

2017-2022 Health Care Preparedness and Response Capabilities



Office of the Assistant Secretary for Preparedness and Response

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Introduction

The U.S. Department of Health and Human Services (HHS) Office of the Assistant Secretary for Preparedness and Response (ASPR) leads the country in preparing for, responding to, and recovering from the adverse health effects of [emergencies](#) and [disasters](#). This is accomplished by supporting the nation's ability to withstand adversity, strengthening health and emergency response systems, and enhancing national health security. ASPR's Hospital Preparedness Program (HPP) enables the health care delivery system to save lives during emergencies and disaster events that exceed the day-to-day capacity and capability of existing health and emergency response systems. HPP is the only source of federal funding for health care delivery system readiness, intended to improve patient outcomes, minimize the need for federal and supplemental state resources during emergencies, and enable rapid recovery. HPP prepares the health care delivery system to save lives through the development of [health care coalitions \(HCCs\)](#) that incentivize diverse and often competitive health care organizations with differing priorities and objectives to work together.

ASPR developed the *2017-2022 Health Care Preparedness and Response Capabilities* guidance to describe what the health care delivery system, including HCCs, hospitals, and emergency medical services (EMS), have to do to effectively prepare for and respond to emergencies that impact the public's health. Each jurisdiction, including emergency management organizations and public health agencies, provides key support to the health care delivery system.

Individual health care organizations, HCCs, jurisdictions, and other stakeholders that develop the capabilities outlined in the *2017-2022 Health Care Preparedness and Response Capabilities* document will:

- Help patients receive the care they need at the right place, at the right time, and with the right resources, during emergencies
- Decrease deaths, injuries, and illnesses resulting from emergencies
- Promote health care delivery system resilience in the aftermath of emergencies

The intended audience for this document is any health care delivery system organization, HCC, or state or local agency that supports the provision of care during emergencies, including but not limited to:

- Behavioral health services and organizations
- Child care providers (e.g., daycare centers)
- [Community Emergency Response Teams \(CERT\)](#)¹ and [Medical Reserve Corps \(MRC\)](#)²
- Dialysis centers and regional Centers for Medicare & Medicaid Services (CMS)-funded end-stage renal disease (ESRD) networks³
- EMS (including inter-facility and other non-EMS patient transport systems)
- Emergency management organizations
- Faith-based organizations
- Federal facilities (e.g., U.S. Department of Veterans Affairs (VA) Medical Centers, Indian Health Service facilities, military treatment facilities)
- Home health agencies, including home and community-based services

¹ "[Community Emergency Response Teams](#)." *FEMA*, 31 Aug. 2016. Web. Accessed 7 Sept. 2016. www.fema.gov/community-emergency-response-teams.

² "[Medical Reserve Corps](#)." *MRC*, 22 Sept. 2016. Web. Accessed 26 Sept. 2016. <https://mrc.hhs.gov>.

³ "[ESRD Networks](#)." *KCER*, 2016. Web. Accessed 7 Sept. 2016. <http://kcercoalition.com/en/esrd-networks/>.

- Hospitals (e.g., acute care hospitals, trauma centers, burn centers, children's hospitals, rehabilitation hospitals)
- Infrastructure companies (e.g., utility and communication companies)
- Cities, counties, parishes, townships, and tribes
- Local chapters of health care professional organizations (e.g., medical societies, professional societies, hospital associations)
- Local public safety agencies (e.g., law enforcement and fire services)
- Medical equipment and supply manufacturers and distributors
- Non-governmental organizations (e.g., American Red Cross, voluntary organizations active in disasters, amateur radio operators, etc.)
- Outpatient health care delivery (e.g., ambulatory care, clinics, community and tribal health centers, Federally Qualified Health Centers (FQHCs),⁴ urgent care centers, freestanding emergency rooms, stand-alone surgery centers)
- Primary care providers, including pediatric and women's health care providers
- Public health agencies
- Schools and universities, including academic medical centers
- Skilled nursing, nursing, and long-term care facilities
- Social work services
- Support service providers (e.g., clinical laboratories, pharmacies, radiology, blood banks, poison control centers)

Planning for and responding to emergencies varies depending on a number of factors, including existing resources, geography (e.g., urban, suburban, rural, or frontier settings), type of health care delivery system (e.g., private sector, government), types of threats and hazards, and demographics. While the goals and objectives of these capabilities are intended for all communities across the nation, ASPR recognizes that the pathways to achieve them will differ based on the factors noted above and acknowledges the importance of flexibility and scalability.

Purpose of the 2017-2022 Health Care Preparedness and Response Capabilities

The *2017-2022 Health Care Preparedness and Response Capabilities* document outlines the high-level objectives that the nation's health care delivery system, including HCCs and individual health care organizations, should undertake to prepare for, respond to, and recover from emergencies. These capabilities illustrate the range of preparedness and response activities that, if conducted, represent the ideal state of readiness in the United States. ASPR recognizes that there is shared authority and accountability for the health care delivery system's readiness that rests with private organizations, government agencies, and [Emergency Support Function-8 \(ESF-8, Public Health and Medical Services\)](#) lead agencies. Given the many public and private entities that must come together to ensure community preparedness, HCCs serve an important communication and coordination role within their respective jurisdiction(s).

These capabilities may not be achieved solely with the funding provided to HPP awardees and sub-awardees (including HCCs and health care organizations) through the HPP Cooperative Agreement. ASPR will present clear expectations and priorities, as well as performance measures for assessing HPP

⁴ "[What are Federally qualified health centers \(FQHCs\)?](#)" HRSA, n.d. Web. Accessed 7 Sept. 2016. www.hrsa.gov/healthit/toolbox/RuralHealthITtoolbox/Introduction/qualified.html.

awardees' and sub-awardees' progress toward building the capabilities, in the HPP funding opportunity announcement for the five-year project period that begins in July 2017.

The Four Capabilities

The four Health Care Preparedness and Response Capabilities are:

Capability 1: Foundation for Health Care and Medical Readiness

Goal of Capability 1: The community's⁵ health care organizations and other stakeholders—coordinated through a sustainable HCC—have strong relationships, identify hazards and risks, and prioritize and address gaps through planning, training, exercising, and managing resources.

Capability 2: Health Care and Medical Response Coordination

Goal of Capability 2: Health care organizations, the HCC, their jurisdiction(s), and the [ESF-8 lead agency](#) plan and collaborate to share and analyze information, manage and share resources, and coordinate strategies to deliver medical care to all populations during emergencies and planned events.

Capability 3: Continuity of Health Care Service Delivery

Goal of Capability 3: Health care organizations, with support from the HCC and the ESF-8 lead agency, provide uninterrupted, optimal medical care to all populations in the face of damaged or disabled health care infrastructure. Health care workers are well-trained, well-educated, and well-equipped to care for patients during emergencies. Simultaneous response and recovery operations result in a return to normal or, ideally, improved operations.

Capability 4: Medical Surge

Goal of Capability 4: Health care organizations—including hospitals, EMS, and out-of-hospital providers—deliver timely and efficient care to their patients even when the demand for health care services exceeds available supply. The HCC, in collaboration with the ESF-8 lead agency, coordinates information and available resources for its members to maintain conventional surge response. When an emergency overwhelms the HCC's collective resources, the HCC supports the health care delivery system's transition to contingency and crisis surge response⁶ and promotes a timely return to conventional standards of care as soon as possible.

These four capabilities were developed based on guidance provided in the *2012 Healthcare Preparedness Capabilities: National Guidance for Healthcare System Preparedness* document. They support and cascade from guidance documented in the *National Response Framework*,⁷ *National Preparedness Goal*,⁸ and the *National Health Security Strategy*⁹ to build community health resilience and

⁵ As the HCC defines in Capability 1, Objective 1, Activity 1 – Define HCC Boundaries

⁶ Altevogt, Bruce M., et al. "[Guidance for Establishing Crisis Standards of Care for Use in Disaster Situations](#)." *The National Academies Press*, 2009. Web. Accessed 26 Oct. 2016. www.nap.edu/read/12749/chapter/1.

⁷ "[National Response Framework](#)." FEMA, ed. 3, Jun. 2016. PDF. Accessed 24 Aug. 2016. www.fema.gov/media-library-data/1466014682982-9bcf8245ba4c60c120aa915abe74e15d/National_Response_Framework3rd.pdf.

⁸ "[National Preparedness Goal](#)." FEMA, ed. 2. 5 Jul. 2016. PDF. Accessed 26 Oct. 2016.

https://www.fema.gov/media-library-data/1443799615171-2aae90be55041740f97e8532fc680d40/National_Preparedness_Goal_2nd_Edition.pdf

⁹ "[National Health Security Strategy and Implementation Plan](#)." ASPR, HHS, 2015-2018. PDF. Accessed 26 Oct. 2016. <http://www.phe.gov/Preparedness/planning/authority/nhss/Documents/nhss-ip.pdf>

integrate health care organizations, emergency management organizations, and public health agencies. See [Appendix 1](#) for more details on the process ASPR followed to revise the capabilities.

The Value of Health Care Coalitions in Preparedness and Response

HCCs—groups of individual health care and response organizations (e.g., hospitals, EMS, emergency management organizations, public health agencies, etc.) in a defined geographic location—play a critical role in developing health care delivery system preparedness and response capabilities. HCCs serve as [multiagency coordination groups](#) that support and integrate with ESF-8 activities in the context of [incident command system](#) (ICS) responsibilities. HCCs coordinate activities among health care organizations and other stakeholders in their communities; these entities comprise [HCC members](#) that actively contribute to HCC strategic planning, operational planning and response, information sharing, and resource coordination and management. As a result, HCCs collaborate to ensure each member has what it needs to respond to emergencies and planned events, including medical equipment and supplies, real-time information, communication systems, and educated and trained health care personnel.

The value of participating in an HCC is not limited to emergency preparedness and response. Day-to-day benefits¹⁰ may include:

- Meeting regulatory and accreditation requirements
- Enhancing purchasing power (e.g., bulk purchasing agreements)
- Accessing clinical and non-clinical expertise
- Networking among peers
- Sharing leading practices
- Developing interdependent relationships
- Reducing risk
- Addressing other community needs, including meeting requirements for tax exemption through community benefit¹¹

Using the Capabilities Document

The *2017-2022 Health Care Preparedness and Response Capabilities* document is organized into four sections—one for each capability. Each capability has a goal and a set of objectives with associated activities. Definitions of capability goal, objective, and activity are defined below.

- Goal: The outcome of developing the capability
- Objective: Overarching component of the capability that, when completed, helps achieve the goal
- Activity: A task critical for achieving an objective

The capabilities are a high-level overview of the objectives and activities that the nation’s health care delivery system, including HCCs and individual health care organizations, should undertake to prepare for, respond to, and recover from emergencies. ASPR encourages HCCs, health care organizations, and

¹⁰ Priest, Chad and Benoit Stryckman. “Identifying Indirect Benefits of Federal Health Care Emergency Preparedness Grant Funding to Coalitions: A Content Analysis.” *Disaster Medicine and Public Health Preparedness*, vol. 9, no. 6, 2015.

¹¹ “[Instructions for Schedule H \(Form 990\)](#).” IRS, 2015. Web. Accessed 18 Jul. 2016. <https://www.irs.gov/pub/irs-pdf/i990sh.pdf>.

other stakeholders supporting the provision of care during emergencies to use ASPR's Technical Resources, Assistance Center, and Information Exchange (TRACIE)¹² to receive assistance and resources for developing the capabilities.

¹² "[Welcome to ASPR TRACIE](https://asprtracie.hhs.gov/)." *ASPR TRACIE*, 24 Aug. 2016. Web. Accessed 24 Aug. 2016. <https://asprtracie.hhs.gov/>.

Capability 1. Foundation for Health Care and Medical Readiness

The foundation for health care and medical readiness enables the health care delivery system and other organizations that contribute to responses to coordinate efforts before, during, and after [emergencies](#); continue operations; and appropriately surge as necessary. This is primarily accomplished through [health care coalitions \(HCCs\)](#) that incentivize diverse and often competitive health care organizations with differing priorities and objectives to work together. HCCs should collaborate with a variety of stakeholders to ensure the community has the necessary medical equipment and supplies, real-time information, communication systems, and trained and educated health care personnel to respond to an emergency. These stakeholders include 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. (For more information, see [Capability 1, Objective 1, Activity 2 – Identify Health Care Coalition Members](#).)

Goal for Capability 1: Foundation for Health Care and Medical Readiness

The community’s¹³ health care organizations and other stakeholders—coordinated through a sustainable HCC—have strong relationships, identify hazards and risks, and prioritize and address gaps through planning, training, exercising, and managing resources.

Objective 1: Establish and Operationalize a Health Care Coalition

HCCs should coordinate with their members to facilitate:

- Strategic planning
- Identification of gaps and mitigation strategies
- Operational planning and response
- Information sharing for improved situational awareness
- Resource coordination and management

HCCs serve as [multiagency coordination groups](#) that support and integrate with other ESF-8 activities. Coordination between the HCC and the [ESF-8 lead agency](#) can occur in a number of ways. Some HCCs serve as the ESF-8 lead agency for their jurisdiction(s). Others integrate with their ESF-8 lead agency through an identified designee at the jurisdiction’s [Emergency Operations Center \(EOC\)](#) who represents HCC issues and needs and provides timely, efficient, and bi-directional information flow to support situational awareness. (See [Capability 2 – Health Care and Medical Response Coordination](#) for details on ESF-8 and situational awareness.)

HCCs serve as a public-private partnership. As stated in the *National Response Framework*:

“...private sector organizations contribute to response efforts through partnerships with each level of government....During an incident, key private sector partners should have a direct link to

¹³ As the HCC defines in Capability 1, Objective 1, Activity 1 – Define HCC Boundaries

emergency managers and, in some cases, be involved in the decision making process....Private sector entities can assist in delivering the response core capabilities by collaborating with emergency management personnel before an incident occurs to determine what assistance may be necessary and how they can support local emergency management organizations during response operations....”¹⁴

Activity 1. Define Health Care Coalition Boundaries

The HCC should define its boundaries based on daily health care delivery patterns—including those established by [corporate health systems](#)—and organizations within a defined geographic region, such as independent organizations and federal [health care facilities](#). Additionally, the HCC may consider boundaries based on defined catchment areas, such as regional EMS councils, trauma regions, accountable care organizations, emergency management regions, etc. Defined boundaries should encompass more than one of each [member type](#) (e.g., hospitals, EMS) to enable coordination and enhance the HCC’s ability to share the load during an emergency. HCC boundaries may span several jurisdictional or political boundaries, and the HCC should coordinate with all ESF-8 lead agencies within its defined boundaries.

The HCC should:

- Include enough members to ensure adequate resources; however, at the same time, having too many members may make the HCC unmanageable
- Consider existing regional service areas, as they define common and known health care delivery patterns and emergency response activities
- Consider HCC boundaries that cross state borders where appropriate
- Engage the jurisdiction’s public health agency to ensure all health care facilities, including independent facilities, belong to an HCC and that there are no geographic gaps in HCC coverage

Activity 2. Identify Health Care Coalition Members

An HCC member is defined as an entity within the HCC’s defined boundaries that actively contributes to HCC strategic planning, identification of gaps and mitigation strategies, operational planning and response, information sharing, and resource coordination and management. In cases 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). HCC membership does not begin or end with attending meetings.

The HCC should include a diverse membership to ensure a successful [whole community](#) response. If segments of the community are unprepared or not engaged, there is greater risk that the health care delivery system will be overwhelmed. As such, the HCC should liaise with the broader response community on a regular basis (see [Introduction](#) for a list of stakeholders). The list is recreated below, delineating core and additional HCC members.

- Core HCC members should include, at a minimum, the following:
 - Hospitals
 - EMS (including inter-facility and other non-EMS patient transport systems)

¹⁴ “[National Response Framework](#).” *FEMA*, ed. 3, Jun. 2016, pp. 10, 29. PDF. Accessed 24 Aug. 2016. https://www.fema.gov/media-library-data/1466014682982-9bcf8245ba4c60c120aa915abe74e15d/National_Response_Framework3rd.pdf.

- Emergency management organizations
- Public health agencies
- Additional HCC members may include but are not limited to the following:
 - Behavioral health services and organizations
 - [Community Emergency Response Team \(CERT\)](#)¹⁵ and [Medical Reserve Corps \(MRC\)](#)¹⁶
 - Dialysis centers and regional Centers for Medicare & Medicaid Services (CMS)-funded end-stage renal disease (ESRD) networks¹⁷
 - Federal facilities (e.g., U.S. Department of Veterans Affairs (VA) Medical Centers, Indian Health Service facilities, military treatment facilities)
 - Home health agencies (including home and community-based services)
 - Infrastructure companies (e.g., utility and communication companies)
 - Jurisdictional partners, including cities, counties, and tribes
 - Local chapters of health care professional organizations (e.g., medical society, professional society, hospital association)
 - Local public safety agencies (e.g., law enforcement and fire services)
 - Medical and device manufacturers and distributors
 - Non-governmental organizations (e.g., American Red Cross, voluntary organizations active in [disasters](#), amateur radio operators, etc.)
 - Outpatient health care delivery (e.g., ambulatory care, clinics, community and tribal health centers, Federally Qualified Health Centers (FQHCs),¹⁸ urgent care centers, freestanding emergency rooms, stand-alone surgery centers)
 - Primary care providers, including pediatric and women’s health care providers
 - Schools and universities, including academic medical centers
 - Skilled nursing, nursing, and long-term care facilities
 - Support service providers (e.g., clinical laboratories, pharmacies, radiology, blood banks, poison control centers)
 - Other (e.g., child care services, dental clinics, social work services, faith-based organizations)

Specialty patient referral centers (e.g., pediatric, burn, trauma, and psychiatric centers) should ideally be HCC members within their geographic boundaries. They may also serve as referral centers to other HCCs where that specialty care does not exist. In such cases, referral centers’ support of HCC planning, exercises, and response activities can be mutually beneficial.

Urban and rural HCCs may have different membership compositions based on population characteristics, geography, and types of hazards. For example, in rural and frontier areas—where the distance between hospitals may exceed 50 miles and where the next closest hospitals are also critical access hospitals with limited services—tribal health centers, referral centers, or support services may play a more prominent role in the HCC.

¹⁵ [“Community Emergency Response Teams.”](#) FEMA, 31 Aug. 2016. Web. Accessed 7 Sept. 2016. www.fema.gov/community-emergency-response-teams/.

¹⁶ [“Medical Reserve Corps.”](#) MRC, 22 Sept. 2016. Web. Accessed 26 Sept. 2016. <https://mrc.hhs.gov>.

¹⁷ [“ESRD Networks.”](#) KCER, 2016. Web. Accessed 7 Sept. 2016. <http://kcercoalition.com/en/esrd-networks/>.

¹⁸ [“What are Federally qualified health centers \(FQHCs\)?”](#) HRSA, n.d. Web. Accessed 7 Sept. 2016. www.hrsa.gov/healthit/toolbox/RuralHealthITtoolbox/Introduction/qualified.html.

Activity 3. Establish Health Care Coalition Governance

The HCC should define and implement a structure and processes to execute activities related to health care delivery system readiness and coordination. The elements of governance include organizational structures, roles and responsibilities, mechanisms to provide guidance and direction, and processes to ensure integration with the ESF-8 lead agency. The HCC should specify how structure, processes, and policies may shift during a response, as opposed to a steady state. HCC members should adopt these elements and be part of regular reviews.

The HCC should document the following information related to its governance:

- HCC membership
- An organizational structure to support HCC activities, including executive and general committees, election or appointment processes, and any necessary administrative rules and operational functions (e.g., bylaws)
- Member guidelines for participation and engagement that consider each member and region’s geography, resources, and other factors
- Policies and procedures, including processes for making changes, orders of succession, and delegations of authority
- HCC integration within existing state, local, and member-specific incident management structures and specified roles—such as a primary point of contact who serves as the liaison to the ESF-8 lead agency and EOCs during an emergency

Objective 2: Identify Risk and Needs

The HCC should identify and plan for risks, in collaboration with the ESF-8 lead agency, by conducting assessments or using and modifying data from existing assessments for health care readiness purposes. These assessments can determine resource needs and gaps, identify individuals who may require additional assistance before, during, and after an emergency, and highlight applicable regulatory and compliance issues. The HCC and its members may use the information about these risks and needs to inform training and exercises and prioritize strategies to address preparedness and response gaps in the region.

Activity 1. Assess Hazard Vulnerabilities and Risks

A [hazard vulnerability analysis \(HVA\)](#) is a systematic approach to identifying hazards or risks that are most likely to have an impact on the demand for health care services or the health care delivery system’s ability to provide these services. This assessment may also include estimates of potential injured or ill survivors, fatalities, and post-emergency community needs based on the identified risks.

General principles for the HVA process include but are not limited to the following:

- HCC members should participate in the HVA process, using a variety of HVA tools¹⁹
- The HVA process should be coordinated with state and local emergency management organization assessments (e.g., Threat and Hazard Identification and Risk Assessment [THIRA])²⁰

¹⁹ “[ASPR TRACIE Evaluation of Hazard Vulnerability Assessment Tools.](#)” *ASPR TRACIE*, 19 Jul. 2016. PDF. Accessed 24 Aug. 2016. asprtracie.hhs.gov/documents/tracie-evaluation-of-hva-tools.pdf.

²⁰ “[Threat and Hazard Identification and Risk Assessment.](#)” *FEMA*, Mar. 2015. Web. Accessed 19 Jul. 2016. www.fema.gov/threat-and-hazard-identification-and-risk-assessment.

and any public health hazard assessments (e.g., jurisdictional risk assessment). The intent is to ensure completion, share risk assessment results, and minimize duplication of effort

- Health care facilities, EMS, and other health care organizations should provide input into the development of the regional HVA based on their facilities' or organizations' HVAs
- The assessment components should include regional characteristics, such as risks for natural or man-made disasters, geography, and critical infrastructure
- The assessment components should address population characteristics (including demographics), and consider those individuals who might require additional help in an emergency, such as children; pregnant women; seniors; individuals with [access and functional needs](#), including people with disabilities; and others with unique needs
- The HCC should regularly review and share the HVA with all members

Activity 2. Assess Regional Health Care Resources

HCC members should perform an assessment to identify the health care resources and services that are vital for continuity of health care delivery during and after an emergency. The HCC should then use this information to identify resources that could be coordinated and shared. This information is critical to uncovering resource vulnerabilities relative to the HVA that could impede the delivery of medical care and health care services during an emergency.

The resource assessment will be different for various HCC member types, but should address resources required to care for all populations during an emergency. The resource assessment should include but is not limited to the following:

- Clinical services – inpatient hospitals, outpatient clinics, emergency departments, private practices, skilled nursing facilities, long-term care facilities, behavioral health services, and support services (see [Capability 4 – Medical Surge](#))
- Critical infrastructure supporting health care (e.g., utilities, water, power, fuel, information technology [IT] services, communications, transportation networks)
- Caches (e.g., pharmaceuticals and durable medical equipment)
- Hospital building integrity
- Health care facility, EMS, corporate health system, and HCC information and communications systems and platforms (e.g., electronic health records [EHRs], bed and patient tracking systems) and communication modalities (e.g., telephone, 800 MHz radio, satellite telephone)
- [Alternate care sites](#)
- Home health agencies (including home and community-based services)
- Health care workforce
- Health care supply chain
- Food supply
- Medical and non-medical transportation system
- Private sector assets that can support emergency operations

Activity 3. Prioritize Resource Gaps and Mitigation Strategies

A comparison between available resources and current HVA(s) will identify gaps and help prioritize HCC and HCC member activities. Gaps may include a lack of, or inadequate, plans or procedures, staff, equipment and supplies, skills and expertise, services, or any other resources required to respond to an emergency. Just as the resource assessment will be different for different member types, so will efforts to prioritize identified gaps. HCC members should prioritize gaps based on consensus and determine

mitigation strategies based on the time, materials, and resources necessary to address and close gaps. Gaps may be addressed through coordination, planning, training, or resource acquisition. Ultimately, the HCC should focus its time and resource investments on closing those gaps that affect the care of acutely ill and injured patients.

Certain response activities may require external support or intervention, as emergencies may exceed the preparedness thresholds the HCC, its members, and the community have deemed reasonable. Thus, during the prioritization process, planning to access and integrate external partners and resources (i.e., federal, state, and/or local) is a key part of gap closure.

Activity 4. Assess Community Planning for Children, Pregnant Women, Seniors, Individuals with Access and Functional Needs, Including People with Disabilities, and Others with Unique Needs

Certain individuals may require additional assistance before, during, and after an emergency. The HCC and its members should conduct inclusive planning for the whole community, including children; pregnant women; seniors; individuals with access and functional needs, such as people with disabilities; individuals with pre-existing, serious behavioral health conditions; and others with unique needs.²¹

The HCC should:

- Support public health agencies with situational awareness and IT tools already in use that can help identify children; pregnant women; seniors; and individuals with access and functional needs, including people with disabilities; and others with unique needs (e.g., the U.S. Department of Health and Human Services emPOWER map,²² which provides information on Medicare beneficiaries who rely on electricity-dependent medical and assistive equipment, such as ventilators, at-home dialysis machines, and wheelchairs)
- Support public health agencies in developing or augmenting existing response plans for these populations, including mechanisms for family reunification
- Identify potential health care delivery system support for these populations (pre- and post-event) that can reduce stress on hospitals during an emergency
- Assess needs and contribute to medical planning that may enable individuals to remain in their residences. When that is not possible, coordinate with the ESF-8 lead agency to support the [ESF-6 \(Mass Care, Emergency Assistance, Housing, and Human Services\)](#) lead agency with inclusion of medical care at shelter sites
- Coordinate with the ESF-8 lead agency to assess medical transport needs for these populations
- Assess specific treatment and access to care needs; incorporate how to address needs into individual HCC member [Emergency Operations Plans \(EOPs\)](#) and the HCC response plan (see [Capability 2, Objective 1 – Develop and Coordinate Health Care Organization and Health Care Coalition Response Plans](#))
- Coordinate with the U.S. Department of Veterans Affairs (VA) Medical Center to identify veterans in the HCC's coverage area (if applicable)

²¹ Public Health Service Act § 2802, 42 U.S.C. 300hh–1 (2013).

²² “[HHS emPOWER Map](#).” ASPR, 2016. Web. Accessed 19 Jul. 2016. www.phe.gov/empowermap/Pages/default.aspx.

Activity 5. Assess and Identify Regulatory Compliance Requirements

The HCC, in collaboration with the ESF-8 lead agency and state authorities, should assess and identify regulatory compliance requirements that are applicable to day-to-day operations and may play a role in planning for, responding to, and recovering from emergencies.

The HCC should:

- Understand federal statutory, regulatory, or national accreditation requirements that impact emergency medical care, including:
 - Centers for Medicare & Medicaid Services (CMS) conditions of participation, (including CMS-3178-F Medicare and Medicaid Programs; Emergency Preparedness Requirements for Medicare and Medicaid Participating Providers and Suppliers)²³
 - Clinical Laboratory Improvement Amendments (CLIA)²⁴
 - [Health Insurance Portability and Accountability Act \(HIPAA\)](#) Privacy Rule requirements²⁵ and circumstances when covered entities can disclose protected health information (PHI) without individual authorization including to public health authorities and as directed by laws (e.g., state law)²⁶
 - Emergency Medical Treatment & Labor Act (EMTALA) requirements²⁷
 - Licensing and accrediting agencies for hospitals, clinics, laboratories, and blood banks (e.g., [Joint Commission](#),²⁸ DNV GL – Healthcare²⁹)
 - Federal disaster declaration processes^{30,31} and public health authorities
 - Available federal liability protections for responders (e.g., Public Readiness and Emergency Preparedness (PREP) Act³²)
 - Environmental Protection Agency (EPA) requirements³³
 - Occupational Safety and Health Administration (OSHA) requirements³⁴ (e.g., general duty clause, blood-borne pathogen standard)

²³ See “Medicare and Medicaid Programs; Emergency Preparedness Requirements for Medicare and Medicaid Participating Providers and Suppliers.” 81 Fed. Reg. 63859. (16 Sept. 2016.) *Federal Register: The Daily Journal of the United States*. Web. Accessed 26 Oct. 2016.

²⁴ See “[Clinical Laboratory Improvement Amendments \(CLIA\)](#).” CMS, May 2016. Web. Accessed 18 Aug. 2016. <https://www.cms.gov/Regulations-and-Guidance/Legislation/CLIA/index.html>.

²⁵ See “[Emergency Situations: Preparedness, Planning, and Response](#).” HHS, 2016. Web. Accessed 19 Jul. 2016. www.hhs.gov/hipaa/for-professionals/special-topics/emergency-preparedness/index.html.

²⁶ “[HIPAA and Disasters: What Emergency Professionals Need to Know](#).” ASPR TRACIE, 31 Aug. 2016. PDF. Accessed 21 Oct. 2016. <https://asprtracie.hhs.gov/documents/aspr-tracie-hipaa-emergency-fact-sheet.pdf>

²⁷ See “[Emergency Medical Treatment & Labor Act \(EMTALA\)](#).” CMS, 2012. Web. Accessed 19 Jul. 2016. <https://www.cms.gov/Regulations-and-Guidance/Legislation/EMTALA/>.

²⁸ “[Emergency Management Resources](#).” *The Joint Commission*, 24 Aug. 2016. Web. Accessed 24 Aug. 2016. www.jointcommission.org/emergency_management.aspx.

²⁹ “[DNV GL Healthcare](#).” DNV GL Healthcare, 2016. Web. Accessed 19 Jul. 2016. dnvglhealthcare.com/.

³⁰ See “[The Disaster Declaration Process](#).” FEMA, 3 Jun. 2016. Web. Accessed 19 Jul. 2016. www.fema.gov/disaster-declaration-process.

³¹ See “[Legal Authority of the Secretary](#).” ASPR, 2016. Web. Accessed 19 Jul. 2016. www.phe.gov/preparedness/support/secauthority/Pages/default.aspx.

³² See “[Public Readiness and Emergency Preparedness Act](#).” ASPR, Dec. 2015. Web. Accessed 14 Aug. 2016. <http://www.phe.gov/preparedness/legal/prepact/pages/default.aspx>.

³³ See “[EPA Laws and Regulations](#).” EPA, Jun. 2016. Web. Accessed 19 Jul. 2016. www.epa.gov/laws-regulations.

³⁴ See “[OSHA laws and regulations](#).” OSHA, 2016. Web. 19 Jul. 2016. www.osha.gov/law-regs.html.

- Understand state or local regulations or programs that impact emergency medical care, including:
 - Scope and breadth of emergency declarations
 - Regulations for health care practitioner licensure, practice standards, reciprocity, scope of practice limitations, and staff-to-patient ratios
 - Legal authorization to allocate personnel, resources, equipment, and supplies among health care organizations
 - Laws governing the conditions under which an individual can be isolated or quarantined
 - Available state liability protections for responders
- Understand the process and information required to request necessary waivers and suspension of regulations, including:
 - Processes for emergency resource acquisition (this may require coordination with the federal, state, and/or local government)
 - Special waiver processes (e.g., [section 1135 of the Social Security Act waivers](#)³⁵) of key regulatory requirements pursuant to emergency declarations
 - Process and implications for Food and Drug Administration (FDA) issuance of [emergency use authorizations](#) for use of non-approved drugs or devices or use of approved drugs or devices for unapproved uses
 - Legal resources³⁶ related to hospital legal preparedness, such as the deployment and use of volunteer health practitioners
 - Legal and regulatory issues related to alternate care sites and practices
 - Legal issues regarding population-based interventions, such as mass prophylaxis and vaccination
 - Processes for emergency decision making from state or local legislature
- Support crisis standards of care planning,³⁷ including the identification of appropriate legal authorities and protections necessary when crisis standards of care are implemented (see [Capability 4 – Medical Surge](#))
- Maintain awareness of standing contracts for resource support during emergencies

Objective 3: Develop a Health Care Coalition Preparedness Plan

The HCC preparedness plan enhances preparedness and risk mitigation through cooperative activities based on common priorities and objectives. In collaboration with the ESF-8 lead agency, the HCC should develop a preparedness plan that includes information collected on hazard vulnerabilities and risks, resources, gaps, needs, and legal and regulatory considerations (as collected in Capability 1, Objective 2, Activities 1-5 above). The HCC preparedness plan should emphasize strategies and tactics that promote communications, information sharing, resource coordination, and operational response planning with HCC members and other stakeholders. The HCC should develop its preparedness plan to include core HCC members and additional HCC members so that, at a minimum, hospitals, EMS, emergency

³⁵ See "[1135 Waivers](#)." ASPR, 2 May 2013. Web. Accessed 12 Sept. 2016. <http://www.phe.gov/Preparedness/legal/Pages/1135-waivers.aspx>.

³⁶ "[Hospital Legal Preparedness: Relevant Resources](#)." CDC, 20 Apr. 2015. Web. Accessed 19 Jul. 2016. www.cdc.gov/phlp/publications/topic/hospital.html.

³⁷ Altevogt, Bruce M., et al. "[Guidance for Establishing Crisis Standards of Care for Use in Disaster Situations](#)." *The National Academies Press*, 2009. Web. Accessed 26 Oct. 2016. www.nap.edu/read/12749/chapter/1.

management organizations, and public health agencies are represented. The plan can be presented in various formats (e.g., a subset of strategic documents, annexes, or a portion of the HCC's concept of operations plans [CONOPS]).

The HCC preparedness plan should:

- Incorporate the HCC's and its members' priorities for planning and coordination based on regional needs and gaps
 - Priorities will depend on multiple factors, including perceived risk, emergencies occurring in the region, available funds, applicable laws and regulations, supporting personnel, HCC member facilities and organizations involved, and time constraints
- Draw from and address gaps identified in HCC members' existing preparedness plans as required by CMS-3178-F Medicare and Medicaid Programs; Emergency Preparedness Requirements for Medicare and Medicaid Participating Providers and Suppliers
- Be developed by HCC leadership with broad input from HCC members and other stakeholders
- Outline strategic and operational objectives for the HCC as a whole and for each HCC member
- Include short-term (e.g., within the year) and longer-term (e.g., three- to five-year) objectives
- Include a recurring objective to develop and review the HCC response plan, which details the responsibilities and roles of the HCC and its members, including how they share information, coordinate activities and resources during an emergency, and plan for recovery (see [Capability 2 – Health Care and Medical Response Coordination](#))
- Include and inform training, exercise, and resource and supply management activities during the year
- Include a checklist of each HCC member's proposed activities, methods for members to report progress to the HCC, and processes to promote accountability and completion

HCC members should approve the initial plan and maintain involvement in regular reviews. Following reviews, the HCC should update the plan as necessary after exercises and real-world events. The review should include identifying gaps in the preparedness plan and working with HCC members to define strategies to address the gaps.

The HCC should also develop a complementary HCC response plan in collaboration with the ESF-8 lead agency (see [Capability 2 – Health Care and Medical Response Coordination](#)).

Objective 4: Train and Prepare the Health Care and Medical Workforce

Training, drills, and exercises help identify and assess how well a health care delivery system or region is prepared to respond to an emergency. These activities also develop the necessary knowledge, skills, and abilities of an HCC member's workforce. Trainings can cover a wide range of topics including clinical subject matter, incident management, safety and protective equipment, workplace violence, [psychological first aid](#), or planning workshops. The HCC should promote these activities and participate in training and exercises with its members, and in coordination with the ESF-8 lead agency, emphasizing consistency, engagement, and demonstration of regional coordination.

Activity 1. Promote Role-Appropriate National Incident Management System Implementation

The HCC should assist its health care organization members and other HCC members with [National Incident Management System \(NIMS\)](#)³⁸ implementation.

The HCC should:

- Ensure HCC leadership receives NIMS training
- Promote NIMS implementation, including training and exercises, among HCC members to facilitate operational coordination with public safety and emergency management organizations during an emergency using an [incident command system \(ICS\)](#)
- Assist HCC members with incorporating NIMS components into their EOPs
- For those members not bound by NIMS implementation, the HCC should consider training on response planning techniques, organizational structure, and other incident management practices that will prepare members for their roles during a response

Activity 2. Educate and Train on Identified Preparedness and Response Gaps

HCC members should support education and training to address health care preparedness and response gaps identified through strategic planning, development of the HCC preparedness and response plans, or other assessments. Whenever possible, training should be standardized at the HCC level to ensure efficiency and consistency.

The HCC should:

- Promote understanding of every HCC member's specific roles and responsibilities in the health care delivery system's emergency response
- Base training on specific gaps and needs identified by HCC members
- Promote and support training for health care providers, laboratorians, non-clinical staff, and ancillary workforce in:
 - Clinical management (e.g., chemical, biological, radiological, nuclear and explosives [CBRNE]^{39,40}, burn, trauma, and other recognized hazards) for all populations
 - Responder safety and health requirements (see [Capability 3, Objective 5 – Protect Responders' Safety and Health](#))
 - Management of patients in a resource-scarce environment, including the implementation of crisis standards of care
- Ensure health care organization leadership is aware of and engaged in HCC activities⁴¹ (see [Capability 1, Objective 5, Activity 2 – Engage Health Care Executives](#) below)

³⁸ "[NIMS Implementation for Healthcare Organizations Guidance.](#)" *ASPR HPP*, Jan. 2015. PDF. Accessed 7 Sept. 2016. www.phe.gov/Preparedness/planning/hpp/reports/Documents/nims-implementation-guide-jan2015.pdf.

³⁹ "[Decontamination Guidance for Chemical Incidents.](#)" *HHS*, 2016. Web. Accessed 11 Oct. 2016.

<https://www.medicalcountermeasures.gov/barda/cbrn/decontamination-guidance-for-chemical-incidents/>.

⁴⁰ Cibulsky, Susan M., et al. "[Patient Decontamination in a Mass Chemical Exposure Incident: National Planning Guidance for Communities.](#)" *HHS, DHS*, Dec. 2014. PDF. Accessed 11 Oct. 2016.

<http://www.phe.gov/Preparedness/responders/Documents/patient-decon-natl-plng-guide.pdf>.

⁴¹ Browning, Henry W., et al. "[Collaborative Healthcare Leadership: A Six-Part Model for Adapting and Thriving during a Time of Transformative Change.](#)" *Center for Creative Leadership*, Mar. 2016. PDF. Accessed 7 Sept. 2016. insights.ccl.org/wp-content/uploads/2015/04/CollaborativeHealthcareLeadership.pdf.

- Develop and implement training plans, including those that support appropriate health care providers and first responders. Training plans may include but are not limited to, initial education, continuing education, appropriate certifications, and just-in-time training
- Employ a variety of modalities (e.g., online, classroom, etc.)

Activity 3. Plan and Conduct Coordinated Exercises with Health Care Coalition Members and Other Response Organizations

The HCC, in collaboration with its members, should plan and conduct coordinated exercises to assess the health care delivery system's readiness. The HCC should focus exercises on the outcomes of HVAs and other assessments that identify resource needs and gaps, identify individuals who may require additional assistance before, during, and after an emergency, and highlight applicable regulatory and compliance issues.

The HCC should:

- Plan and conduct health care delivery system-wide exercises that incorporate hospitals, EMS, emergency management organizations, public health agencies, and additional HCC member participation
- Base exercises on specific gaps and needs identified by HCC members, including emerging infectious diseases and CBRNE threats
- Update an exercise schedule annually or in accordance with jurisdictional needs
- Provide opportunities for clinical laboratory participation
- Assess readiness to support emergencies involving children across the age and developmental trajectory; children represent nearly 25 percent of the population⁴² and have unique response needs during emergencies, including special medical equipment and treatment needs and family reunification considerations
- Assess readiness to support other individuals who have special health needs and may require additional assistance before, during, and after an emergency (e.g., pregnant women, seniors, individuals who depend on electricity-dependent medical and assistive equipment, etc.)
- Exercise Continuity of Operations (COOP) plans (see [Capability 3, Objective 2, Activity 1 – Develop a Health Care Organization Continuity of Operations Plan](#) and [Capability 3, Objective 2, Activity 2 – Develop a Health Care Coalition Continuity of Operations Plan](#))
- Exercise medical surge capacity and capability,⁴³ including decisions leading to the implementation of crisis standards of care (see [Capability 4 – Medical Surge](#))
 - Assess the mobilization of beds, personnel, and key resources, including equipment, supplies, and pharmaceuticals
- Coordinate exercises with other response organizations (e.g., Federal Emergency Management Agency [FEMA], National Guard, etc.)
- When appropriate, include federal, state, and local response resources in exercises (e.g., [National Disaster Medical System \[NDMS\] Disaster Medical Assistance Teams \[DMAT\]](#),⁴⁴ [NDMS](#)

⁴² Lofquist, Daphne, et al. "[Households and Families: 2010](#)." *2010 Census Briefs*, Apr. 2012. PDF. Accessed 26 Aug. 2016. www.census.gov/prod/cen2010/briefs/c2010br-14.pdf.

⁴³ "[Health Care Coalition Surge Evaluation Tool](#)." *ASPR*, Jun. 2016. Web. Accessed 19 Jul. 2016. www.phe.gov/Preparedness/planning/hpp/Pages/coalition-tool.aspx.

⁴⁴ "[Disaster Medical Assistance Team](#)." *ASPR*, 25 Sept. 2015. Web. Accessed 15 Sept. 2016. www.phe.gov/preparedness/responders/ndms/teams/pages/dmat.aspx.

[Federal Coordinating Centers \[FCCs\]](#),⁴⁵ [Emergency System for Advance Registration of Volunteer Health Professionals \[ESAR-VHP\]](#),⁴⁶ state medical teams, MRC, and other federal, state, local, and tribal assets)

- Collect information about HCC member operating status and resource availability during exercises and disseminate the information to other members
- Develop an after-action report (AAR) and improvement plan (IP) that incorporates lessons learned from exercises and a follow-up process, including steps to overcome the identified gaps in the AAR/IP (see [Capability 1, Objective 4, Activity 5 – Evaluate Exercises and Responses to Emergencies](#) below)

Activity 4. Align Exercises with Federal Standards and Facility Regulatory and Accreditation Requirements

The HCC should consider the following when developing and executing exercises:

- Apply [Homeland Security Exercise and Evaluation Program \(HSEEP\)](#) fundamentals⁴⁷ to both the exercise program and the execution of individual exercises
- Integrate current health care accreditation requirements such as the Joint Commission Emergency Management Standards, and health care regulatory requirements such as CMS-3178-F Medicare and Medicaid Programs; Emergency Preparedness Requirements for Medicare and Medicaid Participating Providers and Suppliers
- Use a stepwise progression of exercise complexity for a variety of emergency response scenarios (e.g., workshop to tabletop to functional to full-scale exercises)

Activity 5. Evaluate Exercises and Responses to Emergencies

The HCC should coordinate with its members and other response organizations to complete an AAR and an IP after exercises and real-world events. The same exercise or response may generate facility, member type, HCC, and community AAR/IPs – each with a somewhat different focus and level of detail.

The AAR should document gaps in HCC member composition, planning, resources, or skills revealed during the exercise and response evaluation processes. The IP should detail a plan for addressing the identified gaps, including responsible entities and the required time and resources to address the gaps. The IP should also recommend processes to retest the revised plans and capabilities. Facility and organization evaluations should follow a similar process. AARs may also reveal leading practices that can be shared with HCC members and other HCCs.

Successful HCC maturation depends on integrating AAR/IP findings into the next planning, training, exercise, and resource allocation cycle.

⁴⁵ [“National Disaster Medical System: Federal Coordinating Center Guide.”](#) NDMS, Apr. 2014. PDF. Accessed 12 Sept. 2016. http://www.dmrta.army.mil/01_FCC%20Guide%20Apr%202014.pdf.

⁴⁶ [“The Emergency System for Advance Registration of Volunteer Health Professionals.”](#) ASPR, n.d. Web. Accessed 7 Sept. 2016. <http://www.phe.gov/esarvhp/pages/default.aspx>.

⁴⁷ [“Homeland Security Exercise and Evaluation Program \(HSEEP\).”](#) FEMA, Apr. 2013. pp. 1-1. Web. Accessed 19 Jul 2016. http://www.fema.gov/media-library-data/20130726-1914-25045-8890/hseep_apr13_.pdf.

Activity 6. Share Leading Practices and Lessons Learned

The HCC should coordinate with its members, government partners, and other HCCs to share leading practices and lessons learned. Sharing information between HCCs will improve cross-HCC coordination during an emergency and will help further improve coordination efforts.

The HCC should employ the following principles when sharing leading practices and lessons learned:

- Ensure information is shared among HCCs after real-world events and exercises to identify gaps, leading practices, and lessons learned
- Incorporate lessons learned from real-world events and exercises into HCC plans, training, and exercises
- Utilize mechanisms to rapidly acquire and share new clinical knowledge for a wide range of hazards and threats during exercise scenarios and real-world events. Examples include:
 - Utilizing the Office of the Assistant Secretary for Preparedness and Response (ASPR) Technical Resources, Assistance Center, and Information Exchange (TRACIE)⁴⁸
 - Sharing [hazardous material \(HAZMAT\)](#) information from poison control centers
 - Using virtual telemedicine platforms (e.g., Project ECHO⁴⁹)
 - Obtaining information from federal alert systems (e.g., Centers for Disease Control and Prevention [CDC], FDA, FEMA)
 - Coordinating clinical treatment information on conference calls or webinars (e.g., CDC Clinician Outreach and Communication Activity [COCA]⁵⁰)

Objective 5: Ensure Preparedness is Sustainable

Sustainability planning is a critical component to HCC development. Strong governance mechanisms, constant regional stakeholder engagement, and sound financial planning help form the foundation to continue HCC activities well into the future. Sustainability should emphasize HCC processes and activities that support member needs and regulatory requirements (e.g., exercises and evacuation planning).

Activity 1. Promote the Value of Health Care and Medical Readiness

The HCC, with support from its health care organization members, should be able to articulate its mission, including its role in community preparedness and how that provides benefit (both direct and indirect) to the region. The HCC has a duty to plan for a full range of emergencies and both planned and unplanned events that could affect its community. It is essential that the HCC has leaders who can serve as primary points of contact to promote preparedness and response needs to community leaders. Additionally, members have a shared responsibility to ensure the HCC has visibility into their activities in the region.

The HCC should:

⁴⁸ “[ASPR TRACIE Evaluation of Hazard Vulnerability Assessment Tools.](#)” ASPR TRACIE, 19 Jul. 2016. PDF. Accessed 24 Aug. 2016. asprtracie.hhs.gov/documents/tracie-evaluation-of-hva-tools.pdf.

⁴⁹ “[Project ECHO.](#)” UNM School of Medicine, 2016. Web. 19 Jul. 2016. echo.unm.edu/.

⁵⁰ “[Clinician Outreach and Communication Activity \(COCA\).](#)” CDC, 18 Aug. 2016. Web. Accessed 7 Sept. 2016. <http://emergency.cdc.gov/coca/>.

- Develop materials that identify and articulate the benefits of HCC activities to its members and additional stakeholders
- Engage champions among its members and other response organizations to promote HCC preparedness efforts to [health care executives](#), clinicians, community leaders, and other key audiences

Activity 2. Engage Health Care Executives

The HCC should communicate the direct and indirect benefits of HCC membership to health care executives to advance their engagement in preparedness and response. Executives can promote buy-in across all facility and organization types, clinical departments, and non-clinical support services. The benefits of HCC participation are not limited to emergency preparedness and response.

Day-to-day benefits may include:

- Meeting regulatory and accreditation requirements
- Enhancing purchasing power (e.g., bulk purchasing agreements)
- Accessing clinical and non-clinical expertise
- Networking among peers
- Sharing leading practices
- Developing interdependent relationships
- Reducing risk
- Addressing other community needs, including meeting requirements for tax exemption through community benefit⁵¹

Health care executives should formally endorse their organization's participation in an HCC. This can take the form of letters of support, memoranda of understanding, or other agreements. Health care executives should be engaged in their facilities' response plans and provide input, acknowledgement, and approval regarding HCC strategic and operational planning.

The HCC should regularly inform health care executives of HCC activities and initiatives through reports and invitation to participate in meetings, training, and exercises. The HCC should engage health care executives in debriefs ("hotwashes") related to exercises, planned events, and real-world events.

Activity 3. Engage Clinicians

The HCC should engage health care delivery system clinical leaders to provide input, acknowledgement, and approval regarding strategic and operational planning. Clinicians from a wide range of specialties should be included in HCC activities on a regular basis to validate medical surge plans and to provide subject matter expertise to ensure realistic training and exercises. Clinicians with relevant expertise should lead health care provider training for assessing and treating various types of illnesses and injuries. Clinicians should be engaged in strategic and operational planning, contribute to committees and advisory boards, and participate in training and education sessions. Additional engagement can include active participation in planning, exercise, and response activities.

⁵¹ "[Instructions for Schedule H \(Form 990\)](#)." IRS, 2015. Web. Accessed 18 Jul. 2016. <https://www.irs.gov/pub/irs-pdf/i990sh.pdf>.

Activity 4. Engage Community Leaders

Consistent with a whole community approach to preparedness, the HCC should actively work with and engage community leaders outside of its members. The HCC should identify and engage community members, businesses, charitable organizations, and the media in health care preparedness planning and exercises to promote the resilience of the entire community. Community engagement creates greater awareness of the HCC's role and emergency preparedness activities, promotes community resilience, and speeds the recovery process following emergencies.

Activity 5. Promote Sustainability of Health Care Coalitions

There are a variety of ways to promote greater community effectiveness and organizational and financial sustainability. Full investment in readiness includes in-kind donation of time, resources, support, and continued engagement with HCC members and the community. Financial strategies, including cost-sharing techniques and other funding options, enhance stability and sustainment.

The HCC should:

- Offer HCC members technical assistance or consultative services in meeting CMS-3178-F Medicare and Medicaid Programs; Emergency Preparedness Requirements for Medicare and Medicaid Participating Providers and Suppliers
- Explore ways to meet individual member's requirements for tax exemption through community benefit⁵²
- Analyze critical functions to preserve, and identify financial opportunities beyond federal funding (e.g., foundation, and private funding, dues, and training fees) to support or expand HCC functions
- Develop a financing structure, and document the funding models that support HCC activities
- Determine ways to cost share (e.g., required exercises may be coordinated with public health agencies, emergency management organizations, and other organizations with similar requirements)
- Incorporate leadership succession planning into the HCC governance and structure
- Leverage group buying power to obtain consistent equipment across a region and allow for sharing or emergency allocation of equipment

HCC members should be aware of the HCC's sustainability activities, including any requirements established by HCC leadership, so they can plan their future investments accordingly.

⁵² [Instructions for Schedule H \(Form 990\)](https://www.irs.gov/pub/irs-pdf/i990sh.pdf)." IRS, 2015. Web. Accessed 18 Jul. 2016. <https://www.irs.gov/pub/irs-pdf/i990sh.pdf>.

Capability 2. Health Care and Medical Response Coordination

Health care and medical response coordination enables the health care delivery system and other organizations to share information, manage and share resources, and integrate their activities with their jurisdictions' [Emergency Support Function-8 \(ESF-8, Public Health and Medical Services\)](#) lead agency and [ESF-6 \(Mass Care, Emergency Assistance, Housing, and Human Services\)](#) lead agency at both the federal and state levels.

Private health care organizations and government agencies, including those serving as [ESF-8 lead agencies](#), have shared authority and accountability for health care delivery system readiness, along with specific roles. In this context, [health care coalitions \(HCCs\)](#) serve a communication and coordination role within their respective jurisdiction(s). This coordination ensures the integration of health care delivery into the broader community's incident planning objectives and strategy development. It also ensures that resource needs that cannot be managed within the HCC itself are rapidly communicated to the ESF-8 lead agency. HCC coordination may occur at its own coordination center, the local [Emergency Operations Center \(EOC\)](#), or by virtual means – all of which are intended to interface with the ESF-8 lead agency.

Coordination between the HCC and the ESF-8 lead agency can occur in a number of ways. Some HCCs serve as the ESF-8 lead agency for their jurisdiction(s). Others integrate with their ESF-8 lead agency through an identified designee at the jurisdiction's EOC who represents HCC issues and needs and provides timely, efficient, and bi-directional information flow to support situational awareness. Regardless, HCCs connect the elements of medical response and provide the coordination mechanism among health care organizations—including hospitals and emergency medical services (EMS)—emergency management organizations, and public health agencies.

Goal for Capability 2: Health Care and Medical Response Coordination

Health care organizations, the HCC, their jurisdiction(s), and the ESF-8 lead agency plan and collaborate to share and analyze information, manage and share resources, and coordinate strategies to deliver medical care to all populations during emergencies and planned events.

Objective 1: Develop and Coordinate Health Care Organization and Health Care Coalition Response Plans

Health care organizations respond to emergent patient care needs every day. During an [emergency](#) response, health care organizations and other [HCC members](#) contribute to the coordination of information exchange and resource sharing to ensure the best patient care outcomes possible. HCCs and their members can best achieve enhanced coordination and improved situational awareness when there is active participation from hospitals, EMS, emergency management organizations, and public health agencies and by documenting roles, responsibilities, and authorities before, during, and immediately after an emergency.

Every individual health care organization must have an [Emergency Operations Plan \(EOP\)](#) per federal and state regulations and multiple accreditation standards. The HCC, in collaboration with the ESF-8 lead agency, should have a collective response plan that is informed by its members' individual EOPs. In cases where the HCC serves as the ESF-8 lead agency, the HCC response plan may be the same as the ESF-8 response plan. The purpose of coordinating response plans is not to supplant existing ESF-8 structures, but to enhance effective response in accordance with the wide array of existing federal, state, and municipal legal authorities in which HCC members operate (e.g., Emergency Medical Treatment & Labor Act [EMTALA]⁵³, communicable disease reporting, and the [Health Insurance Portability and Accountability Act \[HIPAA\]](#) Privacy Rule).

Activity 1. Develop a Health Care Organization Emergency Operations Plan

Each health care organization should have an EOP to address a wide range of emergencies. The EOP should detail the use of incident management—including specific indicators for plan activation, alert, and notification processes, response procedures, and resource acquisition and sharing—and a process that delineates the thresholds to demobilize and begin the transition to recovery and the restoration of normal operations (see [Capability 3, Objective 7 – Coordinate Health Care Delivery System Recovery](#)). The plan should define the internal and external sources of information that will be necessary to assess the impact of the emergency on the health care organization. The plan should also address how the individual HCC member communicates this information to the HCC and to key health care organization leadership.

Critical elements of the health care organization's EOP include:

- Identification of triggers to activate the plan
- Communications (internal and external)
- Information management
- Access to resources and supplies
- Safety and security measures
- Delineation of staff roles and responsibilities within the [incident command system \(ICS\)](#)
- Utility readiness (e.g., back-up generator, water supplies)
- Provision of clinical care
- Support activities

The EOP should summarize the actions required to initiate and sustain a response to an emergency. Health care organizations' departmental plans should provide specific information for each unit or area. Employees should have a clear understanding of their actions and how to communicate with the facility or organization's EOC during a response. The EOP should include plans for caring for employees and their dependents during and after an emergency in an effort to promote their return to work⁵⁴ (see [Capability 3, Objective 5 – Protect Responders' Safety and Health](#)).

During an emergency, the EOP should inform the HCC's expectations related to sharing information, attaining situational awareness, and managing and sharing resources, at a minimum. The HCC may help

⁵³ See "[Emergency Medical Treatment & Labor Act \(EMTALA\)](#)." CMS. 2012. Web. Accessed 19 Jul. 2016. <https://www.cms.gov/Regulations-and-Guidance/Legislation/EMTALA/>.

⁵⁴ "[Tips for Retaining and Caring for Staff after a Disaster](#)." ASPR TRACIE, 10 Sep. 2016. PDF. Accessed 26 Oct. 2016. <https://asprtracie.hhs.gov/documents/tips-for-retaining-and-caring-for-staff-after-disaster.pdf>.

health care organizations facilitate patient and resource distribution (or re-distribution) during a surge emergency (see [Capability 4 – Medical Surge](#)).

The EOP may contain annexes that document specific planning actions for various types of medical responses (e.g., evacuation and relocation, [hazardous material \(HAZMAT\)](#), burn mass casualty, pediatric mass casualty). Additionally, the EOP may contain provisions, including an annex, regarding actions required by the health care organization if it is a member of the [National Disaster Medical System \(NDMS\)](#) in a [Federal Coordinating Center’s \(FCC\)](#)⁵⁵ patient receiving area.

In coordination with their HCC, health care organizations should review and update their EOPs regularly, and after exercises and real-world events. The review should involve identifying gaps in the health care organization’s response plan. Health care organization leadership, supported by the HCC, should take steps to define strategies and tactics that address those gaps to ensure a more robust response in the next emergency. The HCC should continuously monitor the health care organization’s progress toward gap closure and offer assistance to help close the gaps as appropriate.

Activity 2. Develop a Health Care Coalition Response Plan

The HCC, in collaboration with the ESF-8 lead agency, should have a collective response plan that is informed by its members’ individual plans. In cases where the HCC serves as the ESF-8 lead agency, the HCC response plan may be the same as the ESF-8 response plan. Regardless of the HCC structure, the HCC response plan should describe HCC operations that support strategic planning, information sharing, and resource management. The plan should also describe 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.

The HCC should develop a response plan that clearly outlines:

- Individual HCC member organization and HCC contact information
- Locations that may be used for multiagency coordination
- Brief summary of each individual member’s resources and responsibilities
- Integration with appropriate ESF-8 lead agencies
- Emergency activation thresholds and processes
- Alert and notification procedures
- [Essential Elements of Information \(EEl\)s](#) agreed to be shared, including information format (e.g., bed reporting, resource requests and allocation, patient distribution and tracking procedures, processes for keeping track of unidentified [John Doe/Jane Doe] patients)
- Communication and information technology (IT) platforms and redundancies for information sharing
- Support and mutual aid agreements
- Evacuation and relocation processes
- Policies and processes for the allocation of scarce resources and crisis standards of care,⁵⁶ including steps to prevent crisis standards of care without compromising quality of care (e.g., conserve supplies, substitute for available resources, adapt practices, etc.) (See [Capability 4, Objective 1, Activity 1 – Incorporate Medical Surge into the HCC Response Plan](#))

⁵⁵ [“National Disaster Medical System: Federal Coordinating Center Guide.”](#) NDMS, Apr. 2014. PDF. Accessed 12 Sept. 2016. http://www.dmrti.army.mil/01_FCC%20Guide%20Apr%202014.pdf.

⁵⁶ Altevogt, Bruce M., et al. [“Guidance for Establishing Crisis Standards of Care for Use in Disaster Situations.”](#) *The National Academies Press*, 2009. Web. Accessed 26 Oct. 2016. www.nap.edu/read/12749/chapter/1.

- Additional HCC roles and responsibilities as determined by state and/or local plans and agreements (e.g., staff sharing, [alternate care site](#) support, shelter support)

The HCC should coordinate the development of its response plan by involving core members and other HCC members so that, at a minimum, hospitals, EMS, emergency management organizations, and public health agencies are represented. While the interests of all members and stakeholders should be considered in the plan, those of hospitals and EMS are paramount given these entities' roles in patient distribution across the HCC's geographic area during an emergency.

In coordination with its members, the HCC should review and update its response plan regularly, and after exercises and real-world events. The review should include identifying gaps in the response plan and working with HCC members to define strategies and tactics to address the gaps. In addition, the HCC should review and recommend updates to the state and/or local ESF-8 response plan regularly.

The HCC response plan can be presented in various formats, including the placement of information described above in a supporting annex.

Objective 2: Utilize Information Sharing Procedures and Platforms

Effective response coordination relies on information sharing to establish a common operating picture. Information sharing is the ability to share real-time information related to the emergency, the current-state of the health care delivery system, and situational awareness across the various response organizations and levels of government (federal, state, local). The HCC's development of information sharing procedures and use of interoperable and redundant platforms is critical to successful response.

Activity 1. Develop Information Sharing Procedures

Individual HCC members should be able to easily access and collect timely, relevant, and actionable information about their own organizations and share it with the HCC, other members, and additional stakeholders according to established procedures and predefined triggers and in accordance with applicable laws and regulations.

HCC information sharing procedures, as documented in the HCC response plan, should:

- Define communication methods, frequency of information sharing, and the communication systems and platforms available to share information during an emergency response and steady state
- Identify triggers that activate alert and notification processes
- Define the EEIs that HCC members should report to the HCC, and coordinate with other HCC members and with federal, state, local, and tribal response partners during an emergency (e.g., number of patients, severity and types of illnesses or injuries, operating status, resource needs and requests, bed availability)
- Identify the platform and format for sharing each EEI
- Describe a process to validate health care organization status and requests during an emergency, including in situations where reports are received outside of HCC communications systems and platforms (e.g., media reports, no report when expected, rumors of distress, etc.)
- Define processes for functioning without electronic health records (EHRs) and document issues related to interoperability

Activity 2. Identify Information Access and Data Protection Procedures

The HCC may coordinate with state and local authorities to identify information access and data protection procedures, including:

- Access to public or private systems
- Authorization to receive and share data
- Types of information that can and will be shared (e.g., EEs)
- Data use and re-release parameters for sensitive information
- Data protections
- Legal, statutory, privacy, and intellectual property issues, as appropriate

Activity 3. Utilize Communications Systems and Platforms

The HCC should utilize existing primary and redundant communications systems and platforms—often provided by state government agencies—capable of sending EEs to maintain situational awareness.

The HCC should:

- Identify reliable, resilient, interoperable, and redundant information and communication systems and platforms (e.g., incident management software; bed and patient tracking systems and naming conventions; EMS information systems; municipal, hospital, and amateur radio systems; satellite telephones; etc.), and provide access to HCC members and other stakeholders
- Use these systems to effectively coordinate information during emergencies and planned events, as well as on a regular basis to ensure familiarity with these tools
- Maintain ability to communicate among all HCC members, health care organizations, and the public (e.g., among hospitals, EMS, [public safety answering points](#), emergency managers, public health agencies, skilled nursing facilities, and long-term care facilities)
- Restore emergency communications quickly during disruptions through alternate communications methods
- Leverage communications abilities of health information exchanges (HIEs) and capabilities of EHR vendors where they exist

Objective 3: Coordinate Response Strategy, Resources, and Communications

The HCC should coordinate its response strategies, track its members' resource availability and needs, and clearly communicate this information to all HCC members, other stakeholders, and the ESF-8 lead agency. In addition, the HCC, in collaboration with its members, should provide coordinated, accurate, and timely information to health care providers and the public in order to ensure a successful emergency response.

Activity 1. Identify and Coordinate Resource Needs during an Emergency

The HCC and all of its members—particularly emergency management organizations and public health agencies—should have visibility into member resources and resource needs (e.g., personnel, teams, facilities, equipment, and supplies) to meet the community's clinical care needs during an emergency.

Outlined below are the general principles when coordinating resource needs during emergencies:

- HCC members should inform the HCC of their operational status, actions taken, and resource needs. The HCC should relay this information to the jurisdiction’s EOC and the ESF-8 lead agency
- Resource management should include logging, tracking, and vetting resource requests across the HCC and in coordination with the ESF-8 lead agency
- Ideally, systems should track beds available by bed type⁵⁷ (ideally, common bed types are defined across the jurisdiction), resource requests, and resources shared between HCC members, from HCC-controlled or other resource caches
- The HCC should work with distributors to understand and communicate which health care organizations and facilities should receive prioritized deliveries of supplies and equipment (e.g., [personal protective equipment \[PPE\]](#)) depending on their role in the emergency. HCC members should collectively determine the prioritization of limited resources provided by distributors, reflecting needs at the time of the emergency (see [Capability 3, Objective 3, Activity 1 – Assess Supply Chain Integrity](#))

Activity 2. Coordinate Incident Action Planning During an Emergency

During an emergency or planned event, each health care organization should develop an [Incident Action Plan \(IAP\)](#)⁵⁸ and utilize [incident action planning cycles](#) to identify and modify objectives and strategies. The HCC should develop an IAP based on its individual HCC members’ plans, with its own focus on planning cycles, objectives, and strategies. Ultimately, the HCC’s IAP should be integrated into the jurisdiction’s IAP, via the ESF-8 lead agency. This will enable a consistent, transparent, and scalable approach to establishing strategies and tactics that will govern the response to an emergency or planned event. Keeping response strategies (e.g., implementing alternate care sites, allocating resources, and developing policies on visitors during infectious disease outbreaks) consistent across HCC members requires coordinated discussion and joint decision making. The IAP can address both response and recovery or a separate recovery plan may be developed in accordance with existing plans at the state or local level (see [Capability 3, Objective 7 – Coordinate Health Care Delivery System Recovery](#)).

Activity 3. Communicate with Health Care Providers, Non-Clinical Staff, Patients, and Visitors during an Emergency

Sharing accurate and timely information is critical during an emergency. Health care organizations should have the ability to rapidly alert and notify their employees, patients, and visitors to update them on the situation, protect their health and safety (see [Capability 3, Objective 5 – Protect Responders’ Safety and Health](#)), and facilitate provider-to-provider communication.

The HCC, in coordination with its public health agency members, should develop processes and procedures to rapidly acquire and share clinical knowledge among health care providers and among health care organizations during responses to a variety of emergencies (e.g., chemical, biological, radiological, nuclear or explosive [CBRNE], trauma, burn, pediatrics, or highly infectious disease) in order to improve patient management, particularly at facilities that may not care for these patients regularly.

⁵⁷ Bed types include but are not limited to: adult ICU, adult medical/surgical, burn, pediatric ICU, pediatric medical/surgical, psychiatric, airborne infection isolation, operating rooms

⁵⁸ “[FEMA Incident Action Planning Guide](#).” FEMA, Jan. 2012. PDF. Accessed 18 Jul. 2016.
http://www.fema.gov/media-library-data/20130726-1822-25045-1815/incident_action_planning_guide_1_26_2012.pdf.

Activity 4. Communicate with the Public during an Emergency

HCC members should coordinate relevant health care information with the community's [Joint Information System \(JIS\)](#) to ensure information is accurate, consistent, linguistically and culturally appropriate, and disseminated to the community using one voice.

Coordinated health care information that could be shared with the JIS includes but is not limited to:

- Current [health care facility](#) operating status
- When and where to seek care
- Alternate care site locations
- Screening or intervention sites
- Expected health and behavioral health effects related to the emergency
- Information to facilitate reunification of families
- Other relevant health care guidance, including preventive strategies for the public's health

The HCC and its members should agree upon the type of information that will be disseminated by either the HCC or individual members.

The HCC should provide [Public Information Officer \(PIO\)](#) training (including health risk communication training) to those designated to act in that capacity during an emergency.

Capability 3. Continuity of Health Care Service Delivery

Optimal emergency medical care relies on intact infrastructure, functioning communications and information systems, and support services. The ability to deliver health care services is likely to be interrupted when internal or external systems such as utilities, electronic health records (EHRs), and supply chains are compromised. Disruptions may occur during a sudden or slow-onset [emergency](#) or in the context of daily operations. Historically, continuity of operations planning has focused on business continuity and ensuring information technology (IT) redundancies. However, health care organizations and [health care coalitions \(HCCs\)](#) should take a broader view and address all risks that could compromise continuity of health care service delivery. Continuity disruptions may range from an isolated cyberattack on a single hospital's IT system to a long-term, widespread infrastructure disruption impacting the entire community and all of its health care organizations.

A safe, prepared, and healthy workforce and comprehensive recovery plans will bolster the health care delivery system's ability to continue services during an emergency and return to normal operations more rapidly.

Goal for Capability 3: Continuity of Health Care Service Delivery

Health care organizations, with support from the HCC and the [Emergency Support Function-8 \(ESF-8\)](#) lead agency, provide uninterrupted, optimal medical care to all populations in the face of damaged or disabled health care infrastructure. Health care workers are well-trained, well-educated, and well-equipped to care for patients during emergencies. Simultaneous response and recovery result in a return to normal or, ideally, improved operations.

Objective 1: Identify Essential Functions for Health Care Delivery

There are key health care functions (e.g., [Mission Essential Functions \[MEFs\]](#)) that should be continued after a disruption of normal activities and are a priority for restoration should any be compromised.⁵⁹ Health care organizations should first determine its key functions when planning for continuity of health care service delivery. The HCC may play an important role in assessing and supporting the maintenance of these functions.

These key health care functions include clinical services and infrastructure:

- Pre-hospital care
- Inpatient services
- Outpatient care
- Skilled nursing facilities and long-term care facilities
- Home care
- Laboratory
- Radiology

⁵⁹ "[Healthcare: COOP & Recovery Planning: Concepts, Principles, Templates & Resources.](#)" ASPR HPP, Jan. 2015. PDF. Accessed 12 Sept. 2016. www.phe.gov/Preparedness/planning/hpp/reports/Documents/hc-coop2-recovery.pdf.

- Pharmacy
- Supply chain management (leasing, purchasing, and delivery of critical equipment and supplies such as medical devices, blood products, [personal protective equipment \(PPE\)](#), and pharmaceuticals)
- Facility infrastructure
- Utilities (water, electricity, gas, sewer, and fuel)
- Medical gases
- Air handling systems (heating, ventilation, and air conditioning [HVAC])
- Telecommunications and internet services
- Information technology (e.g., software and hardware for EHRs and patient billing)
- Central supply
- Transportation services
- Nutrition and dietary services
- Security
- Laundry
- Human resources

Health care and administrative personnel are a critical component of continuity. More information is included in [Capability 3, Objective 5 – Protect Responders’ Safety and Health](#).

Objective 2: Plan for Continuity of Operations

The foundation for safe medical care delivery includes a robust, redundant infrastructure and availability of essential resources. Health care organizations should determine their priorities for ensuring key functions are maintained during an emergency, including the provision of care to existing and new patients. Facilities should determine those services that are critical to patient care and those that could be suspended (e.g., closing a hospital’s outpatient clinics to preserve staff to manage an elevated inpatient census). In addition, the HCC should have a plan to maintain its own operations.

During continuity preparedness activities, health care organizations and the HCC should consider what [disaster](#) risk reduction strategies should be implemented in order to lessen the likelihood of complete and total failure. The HCC should facilitate each individual member’s approach to risk reduction to promote a regional approach to addressing critical infrastructure (e.g., utilities, telecommunications, and supply chain).

Activity 1. Develop a Health Care Organization Continuity of Operations Plan

Continuity of Operations (COOP) planning ensures the ability to continue essential business operations, patient care services, and ancillary support functions across a wide range of potential emergencies. The health care organization’s COOP plan may be an annex to the organization’s [Emergency Operations Plan \(EOP\)](#) and during a response should be addressed under the [incident command system \(ICS\)](#).

Regardless of the format, the COOP plan should include the following:

- Activation and response functions
- Supervisor and managerial points of contact for each department
- Orders of succession and delegations of authority
- Immediate actions and assessments to be performed in case of disruptions
- Safety assessment and resource inventory to determine whether the health care organization can continue to operate

- Redundant, replacement, or supplemental resources
- Strategies and priorities for addressing disruptions

Multiple employees from each [HCC member](#) organization should understand and have access to the HCC's information sharing platforms to ensure the continuity of information flow and coordination activities.

The HCC and governmental partners (including the [ESF-8 lead agency](#)) should be engaged when one or more health care organizations has lost capacity or ability to provide patient care or when a disruption to a health care organization requires evacuation.

The HCC and its members should incorporate COOP into their routine exercises (see [Capability 1, Objective 4, Activity 3 – Plan and Conduct Coordinated Exercises with HCC Members and Other Response Organizations](#)).

Activity 2. Develop a Health Care Coalition Continuity of Operations Plan

HCC COOP plans may be an annex to the HCC's response plan or may take another form. In addition to the topics covered in [Capability 3, Objective 2, Activity 1 – Develop a Health Care Organization Continuity of Operations Plan](#), the HCC COOP plan should include strategies for communications and leadership continuity.

The HCC, in coordination with the ESF-8 lead agency, should ensure that communication and coordination systems that are used for incident management are adequately secured, backed up, and have redundant power and server protections. In addition, redundant or backup systems should be identified in case the usual means of coordination (e.g., internet software platform) is unavailable. Backup plans for communications should be understood prior to an emergency and documented in the HCC response plan.

HCC leadership may not be available to assist with coordination during an emergency due to illness, injury, or commitments external to the HCC. The HCC COOP plan should detail orders of succession and delegations of authority, and a suitable number of personnel (ideally not from the same organization) should be trained to carry out HCC coordination activities.

Activity 3. Continue Administrative and Finance Functions

Health care organizations and the HCC should maintain administrative and financial functions during and after an emergency even if these functions need to continue at an off-site location. This includes essential business processes used to maintain financial security (e.g., registration, billing, access to health records, payroll, and human resource systems).

Activity 4. Plan for Health Care Organization Sheltering-in-Place

The decision to shelter-in-place is based on the nature and timing of the emergency (e.g., tornado, flooding, active shooter, or improvised nuclear device detonation), the potential effects on patient care delivery, and the status of critical infrastructure in the surrounding community.⁶⁰

Health care organizations should consider the following when developing their shelter-in-place plans:

⁶⁰ Zane R, Biddinger, et. al. "[Hospital Evacuation Decision Guide](#)." AHRQ, May 2010. PDF. Accessed 19 Jul. 2016. <http://archive.ahrq.gov/prep/hospevacguide/hospevac.pdf>.

- Decision-making criteria and authorities
- Identification of patient and non-patient care locations to provide protection from the external environment
- Operational procedures for shutting down HVAC, lock-down, and access control
- Assessment of internal capabilities and needs
- Acquisition of supplies, equipment, pharmaceuticals, and other necessary resources for sustainment (e.g., water and food), as well as materials that may be important for children and others during extended sheltering (e.g., books and games)
- Internal and external communications plans, including plans for communicating with patients' and workforce's families
- Triggers for lifting shelter-in-place orders

Objective 3: Maintain Access to Non-Personnel Resources during an Emergency

Critical equipment and supplies for all populations should be available to ensure the ongoing delivery of patient care services. HCC members should assess equipment and supply needs that will likely be in demand during an emergency and develop strategies to address potential shortfalls.

Activity 1. Assess Supply Chain Integrity

Each individual HCC member should examine its supply chain vulnerabilities by collaborating with manufacturers and distributors to determine access to critical supplies, amounts available in regional systems, and potential alternate delivery options in the case that access or infrastructure is compromised. The HCC should then collect and use this information to coordinate effectively within the region, in collaboration with the ESF-8 lead agency.

The supply chain integrity assessment should include the following:

- Blood banks
- Medical gas suppliers
- Fuel suppliers
- Nutritional suppliers and food vendors
- Pharmaceutical vendors
- Leasing entities for biomedical (monitors, ventilators, etc.) and other durable medical equipment and beds
- Manufacturers and distributors for disposable supplies
- Manufacturers and distributors for PPE
- Hazardous waste removal services

The HCC should collaborate with health care organization members and other stakeholders to develop joint understanding and strategies to address supply chain vulnerabilities.

These vulnerabilities may be addressed at a health care organization and/or HCC level by decisions and mitigation strategies including but not limited to:

- Accessing stockpile (or maintain and rotate higher stock levels)
- Accessing vendor- and/or distributor-managed inventory/stockpile
- Establishing secondary vendors
- Developing 'push' or pre-event disaster supply procedures and triggers for activation

- Identifying alternate modes of delivery
- Using bulk purchasing to benefit from advantages in pricing and availability across HCC members

Health care organizations will need to determine whether additional new contracts or other agreements are needed prior to an emergency. In many cases, there is little redundancy in available vendors and little available inventory, which may contribute to rapid exhaustion of supplies in a major emergency. HCC agreements to share supplies may provide a critical resource during emergencies. These agreements should be developed and documented prior to an emergency (see [Capability 1, Objective 2, Activity 2 – Assess Regional Health Care Resources](#)). The HCC and its members should also be aware of the need for redundancies in backup planning (e.g., in events affecting all HCC members, individual facilities may plan for the same vendors to provide backup supplies or utilities).

When these strategies fail, health care organizations and the HCC should consider implementing contingency plans, which may include conservation, substitution, adaptation, reuse, or reallocation.⁶¹ Additional strategies may include transferring resources from other HCCs and/or coordinating with the ESF-8 lead agency to request assets from the [Strategic National Stockpile \(SNS\)](#).⁶²

Activity 2. Assess and Address Equipment, Supply, and Pharmaceutical Requirements

Pharmaceuticals and medical materiel are needed for both emergency treatment and to maintain the health of patients, health care providers, and first responders. Health care organizations should maintain awareness of critical medications and materiel they have on hand and how to obtain additional supplies through their established procurement processes, their HCC, and any state/local stockpiles.

Certain categories of pharmaceuticals and medical materiel are more likely to be required during a patient surge, such as:

- Pharmaceuticals
 - Analgesia and sedation medications (including oral and injectable)
 - Anesthesia medications (e.g., paralytics)
 - Antibiotics (including oral and injectable)
 - Antivirals (e.g., oseltamivir)
 - Tetanus vaccine
 - Pressor medications
 - Antiemetics
 - Respiratory medications (e.g., albuterol)
 - Anticonvulsant drugs
 - Antidotes (e.g., atropine, hydroxocobalamin) – based on community risks and resources
 - Psychotropic medications
- Medical supplies and equipment
 - Blood products
 - Intravenous fluids and infusion pumps

⁶¹ Altevogt, Bruce M., et al. "[Guidance for Establishing Crisis Standards of Care for Use in Disaster Situations.](#)" *The National Academies Press*, 2009. Web. Accessed 26 Oct. 2016. www.nap.edu/read/12749/chapter/1.

⁶² "[Strategic National Stockpile.](#)" *CDC*, Jun. 17, 2016. Web. Accessed 26 Aug. 2016. www.cdc.gov/phpr/stockpile/stockpile.htm.

- Ventilators
- Bedside monitors
- Airway suction for all populations, including children
- Surgical equipment and supplies
- Supplies needed to administer pharmaceuticals, blood products, and intravenous fluids (e.g., needles, syringes, etc.)

Health care organizations should ensure access to formulations appropriate for dosing all patient types, including children and other special populations.

For most health care organizations, small increases above baseline levels of common, inexpensive medications will provide a buffer, particularly when organizations can share resources with HCC members during an emergency. Decisions to stockpile medications are complex and rely on a risk assessment and resource commitments by health care organizations, the HCC, and other stakeholders. Acquisition, storage, rotation, activation, use, and disposal decisions should all be considered and documented.

All health care organizations and the HCC should understand the SNS distribution plan for their jurisdiction(s). Health care organizations and HCCs in jurisdictions participating in the [CHEMPACK](#)⁶³ program, the [Cities Readiness Initiative \(CRI\)](#),⁶⁴ and local and state-based plans that maintain treatment or prophylaxis caches should be engaged in the development, training, and exercising of those distribution plans.

Objective 4: Develop Strategies to Protect Health Care Information Systems and Networks

Cyberattacks on health care organizations have had significant effects on every aspect of patient care and organizational continuity. With increasing reliance on information systems, including EHRs, administrative and payment systems, mobile technology, communication systems, and networked medical devices, there is a potential risk to their integrity and safety. To combat these risks, health care organizations should implement cybersecurity leading practices and conduct robust planning and exercising for cyber incident response and consequence management. As the number of cyberattacks on the health care sector increases, health care practitioners, executives, IT professionals, legal and risk management professionals, and emergency managers should remain current on the ever-changing nature and type of threats to their organizations, systems, patients, and staff.⁶⁵

Health care organizations, assisted by the HCC, should explore industry cybersecurity standards, guidelines, and leading practices necessary to protect these systems (e.g., National Institute of Standards and Technology Cybersecurity Framework - *Framework for Improving Critical Infrastructure Cybersecurity*),⁶⁶ and have a plan in place for response and recovery should they be compromised.

⁶³ "[CHEMPACK](#)." HHS, 25 Jun. 2011. Web. Accessed 19 Jul. 2016. chemm.nlm.nih.gov/chempack.htm.

⁶⁴ "[Cities Readiness Initiative](#)." CDC, 17 Jun. 2016. Web. Accessed 19 Jul. 2016. www.cdc.gov/phpr/stockpile/cri/.

⁶⁵ "[Cybersecurity Topic Collection: 6/16/2016](#)." ASPR TRACIE, 16 Jun. 2016. PDF. Accessed 16 Sept. 2016. asprtracie.hhs.gov/documents/cybersecurity.pdf.

⁶⁶ "[Framework for Improving Critical Infrastructure Cybersecurity](#)." NIST, 12 Feb. 2014. PDF. Accessed 26 Oct. 2016. <https://www.nist.gov/sites/default/files/documents/cyberframework/cybersecurity-framework-021214.pdf>

Some industry-recognized leading practices⁶⁷ for protecting health care information systems and networks include but are not limited to:

- Conducting a computer network assessment to obtain the information necessary to develop a cybersecurity plan to reduce cyberattacks and reduce breaches
- Encrypting all computers and mobile devices
- Pre-approving the use of any devices not issued by the organization
- Implementing role-based access to any systems to ensure employees only have access to programs and applications necessary to perform functions of their jobs
- Configuring any EHR system or database to require specific access permissions to each user; inquiring with the EHR vendor to determine how they provide updates and technical support
- Developing security policies for the use of virtual private network (VPN) or private connections
- Implementing staff cybersecurity training and enforcement policies
- Including cybersecurity and continuity of information systems considerations in the organization's [hazard vulnerability analysis \(HVA\)](#)
- Including appropriate IT personnel and considerations in EOPs, training, and exercises
- Engaging outside partners (e.g., law enforcement, regulatory agencies, and IT security providers/vendors) for assistance with cybersecurity incidents
- Developing mechanisms for IT personnel to obtain needed cybersecurity information through law enforcement partnerships
- Becoming a member in information sharing and analysis organizations (ISAOs)⁶⁸ or other means

Objective 5: Protect Responders' Safety and Health

The safety and health of clinical and non-clinical personnel are high priorities for preparedness and continuity as effective care cannot be delivered without available staff. Health care organizations, in coordination with the HCC, should develop processes to protect responders' safety and health and align with various requirements, certifications, and standards (e.g., Occupational Safety and Health Administration [OSHA],⁶⁹ [Joint Commission](#), etc.). Those processes should be implemented to equip, train, and provide resources necessary to protect responders, employees, and their families from hazards during response and recovery operations. PPE, [medical countermeasures \(MCMs\)](#), workplace violence training, [psychological first aid](#) training, and other interventions specific to an emergency are all necessary to protect health care workers from illness or injury and should be readily available to the health care workforce. This section addresses selected aspects of workforce safety and protection relevant to emergencies, but does not include the much broader spectrum of health care worker safety during routine operations.

Activity 1. Distribute Resources Required to Protect the Health Care Workforce

It is important to keep patients, responders, employees, and their families safe during emergencies. The health care organization should be prepared to distribute MCMs, using a [closed point of dispensing](#)

⁶⁷“[Protecting the Healthcare Digital Infrastructure: Cybersecurity Checklist.](#)” ASPR CIP Healthcare & Public Health Sector Coordinating Councils Public Private Partnership, 2016. PDF. Accessed 19 Jul. 2016. www.phe.gov/Preparedness/planning/cip/Documents/cybersecurity-checklist.pdf.

⁶⁸“[Information Sharing and Analysis Organizations.](#)” DHS, 13 Apr. 2016. Web. Accessed 20 Sept. 2016. <https://www.dhs.gov/isao>.

⁶⁹“[OSHA: Regulations \(Standards – 29 CFR\).](#)” OSHA, 2012. Web. Accessed 12 Sept. 2016. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051.

([POD](#)) or other model, when there is potential or confirmed exposure to any chemical, biological, radiological, nuclear, and explosives (CBRNE) hazard for which MCMs exist. Access to such MCMs should be coordinated and planned for with the local public health department. This approach allows for organized and timely MCM distribution.

In addition, PPE (e.g., respirators, protective clothing, gloves, face shields, etc.) should be available to response personnel across varying job functions to offer protection from a wide range of threats such as infectious diseases, radiation, chemical exposure, and various physical hazards. In certain situations, staff exposures may warrant pharmaceutical prophylaxis, which should be managed according to the health care organization's infection control policies. Exposures may result from PPE failure, emerging infectious disease outbreaks, industrial accidents, natural disasters, or terrorist attacks. Providing access to food and sleeping arrangements is also key to protecting responders' safety and health, increasing their ability and willingness to work during an emergency.

The HCC should promote regional PPE procurement that could offer significant advantages in pricing and consistency for staff, especially when PPE is shared across health care organizations in an emergency. In circumstances where HCC members are part of a larger [corporate health system](#), a balance between corporate procurement and regional procurement could be considered (see [Capability 3, Objective 3, Activity 1 – Assess Supply Chain Integrity](#)).

Activity 2. Train and Exercise to Promote Responders' Safety and Health

Training, drills, and exercises develop the knowledge, skills, and abilities of an HCC members' workforce to effectively respond to emergencies (see [Capability 1, Objective 4 – Train and Prepare the Health Care and Medical Workforce](#)).

Health care organizations, in collaboration with other HCC members, should:

- Integrate responder safety and health policy development, training, and program implementation with existing occupational health and infection control programs (e.g., PPE including respiratory protection, MCMs, workplace violence, psychological first aid)
- Plan for pre-hospital decontamination, and ensure coordination among fire, emergency medical services (EMS), and other health care organizations
- Create [hazardous material \(HAZMAT\)](#) plans that include appropriate staff training requirements and PPE to perform decontamination per OSHA guidance for first receivers⁷⁰ (see [Capability 4 – Medical Surge](#) for more information on HAZMAT response)
- Provide training for health care providers, laboratorians, and support staff for contact, droplet, airborne infectious diseases, including those that may be classified as highly pathogenic and transmissible
- Work with human resources departments and health care unions, as applicable, to develop policies and procedures to ensure health care worker readiness and safety associated with caring for patients
- Maintain PPE in a state of readiness, and ensure inventory is updated and adequate for staffing demands and needs

⁷⁰[“OSHA Best Practices for Hospital-based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances.” OSHA, Jan. 2005. Web. Accessed 19 Jul. 2016. www.osha.gov/dts/osta/bestpractices/html/hospital_firstreceivers.html.](#)

Activity 3. Develop Health Care Worker Resilience

A resilient workforce is critical to successful emergency response and recovery.

The HCC and its members should consider the following:

- Pre-emergency resilience building, such as encouraging healthy lifestyles; developing family emergency plans; conducting staff training for active shooter events and psychological first aid; and instituting workplace violence reduction strategies
- Emergency resilience support, such as rotating staff to limit fatigue; providing support to staff and families (e.g., child care); providing accurate and timely updates during an emergency; providing opportunities for interacting with health care organization leadership; and providing just-in-time training relative to the emergency
- Post-emergency support,⁷¹ such as providing psychological first aid; distributing information on expected stress responses; conducting self- and peer-assessment and monitoring activities; providing access to employee assistance programs, including professional behavioral health services; and modifying duty assignments. Post-emergency activities may continue for months and even years beyond the emergency
- Ongoing health and safety monitoring activities, such as determining which groups of responders should be included in a health care or disease registry program to monitor their long-term physical and behavioral health; establishing and implementing long-term tracking of responder health, and where appropriate, community health; and providing technical assistance to help determine the appropriate duration and content of long-term health tracking

The HCC can disseminate information and promote these programs and initiatives to all HCC members.

Objective 6: Plan for and Coordinate Health Care Evacuation and Relocation

Health care organizations should evacuate or relocate when continuity planning efforts cannot sustain a safe working environment or when a government entity orders a health care organization to evacuate. The HCC should ensure all members and other stakeholders are included in evacuation and relocation planning including but not limited to, skilled nursing facilities and long-term care facilities. The HCC plays a critical role in coordinating the various elements of patient evacuation and relocation.

Activity 1: Develop and Implement Evacuation and Relocation Plans

The HCC and its members should prepare for evacuation or relocation with little or no warning. Evacuation and relocation plans assist health care organizations with the safe and effective care of patients, use of equipment, and utilization of staff when relocating to another part of the facility or when evacuating patients to another facility. Health care organizations may rely on the HCC and their affiliated corporate health systems to assist in planning, evacuation, and relocation processes.

The HCC and its members, in coordination with the ESF-8 lead agency, should consider the following when planning and coordinating patient evacuation and relocation:

- Planning considerations:

⁷¹ ["Tips for Retaining and Caring for Staff after a Disaster."](https://asprtracie.hhs.gov/documents/tips-for-retaining-and-caring-for-staff-after-disaster.pdf) ASPR TRACIE, 10 Sep. 2016. PDF. Accessed 26 Oct. 2016. <https://asprtracie.hhs.gov/documents/tips-for-retaining-and-caring-for-staff-after-disaster.pdf>.

- Establish authorities for decision-making processes, including triggers for evacuation
 - Ensure internal and external communications
 - Identify appropriate relocation and evacuation staging areas within the facility
 - Integrate health care organization evacuation planning with local and regional patient movement plans
 - Identify situations for early discharge
 - Identify available destination facilities and their ability to expand existing services to receive patients from evacuating facilities
 - Establish processes for when patients cannot be moved (see [Capability 3, Objective 2, Activity 4 – Plan for Health Care Organization Sheltering-in-Place](#))
 - Establish procedures for facility closure
- Evacuation and relocation considerations:
 - Prioritize the order and category of patients chosen for evacuation and relocation
 - Obtain [section 1135 of the Social Security Act waivers](#); ⁷² these waivers can be obtained retroactively in certain emergency situations
 - Match patient needs with available transport resources (including non-EMS transportation assets)
 - Move and track patients and their belongings, staff, and medical records; ensure vital patient medications and equipment (e.g., mechanical ventilators, monitors, intravenous [IV] poles, etc.) are brought with the patient during patient transport and are returned to the facility of origin
 - Notify families, and initiate reunification

Planning, training, and exercising these activities are critical to the success of evacuation and relocation. High risk patients should be given special consideration during evacuation and relocation. These patients include adults, children, and neonates in [critical care](#) units, current operative cases, psychiatric (including memory/dementia care) patients, and other patients who may need specialized care during evacuation and relocation.

Activity 2. Develop and Implement Evacuation Transportation Plans

The HCC and its members, in collaboration with the ESF-8 lead agency, should develop and implement transportation plans for evacuating patients from one [health care facility](#) to another.

The plans should:

- Articulate the HCC's role in coordinating EMS assistance
- Include a process to appoint a transport manager or similar position under the ICS operations section
- Identify a coordinating entity for public and private EMS agencies, including both ground and air medical services
- Identify transportation assets including non-medical transportation partners, such as commercial bus companies
- Identify processes to access specialized transportation assets through emergency management organizations (e.g., National Guard [State Active Duty], tractors, boats)

⁷² See "[1135 Waivers](#)." ASPR, 2 May 2013. Web. Accessed 12 Sept. 2016. <http://www.phe.gov/Preparedness/legal/Pages/1135-waivers.aspx>.

- Consider age- and size-related transportation equipment needs
- Develop processes to track patients and staff during transport
- Establish processes for transport partners to communicate with sending and receiving facilities
- Establish processes to communicate with patients' families when transferring patients to the next health care provider

Objective 7: Coordinate Health Care Delivery System Recovery

Effective recovery and reconstitution of the health care delivery system includes pre-incident planning and implementation of recovery processes that begin at the outset of a response. The HCC can play an important role in monitoring and facilitating the recovery processes of the health care delivery system disrupted by an emergency. These efforts are intended to promote an effective and efficient return to normal or, ideally, improved operations for the provision of and access to health care in the community.

Activity 1. Plan for Health Care Delivery System Recovery

Recovery processes can be integrated into existing plans (e.g., annex to EOPs) or be developed as a separate stand-alone plan. The HCC and its members should participate in state and local pre-emergency recovery planning activities as described in the *National Disaster Recovery Framework*⁷³ in order to leverage existing recovery resources, programs, projects, and activities.

Response, continuity operations, and recovery are overlapping, interdependent, and often conducted concurrently. Therefore, identifying connected functions, tasks, or activities in the post-emergency environment will facilitate a coordinated transition from response to recovery.

Key considerations to recovery planning include:

- Goals and strategic priorities for the continued delivery of essential health care services, including behavioral health, and opportunities for improvement after an emergency
- Flexible operational objectives and tactics to accommodate different recovery approaches
- Integration with pre-incident assessments and plans (e.g., community health needs assessments, community health improvement plans, organizational capital improvement plans)
- Critical infrastructure dependencies (e.g., public utilities, IT, transportation, etc.)
- Workforce retention issues essential to operations (e.g., access to child or adult dependent care)

Activity 2. Assess Health Care Delivery System Recovery after an Emergency

The HCC may assist its members' assessment of emergency-related structural, functional, and operational impacts.

The HCC can assist its members with the following activities:

- Data collection and analysis to identify priorities in the reconstitution and delivery of community health care services at the outset of an emergency

⁷³ "[National Disaster Recovery Framework](https://www.fema.gov/media-library-data/1466014998123-4bec8550930f774269e0c5968b120ba2/National_Disaster_Recovery_Framework2nd.pdf)." FEMA, ed. 2, Jun. 2016. PDF. Accessed 12 Sept. 2016. www.fema.gov/media-library-data/1466014998123-4bec8550930f774269e0c5968b120ba2/National_Disaster_Recovery_Framework2nd.pdf

- Collaboration with federal infrastructure assessment teams⁷⁴ to enhance knowledge of disaster impacts on physical infrastructure and inform future risk mitigation strategies
- Implementation of emergency management organizations' disaster impact assessments to assess post-disaster community health concerns

Activity 3. Facilitate Recovery Assistance and Implementation

The HCC, in coordination with its government partners, supports its members in the post-emergency recovery process by facilitating patient repatriation and system operations restoration.

The HCC should:

- Assist HCC members with government processes for reimbursement, reconstitution, and resupply in concert with its emergency management organizations and ESF partners
- Convene a platform to identify long-term health care and community health recovery gaps, and develop potential strategies to address them
- Develop and communicate short- and long-term priorities to the jurisdiction's government and emergency management functions (e.g., [ESF-6 \[Mass Care, Emergency Assistance, Housing, and Human Services\]](#), ESF-8, and the [Health and Social Services Recovery Support Function](#))
- Collaborate with emergency management organizations and government officials to identify opportunities for future mitigation strategies or initiatives to enhance the resilience of the physical health care infrastructure

Health care organizations should ensure that their ICS prepares for a return to normal operations by:

- Identifying and preparing documentation necessary for government assistance
- Assessing damaged infrastructure and impacted patient care services to restore functionality
- Supporting the physical and behavioral health needs of affected patients, staff, and families
- Connecting patients and staff with case management and financial services⁷⁵
- Planning the after-action learning and improvement processes

Successful reconstitution and recovery should be guided by efforts to build back better.

⁷⁴ "[Mitigation Assessment Team Program](#)." *FEMA*, 16 Feb. 2016. Web. Accessed 12 Sept. 2016. www.fema.gov/mitigation-assessment-team-program.

⁷⁵ "[Tips for Retaining and Caring for Staff after a Disaster](#)." *ASPR TRACIE*, 10 Sep. 2016. PDF. Accessed 26 Oct. 2016. <https://asprtracie.hhs.gov/documents/tips-for-retaining-and-caring-for-staff-after-disaster.pdf>.

Capability 4. Medical Surge

Medical surge 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 in [Capability 1 – Foundation for Health Care and Medical Readiness](#), [Capability 2 – Health Care and Medical Response Coordination](#), and [Capability 3 – Continuity of Health Care Service Delivery](#). Developing [health care coalitions \(HCCs\)](#) is especially important to support the coordination of the medical response across health care organizations.

Medical surge requires building capacity and capability:

- 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.⁷⁶ 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)⁷⁷
- 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 protect medical providers, other patients, and the integrity of the medical care facility⁷⁸

Although these terms are not mutually exclusive (e.g., an [emergency](#) with large numbers of burn patients results in a need for both capacity and capability), they provide context for medical surge planning and can assist the HCC in developing regional approaches to providing care to patients with specific illnesses or injuries resulting from a wide variety of emergencies (e.g., regional viral hemorrhagic fever plan, regional mass burn plan, and regional mass pediatric plan).

HCCs and their members that coordinate during a medical surge response are more likely to be able to manage the emergency without state or federal assets or employing crisis care strategies.⁷⁹ However, it is not possible to plan for all worst case scenarios, and there may be times when the health care delivery system is stressed beyond its maximum surge capacity. For those scenarios, crisis care strategies⁸⁰ may be employed and planned well in advance. Planning for medical surge should follow the [Medical Surge](#)

⁷⁶“[Health Care System Surge Capacity Recognition, Preparedness, and Response](#).” *American College of Emergency Physicians*, 2014. Web. Accessed 19 Jul. 2016. www.acep.org/Clinical---Practice-Management/Health-Care-System-Surge-Capacity-Recognition,-Preparedness,-and-Response/.

⁷⁷“[ICDRM/GWU Emergency Management Glossary of Terms](#).” *The George Washington University Institute for Crisis, Disaster, and Risk Management*, 30 Jun. 2010. pp. 14. PDF. Accessed 19 Jul. 2016. www.gwu.edu/~icdrm/publications/PDF/GLOSSARY - Emergency Management ICDRM 30 JUNE 10.pdf.

⁷⁸ Ibid.

⁷⁹ Altevogt, Bruce M., et al. “[Guidance for Establishing Crisis Standards of Care for Use in Disaster Situations](#).” *The National Academies Press*, 2009. Web. Accessed 26 Oct. 2016. www.nap.edu/read/12749/chapter/1.

⁸⁰ Ibid.

[Capacity and Capability \(MSCC\)](#)⁸¹ tiered approach, where successive levels of assistance are activated as the emergency evolves.

Goal for Capability 4: Medical Surge

Health care organizations—including hospitals, emergency medical services (EMS), and out-of-hospital providers—deliver timely and efficient care to their patients even when the demand for health care services exceeds available supply. The HCC, in collaboration with the [Emergency Support Function-8 \(ESF-8\)](#) lead agency, coordinates information and available resources for its members to maintain conventional surge response. When an emergency overwhelms the HCC’s collective resources, the HCC supports the health care delivery system’s transition to contingency and crisis surge response and promotes a timely return to conventional standards of care as soon as possible.

Objective 1: Plan for a Medical Surge

Health care organizations can most effectively implement and manage medical surge when appropriate information sharing systems and procedures have been established, appropriate plans for all levels of care and populations have been developed, and personnel have been trained in their use.

Activity 1. Incorporate Medical Surge Planning into a Health Care Organization Emergency Operations Plan

An emergency event will require the HCC and its members to share information, attain and maintain situational awareness, and manage and share resources, at a minimum. The HCC may help facilitate patient and resource distribution (or re-distribution) during a surge emergency. The health care organization’s [Emergency Operations Plan \(EOP\)](#) will help inform these efforts.

The health care organization EOP should summarize the actions to initiate a response to a medical surge. The EOP should include individual departmental sections that provide specific surge strategies for each unit or service line. Further, employees should clearly know how to communicate with the organization’s [Emergency Operations Center \(EOC\)](#). The EOP should include a process for the health care organization to request waivers and [emergency use authorizations](#). As the response evolves and situational awareness is enhanced, the health care organization can refine its response strategies according to the scope of the emergency.

For more information on the health care organization’s EOP, see [Capability 2 – Health Care and Medical Response Coordination](#).

⁸¹ Barbera, Joseph. A., Macintyre, Anthony. G., M.D. “[Medical Surge Capacity and Capability: A Management System for Integrating Medical and Health Resources During Large-Scale Emergencies.](#)” HHS, Second Edition. Sept. 2007. PDF. Accessed 24 Aug. 2016. www.phe.gov/preparedness/planning/mscc/handbook/documents/mscc080626.pdf.

Activity 2. Incorporate Medical Surge into an Emergency Medical Services Emergency Operations Plan

EMS organizations, the HCC, and its members support each other during medical surge. The EMS EOP should incorporate information on dispatch, response, pre-hospital triage and treatment, transportation, supplies, and equipment. Like the health care organization EOP, the EMS EOP will help inform the overarching HCC response.

The EMS EOP should detail the implementation of a stepwise approach to medical surge, including the use of conventional, contingency, and crisis care strategies, as well as state (e.g., request for National Guard) and interstate (e.g., [Emergency Management Assistance Compact \[EMAC\]](#)⁸²) resources to address potential shortfalls. Ultimately, EMS organizations should strive to return to normal operations as quickly as possible. EMS providers should develop and consistently implement common strategies within the HCC. EMS medical directors and managers should develop and activate surge procedures appropriate for the emergency that enable their employees to make informed decisions in the field so they can provide the best care possible, given limited resources and staff. Table 1 below outlines key elements to incorporate into an EMS EOP.

Table 1 Medical Surge Elements to Incorporate into an EMS Emergency Operations Plan

Category	Elements to incorporate into an EMS EOP
Dispatch	<ul style="list-style-type: none"> • Identify procedures to: <ul style="list-style-type: none"> ▪ Alert hospitals of an emergency ▪ Communicate hospital capacity and capability to EMS providers ▪ Track patient distribution (or redistribution) ▪ Change emergency dispatch processes (e.g., not dispatching EMS to motor vehicle crashes until police or fire report significant injuries) ▪ Assign low priority calls to other resources or alternative forms of transport
Response	<ul style="list-style-type: none"> • Match appropriate specialized providers and equipment with the nature of the emergency (e.g., hazardous materials [HAZMAT] trained crews during a chemical spill) • Consider surge strategies such as changing shift lengths or crew configurations, using alternate vehicles, using community paramedicine, or other non-ambulance responses in coordination with dispatch priorities

⁸² "[Emergency Management Assistance Compact.](#)" EMAC, 2015. Web. Accessed 15 Sept. 2016. <http://www.emacweb.org/>.

Category	Elements to incorporate into an EMS EOP
Pre-hospital triage and treatment	<ul style="list-style-type: none"> • Implement disaster triage procedures and other standard operating procedures (e.g., eliminate requirement for verbal orders) • Consider processes that allow for expanded scope of practice • Plan for specialty responses, such as HAZMAT, highly infectious disease, mass burn, mass trauma, and mass pediatric emergencies
Transportation	<ul style="list-style-type: none"> • Identify procedures to surge the numbers of patients transported per vehicle or aircraft • Identify procedures for changing preferred destination facilities (e.g., trauma center, pediatric hospital) or not using the closest hospital • Identify procedures for type and level of pre-hospital care delivery and mode of transport (ground and air medical) • Develop and implement EMS patient distribution strategies to avoid overloading any single hospital • Identify procedures for transporting patients to alternate care sites
Supplies and equipment	<ul style="list-style-type: none"> • Utilize physical resources including supplies, equipment, and cached materials to support a medical surge

Activity 3. Incorporate Medical Surge into a Health Care Coalition Response Plan

The HCC response plan as described in [Capability 2 – Health Care and Medical Response Coordination](#) should detail the activation and notification processes for initiating medical surge response coordination among [HCC members](#), including ESF-8 partners. The HCC response plan should include the following elements related to medical surge:

- Strategies to implement if the emergency overwhelms regional capacity or specialty care (e.g., trauma, burn, pediatric) capability, including the execution of crisis standards of care plans; plans should also address steps to prevent crisis standards of care without compromising quality of care (e.g., conserve supplies, substitute for available resources, adapt practices, etc.)
- Strategies for patient tracking, including a process for keeping track of unidentified (John Doe/Jane Doe) patients
- Strategies for initial patient distribution (or re-distribution) in the event a facility becomes overwhelmed (e.g., across proximal geographic region among local hospitals)
- Strategies for definitive patient movement out of the affected region coordinated with U.S. Department of Defense (DoD) or U.S. Department of Veterans Affairs (VA) [Federal Coordinating Centers \(FCCs\)](#),⁸³ including the establishment of aerial ports of embarkation and debarkation for patient movement (e.g., deployable U.S. Department of Health and Human Services [HHS] response teams, definitive medical care in [National Disaster Medical System \[NDMS\]](#) civilian hospitals)

⁸³ [“National Disaster Medical System: Federal Coordinating Center Guide.”](#) NDMS, Apr. 2014. PDF. Accessed 12 Sept. 2016. http://www.dmrta.army.mil/01_FCC%20Guide%20Apr%202014.pdf.

- Processes for joint decision making and engagement among the HCC, HCC members, and the [ESF-8 lead agency](#) to avoid crisis conditions based on proactive decisions about resource utilization

Objective 2: Respond to a Medical Surge

Health care organizations and the HCC will need to respond to a surge in demand for health care services as a result of an emergency. This will require a coordinated approach to share information and resources, including staff, and ensure the stewardship of beds, medical equipment, supplies, pharmaceuticals, and other key items to provide the best possible care under such conditions.

Certain emergencies require a specialized response, either because of the type of event or specific vulnerabilities of different patient populations. The HCC facilitates these responses through timely information and resource sharing (e.g., [Essential Elements of Information \(EIs\)](#), expertise that exists within the HCC, etc.).

Activity 1. Implement Emergency Department and Inpatient Medical Surge Response

Hospitals should activate their EOP to rapidly develop a medical surge response proportionate to the emergency. While the goal of [immediate bed availability \(IBA\)](#)⁸⁴ is to create capacity within hospitals, other health care organization partners (e.g., home care, skilled nursing facilities, long-term care facilities, clinics, and community and tribal health centers) can meet the needs of patients who are discharged early as part of the surge response. DoD military treatment facilities and VA Medical Centers should be included in surge planning and response.⁸⁵ Hospitals should engage HCC members with the end goal of returning to normal operations as quickly as possible by either acquiring additional resources or sharing the patient load. Hospitals should develop medical surge capacity and capability for all populations across a number of areas (as described in Table 2 below).

Table 2 Areas to Develop Emergency Department and Inpatient Medical Surge Capacity and Capability

Area	Description
Emergency Department	<ul style="list-style-type: none"> Make beds and surge spaces rapidly available for initial triage and stabilization, and obtain additional staff, equipment, and supplies
General medical, general surgical, and monitored beds	<ul style="list-style-type: none"> Ensure IBA (at least 20 percent additional acute hospital inpatient capacity within the first four hours following an emergency) by rapidly prioritizing patients for discharge, maximizing the use of staffed beds, and using non-traditional spaces (e.g., observation areas)

⁸⁴ Hick, John L, et al. "[Health Care Facility and Community Strategies for Patient Care Surge Capacity.](#)" 15 Jul. 2004. PDF. Accessed 15 Sept. 2016. www.aha.org/content/00-10/Hick.pdf.

⁸⁵ DoD military treatment facilities and VA Medical Centers provide medical care for active duty service members, other military health care beneficiaries, and their families. In an emergency, DoD military treatment facilities may provide lifesaving (e.g., emergency department) care for non-military health care beneficiaries and transfer them at the appropriate time (e.g., patient is stable) to a civilian hospital for inpatient care.

Area	Description
Critical care	<ul style="list-style-type: none"> • Rapidly expand capacity (for those facilities that provide it) by adapting procedural, pre- and post-operative, and other areas for critical care • Assess staff, equipment, and supply needs for these spaces to facilitate requests
Surgical intervention	<ul style="list-style-type: none"> • Secure resources, such as operating rooms, surgeons, anesthesiologists, operating room nurses, and surgical equipment and supplies to provide time-sensitive, immediate surgical interventions to patients with life threatening injuries
Clinical laboratory and radiology	<ul style="list-style-type: none"> • Rapidly expand basic laboratory services (e.g., hematology, chemistries, Gram stain, blood cultures), including mechanisms for staff augmentation and rapid reporting • Consider use of point-of-care testing • Rapidly expand radiology services (e.g., diagnostic radiology, ultrasound, computed tomography [CT]), including mechanisms for staff augmentation and rapid reporting
Staffing	<ul style="list-style-type: none"> • Call back clinical and non-clinical staff; utilize staff in non-traditional roles • Adjust staffing ratios and shifts as required, and implement HCC member staff sharing plans
Health care volunteer management	<ul style="list-style-type: none"> • Identify situations that would necessitate the need for volunteers in hospitals • Identify processes to assist with volunteer coordination • Estimate the anticipated number of volunteers and health professional roles based on identified situations and resource needs of the facility • Identify and address volunteer liability issues, scope of practice issues, and third party reimbursement issues that may deter volunteer use • Leverage existing government and non-governmental volunteer registration programs (e.g., Emergency System for Advance Registration of Volunteer Health Professional [ESAR-VHP]⁸⁶ and Medical Reserve Corps [MRC]⁸⁷) • Develop rapid credential verification processes to facilitate emergency response
Equipment and supplies	<ul style="list-style-type: none"> • Implement emergency equipment, supplies and stocking strategies, and HCC resource sharing agreements

Activity 2. Implement Out-of-Hospital Medical Surge Response

Patient care settings outside of hospitals may be impacted during an emergency. For example, structural impacts from natural disasters or increased demand during epidemics may compromise an outpatient

⁸⁶ [“The Emergency System for Advance Registration of Volunteer Health Professionals.”](#) *Public Health Emergency*, n.d. Web. Accessed 7 Sept. 2016. www.phe.gov/esarvhp/pages/default.aspx.

⁸⁷ [“Medical Reserve Corps.”](#) *MRC*, 22 Sept. 2016. Web. Accessed 26 Sept. 2016. <https://mrc.hhs.gov>.

clinic’s ability to provide care. If not adequately addressed, the demand for out-of-hospital care will usually fall on hospitals and EMS, further overloading an already burdened system. Safe, continued operations of a community’s out-of-hospital care resources are critical to an effective medical surge response. Therefore, HCC out-of-hospital members should share staff and resources and fully integrate with the region’s surge response activities. Out-of-hospital members include but are not limited to, ambulatory care (including primary care providers), Federally Qualified Health Centers (FQHCs),⁸⁸ community and tribal health centers, stand-alone surgical and specialty centers, skilled nursing facilities, long-term care facilities, clinics, private practitioners, and home care.

Activity 3. Develop an Alternate Care System

An [alternate care system](#)—the utilization of non-traditional settings and modalities for health care delivery—may be required when demand overwhelms a region or the nation’s health care delivery system for a prolonged period, or an emergency has significantly damaged infrastructure and limited access to health care. In these situations, the ESF-8 lead agency, in collaboration with health care organizations and the HCC, should work together to meet patient care needs. Public health agencies and emergency management organizations have leadership roles in selecting, establishing, and operating the sites, though the health care delivery system may provide support, including personnel and supplies.

Initial efforts for staffing an alternate care system should not disrupt health care delivery services (see [Capability 3 – Continuity of Health Care Service Delivery](#)). Communities should utilize MRCs and other staffing augmentation efforts (e.g., nursing and medical students) to staff an alternate care system whenever possible. When these resources are no longer available, request for additional assistance (e.g., federal and state assistance, etc.) may be required. Table 3 below outlines key elements to consider when developing an alternate care system.

Table 3 Key Considerations to Develop an Alternate Care System

Category	Key considerations
Telemedicine/virtual medicine	<ul style="list-style-type: none"> • Use telephone, internet, telemedicine consultations, or other virtual platforms to provide consultation between providers • Provide access to specialty care expertise where it does not exist within the HCC to allow for remote triage and initial patient stabilization • Establish call centers to offer scripted patient support

⁸⁸ [“What are Federally qualified health centers \(FQHCs\)?”](http://www.hrsa.gov/healthit/toolbox/RuralHealthITtoolbox/Introduction/qualified.html) HRSA, n.d. Web. Accessed 7 Sept. 2016.

Category	Key considerations
Screening/early treatment	<ul style="list-style-type: none"> • Ensure that a section 1135 of the Social Security Act waiver⁸⁹ is in place if required • Establish assessment and screening centers that allow the health care delivery system to respond to increased demand for screening and early treatment (e.g., during a pandemic) • Preferentially manage patients with minor symptoms and those who might require limited medical intervention as these patients might otherwise overwhelm emergency departments
Medical care at shelters	<ul style="list-style-type: none"> • Provide medical care support at community-established shelters (may involve ESAR-VHP, MRC, state disaster medical teams, nursing home staff, or a variety of ambulatory care providers)
Disaster alternate care facilities selection and operation	<ul style="list-style-type: none"> • Be able to provide non-ambulatory care for patients when hospital beds are not available • Select sites for out-of-hospital patient care management based on recommended guidance⁹⁰ • Identify the process to assist with multiagency volunteer coordination to organize, assemble, dispatch, and properly out-process volunteers (e.g., Volunteer Reception Center) • Integrate with Federal Medical Stations (FMS)

Activity 4. Provide Pediatric Care during a Medical Surge Response

All hospitals should be prepared to receive, stabilize, and manage pediatric patients. However, given the limited number of pediatric specialty hospitals, an emergency affecting large numbers of children may require HCC and ESF-8 lead agency involvement to ensure those children who can most benefit from pediatric specialty services receive priority for transfer. Additionally, pediatric practitioners may be able to help identify patients who are appropriate for transfer to non-pediatric facilities. EMS resources, including providers with appropriate training and equipment, should be prepared to transport pediatric patients.

The HCC should promote its members' planning for pediatric medical emergencies and foster relationships and initiatives with emergency departments that are able to stabilize and/or manage pediatric medical emergencies.

Activity 5. Provide Surge Management during a Chemical or Radiation Emergency Event

Communities should be prepared to manage exposed or potentially exposed patients during a chemical or radiation emergency. During such events, individuals may go to various [health care facilities](#), police and fire stations, and other locations for assistance.

⁸⁹ See "[1135 Waivers](#)." ASPR, 2 May 2013. Web. Accessed 12 Sept. 2016. <http://www.phe.gov/Preparedness/legal/Pages/1135-waivers.aspx>.

⁹⁰ "[Disaster Alternate Care Facilities: Selection and Operation](#)." AHRQ, Oct. 2009. PDF. Accessed 19 Jul. 2016. <archive.ahrq.gov/prep/acfselection/dacfreport.pdf>.

To ensure successful surge management, HCC members should be prepared to do the following:

- Provide wet and dry decontamination by personnel trained and equipped according to the Occupational Safety and Health Administration (OSHA) guidance for first receivers⁹¹ and the *Patient Decontamination in a Mass Chemical Exposure Incident: National Planning Guidance for Communities*⁹²
- Ensure involvement and coordination with regional HAZMAT resources (where available), including EMS, fire service, health care organizations, and public health agencies (for public messaging)
- Distribute and administer available antidotes, including mobilization of [CHEMPACKs](#)⁹³ when necessary
- Screen to differentiate exposed from unexposed patients, especially in radiation emergency events
- Develop a process for radiation triage, treatment, and transport (RTR response)⁹⁴
- Manage behavioral health consequences for these types of emergency events (see [Capability 4 Objective 2, Activity 8 – Respond to Behavioral Health Needs during a Medical Surge Response](#) below)

Activity 6. Provide Burn Care during a Medical Surge Response

All hospitals should be prepared to receive, stabilize, and manage burn patients. However, given the limited number of burn specialty hospitals, an emergency resulting in large numbers of burn patients may require HCC and ESF-8 lead agency involvement to ensure those patients who can most benefit from burn specialty services receive priority for transfer. Additionally, burn surgeons may be able to help identify patients who do not require burn center care and who are appropriate for transfer to other health care facilities.

Activity 7. Provide Trauma Care during a Medical Surge Response

The HCC and its members should coordinate a response to large-scale trauma emergencies with all trauma system partners. All hospitals should be prepared to receive, stabilize, and manage trauma patients. However, given the limited number of trauma centers, an emergency resulting in large numbers of trauma patients may require HCC and ESF-8 lead agency involvement to ensure those patients who can most benefit from trauma services receive priority for transfer. Health care facilities should ensure sufficient availability of operating rooms, surgeons, anesthesiologists, operating room nurses, and surgical equipment and supplies to provide immediate surgical interventions to patients with life threatening injuries.

⁹¹ [“OSHA Best Practices for Hospital-based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances.”](#) OSHA, Jan. 2005. Web. Accessed 19 Jul. 2016.

https://www.osha.gov/dts/osta/bestpractices/html/hospital_firstreceivers.html.

⁹² Cibulsky, Susan M., et al. [“Patient Decontamination in a Mass Chemical Exposure Incident: National Planning Guidance for Communities.”](#) HHS, DHS, Dec. 2014. PDF. Accessed 15 Sept. 2016.

www.dhs.gov/sites/default/files/publications/Patient%20Decon%20National%20Planning%20Guidance_Final_December%202014.pdf.

⁹³ [“CHEMPACK.”](#) HHS, 25 Jun. 2011. Web. Accessed 19 Jul. 2016. chemm.nlm.nih.gov/chempack.htm.

⁹⁴ [“Radiation Triage, Treat, and Transport System \(RTR\) after a Nuclear Detonation: Venues for the Medical Response.”](#) HHS REMM, 16 Aug. 2016. Web. Accessed 15 Sept. 2016. www.remm.nlm.gov/RTR.htm.

Activity 8. Respond to Behavioral Health Needs during a Medical Surge Response

Emergencies may have severe emotional impact on survivors, their families, and responders and also cause substantial destabilization of patients with existing behavioral health issues. Hospitals and outpatient care providers, including behavioral health professionals, should identify a regional approach to assess and address the needs of the community. Behavioral health organizations are valuable HCC members and can provide needed support to survivors, responders, and people with pre-existing behavioral health concerns.

HCC members should promote a robust behavioral health response that include the following elements:

- A proportional behavioral health response, addressing the unique behavioral health needs of children, implemented according to the impact of emergencies on the community
- The development and use of behavioral health support and strike teams to support the affected population
- Ongoing support for inpatient and outpatient care of psychiatric patients
- Widespread information dissemination to help providers, patients, family, and the community understand the symptoms and signs of acute stress responses and when and where to seek treatment
- Behavioral health professionals increasing contact with clients
- Provision of [psychological first aid](#) to those impacted (including health care workers)

Activity 9. Enhance Infectious Disease Preparedness and Surge Response

Both health care organizations and the HCC have roles in planning for and responding to infectious disease outbreaks that stress either the capacity and/or capability of the health care delivery system.

Health care organizations should:

- Screen patients for signs, symptoms, and relevant travel and exposure history
- Support treatment protocol and algorithm use in clinical care by deploying [clinical decision support \(CDS\)](#) where electronic health records (EHRs) are in use
- Document exposure information in EHRs, and ensure it is communicated to the entire care team and state and local health departments (by electronic means, if available)
- Rapidly isolate patients
- Provide [personal protective equipment \(PPE\)](#) and prophylaxis to their employees and visitors while awaiting either comprehensive evaluation, definitive diagnosis, or transfer
- Utilize tertiary care facilities, when possible, or designated facilities to assess, manage, and treat patients with suspected highly pathogenic transmissible infections (e.g., severe acute respiratory syndrome [SARS]/Middle East respiratory syndrome [MERS]) or non-transmissible infections (e.g., anthrax)
- Define and implement visitor policies for infectious disease emergencies, in collaboration with the HCC, to ensure uniformity

The HCC, in collaboration with the ESF-8 lead agency, should:

- Expand existing Ebola concept of operations plans (CONOPs) to enhance preparedness and response for all infectious disease emergencies that stress the health care delivery system
- Ensure jurisdictional public health infection control and prevention programs (including [healthcare-associated infections \[HAI\]](#) programs) participate in developing infectious disease

response plans, and include HCC members for management of individual cases and larger emerging infectious disease outbreaks

- Develop HCC and regional trainings and strategies for the consistent use of PPE
- Manage PPE resources, including stockpiling considerations, vendor managed inventory, and the potential reuse of equipment. This includes consistent policies regarding the type of PPE necessary for various infectious pathogens and sharing information about PPE supplies across HCCs, EMS, public health agencies, and other HCC members
- Include HAI coordinators and quality improvement professionals at the facility and jurisdiction levels in HCC activities, including planning, training, and exercises/drills; include HCC leaders in state HAI coordination work groups
- Develop and/or integrate a uniform process of continuous screening, integrated with EHRs where possible, throughout HCC member facilities and organizations
- Coordinate patient distribution for highly pathogenic respiratory viruses and other highly transmissible infections when tertiary care facilities or designated facilities are not available
- Provide real-time information through coordinated HCC and jurisdictional public health information sharing systems (see [Capability 2, Objective 3, Activity 4 – Communicate with the Public during an Emergency](#))
- Partner with relevant public health and health care delivery system informatics initiatives, including electronic laboratory reporting, electronic test ordering, electronic death reporting, and syndromic surveillance as it relates to the submission of emergency department visit data to the public health agency
- Identify, utilize, and share leading practices to optimize infectious disease preparedness and response; support the use of these practices with CDS in EHRs whenever possible

Activity 10. Distribute Medical Countermeasures during Medical Surge Response

In coordination with public health agencies, the HCC and its member organizations should be prepared to receive and dispense [medical countermeasures \(MCMs\)](#) to patients, responders, and employees and their household members during a medical surge emergency (e.g., radiation, botulism, anthrax, and other [category A bioterrorism agents](#)⁹⁵).

Where possible, health care organizations should coordinate with local public health agencies prior to an emergency to establish a [closed point of dispensing \(POD\)](#) in their facility. In the event of a public health emergency requiring mass dispensing of MCMs to local populations, available MCMs may exist in HCC or individual HCC member’s caches or be provided by local public health agencies to established closed PODs. Establishing closed PODs prior to an emergency allows for organized and timely distribution of medication or vaccines to hospital patients, employees, and their families.

Activity 11. Manage Mass Fatalities

Mass fatality management may involve emergency management organizations, public health agencies, coroners, medical examiners, and other stakeholders depending on the nature of the emergency. Hospitals should be able to manage an increase in decedents at their facilities. Hospitals should be aware of community plans and authorities for an emergency resulting in mass fatalities.

Health care organizations, in collaboration with public health agencies and other stakeholders, should:

⁹⁵ “[NIAID Emerging Infectious Diseases/Pathogens](https://www.niaid.nih.gov/research/emerging-infectious-diseases-pathogens).” *NIAID*, 25 Jan. 2016. Web. Accessed 20 Jul. 2016. <https://www.niaid.nih.gov/research/emerging-infectious-diseases-pathogens>.

- Prepare for a surge in initial storage of decedents, including those who will not become medical examiner cases (e.g., pandemic)
- Manage large numbers of family members and friends of decedents who may come to the hospital
- Facilitate the identification of temporary, ad hoc mass fatality storage sites in the community (e.g., parking decks, ice rinks) when refrigerated trailers and other conventional storage means are not immediately available
- Manage contagious, chemically, or radiologically contaminated remains

Glossary

Term	Definition
Access and functional needs	<p>Access-based needs: All people must have access to certain resources, such as social services, accommodations, information, transportation, medications to maintain health, and so on.</p> <p>Function-based needs: Function-based needs refer to restrictions or limitations an individual may have that requires assistance before, during, and/or after a disaster or public health emergency.⁹⁶</p>
Alternate care sites	<p>Substitute non-medical physical locations converted to provide health care services when existing health care facilities are compromised by a hazard impact, or the volume of patients exceeds the capacity and/or capabilities of everyday health care facilities. They may be managed by private health care or public agencies.⁹⁷</p> <p>In some instances, these sites may be located on hospital campuses or other health care facilities.</p>
Alternate care system	<p>Encompasses a full array of organizations outside the hospital in which health care can be delivered in a health care emergency, including nursing homes, home care, skilled nursing facilities, and long-term care facilities, etc.⁹⁸</p>
Category A bioterrorism agents	<p>Category A bioterrorism agents (pathogens) are those organisms/biological agents that pose the highest risk to national security and public health because they:</p> <ul style="list-style-type: none"> • Can be easily disseminated or transmitted from person to person • Result in high mortality rates and have the potential for major public health impact • Might cause public panic and social disruption • Require special action for public health preparedness⁹⁹

⁹⁶ "[At-Risk Individuals](#)." ASPR, 8 Sept. 2016. Web. Accessed 16 Sept. 2016.

<http://www.phe.gov/Preparedness/planning/abc/Pages/atrisk.aspx>

⁹⁷ "[ICDRM/GWU Emergency Management Glossary of Terms](#)." *The George Washington University Institute for Crisis, Disaster, and Risk Management*, 30 Jun. 2010. pp. 6. PDF. Accessed 19 Jul. 2016.

www.gwu.edu/~icdrm/publications/PDF/GLOSSARY - Emergency Management ICDRM 30 JUNE 10.pdf.

⁹⁸ Hanfling, Dan, et al., "[Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response](#)." *National Academies Press*, 2012 Mar. 21. 8, Out-of-Hospital and Alternate Care Systems. Web. Accessed 12 Sep. 2016. <https://www.ncbi.nlm.nih.gov/books/NBK201069/>.

⁹⁹ "[NIAID Emerging Infectious Diseases/Pathogens](#)." *NIAID*, 25 Jan. 2016. Web. Accessed 20 Jul. 2016. <https://www.niaid.nih.gov/research/emerging-infectious-diseases-pathogens>.

Term	Definition
CHEMPACK	The CHEMPACK program is an ongoing initiative of the Centers for Disease Control and Prevention’s (CDC) Division of Strategic National Stockpile (SNS) launched in 2003, which provides antidotes (three countermeasures used concomitantly) to nerve agents for pre-positioning by state, local, and/or tribal officials throughout the U.S. The CHEMPACK program is envisioned as a comprehensive capability for the effective use of medical countermeasures in the event of an attack on civilians with nerve agents. ¹⁰⁰
Cities Readiness Initiative (CRI)	A federally funded program designed to enhance preparedness in the nation's largest population centers where more than 50% of the U.S. population resides. Using CRI funding, state and large metropolitan public health departments develop, test, and maintain plans to quickly receive and distribute life-saving medicine and medical supplies from the nation’s Strategic National Stockpile (SNS) to local communities following a large-scale public health emergency. ¹⁰¹
Clinical decision support (CDS)	A process for enhancing health-related decisions and actions with pertinent, organized clinical knowledge and patient information to improve health and health care delivery. ¹⁰²
Closed point of dispensing (POD)	A specific business or organization that has the ability to dispense medical countermeasures to a defined population, as opposed to the general public (e.g., private sector workplace, hospital, etc.) ¹⁰³
Community Emergency Response Teams (CERT)	An organization of volunteer emergency workers who have received specific training in basic disaster response skills and who agree to supplement existing emergency responders in the event of an emergency or disaster. ¹⁰⁴

¹⁰⁰ “CHEMPACK.” HHS, 25 Jan. 2011. Web. Accessed 12 Sept. 2016. <https://chemm.nlm.nih.gov/chempack.htm>.

¹⁰¹ “Cities Readiness Initiative.” CDC, 17 Jun. 2016. Web. Accessed 20 Jul. 2016. www.cdc.gov/phpr/stockpile/cri/.

¹⁰² “How to Implement EHRs: Clinical Decision Support (CDS).” ONC, 28 Mar. 2016. Web. Accessed 26 Oct. 2016. healthit.gov/providers-professionals/clinical-decision-support-cds.

¹⁰³ Stroud, C., et al. “Prepositioning Antibiotics for Anthrax.” *National Academies Press*, 30 Sept. 2011. pp. 14. Web. Accessed 16 Sep. 2016. <http://www.ncbi.nlm.nih.gov/books/NBK190049/>.

¹⁰⁴ “Community Emergency Response Teams.” FEMA, 31 Aug. 2016. Web. Accessed 7 Sept. 2016. <https://www.fema.gov/community-emergency-response-teams/>.

Term	Definition
Community paramedicine	An organized system of services, based on local need, which are provided by emergency medical technicians and paramedics integrated into the local or regional health care delivery system and overseen by emergency and primary care physicians. This not only addresses gaps in primary care services, but enables the presence of emergency medical services (EMS) personnel for emergency response in low call-volume areas by providing routine use of their clinical skills and additional financial support from these non-EMS activities. ¹⁰⁵
Corporate health system	An organized, coordinated, and collaborative network that (1) links various health care providers, via common ownership or contract, across three domains of integration – economic, noneconomic, and clinical – to provide a coordinated, vertical continuum of services to a particular patient population or community, and (2) is accountable both clinically and fiscally for the clinical outcomes and health status of the population or community served, and has systems in place to manage and improve them. ¹⁰⁶
Critical care	Critical care helps people with life-threatening injuries and illnesses. It might treat problems such as complications from surgery, accidents, infections, and severe breathing problems. It involves close, constant attention by a team of specially-trained health care providers. Critical care usually takes place in an intensive care unit (ICU) or trauma center. ¹⁰⁷
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). ¹⁰⁸

¹⁰⁵ [“Community Paramedicine Evaluation Tool.”](http://www.hrsa.gov/ruralhealth/pdf/paramedicevaltool.pdf) HRSA, Mar. 2012. PDF. Accessed 20 Sep. 2016. <http://www.hrsa.gov/ruralhealth/pdf/paramedicevaltool.pdf>.

¹⁰⁶ [“Integrated Delivery Systems: The Cure for Fragmentation.”](http://www.ajmc.com/journals/supplement/2009/a264_09dec_hlthpolicycvrone/a264_09dec_enthovens284to290/) AJMC, 15 Dec. 2009. Web. Accessed 20 Jul. 2016. www.ajmc.com/journals/supplement/2009/a264_09dec_hlthpolicycvrone/a264_09dec_enthovens284to290/.

¹⁰⁷ [“Critical Care.”](http://medlineplus.gov/criticalcare.html) MedlinePlus, 2 Apr. 2015. Web. Accessed 16 Sept. 2016. medlineplus.gov/criticalcare.html.

¹⁰⁸ [“ICDRM/GWU Emergency Management Glossary of Terms.”](http://www.gwu.edu/~icdrm/publications/PDF/GLOSSARY - Emergency Management ICDRM 30 JUNE 10.pdf) The George Washington University Institute for Crisis, Disaster, and Risk Management, 30 Jun. 2010. pp. 30. PDF. Accessed 19 Jul. 2016. www.gwu.edu/~icdrm/publications/PDF/GLOSSARY - Emergency Management ICDRM 30 JUNE 10.pdf.

Term	Definition
Disaster Medical Assistance Team (DMAT)	A component of the National Disaster Medical System (NDMS) Response Teams. A DMAT is a group of professional and para-professional medical personnel (supported by a cadre of logistical and administrative staff) designed to provide medical care during a disaster or other event. NDMS recruits personnel for specific vacancies, plans for training opportunities, and coordinates the deployment of the teams. ¹⁰⁹
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). ¹¹⁰
Emergency Management Assistance Compact (EMAC)	A congressionally ratified organization that provides form and structure to interstate mutual aid. Through EMAC, a disaster impacted state can request and receive assistance from other member states quickly and efficiently, resolving two key issues upfront: liability and reimbursement. ¹¹¹
Emergency Operations Center (EOC)	The physical location at which the coordination of information and resources to support incident management (on-scene operations) activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOCs may be organized by major functional disciplines (e.g., fire, law enforcement, medical services), by jurisdiction (e.g., federal, state, regional, tribal, city, county), or by some combination thereof. ¹¹²
Emergency Operations Plan (EOP)	The “response plan” that an entity (organization, jurisdiction, state, etc.) maintains that describes intended response to any emergency situation. It provides action guidance for management and emergency response personnel during the response phase. ¹¹³

¹⁰⁹ “[Disaster Medical Assistance Team \(DMAT\)](http://www.phe.gov/preparedness/responders/ndms/teams/pages/dmat.aspx).” ASPR, 25 Sept. 2015. Web. Accessed 16 Sept. 2016. <http://www.phe.gov/preparedness/responders/ndms/teams/pages/dmat.aspx>.

¹¹⁰ “[ICDRM/GWU Emergency Management Glossary of Terms](http://www.gwu.edu/~icdrm/publications/PDF/GLOSSARY%20-%20Emergency%20Management%20ICDRM%2030%20JUNE%2010.pdf).” *The George Washington University Institute for Crisis, Disaster, and Risk Management*, 30 Jun. 2010. pp. 32. PDF. Accessed 19 Jul. 2016. www.gwu.edu/~icdrm/publications/PDF/GLOSSARY - Emergency Management ICDRM 30 JUNE 10.pdf.

¹¹¹ *Ibid.*, 33.

¹¹² *Ibid.*, 34.

¹¹³ *Ibid.*, 34.

Term	Definition
Emergency Support Function-6 (ESF-6) – Mass Care, Emergency Assistance, Temporary Housing, and Human Services Annex	ESF-6 (Mass Care, Emergency Assistance, Housing, and Human Services) coordinates the delivery of federal mass care, emergency assistance, housing, and human services when local, tribal, and state response and recovery needs exceed their capabilities. ¹¹⁴
Emergency Support Function-8 (ESF-8) – Public Health and Medical Services Annex	ESF-8 (Public Health and Medical Services) provides the mechanism for coordinated federal assistance to supplement state, tribal, and local resources in response to the following: <ul style="list-style-type: none"> • 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 situation¹¹⁵
Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP)	ESAR-VHP is a federal program created to support states and territories in establishing standardized volunteer registration programs for disasters and public health and medical emergencies. The program, administered on the state level, verifies health professionals' identification and credentials so that they can respond more quickly when disaster strikes. ¹¹⁶
Emergency use authorization	This authority allows U.S. Food and Drug Administration (FDA) to help strengthen the nation's public health protections against chemical, biological, radiological, nuclear or explosive (CBRNE) threats by facilitating the availability and use of medical countermeasures (MCMs) needed during public health emergencies. Under section 564 of the Federal Food, Drug, and Cosmetic Act, the FDA Commissioner may allow unapproved medical products or unapproved uses of approved medical products to be used in an emergency to diagnose, treat, or prevent serious or life-threatening diseases or conditions caused by CBRNE threat agents when there are no adequate, approved, and available alternatives. ¹¹⁷

¹¹⁴ [“Emergency Support Function #6 – Mass Care, Emergency Assistance, Housing, and Human Services Annex.”](#) FEMA, Jan. 2008. PDF. Accessed 20 Jul. 2016. www.fema.gov/pdf/emergency/nrf/nrf-esf-06.pdf.

¹¹⁵ [“Emergency Support Function #8 – Public Health and Medical Services Annex.”](#) FEMA, Jan. 2008. Web. Accessed 20 Jul. 2016. www.fema.gov/media-library-data/20130726-1825-25045-8027/emergency_support_function_8_public_health___medical_services_annex_2008.pdf

¹¹⁶ [“The Emergency System for Advance Registration of Volunteer Health Professionals.”](#) ASPR, n.d. Web. Accessed 20 Jul. 2016. www.phe.gov/esarvhp/Pages/about.aspx.

¹¹⁷ [“Emergency Use Authorization.”](#) FDA, 7 Sept. 2016. Web. Accessed 16 Sept. 2016. www.fda.gov/EmergencyPreparedness/Counterterrorism/ucm182568.htm.

Term	Definition
ESF-8 lead agency	ESF-8 language distinguishes between lead and supporting agencies to conduct an emergency response. ¹¹⁸ Within the context of Emergency Support Functions (ESF), primary agencies have significant authorities, roles, resources, and capabilities for a particular function within an ESF.
Essential Elements of Information (EEI)	Important and standard information items needed to make timely and informed decisions. EEIs also provide context and contribute to analysis. EEIs are also included in situation reports. ¹¹⁹
Federal Coordinating Center (FCC)	A federal facility (U.S. Department of Defense or U.S. Department of Veterans Affairs) located in a metropolitan area of the United States, responsible for day-to-day coordination of planning, training, and operations in one or more assigned geographic National Disaster Medical System (NDMS) Patient Reception Areas (PRA). NDMS participating medical treatment facilities (MTF) should be within 5 miles of the managing FCC. ¹²⁰
Federal Medical Station (FMS)	A U.S. Department of Health and Human Services (HHS)- deployable health care facility that can provide surge beds to support health care systems anywhere in the U.S. that are impacted by disasters or public health emergencies. FMS are not mobile and cannot be relocated once established. ¹²¹
Hazard vulnerability analysis (HVA)	A systematic approach to identifying all hazards that may affect an organization and/or its community, assessing the risk (probability of hazard occurrence and the consequence for the organization) associated with each hazard, and analyzing the findings to create a prioritized comparison of hazard vulnerabilities. The consequence, or “vulnerability,” is related to both the impact on organizational function and the likely service demands created by the hazard impact. ¹²²

¹¹⁸ “[Emergency Support Functions.](#)” ASPR, 2 Jun. 2015. Web. Accessed 12 Sept. 2016.

<http://www.phe.gov/Preparedness/support/esf8/Pages/default.aspx#eme>.

¹¹⁹ “[FEMA Incident Action Planning Guide.](#)” FEMA, Jan. 2012. PDF. Accessed 18 Jul. 2016.

http://www.fema.gov/media-library-data/20130726-1822-25045-1815/incident_action_planning_guide_1_26_2012.pdf.

¹²⁰ “[National Disaster Medical System: Federal Coordinating Center Guide.](#)” NDMS, Apr. 2014. PDF. Accessed 12 Sept. 2016. http://www.dmrti.army.mil/01_FCC%20Guide%20Apr%202014.pdf.

¹²¹ “[Medical Assistance.](#)” ASPR, 8 May 2015. Web. Accessed 16 Sept. 2016.

<http://www.phe.gov/Preparedness/support/medicalassistance/Pages/default.aspx#fms>.

¹²² “[ICDRM/GWU Emergency Management Glossary of Terms.](#)” *The George Washington University Institute for Crisis, Disaster, and Risk Management*, 30 Jun. 2010. pp. 48. PDF. Accessed 19 Jul. 2016.

www.gwu.edu/~icdrm/publications/PDF/GLOSSARY - Emergency Management ICDRM 30 JUNE 10.pdf.

Term	Definition
Hazardous material (HAZMAT)	Any material that is explosive, flammable, poisonous, corrosive, reactive, or radioactive (or any combination) and requires special care in handling because of the hazards posed to public health, safety, and/or the environment. ¹²³
Health and Social Services Recovery Support Function	Assists locally-led recovery efforts in the restoration of the public health, health care and social services networks to promote the resilience, health and well-being of affected individuals and communities. ¹²⁴
Healthcare-associated infections (HAI)	Healthcare-associated infections (HAIs) are infections people get while they are receiving health care for another condition. HAIs can happen in any health care facility, including hospitals, ambulatory surgical centers, end-stage renal disease facilities, and long-term care facilities. HAIs can be caused by bacteria, fungi, viruses, or other less common pathogens. ¹²⁵
Health care coalition (HCC)	A group of individual health care and response organizations (e.g., hospitals, emergency medical services (EMS), emergency management organizations, public health agencies, etc.) 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.
Health care executive	Health care organization senior executives with institutional decision-making authority. Titles of health care executives may include but are not limited to, President, Chief Executive Officer, Chief Operating Officer, Chief Medical Officer, Chief Nursing Officer, and Medical Director.

¹²³ ["ICDRM/GWU Emergency Management Glossary of Terms."](#) *The George Washington University Institute for Crisis, Disaster, and Risk Management*, 30 Jun. 2010. pp. 48. PDF. Accessed 19 Jul. 2016.

www.gwu.edu/~icdrm/publications/PDF/GLOSSARY - Emergency Management ICDRM 30 JUNE 10.pdf.

¹²⁴ ["Health and Social Services Recovery Support Function."](#) *ASPR*, 27 Apr. 2015. Web. Accessed 12 Sept. 2016. <http://www.phe.gov/about/oem/recovery/Pages/hss-rsf.aspx>.

¹²⁵ ["Overview – Health Care-Associated Infections."](#) *ODPHP*, 16 Sept. 2016. Web. Accessed 16 Sept. 2016. health.gov/hcq/prevent-hai.asp.

Term	Definition
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. ¹²⁶
Health Insurance Portability and Accountability Act (HIPAA)	Public Law 104-191 (August 21, 1996) addresses many aspects of health care practice and medical records. This federal act most notably addresses the privacy of protected health information (PHI), and directs the development of specific parameters as to how PHI may be shared. ¹²⁷
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 exercise in this document is a Homeland Security industry application of emergency management concepts and principles. ¹²⁸
Immediate bed availability (IBA)	[The ability of a hospital] to provide no less than 20 percent bed availability of staffed beds within four hours of a disaster. It is built on three pillars: continuous monitoring across the health system; off-loading of patients who are at low risk for untoward events through reverse triage; and on-loading of patients from the disaster. ¹²⁹
Incident Action Plan (IAP)	An oral or written plan containing general objectives reflecting the overall strategy for managing an incident. It may include the identification of operational resources and assignments. It may also include attachments that provide direction and important information for management of the incident during one or more operational periods. ¹³⁰

¹²⁶ [“ICDRM/GWU Emergency Management Glossary of Terms.”](#) *The George Washington University Institute for Crisis, Disaster, and Risk Management*, 30 Jun. 2010. pp. 48. PDF. Accessed 19 Jul. 2016.

[www.gwu.edu/~icdrm/publications/PDF/GLOSSARY - Emergency Management ICDRM 30 JUNE 10.pdf.](#)

¹²⁷ *Ibid.*, 49.

¹²⁸ *Ibid.*, 49.

¹²⁹ Hick, John L., et al. [“Health Care Facility and Community Strategies for Patient Care Surge Capacity.”](#) *Annals of Emergency Medicine*. 15 Jul. 2004. PDF. Accessed 15 Sept. 2016. [http://www.aha.org/content/00-10/Hick.pdf.](#)

¹³⁰ [“ICDRM/GWU Emergency Management Glossary of Terms.”](#) *The George Washington University Institute for Crisis, Disaster, and Risk Management*, 30 Jun. 2010. pp. 51. PDF. Accessed 19 Jul. 2016.

[www.gwu.edu/~icdrm/publications/PDF/GLOSSARY - Emergency Management ICDRM 30 JUNE 10.pdf.](#)

Term	Definition
Incident action planning cycles	The flux in incident and response conditions is best managed using a deliberate planning process that is based on regular, cyclical reevaluation of the incident objectives. Commonly known in the incident command system (ICS) as the planning cycle, this iterative process enhances the integration of public health and medical assets with other response agencies that operate planning cycles. ¹³¹
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. ¹³²
Joint Commission	The Joint Commission is an independent, not-for-profit organization that accredits and certifies health care organizations and programs in the United States. Joint Commission accreditation and certification standards are the basis of an objective evaluation process designed to help health care organizations measure, assess, and improve performance. ¹³³
Joint Information System (JIS)	A structure that integrates incident information and public affairs into a cohesive organization designed to provide consistent, coordinated, accurate, accessible, timely, and complete information during crisis or incident operations. The mission of the JIS is to provide a structure and system for developing and delivering coordinated interagency messages; developing, recommending, and executing public information plans and strategies on behalf of the Incident Commander (IC); advising the IC concerning public affairs issues that could affect a response effort; and controlling rumors and inaccurate information that could undermine public confidence in the emergency response effort. ¹³⁴

¹³¹ [“The Incident Command Process.” ASPR](#), 14 Feb. 2012. Web. Accessed 12 Sept. 2016.

<http://www.phe.gov/preparedness/planning/mscc/handbook/chapter1/pages/theincidentcommand.aspx>.

¹³² [“ICDRM/GWU Emergency Management Glossary of Terms.”](#) *The George Washington University Institute for Crisis, Disaster, and Risk Management*, 30 Jun. 2010. pp. 48. PDF. Accessed 19 Jul. 2016.

www.gwu.edu/~icdrm/publications/PDF/GLOSSARY - Emergency Management ICDRM 30 JUNE 10.pdf.

¹³³ [“About the Joint Commission.”](#) *The Joint Commission*, 2016. Web. Accessed 20 Jul. 2016.

www.jointcommission.org/about_us/about_the_joint_commission_main.aspx.

¹³⁴ [“ICDRM/GWU Emergency Management Glossary of Terms.”](#) *The George Washington University Institute for Crisis, Disaster, and Risk Management*, 30 Jun. 2010. pp. 58. PDF. Accessed 19 Jul. 2016.

www.gwu.edu/~icdrm/publications/PDF/GLOSSARY - Emergency Management ICDRM 30 JUNE 10.pdf.

Term	Definition
Medical countermeasures (MCMs)	Medical countermeasures, or MCMs, are Food and Drug Administration (FDA)-regulated products (biologics, drugs, devices) that may be used in the event of a potential public health emergency stemming from a terrorist attack with a biological, chemical, or radiological/nuclear material, a naturally occurring emerging disease, or a natural disaster. MCMs can be used to diagnose, prevent, protect from, or treat conditions associated with chemical, biological, radiological, nuclear, and explosives (CBRNE) threats, or emerging infectious diseases. ¹³⁵
Medical Reserve Corps (MRC)	A national network of local groups of volunteers engaging local communities to strengthen public health, reduce vulnerability, build resilience, and improve preparedness, response, and recovery capabilities. ¹³⁶
Medical Surge Capacity and Capability (MSCC)	A management methodology based on valid principles of emergency management and the incident command system (ICS). Medical and public health disciplines may apply these principles to coordinate effectively with one another and to integrate with other response organizations that have established ICS and emergency management systems (fire service, law enforcement, etc.). This promotes a common management system for all response entities—public and private—that may be brought to bear in an emergency. In addition, the MSCC Management System guides the development of public health and medical response that is consistent with the National Incident Management System (NIMS). ¹³⁷
Member type	A category of health care coalition (HCC) members that represents a type of facility or organization (e.g., all nursing facilities, all hospitals, or all emergency medical services [EMS] agencies within one HCC).
Mission Essential Functions (MEFs)	Functions that are required to be performed by statute, Executive Order, or otherwise deemed essential by the heads of principal organizational elements to meet mission requirements. ¹³⁸

¹³⁵ “[What are Medical Countermeasures?](http://www.fda.gov/EmergencyPreparedness/Counterterrorism/MedicalCountermeasures/AboutMCMi/ucm431268.htm)” FDA, 29 Apr. 2016. Web. Accessed 20 Jul. 2016.

www.fda.gov/EmergencyPreparedness/Counterterrorism/MedicalCountermeasures/AboutMCMi/ucm431268.htm

¹³⁶ “[Medical Reserve Corps.](https://mrc.hhs.gov)” MRC, 22 Sept. 2016. Web. Accessed 26 Sept. 2016. <https://mrc.hhs.gov>.

¹³⁷ Barbera, Joseph. A., Macintyre, Anthony. G., M.D. “[Medical Surge Capacity and Capability: A Management System for Integrating Medical and Health Resources During Large-Scale Emergencies.](http://www.phe.gov/preparedness/planning/mscc/handbook/documents/mscc080626.pdf)” HHS, ed. 2, Sept. 2007. PDF. Accessed 24 Aug. 2016.

www.phe.gov/preparedness/planning/mscc/handbook/documents/mscc080626.pdf.

¹³⁸ “[ICDRM/GWU Emergency Management Glossary of Terms.](http://www.gwu.edu/~icdrm/publications/PDF/GLOSSARY - Emergency Management ICDRM 30 JUNE 10.pdf)” *The George Washington University Institute for Crisis, Disaster, and Risk Management*, 30 Jun. 2010. pp. 37. PDF. Accessed 19 Jul. 2016.

www.gwu.edu/~icdrm/publications/PDF/GLOSSARY - Emergency Management ICDRM 30 JUNE 10.pdf.

Term	Definition
Multiagency coordination group	A multiagency coordination group functions within a broader multiagency coordination system. It may establish the priorities among incidents and associated resource allocations, deconflict procedures, and provide strategic guidance and direction to support incident management activities. ¹³⁹
National Disaster Medical System (NDMS)	The National Disaster Medical System (NDMS) is a federally coordinated health care system and partnership of the U.S. Departments of Health and Human Services, Homeland Security, Defense, and Veterans Affairs. The purpose of the NDMS is to support state, local, tribal, and territorial authorities following disasters and emergencies by supplementing health and medical systems and response capabilities. The NDMS hospital network also supports the military and U.S. Department of Veterans Affairs (VA) Medical Centers in a military health emergency. ¹⁴⁰
National Incident Management System (NIMS)	A systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work together seamlessly and manage incidents involving all threats and hazards—regardless of cause, size, location, or complexity—in order to reduce loss of life, property, and harm to the environment. ¹⁴¹
Personal protective equipment (PPE)	Equipment worn to minimize exposure to a variety of hazards. Examples of PPE include such items as gloves, masks, foot and eye protection, protective hearing devices (earplugs, muffs) hard hats, respirators, and full body suits. ¹⁴²
Psychological first aid	An evidence-informed modular approach for assisting people in the immediate aftermath of disaster and terrorism to reduce initial distress and to foster short- and long-term adaptive functioning. ¹⁴³

¹³⁹ [“ICDRM/GWU Emergency Management Glossary of Terms.”](#) *The George Washington University Institute for Crisis, Disaster, and Risk Management*, 30 Jun. 2010. pp. 66. PDF. Accessed 19 Jul. 2016.

www.gwu.edu/~icdrm/publications/PDF/GLOSSARY - Emergency Management ICDRM 30 JUNE 10.pdf.

¹⁴⁰ [“National Disaster Medical System.”](#) ASPR, 1 Jul. 2016. Web. Accessed 20 Jul. 2016.

www.phe.gov/Preparedness/responders/ndms/Pages/default.aspx.

¹⁴¹ [“National Incident Management System.”](#) FEMA, 28 Jun. 2016. Web. Accessed 12 Sept. 2016.

<http://www.fema.gov/national-incident-management-system>.

¹⁴² [“Personal Protective Equipment.”](#) OSHA, n.d. Web. Accessed 20 Jul. 2016.

<https://www.osha.gov/SLTC/personalprotectiveequipment>.

¹⁴³ Jacobs A., Brymer M., et. al. [“Psychological First Aid: Field Operations Guide.”](#) *National Child Traumatic Stress Network & National Center for PTSD*. ed. 2, 2006. Web. Accessed 26 Oct. 2016.

www.ptsd.va.gov/professional/manuals/manual-pdf/pfa/PFA_2ndEditionwithappendices.pdf.

Term	Definition
Public Information Officer (PIO)	As part of the incident response team, responsible for communicating with the public, media, and/or coordinating with other agencies, as necessary, with incident-related information requirements. The PIO is responsible for developing and releasing information about the incident to the news media, incident personnel, and other appropriate agencies and organizations. ¹⁴⁴
Public safety answering points (PSAPs)	9-1-1 call centers, also known as public safety answering points (PSAPs), are the public's first line of contact to public safety authorities in an emergency. ¹⁴⁵
Section 1135 of the Social Security Act waivers	When the President declares a major disaster or an emergency under the Stafford Act or an emergency under the National Emergencies Act, and the HHS Secretary declares a public health emergency, the Secretary is authorized to take certain actions in addition to his/her regular authorities under section 1135 of the Social Security Act. [The Secretary] may waive or modify certain Medicare, Medicaid, Children's Health Insurance Program (CHIP) and Health Insurance Portability and Accountability Act (HIPAA) requirements as necessary to ensure to the maximum extent feasible that, in an emergency area during an emergency period, sufficient health care items and services are available to meet the needs of individuals enrolled in Social Security Act (SSA) programs and that providers of such services in good faith who are unable to comply with certain statutory requirements are reimbursed and exempted from sanctions for noncompliance other than fraud or abuse. ¹⁴⁶
Strategic National Stockpile (SNS)	Strategic National Stockpile (SNS) has large quantities of medicine and medical supplies to protect the American public if there is a public health emergency (e.g., terrorist attack, flu outbreak, earthquake) severe enough to cause local supplies to run out. Once federal and local authorities agree that the SNS is needed, medicines will be delivered to any state in the U.S. in time for them to be effective. ¹⁴⁷

¹⁴⁴ "[Basic Guidance for Public Information Officers \(PIOs\)](#)." FEMA, Nov. 2007. Web. Accessed 20 Jul. 2016. www.fema.gov/media-library-data/20130726-1623-20490-0276/basic_guidance_for_pios_final_draft_12_06_07.pdf.

¹⁴⁵ "[9-1-1 Call Centers/PSAPs](#)." FCC, n.d. Web. Accessed 18 Sept. 2016. <https://transition.fcc.gov/pshs/psaps.html>.

¹⁴⁶ See "[1135 Waivers](#)." ASPR, 2 May 2013. Web. Accessed 12 Sept. 2016. <http://www.phe.gov/Preparedness/legal/Pages/1135-waivers.aspx>.

¹⁴⁷ "[Strategic National Stockpile \(SNS\)](#)." CDC, 17 Jun. 2016. Web. Accessed 12 Sept. 2016. <http://www.cdc.gov/phpr/stockpile/stockpile.htm>.

Term	Definition
Threat and Hazard Identification and Risk Assessment (THIRA)	A four-step common risk assessment process that helps the whole community—including individuals, businesses, faith-based organizations, nonprofit groups, schools, and academia and all levels of government—understand its risks and estimate capability requirements. ¹⁴⁸
Whole community	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. ¹⁴⁹

¹⁴⁸ ["Threat and Hazard Identification and Risk Assessment."](http://www.fema.gov/threat-and-hazard-identification-and-risk-assessment) FEMA, 19 Mar. 2016. Web. Accessed 20 Jul. 2016. www.fema.gov/threat-and-hazard-identification-and-risk-assessment.

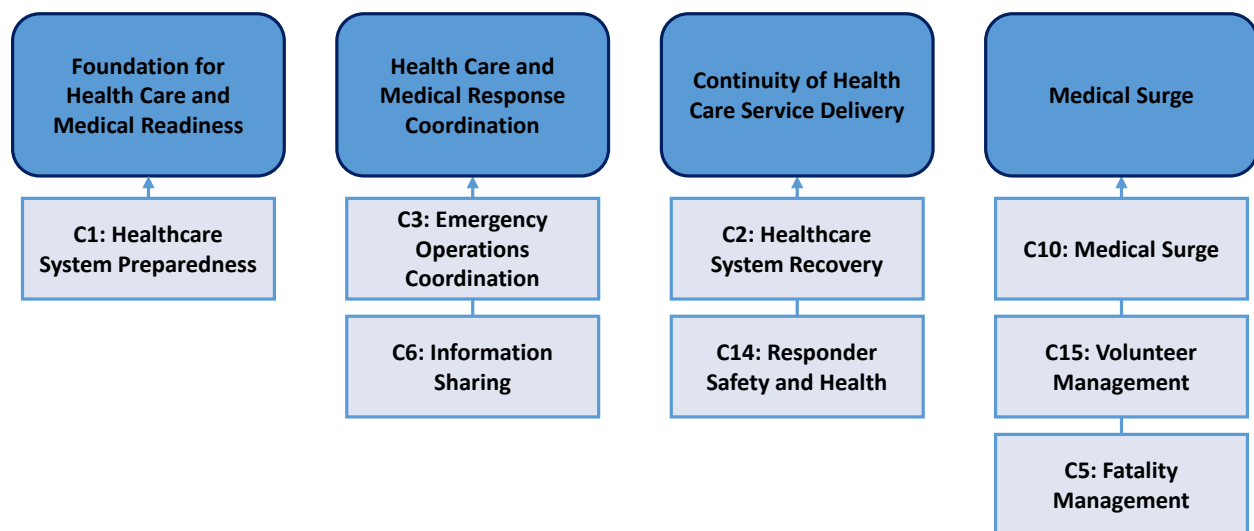
¹⁴⁹ ["Whole Community."](http://www.fema.gov/whole-community) FEMA, 10 Jun. 2016. Web. Accessed 20 Jul. 2016. www.fema.gov/whole-community.

Appendix 1: The 2017-2022 Health Care Preparedness and Response Capabilities Revision Process

The *2017-2022 Health Care Preparedness and Response Capabilities* document improves upon the 2012 version titled *Healthcare Preparedness Capabilities: National Guidance for Healthcare System Preparedness*. The Office of the Assistant Secretary for Preparedness and Response (ASPR) incorporated lessons learned from previous responses to emergencies and extensive stakeholder engagement into the revised capabilities. Stakeholder feedback included a Capability Needs Assessment in 2015, which involved surveys and facilitated discussions with awardees, [health care coalitions \(HCCs\)](#), and other stakeholders, to obtain their reactions to the capability content, structure, and level of detail in the 2012 version, and suggested areas for revision. ASPR also solicited and considered input from more than 50 national associations whose members have an interest in emergency preparedness and response. Finally, ASPR facilitated discussions at emergency preparedness and response conferences, solicited public feedback on ASPR’s Technical Resources, Assistance Center, and Information Exchange (TRACIE) website, and consulted preparedness and response and health care subject matter experts. ASPR also conducted a thorough review of relevant preparedness and response literature and researched recent past events to inform the revision process.

Based on process described above, ASPR streamlined the eight capabilities in the 2012 version into four capabilities. While the number of capabilities have decreased, the concepts from all of the capabilities in the 2012 version can be found within the new set of four capabilities. As seen in Figure 1 below, the 2017 capabilities were informed by the content found in the 2012 capabilities. Foundation for Health Care and Medical Readiness aligns with the 2012 capability 1 (Healthcare System Preparedness). Health Care and Medical Response Coordination aligns with the 2012 capabilities 3 (Emergency Operations Coordination) and 6 (Information Sharing). Continuity of Health Care Service Delivery aligns with the 2012 capabilities 2 (Healthcare System Recovery) and 14 (Responder Safety and Health). Finally, Medical Surge aligns with the 2012 capabilities 10 (Medical Surge), 15 (Volunteer Management) and 5 (Fatality Management).

Figure 1: Crosswalk of the 2012 and 2017-2022 Capabilities



Appendix 2: Health Care Preparedness and Response Capabilities and Public Health Preparedness Capabilities Areas for Alignment

This appendix will be developed upon the completion of the Public Health Preparedness Capabilities in 2017. The appendix will include a crosswalk of 2017-2022 Health Care Preparedness and Response Capabilities, the 2017-2022 Public Health Preparedness Capabilities, and National Preparedness Goal core capabilities.