Knox/East TN Healthcare Coalition Pediatric Surge Tabletop Exercise

Situation Manual

April 27, 2017

EXERCISE OVERVIEW

Exercise Name	Knox/East Tennessee Healthcare Coalition Pediatric Surge Tabletop Exercise (KET HCC Pediatric Surge TTX)
Exercise Dates	April 27, 2017
Scope	This exercise is a tabletop exercise, planned for 4 hours at Bearden Banquet Facility. Exercise play is limited to healthcare coalition members, local community partners (as identified by participating healthcare facilities).
Mission Area(s)	Response and Recovery
Core Capabilities	HPP Capabilities 1: Healthcare System Preparedness, 2: Healthcare System Recovery, 3: Emergency Operations, 5: Fatality Management, 6: Information Sharing; and 10: Medical Surge
Objectives	• Evaluate internal organizational plans ability to respond to a pediatric mass casualty event. • Discuss the internal and external communications systems utilized during such events. • Evaluate the resource needs and methods for requesting additional support. • Define the organization's ability to coordinate with outside agencies. • Discuss how to manage and recover from a pediatric mass casualty in the healthcare system. • Evaluate organizational and coalition reunification plans.
Threat or Hazard	Mass casualty event resulting in a surge of pediatric patients.
Scenario	An explosion of unknown etiology occurs at an elementary school assembly. It is 1250 hours on April 27, 2017 on a sunny and warm day. The school is located 3 miles from the hospital(s) in the county. There are numerous injured children and many are critical. Patients will arrive to area hospitals via ambulance and personal vehicle. Once the media hears about the blast, they will descend on the receiving hospital(s) along with parents and other concerned citizens.
Sponsor	Knox/East TN Healthcare Coalition utilizing ASPR grant funding.

Participating Organizations	Region-wide hospitals, public health, EMS, emergency management, and other appropriate partners.
Point of Contact	Charity Menefee, Knox County Regional Hospital Coordinator. Charity.menefee@knoxocunty.org 865-215-5098 AND Wanda Roberts, East TN Regional Hospital Coordinator Etrhc.health@tn.gov 865-549-5294

GENERAL INFORMATION

Exercise Objectives and Core Capabilities

The following exercise objectives in Table 1 describe the expected outcomes for the exercise. The objectives are linked to 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	Core Capability
Evaluate internal organizational plans ability to respond to a pediatric mass casualty event.	HPP and PHEP: 1, 2, 10
Discuss internal and external communications systems utilized during such events.	HPP and PHEP: 1, 2, 3, 5, 6
Evaluate the resource needs and methods of requesting additional support.	HPP and PHEP: 1, 2, 3, 5, 10
Define the organization's ability to coordinate with outside agencies.	HPP and PHEP: 1, 2, 6
Discuss how to manage and recover from a pediatric surge event in the healthcare system.	HPP and PHEP: 1, 2, 3, 5, 6, 10
Evaluate organizational and coalition reunification plans.	HPP and PHEP: 1, 2, 10

Table 1. Exercise Objectives and Associated Core Capabilities

Participant Roles and Responsibilities

The term *participant* encompasses many groups of people, not just those playing in the exercise. Groups of participants involved in the exercise, and their respective roles and responsibilities, are as follows:

- **Players.** Players are personnel who have an active role in discussing or performing their regular roles and responsibilities during the exercise. Players discuss or initiate actions in response to the simulated emergency.
- **Observers.** Observers do not directly participate in the exercise. However, they may support the development of player responses to the situation during the discussion by asking relevant questions or providing subject matter expertise.
- **Facilitators.** Facilitators provide situation updates and moderate discussions. They also provide additional information or resolve questions as required. Key Exercise Planning Team members also may assist with facilitation as subject matter experts (SMEs) during the exercise.
- **Evaluators.** Evaluators are assigned to observe and document certain objectives during the exercise. Their primary role is to document player discussions, including how and if those discussions conform to plans, polices, and procedures.

Exercise Structure

This exercise will be a multimedia, facilitated exercise. Players will participate in the following three modules:

- Overview: Review of TN pediatric hospital classifications baseline and surge requirements
- Module 1: Initial notification and receipt of initial patients
- Module 2: Management of additional patients
- Module 3: Transfer and Recovery

Each module begins with a multimedia update that summarizes key events occurring within that time period. After the updates, participants review the situation and engage in functional group discussions of appropriate issues. For this exercise, the functional groups will follow county and/or school district lines.

After these functional group discussions, participants will engage in a moderated plenary discussion in which a spokesperson from each group will present a synopsis of the group's actions, based on the scenario.

Exercise Guidelines

- This exercise will be held in an open, low-stress, no-fault environment. Varying viewpoints, even disagreements, are expected.
- Respond to the scenario using your knowledge of current plans and capabilities (i.e., you may use only existing assets) and insights derived from your training.
- Decisions are not precedent setting and may not reflect your organization's final position on a given issue. This exercise is an opportunity to discuss and present multiple options and possible solutions.
- Issue identification is not as valuable as suggestions and recommended actions that could improve prevention, mitigation, preparedness, response, and/or recovery efforts. Problem-solving efforts should be the focus.

Exercise Assumptions and Artificialities

In any exercise, assumptions and artificialities may be necessary to complete play in the time allotted and/or account for logistical limitations. Exercise participants should accept that assumptions and artificialities are inherent in any exercise, and should not allow these considerations to negatively impact their participation. During this exercise, the following apply:

- The scenario is plausible, and event discussions occur as they are presented.
- There is no hidden agenda, and there are no trick questions.
- All players receive information at the same time.
- Hospitals and EMS agencies should utilize their current census and staffing as a starting point for the exercise.

- At the onset of the exercise, East Tennessee Children's Hospital and University of Tennessee Medical Center have both received the 20 (10 per hospital) most critical patients from the event and are at capacity. Local hospitals MUST initially manage the patients they receive during the exercise. EMS is overwhelmed with the scene response; therefore out of area transfers to other pediatric referral hospitals in the state are not immediately possible.
- The pediatric surge event is located in each organization's individual school district.
- For this scenario, we will not be focusing on the cause of the explosion or the additional activities that should occur if it were hazardous materials or terrorism related. Focus your discussion efforts on assessing plans and resources available to medically manage a surge of pediatric patients.
- **East Tennessee Children's Hospital and University of Tennessee Medical Center Staff will have separate questions to address from the group as a whole that can be found in Appendix B.**

Exercise Evaluation

Evaluation of the exercise is based on the exercise objectives and aligned capabilities, capability targets, and critical tasks, which are documented in Exercise Evaluation Guides (EEGs). Evaluators have EEGs for each of their assigned areas. Additionally, players will be asked to complete participant feedback forms. These documents, coupled with facilitator observations and notes, will be used to evaluate the exercise and compile the After-Action Report (AAR).

MODULE 1: INITIAL NOTIFICATION AND RECEIPT OF INITIAL VICTIMS

April 27, 2017: (40 mins caucus and 15 mins brief-back)

1250 hours: Local EMS notifies the Regional Medical Communications Center (RMCC) of reports of a school explosion during a school assembly. Initial reports indicate as many as 50 children and adults in the area at the time of explosion. Estimated number of causalities is unknown, but initial 911 calls report that the situation is dire.

Brief Group Discussion

What notifications are initially made by the RMCC and how is the information disseminated?

Beginning at 1300, the first 5 patients start arriving at your hospital(s) – see patient scenarios 1-5

Questions

Based on the information provided, participate in the discussion concerning the issues raised in Module 1. Identify any critical issues, decisions, requirements, or questions that should be addressed at this time.

The following questions are provided as suggested subjects that you may wish to address as the discussion progresses. These questions are not meant to constitute a definitive list of concerns to be addressed, nor is there a requirement to address every question.

1. **Is this considered a pediatric disaster? Would your emergency operations plan/hospital command center be activated? Would the county EOC be activated? How is the initial EMS response managed and prioritized?**

2. **Describe specific communications needs and how to address them?**

3. **What are your staffing, supply, and environmental needs at this point?**

4. **How will your organization meet the current demand for pediatric care (beds, staffing, supplies, etc.) considering the specific details listed in the initial 5 patients scenarios?**

5. **What outside resources need to be considered at this time (blood products, fatality resources, EMS for transfers, others)?**

MODULE 2: RECEIPT OF REMAINING SURGE PATIENTS

April 27, 2017: (40 mins caucus and 20 mins brief-back)

1330 hours: You have now received word from the RMCC that 5 additional pediatric patients are on the way to your facility via EMS with an estimated time of arrival beginning in the next 3-4 minutes. Parents, the media, and concerned citizens have descended on your organization.

Beginning at 1335, the next 5 patients start arriving at your hospital(s) – see patient scenarios 6-10

Questions

Based on the information provided, participate in the discussion concerning the issues raised in Module 2. Identify any critical issues, decisions, requirements, or questions that should be addressed at this time.

The following questions are provided as suggested subjects that you may wish to address as the discussion progresses. These questions are not meant to constitute a definitive list of concerns to be addressed, nor is there a requirement to address every question.

1. **How will you handle the increasing number of injured? Worried well? Hysterical parents? Staff members who may have had children involved in the incident?**

2. **Where and how will you set up triage, family reunification, media areas, and other response areas at the scene and at the hospitals?**

3. **Where will you identify and admit all unaccompanied pediatric patients?**

4. **How will you keep track of all the pediatric patients and reunify them with the appropriate family members?**

5. **What supply and resource needs will be critical to address based on the specifc additional patient scenarios?**

6. **How is the community working together? Is there competition for resources? How are you communicating with staff, patients, families, etc.?**

7. **If there were numerous fatalties involved, what is the capacity of the local medical examiner and regional forensic center to manage the event?**

MODULE 3: RECOVERY

April 27, 2017: (40 mins caucus and 20 mins brief-back)

1530 hours: You have received word that all the patients have been cleared from the scene. Patients have been sent to numerous hospitals throughout the region. EMS resources are becoming available to assist with patient transfers.

Questions

Based on the information provided, participate in the discussion concerning the issues raised in Module 3. Identify any critical issues, decisions, requirements, or questions that should be addressed at this time.

The following questions are provided as suggested subjects that you may wish to address as the discussion progresses. These questions are not meant to constitute a definitive list of concerns to be addressed, nor is there a requirement to address every question.

1. **With limited EMS resources available, how do you prioritize which pediatric patients should be transferred to a higher level of care and which ones you can continue to manage internally? How does EMS manage and prioritize their resources during this phase considering the potential long commutes to out-of-area facilities?**

2. **How will the mental health needs of the staff, patients, and community be addressed?**

3. **What steps need to be addressed to assure your organization can return to normal operations?**

4. **If this were a terrorist or criminal event, what additional measures would need to be considered throughout this scenario? What would be different if the explosion resulted in hazardous materials contamination?**

APPENDIX A: EXERCISE SCHEDULE AND ACRONYMS

Time	Activity
April 27, 2017	
11:30 am	Registration and Lunch
12:00 pm	Welcome, Opening Remarks, and Background Review
12:20 pm	Module 1 Briefing, Caucus Discussion, and Brief-Back
1:15 pm	Break
1:25 pm	Module 2: Briefing, Caucus Discussion, and Brief-Back
2:25 pm	Break
2:35 pm	Module 3: Briefing, Caucus Discussion, and Brief-Back
3:35 pm	Break
3:45 pm	Hot Wash

Acronym	Term
ASPR	Assistant Secretary for Preparedness and Response
DHS	U.S. Department of Homeland Security
EMS	Emergency Medical Services
HSEEP	Homeland Security Exercise and Evaluation Program
SitMan	Situation Manual
SME	Subject Matter Expert
TTX	Tabletop Exercise

APPENDIX B: ETCH AND UTMC SCENARIO QUESTIONS

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Brief Group Discussion

What notifications are initially made by the RMCC and how is the information disseminated?

Beginning at 1300, the first 5 patients start arriving at your hospital(s) – see patient scenarios 1-5

Questions

Based on the information provided, participate in the discussion concerning the issues raised in Module 1. Identify any critical issues, decisions, requirements, or questions that should be addressed at this time.

The following questions are provided as suggested subjects that you may wish to address as the discussion progresses. These questions are not meant to constitute a definitive list of concerns to be addressed, nor is there a requirement to address every question.

1. **Is this considered a pediatric disaster? Would your emergency operations plan/hospital command center be activated?**

2. **How will you communicate between ETCH and UTMC? How will you relate critical information to EMS regarding capacity at each facility for the most critical patients (i.e. which patients should go to ETCH and which should go to UTMC?)**

3. **What are your staffing, supply, and environmental needs at this point?**

4. **What will be your messaging to EMS and other hospitals in the region at this time regarding patient transfers? How will you spread the information?**

5. **What outside resources need to be considered at this time?**

MODULE 2: RECEIPT OF REMAINING SURGE PATIENTS

April 27, 2017: (40 mins caucus and 20 mins brief-back)

1330 hours: You have now received word from the RMCC that 5 additional pediatric patients are on the way to your facility via EMS with an estimated time of arrival beginning in the next 3-4 minutes. Parents, the media, and concerned citizens have descended on your organization.

Beginning at 1335, the next 5 patients start arriving at your hospital(s) – see patient scenarios 6-10

Questions

Based on the information provided, participate in the discussion concerning the issues raised in Module 2. Identify any critical issues, decisions, requirements, or questions that should be addressed at this time.

The following questions are provided as suggested subjects that you may wish to address as the discussion progresses. These questions are not meant to constitute a definitive list of concerns to be addressed, nor is there a requirement to address every question.

1. **Parents and community members will likely initially assume their children have been transferred to your organizations. How will you handle the increasing number of injured? Worried well? Hysterical parents? Staff members who may have children involved in the incident?**

2. **Where and how will set up triage, family reunification, media areas, and other response areas?**

3. **Where will you identify and admit all unaccompanied pediatric patients?**

4. **How will you keep track of all the pediatric patients and reunify them with the appropriate family members?**

5. **What supply and resource needs will be critical to address based on the specifc additional patient scenarios?**

6. **How is the community working together? Is there a competition for resources? How are you communicating with staff, patients, families, etc.?**

MODULE 3: RECOVERY

April 27, 2017: (40 mins caucus and 20 mins brief-back)

1530 hours: You have received word that all the patients have been cleared from the scene. Patients have been sent to numerous hospitals throughout the region. EMS resources are becoming available to assist with patient transfers.

Questions

Based on the information provided, participate in the discussion concerning the issues raised in Module 3. Identify any critical issues, decisions, requirements, or questions that should be addressed at this time.

The following questions are provided as suggested subjects that you may wish to address as the discussion progresses. These questions are not meant to constitute a definitive list of concerns to be addressed, nor is there a requirement to address every question.

1. **With limited EMS resources available, how do you prioritize which pediatric patients should be transferred to your facilities and how do you communicate that to the other hospitals in the region?**

2. **How will the mental health needs of the staff, patients, and community be addressed?**

3. **What steps need to be addressed to assure your organization can return to normal operations?**

4. **If this were a terrorist or criminal event, what additional measures would need to be considered throughout this scenario? What would be different if the explosion resulted in a hazardous materials exposure?**

APPENDIX C: PATIENT SCENARIOS 1-10

1. **SCENARIO #1:**
   12yo male arrives with parents and is covered with dust in respiratory distress. Expiratory wheezes with retractions and accessory muscle use. HX of asthma, no prior intubations, no PICU admissions. Uses advair and albuterol PRN.
   - P:110, R:30, BP:120/70, O2: 90% GCS 15
   - Medical Considerations:
     - ABCs
     - Oxygen
     - Breathing Treatments
     - Steroids
     - IV Access and fluid replacement

2. **SCENARIO #2**
   6yo brought in by ambulance. Screaming she can't see. Multiple lacerations to her face, neck, chest. Large soft tissue avulsion of left mid-thigh with evidence of shrapnel penetrations andn active hemorrhaging. Poor peripheral perfusion.
   - P:120, R:28, BP:85/60, GCS: 15
   - Medical Considerations
     - ABCs
     - Fluids and blood replacement
     - Hemorrhage control
     - Evaluation/flushing of eyes.
     - Escalation to OR (Ortho and General Surgeon)

3. **SCENARIO #3**
   7yo female brought in by ambulance with severe respiratory distress and absent breath sounds on the right side. Numerous lacerations across chest and ABD. Tender to the right ABD with distention noted.
   - P:140, R:38, BP: 80/50, GCS: 14
   - Medical Considerations:
     - ABCs (Intubation?)
     - Hemothorax
     - Volume replacement (fluids/blood)
     - ABD trauma
     - Escalation to OR (General Surgery)

4. SCENARIO #4

11yo male brought in by EMS with facial burns, agonal respirations, lacerations to face and upper neck.

- P:60, R: 4, BP: 80/50, GCS: 4
- Medical Considerations:
    - ABCs (Intubation to secure airway)
    - Consider TBI vs hypoxia as cause
    - Fluid resuscitation
    - Possible Neurosurgery

5. SCENARIO #5

11yo female brought in with teacher. Unresponsive and missing left arm and leg. Wounds wrapped in blood soaked bandages.

- No vital signs, patient declared DOA on arrival
- Medical Considerations
    - Where will you put the deceased?
    - Support for family/caregivers (SW)

6. SCENARIO #6

14yo male with caregiver. He is rather large and is screaming and head banging. Non-verbal, hitting and biting anyone who approaches. Pt has history of autism and developmental delays. No obvious trauma

- P: 100, R: 18, BP: Unable to obtain D/T fighting, GCS: Unknown (non-verbal) behavior WNL per teacher
- Medical Considerations
    - ABCs
    - Difficulty assessing for injuries
    - Communication on his level
    - Safety of patient and caregiver with minimal resources (Restraints? Medications?)

7. SCENARIO #7

5yo male brought in by EMS. Pt has a history of seizures and has been known to have break through seizures (tonic clonic) requiring rectal valium.

- P:95, R: 18, BP: 100/70, GCS 15
- Medical Considerations
    - ABCs
    - Seizure precautions
    - Who will watch the child?

8. SCENARIO #8

7yo female who is ventilator dependent (neuromuscular disorder) arrives via EMS. She also receives continuous feeds through her g-tube. She has a metabolic condition and requires continuous feeds to prevent hypoglycemia. Both her home ventilator and feed pump were damaged in the blast. EMS has bagged via trach without difficulty. She is alert and at baseline.

- HR: 115, R: 22 (bagged), BP: 115/65, O2: 96% (WNL for patient)
- Medical Considerations
    - ABCs
    - Needs ventilator
    - Needs pump with formula
    - What else could you do if not pump/formula is available?

9. SCENARIO #9

9yo male is brought in by EMS with bleeding from right arm. He has several lacerations to face and other extremities. He is lethargic and only opens his eyes to painful stimulation. On exam he has a open fracture of the humerus with mild active bleeding. He has a alert bracelet that states he has Congential Adreanal Hyperplasia (CAH). No signs of trauma to his head.

- P: 136, R: 14, BP: 86/48, BSG: 28mg/dL
- Medical Considerations
    - ABC
    - Pt is breathing effectively at this time but needs 100% O2 (NRB)
    - CAH patients need stress doses of steroid to prevent hypotension and hypoglycemia. Hypoglycemia needs to be corrected immediately and in some cases more than once.
    - Pain control once awake.
    - Stress dose of steroids.

10. SCENARIO #10

8 yo male found unresponsive near the scene. He has obvious head trauma with open wound to the back of the head. No other obvious injuries.

- HR: 50, RR: 8, BP: 130/60, GCS: 6
- Medical Considerations
    - ABCs
    - Hypertonic Saline/3%
    - Neuro consult
    - C-spine

APPENDIX D: SAMPLE REQUIRED RESOURCES PER PATIENT SCENARIO

Supplies	Quanity Readily Available in ED	Total Quantity Needed for Scenarios	Scenario #1	Scenario #2	Scenario #3	Scenario #4	Scenario #5	Scenario #6	Scenario #7	Scenario #8	Scenario #9	Scenario #10
Pediatric ETT		3			1	1						1
Pediatric Non-rebreather		3		1	1						1	
Pediatric Nasal Cannula		1										1
Pediatric CO2 Confirmation Device		3			1	1						1
Pediatric BVM (Mask & Bag)		3			1	1						1
Pediatric Nebulizer mask		1	1									
Nebulizer Set-up		1	1									
IV Catheter 24 & 22g		21	2	4	5	4					2	4
Pediatric IO Needles + Connectors		5		1	1	1					1	1
IV Tubing		11	1	3	2	2					1	2
Blood Tubing		3		1	1							1
Saline Bag		15	1	4	3	2					2	3
Pressure Bag		4		1	1	1						1
IV Pump		5	1	1	1	1						1
Blood (O-)		6		2	2							2
Cardio/Resp Monitor		6	1	1	1	1					1	1
Chest Tube Set up with tube		1			1							
General Dressing Supplies		5		1	1	1					1	1
Pediatric Hemorrhage Tourniquet		1		1								
Saline for irrigation (at least 500ml)		6		2	1	1					2	
Pain Medication (morphine, fentany,		4		1	1	1					1	

etc.)												
Asthma Medication (Including Steroids)		1	1									
RSI Medication		2			1	1						
Mannitol/3%		0										
Behavioral Medication		1						1				
ABXs (ancef, rocephin, etc.)		4		1		1					1	1
Dextrose/Steroids		1									1	
Ventilator		3			1	1				1		
Feeding Pump/Bag/Tubing		1								1		

Supplies	Quantity Readily Available in ED	Total Quantity Needed for Scenarios	Scenario #1	Scenario #2	Scenario #3	Scenario #4	Scenario #5	Scenario #6	Scenario #7	Scenario #8	Scenario #9	Scenario #10
Ophthalmology		0										
Orthopedics		1									1	
Neurosurgery		1										1
General Surgery		3		1	1							1
SW		3					1	1	1			
RT		5	1		1	1				1		1
RN		15	1	2	2	2	1	1	1	1	2	2