



NICU EVACUATION HANDS-ON TRAINING



After Action Report and Improvement Plan (AAR-IP)

The After-Action Report and Improvement Plan (AAR/IP) summarizes training information required for preparedness reporting and trend analysis by aligning training objectives with preparedness doctrine, related frameworks, and national guidance. This information is compiled into recommendations and corrective actions in the improvement plan to improve local and regional preparedness, response, and recovery activities.

TRAINING OVERVIEW

Training Name	NICU EVACUATION HANDS-ON TRAINING 2022
Training Date	SEPTEMBER 22, 2022
Scope	This is a collaborative, hands-on training between the EMTF-6 AMBUS Team and UTMB-Galveston NICU Staff. Evacuation plans will be discussed and participants will be familiarized with NICU equipment and the procedures required to move and secure NICU isolettes into two versions of AMBUS.
Mission Area	Preparedness, Response, and Recovery
Capabilities	<ul style="list-style-type: none"> • Capability 2: Health Care and Medical Response Coordination • Capability 3: Continuity of Healthcare Service Delivery • Capability 4: Medical Surge
Objectives	<ul style="list-style-type: none"> • Evaluate EMTF and UTMB NICU evacuation policies and procedures in anticipation of a planned or no-notice catastrophic event, including patient tracking/receiving, staffing requirements, and logistical needs. • Identify coordination and communication methods used to mitigate the effects of a hurricane or no-notice disaster.
Hazard	Major Weather Event – Hurricane or No-notice disaster
Scenario	No scenario was utilized for this hands-on training.
Sponsor	EMTF-6 UTMB-Galveston Hospital Preparedness Program (HPP) Regional Healthcare Preparedness Coalition (RHPC) Southeast Texas Regional Advisory Council (SETRAC)
Participating Organizations	SETRAC, UTMB, TDEM, Atascocita Fire Department, Fort Bend County EMS, Acadian EMS.
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GENERAL INFORMATION

Training Objectives and HPP Capabilities

The following training objectives in Table 1 describe the expected outcomes for the training. The objectives are linked to HPP capabilities, which are distinct critical elements necessary to achieve the specific mission requirements. The objectives and aligned HPP capabilities are guided by elected and appointed officials and selected by the Planning Team.

Training Objectives	HPP Capability
Evaluate evacuation and shelter-in-place policies and procedures in anticipation of a major weather event or no-notice disaster, including patient tracking and receiving.	<ul style="list-style-type: none"> • Capability 2: Health Care and Medical Response Coordination • Capability 3: Continuity of Healthcare Service Delivery
Identify coordination and communication methods used to mitigate the effects of a hurricane or no-notice disaster.	<ul style="list-style-type: none"> • Capability 2: Health Care and Medical Response Coordination • Capability 4: Medical Surge

Table 1. Training Objectives and Associated HPP Capabilities

TRAINING SCENARIO

This training will utilize existing evacuation plans and equipment from UTMB-Galveston NICU and the EMTF-6 AMBUS Teams to improve coordination and familiarization of procedures used during an evacuation of the NICU due to a planned or no-notice disaster.

CAPABILITY PERFORMANCE RATINGS

Aligning training objectives and preparedness capabilities provides a consistent taxonomy for evaluation that transcends individual training to support preparedness reporting and trend analysis nationwide. The core capabilities include Operational Coordination, Critical Transportation, Public Health and Medical Services, and Mass Care Services; however, the table below includes performance ratings for each Health Care Preparedness and Response capability objective written by the planning team and observed with average ratings based on the evaluator notes during the training.

Table 1: Summary of Health Care Preparedness & Response Capability Performance Ratings

Capability	Training Objectives	Rating
2. Healthcare and Medical Response Coordination	Evaluate evacuation and shelter-in-place policies and procedures in anticipation of a major weather event or no-notice disaster, including patient tracking and receiving.	S
3. Continuity of Healthcare Service Delivery	Evaluate evacuation and shelter-in-place policies and procedures in anticipation of a major weather event or no-notice disaster, including patient tracking and receiving. Identify coordination and communication methods used to mitigate the effects of a hurricane or no-notice disaster.	S
4. Medical Surge	Identify coordination and communication methods used to mitigate the effects of a hurricane or no-notice disaster.	P
<p>Ratings Definitions:</p> <ul style="list-style-type: none"> • Performed without Challenges (P): The targets and critical tasks associated with the core 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 has conducted in accordance with applicable plans, policies, procedures, regulations, and laws. • Performed with Some Challenges (S): The targets and critical tasks associated with the core 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 core capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance has 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 core capability were not performed in a manner that achieved the objective(s). 		

ANALYSIS OF CAPABILITY OBJECTIVES

This section provides a summary of observations for each objective evaluated with its corresponding capability. The observations are compiled below as either strengths or areas for improvement with an analysis of factors identified and discussed by participants, then recorded by training evaluators.

Capability 2: Healthcare and Medical Response Coordination

Objective:

Evaluate evacuation and shelter-in-place policies and procedures in anticipation of a major weather event or no-notice disaster, including patient tracking and receiving.

Strengths:

- Experience level of participants
- Collaboration among organizations including UTMB, EMTF, SETRAC, & TDEM
- Sharing and discussing different organizational plans
- Availability of resources in Southeast Texas

The following areas of improvement are required to achieve the full capability level:

Areas for Improvement:

- Develop procedures to secure non-transport isolettes and patients for long-distance transport
- Ensure early planning and activation of EMTF & UTMB resources/personnel when evacuation of the facility is expected or possible due to a disaster
- Ensure EMTF MIST personnel are involved in the planning (when activated) and understand UTMB procedures
- Coordinate means and methods of communication between UTMB and Evacuation Teams
- Develop transport guidelines for the AMBUS convoy

Analysis:

Several strengths were identified from this training, including considerable depth of experience and knowledge within the EMTF Team and NICU Staff; willingness and ability to share procedures and plans; and prompt availability of evacuation resources in Southeast Texas. The sharing of evacuation procedures and plans was invaluable to the participants and provides a common basis for future operations. From this training, areas of improvement were identified to better meet Capability 2 (Healthcare and Medical Response Coordination). This can be done by improving/standardizing coordination of the response and communications through the CMOC (Catastrophic Medical Operations Center) with the facility and EMTF. Additionally, the necessity for transport-specific isolettes or improved methods for securing the current isolettes and NICU patients needs to be addressed by the facility and evacuation teams. Even simple changes, such as utilizing ratchet straps, will improve efficiency during loading and the security of the isolettes. It was also suggested to develop transport guidelines for the AMBUS and convoy—such guidelines could recommend max speed limits and increased following distances to allow for smooth braking and lane adjustments without significant forces being placed on the isolettes and infants within them.

Capability 3: Continuity of Health Care Service Delivery

Objective:

Evaluate evacuation and shelter-in-place policies and procedures in anticipation of a major weather event or no-notice disaster, including patient tracking and receiving.

Strengths:

- UTMB, SETRAC, and the EMTF have experience with patient tracking through EMTrack
- UTMB has procedures in place to document patient movements and medical history
- Sharing plans and procedures for evacuation – the UTMB webpage is very informative
- Discussion of staffing plans and logistical considerations for UTMB staff

The following areas of improvement are required to achieve the full capability level:

Areas for Improvement:

- Re-establish and review supply chain needs and contacts
- Determine staffing requirements (RN, RT, MD) for the patients being transported via AMBUS
- Ensure hospital staff are aware of the need for the AMBUS crew to conduct all loading operations
- Hospital staff should evaluate the suitability of current isolettes for long-distance transport of NICU patients

Analysis:

Though the same objective as Capability 2, Capability 3 focuses more specifically on the contingencies of a severe weather event or no-notice disaster. Again, strengths identified from the training include sharing of procedures and plans, considerable experience among team members, and familiarity with the patient tracking systems utilized during evacuations. Many identified areas of improvement focus on the logistical requirements of a NICU evacuation. Both hospital staff and AMBUS crews should prepare for the critical care needs of NICU patients, specifically for medical oxygen supply and logistics prior to evacuation. Hospital staff can meet this improvement area by reviewing contracts with vendors and planning to have adequate supplies of medical oxygen present before an evacuation is implemented. AMBUS crews need to plan for the storage and safe transport of medical oxygen bottles. As mentioned previously, patient safety can be improved through the acquisition of transport-specific isolettes. Lastly, planning for transport staffing is critical to the success of an evacuation mission. An evacuation plan should consider and communicate the staffing requirements (number of RTs, RNs, MDs) of a long-distance evacuation. Additionally, such a plan should consider logistical planning for these staff, while enroute to the receiving facility, upon arrival at the receiving facility, and for return to the home facility.

Capability 4: Medical Surge

Objective:

Identify coordination and communication methods used to mitigate the effects of a hurricane or no-notice disaster.

Strengths:

- Sharing of surge plans during severe weather when facilities are already stressed

The following areas of improvement are required to achieve the full capability level:

Areas for Improvement:

- Consideration of reducing patient census prior to an evacuation mission
- Preparing the receiving facility for an influx of NICU patients through pre-disaster planning and cooperative agreements between the facilities

Analysis:

Participants echoed a similar sentiment as stated in response to the other capabilities: sharing and discussing plans is paramount in ongoing medical response preparation. For this specific capability, the focus was on the inevitable surge of patients that occurs during and after a severe weather event. Participants also noted two areas of improvement for accomplishing this capability. First, plans should address reducing hospital census by appropriately discharging patients. Second, pre-disaster planning and cooperative agreements with receiving facilities can alleviate some of the obstacles related to an influx of NICU patients and attending staff.

PARTICIPATING ORGANIZATIONS

Acadian EMS
Atascocita Fire Department
Fort Bend Co. EMS

SETRAC
Texas Division of Emergency Management
UTMB

Authorizing Signature: _____ Date: _____