*Knox County/East Tennessee Region Hospital Full Scale Exercise*

*October 30, 2012*



***After Action Report/***

***Improvement Plan***

**January 15, 2013**

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***Administrative Handling Instructions***

The title of this document is 2012 Multi State Fungal Meningitis Outbreak

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***Executive Summary***

The Knox County/East Region Hospital Full Scale Exercise is a full-scale exercise (FSE) designed to establish a learning environment for players to exercise emergency response plan, policies, and procedures as they pertain to a Natural Disaster and CBRNE event significant enough to warrant a hospital evacuation, surge of patients, and activation of participating agencies Emergency Operations Centers (EOC), and Regional Medical Communications Center. A FSE is a complex event that requires detailed planning. To conduct an effective exercise, subject matter experts (SMEs) and local representatives from numerous agencies took part in the planning process as well as the exercise conduct and evaluation.

This exercise was produced in conjunction with the East Tennessee Regional Health Department, Knox County Health Department, Blount Memorial Hospital, Claiborne County Hospital, East Tennessee Children’s Hospital, Fort Loudon Medical Center, Fort Sanders Regional Medical Center, Jellico Community Hospital, Knoxville/Knox County 911 Center, Knoxville/Knox County Emergency Management Agency, Lafollette Medical Center, Lakeway Regional Medical Center, Leconte Medical Center, Medlink 2, Regional Medical Communications Center, Methodist Medical Center of Oak Ridge, North Knoxville Medical Center, Parkwest Medical Center, Physicians Regional Medical Center, Scott County Hospital, Sweetwater Hospital Association, Turkey Creek Medical Center , University of Tennessee Medical Center, local and state emergency management, Emergency Medical Services (EMS), American Red Cross, and Knox County Schools.

The Knox County/East Tennessee Region Hospital Full Scale exercise was developed to test Knox County/ East Tennessee Hospital’s (1) Citizen Evacuation and Shelter In-Place, (2) Medical Surge, (3) On Site Incident Management and (4) Communications capabilities. The exercise planning team was composed of numerous and diverse agencies, including Knox County Health Department, East Tennessee Regional Health Office.

Based on the exercise planning team’s deliberations, the following objectives were developed for the Knox County/East Tennessee Region Hospital Full Scale Exercise:

* ***Objective 1***

 Evaluate the capability and processes used to evacuate patients from the Level 1 Trauma Center, while managing an internal natural disaster and CBRNE event

* ***Objective 2***

 Evaluate the participating hospitals’ ability to process a surge of patients with varying levels of injury

* ***Objective 3***

 Evaluate the participating hospitals’, RMCC and other participating agencies use of the incident command system to manage the incident

* ***Objective 4***

 Evaluate the hospitals’ internal and external communications systems- along with the RMCC and Knox Emergency Operations Center

* ***Objective 5***

 Evaluate the methods established to track both patients and staff throughout the region

* ***Objective 6***

 Evaluate the effectiveness and proficiency of plans for emergency credentialing of medical providers at area hospitals

The purpose of this report is to analyze exercise results, identify strengths to be maintained and built upon, identify potential areas for further improvement, and support development of corrective actions.

***Major Strengths***

The major strengths identified during this exercise are as follows:

* Redundant Communication systems (UHF, VHF, and HAM radio) did work well following the unreliability of the Hospital Resource Tracking System (HRTS).
* Volunteer healthcare providers were able to be quickly credentialed and incorporated into the response at receiving facilities.
* Participating hospitals were able to skillfully incorporate a surge or medical patients with varying levels of criticality and little medical information.

***Primary Areas for Improvement***

Throughout the exercise, several opportunities for improvement in Knox/East Tennessee regions ability to respond to the incident were identified. The primary areas for improvement, including recommendations, are as follows:

* Following the recent upgrades to the Hospital Resource Tracking System (HRTS), there have been issues identified with the system “timing out” during events. Users were unable to stay reliably logged into the system. The Regional Hospital Coordinators have provided Tennessee Department of Health IT with screen shots and information to aid in correcting this newfound issue. Recommend continuing to follow up on IT concerns, as well as using back up communication methods more frequently.
* Overall, incident command worked well within the hospitals; however, it was identified that more staff need to be trained in ICS to help mitigate issues regarding turnover of staff and experience. Recommend providing additional Hospital Incident Command training courses to assure that there is a sufficient cadre of trained personnel at each facility.
* Hospitals indicated there were problems with tracking event-related patients. Recommend developing regular testing/use schedules for patient tracking systems.

Overall, the exercise was considered to be a huge success. The participants demonstrated the ability to manage a surge of patients with varying injuries and conditions. They were also able to manage a surge of “volunteer” medical providers. Future exercises should continue to focus on Incident Command, patient tracking, and communication system.

**Section 1: Exercise Overview**

Exercise Details

*Exercise Name*

Knox County/ East Tennessee Region Hospital Full Scale Exercise

*Type of Exercise*

Full Scale Exercise

*Exercise Start Date*

October 30, 2012

*Exercise End Date*

October 30, 2012

*Duration*

8:00 A.M- 13:30 P.M. (5.5 hours)

*Location*

Blount Memorial Hospital (Maryville, TN)

Claiborne County Hospital (Tazewell, TN)

East Tennessee Children’s Hospital (Knoxville, TN)

Fort Loudon Medical Center (Lenoir City, TN)

Fort Sanders Regional Medical Center (Knoxville, TN)

Jefferson Memorial Hospital (Jefferson City, TN)

Jellico Community Hospital (Jellico, TN)

Knoxville/Knox County 911 Center (Knoxville, TN)

Knoxville/Knox County Emergency Management Agency (Knoxville, TN)

Lafollette Medical Center (LaFollette, TN)

Lakeway Regional Medical Center (Morristown, TN)

Leconte Medical Center (Sevierville, TN)

Medlink 2, Regional Medical Communications Center (Knoxville, TN)

Morristown Hamblen Healthcare (Morristown, TN)

Methodist Medical Center of Oak Ridge (Oak Ridge, TN)

Newport Medical Center (Newport, TN)

North Knoxville Medical Center (Knoxville, TN)

Parkwest Medical Center (Knoxville, TN)

Physicians Regional Medical Center (Knoxville, TN)

Roane Medical Center (Harriman, TN)

Sweetwater Hospital Association (Madisonville, TN)

Turkey Creek Medical Center (Knoxville, TN)

University of Tennessee Medical Center (Knoxville, TN)

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*Program*

Fiscal year 2012 ASPR Grant funding

*Mission*

Response

*Capabilities*

1. Citizen Evacuation and Shelter In-Place
2. Medical Surge
3. On Site Incident Management
4. Communications Capabilities

*Scenario Type*

Natural Disaster resulting in evacuation

*Exercise Planning Team Leadership*

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*Participating Organizations*

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Blount Memorial Hospital (Maryville, TN)

Claiborne County Hospital (Tazewell, TN)

East Tennessee Children’s Hospital (Knoxville, TN)

Fort Loudon Medical Center (Lenoir City, TN)

Fort Sanders Regional Medical Center (Knoxville, TN)

Jefferson Memorial Hospital (Jefferson City, TN)

Jellico Community Hospital (Jellico, TN)

Knox County Schools (Knoxville, TN)

Knoxville/Knox County 911 Center (Knoxville, TN)

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Roane Medical Center (Harriman, TN)

Sweetwater Hospital Association (Madisonville, TN)

Turkey Creek Medical Center (Knoxville, TN)

University of Tennessee Medical Center (Knoxville, TN)

**Section 2: Exercise Design Summary**

*Exercise Purpose and Design*

The Knox County/East Region Hospital Full Scale Exercise is a full-scale exercise (FSE) designed to establish a learning environment for players to exercise emergency response plans, policies, and procedures as they pertain to a Natural Disaster and CBRNE event significant enough to warrant a hospital evacuation, surge of patients, the activation of participating agencies’ Emergency Operations Centers (EOC), and Regional Medical Communications Center. To conduct this exercise, subject matter experts (SMEs) and local representatives from numerous agencies took part in the planning process as well as exercise conduct and evaluation.

This Exercise Plan (EXPLAN) was produced in conjunction with the East Tennessee Regional Health Department, Knox County Health Department, and participating hospitals with the input, advice, and assistance of local/state emergency management, EMS, American Red Cross, and Knox County Schools. The Knox County/East Region Hospital Full-scale Exercise is evidence of the growing public safety partnership between hospitals and State and local jurisdictions for the response to the response to the threats and hazards our Nation and communities face.

*Exercise Objectives, Capabilities, Activities and Critical Tasks*

Capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items that were derived from the Target Capabilities List (TCL). The capabilities listed below form the foundation for the organization of all objectives and observations in this exercise. Additionally, each capability is linked to several corresponding activities and tasks to provide additional detail. Based upon the identified exercise objectives below, the exercise planning team has decided to demonstrate the following capabilities during this exercise:

***Objectives, Target Capabilities, Activities and Critical Task***

|  |  |
| --- | --- |
| *Objective 1* | Evaluate the capability and processes used to evacuate patients from the Level 1 Trauma Center, while managing an internal natural disaster  |
|  | *Target Capability:* ***State*** | 1. Community Preparedness |
|  | *Function* | 2. Coordinate healthcare planning to prepare the healthcare system for a disaster6. Improve healthcare response capabilities through coordinated exercise and evaluation |
|  |  | 10. Medical Surge |
|  | *Function* | 5. Provide assistance to healthcare organizations regarding evacuation and shelter in place operations |
|  | *Target Capability:* ***HSEEP*** | Citizen Evacuation and Shelter in Place |
|  | *Activity* | Preparedness Tasks and Measures/Metrics |
|  |  | *Critical Tasks* | *(Res.B.3a 1.3.1.1.2) Develop and implement procedures to identify and arrange transportation to accommodate immobilized individuals or others requiring special assistance during transport* |
|  | *Activity* | Develop and Maintain Training and Exercise Programs |
|  |  | *Critical Tasks* | *(Res.B31 2.1) Develop and implement training programs for staff involved in evacuation/shelter-in-place implementation* |
| *Objective 2* | **Evaluate the participating hospitals ability to process a surge of patients with varying levels of injury.** |
|  | *Target Capability*: **State** | 10. Medical Surge |
|  | *Function* | 1. The Healthcare Coalition assists with the coordination of the healthcare organization response during incidents that require medical surge2. Coordinate integrated health surge operations with pre-hospital Emergency Medical Services (EMS) operations3. Assist healthcare organizations with surge capacity and capability |
|  | *Target Capability*: **HSEEP** | Medical Surge |
|  | *Activity* | *Implement Surge Patient Transfer Procedures* |
|  |  | *Critical Tasks* | *(ResC1b 5.3)* Provide knowledge or visibility of available destination medical care facilities/services and tracking for mass movement of patients, ensuring patients are matched with transportation and destinations that provide appropriate levels of medical care |
| *Objective 3* | **Evaluate the participating hospitals’, RMCC and other participating agencies use of the incident command system to manage the incident.**  |
|  | *Target Capability:* **State** | 3. Emergency Operations Coordination |
|  | *Function* | 1. Healthcare organization multi-agency representation and coordination with emergency operations3. Support healthcare response efforts through coordination of resources |
|  | *Target Capability:* **HSEEP** | On-Site Incident Management |
|  | *Activity* | *Develop and Maintain Training and Exercise Programs* |
|  |  | *Critical Tasks* | *(ResBla 2.2.1)* Exercise personnel in accordance with NIMS  |
| *Objective 4* | **Evaluate the hospitals’ internal and external communications systems- along with the RMCC and Knox Emergency Operations Center**  |
|  | *Target Capability*: **State** | 6. Information Sharing |
|  | *Function* | 1. Provide healthcare situational awareness that contributes to the incident common operating picture2. Develop, refine and sustain redundant, interoperable communications system |
|  | *Target Capability:* **HSEEP** | Communications |
|  | *Activity* | *Alert and Dispatch* |
|  |  | *Critical Tasks* |  *(ComC 4.2.1)* Communicate incident response information |
|  |  |  | (*ComC 4.1.1*) Ensure that all critical communications networks are functioning |
| *Objective 5* | **Evaluate the methods established to track both patients and staff throughout the region**. |
|  | *Target Capability:* **State** | 10. Medical Surge |
|  | *Function* | 3. Assist healthcare organizations with surge capacity and capability |
|  | *Target Capability:* **HSEEP** | *Medical Surge* |
|  | *Activity* | *Implement Surge Patient Transfer Procedures* |
|  |  | *Critical Tasks (ResC1b 5.3) Provide knowledge of visibility of available destination medical care facilities/services and tracking for mass movement of patients, ensuring patients are matched with transportation and destinations that provide appropriate levels of medical care* |
| *Objective 6* | **Evaluate the effectiveness and proficiency of plans for emergency credentialing of medical providers at area hospitals** |
|  | *Target Capability*: **State** | 15. Volunteer Management |
|  | *Function* | 3. Organization and assignment of volunteers |
|  | *Target Capability:* **HSEEP** | Medical Surge |
|  | *Activity* | Direct Medical Surge Tactical Operations |
|  |  | *Critical Tasks (ResC1b 3.4.53)Implement emergency credentialing and privileging procedures* |

*Scenario Summary*

This exercise was originally planned for April 26, 2012. Patient packets were delivered to each participating hospital, and pre-loaded weather bulletins were sent out to players on April 25, 2012. On the exercise date, severe storms made it necessary to post pone the exercise to another day. October 30, 2012 was designated as the make-up day. On October 29th, the pre loaded weather bulletins were again sent to participants indicated an exercise message of severe weather. These were sent out again on the morning of October 30th. The make-up exercise was named “Snownado 2012” due to the fact that again, weather conditions were similar to exercise conditions, with some areas receiving snow the night before.

The University of TN Medical Center (UTMC) simulated a direct impact hit from a tornado, which resulted in massive structural damage to the facility.  Ultimately, the hospital was required to evacuate all of their patients. Receiving hospitals were required to process a surge of patients that had been evacuated from UTMC, injured at the hospital or injured during the severe weather outbreak. The Regional Medical Communications Center is housed at UTMC and also sustained some damage, causing back up communications to be utilized.

**Section 3: Analysis of Capabilities**

This section of the report reviews the performance of the exercised capabilities, activities, and tasks. In this section, observations are organized by capability and associated activities. The capabilities linked to the exercise objectives of Knox County/East Tennessee Region Hospital Full Scale Exercise are listed below, followed by corresponding activities. Each activity is followed by related observations, which include references, analysis, and recommendations.

***State Capabilities***

|  |  |
| --- | --- |
| Capability 1 *Objective 1* | Community Preparedness |
| Function 2 | Coordinate healthcare planning to prepare the healthcare system for a disaster |
| *Observation* | Strength |
| *Reference* | State of Tennessee, Program Guidance for Emergency Preparedness, 2012 |
| *Analysis* | The East/Knox County Healthcare Coalition has been an active community coalition for over 7 years. This coalition consists of multiple, independent and corporate healthcare facilities as well as diverse community representatives. This coalition has fostered a committed trust between members that has resulted in a strong and productive leader for healthcare support, preparedness and safety.  |
| *Recommendation(s)* | The East/Knox County Healthcare Coalition will continue periodic exercises to test response and capabilities. It is clear that by participating in regular exercises the members of the healthcare coalition show improvement and are knowledgeable regarding procedural processes. Coalition members will apply lessons learned from the exercise both at individual hospitals and regionally, as applicable.  |
| Function 6 | Improve healthcare response capabilities through coordinated exercise and evaluation |
| *Observation* | Strength |
| *Reference* | State of Tennessee, Program Guidance for Emergency Preparedness, 2012 |
| *Analysis* | The East/Knox County Healthcare Coalition participates in 1 region wide exercise each year. This exercise is based on the regional HVA and in line with both state and HSEEP capabilities. A coalition sub-committee met to outline a proposed draft plan, then the coalition determined objectives. After the exercise a hot wash was held for a brief over view of successes and areas for improvement. Evaluations were done and each participant will receive a copy of the After Action Report, including an improvement plan. Future exercises will test identified areas of improvement to see if proposed action steps were sufficient to improve the outcome.  |
| *Recommendation(s)* | AAR will be distributed to each participant and areas for improvement will include action steps to be taken to resolve or improve identified issues.  |
| Capability 3 *Objective 3* | Emergency Operations Coordination |
| Function 1 | Healthcare organization multi-agency representation and coordination with emergency operations |
| *Observation* | Strength |
| *Reference* | State of Tennessee, Program Guidance for Emergency Preparedness, 2012 |
| *Analysis* | The Regional Medical Communications Center (RMCC) serves as a Knox county and regional coordinator for emergency operations regarding patient transfer for any incident. Working together with the RHCs, they function as a regional point of contact for all area hospitals for emergency response and preparedness. All other areas would be coordinated through the respective Regional Hospital Coordinator (RHC). Partnerships within the East/Knox Healthcare Coalition, as well as Memorandums of Understanding (MOU’s) are continually sought and added as viable resources during an event or time of need.  |
| *Recommendation(s)* | None |
| Function 3 | Support Healthcare response efforts through coordination of resources |
| *Observation* | Strength |
| *Reference* | State of Tennessee, Program Guidance for Emergency Preparedness, 2012 |
| *Analysis* | The RHC acts as a regional resource for all hospitals during an event.  |
| *Recommendation(s)* | Continue to seek out viable resources and partners to add to the Coalition  |
| Capability 6 *Objective 4* | Information Sharing |
| Function 1 | Provide Healthcare situational awareness that contributes to the incident common operating picture |
| *Observation* | Weakness |
| *Reference* | State of Tennessee, Program Guidance for Emergency Preparedness, 2012 |
| *Analysis* | During this exercise, communication on the HRTS system was tested. All hospitals were asked to not only update bed counts within a given timeframe, but to also post on the comment board as opposed to calling when information was needed. The HRTS system failed to work for this intent. Different sites were unable to stay logged on and many times were kicked out of the system altogether when using it. Regional HAM operations were tested as well which showed an inconsistency in the region with protocol to be followed for HAM communication.  |
| *Recommendation(s)* | We will continue to advise IT services when issues arise and routinely test back-up systems.  |
| Function 2 | Develop, refine and sustain redundant, interoperable communication systems |
| *Observation* | Strength |
| *Reference* | State of Tennessee, Program Guidance for Emergency Preparedness, 2012 |
| *Analysis* | East/Knox Region Healthcare Coalition has put great effort into redundant communication methods. Although the preferred mode of communication for this exercise was not dependable, other systems in place did work well including HAM radios, cell phones, email and fax.  |
| *Recommendation(s)* | Continue to advise IT staff of ongoing HRTS issues and routinely check redundant systems to ensure communications is not interrupted if one system, or even 2 become unusable.  |
| Capability 10 *Objectives 2 and 5*  | Medical Surge |
| Function 1 | The Healthcare Coalition assists with the coordination of the healthcare organization response during incidents that require medical surge |
| *Observation* | Strength |
| *Reference* | State of Tennessee, Program Guidance for Emergency Preparedness, 2012 |
| *Analysis* | Hospitals were clearly prepared on a regional level to assist with the care of all evacuated patients from U.T. Medical Center. There were few issues with transport or treatment during the course of this exercise.  |
| *Recommendation(s)* | We will continue to advise IT services when issues arise and routinely test back-up systems.  |
| Function 2 | Coordinate integrated health surge operations with pre-hospital emergency Medical Services (EMS) operations |
| *Observation* | Strength |
| *Reference* | State of Tennessee, Program Guidance for Emergency Preparedness, 2012 |
| *Analysis* | The RMCC provides does an excellent job coordinating these services.  |
| *Recommendation(s)* | None |
| Function 3 | Assist healthcare organizations with surge capacity and capability |
| *Observation* | Strength |
| *Reference* | State of Tennessee, Program Guidance for Emergency Preparedness, 2012 |
| *Analysis* | The RMCC provides does an excellent job coordinating these services.  |
| *Recommendation(s)* | None |
| Capability 15 *Objective 6* | Volunteer Coordination |
| Function 3 | Organization and assignment of volunteers |
| *Observation* | Strength |
| *Reference* | State of Tennessee, Program Guidance for Emergency Preparedness, 2012 |
| *Analysis* | Participating hospitals were provided with a list of medical volunteers assisting with the exercise event at their respective facility to test credentialing capabilities. Each hospital was familiar with the necessary steps that needed to be taken and followed site specific steps to ensure credentialing was done.  |
| *Recommendation(s)* | None |

***HSEEP Capabilities***

|  |  |
| --- | --- |
| *Target Capability:* ***HSEEP*** *Objective 1* | Citizen Evacuation and Shelter in Place |
| *Activity* | Preparedness Tasks and Measures/Metrics |
|  | *Critical Tasks* | *(Res.B.3a 1.3.1.1.2) Develop and implement procedures to identify and arrange transportation to accommodate immobilized individuals or others requiring special assistance during transport* |
| *Activity* | Develop and Maintain Training and Exercise Programs |
|  | *Critical Tasks* | *(Res.B31.2.1) Develop and implement training programs for staff involved in evacuation/shelter in place implementation* |
| *Observation* | Strength |
| *Reference* | * *Homeland Security Presidential Directive/HSPD–8: National Preparedness. The White House, Office of the Press Secretary. December 2003. http://www.whitehouse.gov/news/releases/2003/12/20031217-6.html.*
* *National Response Plan. U.S. Department of Homeland Security. December 2004.*
* *National Incident Management System. U.S. Department of Homeland Security. March 2004. http://www.dhs.gov/interweb/assetlibrary/NIMS-90-web.pdf.*
 |
| *Analysis* | *Exercise programs, such as this train facility specific as well as regional efforts. As training is provided, key elements of success and areas for improvement can be identified and addressed as such.*  |
| *Recommendation(s)* | *Provide AAR to all pariticipants so that lessons learned can be shared with each indivual facility.*  |
| *Target Capability:* ***HSEEP*** *Objective 2, 5 and 6* | Medical Surge |
| *Activity* | Implement Surge Patient Transfer Procedures |
|  | *Critical Tasks* | *(ResC1b.5.3) Provide knowledge or visibility of available destination medical care facilities/services and tracking for mass movement of patients, ensuring patients are matched with transportation and destinations that provide appropriate levels of medical care.*  |
| *Observation* | Weakness |
| *Reference* | * *Homeland Security Presidential Directive/HSPD–8: National Preparedness. The White House, Office of the Press Secretary. December 2003. http://www.whitehouse.gov/news/releases/2003/12/20031217-6.html.*
* *National Response Plan. U.S. Department of Homeland Security. December 2004.*
* *National Incident Management System. U.S. Department of Homeland Security. March 2004. http://www.dhs.gov/interweb/assetlibrary/NIMS-90-web.pdf.*
 |
| *Analysis* | *While surge capacity and transfer seemed to run smoothly, many facilities had difficulty with patient tracking systems. Inexperience with equipment or equipment malfunction led many hospitals to fall back on an alternate patient tracking system.*  |
| *Recommendation(s)* | *Hospital staff need to regularly test tracking equipment to ensure they are familiar with the equipment and it is fully functional*  |
| *Target Capability:* ***HSEEP*** *Objective 3* | On-Site Incident Management |
| *Activity* | Develop and Maintain Training and Exercise Programs |
|  | *Critical Tasks: (ResBLA 2.2.1) Exercise personnel in accordance with NIMS*  |
| *Observation* | Strenght/Weakness |
| *Reference* | * *Homeland Security Presidential Directive/HSPD–8: National Preparedness. The White House, Office of the Press Secretary. December 2003. http://www.whitehouse.gov/news/releases/2003/12/20031217-6.html.*
* *National Response Plan. U.S. Department of Homeland Security. December 2004.*
* *National Incident Management System. U.S. Department of Homeland Security. March 2004. http://www.dhs.gov/interweb/assetlibrary/NIMS-90-web.pdf.*
 |
| *Analysis* | *Each hospital trains key personnel on the Hospital Incident Command System as needed. Staff are also rotated in key positions within the Command System to ensure that NIMS will be followed if primary staff are unavailable. Staff turnover at medical facilities can be high at times, which leads to new staff not being properly trained in Incident Command at the time of the event. Although most facilities had one or more roles filled with new/untrained personnel, Incident Command was reportedly effective overall.*  |
| *Recommendation(s)* | *More training opportunities for hospital staff to be trained in ICS* |
| *Target Capability:* ***HSEEP*** *Objective 4* | Communications |
| *Activity* | Alert and Dispatch |
|  | *Critical Tasks:*  | *(ComC4.2.1) Communicate incident response information* |
|  |  | *(ComC4.1.1) Ensure that all critical communications networks are functioning* |
| *Observation* | Weakness |
| *Reference* | * *Homeland Security Presidential Directive/HSPD–8: National Preparedness. The White House, Office of the Press Secretary. December 2003. http://www.whitehouse.gov/news/releases/2003/12/20031217-6.html.*
* *National Response Plan. U.S. Department of Homeland Security. December 2004.*
* *National Incident Management System. U.S. Department of Homeland Security. March 2004. http://www.dhs.gov/interweb/assetlibrary/NIMS-90-web.pdf.*
 |
| *Analysis* | During surge events, the RMCC provides real time data to indicate where patient treatment can be provided. This information is provided by hospitals on the HRTS system, with hospitals updating the system at given intervals. The HRTS system provides bed counts, specialty services available and a message board used during events that hospitals, RHCs and the RMCC call all provide information on. This information is very useful when the systems are working correctly. During this exercise, the HRTS system was not a reliable tool as many facilities, both state and community, were unable to effectively use it. The system did not provide consistent access, timing out regardless of use or would display error messages requiring multiple log ins to access the system. Regional HAM operations were tested as well which showed an inconsistency in the region with protocol to be followed for HAM communication. At some facilities, the HAM operator was available and transmitted information as provided. At other facilities the HAM operator was never notified, or did not respond.  |
| *Recommendation(s)* | We will continue to advise IT services when issues arise and routinely test back-up systems. Back up HAM operators should be identified at each facility.  |

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**Section 4: Conclusion**

Overall, the exercise was considered to be a huge success. Participation was widespread throughout the region. Hospitals, Mental Health Facilities, Regional Medical Communications Centers, Public Health, Emergency Medical Services, and dispatch centers were involved. The participants demonstrated the ability to manage a surge of patients with varying injuries and conditions. They were also able to manage a surge of “volunteer” medical providers. Future exercises should continue to focus on Incident Command, patient tracking, and communications to assure that we are able to further improve our response areas.

**Appendix A: Improvement Plan**

This IP has been developed specifically for East/Knox hospitals as a result of Knox County/East Tennessee Region Hospital Full Scale Hospital Exercise conducted on October 30, 2012. These recommendations draw on both the After Action Report and the After Action Conference.

Table A.1: Improvement Plan Matrix

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Objective** | **Observation** | **Recommendation****Area of Strength** | **Corrective Action** | **Primary Lead** |  **Date** |
| **Start** | **Completion** |
| 1. Evacuation | STRENGHT*Process* | The RMCC is an extremely effective partner for the East Tennessee/Knox region. The hospitals are very confident in the effectiveness of the RMCC and are quick to provide notifications so that early intervention can be done. This would provide valuable time and accurate instructions during an event.  |  |  |  |  |
| 2. Medical Surge | STRENGTH |  |  |  |  |  |
| 3. Use of Incident Command | STRENGTH*Effective Staff* |  |  |  |  |  |
| WEAKNESS*Training* |
| 4. Communications | WEAKNESS *HRTS* | Errors within the HRTS system needs to be repaired so that it can be dependably used during an exercise/event | East/Knox RHC’s and RMCC will send screen shots of repeated error messages to IT staff with detailed descriptions of the issue.  | Charity MenefeeKnox County Health DepartmentWanda RobertsET Regional Health Office | 30 OCT 12 | 06 NOV 12 |
| Central Office IT staff will be tasked with repair to the HRTS system to correct error messages and inability to log or stay logged on | Central OfficeTennesee Department of Health | 30 OCT 12 | ASAP |
|  | WEAKNESS*HAM Radio* | A regional system of activation needs to be implemented to ensure each facility has an available operator during an event | A regional list of all HAM operators will be developed and METERS representative will be consulted as to most effective means to create a workable regional plan.  | Wanda RobertsEast Tennessee Department of Health | 30 OCT 12 | 30 JUNE 13 |
| 5. Patient Tracking | WEAKNESS*Equipment use* | Staff may need routine practice on tracking equipment to become more familiar with use, and equipment needs to be checked frequently.  | Training should be provided at each site using hospital tracking systems on correct equipment use | Hospital Facilies | 06 NOV 12 | 30 JUNE 13 |
| Regular equipment checks need to be done to test batteries and make sure equipment works | Hospital Facilites | 06 NOV 12 | 30 JUNE 13 |
|  | STRENGTH*Ability to improvise* | When equipment use was not available, staff members were able to identify a secondary method for patient tracking.  |  |  |  |  |
| 6. Credentialing | STRENGTH |  |  |  |  |  |
|  |  |  |  |  |  |  |

**Appendix B: Exercise Events Summary Table**

|  |  |  |
| --- | --- | --- |
| **Exercise Date**  | **Venue**  | **Activity**  |
| April 10, 2012 2:30PM | KCHD Community Room | Exercise Packet Pick Up |
| April 25, 2012Afternoon | Email Notification | Participating Organizations received notification that severe weather is expected to enter the area in the evening and early morning hours. |
| April 25, 2012 2000 hrs | Email Notifications | Participating Organizations received notification of Tornado Warnings taking effect in their communities.  |
| April 26, 2012 0800 hrs | Email Notifications, THAN, Phone calls | All participating agencies notified that exercise was terminated due to severe weather  |
| October 29, 2012Afternoon | Email Notification | Participating Organizations received notification that severe weather is expected to enter the area in the evening and early morning hours. |
| October 29, 2012 2000 hrs | Email Notifications | Participating Organizations received notification of Tornado Warnings taking effect in their communities.  |
| October 30, 20120800 hrs | THAN Notification | Participating Organizations received notification of Tornado Warnings taking effect in their communities.  |
| 0915 hrs  | UTMC | UTMC took a direct hit from a Tornado, sustaining severe damage.  |
| 0930 hrs | UTMC  | UTMC staff determined it was necessary to start emergency evacuations/ go on diversion. Notifications were delivered via prescribed methods (radio, THAN, HRTS, etc). UTMC also started managing the walking wounded and other self presenters that are arriving at their ED. |
| 0945 | Participating Hospitals  | Participating hospitals began receiving and processing a surge of patients (via EMS traffic, self presenters, etc).  |
| 1000  | Peninsula Behavioral Health Center | Participating hospitals were notified that Peninsula Behavioral Health Center is inaccessible due to fallen trees.  |
| 1015 | HRTS/THAN | RMCC/RHCs put out word to participating agencies that communications issues were arising. Request current bed availability be sent to UTMC/RMCC via HAM radio. |
| 1330 | All Participating Organizations | END EXERCISE |
| 1330  | All Participating Organizations | Conduct internal HOTWASH/collect participant feedback forms. |
| November 1, 2012 1400  | KCHD Auditorium | Controller/Evaluator Debriefing/HOTWASH |

**Appendix C: Acronyms**

[Any acronym used in the AAR should be listed alphabetically and spelled out.]

**Table F.1:** *Acronyms*

| Acronym | Meaning |
| --- | --- |
| AAR | After Action Report |
| CBRNE | Chemical, Biological, Radiological or Nuclear Event |
| EMS | Emergency Medical Services |
| EOC | Emergency Operations Center |
| EOC | Emergency Operations Center |
| EPT | Exercise Planning Team |
| ETR | East Tennessee Region |
| FSE | Full Scale Exercise |
| HICS | Hospital Incident Command System |
| HSEEP | Homeland Security Exercise and Evaluation Program |
| ICP | Incident Command Post |
| IP | Improvement Plan |
| MACC | Multi-Agency Coordinating Center |
| NIMS | National Incident Command System |
| NIMS | National Incident  |
| SME | Subject Matter Experts |
| SOP | Standard Operating Procedure |
| UTMC | University of Tennessee Medical Center |
| WMD | Weapons of Mass Destruction |
| RMCC | Regional Medical Communications Center |
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