

Department of Health and Human Services

**OFFICE OF  
INSPECTOR GENERAL**

**STATE AND LOCAL PANDEMIC  
INFLUENZA PREPAREDNESS:  
MEDICAL SURGE**



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# *Office of Inspector General*

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## OBJECTIVES

To determine the extent to which selected States and localities have:

1. prepared for a medical surge in response to an influenza pandemic and
2. conducted and documented exercises that test their medical surge preparedness for an influenza pandemic.

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## BACKGROUND

An influenza pandemic is a global outbreak of a highly infectious influenza virus that can cause serious illness in humans. The Department of Health and Human Services (HHS) estimates that even a mild influenza pandemic could cause between 2 and 7.4 million deaths worldwide. In February 2008, the Assistant Secretary for Preparedness and Response (ASPR) within HHS asked the Office of Inspector General to evaluate State and local preparedness for influenza pandemic, particularly with regard to medical surge and vaccine and antiviral drug distribution and dispensing.

Since 2002, HHS, primarily through ASPR and the Centers for Disease Control and Prevention (CDC), has provided more than \$8 billion for programs to enhance their emergency preparedness for large-scale public health emergencies. In addition, HHS provided \$600 million in supplemental funding specifically for pandemic influenza preparedness.

If a severe pandemic occurs, it will affect much of the country at the same time, so medical resources—such as hospital beds, medical equipment, and personnel—will likely be scarce. The ability to rapidly respond to an increased demand for medical resources is often referred to as a medical surge. This study focuses on the following five key components of medical surge that are based on guidance from ASPR and CDC: (1) coordination among stakeholders; (2) recruitment and management of medical volunteers; (3) acquisition and management of medical equipment; (4) development of alternate care sites; and (5) identification of guidelines for altering triage, admission, and patient care.

This study is based on a purposive sample of 5 States and 10 localities and presents a snapshot of these States' and localities' preparedness for an influenza pandemic as of late summer 2008. The study is based on a review of documentation from ASPR, CDC, and the selected States and

localities, as well as structured in-person interviews with key officials in each of the selected States and localities.

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## FINDINGS

**All of the selected localities had established partnerships to prepare for a medical surge; however, the degree to which coordination occurred varied.**

As of late summer 2008, all 10 localities had developed committees to help plan for a pandemic, as well as health care coalitions to coordinate the efforts of health care facilities. In addition, all localities had started to include hospitals in their emergency response planning. Although these partnerships helped to prepare for a medical surge, the degree to which coordination occurred varied among the 10 localities.

**Fewer than half of the selected localities had started to recruit medical volunteers, and none of the five States had implemented an electronic system to manage them.**

Four localities had started to recruit, register, and train medical volunteers. All four, however, had concerns about using volunteers. In addition, none of the five States had fully implemented an electronic system for managing medical volunteers. States were required by ASPR to have electronic systems to register medical volunteers and verify credentials by August 2009.

**All of the selected localities had acquired limited medical equipment for a pandemic, but only three of the five States had electronic systems to track beds and equipment.**

All 10 localities had acquired limited caches of medical equipment; however, many experienced difficulties with managing this equipment. In addition, only three of the five States had implemented electronic systems to track available hospital beds and medical equipment during an emergency.

**Most of the selected localities were in the early stages of planning for alternate care sites.**

Alternate care sites are preselected facilities, such as schools or convention centers, that have been identified for potential use during emergencies to help alleviate overcrowding in hospitals. Nine localities had either identified or were in the process of identifying alternate care sites to be used in a pandemic; however, few had signed formal agreements. None of the localities that were planning to use alternate care sites had plans that included the scope of care and how these sites would be managed, staffed, and supplied.

**Most of the selected localities had not identified guidelines for altering triage, admission, and patient care; many cited liability concerns.** During a pandemic, health care professionals may need to alter how they provide medical care by allocating scarce resources in a manner that saves the greatest number of lives. Nine localities had not identified guidelines for altering triage, admission, and patient care during a pandemic. Seven of these localities noted that providers in their localities were concerned that they would be legally at risk if they were to alter their standards for triage, admission, or patient care, and all nine reported that they wanted additional State or Federal guidance.

**All of the selected localities conducted medical surge exercises; however, none consistently documented the lessons learned.**

Localities conducted between one and seven medical surge exercises over a 2-year period. Most of these exercises were discussion-based, rather than operations-based. Although localities are encouraged to document lessons learned during exercises through the creation of after-action reports and improvement plans, none consistently completed these documents for their exercises. In addition, the existing documentation that we reviewed showed that localities needed to make improvements within the five medical surge components.

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## RECOMMENDATIONS

Based on these findings, we recommend that ASPR, in collaboration with CDC:

**Work with States and localities to improve their efforts within each of the five components of medical surge that we reviewed.**

- **ASPR should continue to emphasize the importance of coordination and involving a wide array of stakeholders in medical surge and pandemic planning.**
- **ASPR should continue to emphasize the importance of recruiting, registering, and training medical volunteers for use in a pandemic.**
- **ASPR should continue to emphasize the importance of managing medical equipment currently being stockpiled for a public health emergency, such as a pandemic.**
- **ASPR should continue to emphasize the importance of planning for alternate care sites for use during a pandemic.**

- **ASPR should emphasize the importance of identifying and adopting guidelines for altering triage, admission, and patient care during a pandemic.**

**Ensure that States and localities consistently document the lessons learned from preparedness exercises that address medical surge.**

Given the importance of exercises in strengthening preparedness, ASPR, in collaboration with CDC, should ensure that States and localities consistently document the lessons learned from all medical surge exercises that require documentation.

**Address the issue of legal protections for medical professionals and volunteers who respond to public health emergencies, such as an influenza pandemic.**

ASPR should consider working with States to develop appropriate legal protections for medical professionals and volunteers who respond to public health emergencies and who may need to alter standards of care. ASPR should also consider the feasibility of Federal legislation in this area.

**Facilitate the sharing of information and emerging practices among States and localities.**

ASPR, in collaboration with CDC, should collect information on emerging practices from States and localities, as well as experts in the field, to further improve medical surge preparedness. ASPR should employ a variety of strategies to facilitate the sharing of this information and emerging practices among States and localities.

**Provide training and technical assistance to States and localities on key issues.**

ASPR, in collaboration with CDC, should address specific State and local challenges, such as identifying alternate care sites, managing medical equipment, and identifying guidelines for alternate standards of care.

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## **AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE**

ASPR concurred with all five of our recommendations. CDC did not formally comment, but did provide technical comments. We made changes to the final report based on CDC's technical comments, as appropriate.

► T A B L E O F C O N T E N T S

EXECUTIVE SUMMARY ..... i

INTRODUCTION ..... 1

FINDINGS ..... 12

    All of the selected localities had established partnerships to  
    prepare for a medical surge; however, the degree to which  
    coordination occurred varied ..... 12

    Fewer than half of the selected localities had started to recruit  
    medical volunteers, and none of the five States had implemented  
    an electronic system to manage them ..... 13

    All of the selected localities had acquired limited medical  
    equipment for a pandemic, but only three of the five States had  
    electronic systems to track beds and equipment ..... 15

    Most of the selected localities were in the early stages of  
    planning for alternate care sites ..... 17

    Most of the selected localities had not identified guidelines for  
    altering triage, admission, and patient care; many cited liability  
    concerns. .... 19

    All of the selected localities conducted medical surge exercises;  
    however, none consistently documented the lessons learned .... 20

RECOMMENDATIONS ..... 25

    Agency Comments and Office of Inspector General Response ... 27

APPENDIX ..... 28

    A: Selected States and Localities..... 28

    B: Agency Comments..... 29

ACKNOWLEDGMENTS ..... 30

# I N T R O D U C T I O N

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## OBJECTIVE

To determine the extent to which selected States and localities have:

1. prepared for a medical surge in response to an influenza pandemic and
2. conducted and documented exercises that test their medical surge preparedness for an influenza pandemic.

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## BACKGROUND

An influenza pandemic is a global outbreak of a highly infectious influenza virus that can cause serious illness in humans.<sup>1</sup> HHS estimates that even a mild influenza pandemic could cause between 2 and 7.4 million deaths worldwide.<sup>2</sup> In June 2009, after human cases of a novel H1N1 influenza were identified in the United States and internationally, the World Health Organization raised its influenza pandemic alert level to Phase 6, indicating that a pandemic is underway.<sup>3</sup> Although scientists cannot predict this pandemic's severity, it has highlighted the importance of ongoing emergency preparedness efforts.

In February 2008, the Assistant Secretary for Preparedness and Response (ASPR) within HHS asked the Office of Inspector General (OIG) to evaluate State and local preparedness for influenza pandemic, particularly with regard to medical surge and vaccine and antiviral drug distribution and dispensing.

This evaluation focuses on the extent to which selected States and localities have prepared for a medical surge during a pandemic. Medical surge is a rapid expansion of the health care system in response to an event that requires resources—such as hospital beds, medical equipment, and personnel—that exceed what the normal medical

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<sup>1</sup> Department of Health and Human Services (HHS), "Flu Terms Defined." Available online at <http://www.pandemicflu.gov>. Accessed on February 17, 2009.

<sup>2</sup> HHS, "Why are pandemics such dreaded events?" Available online at <http://www.pandemicflu.gov/faq/pandemicinfluenza/1108.html>. Accessed on February 17, 2009.

<sup>3</sup> World Health Organization, "World now at the start of 2009 influenza pandemic." Available online at [http://www.who.int/mediacentre/news/statements/2009/h1n1\\_pandemic\\_phase6\\_20090611/en/index.html](http://www.who.int/mediacentre/news/statements/2009/h1n1_pandemic_phase6_20090611/en/index.html). Accessed on August 10, 2009.

infrastructure can provide.<sup>4</sup> A second OIG evaluation focuses on the extent to which selected localities have prepared for vaccine and antiviral drug distribution and dispensing during a pandemic.<sup>5</sup> In addition, OIG is auditing three States to determine whether certain expenditures used to prepare for an influenza pandemic complied with Federal requirements.<sup>6</sup>

### **HHS Support of State and Local Preparedness Efforts**

Since 2002, HHS has provided more than \$8 billion for programs to enhance their emergency preparedness for large-scale public health emergencies.<sup>7</sup> HHS has distributed this funding primarily through cooperative agreements under two programs—ASPR’s HPP<sup>8</sup> and the Centers for Disease Control and Prevention’s (CDC) PHEP.<sup>9</sup> In addition to providing general emergency preparedness funds, HHS has provided \$600 million in supplemental funding specifically for improving preparedness for an influenza pandemic.

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<sup>4</sup> The CNA Corporation, “Medical Surge Capacity and Capability: A Management System for Integrating Medical and Health Resources During Large-Scale Emergencies,” August 2004, p. I 5.

<sup>5</sup> OIG, “Local Pandemic Influenza Preparedness: Vaccine and Antiviral Drug Distribution and Dispensing,” OEI-04-08-00260.

<sup>6</sup> OIG, “Review of Vermont’s Pandemic Influenza Expenditures for the Period August 31, 2005, Through June 30, 2008,” A-01-08-01500, June 25, 2009; “Review of Washington State’s Pandemic Influenza Expenditures for the Period August 31, 2005, Through June 30, 2008,” A-09-08-01006, August 21, 2009. OIG is also auditing pandemic influenza expenditures in Georgia.

<sup>7</sup> HHS, “HHS Announces \$896.7 Million in Funding to States for Public Health Preparedness and Emergency Response.” Available online at <http://www.hhs.gov/news/press/2007pres/07/pr20070717c.html>. HHS also provided an additional \$1 billion in Public Health Emergency Preparedness Program (PHEP) and Hospital Preparedness Program (HPP) funds in 2008. See HHS, “HHS Provides More Than \$1 Billion to Improve All Hazards Public Health.” Available online at <http://www.hhs.gov/news/press/2008pres/06/20080603a.html>. Accessed on March 6, 2009.

<sup>8</sup> The administration of HPP was transferred to ASPR from the Health Resources and Services Administration (HRSA) in December 2006. (See 42 U.S.C. § 300hh-10, as added by P.L. No. 109-417, Title I, § 102(a)(3)). Activities under HPP are currently authorized by 42 U.S.C. §§ 247d-3a and 247d-3b.

<sup>9</sup> CDC has cited various authorities for PHEP and PHEP supplemental funding. CDC is currently relying on section 319C-1 of the Public Health Service Act (42 U.S.C. § 247d-3a) for all of these grant awards.

The Secretary of HHS has been designated the lead official for all Federal public health and medical response in the event of a public health emergency.<sup>10</sup> ASPR is the primary agency within HHS responsible for improving medical surge preparedness. ASPR provides funding and guidance through HPP to improve the response of the health care system during public health emergencies.<sup>11</sup> CDC generally plays a supporting role in medical surge preparedness by focusing on improving the response of the public health system during an emergency, such as an influenza pandemic.

The focus of both HPP and PHEP funding is to build the capability of the health care and public health systems to minimize the number of deaths, long term disabilities, injuries, and hospitalizations from events, such as pandemics.<sup>12</sup> In general, HPP and PHEP guidance require that States prioritize preparedness activities and outline how they will spend the funds.<sup>13</sup> The guidance generally allows States to specify in their grant applications the activities that they intend to complete to improve their preparedness.<sup>14</sup> As these programs have evolved, the guidance has often emphasized varying program priorities. In addition, although Federal funding and guidance are provided to States, many of the activities needed to prepare for an influenza pandemic are carried out by localities.

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<sup>10</sup> This authority was established with the passage of the 2006 Pandemic and All-Hazards Preparedness Act, P.L. No. 109-417, § 201, 42 U.S.C. § 247d.

<sup>11</sup> Funding for both HPP and PHEP was provided to the 50 States; Washington, DC; five territories (Puerto Rico, the Virgin Islands, American Samoa, Commonwealth of the northern Mariana Islands, and Guam); the Pacific Freely Associated States (Republic of the Marshall Islands, Republic of Palau, and the Federated States of Micronesia); and the localities of Chicago, Los Angeles County, and New York City. For the purposes of this report, we refer to these entities as States.

<sup>12</sup> HRSA, National Bioterrorism Hospital Preparedness Program (hereinafter referred to as HPP Fiscal Year (FY) 06 guidance), FY 2006, p.5; CDC, Pandemic Influenza Guidance Supplement to the 2006 Public Health Emergency Preparedness Cooperative Agreement Phase II (hereinafter referred to as PHEP Phase II guidance), p. 5.

<sup>13</sup> HPP FY 06 guidance, pp. 29-30; ASPR, Announcement of Availability of Funds for the Hospital Preparedness Program, Pandemic Influenza Supplement for Medical Surge Capacity and Capability, p. 2; PHEP Phase II guidance, p. 9.

<sup>14</sup> Ibid.

### **Medical Surge in Response to a Pandemic**

If a severe pandemic occurs, it will affect much of the country at the same time, so medical resources—such as hospital beds, medical equipment, and personnel—will likely be scarce.<sup>15</sup> The ability to rapidly respond to this increased demand for medical resources is often referred to as medical surge. This study focuses on the following five key components of medical surge that were identified in HPP and PHEP guidance: (1) coordination among stakeholders; (2) recruitment and management of medical volunteers; (3) acquisition and management of medical equipment; (4) identification of alternate care sites; and (5) identification of guidelines for altering triage, admission, and patient care.

*Coordination among stakeholders:* HPP and PHEP guidance consistently emphasize that medical surge preparedness requires coordination among a variety of public and private stakeholders, including hospitals and other health care facilities, public health departments, and emergency management departments. HPP and PHEP guidance also encourage States and localities to establish pandemic influenza coordinating committees and health care coalitions to help plan for a pandemic. Additionally, these documents encourage localities to integrate the efforts of private health care facilities with those of the local departments of public safety, emergency management, and public health.<sup>16</sup>

*Recruitment and management of medical volunteers:* In the event of a pandemic, States and localities may be forced to rely on large numbers of medical volunteers. HPP guidance encourages States and localities to recruit, register, and train medical volunteers prior to a pandemic as part of the Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) program.<sup>17</sup> Additionally, the guidance

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<sup>15</sup> Agency for Healthcare Research and Quality (AHRQ), AHRQ Publication No. 07-0001, “Mass Medical Care with Scarce Resources: A Community Planning Guide (2007).” Available online at <http://www.ahrq.gov/research/mce/mceguide.pdf>. Accessed on April 23, 2008.

<sup>16</sup> ASPR, Announcement of Availability of Funds for the Hospital Preparedness Program, Pandemic Influenza Supplemental for Medical Surge Capacity and Capability for Budget Period October 31, 2007–October 31, 2008, p. 4 (hereinafter referred to as HPP FY 07 guidance); PHEP Phase II guidance, p. 3.

<sup>17</sup> Note that HPP guidance references additional guidance in the following document: HRSA, “ESAR-VHP Program Interim Technical and Policy Guidelines, Standards, and Definitions,” Version 2, June 2005. ASPR plans to release Version 3 of this guidance in 2009.

required States to develop electronic systems to register medical volunteers and verify credentials by August 2009.<sup>18</sup>

*Acquisition and management of medical equipment:* During a severe pandemic, medical equipment will likely be scarce. Both HPP and PHEP supplemental funding can be used to purchase medical equipment at the State and local levels. Localities are generally responsible for storing, maintaining, and transporting this medical equipment. In addition, HPP requires States to maintain a system that enables them to report to HHS the number of available hospital beds.<sup>19</sup> It also encourages States to make these systems electronic; however, States have the option of manually entering the data they receive from hospitals into an HHS Web site. In addition, States are encouraged to establish interoperable inventory-tracking systems that assist with the management of medical equipment during an emergency.<sup>20</sup>

*Development of alternate care sites:* Alternate care sites are preselected facilities—such as schools or convention centers—that have been identified for potential use during emergencies to help alleviate overcrowding in hospitals. They can also be mobile alternate care sites that are preequipped with tents and beds and can be set up quickly in various locations. HPP and PHEP guidance encourage hospitals, in conjunction with other community partners, to identify appropriate locations for alternate care sites.<sup>21</sup> Before being able to use these sites, localities need to engage in a significant amount of planning. Such planning generally consists of determining the scope of care that will be provided at the site in an emergency and establishing how the site will be managed, staffed, and supplied.

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<sup>18</sup> HPP FY 07 guidance pp. 2-3; 1-year extension provided for in ASPR, Announcement of Availability of Funds for HPP, FY 08, p. 12.

<sup>19</sup> HPP FY 07 guidance. States were required to have such reporting capabilities—referred to as the standards for Hospital Available Beds for Emergencies and Disasters—by August 8, 2008.

<sup>20</sup> Note that HPP guidance requires States to be compliant with the National Incident Management System, which encourages States to have interoperable systems in place to track equipment. In the future, these systems will be required for States. See Federal Emergency Management Agency, IS-700.a National Incident Management System, An Introduction, I-700.a, Unit 5. Available online at: <http://training.fema.gov/EMIWeb/IS/is700alst.asp>. Accessed on May 21, 2009.

<sup>21</sup> PHEP Phase II guidance, p. 32. The guidance also encourages States to use a tool developed by AHRQ to help identify facilities that can be used as alternate care sites.

*Identification of guidelines for altering triage, admission, and patient care:*

A severe pandemic will likely require changes to how medical care is provided. Physicians and other health care professionals may need to alter triage, admission, and patient care. Such alterations are referred to as altered standards of care, which generally require allocating scarce equipment, supplies, and personnel in a manner that saves the greatest number of lives, as opposed to the traditional focus of treating the sickest or most injured patients first.<sup>22</sup> In 2004, HHS developed recommendations to States and localities for how to alter patient care, emphasizing that such efforts should involve unified local and regional planning.<sup>23</sup> Specifically, localities are encouraged to identify and adopt guidelines for altering triage, admission, and patient care to ensure that all hospitals and other health care providers are making uniform decisions during a pandemic. In addition, the American Health Lawyers Association (AHLA), in cooperation with CDC and OIG, developed a checklist that encourages health care providers to develop altered standards of care that may become necessary in a pandemic.<sup>24</sup>

**Exercises To Address Medical Surge**

States and localities conduct exercises to test and improve their medical surge preparedness. HPP and PHEP guidance require States to conduct medical surge exercises.<sup>25</sup> Localities may participate in State exercises or conduct their own exercises.

Exercises generally fall into two categories. Discussion-based exercises enable participants to become familiar with current plans, policies, and procedures. In contrast, operations-based exercises enable participants to execute plans, policies, and procedures in order to clarify roles and responsibilities and identify resource gaps.<sup>26</sup> PHEP guidance suggests using discussion-based exercises to identify

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<sup>22</sup> AHRQ, “Altered Standards of Care in Mass Casualty Events,” April 2005. Available online at <http://www.ahrq.gov/research/altstand/altstand1.htm>. Accessed on March 6, 2009.

<sup>23</sup> Ibid.

<sup>24</sup> This document also provides a comprehensive list of potential legal issues that health care providers may face during an influenza pandemic. See AHLA, “Community Pan-Flu Preparedness: A Checklist of Key Legal Issues for Healthcare Providers,” 2008. Available online at <http://www.healthlawyers.org/panfluchecklist>. Accessed on May 13, 2009.

<sup>25</sup> HPP guidance required that States conduct at least one medical surge exercise by August 2008. PHEP required States to conduct at least one medical surge exercise by August 2007. HPP FY 07 guidance, pp. 15–17; PHEP Phase II guidance, pp. 10–11.

<sup>26</sup> Homeland Security Exercise and Evaluation Program (HSEEP). Available online at [https://hseep.dhs.gov/pages/1001\\_HSEEP7.aspx](https://hseep.dhs.gov/pages/1001_HSEEP7.aspx). Accessed on March 6, 2009.

and address gaps in preparedness plans before conducting more resource-intensive operations-based exercises.<sup>27</sup>

HPP and PHEP guidance also encourage States to conduct exercises in accordance with the HSEEP program.<sup>28</sup> HSEEP requires participants to create an after-action report and an improvement plan for each exercise. After-action reports include the exercise objectives, participant observations, and general recommendations. Improvement plans incorporate the lessons learned during the exercise and include specific corrective actions, the responsible parties, and dates for their completion.

### **Related Work**

In 2009, the Center for Biosecurity of the University of Pittsburgh Medical Center, under contract with ASPR, released a report on the impact of HPP on hospital preparedness from 2002 to 2007.<sup>29</sup> It found that disaster preparedness of individual hospitals had improved significantly throughout the country since the start of HPP. Specifically, it found that the emergence of health care coalitions created a foundation for health care preparedness, but that health care planning for catastrophic emergencies was still in its early stages, particularly with regard to altering standards of care.

In 2008, the Government Accountability Office (GAO) released a report that found that selected States and localities had developed pandemic influenza plans.<sup>30</sup> These States and localities had also conducted or participated in at least one exercise to test their plans. Further, GAO found that according to HHS's review of these plans, States had major gaps in many areas, including medical surge.

In 2008, GAO released another report that found that the Federal Government had provided funding, written guidance, and other assistance, such as holding conferences, to help States prepare for

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<sup>27</sup> PHEP Phase II guidance, p. 6.

<sup>28</sup> HPP FY 07 guidance, pp. 16–17; PHEP Phase II guidance, p. 4. Beginning in August 2008, HSEEP compliance was required for all exercises associated with HPP or PHEP funding.

<sup>29</sup> Center for Biosecurity of the University of Pittsburgh Medical Center, "Hospitals Rising to the Challenge: The First Five Years of the U.S. Hospital Preparedness Program and Priorities Going Forward," March 2009.

<sup>30</sup> GAO, "Influenza Pandemic: Federal Agencies Should Continue to Assist States to Address Gaps in Pandemic Planning," GAO-08-539, June 2008.

medical surge in a mass casualty event.<sup>31</sup> GAO reported that the 20 States it reviewed were planning for medical surge at the State level and had made efforts in increasing hospital capacity, identifying alternate care sites, and registering medical volunteers, but that fewer were planning for altered standards of care. GAO further noted that these 20 States continued to face challenges in preparing for medical surge in a mass casualty event.

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## METHODOLOGY

This review determines how selected States and localities have prepared for medical surge in response to an influenza pandemic and the extent to which they have conducted and documented exercises that test their preparedness. It presents a snapshot of selected States' and localities' preparedness for an influenza pandemic as of late summer 2008. This review is based on data from two sources: (1) a review of documentation from ASPR, CDC, and the selected States and localities; and (2) structured in-person interviews with key officials in each of the selected States and localities.

### **Selection of Sampled States and Localities**

We selected a purposive sample of five States based on the following factors: health department structure, population density, geographic distribution, and input from ASPR and CDC. We selected one State included in related OIG studies and eliminated other States included in recent GAO work related to this evaluation. The States we selected were Maine, Missouri, South Dakota, Virginia, and Washington. In each State, we selected the largest Metropolitan Statistical Area (MSA) and then selected the most populated city within that MSA. We also selected one low- to medium-sized city in each State. We did not select localities in counties that were adjacent to each other to ensure that localities were in different regional planning areas. See Appendix A for a list of the selected localities.

### **Data Collection**

*Selection of medical surge components:* We selected the following five key components of medical surge based on a review of HPP and PHEP guidance and input from officials at CDC and ASPR: (1) coordination

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<sup>31</sup> GAO, "Emergency Preparedness: States Are Planning for Medical Surge, but Could Benefit from Shared Guidance for Allocating Scarce Medical Resources," GAO-08-668, June 2008.

among stakeholders; (2) recruitment and management of medical volunteers; (3) acquisition and management of medical equipment; (4) identification of alternate care sites; and (5) identification of guidelines for altering triage, admission, and patient care.

*State and local documentation:* To determine how selected States and localities have prepared for a medical surge, we first requested documentation from ASPR and CDC. Specifically, we requested HPP, HPP supplemental, and PHEP supplemental applications and progress reports that covered the time between 2006 and 2008 for each of the five selected States. We also requested any assessments that ASPR and CDC conducted of these documents.

In addition, from each selected State and locality, we requested all available documentation related to the five components of medical surge that we reviewed. These documents included States' and localities' pandemic influenza plans and various other documents, such as committee meeting notes, memoranda of understanding, and descriptions of equipment. We also requested all available documentation about the exercises that these States and localities conducted from August 2006 to August 2008 that were related to these five components of medical surge, including any after-action reports and improvement plans.<sup>32</sup>

*Structured interviews with State and local officials:* We conducted structured in-person interviews with officials responsible for coordinating medical surge in each of the 5 States and 10 localities. At the State level, these officials typically included State HPP and PHEP coordinators and State emergency preparedness exercise coordinators. At the local level, we determined how each State distributed its HPP and PHEP funds to its localities and identified the key local officials responsible for coordinating medical surge activities. These officials typically included representatives involved in pandemic planning activities as well as representatives from local public health departments and hospitals. In a few localities, representatives from emergency management services were also present. We conducted the interviews between July and September 2008.

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<sup>32</sup> For the purpose of our review, we included exercises that localities either conducted or participated in (including exercises that the State conducted in which the selected localities participated). We did not include routine drills because they are limited to an exercise of a single entity and function. We also did not include workshops as they are generally focused on achieving a particular objective, such as developing a new draft plan or policy.

## I N T R O D U C T I O N

During our interviews, we asked State and local officials about their preparedness activities for medical surge and about the exercises they had conducted within the five components that we reviewed. Our discussions with State officials focused on the State's role in each of the five components as well as in conducting exercises. Our discussions with local officials focused on the localities' progress and challenges within each of the five components, as well as the localities' exercise programs. Throughout the report, we use the term "States" to refer to the State officials that we interviewed and "localities" to refer to the local and regional officials that we interviewed.

### **Data Analysis**

To determine how the selected States and localities have prepared for a medical surge, we relied on both the State and local documentation we collected, as well as the responses from the structured interviews with State and local officials. We compared the documentation to the information gathered during our structured interviews and looked for consistency among the sources of data. We also asked for additional documentation, when appropriate, to validate certain responses about States' and localities' preparedness activities. For example, we reviewed memoranda of understanding or other documentation to verify that localities had formal agreements in place that would allow them to set up alternate care sites. We also reviewed meeting notes and agenda to verify that localities coordinated with certain entities. In addition, we compared the responses of the State officials to those of the local officials. We also looked for corroboration among the various officials present at each interview. To determine the extent to which States and localities have conducted and documented exercises that test their medical surge preparedness, we relied primarily on the documentation we collected from the States and localities, including any after-action reports and improvement plans.

### **Limitations**

This study is based on a purposive sample of five States and two localities within each of these States. The findings cannot be projected to other States and localities. In addition, the five components of medical surge that we reviewed do not encompass all aspects of medical surge preparedness. For example, other aspects of medical surge may include preparedness activities designed to improve hospital evacuations and fatality management.

# I N T R O D U C T I O N

## **Standards**

This study was conducted in accordance with the “Quality Standards for Inspections” approved by the Council of the Inspectors General on Integrity and Efficiency.

## ► FINDINGS

**All of the selected localities had established partnerships to prepare for a medical surge; however, the degree to which coordination occurred varied**

HPP and PHEP guidance emphasize that medical surge preparedness necessitates coordination among a variety of public and private stakeholders.

These documents also encourage States and localities to establish pandemic influenza coordinating committees and health care coalitions to help plan for a pandemic. Additionally, the documents encourage localities to integrate the efforts of health care facilities with the efforts of agencies for public safety, emergency management, and public health.

**All 10 localities had developed committees to help plan for a pandemic**

As of late summer 2008, all 10 localities we reviewed had established committees to help plan for an influenza pandemic. These committees generally included representation from health care, public health, emergency management, public safety, local schools, and private industry. These committees typically were responsible for developing the localities' pandemic influenza response plans. They also commonly discussed issues important to pandemic planning, such as the use of volunteer health care personnel and alternate care sites, as well as how best to use funds from State and Federal agencies to prepare for a pandemic.

Although all 10 localities had established such committees, the degree to which coordination occurred varied among the localities. In some localities, the committees were actively engaged and met monthly, whereas in other localities they met less frequently. In addition, the degree to which the local health departments participated in these preparedness committees also varied among localities. Many localities reported challenges with keeping necessary partners engaged in pandemic planning. As a few noted, planning was often fragmented because there were multiple agencies and different funding streams involved.

**All 10 localities had developed health care coalitions to coordinate the efforts of health care facilities**

All 10 localities had developed health care coalitions to coordinate the preparedness efforts of health care facilities and providers and to develop plans for medical emergencies, such as a pandemic.

Localities most commonly reported that the most active participants in their coalitions were local and regional hospitals. However, some localities reported that keeping hospitals engaged in the coalitions'

activities was difficult, as hospitals were often strained by increasing preparedness requirements, decreasing funding, and the everyday pressures to stay in business.

The extent to which localities had started to include other types of health care providers in their coalitions differed. Many localities were in the early stages or had not attempted to include nonhospital providers at all. For example, only 3 of the 10 localities had coalitions that involved home health care agencies, 5 localities had coalitions that involved nursing homes, and 5 localities had coalitions that involved local health care clinics. In addition, several localities emphasized that their goal in working with these other health care providers was mainly educational.

**All 10 localities had started to include hospitals in their emergency response planning**

All 10 localities had started to include hospitals in their emergency response planning. Until recently, hospitals were not typically part of localities’ emergency response planning. However, several localities noted that the relationships between hospitals and emergency management, public safety, and public health officials—although relatively new—were critically important to the localities’ pandemic planning response. As one hospital official stated, “we need to play a bigger role in emergency planning, especially if we are facing something like a pandemic.”

At the same time, the degree to which hospitals were included in emergency response planning varied. A few localities had well-established systems for sharing information between emergency management agencies and hospitals. Other localities were just beginning to develop these relationships, and several hospitals reported that they had not been fully integrated into their localities’ emergency response planning.

**Fewer than half of the selected localities had started to recruit medical volunteers, and none of the five States had implemented an electronic system to manage them**

Medical staff will likely be scarce during a severe pandemic, and localities may need to rely on medical volunteers to help respond to the increased demands upon the

medical infrastructure. To prepare for this, HPP guidance encourages States and localities to recruit, register, and train medical volunteers as part of the ESAR-VHP program. HPP guidance also required States to develop electronic systems to register medical volunteers and verify credentials by August 2009.

**Four localities had started to recruit, register, and train medical volunteers**

As of late summer 2008, 4 of the 10 localities had started to recruit, register, and train medical volunteers to be used in a pandemic. These localities planned to use their volunteers primarily in alternate care sites and, to a lesser degree, in hospitals. Two of the remaining localities were in the early stages of developing policies and procedures to recruit volunteers, whereas four others had no plans to recruit or train volunteers, as they intended to use volunteers from other organizations, such as the Red Cross, or rely on spontaneous volunteers.

The four localities that had started to recruit volunteers reported registering between 38 and 200 volunteers each. To recruit volunteers, they typically used media advertisements and in-person presentations at health fairs and medical association meetings. They often targeted specific groups, such as retired medical professionals; school nurses; medical and nursing school students; and medical societies. To register their volunteers, all four localities had some type of background check that typically involved interviews, fingerprinting, and the verification of medical licenses. All four localities also offered training to volunteers in areas such as first aid techniques. In addition, two of these localities used their volunteers on a routine basis, such as helping to staff seasonal influenza clinics.

The four localities had several factors in common that may have helped them develop their volunteer programs. These factors included having a paid volunteer coordinator, using an existing Federal volunteer program called the Medical Reserve Corps,<sup>33</sup> and having multiple sources of funding to help support their volunteer programs.

At the same time, these four localities expressed a number of concerns about using volunteers. They were concerned primarily that their volunteers would not show up during a pandemic because of competing work or other volunteer commitments or because of fears that the volunteers would not be legally protected during a pandemic. They also noted that volunteers may not have worked in a clinical setting recently, may not have current medical licenses, or may have physical limitations, thereby limiting the role that the volunteers could play

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<sup>33</sup> The Medical Reserve Corps in the Office of the Surgeon General is a nationwide program that uses medical and public health professionals in a volunteer capacity to improve the health and safety of communities. Medical Reserve Corps are local units that strengthen the public health infrastructure of their communities.

## F I N D I N G S

during a pandemic. Other concerns focused on the amount of resources needed to maintain a successful volunteer program.

### **None of the five States had fully implemented an electronic system for managing medical volunteers**

As of late summer 2008, none of the five States had fully implemented an electronic system to manage volunteers. As noted earlier, HPP required States to have electronic systems for managing medical volunteers by August 2009. Four of the five States reported that they were in the process of selecting system software, developing their systems, or writing policies for using their systems. The remaining State reported that its system was not fully operational in that it was still developing the ability to verify the credentials of volunteers.

Even though these systems were not fully operational, a number of the localities expressed concerns about using their States' systems. Two localities that had their own systems for registering and credentialing volunteers were reluctant to transition to the new State system. In addition, three localities expressed concerns that their States may use the system to deploy local volunteers without alerting the localities.

### **All of the selected localities had acquired limited medical equipment for a pandemic, but only three of the five States had electronic systems to track beds and equipment**

During a severe pandemic, the availability of medical equipment may be insufficient. To address this, both PHEP and HPP provide States with

funding that can be used to purchase medical equipment at the State and local levels. Localities are generally responsible for storing, maintaining, and transporting this medical equipment. In addition, HPP requires States to maintain systems that enable them to report to HHS the number of available hospital beds and encourages States to make these systems electronic. States are also encouraged to establish inventory systems to track medical equipment during an emergency.

### **All 10 localities had acquired limited caches of medical equipment; however, many experienced difficulties with managing this equipment**

As of late summer 2008, all 10 localities had acquired limited medical equipment to be used during a pandemic. These caches included a variety of equipment, such as ventilators; portable beds; and personal protective equipment, such as masks, respirators, and gloves.

## F I N D I N G S

The localities used different approaches for storing this equipment. Two localities distributed all of their equipment to local hospitals, whereas the remaining eight localities retained some equipment in regional caches and distributed the remainder to hospitals. The regional caches typically consisted of equipment stored in trailers or public health departments. The equipment stored in hospitals could be used in nonemergency situations; however, hospitals were generally responsible for maintaining and replacing the equipment so that it could be redistributed in an emergency if needed.

Almost all of the localities reported having difficulties with managing the equipment that they had acquired for a pandemic. Many noted that local hospitals and health departments often did not have sufficient storage space. Some localities also reported problems with maintaining the equipment, indicating, for example, that they were sometimes unsure of whether hospitals were replacing items that had expired.<sup>34</sup> Others mentioned difficulties with trying to standardize the medical equipment, such as ventilators, in their caches. As one official noted, this is particularly important because standardization makes it easier to share equipment and it simplifies training. Finally, a few localities noted that there are logistical challenges with moving equipment from one location to another.

Many localities were also concerned that existing caches would be rapidly depleted during a pandemic. They anticipated problems with obtaining equipment through normal channels during a pandemic and questioned whether vendors would be able to honor their contracts with an influx of competing orders to fill. A few officials noted that supply chains may be disrupted during a pandemic, especially if the supplies are shipped from overseas or from another State.

### **Three States had implemented electronic systems to track available hospital beds and medical equipment during an emergency**

Although all five States were able to meet the requirement to report available beds to HHS, only three States had implemented electronic systems to track available hospital beds during an emergency. In addition to electronically tracking available beds, these systems were also able to track various types of medical equipment, such as

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<sup>34</sup> Certain medical materials (e.g., personal protective equipment) are imprinted with an expiration date. Beyond this date, the manufacturer does not guarantee the sterility, safety, or stability of the item.

## F I N D I N G S

respirators or masks. The States noted that these systems simplified the process of collecting data from hospitals. In addition, these systems enabled States to quickly disseminate information to hospitals and localities. The remaining two States were in the process of developing such systems and noted that their current methods for collecting data were cumbersome.

At the same time, most of the localities in the three States that had implemented electronic tracking systems reported difficulties with using these systems. They noted that their State systems were not compatible with other systems used during an emergency. For example, one locality near a State border had to input the same data into two States' systems. Others mentioned incompatibilities with the systems used by local emergency management agencies. In addition, two localities were concerned about the reliability of the data. As one noted, its State system may not be kept up-to-date during an emergency because overburdened hospital staff might not reliably enter information into the system.

### **Most of the selected localities were in the early stages of planning for alternate care sites**

Localities may need to use alternate care sites to increase their medical surge capacity in a pandemic. Before

being able to use alternate care sites, localities need to engage in a significant amount of planning. Such planning generally consists of identifying an appropriate location for the site; determining the scope of care that the site will provide in an emergency; and establishing how the site will be managed, staffed, and supplied.

### **Nine localities had either identified or were in the process of identifying alternate care sites to be used in a pandemic; however, few had signed formal agreements**

As of late summer 2008, three localities had identified locations to be used as alternate care sites. Each of the three localities had identified between 3 and 11 sites that could be used as alternate care sites during a pandemic. The sites typically included buildings such as schools, churches, and convention centers. These localities had either signed or were in the process of signing formal agreements with the facility owners. In addition, one of these localities planned to use preequipped, mobile trailers that had been purchased by the State to supplement its alternate care sites during a pandemic.

Six other localities were in the process of deciding which facilities to use for their alternate care sites. The remaining locality reported that it did not plan to use alternate care sites at all because it was concerned that it would not be able to staff these sites. Instead, its plan was for the hospitals in the area to take in as many patients as possible during a pandemic.

**None of the localities that were planning to use alternate care sites had plans that included the scope of care and how these sites would be managed, staffed, and supplied**

Of the nine localities that intended to use alternate care sites, a few addressed some of these components, but none addressed all of them.

*Scope of care.* Only one locality that intended to use alternate care sites had defined the scope of care that would be provided. This locality planned to provide triage and care for only “minor problems” at the alternate care sites. The other eight localities were still considering various alternatives. In general, they explained that they would most likely provide triage, treatment, or both at their sites to help alleviate overcrowding in hospitals. Possible treatments ranged from lower levels of care, such as first aid, to more intensive care or palliative care.

*Managing alternate care sites.* Three of the localities that intended to use alternate care sites had determined who would manage patient care at their sites. These localities had arranged for the health department, hospitals, regional coordinating entities, or a combination of these entities to manage their sites.

The other six localities were less specific about who would be responsible for managing patient care at the site. One official reported that it is often challenging to find the appropriate people to manage an alternate care site; public health officials often did not have the specialized knowledge to manage and operate the sites, but private health care facilities (such as hospitals) often did not have the motivation. As several officials explained, hospitals often did not want to participate in managing alternate care sites because of liability concerns, as well as staffing and reimbursement concerns.

*Staffing alternate care sites.* Only one locality had determined who would staff its alternate care sites. This locality planned to use medical volunteers that it had already recruited and trained. Six other localities that intended to use alternate care sites were still in the beginning stages of planning and were considering recruiting volunteers from groups such as the Red Cross, home health agency staff, health care

clinic staff, and medical school students. The remaining two localities said that they would primarily rely on hospital staff.

*Supplying alternate care sites.* Four of the localities that intended to use alternate care sites said they had acquired some of the supplies needed for the sites. These localities were planning to use the medical equipment from either a regional cache or a mobile trailer stocked with medical equipment. In contrast, the remaining localities had not yet obtained supplies for the alternate care sites. These localities were either planning to order the equipment during a pandemic or were in the process of trying to acquire equipment for the sites.

**Most of the selected localities had not identified guidelines for altering triage, admission, and patient care; many cited liability concerns**

During a pandemic, guidelines governing triage, admission, and patient care may need to be altered to save as many lives as possible. To address this,

localities may identify and adopt a standard set of guidelines for altering triage, admission, and patient care. Such an approach would ensure that all hospitals and other health care providers in the locality or region were making uniform decisions during a pandemic.

**Nine localities had not identified guidelines for altering triage, admission, and patient care during a pandemic**

As of late summer 2008, only one locality had identified a standard set of guidelines for altering triage, admission, and patient care during a pandemic. This locality was in the process of encouraging hospitals to adopt these guidelines to ensure that care was provided in a consistent manner. The guidelines that this locality identified were developed in Canada after the Severe Acute Respiratory Syndrome outbreak. These guidelines provide direction for how to alter patient care during a pandemic. They also assist health care providers with determining whether a patient should be admitted to a hospital for treatment or offered other options, such as palliative care. In particular, the guidelines provide hospitals with a scoring method based on specific characteristics of patients to use for triaging and for making decisions about how to equitably allocate limited resources, such as ventilators.

Several localities highlighted the importance of coordinating the approaches of all hospitals and other health care providers in the region. As one hospital official noted, the lack of coordination between admission protocols could be devastating for a local hospital. For

## FINDINGS

example, if neighboring hospitals rely on different protocols for admission and patient care, one hospital could become inundated with patients denied care at the neighboring hospital.

### **Localities commonly cited concerns about liability and a lack of State or Federal guidance**

The nine localities that had not identified a standard set of guidelines gave several reasons for their reluctance. Seven localities noted that providers in their localities were concerned that they would be legally at risk if they had to alter their triage, admission, or patient care. As one locality noted, “Our hospitals will functionally be practicing battlefield medicine. I don’t think providers are prepared to deal with this, and we haven’t even begun to deal with all the legal questions that will arise from practicing this type of medicine.” A few localities noted that instituting a uniform set of guidelines would minimize the legal risk to providers.

The nine localities also reported that they wanted additional State or Federal guidance before attempting to institute uniform guidelines in their localities. Localities were concerned that it may not be appropriate to institute guidelines in the absence of State or Federal guidance. Several localities mentioned that it would be extremely valuable to have a single set of nationwide or statewide guidelines. As one official noted, “when you start to alter your protocols for patient care without the backing of statewide guidelines, you open yourself up to potential litigation.”

### **All of the selected localities conducted medical surge exercises; however, none consistently documented the lessons learned**

Localities conduct exercises to test and improve their preparedness efforts. HPP and PHEP guidance require States to conduct exercises

and encourage States to conduct these exercises pursuant to HSEEP requirements.<sup>35</sup> Among other things, HSEEP requires participants to create an after-action report that documents the preparedness issues that arose during the exercise and an improvement plan that shows how participants will follow up on the lessons learned.

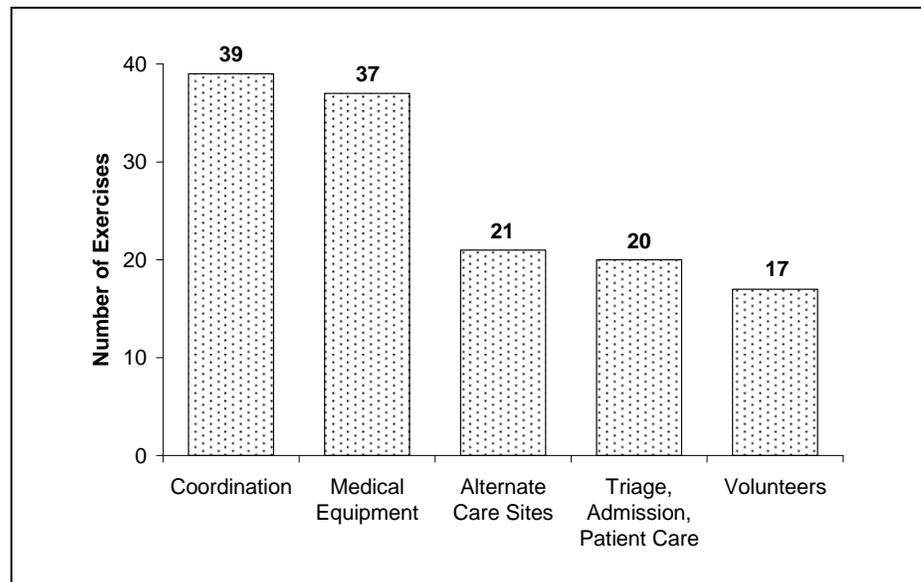
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<sup>35</sup> Beginning in August 2008, all exercises associated with HPP and PHEP funding were required to meet HSEEP requirements for after-action reports and improvement plans. Note that this was not a requirement for any of the exercises reviewed for this study.

**Localities conducted between one and seven medical surge exercises over a 2-year period**

Between mid-2006 and mid-2008, the 10 selected localities conducted a total of 41 exercises that focused on medical surge. Over half of these exercises were specific to a pandemic, whereas the remainder focused on other types of emergencies. As shown in Figure 1, the exercises most commonly focused on coordination among hospitals and other responders, followed by the management of medical equipment. Fewer exercises tested the use of alternate care sites; guidelines for altering triage, admission, and patient care; and volunteers. Most exercises focused on more than one medical surge component.

Figure 1:  
Number of  
Exercises by  
Medical Surge  
Component



Source: OIG analysis of documentation from selected States and localities, 2009.  
Note: Most exercises focused on more than one medical surge component.

**Most of the medical surge exercises were discussion based, rather than operations based**

Discussion-based exercises can be used to identify and address gaps in preparedness plans before more resource-intensive operations-based exercises are conducted. As shown in Table 1, over half of the 41 medical surge exercises conducted by the 10 selected localities were discussion based and over a third were operations based. The remaining exercises were actual emergencies that localities evaluated for lessons learned. In total, 7 of the 10 localities conducted at least one discussion-based exercise and one operations-based exercise.

<b>Table 1: Number of Exercises, by Type of Exercise</b>		
<b>Type of Exercise</b>	<b>Number of Exercises</b>	<b>Percentage of Exercises</b>
Discussion-based	23	56%
Operations-based	15	37%
Based on Actual Emergencies	3	7%
<b>Total</b>	<b>41</b>	<b>100%</b>

Source: OIG analysis of documentation from selected States and localities, 2009.

Localities’ discussion-based exercises typically involved discussions by participants regarding potential responses to simulated scenarios in an informal setting. These types of exercises most commonly involved a facilitator who described a mock emergency to the participants. During each phase of the mock emergency—hour-by-hour or week-by-week—the participants discussed how they would respond. Typically, the facilitator prompted the participants with predetermined questions. For example, as part of one locality’s exercise, the facilitator described a scenario, stating that “It is now three hours into the incident. You are at capacity for beds. Your staffing is at 83 percent of your requirements . . . .” The facilitator then posed a variety of questions to participants, such as: “What are your top five priorities now?”; “What are your alternate care site plans?”; and “What do you need to do with regard to medical supplies?”

In contrast, localities’ operations-based exercises typically occurred in participants’ actual work environments and participants physically responded to a mock emergency. For example, in one exercise, the following events were communicated to participants in hospitals via radio: “Local Emergency Operations Centers requesting update on hospital status by 9 a.m.” and “Some hospitals are reporting influx of people . . . .” Participants then had to respond and provide their status. Some of the operations-based exercises also involved the actual delivery of equipment and supplies or an influx of mock patients to hospitals.

In addition, three localities experienced actual emergencies that they evaluated for lessons learned. For example, one locality evaluated its medical surge response to an ice storm in which staff at local hospitals, the public health department, the Red Cross, and emergency management coordinated to establish and run shelters for 400 residents

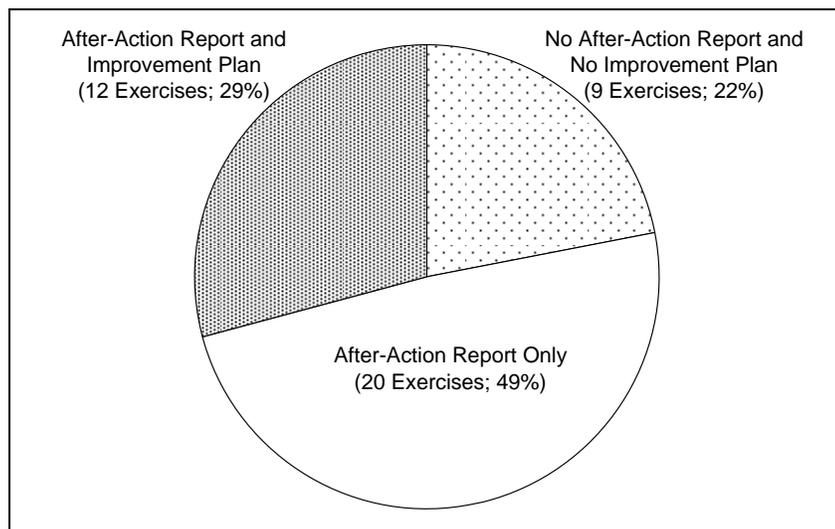
over 10 days. Another locality evaluated how it responded to a local shooting in which numerous people were admitted to the hospital.

**Localities did not consistently document the lessons learned from exercises**

As noted earlier, localities are encouraged to document lessons learned during exercises through the creation of after-action reports and improvement plans. None of the 10 localities had completed an after-action report and an improvement plan for all of their exercises. However, all of the localities had completed either an after-action report or an improvement plan for at least one of their exercises.

For 9 of the 41 exercises, localities completed neither after-action reports nor improvement plans. For another 20 exercises, localities completed only after-action reports. For the remaining 12 exercises, they completed both after-action reports and improvement plans. See Figure 2.

Figure 2:  
Number of  
Exercises With  
After-Action  
Reports and  
Improvement Plans



Source: OIG analysis of documentation from selected States and localities, 2009.

Localities reported several problems with preparing after-action reports and improvement plans. Specifically, they mentioned difficulties with conforming to HSEEP requirements that specify the format of and type of information that needs to be included in after-action reports and improvement plans. One locality reported that these requirements were not “hospital-friendly,” while another locality reported needing a full-time person to complete all of the required documents.

**Exercises showed that localities needed to make improvements within the five medical surge components**

The after-action reports from the exercises we reviewed showed that localities needed to make improvements within the five medical surge components. In particular, several reports highlighted the need for better coordination among stakeholders as well as the need for a better understanding of their roles and responsibilities during an emergency. Other reports focused on the need to improve coordination with emergency management agencies as well as enhance coordination with health care entities, such as long term care facilities and clinics.

After-action reports also highlighted difficulties with medical equipment. Several reports indicated that localities had not assessed their equipment needs or could not deploy existing equipment. These reports also indicated that hospitals did not have plans for dealing with equipment shortages. One report pointed out that the locality had not established agreements among its hospitals to help facilitate the sharing of equipment.

A few after-action reports also showed a need for localities to make improvements within the other medical surge components. These reports cited a need for localities to start or continue to plan for alternate care sites, specifically in terms of establishing who would manage and staff the sites. For example, one report noted that local hospitals and the public health department disagreed over who would open alternate care sites. Several reports also showed the need for localities to recruit additional medical volunteers, such as medical and nursing students. Another report noted that the locality should consider developing guidelines for altering patient care and determine the legality of adopting these guidelines.

The recent public health emergency caused by an outbreak of human cases of H1N1 influenza has highlighted the need for States and localities to be prepared for a medical surge. Our review found that although the selected States and localities are making progress within the five components of medical surge that we reviewed, more needs to be done to improve States' and localities' ability to respond to a pandemic.

Specifically, we found that in preparation for a pandemic, all of the 10 selected localities had established partnerships to prepare for a medical surge; however, the degree to which this coordination occurred varied. We also found that fewer than half of the selected localities had started to recruit medical volunteers, and none of the five States had implemented an electronic system to manage these volunteers. Similarly, all selected localities had acquired limited medical equipment for a pandemic, but only three of the five States had electronic systems to track available beds and equipment. In addition, most of the selected localities were in the early stages of planning for alternate care sites, and most localities had not identified guidelines for altering triage, admission, and patient care during a pandemic. Finally, although all of the selected localities conducted medical surge exercises, none consistently documented the lessons learned.

Based on these findings, we recommend that ASPR, in collaboration with CDC:

**Work with States and localities to improve their efforts within each of the five components of medical surge that we reviewed**

- **ASPR should continue to emphasize the importance of coordination and involving a wide array of stakeholders in medical surge and pandemic planning.** Specifically, additional guidance should focus on integrating local hospitals into emergency response planning as well as emphasizing the importance of including other health care providers—such as nursing homes, home health agencies, clinics, and physicians—in pandemic planning efforts. In addition, ASPR should collaborate with CDC to ensure that public health officials are actively involved in medical surge preparedness activities.
- **ASPR should continue to emphasize the importance of recruiting, registering, and training medical volunteers for use in a pandemic.** In addition, ASPR should continue to monitor States' progress in developing electronic systems (pursuant to the guidelines established

## R E C O M M E N D A T I O N S

for ESAR-VHP) to register volunteers and verify credentials. ASPR should also encourage States and localities to make use of existing Federal volunteer programs, such as the Medical Reserve Corps.

- **ASPR should continue to emphasize the importance of managing medical equipment currently being stockpiled for a public health emergency, such as a pandemic.** Specifically, ASPR should consider providing guidance on how best to store, maintain, and transport medical equipment. In addition, ASPR should consider providing guidance on the tracking of medical equipment in addition to the tracking of available hospital beds.
- **ASPR should continue to emphasize the importance of planning for alternate care sites for use during a pandemic.** ASPR should include specific guidance about determining the scope of care to be provided at alternate care sites and how the sites can be managed, staffed, and supplied.
- **ASPR should emphasize the importance of identifying and adopting guidelines for altering triage, admission, and patient care during a pandemic.** ASPR should consider developing guidelines for altering standards of care during a pandemic. These guidelines could serve as a model for States. In addition, ASPR should strengthen current guidance to encourage hospitals and other health care providers to make uniform decisions during a pandemic.

### **Ensure that States and localities consistently document the lessons learned from preparedness exercises that address medical surge**

Given the importance of exercises in strengthening preparedness, ASPR, in collaboration with CDC, should ensure that States and localities consistently document the lessons learned from all medical surge exercises that require HSEEP compliance. ASPR and CDC should conduct additional reviews to ensure that such exercises are meeting HSEEP requirements.

### **Address the issue of legal protections for medical professionals and volunteers who respond to public health emergencies, such as an influenza pandemic**

ASPR should consider working with States to develop appropriate legal protections for medical professionals and volunteers who respond to public health emergencies, such as an influenza pandemic, and who may need to alter standards of care. ASPR should also consider the feasibility of Federal legislation in this area. Additionally, ASPR should encourage States and localities to inform health care providers about liability issues

using documents such as AHLA’s “Community Pan-Flu Preparedness: A Checklist of Key Legal Issues for Healthcare Providers.”

**Facilitate the sharing of information and emerging practices among States and localities**

ASPR, in collaboration with CDC, should collect information on emerging practices from States and localities, as well as experts in the field, to further improve medical surge preparedness. These efforts should focus particularly on planning for alternate care sites and identifying and adopting guidelines for altered standards of care. ASPR should employ a variety of strategies to facilitate the sharing of information and emerging practices among States and localities. For example, ASPR could develop a secure Web site or listserv where States and localities could compare themselves to other States and localities with similar characteristics and share information. ASPR could also provide a mentoring program for State officials responsible for preparedness as well as develop additional opportunities for in-person meetings.

**Provide training and technical assistance to States and localities on key issues**

ASPR, in collaboration with CDC, should provide training and technical assistance to States and localities to bolster their medical surge preparedness efforts. ASPR should address specific State and local challenges, such as identifying alternate care sites, managing medical equipment, and identifying guidelines for alternate standards of care. ASPR should use its partnerships with existing groups, such as the National Association of County and City Health Officials, the Association of State and Territorial Health Officials, and the American Hospital Association, to help facilitate these activities.

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**AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE**

ASPR concurred with all five of our recommendations. The full text of ASPR’s comments is provided in Appendix B. CDC did not formally comment, but did provide technical comments. We made changes to the final report based on CDC’s technical comments, as appropriate.

**Selected States and Localities**

State	Locality
Maine	Portland
	Lewiston
Missouri	Saint Louis
	Rolla
South Dakota	Sioux Falls
	Mitchell
Virginia	Virginia Beach
	Blacksburg
Washington	Seattle
	Longview

Agency Comments



DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of the Secretary

Assistant Secretary for  
Preparedness & Response  
Washington, D.C. 20201

DATE: September 1, 2009

TO: Stuart Wright  
Deputy Inspector General for Evaluation and Inspections

FROM: Gerald W. Parker, DVM, PhD, MS /S/  
Principal Deputy Assistant Secretary for Preparedness and Response

SUBJECT: OIG Draft Report: "State and Local Pandemic Influenza Preparedness: Medical Surge," OEI-02-08-00210

The Office of the Assistant Secretary for Preparedness and Response (ASPR) appreciates the opportunity to review and respond to the Office of Inspector General's (OIG) draft report entitled, "State and Local Pandemic Influenza Preparedness: Medical Surge," OEI-02-08-00210.

**OIG Recommendations**

- **Work with States and localities to improve their efforts within each of the five components of medical surge that we reviewed.**
  - ASPR should continue to emphasize the importance of coordination and involving a wide array of stakeholders in medical surge and pandemic planning.
  - ASPR should continue to emphasize the importance of recruiting, registering, and training medical volunteers for use in a pandemic.
  - ASPR should continue to emphasize the importance of managing medical equipment currently being stockpiled for a public health emergency such as a pandemic.
  - ASPR should continue to emphasize the importance of planning for alternate care sites for use during a pandemic.
  - ASPR should emphasize the importance of identifying and adopting guidelines for altering triage, admission, and patient care during a pandemic.
- **Ensure that States and localities consistently document the lessons learned from preparedness exercises that address medical surge.**
- **Address the issue of legal protections for medical professionals and volunteers who respond to public health emergencies, such as an influenza pandemic.**
- **ASPR should consider working with States to facilitate the sharing of information and emerging practices among States and localities.**
- **Provide training and technical assistance to States and localities on key issues.**

**ASPR Response**

We concur with these recommendations and look forward to working with the OIG on this issue.



## A C K N O W L E D G M E N T S

This report was prepared under the direction of Jodi Nudelman, Regional Inspector General for Evaluation and Inspections in the New York regional office, and Meridith Seife, Deputy Regional Inspector General.

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