

U.S. Department of Health & Human Services
Administration for Strategic Preparedness & R Administration for Strategic Preparedness & Response

Medical Response & Surge **Exercise (MRSE) Evaluation Plan**

Hospital Preparedness Program



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1.0 INTRODUCTION

The **Medical Response & Surge Exercise** (MRSE) was created by the U.S. Department of Health and Human Services (HHS) Administration for Strategic Preparedness and Response (ASPR). The exercise procedures and supporting materials described in the Situation Manual (SitMan) and this Evaluation Plan are aligned with updated the Federal Emergency Management Agency (FEMA) Homeland Security Exercise and Evaluation

(HSEEP) guidelines issued in 2020. MRSE is a functional exercise, which HSEEP describes as "an operations-based exercise designed to test and evaluate capabilities and functions while in a realistic, real-time environment."

MRSE and this Evaluation Plan were produced with input, advice, and assistance from the National Healthcare Preparedness Programs' (NHPP) Exercise Design Team (hereafter referred to as "Design Team"). This team included NHPP representatives as well as a number of emergency preparedness and response subject matter experts from federal, state, and private sector organizations.

This Evaluation Plan provides Exercise Evaluators the information needed to evaluate the ability of respective agencies/organizations to facilitate the care and transportation of patients due to surge, with a focus on the processes for requesting, coordinating, and employing resources at the local, state, and federal levels. The information in this document is current on the date of publication and is subject to change.

For more information about the requirements of the Hospital Preparedness Program (HPP) Cooperative Agreement, please contact your regional HPP Field Project Officer. For more information about HPP and/or MRSE evaluation, you may also contact the Evaluation Branch of HHS/ASPR/Office of Strategy, Planning, Policy, and Requirements (SPPR) at msharper@hhs.gov.

1.1 RELATED DOCUMENTS AND TOOLS

This exercise requires the use of three documents:

 Situation Manual – The core document provided to all participants in an exercise. It provides in-depth instructions for how to plan and conduct the MRSE.

- Evaluation Plan (this document) Outlines the goals and purpose of exercise evaluation for a health care coalition (HCC) and guides the Exercise Evaluator (see section 3.2 Assigning an Exercise Evaluator below) through assisting during the exercise, gathering information, and facilitating the After-Action Review (AAR). The Evaluation Plan helps the Exercise Evaluator turn information collected during the exercise into a meaningful AAR and Improvement Plan (IP) in concert with exercise participants.
- Exercise Planning and Evaluation Tool The Excel-based tool is used primarily by the Exercise Evaluator to document decisions and results throughout the exercise, including the *Phase I: Plan & Scope* and *Phase III: Review*. The tool includes sequentially organized tabs that may be viewed by clicking on each tab's name at the bottom of the screen. All required exercise data collection including data for HPP Cooperative Agreement performance measures will be completed in the Exercise Planning and Evaluation Tool.

2.0 EXERCISE OVERVIEW

2.1 BACKGROUND

ASPR leads the country in preparing for, responding to, and recovering from the adverse health effects of emergencies and disasters. ASPR's programs improve the nation's ability to withstand adversity, strengthen health and emergency response systems, and enhance national health security. This portfolio of programs and activities, which includes the Hospital Preparedness Program (HPP) Cooperative Agreement, engages health care stakeholders from all 50 states, U.S. territories, freely associated states, major metropolitan areas, and Washington, D.C., as well as from across the health care industry, empowering private health care to share ownership in addressing the risks and vulnerabilities across the spectrum of disaster care delivery. The portfolio represents a collection of building blocks that form a comprehensive, national system for health care preparedness and response.

ASPR's HPP is the primary source of federal funding specifically for health care delivery system readiness. The HPP Cooperative Agreement aims to improve patient outcomes, minimize the need for federal and supplemental state resources during emergencies, and enable rapid recovery from catastrophic events through the development of health

care coalitions (HCCs). HCCs incentivize and support diverse and often competitive health care organizations with differing priorities and objectives to work together to save lives during disasters and emergencies that exceed the day-to-day capacity and capability of individual health care and emergency response systems. HCCs serve an important communication and coordination role within their jurisdictions, given the many public and private entities that must come together to ensure health care delivery system readiness.

To describe what health care delivery system partners, including HCCs, health care organizations, and emergency medical services (EMS), must do to effectively prepare for and respond to emergencies, ASPR developed the 2017-2022 Health Care Preparedness and Response Capabilities. Medical Surge, listed as Capability Four, is the ability to evaluate and care for a markedly increased volume of patients that exceeds normal operating capacity. Providing an effective medical surge response is dependent on the planning and response capabilities developed by HCCs and other stakeholders. Medical surge requires building capacity and capability.¹

Surge capacity is the ability to manage a sudden influx of patients. It is dependent on a well-functioning incident command system (ICS) and the variables of space, supplies, and staff. The surge requirements may extend beyond placing patients into beds and should include all aspects related to clinical services (e.g., laboratory studies, radiology exams, operating rooms).

Surge capability is the ability to manage patients requiring very specialized medical care. Surge requirements span a range of medical and health care services (e.g., expertise, information, procedures, or personnel) that are not normally available at the location where they are needed (e.g., pediatric care provided at non-pediatric facilities or burn care services at a non-burn center). Surge capability also includes special interventions in response to uncommon and resource intensive patient *diagnoses* (e.g., Ebola, radiation sickness) to

This MRSE is designed to examine and evaluate the ability of HCCs and other

¹ Administration for Strategic Preparedness and Response. <u>2017-2022 Health Care Preparedness and Response Capabilities</u>.

https://aspr.hhs.gov/HealthCareReadiness/HPP/Documents/2017-2022%20Health%20Care% 20Preparedness%20and%20Response%20Capabilities.pdf. Accessed August 2021.

stakeholders to support medical surge, and specifically, how coalitions help patients receive the care they need at the right place, at the right time, and with the right resources during medical surge; decrease deaths, injuries, and illnesses resulting from medical surge; and promote health care delivery system resilience in the aftermath of medical surge.

2.2 CONFIDENTIALITY

All exercise participants should use appropriate guidelines to ensure proper control of information within their areas of expertise and protect this material in accordance with current directives. Exercise participants should follow their existing policies and procedures with regard to information security and confidentiality. In accordance with the HIPAA 1974 Privacy Act, no individual patient information should be shared as a part of this exercise²². Information about surge patients provided in MRSE materials is hypothetical in nature and will not reflect information related to any real patients.

ASPR will use the information submitted by HCCs and HPP recipients to evaluate and inform progress in achieving evidence-based benchmarks and objective standards; performance measures data, including data from local health departments; outcomes of annual preparedness exercises including strengths, weaknesses and associated corrective actions; and accomplishments highlighting the impact and value of the HPP activities in their jurisdictions. Information provided by HCCs and HPP recipients from the MRSE may also be used to inform the future design of the national program. As such, HCCs and recipients are requested to ensure all data accurately reflect the HCC's experience during the exercise.

2.3 PURPOSE AND SCOPE

The purpose of the MRSE is to provide HCCs and their members with an opportunity to test their surge response and preparedness capabilities. The scenario used in the MRSE is defined by the HCC, but all exercises will test an HCC and its members' capacity to

² The Privacy Act of 1974.

https://www.hhs.gov/foia/privacy/index.html. Accessed August 2021.

accommodate a surge of patients equal to at least 20% of its staffed bed capacity³ and to ensure availability of staffed beds, supplies and equipment, and personnel across its membership.

2.4 EXERCISE OBJECTIVES

The exercise includes six required objectives. However, HCCs may develop additional objectives to meet the needs of their members provided the standard actions in the exercise are followed in order to meet HPP Cooperative Agreement requirements. Due to the flexibility of the exercise scenario, HCCs may include additional objectives which support their members in meeting additional exercise requirements (e.g., Joint Commission, Centers for Medicare and Medicaid Services (CMS), state and local jurisdictional requirements, etc.) apart from the HPP requirements.

The Design Team identified the following standard objectives for the MRSE functional exercise:

- Assess an HCC's capacity to support a large-scale, community-wide medical surge incident
- Evaluate a multitude of coalition preparedness and response documents and plans, including specialty surge annexes, transfer agreements, coordination plans with other state HCCs, and all other relevant plans
- Evaluate coalition members' ability to communicate and coordinate quickly to find and match available staffed beds, transportation, supplies and equipment, and personnel during a large-scale surge incident
- Assist HCCs and their members with improvement planning based on MRSE outcomes
- Serve as a data source for performance measure reporting required by the HPP Cooperative Agreement
- Provide a flexible exercise which could be customized to meet the needs and/or exercise requirements of HCCs

³ Only certain bed types are included in this calculation. Additional bed types may be included based on the incident scenario defined by the HCC. The accompanying Exercise Planning and Evaluation Tool will calculate the number of patients based on inputs from the HCC.

2.5 EXERCISE OUTCOMES

ASPR identified the following required outcomes for the MRSE functional exercise. However, as with the exercise objectives, HCCs are encouraged to include additional expected outcomes based on the needs of their members, such as:

- The HCC has validated all applicable response plans and identified gaps which remain unaddressed.
- The HCC is better prepared to respond to a large-scale surge in patients.
- HCC members have improved their capacity to assess the availability of and secure access to key resources such as staffed beds, personnel, supplies and equipment, and patient transport during a large-scale community incident.
- The HCC has strengthened its role in sharing information, situational awareness, and coordination during a large-scale community incident.

2.6 USING REAL-WORLD EVENTS IN LIEU OF THE MRSE

If the HCC has selected to use a real-world event in lieu of conducting the MRSE, it should consult section 2.9 and Appendix C of the exercise Situation Manual to review parameters and requirements. There are restrictions for the types of real-world events which can be used in lieu of MRSE. Use of the Real-world Incident Reporting and Evaluation Tool is required for real-world events. Real-world incidents must adhere to the parameters articulated in the Questionnaire tab of the tool. The Situation Manual provides further instruction for how to complete the different sections of the tool.

3.0 EVALUATION OF THE MRSE

3.1 PURPOSE OF MRSE EVALUATION

The goal of exercise evaluation is to validate strengths, identify areas for improvement, and highlight lessons learned for HCCs and their participating member organizations in a real or simulated response scenario to inform improvement planning. ASPR will use performance measures, AAR, and Improvement Plan information collected through the Exercise Planning and Evaluation Tool and reported annually by HCCs to inform Hospital

Preparedness Program (HPP) Cooperative Agreement evaluation at regional and national levels. Each HCC conducting the MRSE will, through the exercise and subsequent AAR, evaluate the performance of their individual HCC and identify specific strengths, challenges, and lessons learned that their HCC will use to conduct Improvement Plans to strengthen their response plans, policies and procedures, technical assistance requests, coordination efforts, and other improvement efforts. To ensure these evaluation goals are met, each HCC will select an Exercise Evaluator to observe the exercise (including all three exercise phases), to ensure HCCs properly document exercise outcomes, and to document outputs of the AAR and improvement planning. All crucial data to support evaluation will be recorded through the Exercise Planning and Evaluation Tool.

A combination of quantitative and qualitative information is collected through the Exercise Planning and Evaluation Tool to help your Exercise Evaluator and your HCC evaluate HCC response and identify strengths, areas for improvement, and lessons learned. Throughout the exercise, most exercise actions will require the Exercise Evaluator to help exercise participants track specific quantitative data points in the Exercise Planning and Evaluation Tool, some of which will be used to calculate exercise performance measures. Other qualitative data points and observations should be recorded in the Exercise Planning and Evaluation Tool to support the HCC's ability to evaluate the results of the exercise, including conducting the After-Action Report and creating an Improvement Plan.

3.2 ASSIGNING AN EXERCISE EVALUATOR

The Exercise Evaluator may be personnel from the HCC, a member organization, or a third-party. The Exercise Evaluator must be identified before the beginning of *Phase I Plan & Scope*.

Suggested criteria to use when assigning an Exercise Evaluator include:

- Well-versed in the HCC Response Plan
- Willingness and ability to attend for the full exercise, including Phase I Plan & Scope, Phase II Exercise, and Phase III Review
- General knowledge of Medical Surge as defined in the 2017-2022 Health Care
 Preparedness and Response Capabilities
- Ability to objectively observe and document the actions of exercise participants

- Ability to interpret HCC and member organization actions to respond to qualitative questions
- Proficiency in the basic functions of Microsoft Excel
- Ability to facilitate the AAR with exercise participants
- Ability and willingness to participate in Improvement Plan development

The Exercise Evaluator must be provided with and must dedicate time in advance of the exercise to understanding the following documents:

- The HCC's Response Plan
- The MRSE Situation Manual
- The MRSE Exercise Planning and Evaluation Tool
- The MRSE Evaluation Plan (this document)

3.3 EXPECTED EVALUATION PRODUCTS

The MRSE Exercise Evaluator will participate for the entire duration of the exercise, including Phases I through III. The following required products are the responsibility of the Exercise Evaluator:

A completed Exercise Planning and Evaluation Tool consisting of complete data on the following Exercise Planning and Evaluation Tool tabs:

- Phase I Plan & Scope
- Phase II Exercise Initial Actions
- Phase II Exercise Operations
- Phase III After-Action Review
- Phase III Improvement Plan

Select data from this tool (highlighted in the self-calculating Performance Measures tab) will be uploaded by the HCC into the Coalition Assessment Tool as part of end-of-year HCC reporting for the HPP Cooperative Agreement and will satisfy the HPP requirement for providing exercise-related performance measure data and AAR and Improvement Plan documentation. Once HCCs and their HPP recipients upload these data into HPP data collection systems (the Coalition Assessment Tool for HCCs and PERFORMS for

recipients) these data will be used for analysis to support program communications and decision-making.

3.4 EVALUATOR INSTRUCTIONS AND GUIDELINES

Exercise Evaluators observe exercise activities and help the HCC collect data, assess data, and analyze data to understand what happened during the exercise, and what strengths, challenges, and lessons learned emerged from the experience. During all phases of the exercise, the Exercise Evaluator will document the actions of the HCC and its members and will help exercise participants to accurately record information in the Exercise Planning and Evaluation Tool. At the end of Phase II, the Exercise Evaluator will analyze the collected information to understand the outcomes of the exercise, gather some initial ideas regarding strengths, challenges, and lessons learned, and prepare for the AAR in Phase III. In Phase III, the Exercise Evaluator will facilitate the AAR with all HCC members participating in the exercise and will help with HCC develop and Improvement Plan. Per the Homeland Security Exercise and Evaluation (HSEEP) guidelines, Exercise Evaluators will be involved in the full lifecycle of the exercise. The Exercise Evaluator must have full access to information during the exercise such as communication between the HCC and members related to resource availability. Exercise Evaluator responsibilities before, during, and after the exercise are outlined in the table below.

Table 1: Exercise Evaluator Responsibilities and Evaluation Products

Exercise Phase	Responsibilities	Evaluation Products
Before the	Confirm your ability to attend the full MRSE exercise,	N/A
Exercise	 including Phase I Plan & Scope, which will occur before Phases II and III Review relevant exercise materials, with special emphasis on the goals and objectives of the exercise and the Exercise Evaluator's role: The MRSE Situation Manual The MRSE Exercise Planning and Evaluation Tool 	

Exercise Phase	Responsibilities	Evaluation Products
	 The MRSE Evaluation Plan (this document) Review materials relevant to HCC response (including HCC Response Plan; policies and procedures) 	
Phase I Plan & Scope	 Observe exercise participants as they define the surge scenario, calculate the scale of the surge, and identify required resources. While other exercise participants will make these decisions, help participants interpret and correctly define the scale of the surge and the required resources based upon exercise requirements anywhere there is misunderstanding Certify that the <i>Phase I Plan & Scope</i> is completed and that information on the <i>Phase I Plan & Scope</i> tab of the Exercise Planning and Evaluation Tool is completely and accurately filled in 	Completed Phase I Plan & Scope tab in the Exercise Planning and Evaluation Tool
Phase II Exercise	 Report to your respective exercise location no later than one hour before the beginning of your venue's exercise play Ensure that your cellphone and satellite phone (if applicable) are with you and are fully charged so that you can communicate with other exercise staff. Bring your cellphone charger with you Upon arrival at the start of shift, check in with the Readiness and Response Coordinator (RRC) and/or Exercise Facilitator at your location, and introduce yourself to participants Throughout the exercise, do not prompt players with specific responses or interfere with player performance in any way. The only guidance the Exercise Evaluator should give participants is related to compliance with the exercise requirements themselves As strengths, challenges, and lessons learned arise, do not discuss these with exercise players. However, 	Completed Phase II Exercise Initial Actions and Phase II Exercise Operations tabs in the Exercise Planning and Evaluation Tool

Exercise Phase	Responsibilities	Evaluation Products
	Exercise Evaluators may talk to players to clarify events and gain insight into their decisions and actions. Record your own private notes on strengths, challenges, and lessons learned for use during facilitation of the AAR • The Exercise Planning and Evaluation Tool provides discussion questions in each phase and most actions of the exercise. The responses to these questions are documented in the Exercise Planning and Evaluation Tool by the Exercise Evaluator in discussion with the RRC, the Exercise Facilitator, and other participants. The Exercise Evaluator can review the responses to these questions to stimulate discussion amongst the participants during the AAR. Responses from earlier stages will pre-populate into the Phase III: After-Action Review tab in the Exercise Planning and Evaluation Tool • Ensure the Phase II Exercise Initial Actions and Phase II Exercise Operations tabs are filled in fully and in accordance with the play of the HCC throughout the exercise	
Phase III After-Action Review	 Facilitate discussion during the AAR using the scripts and tables included in the <i>Phase III After-Action Review</i> tab of the Exercise Planning and Evaluation Tool Collect information regarding which member organizations have at least one executive participating in the AAR using the table in the Exercise Planning and Evaluation Tool The <i>Phase III After-Action Review</i> tab will populate with information regarding the exercise. Share this with AAR participants so they are able to reflect on the outcome of the exercise Walk participants through a discussion of strengths and of challenges during the exercise that identified gaps, 	Completed Phase III After-Action Review tab in the Exercise Planning and Evaluation Tool

Exercise Phase	Responsibilities	Evaluation Products
	 weaknesses, and areas for improvement. During the discussion, identify how you want participants to share insights (raising hands, speaking out, etc.). Create a comfortable and inclusive environment for sharing and encourage everyone to provide their own observations and perspectives. Solicit all participant insights before offering your own. As participants share feedback, take notes. After receiving feedback, summarize and enter it into the Exercise Planning and Evaluation Tool. Review the contents with participants to ensure the summary reflects the main points of conversation Document the most significant lessons learned regarding the HCC's ability to respond to the surge event that point to areas for HCC improvement planning Ensure the <i>Phase III After-Action Review</i> tab in the Exercise Planning and Evaluation Tool is filled out completely 	
Phase III Improvement Planning	 Participate in HCC processes for improvement planning based upon strengths, challenges, and lessons learned documented in the <i>Phase III After-Action Review</i> tab Exercise Evaluators will support the HCC in using the outputs of the Exercise Planning and Evaluation Tool <i>Phase III After-Action Review</i> tab to develop plans for HCC improvement, including action items, timelines, and associated owners. These plans will be documented in the <i>Phase III Improvement Plan</i> tab of the Exercise Planning and Evaluation Tool Ensure that the <i>Phase III Improvement Plan</i> tab in the Exercise Planning and Evaluation Tool is filled out completely 	Completed Phase III Improvement Plan tab in the Exercise Planning and Evaluation Tool Completed Exercise Planning and Evaluation Tool Tool Tool Tool Tool Tool

Exercise Phase	Responsibilities	Evaluation Products
	Ensure that all tabs of the Exercise Planning and Evaluation Tool are complete and provide the finalized Exercise Planning and Evaluation Tool to the HCC for HCC documentation and submission of required annual HPP Cooperative Agreement data to ASPR	

3.5 HOSPITAL PREPAREDNESS PROGRAM PERFORMANCE MEASURES

As previously discussed, ASPR will use performance measures, AAR information, and Improvement Plan information collected through the Exercise Planning and Evaluation Tool and reported annually by HCCs to inform Hospital Preparedness Program (HPP) Cooperative Agreement evaluation.

The HPP Cooperative Agreement MRSE Performance Measures (whose results are calculated in the Exercise Planning and Evaluation Tool on the *Performance Measures* tab) will be used by ASPR to assess national and regional performance across HCCs for evaluation of the HPP Cooperative Agreement.

Table 2: HPP Cooperative Agreement MRSE Performance Measures

Performance Measure	Description
PM 14	Percent of contacted HCC members acknowledging initial emergency notification
PM 15	Percent of contacted HCC members who responded to the initial information request
PM 16	Percent of all pre-identified, critical required personnel types that were met by participating HCC members to manage patient surge
PM 17	Percent of all pre-identified, critical resources that were met by participating HCC members to manage patient surge

Performance Measure	Description
PM 18	Percent of all pre-identified, critical EMS resources that were met to safely respond to triage and transportation needs
PM 19 (previously PM 18)	Percent of patients requiring inpatient care who were placed at a receiving facility with an appropriate staffed bed by the end of the exercise
PM 20 (previously 15 for the CST and 24 for the HST)	Percent of HCC core members with at least one executive participating in the exercise AAR
PM 21 (previously PM 23)	Percent of all pre-identified, critical HCC members that participated in the exercise

3.6 PERFORMANCE MEASURES IMPLEMENTATION GUIDANCE

Performance measures to be used by ASPR will be automatically calculated by the Exercise Planning and Evaluation Tool. The descriptions under each performance measure below detail the operational intent of the performance measure, the data points in the Exercise Planning and Evaluation Tool used to calculate the performance measure, and the calculation. HCCs using real-world events in lieu of MRSE should consult Appendix C of the Situation Manual for how to collect data correctly for these performance measures.

Performance Measure 14: Percent of contacted HCC members acknowledging initial emergency notification

Operational Intent: This measure provides insight into communication among HCC members during a simulated or real medical surge event.

Data Points in the Exercise Planning and Evaluation Tool: The responses to the data requests outlined below are used to calculate this performance measure.

Numerator	Number of HCC members acknowledging initial emergency notification.	
Denominator	Total number of HCC members contacted with initial emergency notification.	

Calculation: Number of HCC members acknowledging initial emergency notification / Total number of HCC members contacted with initial emergency notification.

Performance Measure 15: Percent of contacted HCC members who responded to the initial information request

Operational Intent: This measure provides insight into communication among HCC members during a simulated or real medical surge event

Data Points in the Exercise Planning and Evaluation Tool: The responses to the data requests outlined below are used to calculate this performance measure.

Numerator	Number of HCC members who responded to an initial information request.
Denominator	Total number of HCC members contacted with an initial information request.

Calculation: Number of HCC members who responded to an initial information request / Total number of HCC members contacted with an initial information request.

Performance Measure 16: Percent of all pre-identified, critical required personnel types that were met by participating HCC members to manage patient surge

Operational Intent: This measure provides insight into an HCC's ability to provide sufficient personnel support to appropriately respond to a simulated or real medical surge event

Data Points in the Exercise Planning and Evaluation Tool: The responses to the data requests outlined below are used to calculate this performance measure

Number of pre-identified, critical required personnel types that were Numerator met by participating HCC members to manage patient surge. Mark each of the critical personnel types below as 'fully met' or 'had shortages'. Responses are limited to those personnel types identified as critical to the incident by the HCC during Phase I Plan & Scope. Note facilities may be within or outside the HCC's boundaries as needed by the HCC and the incident being exercised. **Personnel Types** Critical Care Physicians Critical Care Nurses **Advanced Practice Nurses Physicians Assistants Respiratory Therapists Pharmacists** Dieticians, Physiotherapists, and Occupational Therapists Mental Health Clinicians, Social Workers, Chaplaincy, and Clinical **Ethicists** Trauma, Emergency Department, and Perioperative Services Pediatrics, Neonatal, and Obstetric Services **Laboratory and Diagnostic Imaging Services Environmental Services Staff** Clinical Supply Staff Sterile Processing Technicians **Facilities and Information Technology** Security Admin and Finance Other (describe below) Total number of pre-identified, critical, required personnel types. **Denominator** HCCs using a real-world event in lieu of MRSE should complete the Real-world Incident Reporting and Evaluation Tool for this performance measure. **Personnel Types**

- Critical Care Physicians
- Critical Care Nurses
- Advanced Practice Nurses
- Physicians Assistants
- Respiratory Therapists
- Pharmacists
- Dieticians, Physiotherapists, and Occupational Therapists
- Mental Health Clinicians, Social Workers, Chaplaincy, and Clinical Ethicists
- Trauma, Emergency Department, and Perioperative Services
- Pediatrics, Neonatal, and Obstetric Services
- Laboratory and Diagnostic Imaging Services
- Environmental Services Staff
- Clinical Supply Staff
- Sterile Processing Technicians
- Facilities and Information Technology
- Security
- · Admin and Finance
- Other (describe below)

Calculation: Number of pre-identified, critical, required personnel types that were met by participating HCC members to manage patient surge (critical + optional) / Total number of pre-identified, critical, required personnel types (critical + optional).

Performance Measure 17: Percent of all pre-identified, critical resources that were met to manage patient surge

Operational Intent: This measure provides insight into an HCC's ability to provide sufficient critical resources to appropriately respond to a simulated or real medical surge event

Data Points in the Exercise Planning and Evaluation Tool: The responses to the data requests outlined below are used to calculate this performance measure.

Numerator Number of pre-identified, critical, required resource types that were met by participating HCC members to manage patient surge.

Mark each of the pre-identified, critical, required resource types (critical + optional beds, pharmaceutical supplies, and equipment type) below as 'fully met' or 'had shortages'. For beds, responses are limited to required types and optional types identified as critical to the incident by the HCC during

Phase I Plan & Scope. For other resource types, responses are limited to those identified as critical to the incident during Phase I Plan & Scope. Note facilities may be within or outside the HCC's boundaries as needed by the HCC and the incident being exercised.

Critical patient care bed types (required)

- Emergency department beds
- General medical unit beds
- ICU beds (SICU, MICU, CCU)
- Post critical care (monitored/stepdown) beds

Surgical unit beds (pre-op, post-op, and procedural)

Other bed types (optional)

- Labor and Delivery Unit beds
- Psychiatric unit beds
- General pediatric unit beds
- Pediatric ICU beds
- Neonatal ICU beds
- Oncology unit beds
- Other (describe below)

Pharmaceutical Supplies

- Analgesia and sedation
- Anesthesia
- Antibiotics and Antivirals
- Tetanus vaccine
- Pressor medications
- Antiemetics
- Respiratory medications
- Anticonvulsant drugs
- Antidotes
- Psychotropic medications
- Other (specify)

Non-pharmaceutical supplies and Equipment Types

- Blood products
- Intravenous Fluids | infusion pumps
- Ventilators
- Bedside monitors
- Airway suction (peds/adults)
- Surgical equipment and supplies
- Other (specify)

Denominator

Total number of pre-identified, critical, required resource types. HCCs using a real-world event in lieu of MRSE should complete the Real-world Incident Reporting and Evaluation Tool for this performance measure.

Critical patient care bed types (required)

- Emergency department beds
- · General medical unit beds
- ICU beds (SICU, MICU, CCU)
- Post critical care (monitored/stepdown) beds

Surgical unit beds (pre-op, post-op, and procedural)

Other bed types (optional)

- Labor and Delivery Unit beds
- Psychiatric unit beds
- General pediatric unit beds
- Pediatric and neonatal ICU beds
- Oncology unit beds
- Other (describe below)

Pharmaceutical Supplies

- Analgesia and sedation medications (oral and injectable)
- Anesthesia medications
- Antibiotics (oral and injectable)
- Antivirals
- Tetanus vaccine
- Pressor medications
- Antiemetics
- Respiratory medications
- Anticonvulsant drugs
- Antidotes (e.g., atropine, hydroxocobalamin)
- Psychotropic medications

Non-pharmaceutical supplies and Equipment Types

- Blood products
- Intravenous fluids
- Infusion pumps
- Ventilators
- Bedside monitors
- Airway suction (adult and pediatric)
- Surgical equipment and supplies

- Supplies needed to administer pharmaceuticals, blood products, and intravenous fluids
- Other (describe below)

Calculation: Number of pre-identified, critical, required resource types that were met by participating HCC members to manage patient surge (critical + optional beds, pharmaceutical supplies, and equipment type / Total number of pre-identified, critical, required resource types (critical + optional beds, pharmaceutical supplies, and equipment type).

Performance Measure 18: Percent of all pre-identified, critical EMS resources that were met to safely respond to triage and transportation needs

Operational Intent: This measure provides insight into an HCC's ability to provide sufficient EMS resources to appropriately respond to a simulated or real medical surge event

Data Points in the Exercise Planning and Evaluation Tool: The responses to the data requests outlined below are used to calculate this performance measure

Numerator

Number of pre-identified, critical EMS resource types (personnel, transport, supplies & equipment) that were met to safely respond to triage and transportation needs.

For each of the pre-identified, critical EMS resource types (personnel, transport, supplies & equipment) below, mark if it was fully met.

Responses are limited to those types identified as critical to the incident by the HCC during Phase I Plan & Scope. Definitions of EMS resources can be found in the EMS National Incident Management System (NIMS). Note participating EMS agencies may be within or outside the HCC's boundaries as needed by the HCC and the incident being exercised.

- Ground ambulance (BLS)
- Ground ambulance (ALS)
- Multi-patient medical transport vehicle
- Air ambulance fixed-wing (critical care transport)
- Air ambulance fixed-wing (non-critical care transport)
- Air ambulance rotary-wing (critical care transport)
- Air ambulance rotary-wing (non-critical care transport)
- Incident management team (on scene)
- Hazmat team
- Decontamination Team
- Search and Rescue Team

	 Mass Casualty Support Unit Specialized Protective Equipment Other (describe below)
Denominator	Total number of pre-identified, critical EMS resource types (personnel, transport, supplies & equipment). (Select all that apply)
	 Ground ambulance (BLS) Ground ambulance (ALS) Multi-patient medical transport vehicle Air ambulance fixed-wing (critical care transport) Air ambulance fixed-wing (non-critical care transport) Air ambulance rotary-wing (critical care transport) Air ambulance rotary-wing (non-critical care transport) Incident management team (on scene) Hazmat team Decontamination team Search and Rescue team Mass Casualty Support Unit Specialized Protective Equipment Other (describe below)

Calculation: Number of pre-identified, critical EMS resource types that were met to safely respond to triage and transportation needs (personnel, transport, supplies & equipment) / Total number of pre-identified, critical EMS resource types (personnel, transport, supplies & equipment).

Performance Measure 19 (Previously PM 18): Percent of patients requiring inpatient care who were placed at a receiving facility with an appropriate staffed bed by the end of the exercise

Operational Intent: This measure demonstrates the ability of an HCC to load share to meet initial patient care needs in a simulated or real medical surge event

Data Points in the Exercise Planning and Evaluation Tool: The responses to the data requests outlined below are used to calculate this performance measure. Note facilities may be within or outside the HCC's boundaries as needed by the HCC and the incident

being exercised.

Numerator	a. b.	Number of surge patients and existing patients requiring admission for inpatient care with appropriate, staffed beds after patients are discharged. Number of patients for whom you were unable to find appropriate transport to and/or appropriate, staffed beds at receiving facilities.
Denominator	C.	Number of surge patients and existing patients requiring admission for inpatient care with appropriate, staffed beds at the end of the exercise.

Calculation: (The number of surge patients and existing patients requiring admission for inpatient care with appropriate, staffed beds after patients are discharged + number of patients for whom you were unable to find appropriate transport to and/or appropriate, staffed beds at receiving facilities) / (The total number of surge patients and existing patients requiring admission for inpatient care with appropriate, staffed beds at the end of the exercise). Shown in equation format: (a+b)/(c).

Performance Measure 20 (Previously PM 24): Percent of HCC core members with at least one executive participating in the exercise After Action Review

Operational Intent: This measure provides insight into the extent to which HCC core member organizations' executives are engaged in the lessons learned event of the required surge exercise to enable systematic learning

Data Points in the Exercise Planning and Evaluation Tool: The responses to the data requests outlined below are used to calculate this performance measure

Numerator	Number of HCC core members with at least one executive participating in the exercise AAR:	
	HospitalEMS	

	 Public Health Emergency Management
Denominator	Total number of HCC core members participating in the exercise AAR. Note at least one-member organization from each category is required to participate in MRSE. However, if the HCC has an HPP-approved waiver for one or more member types, it may reduce or remove the number of required core member participants for the waived categories during Phase I Plan & Scope. • Hospital • EMS • Public Health • Emergency Management

Calculation: Number of HCC core members with at least one executive participating in the exercise AAR / Total number of HCC core members.

Performance Measure 21: Percent of all pre-identified, critical HCC members that participated in the exercise

Operational Intent: Participation of HCC members is crucial to truly test preparedness and response capabilities. Thus, this measure is intended to gauge the extent to which HCC core member organizations are engaged in coalition exercises

Data Points in the Exercise Planning and Evaluation Tool: The responses to the data requests outlined below are used to calculate this performance measure

Numerator	Number of all pre-identified, critical HCC members that participated in the exercise. Participation is defined as having joined the exercise for at least one of Phase I or Phase II while participating fully in Phase III. For example, if a member joins Phase II and Phase III, the member has participated. A member cannot be considered as having participated by joining only Phase I and Phase II. HCCs may consult the 2017-2022 Health Care Preparedness and Response Capabilities for more information about member types.
	Hospital
	Public Health
	• EMS
	Emergency Management
	Laboratory

	 Pharmacy Long Term Care Facility Nursing Home Other (specify)
Denominator	 Total number of pre-identified, critical HCC members: Hospital Public Health EMS Emergency Management Laboratory Pharmacy Long Term Care Facility Nursing Home Other (specify)

Calculation: Number of all pre-identified, critical HCC members that participated in the exercise / Total number of pre-identified, critical HCC members invited to participate in the exercise

Appendix A: After-Action Review Discussion Questions

The Exercise Planning and Evaluation Tool provides discussion questions during each exercise phase. Below is a consolidated list of questions the Exercise Evaluator will ask during the different phases of the exercise. Participants can use these questions to guide AAR and Improvement Plan discussions. The responses to these questions are documented in the Exercise Planning and Evaluation Tool during the AAR by the Exercise Evaluator in discussion with the RRC, the Exercise Facilitator, and other participants.

Exercise Phase/Action	Discussion Questions
Plan & Scope	 Did all contacted members confirm their availability to participate in the exercise? Will HCC members be using the exercise to meet other requirements? If so, which? Joint Commission CMS PHEP EMS-related exercise requirements Other (please specify)
Incident Recognition	 How is the HCC notified? Identify Initial Incident Details What, When, Where Responding units Reported injuries (approx. # & type) Identify Current Operating Conditions: Weather Traffic Other factors impacting operations
Notification	 6. What is the primary and secondary system utilized to notify and activate an HCC response? 7. What is the process used to notify and mobilize your support team? 8. What were the primary and secondary systems utilized to alert HCC members?

Exercise Phase/Action	Discussion Questions
Mobilization	 9. If applicable, what positions are part of your HCC's incident management team during the exercise? 10. If applicable, what positions were activated for this response? 11. How long did it take for you to activate your support team? 12. Were there any barriers/issues with notification/activation/mobilization?
Incident Operations	13. Were all planned/expected members of your incident management team able to participate in the exercise?14. Were any barriers faced that would hinder participation?
Information Sharing	 15. Which incident reporting system/sharing platform is used by the HCC to collect and share information (e.g., CST 2.0 tool to provide dropdowns of known systems with options for others)? 16. Who maintains this system? 17. Who from the HCC has access to the system? 18. What process do you use to manage ongoing requests for information from HCC members and other stakeholders?
Resource Coordination	 19. Describe the process used to manage and coordinate resources (staff, supplies, equipment, etc.) 20. What process do you use to manage requests for resources from HCC members and other stakeholders? 21. What process do you use to facilitate the management and distribution of resources across HCC members?
Patient Tracking	 22. Was mutual aid required? Were there any issues or concerns? 23. What additional resources does EMS require (staff, equipment, etc.) to care and transport patients? 24. Based on the chosen scenario, what is the estimated EMS response time? 25. What is the process for EMS to provide updates to hospitals? 26. Who is responsible for determining patient transport locations? 27. Based on the chosen scenario, what is the estimated time that it takes EMS to triage and transport all patients to a receiving facility?

Appendix B: Glossary

Term	Definition
After-Action Review (AAR)	An After-Action Review is a facilitated discussion to identify strengths, challenges, gaps, and weaknesses, and lessons learned. Information from the After-Action Review should be used for improvement planning.
Improvement Plan	The Improvement Plan identifies specific corrective actions, assigns them to responsible parties, and establishes targets for their completion.
Community	A political entity that has the authority to adopt and enforce laws and ordinances for the area under its jurisdiction. In most cases, the community is an incorporated town, city, township, village, or unincorporated area of a county; however, each State defines its own political subdivisions and forms of government.
Community-wide	A means by which residents, emergency management practitioners, organizational and community leaders, and government officials can collectively understand and assess the needs of their respective communities and determine the best ways to organize and strengthen their assets, capacities, and interests.
Disaster	A hazard impact causing adverse physical, social, psychological, economic or political effects that challenges the ability to respond rapidly and effectively. Despite a stepped-up capacity and capability (call-back procedures, mutual aid, etc.) and change from routine management methods to an incident command/management process, the outcome is lower than expected compared with a smaller scale or lower magnitude impact (see "emergency" for important contrast between the two terms).
ESF-8	ESF-8 provides the mechanism for coordinated federal assistance to supplement state, tribal, and local resources in response to the following: • Public health and medical care needs • Veterinary and/or animal health issues in coordination with the U.S. Department of Agriculture (USDA) • Potential or actual incidents of national significance • A developing potential health and medical situation Reference "Emergency Support Functions." Public Health

Term	Definition
	Emergency. http://www.phe.gov/Preparedness/support/esf8/Pag es/default.aspx#8. Accessed 6 Aug. 2020.
Emergency	A hazard impact causing adverse physical, social, psychological, economic or political effects that challenges the ability to respond rapidly and effectively. It requires a stepped-up capacity and capability (call-back procedures, mutual aid, etc.) to meet the expected outcome, and commonly requires change from routine management methods to an incident command process to achieve the expected outcome (see "disaster" for important contrast between the two terms).
Emergency Management	Includes Federal, State, territorial, tribal, substate regional, and local governments, nongovernmental organizations (NGOs), private sector organizations; critical infrastructure owners and operators, and all other organizations and individuals who assume an emergency management role.
Emergency Medical Services (EMS)	Services, including personnel, facilities, and equipment required to ensure proper medical care for the sick and injured from the time of injury to the time of final disposition (which includes medical disposition within a hospital, temporary medical facility, or special care facility; release from the site; or being declared dead). EMS specifically includes those services immediately required to ensure proper medical care and specialized treatment for patients in a hospital and coordination of related hospital services.
Evacuation	The organized, phased, and supervised withdrawal, dispersal, or removal of patients, personnel, and visitors from dangerous or potentially dangerous areas.
Exercise	An instrument to train for, assess, practice, and improve performance in <i>prevention</i> , <i>protection</i> , <i>response</i> , and <i>recovery capabilities</i> in a risk-free environment. Exercises can be used for: testing and validating policies, plans, procedures, training, equipment, and interagency agreements; clarifying and training personnel in roles and responsibilities; improving interagency coordination and communications; identifying gaps in resources; improving individual performance; and identifying opportunities for improvement

Term	Definition
Functional Exercise	A single- or multi-agency operations-based exercise designed to evaluate capabilities and multiple functions using a simulated response. Characteristics of a functional exercise include simulated deployment of resources and personnel, rapid problem solving, and a highly stressful environment.
Hazard	Something that is potentially dangerous or harmful, often the root cause of an unwanted outcome.
Health care coalition (HCC)	A group of individual health care and response organizations (e.g., hospitals, EMS, emergency management organizations, public health agencies) in a defined geographic location. HCCs play a critical role in developing health care delivery system preparedness and response capabilities. HCCs serve as multiagency coordinating groups that support and integrate with ESF-8 activities in the context of incident command system (ICS) responsibilities.
Health care coalition (HCC) member	An HCC member is defined as an entity within the HCC's defined boundaries that actively contributes to HCC strategic planning, operational planning and response, information sharing, and resource coordination and management. Membership is evidenced by memoranda of understanding (MOU), letters of agreement, and/or attendance at an HCC meeting in the past fiscal year. Representation can be achieved through an authorized representative from the member organization or an authorized representative of a group or network of member organizations (e.g., an integrated health care delivery system or corporate network). In instances where there are multiple entities of an HCC member type, there may be a subcommittee structure that establishes a lead entity to communicate common interests to the HCC (e.g., multiple dialysis centers forming a subcommittee). For example, if a subcommittee lead participates in an HCC meeting, the members engaged in that subcommittee (through MOU, letters of agreement, and/or attendance at a subcommittee meeting in the past budget year) are also considered represented.

Term	Definition
Health care executive	An executive is a decision-maker for his/her respective organization and should have decision-making power that includes, but is not limited to, allocating or reallocating resources, changing staffing roles and responsibilities, and modifying business processes in his/her organization. Typical titles of executives with decision-making power include: Chief Executive Officer, Chief Operating Officer, Chief Medical Officer, Chief Clinical Officer, Chief Nursing Officer, State and/or Local Director of Public Health, Director of Emergency Management, Administrator on Duty, or Chief of EMS, among others.
Health care facility	Any asset where point-of-service medical care is regularly provided or provided during an incident. It includes hospitals, integrated health care systems, private physician offices, outpatient clinics, nursing homes, and other medical care configurations. During an emergency response, alternative medical care facilities and sites where definitive medical care is provided by emergency medical services (EMS) and other field personnel would be included in this definition.
Homeland Security Exercise and Evaluation Program (HSEEP)	Doctrine and policy provided by the U.S. Department of Homeland Security for design, development, conduct, and evaluation of preparedness exercises. The terminology and descriptions related to exercises in this document is a Homeland Security industry application of emergency management concepts and principles.
Incident	An occurrence, natural or human-caused, that requires a response to protect life or property. Incidents can, for example, include major disasters, emergencies, terrorist attacks, terrorist threats, civil unrest, wildland and urban fires, floods, hazardous materials spills, nuclear accidents, aircraft accidents, earthquakes, hurricanes, tornadoes, tropical storms, tsunamis, war-related disasters, public health and medical emergencies, and other occurrences requiring an emergency response.
Incident command system (ICS)	The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. ICS is used by various jurisdictions and functional agencies, both public and private, to organize field-level incident management operations.

Term	Definition
Jurisdiction	A range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority. Jurisdictional authority at an incident can be political or geographical (e.g., Federal, State, tribal, local boundary lines) or functional (e.g., law enforcement, public health, school).
Medical Surge	The ability to evaluate and care for a markedly increased volume of patients that exceeds normal operating capacity.
Participants	A member organization or executive is considered to be participating if they are physically or remotely connected to the exercise and After-Action Review in real time.
Resources	Personnel and major items of equipment, supplies, and facilities available or potentially available for assignment to incident operations and for which status is maintained.
Response	Activities that address the short-term, direct effects of an incident. Response includes immediate actions to save lives, protect property, and meet basic human needs. Response also includes the execution of emergency operations plans and of mitigation activities designed to limit the loss of life, personal injury, property damage, and other unfavorable outcomes.
Response Plan	A Response Plan meets the required components identified in the FOA. An HCC Response Plan describes HCC operations that support strategic planning, information sharing, and resource management. The plan also describes the integration of these functions with the ESF-8 lead agency to ensure information is provided to local officials and to effectively communicate and address resource and other needs requiring ESF-8 assistance.
Stakeholders	Includes core HCC members—hospitals, emergency medical services (EMS), emergency management organizations, and public health agencies—additional HCC members, and the Emergency Support Function-8 (ESF-8, Public Health and Medical Services) lead agency.

Term	Definition
Surge Capacity	The ability to manage a sudden influx of patients. It is dependent on a well-functioning incident command system (ICS) and the variables of space, supplies, and staff. The surge requirements may extend beyond placing patients into beds and should include all aspects related to clinical services (e.g., laboratory studies, radiology exams, operating rooms).
Surge Capability	The ability to manage patients requiring very specialized medical care. Surge requirements span a range of medical and health care services (e.g., expertise, information, procedures, or personnel) that are not normally available at the location where they are needed (e.g., pediatric care provided at non-pediatric facilities or burn care services at a non-burn center). Surge capability also includes special interventions in response to uncommon and resource intensive patient diagnoses (e.g., Ebola, radiation sickness) to protect medical providers, other patients, and the integrity of the medical care facility.