established quickly
- Roles and Responsibilities were clear and understood

Opportunities for Improvement:

- Possible need for designated discharge area
- Possible designated area for Transports/Transfers
- Access Control (designated personnel to control access points, staff and patients had to wait to gain access during the drill)

FINDINGS FOR POTENTIAL ACTION BY THE HEALTHCARE COALITION

Numerous issues were identified at participating facilities during this exercise. Many of those pertain only to the manner in which a particular facility needs to modify their procedures or update their internal plans. Those are noted in the individual facility summaries in this AAR.

There were several issues that were common to most or all of the participating facilities. Since these items may 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.

Overall Strengths and Improvement Opportunities

When compared to the 2018 Full Scale Exercise, the majority of facilities showed improvement in several areas. One of the most noticeable areas of improvement was the ability to assemble Incident Command teams with knowledgeable and qualified personnel. Additionally, HICS staff were able to utilize forms and other documents and properly assign resources and staff more efficiently than reported during past exercises.

There was also marked improvement in the use of all web-based notification and registration tools used by the MSEPC. Facilities were reportedly more comfortable with the patient tracking system, utilized HRTS more appropriately, and responded to TNHAN alert notifications at the same rate as they have done in exercises' past. This is a direct result of the increased use of all of these programs during exercises scheduled and performed throughout the year.

As expected, the decontamination scenario during this year's exercise highlighted the need for more in-depth decon-based trainings for staff and more sufficient equipment and supplies at the facility level to increased response times and effectiveness.

Hospital Incident Command

As with previous exercises, almost every facility identified some level of need for more ICS training, but overall, almost all identified specific improvements within their ICS response from last year.

The most common strength was the success experienced with the initial HICS activation and assembly. Several facilities also reported the efficiency of the HICS forms utilized and how it directly impacted the internal flow of communication.

For some facilities, however, HICS was still disorganized, especially when positions were filled with inexperienced staff. Disorganization also led to confusion among resource requests made and how resources were eventually assigned.

Internal trainings should be offered by facilities regularly to ensure all new staff are adequately trained. Routine trainings focusing on different aspects of the HICS response (use of Job Action Sheets and other forms, requesting and assigning resources, etc) sponsored by the HCC could also benefit facilities and aid in strengthening their internal HICS response.

Radio Communications

Although several facilities included that radio communications were utilized successfully, none reported any significant successes or strengths. Many other facilities, however, continued to report that they still experience radio communication issues.

Areas of improvement ranged from the more complex issue of the lack of corporate wide channels to allow for multiple facility communication to the simpler problem of radios not being charged. Overall, there is still a significant need for more sufficient radio communication plans that include disbursement plans, training on both radio use and etiquette, and schedules to include routine testing and maintenance.

The HCC no longer supports Coalition-wide radios after years of unuse by facility partners. The RMCC conducts routine radio tests with local ED's to ensure line of communication are operable. Because of this, any improvement in radio communication – both internal and external – will be the responsibility of each facility.

Internal Communication Procedures

For purposes of this summary, internal communication procedures will be used to describe all ways facilities shared information within their facility including technologies and processes – intercom systems, notification software, labor pool call backs, etc.

Overall, many facilities highlighted successes with the use of call trees, accessing labor pools, and general information sharing between departments. This is a noted increase over last year's evaluations and is directly attributed to the increased use of HICS forms to further set expectations and track information. Communication was also more effective due to the increased participation by engaged and experienced staff.

There were, however, some notable challenges reported with the use of intercoms and web-based products to notify staff. For some facilities, intercoms were not used appropriate to signal the start of the event, and for others, the intercom system was inoperable which cut off sections of the hospital to more timely updates. Web-based notification systems, while functional, did not reach all intended parties because of the lack of up-to-date records to eliminate staff that are no longer employed and add newly hired staff. Facilities identifying these types of issues also identified solutions and included improvement strategies along with their evaluations.

Decontamination

The main reason a decontamination scenario was selected for this exercise was because facilities had previously identified perceived and real shortcomings in this area. We fully intended to identify more areas of improvement than strengths, but thankfully most of our weaknesses can be corrected fairly easily.

An overwhelming majority of the facilities identified the ease and speed of assembly as a strength and most were very pleased with the functionality of the location they had chosen for the decon response. Overall, staff was familiar with decon assets and equipment and responded the alerts and notifications appropriately.

However, all facilities included at least one area of improvement related to their decon response. For most it was the need for more personal equipment to enlarge their response team, and more adaptive equipment to create a better throughput for their decon process. Some facilities also noted the need for more in-depth decon training for their response teams to stress the importance of adhering to zones and how to properly treat the patients as they are being deconned. ICS principles also played a role as several facilities noted that notification and resources request processes were not followed according to existing plans.

HC Standard (HCS) Patient Tracking

In 2018, all patients were pre-entered into the tracking system to simulate initial entry at the event site. Last year, only six facilities edited entries and used HCS as part of the event. This year, facilities entered their own patients to test the facility's ability to be the first point of entry. Fifteen of 21 facilities entered patients in some quantity – six entered 100% of their patients into the HCS system and four entered over 60% of their patients into the system.

All but one facility that had experienced system issues in past exercises reported that their staff was much more comfortable with the system and that it was easily managed. There were still some facilities that experienced issues with the internet connectivity but had identified solutions prior to submitting the evaluations. A couple of facilities also reported issues with the handheld scanners but were able to manually enter the patients instead. For other facilities, the entry process was not timely in regards to patient throughput and some had difficulty logging in because of wrong passwords or user names. As with other issues, solutions were identified and trainings scheduled prior to evaluation submissions.

Healthcare Resource Tracking System

There were significant improvements in the use of HRTS during this exercise in comparison to our most recent exercise. In addition to holding several, random exercises that incorporated the HRTS system, as well as a handful of real events, MSEPC also hosted a pre-exercise HRTS training to further review the system.

To keep the message board free of unnecessary comments incorrectly labeled a resource request; this is a specific metric we measure with each exercise. Although we had less overall resource requests in general (which could in itself be an improvement in HRTS understanding) there was still a higher percentage of comments posted and requests but were simply FYI (14 of 21 were made incorrectly in 2018 while 10 of 11 were posted incorrectly in 2019). Often times this is just a matter of a quick click of the wrong button, but continued HRTS exercise and pre-exercise training can help.

Facility and regional users in general are using the message board more effectively. Facility and Regional User check-ins are also a required metric of each in exercise. In 2018, 0 of 14 (0%) facility and 3 of 7 (43%) regional users checked in appropriately. In 2019, however, 6 of 15 (40%) facility and 8 of 8 (100%) regional users checked in correctly.

And the most significant and beneficial improvement was the amount of facilities that logged on and updated their bed and facility statuses within 30 minutes – providing vital information for patient placement during a med surge event. in 2018, only 33% of facilities updated within 30 minutes but in 2019, 60% did.

Tennessee Health Alert Network

Similar response rates as the 2018 exercise were recorded for TNHAN notification acknowledgements. A more thorough review of the current users will likely identify many of those not responding as employees who no longer work for the facilities with which they are connected. A more accurate list of employees that should be notified will likely increase response rates in future exercise and real events.

Regional Medical Communications Center (RMCC)

For this exercise, and as in past exercises as well, the RMCC trailer from the Jackson-Madison County Regional Health Department (JMCRHD) was deployed at the AgriCenter. JMCRHD staff successfully deployed and maintained the asset with no issues. Staff from the local RMCC – Memphis MedCom – were dispatched to the RMCC trailer to handle all communications between RMCC, hospitals, and exercise staff. No difficulties were reported.

The Activity Logs kept by Memphis Medcom staff are included as Appendix C.

APPENDIX A: ACRONYMS

Acronym	Term
AAR	After Action Report
ASPR	Assistant Secretary of Preparedness and Response
COP	Common Operating Picture (VA)
DOA	Dead on Arrival
ED	Emergency Department
EEGs	Exercise Evaluation Guides
EEI	Essential Elements of Information
EM	Emergency Management
EOP	Emergency Operations Plan
ER	Emergency Room
HCC	Health Care Coalition
HCC	Hospital Command Center (VA)
HICS	Hospital Incident Command System
HPP	Hospital Preparedness Program
HRTS	Healthcare Resource Tracking System
HSEEP	Homeland Security Exercise and Evaluation Program
IC	Incident Command
ICS	Incident Command System
IP	Improvement Plan
JMCRHD	Jackson-Madison County Regional Health Department
MH	Mental Health
MLH	Methodist Le Bonheur Healthcare
MSEPC	Mid-South Emergency Planning Coalition
NIMS	National Incident Management System
PAPR	Powered Air Purifying Respirator
PPE	Personal Protective Equipment
RHC	Regional Healthcare Coordinator
RMCC	Regional Medical Communications Center
RN	Registered Nurse
SCHD	Shelby County Health Department
START	Simple Triage and Rapid Treatment
TDH	Tennessee Department of Health
TEMA	Tennessee Emergency Management Agency
VA	US Department of Veterans Affairs
VAMC	Veterans Affairs Medical Center

APPENDIX B: EXERCISE PARTICIPANTS

Participating Organizations
Federal
US Department of Veterans Affairs/Memphis Veterans Affairs Medical Center
State
Tennessee Department of Health/Emergency Medical Services
Tennessee Emergency Management Agency
Memphis MedCom (Regional Medical Communications Center)
Local Government
Jackson-Madison County Regional Health Department
Memphis Fire Department Emergency Medical Services
Shelby County Health Department
Shelby County Office of Preparedness
Local Hospitals and Other Healthcare Services
Baptist Memorial Hospital Crittenden
Baptist Memorial Hospital for Women and Children
Baptist Memorial Hospital Collierville
Baptist Memorial Hospital Memphis
Baptist Memorial Hospital Tipton
Encompass Rehabilitation Hospital Memphis Central
Encompass Rehabilitation Hospital Memphis North
Le Bonheur Children's Hospital
Memphis Mental Health Institute
Methodist Germantown Hospital
Methodist North Hospital
Methodist Olive Branch Hospital
Methodist South Hospital
Methodist University Hospital
Regional One Health
Saint Francis Hospital Bartlett
Saint Francis Hospital Memphis
Select Specialty inside St. Francis Memphis Hospital

APPENDIX C: RMCC ACTIVITY LOG

All information was recorded on an ICS 214 form as required. Activity Log information (date/time and notable activities) have been reprinted here. The original documents have been retained by the MSEPC RHC if needed. All activities recorded on Thursday, September 26, 2019.

Date/Time	Notable Events
0904	Event Started
0908	Baptist Collierville and Baptist Women's notified of patients en route
0923	Patients en route to Methodist South – 20 pts
0932	29 patients to Regional One Health
0937	20 patients en route to Le Bonheur
0942	9 patients to Methodist University
0947	20 patients to St. Francis Park
0949	Pts arrived at Baptist Women's – decon in progress
0949	Pts arrived at Baptist Collierville – decon in progress
0957	Pts arrived at Baptist Memphis
1004	Pts arrived at Encompass Health
1008	Pts arrived at Healthsouth North
1012	Pts arrives at Healthsouth Central
1002	Pts arrived Methodist Germantown
1017	Pts arrived at Regional One Health – decon in progress
1019	Baptist Collierville pts returning
1032	72 patients received at St. Francis Park – decon in progress
1036	10 pts arrived at Baptist Rehab – decon in progress
1040	3 pts enroute to Crittenden
1141	Regional One bus clear
1150	Le Bonheur pts returning
1156	St. Francis Bartlett pts returning
1157	Methodist University & North demobilizing

1211	Baptist Women's bus returned
1211	Methodist South bus returned
1220	Le Bonheur bus returned

APPENDIX D: FINDINGS FROM THE REGIONAL HEALTHCARE COORDINATOR

The following information was submitted by the Regional Healthcare Coordinator to document specific information related to communications and exchanges of Essential Elements of Information. Included are statistical data from HRTS, TNHAN, and HC Standard Patient Tracking.

HRTS

- **Number of HRTS posts requiring a reply (resource or request):** 9 requests made
- **Number of total requests that were made correctly (actually needed a response/resource)** 1 (11%)
- **Number of total (correct) requests that were appropriately followed up**: 1 (100%)
- **Percent of facility/regional user check-ins properly recorded in the appropriate place on the comment board**
  - Facility users: (6 of 15) 40%; (3 of 15) 20% posted in the Regional users section; (5 of 15) 33% posted in the general message board
  - Regional users: (8 of 8) 100%
- **Percent of hospitals updating bed counts within 30 minutes of event activation**: (9 of 15) 60%
- **Number Facilities Users**
  - Logging into event 37
  - Posting on message board 20 (5 facility users posted without first checking in)
- **Number of Regional Users**
  - Logging into event 34
  - Posting on message board 8

TNHAN

- **Percent of persons confirming the TNHAN alert**: (Total confirmed over total sent) (157/288) 55% confirmation rate
- **List of facility types confirming alert**
  - Hospital
  - Public health
  - EMS
  - Emergency Management
  - RMCC
  - Forensic Center
  - CERT/MRC
- **Breakdown of delivery type for all confirmed**
  - 2 personal email
  - 28 personal text message

- 34 business email
- 3 Everbridge app
- 34 business text message
- 15 business mobile phone
- 2 alternate mobile phone
- 1 alternate email
- 1 alternate phone
- 26 business desk phone
- 11 personal mobile phone

HCS Patient Tracking

- **Percent total patients entered into patient tracking system:** 61% (488/801)
- **Breakdown of facilities entering patients:**
  - Baptist Collierville – 16/16 (100%)
  - Baptist Crittenden – 0/3 (0%)
  - Baptist Memphis – 1/125 (.8%)
  - Baptist Tipton – 27/27 (100%)
  - Baptist Women's and Children's – 14/32 (44%)
  - Lauderdale Community – 6/6 (100%)
  - Le Bonheur Children's – 56/56 (100%)
  - Methodist Germantown – 68/68 (100%)
  - Methodist North – 27/43 (63%)
  - Methodist Olive Branch – 13/17 (76%)
  - Methodist South – 6/32 (19%)
  - Methodist University – 99/99 (100%)
  - Regional One Health – 61/73 (84%)
  - St. Francis Bartlett – 6/34 (18%)
  - St. Francis Memphis – 10/79 (13%)
  - VA Medical Center – 46/47 (98%)
  - Baptist Rehab – 0/10 (0%)
  - Encompass Central – 0/10 (0%)
  - Encompass North – 0/10 (0%)
  - Memphis Mental Health Institute – 0/11 (0%)
  - Select Specialty – 0/3 (0%)

(32 entries were not correctly assigned to a hospital and I was unable to determine where the patient had originated. - HBF)

Essential Elements of Information (EEI)

All requested EEI was collected utilizing an ESF-8 Status Form created by the MSEPC. To further test HAM Radio capabilities, this information should have been provided by each facility's Incident Command to the HAM Radio operator on site and then communicated to Net Control by each operator. This action simulates what would happen should internet and telephone services be interrupted during an emergency. All acute care hospital facilities participated in the HAM Radio test. The ESF-8 Status Form is list on the following page and the radio results are listed as Appendix E.

ESF # 8 Status Reporting Form

Facility:	Date / Time transmitted:	
Hospital Originator	Sent by (Radio Call Sign)	
Date / Time filed	Date/ Time received	(Radio Call Sign)

Instructs: Use international phonetic alphabet when reporting all information. 2. Inform ESF #8 if location is aid station.

Section I Bed Availability
- **A.** _____ Floor Bed Pediatric
- **B.** _____ Floor Bed Adult
- **C.** _____ ED Beds
- **D.** _____ ICU Cardiac
- **E.** _____ ICU General
- **F.** _____ ICU Neuro
- **G.** _____ ICU Surgery
- **H.** _____ ICU Pediatric
- **I.** _____ ICU Neonatal
- **J.** _____ Burn Beds
- **K.** _____ Negative Pressure
- **L.** _____ Step Down
- **M.** _____ Psych Adult
- **N.** _____ Psych Pediatric
- **O.** _____ Operating Rooms

Section II Bed Needs
- **A.** _____ Floor Bed Pediatric
- **B.** _____ Floor Bed Adult
- **C.** _____ ED Beds
- **D.** _____ ICU Cardiac
- **E.** _____ ICU General
- **F.** _____ ICU Neuro
- **G.** _____ ICU Surgery
- **H.** _____ ICU Pediatric
- **I.** _____ ICU Neonatal
- **J.** _____ Burn Beds
- **K.** _____ Negative Pressure
- **L.** _____ Step Down
- **M.** _____ Psych Adult
- **N.** _____ Psych Pediatric
- **O.** _____ Operating Rooms

Section III Staffing On Site/On Duty
- **A.** ____# of Staff **(Total)**
- **B--**_____Physicians
- **C--**_____Nurse
- **D--**_____Respiratory Therapy
- **E--**_____EMT

Section IV Transportation
- **A--**____Ambulance Unit On Site
- **B--**____Ambulance On Standby
- **C--**____Air Ambulance On-Site
- **D--**____Air Ambulance On Standby

Section V Blood Supply on Hand (units)
- **A--**_____A+
- **B--**_____A-Neg
- **C--**_____O+
- **D--**_____O-Neg
- **E--**_____B+
- **F--**_____B-Neg
- **G--**_____A/B+
- **H--**_____A/B Neg

Section VI Blood Supply Needed (units)
- **A--**_____A+
- **B--**_____A-Neg
- **C--**_____O+
- **D--**_____O-Neg
- **E--**_____B+
- **F--**_____B-Neg
- **G--**_____A/B+
- **H--**_____A/B-Neg

Section VII Fatalities #'s
- **A--**_____ Total
- **B--**_____Stored inside
- **C--**_____Stored outside

Section VIII Contamination Event

- **A--**Nature of accident _____
- **B--** Type of contaminant _____
- **C--**_____ # of Victims
- **D--**_____ # injured but no radiation or contamination
- **E--**_____ # with radiation exposure
- **F--**_____ # with internal Contamination
- **G--**_____ # with external Contamination
- **H--**_____ # with Contamination Wounds
- **I--**_____ # deconed
- **J--** Type deconed _____
- **K--** Type of survey equipment _____
- **L--**_____ # of Patients to be admitted

Section IX Agency/ Station

A -- Health Dept	M—Baptist Pediatric	Y -- __Vacant_____	AI – HCT Ambulance
B --Medcom/ The Med	N -- Methodist Germantown	ZA -- Red Cross HQ	AJ – Hernando EMS
C -- Hospital Wing	O -- Methodist LeBonheur	ZB -- Mid South Reg Blood Ctr	AK – Lauderdale EMS
D -- Baptist Memphis	P-- Methodist North	ZC -- __Vacant_____	AL – Lifeline Ambulance
E -- Baptist Collierville	Q -- Methodist Olive Branch	AA – AMR Ambulance	AM--Marion EMS
F -- Baptist Desoto	R-- Methodist South	AB – Bartlett EMS	AN-Medic One Ambulance
G -- Baptist Women	S-- Methodist University	AC – Crittenden County EMS	AM—Memphis Fire EMS
H-- Baptist Rehab-GTown	T -- Memphis Mental Health	AD – Desoto County Medical Services	AN – Olive Branch EMS
I-- Baptist Tipton	U-- St Francis Park	AE – EMHC Ambulance	AO -- Rural Metro
J— Delta Medical	V – St.Francis Bartlett	AF – Fayette County EMS	AP – Southaven EMS
K – Lakeside Behavioral Health	W—St. Jude Research	AG – First Call Ambulance	AQ – West Memphis EMS
L – Lauderdale Community	X – VA Medical Center	AH – Germantown EMS	AR – Other_____

Section X COMMENTS **(For additional space use separate sheet including Hospital name, location and contact.)**

Fax Information to: Shelby County HEALTH DEPT 222-8249

International **Phonetic Alphabet:**

A. Alfa	E- Echo	I- India	M- Mike	Q- Quebec	U- Uniform	Y- Yankee
B- Bravo	F- Foxtrot	J- Juliet	N- November	R- Romeo	V- Victor	Z- Zula
C- Charlie	G- Golf	K- Kilo	O- Oscar	S- Sierra	W- Whiskey	
D- Delta	H- Hotel	L- Lima	P- Papa	T- Tango	X- Xray	

Last update: 9/9/2019

APPENDIX E: AMATEUR RADIO SITE REPORTS

All comments included in this Appendix were provided by HAM radio operators in place at their respective facility during the exercise.

Health Department
No radio problems. Shut down early due to repeater noise on simplex

Baptist Collierville
Everything great. Very cooperative. They were well organized and radio equipment worked great. No problems

Baptist Memphis
Had to request ESF#8 Form. Had problems with cross-banding from 440 to 2 meters using the short Diamond magmount antenna; had to use a personal antenna. Still problems cross-banding. Could not do the simplex check. Due to interference with cross-banding there needs to be a direct coax from the command center radio to an antenna so the radio frequency can be change easily. If there is cross-banding to the radio in the penthouse, you have to have a guard take you there every time when you need to change frequencies in a timely manner. The cross-banding really does not work satisfactorily.

Baptist Women's
1. On-site equipment - The TRAM model 1191 glass mount antenna was installed by the time I arrived. However, the provided coax connecter was (I believe) a UHF PL-259, with no adapter for my HT's SMA connector. I had an adapter in my car that I was able to use so I could test their antenna. Since I had a few extras at home, I left that adapter attached and behind when the event was over. The hospital antenna seemed to work okay to pickup the cross-band. Towards the end of the event I tested out my MFJ antenna, which seemed to pick up the cross-band (and later the 82 repeater) better.

2. Cross-band issues - Rick and Richard were not able to get setup until after check-in started. There were a few times throughout the morning that they had issues and I could not hear anything at all through the cross-band frequency. I had trouble transmitting on simplex using the cross-band. From what I understood, this was while the cross-band was setup in/on a car. Once they moved it to the hospital's radio, everything seemed to work better for repeater contacts. During the 25-35 minutes that they were moving the cross-band set-up from the vehicle to the hospital, I switched over to try reaching the 82 repeater with my HT. I heard everyone relaying info just as clear, if not clearer, as it was through the cross-band. Later on it seemed like I was transmitting to the 82 repeater pretty well, though you will probably be able to determine that more than I can.

3. ESF-8 Form - I checked in with the hospital's "control room" after the event started around 9:30 am. I asked if they had the ESF-8 form, and they told me that they had one…. I do not know if they were waiting for the event to close out or if they just forgot to relay the information, but I didn't get the form information until I asked about it at the end of the day (when I realized that

there were just a few stations left). When I did ask about it, they were very helpful in getting the appropriate person back in the control room to fill out the form. They had an older version of the form already filled out, but Ms. Thetford offered to switch everything over to the new form I had once she saw they were different.

4. Location - I thought the location worked pretty well. It was right across the office hallway from the "control room," so had there been an actual emergency with no cell phone service, it would have been easy for them to quickly reach the radio operator to get messages out.

Baptist Tipton
It went smoothly. Got 3 more operators hospital IDs

Le Bonheur Children's
As previous reported by John Volmer KN4LCV to Net Control, Methodist Le Bonheur had the wrong form on file. Blake Robertson our contact at the hospital reported that Shelby County sent them the old form. Because we were hearing over the net some hospitals were reporting the wrong form, Volmer contacted Blake to verify that they had the correct form. Luckily we removed any delay in reporting to Net Control the correct form. I'm sure you have seen it, but it was very impressive to work there. I know I can speak for John about the radio room also.

Methodist Germantown
All went well. Hospital even offered to send a second ESF#8 report.

Methodist Olive Branch
No feedback or comments provided.

Methodist North
Hospital did not have the latest ESF#8 Form, took it back and had them fill out the latest one. After asking them to read all the form, they still did not put "b"s in blanks No one said exactly when the roll call would be done on either frequency.

Methodist South
Received ESF#8 and transmitted. Did simplex check.

Methodist University
Did not receive ESF#8 forms for Methodist University Hospital.

St. Francis Bartlett
We did not get victims to the hospital till almost 12:30pm. Once we did after some prodding we obtained the ESF8 and transmitted it to net control. All in all it appeared to be a good exercise. The Incident Commander had never done this before and had a lot on his plate. The ESF8 form was never received by the proper folks, and may have been due to the last minute staff changes. It would be also easier for me to check the radio on a periodic basis if I had access to the PBX room. I did purchase a new microphone for the Kenwood radio used in the hospital. The old one would have the PTT stick. Bill sprayed it with lub but it was still a bit

sticky. The mic was only $13, consider it my contribution to the cause. thanks to Bill Peck for all his assistance.

St. Francis Park Ave
Everything was fine. The HF antenna still is in operable. Someone suggested that the ham radio be moved from the Mold room due to hazardous materials stored there.

Regional One
We did not receive ESF#8 forms for Regional One. When I inquired about it, I received a blank form. When I asked for one that was filled out, the person in the communications room contacted the administrator and was told the exercise was over and they would note that needed to fill one out for next year.

VAMC
No problems.

(In addition to these comments, Memphis AREA group submitted a detailed simplex spreadsheet provided by all participating operators. – HBF)

APPENDIX F: IMPROVEMENT PLAN

This IP has been developed specifically for the Mid-South Emergency Planning Coalition as result of the Full Scale Exercise conducted on September 26, 2019.

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
Hospital Incident Command				
Lack of HICS awareness among new hospital staff.	Facility-level consideration should be given to making certain courses (100 and 700) a requirement for all new hires within 3 months of hire and more extensive course (200, 300, 400, 800) a requirement for all staff potentially filling HICS leadership roles. MSEPC will identify ICS and HICS trainings to be made available for HCC membership.	Training	Immediate at facility level MSEPC will identify trainings by 12/31/2019; offer courses beginning Spring 2020	First round of MSEPC trainings offered by 6/30/2020.
Radio Communication				
Lack of routine internal radio system maintenance to include operable corporate channels, charged batteries, disbursement plans for radio equipment.	Evaluations named issues specific to each facility. Further planning for corrections and implementations should be performed at the facility level.	Planning/Organization	Immediate	Ongoing
Internal Communication Procedures				
Notifications not sufficient to reach all parties.	Confirm appropriate staff are included in all notification channels to ensure information reaches all parties.	Planning/Organization	Immediate	Ongoing

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

Issue/Area for Improvement	Corrective Action	Capability Element	Start Date	Completion Date
Decontamination				
Need more sufficient and effective training for decon staff.	Facility should identify all staff to be trained and ensure certification on facility equipment. MSEPC will identify and host training options for members to be offered at both an HCC level and facility level.	Training	Immediate MSEPC will identify trainings by 12/31/2019; offer courses beginning Spring 2020	First round of MSEPC trainings offered by 6/30/2020.
Need more equipment and supplies for decon response.	Facility should identify equipment and supply needs and provide to MSEPC Executive Council using the HCC purchase request process. MSEPC Executive Council to review purchases, make approvals, and procure items.	Equipment	Facilities identify equipment by 12/31/2019.	Purchases to be completed during remainder of FY20 and during full FY21 fiscal years.
HC Standard Patient Tracking				
Several facilities still not routinely using HCS during exercises and real events.	MSEPC will offer routine trainings/exercises to use system – at least two annually. Facility specific trainings will be offered by MSEPC to all users.	Training/Exercise	Facilities notify MSEPC of need for training by 12/31/2019	MSEPC to complete scheduled trainings by 6/30/2020
Healthcare Resource Tracking System				
Increase number of facilities reporting facility and bed status within first 30 minutes of event to 100%	MSEPC will hold quarterly, no notice trainings to increase and record metrics to track to participation. Identify facilities with repeat offenders and schedule facility-specific trainings to address issues. Continue to hold pre-exercise reviews of HRTS.	Planning/Training/Exercise	Immediate	Ongoing

Issue/Area for Improvement	Corrective Action	Capability Element	Start Date	Completion Date
Healthcare Resource Tracking System				
Increase appropriate utilization of message board by all users.	MSEPC will hold quarterly, no notice trainings to increase and record metrics to track to participation. Identify facilities with repeat offenders and schedule facility-specific trainings to address issues. Continue to hold pre-exercise reviews of HRTS.	Planning/Training/Exercise	Immediate	Ongoing
Tennessee Health Alert Network				
Groups/users not up to date to ensure all parties are notified.	MSEPC to provide each facility with a list of TNHAN users to confirm or deny employment and add any new users. MSEPC will update TNHAN appropriately.	Organization	MSEPC to provide information for facility review by 4/30/2020. Facilities return updates to MSEPC by 5/31/2020.	MSEPC to make all relevant updates by 6/30/2020.
Regional Medical Communications Center				
Memphis Medcom staff increase and maintain familiarity with mobile RMCC equipment and accommodations.	Continue to use Mobile RMCC, when available, for local exercises and events with local Memphis Medcom staff.	Planning/Training/Exercise	Immediate	Ongoing