Contents

CHAPTER 4: FEDERAL MEDICAL RESPONSE

Introduction

An influenza pandemic will place extraordinary demands on the health care system requiring an integrated response by and across all local, State, and Federal jurisdictions and partners. Efficient use of existing Federal assets will be crucial in meeting the medical surge requirements. For medical resources to be most efficiently utilized, effective response plans must be developed and tested. Plans must include a command structure compatible with the DHS National Incident Management System (NIMS) at all levels of response, a Federal regional approach to the stockpiling and distribution of medical materiel, and a schedule of exercises for evaluating the effectiveness of the plans. Guidelines must be developed and disseminated by the Federal Government to all partners and stakeholders. These guidelines must offer approaches to the allocation of scarce resources and the altering of medical care, if needed, such that scarce resources are distributed and applied in the most appropriate manner. Working groups organized by the Federal Government to develop guidelines, determine medical resource needs, and determine the response framework should include multidisciplinary partners from Government, private, and volunteer organizations, as well as academic medical and health training programs.

This chapter addresses the Federal medical response only, recognizing that State and local medical responders are essential partners in the U.S. effort to prepare for pandemic influenza. For preparedness guidance for State and local partners, see the **HHS Pandemic Influenza Plan** (Part 2—Public Health Guidance for State and local Partners Supplement 3, Healthcare Planning: see http://www.hhs.gov/pandemicflu/plan/sup3.html) and Chapter 8, State, Local, and Tribal Preparedness. There are specific HHS-sponsored programs that provide additional guidance to States regarding their public health and medical preparations. CDC and HRSA are working closely with States in the areas of public health and hospital preparedness, and have entered into cooperative agreements with States to provide funding for implementing this guidance (CDC: http://www.bt.cdc.gov/planning/coopagreement/#fy05 and HRSA: http://www.hrsa.gov/bioterrorism). Additionally, DHS has developed a series of National Preparedness Goals. Within these goals are specific planning scenarios, including one that addresses pandemic influenza (see http://www.dhs.gov). See these resources and Web sites for further information and detail about preparedness planning.

Surge Capacity Strategies

Federal medical support will augment, to the extent possible dictated by availability, existing local and State infrastructure. Federal resources include the National Disaster Medical System (NDMS), the Commissioned Corps of the U.S. Public Health Service (USPHS), the Strategic National Stockpile (SNS), and Federal volunteers and temporary

employees. At all levels, the success of medical response to an influenza pandemic will be determined by how medical providers and facilities implement interventions that enable them to meet the increased medical demands resulting from the pandemic. Strategies, developed through Federal regional approaches, are needed for enhancing the health care system's provider and facility surge capacity as well as the abilities to accept, distribute equitably, and utilize the medical resources that may be brought in from outside organizations, including Federal medical support.

Altered Standards of Care and Other Tools for Medical Surge Capacity

Even if health care systems fully maximize their internal surge capacity and fully utilize alternative health care sites, it is likely that under the worst case scenario, health care systems will need to modify their standards of care in such a way that patients can receive treatment without a significant compromise to clinical outcomes.[1] While these difficult decisions must be based on a variety of conditions and there is no single set of standards that addresses every situation, guidance regarding the process of altering standards can be made using existing medical knowledge.

States have also initiated other steps to enhance their surge capacity, including developing alternate health care facilities and exploring the concept of home care by lay persons, creating rosters of volunteers, enhancing hospital bed tracking systems, and providing mutual aid compacts or agreements. A number of models and tools have been developed and disseminated by HHS to State, local, and tribal planners to enhance their planning for medical surge capacity (http://ahrq.gov/browse/bioterbr.htm#tools). There is a list of tools in the appendix to the **HHS Pandemic Plan** (Part 2—Public Health Guidance for State and Local Partners Supplement 3 Healthcare Planning: see http://www.hhs.gov/pandemicflu/plan/sup3.html). Tools for hospitals include: AHRQ Altered Standards of Care in Mass Casualty Events_4-20051.pdf and DHHS Medical Surge Capacity and Capability Handbook_8-2004.pdf.

Stockpiling Guidance

There are a variety of different guidelines disseminated by the Federal Government that address the issue of stockpiled medications and supplies. SNS has a program that is assisting States with their pharmaceutical distribution plans. CDC offers training to States for the receipt and distribution of SNS material (see http://www.bt.cdc.gov/stockpile/).

Recommendations From Private Sector Partners

Private sector entities have also issued recommendations for building State and local medical surge capacity that are applicable to all hazard situations. For example, the American Hospital Association (AHA) has recommended that individual hospitals have a 24-hour supply of pharmaceuticals and that they develop a list of required

[1] Initial work on altering standards of care has been published, including a white paper from AHRQ (Altered Standards of Care in Mass Casualty Events, May 2005, http://ahrq.gov/research/altstand/altstand.pdf). JCAHO has also begun to address the issue (see http://www.jointcommission.org).

medical/surgical equipment and supplies (see AHA Hospital Resources for Disaster Readiness: http://www.aha.org/aha_app/issues/Emergency-Readiness/index.jsp). The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) recommends a 48–72-hour capability of medications and supplies (JCAHO Health Care at the Crossroads: Strategies for Creating and Sustaining Community-wide Emergency Preparedness Systems, 2003; see http://www.usaprepare.com/ep3-12-03.pdf). HRSA recommends a 72-hour supply of pharmaceuticals. During an influenza pandemic, the needs for medical surge capacity and stockpiles will be similar to those needed during other types of hazards; however, the specific requirements for a pandemic will also need to be addressed.

Role of HHS in Federal Medical Response

Deployment of Federal medical response assets will use the National Response Plan (NRP) as a framework for the coordination of Federal support. Additionally, the Federal resource inventory includes the Federal Medical Stations (FMS). These facilities are designed to provide care to special needs persons and others who do not require hospitalization, yet may need frequent or continuous medical supervision.

From an incident management perspective, the NRP (Emergency Support Function [ESF] #8) assigns HHS as the lead Federal agency responsible for coordinating the health and medical responses to a biological event such as a pandemic. Specifically with respect to the Federal medical response, the HHS role is to:

- Coordinate the deployment of Federal medical resources available through ESF #8
- Provide guidance regarding surge capacity
- Distribute stockpile medications and supplies

Specific Assumptions and Planning Considerations for HHS Federal Medical Response

The NRP will serve as the pandemic response framework for the Federal medical response.

The spectrum of Federal medical services can include clinical care, immunization, patient transport, establishing augmentation facilities, backfilling existing facilities, fatalities management, and mental health. But, the number of Federal health care providers is limited, and it will be unlikely that the Federal Government will be able to meet requests for personnel in the event of a pandemic.

- The USPHS Commissioned Corps and NDMS resources will be tasked with the primary responsibility for providing the main body of Federal responders.
- Federal resources other than personnel will also be scarce, and a mechanism is required for their equitable distribution.
- The Federal medical response must be sustainable for several months during a pandemic.
- Federal responders are multidisciplinary and come from a variety of sources, including screened volunteers and temporary Federal employees.
- HHS will establish an interagency management system that will be based on the HHS Incident Response Coordination Team (IRCT) and the utilization of existing regional entities to coordinate and support the Federal medical effort.

HHS Actions and Expectations

Pillar One: Preparedness and Communication

Preparedness and communication are critical elements to the implementation of successful public health interventions and medical responses. Described below are activities that should be undertaken before a pandemic to ensure preparedness and to communicate expectations and responsibilities to all levels of government and society. Specifically, this section includes the actions and steps necessary to develop the strategies for deploying Federal resources, guidance needed for allocating scarce non-Federal health and medical resources, and the medical materiel requirements of the SNS and stockpiles based in States and communities. HHS has developed public communications guidelines that are discussed in Chapter 7, Communications.

Planning for a Pandemic

A. Action (HSC 6.1.2.2): HHS, DHS, DOD, and VA will develop a joint strategy defining the objectives, conditions, and mechanisms for deployment under which NDMS assets, USPHS Commissioned Corps, Epidemic Intelligence Service (EIS)

officers, and DOD and VA health care personnel and public health officers would be deployed during a pandemic. (Also see chapter 2, Pillar One, Action I [No HSC number], Step 7.)

Timeframe: Within 9 months.

Measure of Performance: Interagency strategy completed and tested for the deployment of Federal medical personnel during a pandemic.

Step 1: Convene ESF #8 working group to review ESF #8 incident management and to define the conditions and mechanisms for equitable deployment of Federal medical assets noted above. The NRP will be used as the framework to coordinate the deployment of Federal resources. Review the HHS Incident Management Team (IMT) for consideration as the pandemic influenza "Incident Management System."

Step 2: Identify triggers for deployment of Federal resources to include the following:

- Declaration of a public health emergency
- Request for assistance from States
- Emergency or disaster declaration by President
- International deployment

Step 3: Document incident management strategy and deployment triggers and disseminate strategy to Federal partners and State, local, and tribal health counterparts.

Step 4: Draft results of Steps 1 and 2 into a working summary and send out for comment to State and local public health and medical organizations. Results will be integrated with State and local plans. Incorporate revisions as appropriate and establish documents as Standard Operating Procedures.

Step 5: Conduct a facilitated discussion with ESF #8 partners to test the Federal public health and medical response strategy.

Step 6: Revise plans, strategies, and materiel, based on exercises and partner feedback.

B. Action (HSC 6.1.2.4): HHS, in coordination with DHS, DOD, and VA, and in collaboration with medical professional and specialty societies, within their domains of expertise, will develop guidance for allocating scarce health and medical resources during a pandemic. (Also see chapter 8, Pillar One, Action CC [HSC 6.1.13.6].)

Timeframe: Within 6 months.

Measure of Performance: Guidance developed and disseminated.

Step 1: Convene ESF #8 partners and private collaborators (AHA, AMA, ACEP, JCAHO, NGOs, IDSA, SHEA, and APIC) to discuss options for scarce resource allocation. AHRQ with the Office of Public Health Emergency Preparedness (OPHEP) guidance convened this working group on June 1–2, 2006, to develop a Community Based Planning Guide for State, local, and tribal health planners who are responsible for developing medical response plans. The guide will be released in late summer 2006 and be disseminated to local and State jurisdictions.

Step 2: Define scarce resources for local, State, and Federal:

- Personnel—which specialties and disciplines—hospital, prehospital, and other local health care providers
- Equipment—ventilators, monitoring equipment, PPE, and masks
- Supplies—pharmaceuticals
- Services—intensive care, respiratory care, laboratory, diagnostics

Step 3: The working group will review existing guidance for allocation of scarce resources and recommend options for maximizing resource utilization such as:

- Developing clinical algorithms
- Using clinical "extenders"
- Using alternate health care facilities

Step 4: Develop consensus document on allocation of scarce resources.

Step 5: Disseminate new guidance to Federal, State, and local partners.

Step 6: Revise plans, strategies, and materiel, based on exercises, evaluations, and partner feedback.

C. Action (HSC 6.3.4.8): All hospitals should be prepared to treat patients with pandemic influenza (i.e., equipped and ready to care for: (1) a limited number of patients infected with a pandemic influenza virus, or other novel strain of influenza, as part of normal operations; and (2) a large number of patients in the event of escalating transmission of pandemic influenza).

Timeframe: 24 months.

Measure of Performance: Hospital pandemic influenza plans completed and tested.

Step 1: Ensure that HHS-supported hospitals and clinics are prepared to treat patients with pandemic influenza by reviewing their disaster plans and identifying resources necessary to enhance surge capacity.

Producing and Stockpiling Countermeasures and Medical Materiel

D. Action (HSC 6.1.6.2): HHS, in coordination with DOD, VA, and State, local, and tribal partners, will define critical medical material requirements for stockpiling by the SNS and States to respond to the diversity of needs presented by a pandemic.

Timeframe: Within 9 months.

Measure of Performance: Requirements defined and guidance provided on stockpiling.

Step 1: Convene meeting between the HRSA Bioterrorism Hospital Preparedness Program and CDC to build a medical requirements list for pandemic influenza to include the following:

- Identify critical medical materiel requirements based on population
- Identify what State stockpiles exist and list contents
- Review SNS and State stockpiles to determine gap between the HHS Essential Materials List (EML) and stockpiles

Step 2: Develop a budget for procurement of additional material.

Step 3: Disseminate these materials to Federal, State, and local partners, as materiel becomes available from manufacturers.

Step 4: Revise plans, strategies, and materiel, based on exercises, evaluations, and partner feedback.

E. Action (HSC 6.3.4.10): All health care systems, individually or collaborating with other facilities to develop local or regional stockpiles maintained under vendor managed inventory systems, should consider stockpiling consumable critical medical materiel (including but not limited to food, fuel, water, N95 respirators, surgical and/or procedural masks, gowns, and ethyl-alcohol based gels) sufficient for the peak period of a pandemic wave (2-3 weeks).

Timeframe: 24 months.

Measure of Performance: Stockpiling plans completed.

Step 1: Ensure that HHS-supported health care systems consider stockpiling consumable critical medical materiel, either on an individual or regional basis.

Establishing Distribution Plans

F. Action (HSC 6.1.13.7): HHS, in coordination with DHS, DOT, DOD, and VA, will work with State, local, and tribal governments and private sector partners to develop and test plans to allocate and distribute critical medical materiel (e.g., ventilators with accessories, resuscitator bags, gloves, face masks, gowns) in a health emergency. (Also see chapter 8, Pillar One, Action DD [HSC 6.1.13.7].)

Timeframe: Within 6 months.

Measure of Performance: Plans developed, tested, and incorporated into department plan, and disseminated to States and tribes for incorporation into department plan, and disseminated to States and tribes for incorporation into their pandemic response plans.

Step 1: Convene meeting with Federal, State, and local partners to develop regional distribution plans for medical materiel:

- Review the appropriateness of distribution plans developed by the States
- Modify distribution plans as appropriate

Step 2: Work with States and local partners to develop coordinated regional distribution exercises. Utilize existing Federal, State, local, and tribal exercises whenever possible and appropriate.

Step 3: Conduct exercises with evaluations of plans.

Step 4: Revise plans, strategies, and materiel, based on exercises, evaluations, and partner feedback.

Pillar Two: Surveillance and Detection

Federal medical response actions and steps are carried out either in the pre-pandemic preparedness or pandemic response periods. Surveillance and detection actions that identify the beginning of a pandemic or trigger deployment of Federal medical resources are covered elsewhere in this document. (See Chapter 2, Domestic Surveillance and Chapter 8, State, Local, and Tribal Preparedness.)

Pillar Three: Response and Containment

HHS supports a layered strategy of influenza pandemic response and containment. In the event of sustained and efficient human-to-human transmission of an influenza virus with pandemic potential, HHS will first leverage available resources and interventions to contain the pandemic at its source and to delay its introduction into the United States. If such efforts fail, HHS resources and recommended interventions will be redirected to limiting or otherwise delaying the spread of the pandemic within the United States, minimizing suffering and death, sustaining critical infrastructure and a constitutional form of government, and reducing the economic and social effects of the pandemic. This section covers the deployment of Federal medical resources and the review of clinical care algorithms.

Containing Outbreaks

A. Action (HSC 6.3.2.6): HHS health care facilities will develop test and be prepared to implement infection control campaigns for pandemic influenza.

Timeframe: 6 months.

Measure of Performance: HHS will have initiated infection control campaigns on pandemic influenza in its health care facilities.

Step 1: Review existing infection control strategies within HHS health care facilities.

Step 2: Develop infection control campaigns for pandemic influenza for HHS health care facilities based on the findings of Step 1.

Step 3: Beta test the infection control campaigns.

Step 4: Implement the infection control campaigns for pandemic influenza.

Leveraging National Medical and Public Health Surge Capacity

B. Action (HSC 6.3.4.1): HHS will work in collaboration with DHS, DOD, and VA to assist major medical societies and organizations in developing and disseminating protocols for changing clinical care algorithms in settings of severe medical surge. (Also see chapter 8, Pillar Two, Action B [HSC 6.2.2.8]; and chapter 7, Pillar Three, Actions D, E, and H [HSC 6.3.2.6, 6.3.2.7, and 6.3.3.1].)

Timeframe: Ongoing.

Measure of Performance: Evidence-based protocols developed to optimize care that can be provided in conditions of severe medical surge.

See Pillar One, Action B [HSC 6.1.2.4] for steps.

C. Action (HSC 6.3.4.2): HHS will develop, in coordination with DHS, DOD, and VA, and in collaboration with States, localities, tribal entities, and private sector healthcare facilities, strategies and protocols for expanding hospital and home healthcare delivery capacity in order to provide care as effectively and equitably as possible. (Also see chapter 8, Pillar Three, Action A [HSC 6.3.4.2], and Actions in chapter 2, Pillar Three.)

Timeframe: Within 6 months.

Measure of Performance: Guidance and protocols developed and disseminated.

Step 1: Review medical literature for best practices regarding evidence-based clinical care algorithms for medical practice, including mental health, in mass casualty incidents.

Step 2: Convene Federal, State, and private partners to develop options based on review of literature in Step 1, above. The workgroup will develop guidance for consensus.

Step 3: Disseminate options to Federal medical responders and private partners through Federal agency Web sites and teleconferencing.

D. Action (HSC 6.3.4.4): HHS assets, such as the USPHS Commissioned Corps and FMS's, along with DHS assets, such as NDMS medical materiel and mobile medical units, will be deployed in a manner consistent with pre-defined strategic considerations.

Timeframe: Within 6 months.

Measure of Performance: Development of strategic principles for deployment of Federal medical assets in a pandemic; consistency of deployments during a pandemic with these principles.

Step 1: HHS-convened working group of ESF #8 partners will develop strategic principles for the deployment of the HHS assets in a pandemic.

Step 2: Strategic principles are shared with State and local partners.

E. Action (HSC 6.3.4.6): HHS will deploy the USPHS Commissioned Corps and FMS's, if available and in combination or separately as circumstances warrant, to augment efforts of State/local governments as part of the Federal response.

Timeframe: Within 9 months.

Measure of Performance: USPHS Commissioned Corps personnel trained on FMS; Commissioned Corps personnel and FMS's deployed within 72 hours of order to mobilize during a pandemic.

Step 1: Work with OPHEP, USPHS Office of Force Readiness and Deployment (OFRD), CDC, and MRC to identify USPHS Commissioned Corps deployable resources—with this chapter's planning assumptions in mind.

Step 2: Develop concept of operations for FMS.

Step 3: Determine challenges/barriers to deployment of FMS, if any, and enhance logistic support for FMS deployment.

Step 4: Develop optimal configuration (staffing and material) for FMS to respond to pandemic influenza. Procure any material deficiencies. Adjust staffing as necessary.

Sustaining Infrastructure, Essential Services, and the Economy

F. Action (HSC 6.3.7.1): HHS, in coordination with DHS, DOD, VA, and DOT, and as the lead for ESF #8 (Public Health and Medical Services, see http://www.dhs.gov/xlibrary/assets/NRP_FullText.pdf), will identify public health and medical capabilities required to support a pandemic response and work with other supporting agencies to identify and deploy or otherwise deliver the available capability or asset, if available.

Timeframe: Within 6 months.

Measure of Performance: Inventory of public health and medical capabilities; available public health or medical capabilities or assets deployed or delivered during a pandemic.

Step 1: Convene partners to develop medical/public health capabilities requirements list for the following areas:

- Personnel
- Equipment
- Supplies
- Facilities
- Services

Step 2: ESF #8 partners identify their respective public health and medical capabilities available to respond to pandemic.

Step 3: Review by ESF #8 partners of how capabilities will be deployed through ESF #8 IMT infrastructure.

Step 4: Develop and conduct an exercise to evaluate the 72-hour deployment capabilities to respond to a pandemic.

Step 5: Revise plans, strategies, and materiel, based on exercises, evaluations, and partner feedback.