Maryland Region III Health and Medical Coalition 2019 Evacuation/Medical Surge Exercise

Operation Time to Go 2

After-Action Report/Improvement Plan

AAR/IP Revision Date: **July 23, 2019**

Date of Exercise: **June 11, 2019**

The After Action Report and 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 for Preparedness and Response's (ASPR) National Guidance for Health Care Preparedness and the Hospital Preparedness Program Measures.

EXERCISE OVERVIEW

Exercise Name	2019 Evacuation/Medical Surge Exercise - *Operation Time to Go 2*
Exercise Date	June 11, 2019 8:00 a.m. to 12:30 p.m.
Scope	The 2019 Evacuation/Medical Surge Exercise was conducted over approximately 4.5 hours at four primary venues (Northwest Hospital, Sinai Hospital of Baltimore, Johns Hopkins Bayview Medical Center, and MedStar Franklin Square Medical Center) and multiple additional venues. The exercise scenario involved a response to power outages, driving evacuation of pre-determined hospitals (Northwest, Sinai, and Johns Hopkins Bayview) and corresponding medical surge at receiving hospitals.
Mission Area(s)	Response
HPP and Response Capabilities	Hospital Preparedness Program (HPP) Capabilities: HPP Capability #2 – Health Care and Medical Response Coordination HPP Capability #3 – Continuity of Health Care Service Delivery (performance measures included as Appendix E) Response/Joint Commission Capabilities: - Communications - Resource and Asset Mobilization - Staff Roles and Responsibilities - Patient Clinical and Support Care - Safety and Security - Utilities
Objectives	1. The evacuating hospitals will report their initial census, number of patients discharged, and patients remaining (waiting for placement) for each of the seven identified exercise hospital units as evidenced by their completion and submission of Exercise Table A-1. 2. The evacuating hospitals will report the names of the receiving hospitals and the number of patients in each exercise bed category they are accepting as evidenced by their completion and submission of Exercise Table A-2. 3. The evacuating hospitals will report the name of each transport organization or indicate they have made contact with MIEMSS and document the type of emergency transportation that is being provided as evidenced by their completion and submission of Exercise Table A-3.

	4. The evacuating hospitals will notify the appropriate government agencies once the decision is made to evacuate as evidence by their notification documentation (name of agency and time of notification). 5. The evacuating hospitals will demonstrate knowledge of activities their facility should undertake within the first two hours of a hospital evacuation process as evidenced by their documentation of activities per their hospital protocol. 6. All participating hospitals and needed state agencies will coordinate patient placement through the use of a regional teleconference as evidenced by their representation and active participation in providing assistance for bed placement. 7. Jurisdictional and state-level health and medical participants will communicate with appropriate jurisdictional and state-level stakeholders to process received requests for assistance and allocate resources as evidenced by documentation of activities by all involved parties.
Threat or Hazard	Regional Heatwave and Utility Outage Incident - including hospital patient evacuations
Scenario	The scenario for this exercise includes a regional heatwave and resultant surge in admissions for heat-related illnesses. Additionally, utility breakdowns at Northwest, Sinai, and Johns Hopkins Bayview create conditions for evacuation of patients to other regional hospitals.
Sponsor	National Exercise Division (NED) Federal Emergency Management Agency (FEMA) U.S. Department of Homeland Security (DHS)
Participating Organizations	A broad spectrum of primary, support, and coordinating agencies for an evacuation/medical surge incident. A list of participating agencies and organizations is included in Appendix B.

Points of Contact (POC)	**NED Exercise POC:** R. Duane Keel National Exercise Division (NED) Federal Emergency Management Agency (FEMA) U.S. Department of Homeland Security (DHS) Phone: (202) 786-0839 roy.keel@fema.dhs.gov **Maryland Region III POCs:** Loreal Froat, MPS, CHEP Assistant Director, Emergency Management MedStar ER One Institute The Dr. Michael Pipkin Emergency Department MedStar Franklin Square Medical Center, ED 9000 Franklin Square Drive Baltimore, MD 21237 Phone: (443) 777-2479 loreal.froat@medstar.net Lisa Swank, BSN, RN Emergency Preparedness Coordinator Harford County Health Department 120 S. Hays Street, P.O. Box 797 Bel Air, MD 21014 Phone: (410) 877-1028 lisa.swank@maryland.gov

EXECUTIVE SUMMARY

The 2019 Maryland Region III Evacuation/Medical Surge Exercise, *Operation Time To Go 2* was conducted at four primary venues (Northwest, Sinai, Johns Hopkins Bayview, and MedStar Franklin Square hospitals) and multiple additional venues on June 11, 2019. The exercise scenario involved a response to power outages, driving evacuations of the pre-determined hospitals (Northwest, Sinai, and Johns Hopkins Bayview) and the corresponding medical surge at receiving hospitals.

Principle evaluation criteria for the exercise were organized in the following categories: communications, resource and asset mobilization, staff roles and responsibilities, patient clinical and support care, safety and security, and utilities. 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. Included with this AAR is the Improvement Plan (Appendix A), the list of participating organizations (Appendix B), Feedback Survey results (Appendix C), a summary of the exercise including the scenario (Appendix D) and HPP Grant Performance Measures (Appendix E).

Major Strengths

The major strengths identified during this incident are as follows:

- Most regional partners agreed that the basic format of the Patient Placement Coordination Call was well organized, facilitated rapid regional situational awareness, and was an efficient use of time.
- At numerous facilities, multiple methods of communication including radios, cell phones (voice, text, and picture messages), and runners were used to communicate among multiple rooms throughout the facility.
- A total of 23 regional partners participated in the Patient Placement Coordination Call, with entities from state, local, and private sectors and positions including Hospital Command Center (HCC) Managers, Safety Officers, Administrator On Call, EP Planners/Coordinators, Nursing Administrators and Supervisors, Logistics RNs, Director of Operations, and Emergency Management.
- In many cases, individual facility resources (elder care buses repurposed for evacuation of ambulatory patients, Public Information Officer [PIO] assistance drawn from Marketing) were utilized for emergency purposes that contributed to overall sustainability of emergency operations efforts.
- Regional resources were called upon and utilized during the simulated incident, including transportation coordination through MIEMSS.
- At numerous facilities, the Hospital Incident Command System (HICS) was implemented to assign roles and responsibilities during the simulated incident, and several displayed assignments on an Incident Command System (ICS) 207 Incident Organization Chart.

- Many facilities activated their Emergency Operations Plans and followed the roles and responsibilities outlined therein.
- Multiple receiving hospitals in the region identified rapid discharge patient pickup locations.
- Several of the receiving hospitals also identified ALS and BLS ambulance loading areas.
- At multiple facilities, evacuation staging areas were predetermined.
- Hospital security is generally well incorporated into emergency operations at facilities across the region.
- The Patient Placement Coordination Call provided situational awareness for regional partners regarding utility stressors at the impacted facilities.

Primary Areas for Improvement

Throughout the exercise, several opportunities for improvement in the region's ability to respond to the incident were identified. The primary areas for improvement are as follows:

- Participants on the Patient Placement Coordination Call agreed that the concept was sound, but provided the following recommendations for improvement:
    - Provide a status overview of all evacuating facilities at the beginning of the call
    - Provide a central electronic means for tracking and displaying the information shared on the call
    - Provide common bed terminology (especially ICU and med surge beds), standard bed specialty definitions, and reporting methodology for use by participants during the call
    - Provide clarification on entity roles and responsibilities for facilitating, providing input ,and tracking decisions during the call (including which entity should lead the call)
- Numerous opportunities for improvement were presented regarding patient transportation:
    - How bariatric patients would be transported,
    - Identifying patient types that could be placed on mass transport buses,
    - Most efficient use of ambulance buses
    - Uncertainty in communications modality between hospitals and transports,
    - Lack of practice assigning large numbers of evacuating patients to individual transportation resources while incorporating destinations and turnaround time,
    - When would the Attorney General need to be involved to allow clinical support/ equipment on transports to allow for a more flexible use of transportation resources.
    - Determining percent of transport resources that can consistently provide a fairly quick turnover rate for patient placements nearby,
    - Process of dividing transport resources among multiple hospitals

Although the following actions are important in a hospital evacuation they were not included in the objectives for this particular exercise.

- Evaluators did not observe decisions regarding family reunification being the responsibility of the evacuating or receiving hospital.
- Extensive discussions were not observed regarding details of patient evacuation including what information (medical history, patient charts) and resources (medical equipment, medications, health care provider) would accompany each patient being evacuated.
- Detailed safety and security protocols and procedures were not discussed during the simulated incident.
- Evaluators did not observe HCC staff being assigned to work through utility outages.

CAPABILITY RATINGS

Aligning exercise objectives and Hospital Preparedness Program (HPP) Health Care Preparedness and Response capabilities provides a consistent methodology for evaluation that transcends individual exercises and real-world responses to support preparedness reporting and trend analysis. Ratings are assigned by the sub recipient to HPP activities evaluated during the exercise.

Hospital Preparedness Program (HPP) Capability	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
#2 - Health Care and Medical Response Coordination		√		
#3 - Continuity of Health Care Service Delivery		√		

Ratings Definitions:

- *Performed without Challenges* (P): The targets and critical tasks associated with the health care 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 health care 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 health care 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 health care preparedness capability were not performed in a manner that achieved the objective(s).

HOSPITAL PREPAREDNESS PROGRAM (HPP) CAPABILITY ANALYSIS

The following sections provide an overview of exercise participant performance related to each response capability, highlighting strengths and areas for improvement. The analysis below is directly linked to the HPP activity ratings and list of applicable reference documents.

COMMUNICATIONS

Strengths

The partial capability level can be attributed to the following strengths:

- Most regional partners agreed that the basic format of the Patient Placement Coordination Call was well organized, facilitated rapid regional situational awareness, and was an efficient use of time.
- At numerous facilities, multiple methods of communication including radios, cell phones (voice, text, and picture messages), and runners were used to communicate among multiple rooms throughout the facility.
- Public Information Officers (PIO) were activated at several facilities. Some PIOs quickly drafted press releases and handled internal communications using templates.
- Multiple participants established a media staging area away from evacuation operations.
- Hospitals frequently used voice communication/intercom systems to update employees, patients, and visitors regarding the emergency situation.
- A total of 23 regional partners participated in the Patient Placement Coordination Call, with entities from state, local, and private sectors and positions including HCC Managers, Safety Officers, Administrator On Call, EP Planners/Coordinators, Nursing Administrators and Supervisors, Logistics RNs, Director of Operations, and Emergency Management.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Participants on the Patient Placement Coordination Call agreed that the concept was sound but provided the following recommendations for improvement:

- Provide a status overview of all evacuating facilities at the beginning of the call.
- Provide a central electronic means for tracking and displaying the information shared on the call.
- Provide common bed terminology (especially ICU and med surge beds), standard bed specialty definitions, and reporting methodology for use by participants during the call.

- Provide clarification on entity roles and responsibilities for facilitating, providing input and tracking decisions during the call (including which entity should lead the call).

Analysis: The forum and detailed information sharing during the call was deemed beneficial, but the agenda, data management, terminology, definitions, roles and responsibilities could all be updated and expanded.

Recommendation: Address each one of the areas for improvement prior to exercising the Patient Placement Coordination Call in the future.

Recommendation 1: All regional partners will be notified of a hospital incident/ hospital evacuation by MIEMSS using MEMRAD. Notification should direct all hospitals to cease elective surgeries, begin rapid patient discharge and establish bed surge capacity.

Recommendation 2: MDH-OP&R will establish a Conference Call Line and notify necessary partners using MJOC alert/ HC Standard and HAN as to the conference call information (phone number, password, time of call, objective).

Recommendation 3: Participants on the Patient Placement Call should include the following: MEMA, MIEMSS, OHCQ (critical in placement of long term care patients), Local Emergency Mgt, Local Health Department, evacuating hospital(s) and rest of Region III hospitals.

Recommendation 4: The Patient Placement Call should not take place prior to the evacuating hospital(s) confirmation that in network patient placements have been arranged.

Recommendation 5: Roll call (especially important to have every hospital represented). If a hospital is not on the line, an attempt should be made to contact them in order to ensure patient placement can take place at their facility.

Recommendation 6: Host of Call during exercise:

- Describe limitations of the exercise (no placements made outside the region and description of transportation limitations).
- Designate a staff member to record each patient placement using an excel spreadsheet in Google Docs that will list each hospital in Region III with their bed categories or MIEMSS may facilitate patient placement documentation through the use of HSIN, providing call participants with a web link to their chat feature.
- Announce that Department of Human Services can assist with family reunification and patient tracking (CRISP).
- Hospitals should not make any calls to other hospitals for patient placement requests during the conference call.

Recommendation 7: Evacuating hospitals should provide a brief overview of patient placements that must be made in each bed category (ideally a regional bed chart would define each hospital's bed categories).

Recommendation 8: Host of Call will:

- Describe call protocol for Evacuating hospital: Announce name of facility, bed category placement, number of patients, which hospital they wish to address.
- Describe call protocol for Receiving hospital: Announce name of facility, number of open beds and repeat name of bed category.
- Ask evacuating hospital(s) to identify which bed category is a priority placement and repeat the number of patients in this bed category.
- Ask for a 5 minute break to check the Region III Hospital Matrix to find hospitals with same bed category and proximity to evacuating hospital (Hospital Map/Matrix). This time also allows receiving hospitals to double check their bed availability for this bed category.
- Host of Call will summarize possible patient placement locations based on presence of requested bed category within hospital and closest hospital location. Evacuating hospital(s) will begin placement process with recommended hospital list.
- Once specific requests are made: Evacuating Hospital(s) will call out to all facilities on line who have open beds in this bed category.
- Process would be repeated for each bed category.

Recommendation 9: Due to the unique nature of Trauma Center patients, perhaps there should be a regional agreement between trauma centers for patient placement during an evacuation.

Area for Improvement 2: Evaluators did not observe communication modality being established with individual transportation resources between evacuating or receiving hospitals.

Analysis: Potentially an exercise artificiality, the communications between individual regional transportation resources and the evacuating and receiving hospitals should be established as an integral part of selecting transport for the patients.

Recommendation: Review individual and regional plans to establish a baseline of communications modality, and integrate best practices into the plans.

RESOURCE AND ASSET MOBILIZATION

Strengths

The partial capability level can be attributed to the following strengths:

- In many cases, individual facility resources (elder care buses repurposed for evacuation of ambulatory patients, PIO assistance drawn from Marketing) were utilized for emergency purposes that contributed to overall sustainability of emergency operations efforts.
- Regional resources were called upon and utilized during the simulated incident, including transportation coordination through MIEMSS.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Numerous opportunities for improvement were present regarding patient transportation, including transportation resource shortages (such as large buses), uncertainty in communications modality between hospitals and transports, and lack of practice assigning large numbers of evacuating patients to individual transportation resources while incorporating destinations and turnaround time.

Analysis: The on-site coordination role from MIEMSS is essential and, due to exercise artificialities, was not fully implemented during the simulated incident**.**

Recommendation: Review regional and individual entity plans for full regional activation of transportation resources, including coordination and control, communications, information management, and critical transport resource prioritization. Implement best practices across the region.

Recommendation 1: Discuss with MIEMSS how best to address unique transport needs for certain patient bed types on the Patient Placement Call.

Recommendation 2: Patient transportation would be coordinated at a central location. Discuss with MIEMSS how they would divide initial available transport resources between multiple evacuating hospitals and when that should be discussed on the Patient Placement Call.

Recommendation 3: MIEMSS reports that one of their personnel would be on location at each evacuating hospital. Discuss how far in advance a hospital would know when a transport vehicle would be arriving at their facility, at the start of the event and throughout the evacuation process.

Recommendation 4: Commercial ambulance companies do not use the same communication tools so communication would be challenging. Although 24 hour contact information for these companies is kept by MIEMSS the issue to discuss with MIEMSS is how does the communication plan work when coordinating this resource type?

Recommendation 5: Ambulance buses would be used to transport large numbers of patients to one location. Discuss the prioritization process with respect to the use of this resource.

Area for Improvement 2: Consideration for repatriation of medical equipment was not observed.

Analysis: Although the majority of patients were placed at locations within 90 minutes of exercise play, no consideration was given to repatriation of equipment after the incident had stabilized. This may have been an exercise artificiality due to the time constraint; however, this detail should have been considered.

Recommendation: Consider assigning responsibility for repatriation of equipment to a specific position in the HICS organizational structure.

STAFF ROLES AND RESPONSIBILITIES

Strengths

The partial capability level can be attributed to the following strengths:

- At numerous facilities, the HICS was implemented to assign roles and responsibilities during the simulated incident, and several displayed assignments on an ICS 207 Incident Organization Chart.
- Many facilities activated their Emergency Operations Plans and followed the roles and responsibilities outlined therein.
- Participants identified the exercise as an opportunity to apply concepts learned through FEMA Independent Study courses.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Evaluators did not observe decisions regarding family reunification being the responsibility of the evacuating or receiving hospital.

Analysis: This could have been an exercise artificiality, but evaluators did not observe the decision-making process regarding which evacuating or receiving hospital should take the lead on family reunification for evacuated patients.

Recommendation: Review regional and facility plans to determine best practice regarding responsibilities for family reunification.

Area for Improvement 2: At several facilities, the incident management team stopped work in their assigned positions to listen to the Patient Placement Coordination Call.

Analysis: This could have been an exercise artificiality (and learning opportunity), as this call is not part of current operational policy in the region. Listening in on the call could have contributed to delays in the necessary evacuation logistical planning, as some decisions were made within the first few minutes of the conference call as to disposition of ICU patients.

Recommendation: Evaluate facility protocol for participation in the call. Consider separating a small group of people who need to speak on the call in a separate room, and playing the conference call in listen-only mode for the rest of the incident management team.

Area for Improvement 3: Some exercise participants were unsure of their roles and responsibilities, or were uncomfortable with letting go of their day-to-day responsibilities to take on their assigned HICS role.

Analysis: While many participants asked for help or used available job aids, several did not. Some participants described feeling as though they were delayed in taking the necessary actions to plan and execute patient evacuation while they got comfortable in their assigned role.

Recommendation: Continue to provide job aids for each position and provide regular training opportunities to familiarize staff with the HICS positions they would be expected to fill.

PATIENT CLINICAL AND SUPPORT CARE

Strengths

The partial capability level can be attributed to the following strengths:

- Multiple receiving hospitals in the region identified rapid discharge patient pickup locations.
- Several of the receiving hospitals also identified ALS and BLS ambulance loading areas.
- Most of the evacuating hospitals were able to assign transfers for the majority of their patients during the simulated incident.
- Prioritization of patient transfers were made—including the evacuating hospitals and coordination of transportation resources—to maintain patient clinical and support care for the duration of the simulated incident.
- Evacuating hospitals quickly stepped down through their discharge protocols, cancelled elective procedures, and focused resources on required evacuations.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Extensive discussions were not observed regarding details of patient evacuation, including the types of information (medical history, patient charts) and resources (medical equipment, medications, health care provider) that would accompany each patient being evacuated.

Analysis: This is potentially an exercise artificiality, but observers did not note any details regarding the information and resources that would accompany evacuated patients.

Recommendation: Regional and facility plans could be reviewed to identify best practices regarding the information and resources that should accompany evacuated patients. Checklists and specific details can be confirmed on a case-by-case basis.

Area for Improvement 2: Prioritization for evacuation was based primarily on the severity of the patient's condition.

Analysis: It was unclear how much consideration was given to facility infrastructure status and conditions in making evacuation prioritization decisions. While prioritizing patients based on acuity certainly makes sense, conditions within the facility (e.g., which unit/floor is the warmest? Do some parts of the facility still have air conditioning?) also needed to be considered to make a holistic assessment.

Recommendation: Develop a checklist for other considerations beyond patient acuity that should be assessed in determining evacuation priority. Ensure that patient priority decisions are made with input from non-clinical staff as well as clinical staff.

Area for Improvement 3: Evaluators did not observe case management and/or social work staff involvement in patient movement.

Analysis: Exercise participants identified the need to include case managers and/or social workers when handling logistics of patient movement. Because this is a function of their day-to-day job, their expertise would have been valuable to the incident management team.

Recommendation: Engage case management and/or social work staff in filling applicable positions in the HICS structure.

SAFETY AND SECURITY

Strengths

The partial capability level can be attributed to the following strengths:

- At multiple facilities, evacuation staging areas were predetermined.
- Hospital security is generally well incorporated into emergency operations at facilities across the region.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Detailed safety and security protocols and procedures were not discussed during the simulated incident.

Analysis: Perhaps an exercise artificiality, evaluators did not routinely observe detailed safety and security procedures being referenced and implemented during the simulated incident.

Recommendation: Review regional and facility safety and security plans to identify best practices and ensure best practices are incorporated into plans. Design training and exercises to test those plans.

Area for Improvement 2: In Baltimore City, evaluators did not observe references to roads in and around hospitals being shut down or route security for evacuations.

Analysis: Roads through the hospital campus are controlled by Baltimore City. Additionally, several bus routes go directly through the campus. As a result, the hospital does not have the authority to shut down the roads on their own.

Recommendation: Determine the process for requesting that roads be shut down and providing security for evacuation routes through Baltimore City Police and/or Emergency Management if deemed prudent to implement road closures.

Recommendation 1: The development of a Hospital Map (MEMA OSPREY system) and Hospital Location Matrix would assist with determining what the safest and closest route would be to an acceptable receiving hospital.

UTILITIES

Strengths

The partial capability level can be attributed to the following strengths:

- The Patient Placement Coordination Call provided situational awareness for regional partners regarding utility stressors at the impacted facilities.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Evaluators did not observe HCC staff assigned to work through utility outages.

Analysis: This may have been an exercise artificiality due to the focus on patient evacuation, but HCC operations should have included assignments to facility personnel working on overcoming the challenges facing utilities.

Recommendation: HCC and HICS training and exercises should include responding to the full spectrum of hazards faced at the facility and regional level, including mitigation, response, and recovery aspects of potential incidents.

Area for Improvement 2: Evaluators did not observe critical infrastructure assessments being conducted, or if they were completed, information was not shared.

Analysis: Lack of information about critical infrastructure status could have led to patients being moved unnecessarily, or resulted in errors in prioritization of patients for evacuation. This information is vital for understanding the holistic picture of the incident and in determining necessary actions to mitigate.

Recommendation: Include a report out for critical infrastructure status during situation updates.

CONCLUSION

The 2019 Evacuation/Medical Surge Exercise – Operation Time To Go 2 was successfully conducted with Maryland Region III Health and Medical Coalition partners. The exercise planning team took the opportunity to test the new Patient Placement Coordination Call. Areas for improvement were identified for all six categories of exercise focus (communications, resource and asset mobilization, staff roles and responsibilities, patient clinical and support care, safety and security, and utilities), but the largest opportunities to enhance preparedness exist in improving the Patient Placement Coordination Call and augmenting aspects of patient transport required under an evacuation scenario.

APPENDIX A: IMPROVEMENT PLAN

This Improvement Plan (IP) has been developed specifically for the Maryland Region III Health and Medical Coalition as a result of the 2019 Evacuation/Medical Surge Exercise conducted on June 11, 2019.

Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization POC	Start Date	Target Completion Date
Communications	1. Participants on the Patient Placement Coordination Call agreed that the concept was sound but provided the following improvement observations: a) Provide a status overview of all evacuating facilities at the beginning of the call. b) Provide a central electronic means for tracking and displaying the information shared on the call. c)Provide common terminology, standard specialty definitions and reporting methodology for	Address each one of the areas for improvement prior to exercising the Patient Placement Coordination Call again	Planning	MIEMSS, MDH OPR, Region III Coalition			

	use by participants during the call. d) Provide clarification on entity roles and responsibilities for facilitating, providing input and tracking decisions during the call (including which entity should lead the call).						
	2. Evaluators did not observe communication modality being established with individual transportation resources between evacuating or receiving hospitals.	Review individual and regional plans to establish a baseline of communications modality, and integrate best practices in plans.	Planning	MIEMSS, Hospital Transport Units,			

Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization POC	Start Date	Target Completion Date
Resource and Asset Mobilization	1. Numerous opportunities for improvement were present regarding patient transportation, including transportation resource shortages (such as large buses), uncertainty in communications modality between hospitals and transports, and lack of practice assigning large numbers of evacuating patients to individual transportation resources while incorporating destinations and turnaround time.	Review regional and individual entity plans for full regional activation of transportation resources, including coordination and control, communications, information management, and critical transport resource prioritization. Implement best practices across the region.	Planning	MIEMSS, Region III Coalition			
	2. Consideration for repatriation of medical equipment was not observed.	Consider assigning responsibility for repatriation of equipment to a specific position in the HICS organizational structure.	Organization	Hospitals			

Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization POC	Start Date	Target Completion Date
Staff Roles and Responsibilities	1. Evaluators did not observe decisions regarding family reunification being the responsibility of the evacuating or receiving hospital.	Review regional and facility plans to determine best practice regarding responsibilities for family reunification.	Planning	Hospitals, Region III Coalition			
	2. At several facilities, the incident management team stopped work in their assigned positions to listen to the Patient Placement Coordination Call.	Evaluate facility protocol for participation in the call. Consider separating a small group of people who need to speak on the call in a separate room and playing the conference call in listen-only mode for the rest of the incident management team.	Planning	Hospitals			
	3. Some exercise participants were unsure of their roles and responsibilities,	Continue to provide job aids for each position and provide regular training opportunities to	Training	Hospitals			

	or were uncomfortable with letting go of their day-to-day responsibilities to take on their assigned HICS role.	familiarize staff with the HICS positions they would be expected to fill.					

Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization POC	Start Date	Target Completion Date
Patient Clinical and Support Care	1. Extensive discussions were not observed regarding details of patient evacuation including the information (medical history, patient charts) and resources (medical equipment, medications, health care provider) that would accompany each patient being evacuated.	Regional and facility plans could be reviewed to identify best practices regarding the information and resources that should accompany evacuated patients. Checklists and specific details can be confirmed on a case by case basis.	Planning	Region III Coalition, Hospitals			
	2. Prioritization for evacuation was based primarily on the severity each patient's condition.	Develop a checklist for other considerations, beyond patient acuity, that should be assessed in determining evacuation priority. Ensure that patient priority decisions are made with input from non-clinical staff as	Planning	Region III Coalition, Hospitals			

		well as clinical staff					
	3. Evaluators did not observe case management and/or social work staff involvement in patient movement.	Engage case management and/or social work staff to fill applicable positions in the HICS structure.	Organization	Hospitals			

Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization POC	Start Date	Target Completion Date
Safety and Security	1. Detailed safety and security protocols and procedures were not discussed during the simulated incident.	Review regional and facility safety and security plans to identify best practices, and incorporate best practices into plans. Design training and exercises to test those plans.	Planning	Hospitals, Region III Coalition, Local EMA/LHDs			
	2. In Baltimore City, evaluators did not observe references to roads in and around Hospitals being shut down or route security for evacuations.	Determine the process for requesting that roads be shut down and providing security for evacuation routes through Baltimore City Police and/or Emergency Management if deemed prudent to implement road closures.	Planning	Hospitals, Local EMA/LHDs			

Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization POC	Start Date	Target Completion Date
Utilities	1. Evaluators did not observe HCC staff assigned to work through utility outages.	HCC and HICS training and exercises should include the full spectrum of hazards faced at the facility and regional level, including mitigation, response and recovery aspects of potential incidents.	Training	Hospitals			
	2. Evaluators did not observe critical infrastructure assessments being conducted, or if they were completed, information was not shared.	Include a report out for critical infrastructure status during situation updates.	Organization	Hospitals			

APPENDIX B: EXERCISE PARTICIPANTS

Participating Organizations
Federal Government
National Exercise Division (NED) FEMA DHS
State Government
Maryland Emergency Management Agency (MEMA)
Maryland Institute for Emergency Medical Services Systems (MIEMSS)
Maryland Department of Health, Office of Preparedness and Response (MDH – OP&R)
Public Health
Anne Arundel Health Department
Baltimore City Health Department
Carroll County Health Department
Harford County Health Department
Howard County Health Department
Hospitals
Johns Hopkins Bayview Medical Center
Northwest Hospital
Sinai Hospital of Baltimore
Anne Arundel Medical Center
Bon Secours Baltimore Health Systems
Carroll Hospital Center
Greater Baltimore Medical Center
Howard County General Hospital
Johns Hopkins Hospital
MedStar Franklin Square Medical Center
MedStar Good Samaritan Hospital
MedStar Harbor Hospital
MedStar Union Memorial Hospital
Mercy Medical Center
University of Maryland Harford Memorial Hospital
University of Maryland Medical Center
University of Maryland Midtown Campus
University of Maryland Upper Chesapeake Medical Center

APPENDIX C: PARTICIPANT FEEDBACK SUMMARY

Participant Feedback Form Assessment Question	Average Rating (5 highest to 1 lowest)
The exercise was well structured and organized.	4.27
The exercise scenario was plausible and realistic.	3.82
The exercise moved at an appropriate pace.	4.55
Participants were actively involved in the exercise.	4.27
Participation in the exercise was appropriate for someone in my position with my level of experience/training.	4.82
The exercise increased my understanding about and familiarity with the capabilities and resources of other participating organizations.	4.45
My agency/jurisdiction is better prepared to deal successfully with the scenario that was exercised.	4.36

APPENDIX D: EXERCISE SUMMARY

Date	Time	Summarized Exercise Actions
06/10/2019	1530	Module 1: (background below) Baltimore heatwave with surge in hospital patients with heat related illnesses. Additionally, utility breakdowns at Northwest, Sinai and Johns Hopkins Bayview created conditions for consideration of evacuations.
06/11/2019	0800	Module 2: (update below) Heatwave continues and utilities at the three hospitals will be out for an extended period of time. This prompted evacuation of these hospitals beginning at 0900 hours.
06/11/2019	0900	Evacuation and patient placement started with conference call.
06/11/2019	1030	Patient Placement Coordination Call ends
06/11/2019	1100	Regional facilitated conference call begins
06/11/2019	1230	Exercise ends

Module 1

Background

June 10, 2019 at 1530 hours

The Baltimore area is in the midst of a heat wave. Temperatures have averaged over 100 degrees Fahrenheit for the last 6 days. Residents and visitors have not acclimatized to this early and unprecedented rise in temperature. Baltimore County and Baltimore City governments have declared a state of emergency due to the heat wave.

Hospitals are reporting a surge in emergency room visits and patient admissions for heat-related illnesses. Across the region, fire departments have placed additional reserve medic units in service to keep up with an increase in call volume and to provide additional rest time for paramedics. The Maryland Department of Health is reporting seven deaths attributed to the heat with expectations of more to follow. Baltimore City and Baltimore County health departments have declared a Code Red each day during the heat wave. Cooling centers are open, the MTA is providing free bus service, and government agencies are deploying to assist the vulnerable population by providing water, fans, and ice. Temperatures are expected to remain elevated for 2 more days.

In addition, utility breakdowns have occurred in three Baltimore area hospitals. The Johns Hopkins Bayview Medical Center (Bayview), Northwest Hospital (Northwest), and Sinai Hospital (Sinai) have lost cooling capability at 1300 hours, 1400 hours, and 1430 hours, respectively. The interior temperature of each hospital continues to elevate. Sinai attributes the problem to a faulty switch that has caused a shutdown of the coolers. Bayview is focusing on a software malfunction that is preventing electrical flow to power cooling equipment. Northwest is experiencing a power outage after prolonged excessive electricity usage blacked out the surrounding area. Since the problem began, Facilities and Maintenance officials at each hospital have assured leadership that normal cooling capabilities are estimated to resume by 1200 tomorrow (Tuesday), barring any further complications.

Module 2

June 11, 2019 at 0800 hours

Facilities and maintenance officials at each hospital have reassessed the situation and determined the restoration of cooling capabilities will take longer than expected. The outage will last at least 24 to 36 additional hours, and crews predict the internal temperatures will rapidly increase to match the current outside temperature of 101 degrees.

Upon receipt of the predicted prolonged temperature increases within the respective hospitals, and after consultation with their respective leadership, all three hospitals have decided not to accept any emergency room or transfer patients and **to begin the evacuation of their entire hospital at 0900 hours.** This will include discharging patients that can safely go home and evacuating patients to assisted living facilities, nursing homes, **other hospitals,** etc….

APPENDIX E: HPP GRANT PERFORMANCE MEASURES

PM14: Health Care Coalition (HCC) core member organizations participating in Exercise

Hospitals: _____
EMS: _____
EM: _____
Public Health: _____

PM15: HCC member organizations' executives participating in facilitated discussion/after-action review

Hospitals: _____
EMS: _____
EM: _____
Public Health: _____

PM16: Number of patients at the evacuating facilities that are identified as able to be:

Discharged safely to home during Evacuation/Surge Exercise: _____
Evacuated to receiving facilities during Evacuation/Surge Exercise: _____

Total number of patients at evacuating facilities at the beginning of the Exercise: _____
Total number of staffed acute-care beds in the Coalition: _____

PM17: Time (in minutes) for evacuating facilities in the HCC to report the total number of evacuating patients.

Time in minutes for the last evacuating facility to report the total number of patients identified as able to be evacuated after start of exercise: _____

PM18: Number of evacuating patients to an appropriate bed identified at a receiving health care facility in 90 minutes.

Total number of beds identified at all receiving facilities at the end of the exercise: _____

PM19: Time (in minutes) for receiving facilities in the HCC to report the total number of beds available to receive patients.

Time in minutes for the last receiving facility to report the total number of beds available to receive patients after start of exercise: _____

PM20: Number of evacuating patients with acceptance for transfer to another facility that have an appropriate mode of transport identified in 90 minutes.

Total number of patients matched to a confirmed, appropriate mode of transport to their receiving facility at the end of the exercise: _____

PM21: Time (in minutes) for the HCCs to identify an appropriate mode of transport for the last evacuating patient.

Time in minutes for an available and appropriate mode of transport to be identified for the last evacuating patient after start of exercise: _____