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Report to the Committee on Government Reform, House of Representatives

September 2006

INFLUENZA PANDEMIC

DOD Has Taken Important Actions to Prepare, but Accountability, Funding, and Communications Need to be Clearer and Focused Departmentwide

GAO-06-1042

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GAO Accountability·Integrity·Reliability

Highlights

Highlights of GAO-06-1042, a report to the Chairman and Ranking Minority Member, Committee on Government Reform, House of Representatives

Why GAO Did This Study

An influenza pandemic would be of global and national significance and could affect large numbers of Department of Defense (DOD) personnel, seriously challenging DOD's readiness.

GAO was asked to examine DOD's pandemic influenza preparedness efforts. This report focuses on DOD's planning for its workforce, specifically (1) actions DOD has taken to prepare and (2) challenges DOD faces going forward. GAO analyzed guidance, contracts, and plans, and met with DOD officials.

What GAO Recommends

GAO recommends that DOD (1) define and communicate roles and responsibilities, oversight mechanisms, and goals and performance measures for DOD's efforts, (2) establish a framework to request funding, tied to its goals, (3) define and communicate departmentwide which types of personnel DOD plans to include in its vaccine and antiviral distribution, and (4) implement a comprehensive and effective departmentwide communications strategy. DOD generally concurred with four recommendations, and did not address one in its written comments. Based on DOD's comments and additional information provided showing DOD designated a lead authority for its efforts, GAO combined two recommendations. GAO clarified another recommendation to focus on requesting funding tied to the department's goals.

www.gao.gov/cgi-bin/getrpt?GAO-06-1042.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Davi M. D'Agostino at (202) 512-5431 or DAgostinoD@gao.gov.

What GAO Found

DOD had taken a number of actions since September 2004 to prepare for an influenza pandemic, and its planning efforts continue to evolve. The *Implementation Plan for the National Strategy for Pandemic Influenza*, released in May 2006, tasked each federal department to develop its own implementation plan that details how it will carry out its responsibilities as outlined in the national plan and how it will prepare its workforce. DOD established working groups for its pandemic influenza planning efforts, including the Pandemic Influenza Task Force, which included representatives from across the department, including the Offices of the Assistant Secretary of Defense (ASD) for Homeland Defense, ASD for Health Affairs, ASD for Special Operations and Low Intensity Conflict, and the Joint Chiefs of Staff. In addition, the Office of the ASD for Health Affairs developed guidance that provided tasks for the Office of the Secretary of Defense, military departments, installation commanders, and others to complete to prepare for a pandemic. Further, several entities within DOD drafted plans and guidance, and DOD had taken other important steps, such as establishing Web sites, stockpiling vaccines and antivirals, and initiating projects to assist other nations with their preparedness efforts.

Going forward, DOD faces four management challenges that it needs to address as it shifts its focus to the department as a whole. First, at the time of GAO's review, neither the Secretary of Defense nor the Deputy Secretary of Defense had yet issued guidance defining lead and supporting roles and responsibilities with clear lines of authority, oversight mechanisms, and goals and performance measures for DOD's influenza pandemic planning efforts. The lack of these accountability mechanisms over time may hamper the leadership's ability to ensure that planning efforts across the department are progressing as intended. Second, DOD had not yet requested funding for its pandemic influenza preparedness efforts linked to departmentwide goals. Therefore, it is unclear whether DOD can address the tasks assigned to it in the national implementation plan and pursue its own preparedness efforts for its workforce departmentwide within current resources. Third, DOD had not yet fully defined or communicated departmentwide which types of personnel—military and civilian personnel, contractors, beneficiaries, and dependents—it plans to include in its distribution of vaccines and antivirals. Fourth, DOD had not yet fully developed its communications strategy or communicated information to its personnel departmentwide on what actions to take in the event of an influenza pandemic. Also, DOD had not yet developed a plan to communicate information on the safety and efficacy of vaccines and antivirals, if DOD decides to dispense them. While DOD established Web sites with some information on pandemic influenza, GAO identified some unevenness across the department in terms of the information personnel received. A comprehensive and effective communications strategy could ensure that DOD's personnel departmentwide are aware of actions they should take in the event of an influenza pandemic.

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Abbreviations

ASD	Assistant Secretary of Defense
DOD	Department of Defense
HHS	Department of Health and Human Services
WHO	World Health Organization

GAO
Accountability * Integrity * Reliability

United States Government Accountability Office
Washington, DC 20548

September 21, 2006

The Honorable Tom Davis
Chairman
The Honorable Henry A. Waxman
Ranking Minority Member
Committee on Government Reform
House of Representatives

An influenza pandemic—a novel strain of influenza virus to which humans have little or no immunity that has the ability to infect and be passed efficiently between humans worldwide—would be of global and national significance. A large number of Department of Defense (DOD) personnel potentially could be affected by an influenza pandemic, which could adversely affect the military's readiness, jeopardize ongoing military operations overseas, and threaten the day-to-day functioning of the department and maintenance of its critical infrastructure. For example, approximately one-half of all of the deaths of U.S. servicemembers from World War I, at least 43,000 deaths, were due to influenza or influenza-related complications, and another 1 million servicemembers were hospitalized, limiting the military's resources to continue ongoing missions. An influenza pandemic outbreak not only would be a medical problem, but also a human capital and national security problem. The federal government anticipates an influenza pandemic would occur in multiple waves over a period of time, rather than as a discrete event. During the peak weeks of an outbreak of a severe influenza pandemic, an estimated 40 percent of the U.S. workforce may not be at work due to illness, the need to care for family members, or fear of infection.

Planning for an influenza pandemic is a difficult and daunting task, particularly because so much is currently unknown about a potential pandemic. While some scientists and public health experts believe that the next influenza pandemic could be spawned by the H5N1 strain of avian influenza (also known as "bird flu") that is currently circulating in parts of Asia, the Middle East, Europe, and Africa, it is unknown when an influenza pandemic will occur, where it will begin, or whether a variant of the H5N1 strain or some other strain would be the cause. Moreover, the severity of an influenza pandemic, as well as the groups of people most at risk for infection, cannot be accurately predicted. Additionally, responding to an influenza pandemic would be more challenging than dealing with annual influenza in several ways. Each year, annual influenza causes

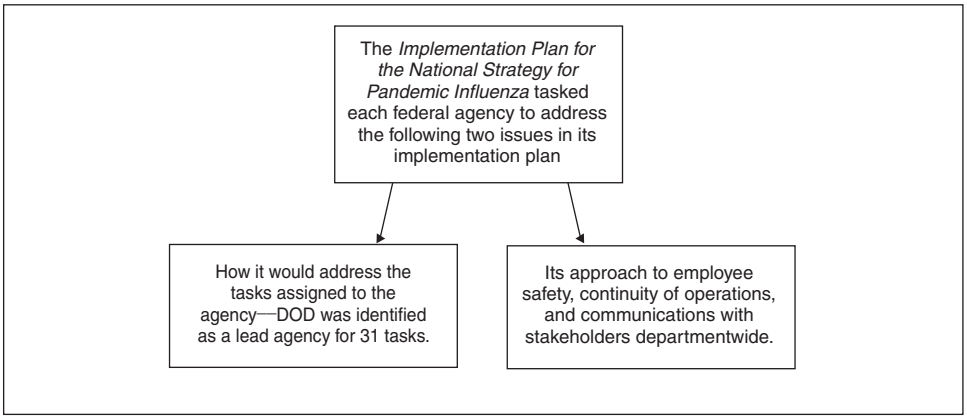
approximately 226,000 hospitalizations and 36,000 deaths in the United States. According to the World Health Organization (WHO), an influenza pandemic would spread throughout the world very quickly, usually in less than a year, and could sicken more than a quarter of the global population, including young, healthy individuals who are not normally as affected by the annual influenza. However, despite all of these uncertainties, sound planning and preparedness could lessen the impact of any influenza pandemic.

To address the potential threat of an influenza pandemic, the Homeland Security Council issued its *National Strategy for Pandemic Influenza* in November 2005.[1] The *Implementation Plan for the National Strategy for Pandemic Influenza*,[2] which was released in May 2006, proposes actions for federal departments—including DOD—in support of the national strategy and describes expectations for nonfederal entities, including state, local, and tribal governments; the private sector; international partners; and individuals. The national implementation plan tasked each federal agency to develop an implementation plan that addresses two issues, as shown in figure 1. First, each federal department was to detail how it would carry out the department's responsibilities in the national implementation plan. For example, of the more than 300 actions in the national implementation plan, DOD was responsible for 114 actions—31 actions as a lead agency and 83 actions as a supporting agency. Second, each federal department was to include the department's approach to employee safety, continuity of operations, and communications with stakeholders in its implementation plan.

[1]Homeland Security Council, *National Strategy for Pandemic Influenza* (Washington, D.C.: Nov. 2005).

[2]Homeland Security Council, *Implementation Plan for the National Strategy for Pandemic Influenza* (Washington, D.C.: May 2006).

Figure 1: Issues to Be Addressed in DOD's Pandemic Influenza Implementation Plan



Source: GAO analysis.

WHO defines the emergence of an influenza pandemic in six phases (see fig. 2). Based on this definition, the world currently is in phase 3, in which there are human infections from a new influenza subtype, but no or very limited human-to-human transmission of the disease. In addition, the Homeland Security Council developed "stages," also shown in figure 2, to provide a framework for a federal government response to an influenza pandemic, which characterize the outbreak in terms of the threat that the pandemic virus poses to the U.S. population. Currently there are new domestic animal outbreaks in an at-risk country, which is stage 0.

Figure 2: Comparison of WHO Pandemic Phases and U.S. Government Stages

WHO phase	Description	Federal government stage	Description
Interpandemic period			
Phase 1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low.	Stage 0	New domestic animal outbreak in an at-risk country.
Phase 2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.		
Pandemic alert period			
Phase 3	Human infections with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.	Stage 0	New domestic animal outbreak in an at-risk country.
		Stage 1	Suspected human outbreak overseas.
Phase 4	Small clusters with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.	Stage 2	Confirmed human outbreak overseas.
Phase 5	Larger clusters but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).		
Pandemic period			
Phase 6	Pandemic: increased and sustained transmission in the general population.	Stage 3	Widespread human outbreaks in multiple locations overseas.
		Stage 4	First human case in North America.
		Stage 5	Spread throughout the United States.
		Stage 6	Recovery and preparation for subsequent waves.

Source: Homeland Security Council.

You asked that we examine DOD's planning and preparedness efforts for an influenza pandemic. Because DOD's implementation plan was still being drafted at the time of our review, we focused our work on DOD's pandemic influenza planning and preparedness efforts to date for its own workforce. DOD is a large, complex organization of departments, agencies, and other components with a workforce spread around the world, which, as of April 30, 2006, included nearly 1.4 million active duty military personnel and nearly 675,000 civilian personnel. This total does not include the numerous reserve and mobilized National Guard

personnel,[3] contractors, dependents, and beneficiaries for which DOD also is responsible.

We are reporting to you at this time to highlight some of our observations to date on DOD's approach to planning and preparing to protect its workforce so DOD can consider and address them as the department continues its ongoing planning efforts. This report is largely focused on DOD's plans to protect its own workforce and addresses (1) actions DOD has taken to date to prepare for an influenza pandemic and (2) management challenges DOD faces going forward as the department continues its planning efforts. We expect to issue another report at a later date on DOD's plans and preparedness for an influenza pandemic, which will include our evaluation of DOD's final implementation plan, the combatant command plans, and selected installation plans.

To address these objectives, we reviewed a draft of the department's implementation plan for pandemic influenza dated March 2006;[4] guidance and planning orders for pandemic influenza issued by the Assistant Secretary of Defense (ASD) for Health Affairs, the Joint Chiefs of Staff, Army Medical Command, and Army Installation Management Agency; and the department's existing directives for force health protection. Also, we reviewed the *Implementation Plan for the National Strategy for Pandemic Influenza*, the Department of Health and Human Services' (HHS) contract with a vaccine manufacturer, and DOD's contracts with two antiviral manufacturers. Additionally, we met in the Washington, D.C., area with cognizant DOD officials from the Office of the Secretary of Defense, including officials from the Offices of the ASD for Homeland Defense, ASD for Health Affairs, and ASD for Special Operations and Low Intensity Conflict; the Joint Chiefs of Staff; and each of the military services. Some officials from these offices were involved in the development of the *National Strategy for Pandemic Influenza* and its

[3]According to DOD officials, DOD would be responsible for National Guard personnel who have been mobilized under Title 10, United States Code. Otherwise, the individual states would be responsible for National Guard personnel serving under Title 32, United States Code, or under State Active Duty.

[4]DOD released its implementation plan to the Homeland Security Council on August 16, 2006, as we were completing our review. However, according to an official in the Office of the ASD for Homeland Defense, DOD cannot release its implementation plan externally until it is coordinated and approved by the Homeland Security Council. We reviewed the final plan and determined that it was not significantly different from the March 2006 draft that we previously reviewed.

implementation plan. We conducted our review from December 2005 through August 2006 in accordance with generally accepted government auditing standards. Further details on our scope and methodology are in appendix I.

Results in Brief

DOD has taken a number of important actions to prepare for an influenza pandemic since September 2004, well before the federal government released the *National Strategy for Pandemic Influenza* in November 2005 and its implementation plan in May 2006, and these efforts continue to evolve. Going forward, DOD faces several management challenges as it continues its ongoing planning efforts. Certain offices within DOD established working groups, such as the Pandemic Influenza Task Force, which coordinated and implemented DOD's pandemic influenza policies and plans. Also, in September 2004 and January 2006, the ASD for Health Affairs issued guidance to the military departments, which, among other things, provided tasks for several DOD organizations to complete for each of WHO's phases of an influenza pandemic. The guidance also established generic priorities for the distribution of vaccines and antivirals. For example, deployed forces engaged in or supporting armed conflict and those personnel necessary to provide essential health care for the force are in the top tier of DOD's prioritization system. Further, at the time of our review, two of the three military departments—the Departments of the Navy and the Air Force—planned to issue servicewide instructions related to pandemic influenza preparedness. The Department of the Army did not plan to issue a similar instruction, but two organizations within the Army issued guidance to installations on developing pandemic influenza plans. DOD also was undertaking influenza pandemic planning efforts at several different levels. Specifically, DOD completed its implementation plan for an influenza pandemic, as required by the *Implementation Plan for the National Strategy for Pandemic Influenza*. The department started drafting its implementation plan in November 2005. The Joint Chiefs of Staff tasked the geographic combatant commands to develop plans, which were to address force health protection and defense support to civil authorities, among other things. According to officials from the Joint Staff, these plans were near completion at the time of our review. Installations were tasked by the ASD for Health Affairs to develop pandemic influenza plans or revise existing plans to address pandemic influenza. Also, DOD established Web sites, including the Pandemic Influenza Watchboard, that provided information for servicemembers and their families about avian

and pandemic influenza. Moreover, DOD procured more than 2 million treatment courses of one antiviral, which were prepositioned in the continental United States, Europe, and the Far East.[5] Additionally, DOD procured over 2 million doses of an existing H5N1 vaccine, based on the strain that circulated in Vietnam in 2004, and planned to purchase in fiscal year 2007 additional doses of the Vietnam strain and a strain that circulated in Indonesia in 2005.[6] Internationally, the department initiated projects to help build host nation capacity to prepare for, mitigate, and respond to a potential influenza pandemic.

At the time of our review, DOD's planning efforts to protect its personnel focused primarily on the military departments, geographic combatant commands, and installations. However, as DOD's focus shifts to the workforce departmentwide, including the civilian workforce and personnel in defense agencies, we identified four key management challenges that DOD faces going forward as it continues its planning and preparedness efforts for pandemic influenza. In our prior work, we identified six desirable characteristics of national strategies, including defining organizational roles, responsibilities, and coordination; identifying goals, subordinate objectives, activities, and performance measures; and addressing resources, investments, and risk management.[7] However, to date, DOD's pandemic influenza planning may not be as effective as it could be because the department had not yet (1) clearly and fully defined and communicated departmentwide roles and responsibilities with clear lines of authority, oversight mechanisms, and goals and performance measures; (2) requested funding that is tied to the departmentwide goals of pandemic influenza to complete the tasks in the national implementation plan and to protect DOD's own workforce; (3) clearly defined the types of personnel—military personnel, civilian personnel, contractors, dependents, and beneficiaries—to be included in DOD's vaccine and antiviral distribution; and (4) implemented a

[5]DOD has purchased an additional 470,000 treatment courses of the antiviral, which are scheduled for delivery by the end of 2006. Additionally, DOD has ordered another 530,000 treatment courses of the antiviral, which will increase its stockpile to 3.4 million courses. DOD has not yet received these two orders.

[6]These vaccines, which have not been approved by the Food and Drug Administration, may not be effective against a future pandemic strain, because the pandemic strain has not yet emerged.

[7]GAO, *Combating Terrorism: Evaluation of Selected Characteristics in National Strategies Related to Terrorism*, GAO-04-408T (Washington, D.C.: Feb. 3, 2004).

departmentwide communications strategy. Specifically, at the time of our review, the following conditions existed.

- First, neither the Secretary of Defense nor the Deputy Secretary of Defense had yet issued guidance clearly and fully defining and communicating lead and supporting roles and responsibilities for DOD's pandemic influenza planning with clear lines of authority; oversight mechanisms, including reporting requirements; and departmentwide goals—such as a description of a desired end-state—and performance measures. Some officials told us that the lines of authority for DOD's pandemic influenza planning efforts were unclear. For example, officials told us that some installation personnel were confused about whether or not they were supposed to be developing plans, since it was unusual for the ASD for Health Affairs to task installations directly with developing plans, and we observed differences in the military departments' approaches to installation planning. Further, DOD instituted reporting requirements for the organizations responsible for implementing the 31 tasks from the national implementation plan; however, there were not similar oversight mechanisms in place for tasks that were not part of the national implementation plan. For example, the January 2006 Health Affairs guidance tasked installations with developing pandemic influenza plans or modifying existing plans to address pandemic influenza and DOD's implementation plan tasked all DOD organizations with developing or modifying continuity of operations plans to address pandemic influenza; however, there were no reporting requirements for these tasks. Finally, Navy officials said that they started developing plans for pandemic influenza, but it was difficult because the Office of the Secretary of Defense had not provided specific goals for what would be expected of the services in the event of an influenza pandemic. Over time, a lack of clear lines of authority, oversight mechanisms, and goals and performance measures could hamper the leadership's abilities to ensure that planning efforts across the department are progressing as intended as DOD continues its pandemic influenza planning and preparedness efforts. Additionally, without clear departmentwide goals, it may be difficult for all DOD components to develop effective plans and guidance.

- Second, at the time of our review, DOD had started identifying funding requirements, but had not yet identified an appropriate funding mechanism or requested funding, tied to its departmentwide goals, for its pandemic influenza planning efforts. An official from the Office of the ASD for Homeland Defense said the department had options for requesting the required funding, including incorporating the request in future budget submissions or submitting a supplemental request to the Congress. Because DOD had not yet requested funding, it is unclear whether DOD

can address the tasks assigned to it in the national implementation plan and pursue its own preparedness efforts for its workforce departmentwide within current resources.

- Third, at the time of our review, DOD had not yet clearly defined or communicated departmentwide which types of personnel—military personnel, civilian personnel, contractors, beneficiaries, and dependents—the department planned to include in its distribution of vaccines and antivirals in the event of an influenza pandemic. The ASD for Health Affairs issued generic priorities for the department's vaccine and antiviral distribution and noted that these priorities would be clarified when more was known about a pandemic strain. An official in the Office of the ASD for Homeland Defense said distinctions in the types of personnel who would be included in the distribution of DOD-purchased vaccines and antivirals would be based on whether the individual was identified as critical to the execution of an essential function, as determined by components as they develop or modify their continuity of operations plans to address pandemic influenza. A factor affecting DOD's ability to clarify priorities for distributing vaccines among its personnel is that the department's priority for receiving additional vaccines, including the vaccine for the pandemic strain, from HHS was not yet defined at the time of our review. As a result the department cannot realistically determine how well it will be able to meet its priorities for vaccinating personnel, and without knowing a rough estimate of how many vaccines will be available, DOD cannot accurately determine the funding required to purchase vaccines or, if needed, additional antivirals.

- Fourth, DOD had communicated information to many of its personnel about what actions they should take in the event of an influenza pandemic; however, these communication efforts were inconsistent departmentwide. Also, although DOD had not yet decided when, whether, or under what conditions it would dispense the vaccines and antivirals it purchased to date, DOD did not yet have a plan to communicate with personnel information on the safety and efficacy of vaccines and antivirals it purchased to date.[8] However, DOD had posted on one of its Web sites the package inserts for the two antivirals that it purchased. While DOD established Web sites with some information on pandemic influenza, we identified unevenness across the department in terms of offices that

[8]Although information about the safety and efficacy of treatments that DOD has purchased to date is available for dissemination, it is not known whether these treatments would be effective against a future strain of the virus because an influenza pandemic involving the H5N1 virus has not occurred.

regularly received actively distributed messages and other information. Without a comprehensive and effective communications strategy departmentwide, DOD personnel's awareness of actions that should be taken in the event of an influenza pandemic could become uneven and lead to confusion and increased numbers of affected personnel.

As DOD continues its planning efforts going forward, and to enhance DOD's ongoing planning efforts, we are making recommendations to the Secretary of Defense. Specifically, we are recommending that the Secretary of Defense (1) instruct the ASD for Homeland Defense, as the individual accountable for DOD's pandemic influenza planning and preparedness efforts, to clearly and fully define and communicate departmentwide the roles and responsibilities of the organizations that will be involved in DOD's efforts with clear lines of authority; the oversight mechanisms, including reporting requirements, for all aspects of DOD's pandemic influenza planning efforts, to include those tasks that are not part of the national implementation plan; and the goals and performance measures of DOD's preparedness efforts; (2) instruct the ASD for Homeland Defense to work with the Under Secretary of Defense (Comptroller) to establish a framework for requesting funding for the department's preparedness efforts that includes the appropriate funding mechanism and controls to ensure needed funding for DOD's pandemic influenza preparedness efforts is tied to the department's goals; (3) instruct the ASD for Health Affairs to clarify DOD's guidance to explicitly define and communicate departmentwide whether and how all types of personnel—military and civilian personnel, contractors, dependents, and beneficiaries—would be included in DOD's distribution of vaccines and antivirals, and (4) instruct the ASD for Public Affairs to implement a comprehensive and effective communications strategy for personnel departmentwide.

In written comments on a draft of this report, DOD generally concurred with four of our recommendations, and did not address one recommendation. DOD's comments and our evaluation of them are in the agency comments section of this report. Based on DOD's comments and additional documentation that DOD provided, we combined two of our recommendations and clarified another. Specifically, DOD provided additional documentation showing that the Deputy Secretary of Defense designated the ASD for Homeland Defense to lead the department's pandemic influenza efforts. Therefore, we deleted part of the original recommendation that the Secretary of Defense or Deputy Secretary of Defense designate an individual to be accountable for DOD's efforts. Additionally, DOD commented that it had started to determine funding

requirements for its pandemic influenza efforts. We recognized this in our draft report and, subsequently, we clarified the recommendation to focus on requesting funding that is tied to the department's goals.

Background

Occasionally, worldwide influenza epidemics—called pandemics—occur that can have successive "waves" of disease that can last for up to 3 years. Three influenza pandemics occurred in the twentieth century. Notable among these was the influenza pandemic of 1918, called the "Spanish flu," which killed at least 20 million people worldwide, including 500,000 in the United States.[9] The past pandemics have spread worldwide within months and a future pandemic is expected to spread even more quickly given modern travel patterns. The major implication of such a rapid spread is that many, if not most, countries will have minimal time to implement preparations and responses once a pandemic virus begins to spread.

The current pandemic influenza threat stems from an unprecedented outbreak of H5N1 avian influenza that began in Hong Kong in 1997 and has spread in bird populations across parts of Asia, the Middle East, Europe, and Africa, with limited infections in humans. The Food and Agriculture Organization of the United Nations reported in August 2006 that more than 220 million poultry were culled as a preventive measure or died from the H5N1 strain. From January 2003 through August 2006, WHO reported more than 240 confirmed human cases and more than 140 confirmed human deaths from the H5N1 virus. Scientists and public health officials agree that the rapid spread of the H5N1 virus in birds and the occurrence of limited infections in humans have increased the risk that this disease may mutate into a form that is easily transmissible among humans, resulting in an influenza pandemic. Some experts at WHO and elsewhere believe that the world is now closer to another influenza pandemic than at any time since the last influenza pandemic in 1968. According to Central Intelligence Agency officials, the likelihood of an influenza pandemic occurring within the next 5 years is greater than any other time in the past 40 years. Furthermore, the agency officials reported that H5N1 is the most likely of all influenza viruses to cause a pandemic. Three conditions must be met before an influenza pandemic begins: (1) a new influenza virus subtype that has not previously circulated in humans must emerge, (2) the virus must be capable of causing disease in humans, and (3) the virus must

[9]The pandemics of 1957 ("Asian flu") and 1968 ("Hong Kong flu") caused dramatically fewer fatalities—70,000 and 34,000, respectively, in the United States—partly because of antibiotic treatment of secondary infections and more aggressive supportive care.

be capable of being passed easily among humans. The H5N1 virus meets the first two of these three conditions.

We previously reported vaccination is considered the first line of defense for preventing or reducing influenza-related illness and death; however, vaccines may be unavailable, in short supply, or ineffective for certain portions of the population during the first wave of a pandemic.[10] Because a pandemic strain has not emerged and an effective vaccine needs to be a close match to the actual pandemic virus, vaccine production for the pandemic strain cannot begin until a pandemic virus emerges.[11] Vaccine production generally takes at least 6 to 8 months after a virus strain has been identified. The length of time required to produce the vaccine, combined with limited U.S. manufacturing capability, could lead to a shortage of vaccines for the first wave of an influenza pandemic. We previously reported that limited studies have shown that when a vaccine produces a good antibody response to a virus, approximately 70 to 90 percent of healthy young adults may be protected from influenza. This protection drops to about 30 to 40 percent for the elderly and those suffering from chronic illness or disease.[12]

While vaccination has been the primary strategy for preventing influenza, antiviral drugs can also contribute to the prevention and treatment of influenza. The Food and Drug Administration has approved four antiviral medications for the prevention and treatment of influenza. If taken within 2 days of symptoms, these drugs can reduce symptoms and make someone with influenza less contagious to others. According to the Centers for Disease Control and Prevention, these antivirals are about 70 to 90 percent effective for preventing illness in healthy adults. However, influenza virus strains can become resistant, so these drugs may not always be effective. While antiviral drugs may help prevent or mitigate influenza-related illness or death until an effective vaccine becomes available, these drugs are expected to be in short supply during an influenza pandemic.

[10]GAO, *Influenza Pandemic: Plan Needed for Federal and State Response*, GAO-01-4 (Washington, D.C.: Oct. 27, 2000).

[11]Although a vaccine for a pandemic strain cannot be developed until the pandemic strain emerges, some vaccine manufacturers have developed vaccines based on the H5N1 strain isolated in Vietnam in 2004.

[12]GAO-01-4.

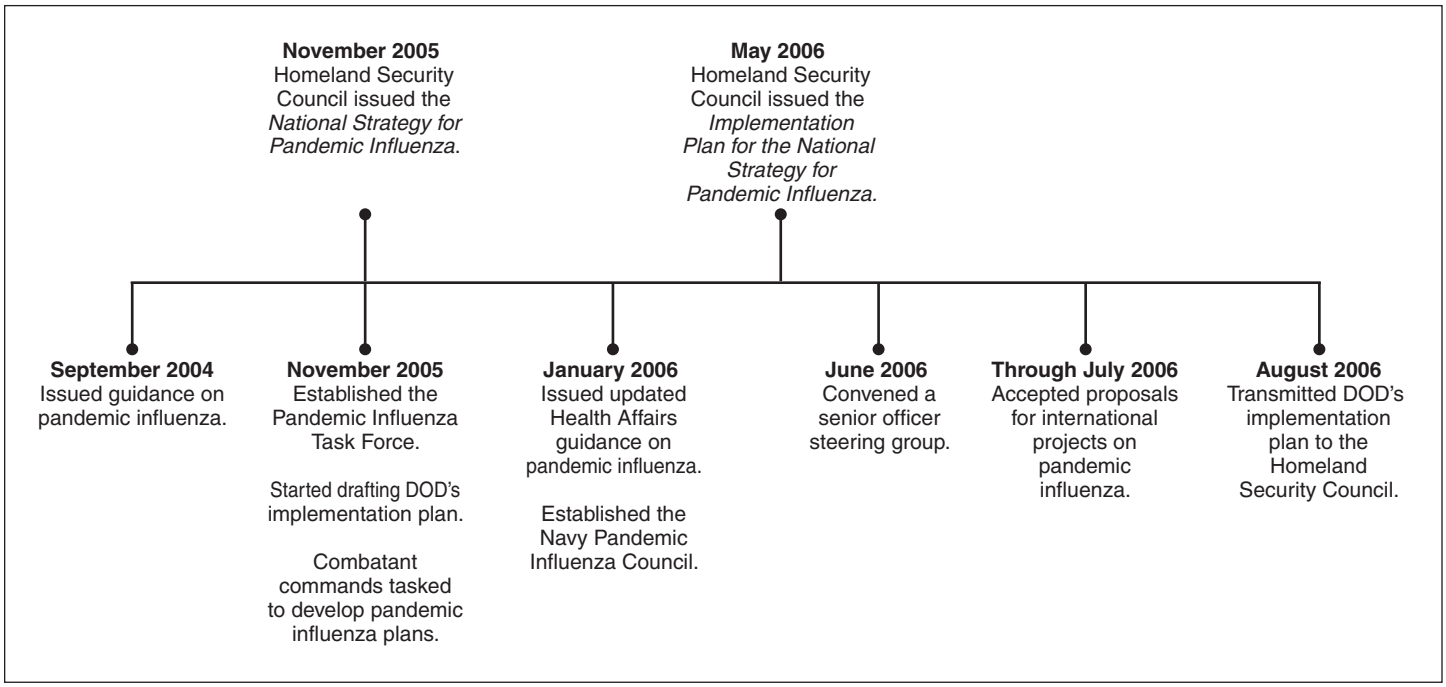
We previously reported that DOD provides health care to over 9 million active duty personnel, retirees, and their dependents through the department's TRICARE program.[13] DOD's military health system has a dual role of medically supporting wartime deployments while caring for active duty members, retirees, and their families in peacetime. TRICARE beneficiaries can obtain health care through DOD's direct care system of military hospitals and clinics, commonly referred to as military treatment facilities, and through DOD's purchased care system of civilian providers. The Army, the Navy, and the Air Force provide most of the system's care through their own medical centers, hospitals, and clinics, while regional networks of civilian providers supply the remaining care.

DOD Had Taken Actions to Prepare for an Influenza Pandemic

DOD began its pandemic influenza planning and preparedness efforts as early as September 2004, well before the White House issued the *National Strategy for Pandemic Influenza* in November 2005 and its implementation plan in May 2006, and has taken a number of important actions since then to ensure that the department is ready in the event of an influenza pandemic. To date, DOD's actions to prepare for an influenza pandemic include establishing working groups, issuing guidance, developing plans, establishing Web sites, stockpiling vaccines and antivirals, and initiating projects to assist other nations' preparedness efforts. Figure 3 summarizes DOD's efforts to date related to pandemic influenza planning and preparedness.

[13]GAO, *Defense Health Care: Implementation Issues for New TRICARE Contracts and Regional Structure*, GAO-05-773 (Washington, D.C.: July 27, 2005).

Figure 3: Timeline of Actions DOD Has Taken to Prepare for an Influenza Pandemic Compared to Key Homeland Security Council Plans



Source: GAO analysis.

Certain DOD Offices Established Pandemic Influenza Working Groups

The ASD for Homeland Defense and ASD for Health Affairs, as well as the Chief of Naval Operations and Commandant of the Marine Corps, established pandemic influenza working groups. The ASD for Homeland Defense and ASD for Health Affairs established the Pandemic Influenza Task Force in November 2005, which was led by the ASD for Homeland Defense and met bimonthly. As the lead entity for pandemic influenza policy within the department, the Pandemic Influenza Task Force coordinated and implemented policies and plans that would (1) prepare for, prevent, and contain the effects of an influenza pandemic in military forces, (2) ensure DOD protects U.S. interests at home and abroad, and (3) render appropriate assistance to civilian authorities in the United States. The members of the Pandemic Influenza Task Force included the following:

- Office of the ASD for Homeland Defense
- Office of the ASD for Health Affairs
- Office of the ASD for Special Operations and Low Intensity Conflict

- Joint Chiefs of Staff
- Office of the Under Secretary of Defense for Intelligence
- Office of the Under Secretary of Defense for Acquisition, Technology and Logistics
- Office of the Under Secretary of Defense (Comptroller)
- Office of the Deputy Under Secretary of Defense for Military Personnel Policy
- Office of the Deputy Under Secretary of Defense for Civilian Personnel Policy
- Office of the Assistant Secretary of Defense for Public Affairs

The Deputy Secretary of Defense verbally designated the ASD for Homeland Defense as the lead for DOD's pandemic influenza planning efforts and DOD identified four functional leads to oversee the 31 tasks assigned to DOD as a lead agency in the national implementation plan. In addition to its overall lead role, the Office of the ASD for Homeland Defense was the functional lead for those tasks in the national implementation plan related to providing defense support to civil authorities. The Office of the ASD for Health Affairs was the functional lead for force health protection tasks in the national implementation plan. The Office of the ASD for Special Operations and Low Intensity Conflict was the functional lead for tasks in the national implementation plan related to stability operations and international support. Finally, the Joint Chiefs of Staff were overseeing the combatant commands' planning and implementation efforts. According to officials in the Offices of the ASD for Homeland Defense and ASD for Health Affairs, DOD intentionally organized its functional lead offices to mirror the federal government's organization for pandemic influenza to improve coordination between DOD and other federal government agencies. For example, in general, the Office of the ASD for Health Affairs coordinated with HHS on medical issues and the Office of the ASD for Special Operations and Low Intensity Conflict coordinated with the Department of State on international issues.

In addition to the Pandemic Influenza Task Force, in June 2006 the ASD for Homeland Defense convened a senior officer steering group comprised of senior military and civilian officials. The steering group was to meet quarterly and submit a report to the Homeland Security Council detailing DOD's progress on the actions assigned to the department in the national implementation plan. The Chief of Naval Operations also developed a working group, called the Navy Pandemic Influenza Council, in January 2006, which met quarterly to examine issues related to an influenza pandemic. The Commandant of the Marine Corps originally established his

own working group that merged with the Navy Pandemic Influenza Council to create one working group for the Department of the Navy.

Some Offices and Components Issued Guidance on and Developed Plans for Pandemic Influenza

In September 2004, the ASD for Health Affairs issued guidance to the military departments related to preparing for an influenza pandemic,[14] with the most recent guidance issued in January 2006.[15] This guidance is in addition to the department's existing policies on force health protection. The January 2006 guidance, which supersedes the September 2004 guidance, was developed by preventive medicine experts in the Office of the ASD for Health Affairs to provide comprehensive policy guidance for writing the combatant command and installation pandemic influenza plans. The guidance also provided information on assumptions to use when developing plans, such as the percentage of people that could be affected by a pandemic and that antiviral supplies will likely be insufficient to meet demands. The guidance listed tasks, such as developing and exercising plans, for the Office of the Secretary of Defense, Joint Chiefs of Staff, military departments, installation commanders, military treatment facility commanders, and Public Health Emergency Officers to complete for each of WHO's phases of an influenza pandemic. Additionally, the guidance tasked installations with developing community containment plans to contain infections at their source or slow the spread of the disease. The guidance also provided information on home care infection control that recommended infection control measures, such as hand washing. Finally, the guidance included a generic prioritization system for DOD's limited supplies of vaccines and antivirals and noted that these priorities would be clarified in the event of an influenza pandemic. Table 1 lists DOD's current generic priorities for vaccines and antivirals.

[14]Department of Defense, Office of the Assistant Secretary of Defense for Health Affairs, *Department of Defense Guidance for Preparation and Response to an Influenza Pandemic Caused By the Bird Flu (Avian Influenza)* (Washington, D.C.: Sept. 21, 2004).

[15]Department of Defense, Office of the Assistant Secretary of Defense for Health Affairs, *Department of Defense Influenza Pandemic Preparation and Response Health Policy Guidance* (Washington, D.C.: Jan. 25, 2006).

Table 1: DOD's Current Priorities for Vaccine and Antiviral Distribution

Tier	Personnel included in tier
Tier 1	Those personnel necessary to respond to global military contingencies and provide essential health care for the force structure, including (1) those required to maintain national strategic and critical operational capabilities, as defined by the Joint Chiefs of Staff, (2) deployed forces engaged in or supporting armed conflict, and (3) those personnel necessary to maintain a functioning health care system.
Tier 2	Nondeployed forces that are on alert or designated to conduct critical contingency operations as defined by the Joint Chiefs of Staff.
Tier 3	Personnel necessary to maintain critical mission-essential capabilities at each organizational level.
Tier 4	All other Active Component or mobilized reserve component personnel.
Tier 5	All other beneficiaries not included previously according to the Centers for Disease Control and Prevention priority tiers.

Source: DOD.

Note: DOD's antiviral priorities are the same as its vaccine priorities except for individuals who are hospitalized due to a pandemic influenza are in the top tier for antivirals.

The Department of the Navy and the Department of the Air Force planned to issue servicewide instructions related to pandemic influenza preparedness. Navy and Marine Corps officials said that the Department of the Navy was drafting an instruction that would cover all biological hazards and would include information on an influenza pandemic. According to a Navy official, the instruction was expected to be released in the fall of 2006. Similarly, Air Force officials said that the Department of the Air Force was developing a servicewide instruction on disease containment that would include guidance on actions that personnel should take in the event of an influenza pandemic. The instruction was expected to be released by the end of the summer of 2006. At the time of our review, the Department of the Army had not drafted or released a servicewide instruction related to pandemic influenza for the department; however, its Medical Command and Installation Management Agency had released guidance to Army military treatment facilities and installations. In November 2004, the Army Medical Command tasked its military treatment facilities, including hospitals and clinics, on Army installations with updating existing plans for Severe Acute Respiratory Syndrome (SARS).[16] The tasking included guidance to address issues related to influenza

[16]United States Army Medical Command, *Avian Influenza Planning Guidance and Tasking* (Fort Sam Houston, Tx.: 2004).

pandemics in the installations' revised plans, such as identifying facilities other than normal hospital or clinic locations at which mass vaccinations could be administered. In May 2006, the Army Installation Management Agency tasked Army installations to develop or update Installation Emergency Response Plans by the end of June 2006 to address a response to an influenza pandemic.[17] The tasking included specific guidance on what should be included in the installation plans, such as incorporating pandemic-specific information into continuity of operations plans to account for a potential reduction of staff.

The Office of the ASD for Homeland Defense, with support from the Offices of the ASD for Health Affairs and ASD for Special Operations and Low Intensity Conflict and the Joint Chiefs of Staff, completed DOD's implementation plan for an influenza pandemic, as required by the national implementation plan. DOD started drafting its implementation plan in November 2005 and had a draft implementation plan in December 2005. DOD submitted its implementation plan to the Homeland Security Council in August 2006; however, according to an official in the Office of the ASD for Homeland Defense, DOD cannot release its implementation plan externally until after it is coordinated and approved by the Homeland Security Council. The official said that DOD's implementation plan provided some guidance on protecting DOD's military and civilian personnel, contractors, dependents, and beneficiaries in the event of an influenza pandemic; however, the plan focused on the actions assigned to DOD in the national implementation plan because force health protection measures already exist. Appendix II summarizes the guidance and existing force health protection policies related to DOD's efforts to protect its workforce in the event of an influenza pandemic. The officials indicated that DOD expected to update its implementation plan as needed. DOD's implementation plan also tasked all offices, components, and agencies departmentwide to begin developing or modifying existing continuity of operations plans in preparation for an influenza pandemic.

Additionally, DOD's geographic combatant commands—U.S. Central Command, U.S. European Command, U.S. Northern Command, U.S. Pacific Command, and U.S. Southern Command—and installations were tasked with developing pandemic influenza plans. In November 2005, the Joint Chiefs of Staff requested that the geographic combatant commands

[17]United States Army Installation Management Agency, *Influenza Pandemic Preparation and Response* (Arlington, Va.: 2006).

develop plans for DOD's response to an influenza pandemic that addressed force health protection, defense support to civil authorities, and support to humanitarian assistance and disaster relief operations. According to an official in the Office of the ASD for Homeland Defense, the combatant command plans would further define how DOD would implement its assigned actions from the national implementation plan. According to officials with the Joint Staff, the combatant command plans were almost complete at the time of our review. Furthermore, the January 2006 Health Affairs guidance tasked installation commanders with developing pandemic influenza plans for their installations. According to officials in the offices of the ASD for Homeland Defense and ASD for Health Affairs, the military services were responsible for overseeing the installations' planning efforts.

DOD Established Web Sites for Pandemic and Avian Influenza Information

The Office of the Deputy ASD for Force Health Protection and Readiness developed a Web site, the Pandemic Influenza Watchboard, which provided information to servicemembers and their families on pandemic and avian influenza.[18] The Web site provided answers to frequently asked questions about avian influenza; links to two of DOD's policies for pandemic influenza; data on confirmed human and animal H5N1 influenza cases; links to some WHO information on response to and containment of an influenza pandemic; links to federal government documents, such as the national implementation plan; and other federal government Web sites, such as the federal government's pandemic influenza Web site (www.pandemicflu.gov). Additionally, there was a link from the Watchboard to DOD's Deployment Health Web site, which is described below. According to an official from the Office of the ASD for Homeland Defense, by September 2006, all servicemembers, their families, and military health system providers will be directed to use the Watchboard as the primary DOD platform for messages and information on pandemic influenza, with appropriate hyperlinks to other non-DOD Web sites.

Additionally, the Deployment Health Support Directorate, within the Office of the ASD for Health Affairs, established in November 2005 an informational Web site on avian and pandemic influenza for servicemembers and their families.[19] It included strategies for personnel to protect themselves, such as avoiding poultry farms in countries that have

[18]See https://fhp.osd.mil/aiWatchboard/index.html.

[19]See http://deploymentlink.osd.mil/medical/medical_issues/immun/avian_flu.shtml.

had avian influenza outbreaks and washing hands with soap and water or using alcohol-based hand sanitizer. In addition, it provided links to additional resources, such as the federal government's pandemic influenza Web site. At the time of our review, there was a link from the Deployment Health Web site to the DOD Military Vaccine Agency's pandemic influenza Web site, but not to DOD's other pandemic influenza Web sites.

As part of its Disaster Preparedness and Response Information Web site, DOD's Civilian Personnel Management Service developed a Web site with some information on pandemic influenza.[20] The Web site provided information for employees, supervisors, and managers, such as a list of phone numbers that civilian employees could call for assistance and information; statutory authorities for evacuations; and general information on pay, leave, telework, and benefits in a natural disaster or declared emergency. The Web site also provided links to other resources, such as DOD's Pandemic Influenza Watchboard, additional information on avian and pandemic influenza on WHO's and the Centers for Disease Control and Prevention's Web sites, and the Office of Personnel Management's guidance on human capital planning for an influenza pandemic.[21] The Civilian Personnel Management Service Web site stated that additional information will be posted as it becomes available.

Additionally, DOD's Military Vaccination Agency Web site provided information on pandemic influenza.[22] The Web site provided links to news articles on avian influenza; some of DOD's pandemic influenza policies and planning documents; two service messages related to pandemic influenza; questions and answers on avian and pandemic influenza; and some links to related information, including links to the Centers for Disease Control and Prevention, WHO, and some DOD components' Web sites.

DOD Procured Antiviral Medications and Vaccines

The Office of the ASD for Health Affairs procured antivirals and an existing H5N1 vaccine. DOD purchased more than 2 million treatment courses of one antiviral and has prepositioned it at three storage sites

[20]See http://www.cpms.osd.mil/disasters/pan.htm.

[21]Office of Personnel Management, *Agency Guidance – Human Capital Management Policy for a Pandemic Influenza* (Washington, D.C.: Aug. 2006).

[22]See http://www.vaccines.mil/.

around the world—40 percent of the stockpile is in the continental United States, 30 percent is in Europe, and 30 percent is in the Far East.[23] According to officials in the Office of the ASD for Health Affairs, DOD purchased an additional 470,000 treatment courses of the antiviral, which were expected to be delivered by December 2006, and 241,000 treatment courses of another antiviral, which were expected to be delivered by March 2007. The additional treatment courses of the first antiviral would be located at DOD's military treatment facilities on installations, and the second antiviral would be distributed among the three antiviral storage sites. Additionally, DOD purchased an additional 530,000 treatment courses of the first antiviral, which will increase DOD's stockpile of antivirals to 3.4 million treatment courses once all of the antivirals are delivered. The Office of the ASD for Health Affairs purchased more than 2 million doses of an existing H5N1 vaccine based on the strain that circulated in Vietnam in 2004 and, in fiscal year 2007, planned to purchase an additional 3.6 million doses of the Vietnam strain and 2.5 million doses of a strain that circulated in Indonesia in 2005. Officials said that even though a vaccine based on existing strains of the H5N1 virus will not necessarily protect its recipients from a further mutated pandemic strain, one option is to vaccinate personnel with an existing H5N1 vaccine before an influenza pandemic starts, which may provide personnel some immunity from the disease.[24] Officials said that no decision had been made on whether to vaccinate personnel before a pandemic, but an official in the Office of the ASD for Health Affairs said that the current plan was not to administer the vaccine until it had been approved or licensed by the Food and Drug Administration. According to officials in the Office of the ASD for Health Affairs, DOD had a verbal agreement with HHS to purchase additional vaccines for future strains of the virus, including a pandemic strain.

[23]A treatment course consists of two capsules per day for 5 days if used for treatment, and one capsule per day for at least 10 days for prevention.

[24]There is currently some scientific debate regarding the appropriateness of using a pre-pandemic vaccine. In addition to concerns about the vaccine's effectiveness against a pandemic strain, some health experts have expressed concern that vaccinating individuals with a pre-pandemic vaccine could reduce the effectiveness of vaccines subsequently produced from the pandemic strain for these individuals.

DOD Initiated Projects to Assist Other Nations' Preparedness

The ASD for Special Operations and Low Intensity Conflict and the Defense Security Cooperation Agency issued guidance and accepted proposals from the combatant commands for projects to build host nation military capacity for preparing for, mitigating, and responding to a potential influenza pandemic. The combatant commands could request funding for projects in four categories: (1) influenza planning and preparedness assessments, (2) influenza preparedness training programs, (3) response training and exercise programs, and (4) increasing military infrastructure capacity. Through the end of July 2006, the Office of the ASD for Special Operations and Low Intensity Conflict and the Defense Security Cooperation Agency had approved nearly 50 proposals from the U.S. European Command, U.S. Pacific Command, and U.S. Southern Command for projects covering 30 countries. Individual project costs ranged from about $17,000 to $150,000 and totaled over $3 million for fiscal years 2006 and 2007. For example, the U.S. Pacific Command requested a total of about $72,000 to provide the Chinese and Indonesian militaries with subject matter experts to share experiences in operational planning, health surveillance, laboratory testing, and other preparedness and control activities, including tools and mechanisms for detecting and tracking cases. Additionally, the U.S. European Command requested $100,000 to assess the Zambian Defense Force's current capabilities related to avian influenza and to develop and implement the capabilities necessary to respond to an avian influenza outbreak within Zambia.

Going Forward, DOD Faces Four Key Management Challenges in Its Pandemic Influenza Planning and Preparedness Efforts for Its Workforce Departmentwide

DOD began its planning efforts in September 2004 and, to date, efforts related to protecting DOD's personnel have focused primarily on the personnel in the military departments, geographic combatant commands, and installations. However, as the focus shifts to the workforce departmentwide, including its civilian workforce and personnel at defense agencies, DOD faces four key management challenges going forward as the department continues its planning and preparedness efforts related to an influenza pandemic. First, neither the Secretary of Defense nor the Deputy Secretary of Defense had yet issued departmentwide guidance that fully defined an accountability framework for DOD's pandemic influenza planning efforts, including defining lead and supporting roles and responsibilities with clear lines of authority, formal oversight mechanisms, and goals and performance measures. Establishing an accountability framework could help the Secretary of Defense or Deputy Secretary of Defense monitor the department's preparedness for an influenza pandemic. Second, at the time of our review, DOD had not yet requested funding for its preparedness efforts that was tied to its departmentwide goals. Additional funding was necessary to ensure that DOD could

complete the actions assigned to the department in the national implementation plan. Third, DOD had not yet fully defined and communicated departmentwide which types of its personnel the department expected to include in its distribution of vaccines and antivirals in the event of an influenza pandemic. Clarifying this information before a pandemic may lessen the confusion over who is to receive DOD-purchased vaccines and antivirals during an influenza pandemic. Fourth, while certain parts of DOD received actively distributed guidance and other information, DOD had not yet fully communicated key information to personnel departmentwide on actions they should take in the event of an influenza pandemic, as well as information on the safety and efficacy of vaccines and antivirals. Ensuring that personnel departmentwide receive information in advance of an influenza pandemic may lessen confusion about what actions personnel should take to protect themselves in the event of an influenza pandemic.

DOD Had Not Yet Fully Defined Departmentwide Lead and Supporting Roles and Responsibilities, Formal Oversight Mechanisms, and Goals and Performance Measures for Pandemic Influenza

At the time of our review, neither the Secretary of Defense nor the Deputy Secretary of Defense had yet issued guidance that fully and clearly defined the lead and supporting roles and responsibilities and clear lines of authority for the organizations involved in departmentwide pandemic influenza planning efforts, formal oversight mechanisms, and goals and performance measures for what the leadership expects from DOD's preparedness efforts. In our prior work, we have identified six desirable characteristics of strategies.[25] One of these characteristics is that the strategy should address who is implementing the strategy, what the roles of organizations will be compared to others, and mechanisms to coordinate efforts. Similarly, in our work on the federal government's response to Hurricane Katrina, we found that, in the event of a catastrophic disaster, the leadership roles, responsibilities, and lines of authority for response at all levels must be clearly defined and effectively communicated to facilitate rapid and effective decision making, especially in preparing for and in the early hours and days after the disaster.[26]

Neither the Secretary of Defense nor the Deputy Secretary of Defense had issued guidance on the specific roles and responsibilities of the lead and supporting organizations with clear lines of authority for DOD's pandemic

[25]GAO-04-408T.

[26]GAO, *Hurricane Katrina: GAO's Preliminary Observations Regarding Preparedness, Response, and Recovery*, GAO-06-442T (Washington, D.C.: Mar. 8, 2006).

influenza planning efforts. Officials from the Offices of the ASD for Homeland Defense and ASD for Health Affairs said that the Deputy Secretary of Defense verbally designated the ASD for Homeland Defense to lead the department's pandemic influenza planning and preparedness efforts with the ASD for Health Affairs providing support on medical force health protection issues. However, at the time of our review, we were not able to corroborate this information because a memorandum documenting this verbal agreement had not been distributed throughout the department. In commenting on a draft of this report, DOD provided a memorandum dated July 25, 2006, from the Principal Deputy to the ASD for Homeland Defense that documented this information.

An official from the Office of the ASD for Homeland Defense stated that, in preparing for an influenza pandemic, organizations would handle issues for which they are responsible in their existing directives. However, we observed that the ASD for Homeland Defense had not issued a directive outlining its office's general roles and responsibilities. While existing policies and directives outline the general roles and responsibilities of most DOD organizations, we found that some organizations within the department were unclear about other organizations' specific roles and responsibilities related to preparing for an influenza pandemic. For example, an official from one combatant command said that clarification was needed on the roles and responsibilities of the service headquarters compared to the combatant commands. Moreover, an official in one of the services said that more guidance was needed on the services' responsibilities in planning for and responding to an influenza pandemic. Also, a defense agency official was unsure about the agency's role in preparing for an influenza pandemic.

In addition to not yet clearly defining the roles and responsibilities for organizations involved in DOD's pandemic influenza planning efforts, lines of authority were not yet clearly defined. An official from the Office of the ASD for Homeland Defense stated that organizations would maintain their current lines of authority for DOD's pandemic influenza planning efforts; however, as noted earlier, the ASD for Homeland Defense currently did not have a directive, which should outline the office's relationship with others. Additionally, officials from different DOD organizations told us that the current lines of authority for DOD's pandemic influenza planning efforts were unclear. For example, officials from two of the military services said that it was unusual for the ASD for Health Affairs to task installations directly with developing plans; rather, the tasking usually comes through the military services. One official said that installation personnel in that service were confused about whether or not they were

supposed to be developing plans. We further observed differences in the military departments' approach to installation planning. Specifically, the Army Medical Command and Installation Management Agency issued guidance directing Army installations to plan. On the other hand, an Air Force official said that the Air Force had not yet tasked its installations servicewide to develop plans for an influenza pandemic, but planned to task installations to develop disease containment plans, which would include information about pandemic influenza, after the Air Force's related instruction is published. Defining the roles and responsibilities of the lead and supporting offices and organizations participating in DOD's pandemic influenza planning efforts departmentwide with clear lines of authority could better ensure that there are not gaps in DOD's policies and plans for pandemic influenza or uncertainty about each organization's authorities and responsibilities.

While the ASD for Homeland Defense established reporting requirements for the 31 tasks assigned to DOD in the national implementation plan, there was no oversight mechanism for those tasks that were not part of the national implementation plan. DOD's July 25, 2006, memorandum stated that organizations identified as the lead implementers for the 31 tasks assigned to DOD as a lead agency in the national implementation plan should report their progress on these tasks each month. However, this reporting requirement does not apply to other efforts that DOD has undertaken, including the tasking in DOD's implementation plan that all DOD organizations develop or revise their continuity of operations plans in preparation for an influenza pandemic.

Because of the lack of reporting mechanisms for tasks that are not part of the national implementation plan, it is unclear whether anyone in the department had an accurate picture of the status of DOD's preparedness. At the time of our review, we identified some gaps in DOD's planning efforts. For example, at that time, only the geographic combatant commands and installations were required to develop plans for pandemic influenza. However, numerous DOD personnel would not have been covered by these plans, such as personnel located in the Pentagon or in DOD-leased space, functional combatant commands, and defense agencies. An official in the Office of the ASD for Homeland Defense acknowledged the gap in planning for personnel in the Pentagon and DOD-leased space. DOD has since addressed this gap by tasking all DOD organizations to develop or revise their respective continuity of operations plans in preparation for an influenza pandemic in DOD's implementation plan. Additionally, we identified some overlaps in DOD's planning efforts. For example, the January 2006 Health Affairs guidance tasked the military

departments to develop plans for providing support to civil authorities and humanitarian assistance, but the combatant commands were already tasked to address these issues by the Joint Chiefs of Staff. Without oversight mechanisms that address the full range of DOD's preparedness efforts, to include those tasks that are not part of the 31 tasks for which DOD is named as a lead in the national implementation plan, it is unclear whether anyone in the department has an accurate picture of the status of DOD's preparedness. As DOD continues its planning and preparedness efforts for an influenza pandemic, this lack of a formal oversight mechanism for those tasks that are not part of the national implementation plan may hamper the leadership's abilities to ensure that departmentwide planning efforts are progressing as intended.

Moreover, DOD had not yet established goals or performance measures for its pandemic influenza preparedness efforts. Another desirable characteristic of strategies is that they should establish goals for what the strategy strives to achieve—such as a description of a desired end-state—and performance measures to gauge progress toward results. Identifying goals and performance measures aids implementing parties in achieving results and enables more effective oversight and accountability. Additionally, the goals would provide a baseline, or minimum expectation, of what the Secretary of Defense or the Deputy Secretary of Defense expects from DOD organizations as they move forward in their planning efforts.

One example of a potential goal, with some modification, for DOD's pandemic influenza preparedness efforts comes from the department's January 2006 Health Affairs guidance. The purpose of the January 2006 guidance was to maintain operational effectiveness by minimizing death, disease, and lost duty time due to an influenza pandemic. While the purpose of the January 2006 Health Affairs guidance may serve as the underpinning of a goal for DOD's overall preparedness efforts, we previously reported that goals should have quantifiable, numerical targets or other measurable values, which facilitate assessments of whether overall goals were achieved. Other examples of goals for DOD's efforts could be ensuring 100 percent of DOD's organizations develop plans or update existing plans to address pandemic influenza and communicate this information to personnel, or identifying personnel supporting critical operations and have a backup plan for their absence. After DOD has established overall goals for its preparedness efforts, performance measures can assist DOD in assessing its progress toward its goals.

Navy officials said that they had started developing plans for pandemic influenza, but it was difficult because the Office of the Secretary of Defense had not provided specific information to the military services on what is expected of the military services in the event of an influenza pandemic. The Navy officials explained that if the Office of the Secretary of Defense set goals, such as required readiness levels, then Navy officials could develop detailed plans for an influenza pandemic. Without overall goals for DOD's preparedness efforts and performance measures, it could be difficult for combatant commands, the military services, and installations to develop plans for an influenza pandemic and for the Secretary of Defense to gauge the department's progress toward preparedness as DOD continues its ongoing planning efforts.

Issuing departmentwide guidance detailing roles and responsibilities, reporting mechanisms, and goals is not without precedent. For example, in November 2002, the Secretary of Defense issued a memorandum initiating DOD's Base Realignment and Closure process. The memorandum specifically:

- Identified the Deputy Secretary of Defense as the individual responsible for overseeing the departmentwide process and the Under Secretary of Defense for Acquisition, Technology and Logistics as the individual responsible for issuing operating policies and detailed direction necessary to conduct the process.
- Established two senior groups to oversee the departmentwide efforts and identified the members of these groups.
- Described the roles of the organizations involved in the effort.
- Established the reporting mechanisms for the process and future memoranda more clearly defined the specific reporting time frames.
- Established goals for the process.

DOD Had Not Yet Identified an Appropriate Funding Mechanism or Requested Funding Tied to Departmentwide Goals

At the time of our review, DOD had started identifying funding requirements, but had not yet identified an appropriate funding mechanism or requested funding, tied to its departmentwide goals, for its pandemic influenza planning efforts. Another desirable characteristic of a strategy is that the strategy should address resources, investments, and risk management—what the strategy will cost; where resources will be targeted to achieve the end-state; and how the strategy balances benefits, risks, and costs. Using a risk management approach helps implementing parties allocate resources according to priorities; track costs and performance; and shift resources, as appropriate. This information also

would assist DOD in developing a more effective strategy to achieve its desired end-state.

DOD started collecting information on funding requirements for its pandemic influenza preparedness efforts. In June 2006, the Joint Chiefs of Staff requested that the combatant commands and military services identify funding necessary to meet the requirements in the national implementation plan and the combatant command plans, which could include funding for force health protection, training and exercises, laboratory surveillance, and other activities. According to most officials we met with in the Office of the Secretary of Defense and the military services, funding was a challenge regarding the department's influenza pandemic preparedness efforts. For example, according to an official in the Office of the ASD for Homeland Defense, the national implementation plan tasked DOD with increased surveillance activities, which will require substantial additional funding to complete, but DOD had not yet included this requirement in a budget request to the Congress.

While DOD had started identifying its funding requirements, at the time of our review, DOD had not yet identified a mechanism to request funding to complete the tasks assigned to DOD in the national implementation plan and protect its own personnel. An official from the Office of the ASD for Homeland Defense said the department had options for requesting the required funding, including incorporating the request in future budget submissions or submitting a supplemental request to the Congress. An official from the Office of the ASD for Health Affairs noted that it was difficult for the department to accurately identify the department's funding requirements before DOD completed its implementation plan. Additionally, according to the official, the department was not aware of the funding requirements in support of the national implementation plan before the department's previous budget submissions to the Congress. However, there were more than 50 tasks in the national implementation plan for which DOD was either a lead or support agency that were to be completed before the end of 2006. Because DOD had not yet requested funding, it is unclear whether DOD can address the tasks assigned to it in the national implementation plan and pursue its own preparedness efforts for its workforce departmentwide within current resources.

DOD Had Not Yet Defined the Types of Personnel Included in Its Vaccine and Antiviral Distribution Plans or Communicated That Information Departmentwide

At the time of our review, DOD had not yet clearly defined or communicated departmentwide which types of DOD personnel—military and civilian personnel, contractors, dependents, and beneficiaries—the department planned to include in its distribution of vaccines and antivirals in the event of an influenza pandemic. We have reported on the importance of DOD managing its workforce from a total force perspective, which includes active duty and reserve military personnel, civilian personnel, and contractor personnel.[27] In addition to providing medical care to active duty and reserve personnel, DOD is required by law to provide medical care to dependents of military personnel and certain beneficiaries.[28] At the same time, planning to protect all of DOD's active duty and reserve personnel, civilian personnel, and contractor personnel—as well as beneficiaries and dependents—with vaccines and antivirals in the event of an influenza pandemic would require extensive resources and likely is unrealistic. It will take 6 to 8 months after the pandemic strain is identified to produce a vaccine and there are only two manufacturers producing vaccines domestically and a limited number of antiviral manufacturers. Moreover, there will be widespread demand for vaccines and antiviral medications.

DOD's guidance was vague as to the types of personnel to be included in the department's distribution of vaccines and antivirals. The ASD for Health Affairs developed generic priorities for distributing vaccines to its personnel, as detailed in table 1, which would be clarified in the event of an influenza pandemic. While DOD's vaccine and antiviral priorities specifically mentioned DOD beneficiaries, the guidance did not clearly state which types of DOD's employees—military personnel, civilian personnel, and contractors—would receive vaccines and antivirals from the DOD stockpile. An official in the Office of the ASD for Homeland Defense said that the primary purpose of DOD's vaccine and antiviral stockpiles was to preserve the department's ability to meet the mission requirements of national defense and domestic support. The official stated that distinctions regarding types of employees—military personnel, civilian personnel, and contractors—were not made because whether an individual would be included in the distribution of vaccines and antivirals was based on whether the individual was identified as critical to the

[27]GAO, *DOD Personnel: DOD Actions Needed to Strengthen Civilian Human Capital Strategic Planning and Integration with Military Personnel and Sourcing Decisions*, GAO-03-475 (Washington, D.C: Mar. 28, 2003).

[28]10 U.S.C. 1071 et. seq.

execution of an essential mission, which would be determined by components as they developed their continuity of operations plans. However, this information was not stated in the January 2006 Health Affairs guidance or DOD's implementation plan. Additionally, DOD's January 2006 Health Policy guidance stated that military treatment facilities would obtain vaccines for civilian beneficiaries through their usual logistics channels or local or state health departments. Similarly, the military treatment facilities would obtain antivirals for civilian beneficiaries through their usual logistics channels or through the local health department to access the Strategic National Stockpile. An official in the Office of the ASD for Homeland Defense stated that specific use of the antiviral supply through the Strategic National Stockpile would be described in an updated antiviral release policy that was expected to be issued soon. The lack of clarity of which types of personnel DOD plans to include in its distribution of vaccines and antivirals could lead to confusion among personnel as to whether they will receive vaccines and antivirals from the department or should try to obtain them from other sources.

A major factor affecting DOD's ability to clarify priorities for the department's current and future vaccine supplies is that DOD's priority for receiving future influenza vaccines from HHS had not yet been defined. The Office of the ASD for Health Affairs had a verbal agreement with HHS to purchase vaccines for future strains of influenza, including the pandemic strain. In the event of an influenza pandemic, there will likely be high, widespread demand for a vaccine across the United States and vaccine production capabilities will be limited, particularly compared to the demand. At the time of our review, DOD's priority compared to others for receiving vaccines for future strains—including the pandemic strain—and how many vaccines it will receive was not defined and DOD did not have a written agreement with HHS addressing these issues. An official from the Office of the ASD for Health Affairs said that the prioritization of vaccines for future influenza strains, including the pandemic strain, from the HHS contract with the vaccine manufacturer was being reevaluated by the Homeland Security Council; however, the official said that previous discussions had placed DOD in the first tier of agencies to receive the vaccine for a pandemic strain when it becomes available. The exact number of vaccine doses for future influenza strains that will be available is unknown, in part because of the unknown production output for a pandemic-specific vaccine. Under these circumstances, the department cannot realistically determine how well it will be able to meet its priorities for vaccinating personnel. Additionally, without knowing a rough estimate of how much vaccine will be available, DOD cannot accurately determine

the funding required to purchase vaccines or, if needed, additional antivirals.

Although a Communications Strategy Was under Development, DOD's Communication Efforts to Date Were Inconsistent Departmentwide

At the time of our review, DOD was developing a communications strategy for an influenza pandemic, and while not fully developed, it continues to evolve. We reported that communication on threats should be timely and include specific information on the nature, location, and timing of the threat as well as guidance on actions to take in response to the threat to ensure early and comprehensive information sharing and allow for informed decision making.[29] These risk communication concepts have been used in a variety of warning contexts, including warnings of infectious disease outbreaks. Additionally, the national implementation plan states that government officials must communicate clearly and continuously with the public now and throughout a pandemic, and public officials at all levels of government must provide unambiguous and consistent guidance on what individuals can do to protect themselves, how to care for family members at home, when and where to seek medical care, and how to protect others and minimize the risks of disease transmission. However, so much is unknown about a potential influenza pandemic that it is difficult to provide extensive information on preparing for an influenza pandemic.

Some, but not all, organizations received frequent communications about avian or pandemic influenza. Several officials across the department said their organizations distributed information about the current avian influenza threat and pandemic influenza to their personnel. For example, an official from U.S. Northern Command's Washington office mentioned receiving frequent e-mails from the command on the status of avian influenza. In contrast, it was unclear whether other DOD organizations, such as the defense agencies, received and distributed such information to their personnel. For example, at least one defense agency had not received any information on planning or preparing for an influenza pandemic, including what actions its personnel should take in the event of an influenza pandemic. DOD officials said the department's communications with its personnel were currently limited, in part because DOD's communications strategy for an influenza pandemic still was under development and had been implemented only to a limited extent. As a

[29] GAO, *Homeland Security: Communication Protocols and Risk Communication Principles Can Assist in Refining the Advisory System*, GAO-04-682 (Washington, D.C.: June 25, 2004).

result, there currently may be gaps and unevenness in awareness among DOD's personnel across the department, including military and civilian personnel, contractors, dependents, and beneficiaries, about actions they should take in the event of an influenza pandemic, which could lead to confusion and increased numbers of personnel affected by a pandemic.

Officials from the Offices of the ASD for Homeland Defense and ASD for Health Affairs said that DOD planned to use communications strategies already in place in addition to those created specifically for an influenza pandemic to share information on the disease to ensure that personnel know how to protect themselves. DOD's January 2006 Health Affairs guidance, which was issued to the military departments but not departmentwide, provided some information on actions, such as hand washing, that personnel should take in the event of an influenza pandemic. According to a public affairs official with the Joint Staff, the department planned to use its existing influenza Web sites, as well as key messages that will be distributed at the installation level, to let personnel know what actions to take in the event of an influenza pandemic. Existing Web sites had some information on what personnel should do to protect themselves, but as DOD continues its planning and preparedness efforts, more information could be added. For example, one Web site mentioned, among other things, that personnel should wash hands and cover coughs and sneezes; however, there was no information on what personnel should do specifically in the event of an influenza pandemic, such as the department's policies on who should seek medical care at DOD's military treatment facilities or whether personnel should telework from home during an influenza pandemic. Using multiple methods—both active and passive—of sharing information on what actions to take in the event of an influenza pandemic will be useful. For example, some of DOD's personnel are deployed in austere or rural environments and may not have access to the Internet and, therefore, may not have access to the information currently posted on various Web sites.

In addition to providing information passively on Web sites and actively through distributed messages, there is a need to communicate with employees deemed "critical" and in the top tiers for vaccine and antiviral distribution. These personnel will need to know who they are and when and where they should obtain vaccines and antivirals. Conversely, employees in the lower tiers for vaccine and antiviral distribution will need to be told that they will need to rely on other resources to obtain these treatments, such as HHS's Strategic National Stockpile or other state and local public health sources.

DOD also had not yet developed a plan to communicate information to its personnel on the efficacy of vaccines and antivirals, in the event DOD decides to dispense those it has purchased to date, but it had posted the package inserts for the two antivirals that it purchased on one of its Web sites. In 2002, we reported that survey respondents from the Air National Guard and Air Force Reserve were generally dissatisfied with the information DOD provided about its Anthrax Vaccine Immunization Program. They were particularly concerned about the (1) military threat from anthrax, (2) anthrax vaccine's battlefield effectiveness, (3) vaccine's history and past usage, (4) short-term and long-term safety risks of the vaccine, and (5) possible side effects from reactions to the vaccine.[30] As indicated earlier, DOD is considering whether or not to vaccinate personnel before an influenza pandemic to possibly provide personnel some degree of immunity from the pandemic strain. Based on DOD's experience with the anthrax vaccine, if DOD decides to vaccinate its personnel early or after an influenza pandemic starts, then the department would benefit from a plan addressing how it will communicate information to its personnel on the threat of an influenza pandemic and the vaccine's efficacy, risks, and potential side effects.

Conclusions

To date, DOD's efforts to protect its personnel from an influenza pandemic have focused primarily on the military departments, geographic combatant commands, and installations. However, going forward, as the department's focus shifts to the workforce departmentwide, DOD faces some key management challenges as it continues its planning and preparedness efforts related to an influenza pandemic. While we recognize that DOD's planning for an influenza pandemic continues to evolve, we believe DOD's planning efforts would benefit from taking steps to address the challenges and gaps we have identified. Planning in an environment of tremendous uncertainty for a large workforce deployed worldwide is an extremely difficult and complex task. Although DOD has mechanisms, systems, and processes in place for force health protection, an influenza pandemic would create a different set of challenges for DOD. Unlike most diseases, an influenza pandemic would spread quickly around the world and, according to government estimates, the disease could result in a 40 percent absenteeism rate in general through illness, taking care of someone who is ill, or fear of becoming ill. Although DOD has taken many

[30]GAO, *Anthrax Vaccine: GAO's Survey of Guard and Reserve Pilots and Aircrew*, GAO-02-445 (Washington, D.C.: Sept. 20, 2002).

appropriate and important steps to prepare for an influenza pandemic, challenges remain. First, DOD's planning efforts would benefit from an accountability framework, with clearly defined roles and responsibilities, an oversight mechanism, and goals and performance measures. Such an accountability framework could help the Secretary of Defense or Deputy Secretary of Defense to monitor the department's readiness for an influenza pandemic and the Secretary of Defense—and the Congress—could better ascertain when and to what extent the Armed Forces and critical functions departmentwide are prepared to meet this potential emergency at home and abroad. Second, by identifying an appropriate funding mechanism and requesting funding for pandemic influenza preparedness efforts that is tied to the department's goals, the Secretary of Defense can better ensure that the department can accomplish its tasks in the national implementation plan and protect its personnel. Third, going forward, DOD would benefit from clarifying in advance and communicating with personnel which types of personnel it plans to include in its distribution of vaccines and antivirals, which may lessen the confusion over who is to receive DOD-purchased vaccines and antivirals during an influenza pandemic. Fourth, by developing a departmentwide strategy that communicates key information to all of its workforce, DOD's military and civilian personnel, contractors, dependents, and beneficiaries may better know what actions to take to protect themselves in the event of an influenza pandemic.

Recommendations for Executive Action

To improve accountability and oversight of planning efforts across DOD as the department continues its pandemic influenza planning for its workforce, we recommend that the Secretary of Defense do the following.

- Instruct the Assistant Secretary of Defense for Homeland Defense, as the individual accountable for DOD's pandemic influenza planning and preparedness efforts, to clearly and fully define and communicate departmentwide the roles and responsibilities of the organizations that will be involved in DOD's efforts, with clear lines of authority; the oversight mechanisms, including reporting requirements, for all aspects of DOD's pandemic influenza planning efforts, to include those tasks that are outside of the national implementation plan; and the goals and performance measures for DOD's planning and preparedness efforts.

- Instruct the Assistant Secretary of Defense for Homeland Defense to work with the Under Secretary of Defense (Comptroller) to establish a framework for requesting funding for the department's preparedness efforts. The framework should include the appropriate funding mechanism

and controls to ensure that needed funding for DOD's pandemic influenza preparedness efforts is tied to the department's goals.

- Instruct the Assistant Secretary of Defense for Health Affairs to clarify DOD's guidance to explicitly define whether or how all types of personnel—including DOD's military and civilian personnel, contractors, dependents, and beneficiaries—would be included in DOD's distribution of vaccines and antivirals and communicate this information departmentwide.

- Instruct the Assistant Secretary of Defense for Public Affairs to implement a comprehensive and effective communications strategy departmentwide that is transparent as to what actions each group of personnel should take and the limitations of the efficacy, risks, and potential side effects of vaccines and antivirals.

Agency Comments and Our Evaluation

In written comments on a draft of this report, DOD concurred, with comment, with four of our five original recommendations, and did not address one recommendation. DOD also provided technical comments, which we have incorporated in the report, as appropriate. Based on DOD's written and technical comments and supporting documentation DOD provided in response to our draft report, we combined two of our recommendations and modified another recommendation, as discussed below.

In written comments, DOD stated that the recommendations in the draft report reflected information that was over a year old. As stated in our scope and methodology in appendix I, we based our report on information gathered from December 2005 through August 2006. Notwithstanding, after reviewing a draft of this report, DOD provided some additional documentation, which we incorporated, as discussed below.

We originally recommended that the Secretary of Defense designate a lead individual within DOD who is accountable to the Secretary for influenza pandemic planning and preparedness efforts, and provide the individual with the authority to establish oversight mechanisms, including reporting requirements, for the department's pandemic influenza efforts. We also recommended that this lead individual identify and communicate roles and responsibilities of the offices and components involved in DOD's preparedness efforts, and the goals and performance measures for DOD's efforts. In its written and technical comments, DOD stated that the Deputy Secretary of Defense verbally designated the ASD for Homeland Defense

to lead the department's preparation for a potential influenza pandemic. Our draft report reflected this statement and noted we could not corroborate or find documentation of this verbal designation. DOD's comments referred to a July 25, 2006, memorandum from the Principal Deputy to the ASD for Homeland Defense, which we subsequently obtained. This memorandum states that the Deputy Secretary of Defense designated the ASD for Homeland Defense to lead the department's preparation for a potential pandemic influenza. The memorandum also directs individual offices to carry out each of the 31 tasks for which DOD is the lead agency in the national implementation plan and report each month on their progress on the 31 tasks. However, the 31 tasks do not address the entirety of DOD's planning efforts and specifically exclude DOD organizations' planning efforts to protect its workforce departmentwide. With regard to our recommendation to establish goals and performance measures, DOD concurred and commented that the January 2006 Health Affairs guidance and the national and DOD implementation plans describe the roles and responsibilities of several DOD organizations. While we agree that these documents list specific tasks for some organizations to complete, they do not address overall roles and responsibilities for departmentwide pandemic influenza planning efforts. DOD also commented that the national implementation plan and DOD's implementation plan already provide specific tasks with specific time frames for completion. We agree that these implementation plans, as well as the July 25, 2006, memorandum from the Principal Deputy to the ASD for Homeland Defense, provide time frames to complete individual tasks. Nevertheless, the intent of our recommendation is that DOD develop departmentwide goals and performance measures for DOD's overall pandemic influenza planning and preparedness efforts, including that for its total workforce, rather than time frames for individual tasks. In light of the additional information DOD provided on the role of the ASD for Homeland Defense as the lead for DOD's pandemic influenza planning efforts, we revised our recommendation to read that the Secretary of Defense instruct the ASD for Homeland Defense to clearly and fully define and communicate departmentwide the roles and responsibilities of organizations involved in DOD's efforts with clear lines of authority, oversight mechanisms, and goals and performance measures for DOD's efforts.

DOD concurred, with comment, with our recommendation that the Secretary's designated lead for DOD's influenza pandemic planning and preparedness efforts task the combatant commands and military departments to identify funding requirements that are linked to the department's preparedness goals and build them into DOD's future budget

requests. DOD commented, and we acknowledged in our draft report, that DOD had begun to gather funding requirements for the department's pandemic influenza efforts. Nevertheless, we modified our recommendation to include a focus on requesting needed funding that is tied to departmentwide goals.

DOD's written comments did not address our recommendation that the Secretary's designated lead for DOD's planning and preparedness efforts instruct the ASD for Health Affairs to clarify DOD's guidance to more clearly define the types of personnel included in DOD's distribution of vaccines and antivirals and communicate this information departmentwide. However, in its technical comments, DOD stated that the department's prioritization list for vaccines and antivirals is based on functional roles in the organization and distinctions in the type of personnel are not made because these divisions do not reflect function. DOD also stated that individual components are responsible for determining which individuals are critical when updating their continuity of operations plans. We incorporated this information into our report. We continue to believe our recommendation has merit and should be implemented because DOD's existing guidance remains unclear on what types of personnel are included in DOD's distribution of vaccines and antivirals and components' continuity of operations plans are not yet complete.

Additionally, DOD concurred, with comment, with our recommendation that the ASD for Public Affairs clarify and implement a comprehensive and effective communications strategy. In its written and technical comments, DOD stated that the Office of the ASD for Public Affairs developed an annex for DOD's implementation plan and plans to issue an integrated internal communications plan in September 2006. We are encouraged that the ASD for Public Affairs is developing an integrated internal communications plan for reaching DOD's internal audiences. Because the plan is not yet complete, we continue to believe our recommendation has merit and should be implemented.

As we agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution of it until 30 days from the date of this letter. We will then send copies to the Chairmen and Ranking Members of the Senate and House Committees on Appropriations; the Chairmen and Ranking Members, Senate and House Committees on Armed Services; and other interested congressional parties. We also are sending copies to the Secretary of Defense; Secretary

of Health and Human Services; Secretary of Homeland Security; and Director, Office of Management and Budget. We will make copies available to others upon request. In addition, the report will be available at no charge on GAO's Web site at http://www.gao.gov.

If you or your staff have any questions concerning this report, please contact me at (202) 512-5431 or by e-mail at dagostinod@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made contributions to this report are listed in appendix IV.

Davi M. D'Agostino
Director
Defense Capabilities and Management

Appendix I: Scope and Methodology

As part of our review of the Department of Defense's (DOD) planning and preparedness for a pandemic influenza, we determined (1) actions that DOD has taken to date to prepare for an influenza pandemic and (2) management challenges that DOD faces going forward as the department continues its planning efforts. We are reporting on these issues now so that DOD can consider and address our findings as the department continues its planning and preparedness efforts. We have not yet assessed DOD's implementation plan for pandemic influenza, since it was not yet complete at the time of our review; however, we plan to assess DOD's implementation plan, the combatant commands' implementation plans, and selected installation plans in another report that will be issued at a later date.

To determine the actions that DOD has taken to date to prepare for an influenza pandemic, we reviewed a draft of DOD's implementation plan for pandemic influenza dated March 2006.[1] Additionally, we reviewed guidance issued by the Office of the Assistant Secretary of Defense (ASD) for Health Affairs in September 2004 and January 2006; a planning order issued by the Joint Chiefs of Staff to the combatant commands in November 2005; planning guidance issued by the Army Medical Command to the Army regional medical commands in November 2004; and planning guidance issued by the Army Installation Management Agency to Army installations in May 2006. We also reviewed the department's existing force health protection directives, which were identified in DOD's January 2006 Health Affairs guidance and DOD's draft implementation plan and by officials in the Office of the ASD for Health Affairs. These directives are summarized in appendix II. We reviewed the *Implementation Plan for the National Strategy for Pandemic Influenza* to understand what was required of federal departments—including DOD—in their pandemic influenza preparedness efforts. Furthermore, we reviewed HHS's contract with a vaccine manufacturer and DOD's antiviral contracts with two manufacturers. Additionally, we met in the Washington, D.C., area with DOD officials from the Office of the Under Secretary of Defense for Policy, Office of the ASD for Homeland Defense, Office of the ASD for Health Affairs, Office of the ASD for Reserve Affairs, Office of the Deputy Under

[1]DOD released its implementation plan to the Homeland Security Council on August 16, 2006, as we were completing our review. However, according to an official in the Office of the ASD for Homeland Defense, DOD cannot release its implementation plan externally until it is coordinated and approved by the Homeland Security Council. We reviewed the final plan and determined that it was not significantly different from the March 2006 draft that we previously reviewed.

Secretary of Defense for Logistics and Materiel Readiness, Office of the Deputy ASD for Stability Operations, Office of Force Transformation (Defense), National Guard Bureau, Joint Chiefs of Staff, Department of the Army, Department of the Navy, Marine Corps Headquarters, and Department of the Air Force.

To better understand the threat of an influenza pandemic, we met with officials from the Defense Intelligence Agency's Armed Forces Medical Intelligence Center, Fort Detrick, Maryland, and the Central Intelligence Agency, McLean, Virginia.

To determine management challenges that DOD faces as it continues its planning efforts, we compared the department's actions to date to best practices that we have identified in our prior work. Specifically, we compared DOD's actions to date to the desirable characteristics of national strategies, which state that a national strategy should include

- purpose, scope, and methodology;
- problem definition and risk assessment;
- goals, subordinate objectives, activities, and performance measures;
- resources, investments, and risk management;
- organizational roles, responsibilities, and coordination; and
- integration and implementation.

While we are not yet assessing DOD's draft implementation plan and it is not a national strategy, we determined that some of the characteristics are applicable to planning efforts in general, specifically those related to identifying goals and performance measures, resources and investments, and organizational roles and responsibilities. Because we are not yet assessing DOD's implementation plan, we used the characteristics as guidance for how DOD could approach its planning efforts, as opposed to a checklist of what DOD should be doing. Additionally, we relied on our previous work on total force management to determine which types of personnel DOD should include in its plans for vaccine and antiviral distribution. Furthermore, we relied on our previous work on risk communication principles to determine whether DOD's current communications strategy meets these principles. Finally, we reviewed our prior work on influenza pandemics.

We conducted our review from December 2005 through August 2006 in accordance with generally accepted government auditing standards.

Appendix II: Summary of DOD's Guidance for Pandemic Influenza and Related Force Health Protection Policies

Title of guidance, responsible office or organization, and date	Purpose of guidance	Applicability of the guidance
Department of Defense Influenza Pandemic Preparation and Response Health Policy Guidance (January 2006)	To provide policy and instructions to prepare for and respond to an influenza pandemic; facilitate integration into the *National Strategy for Pandemic Influenza*, outline an appropriate response for military installations and contingency operations worldwide, and provide guidance for defense support to civil authorities.	Military departments, the Joint Staff, and the combatant commands; the guidance was provided to the Coast Guard as a reference.
Policy for Release of Tamiflu® (Oseltamivir) Antiviral Stockpile During an Influenza Pandemic (January 2006)	To provide guidance for the release of the Department of Defense's (DOD) Tamiflu stockpile; establishes generic prioritization tiers for Tamiflu.	Applicability was not listed, but guidance was addressed to the secretaries of the military departments, Chairman of the Joint Chiefs of Staff, Under Secretaries of Defense, Commandant of the U.S. Coast Guard, Assistant Secretaries of Defense, DOD General Counsel, DOD Inspector General, and directors of defense agencies.
Policy for the Use of Influenza Vaccine for the 2005-2006 Influenza Season (November 2005)	To set policy and priorities for use of influenza vaccine for the 2005-2006 influenza season.	Applicability was not listed, but guidance was addressed to the Assistant Secretaries of the Military Departments for Manpower and Reserve Affairs; Director, Joint Staff; ASD for Reserve Affairs; Military Department Surgeons General; and Defense Supply Center Philadelphia.
DOD Directive 6490.2, *Comprehensive Health Surveillance* (October 2004)	To establish policy and assign responsibility for routine, comprehensive health surveillance of all military servicemembers during active federal service.	Office of the Secretary of Defense, military departments, Chairman of the Joint Chiefs of Staff, combatant commands, defense agencies, DOD field activities, and all other organizational entities in DOD.
DOD Directive 6200.4, *Force Health Protection* (October 2004)	To establish policy and assign responsibility for implementing force health protection measures on behalf of all military servicemembers during active and reserve military service.	Office of the Secretary of Defense, military departments, Chairman of the Joint Chiefs of Staff, combatant commands, Office of the Inspector General, defense agencies, DOD field activities, and all other organizational entities in DOD.
Department of Defense Guidance for Preparation and Response to an Influenza Pandemic Caused by the Bird Flu (Avian Influenza) (September 2004)	To provide instruction on actions to take in preparation for the possibility of an influenza pandemic, to implement recommendations from the Department of Health and Human Services' *National Pandemic Influenza Response Plan*.	Military departments, nonmilitary persons under military jurisdiction, selected federal employees, and family members and other people eligible for care within the military health system.
DOD Directive 6200.3, *Emergency Health Powers on Military Installations* (May 2003)	To establish policy to protect installations, facilities, and personnel in the event of a public health emergency due to biological warfare, terrorism, other public health emergency, or a communicable disease epidemic.	Office of the Secretary of Defense, military departments, Chairman of the Joint Chiefs of Staff, Office of the Inspector General, combatant commands, defense agencies, DOD field activities, and all other organizational entities in DOD.

Title of guidance, responsible office or organization, and date	Purpose of guidance	Applicability of the guidance
Policy for Use of Force Health Protection Prescription Products (April 2003)	To establish policy to comply with the statutory requirement regarding use of prescription-only drugs, vaccines, and other medical products.	Applicability was not listed, but guidance was addressed to the Assistant Secretaries of the Military Services for Manpower and Reserve Affairs; Director, Joint Staff; Surgeons General of the Military Departments; and Deputy Director for Medical Readiness, Joint Staff.
DOD Directive 6200.2, *Use of Investigational New Drugs for Force Health Protection* (August 2000)	To establish policy and assign responsibility regarding legal requirements for use of investigational new drugs and designates the Secretary of the Army as the Executive Agent for the use of investigational new drugs for force health protection.	Office of the Secretary of Defense, military departments, Chairman of the Joint Chiefs of Staff, combatant commands, Office of the DOD Inspector General, defense agencies, DOD field activities, and all other organizational entities within DOD.
Policy for DOD Global, Laboratory-Based Influenza Surveillance (February 1999)	To set DOD policy to conduct global, operationally relevant laboratory-based influenza surveillance.	Applicability was not listed, but guidance was addressed to the Surgeons General of the Military Services; and Deputy Director for Medical Readiness, J-4, Joint Staff.
Joint Tactics, Techniques, and Procedures for Noncombatant Evacuation Operations Joint Report 3-07.51 (September 1997)	To guide combatant commanders and their subordinate joint force and component commanders in preparing for and conducting noncombatant evacuation operations.	Commanders of combatant commands, subunified commands, joint task forces, and subordinate components of the commands.
DOD Instruction 3020.37, *Continuation of Essential DOD Contractor Services During Crises* (November 1990), *Administrative Reissuance Incorporating Change 1* (January 1996), *Enclosure E3, Guidelines for Theater Admission Procedures*	Enclosure E3 sets policy for civilian contractors entering a theater of operations, including ensuring them the same medical care given to military personnel.	Office of the Secretary of Defense; military departments including the Coast Guard when operating as a service in the Navy; Chairman of the Joint Chiefs of Staff and the Joint Staff; combatant commands; Inspector General; and defense agencies.
DOD Directive 1404.10, *Emergency Essential (E-E) DOD U.S. Citizen Civilian Employees* (April 1992)	Updates policy, responsibilities, and procedures regarding employees in civilian positions designated emergency essential.	Office of the Secretary of Defense; military departments, including the Coast Guard when operating as a service in the Navy; Chairman of the Joint Chiefs of Staff and the Joint Staff; combatant commands; Inspector General; defense agencies; and DOD field activities.
DOD Directive 3025.14, *Protection and Evacuation of U.S. Citizens and Designated Aliens in Danger Areas Abroad* (November 1990)	Updates policies, responsibilities, and procedures for protection and evacuation of U.S. citizens and designated aliens in danger areas abroad, and assigns responsibilities for noncombatant evacuation operations planning and implementation.	Office of the Secretary of Defense; military departments, including the Coast Guard when operating as a service in the Navy; Chairman of the Joint Chiefs of Staff and the Joint Staff; combatant commands; and defense agencies.
DOD Directive 6205.2, *Immunization Requirements* (October 1986)	Addresses immunization policies for all armed forces members, DOD civilian employees, and eligible beneficiaries of the military health care system.	Office of the Secretary of Defense; military departments, including their guard and reserve components; Organization of the Joint Chiefs of Staff; and defense agencies.

Source: GAO analysis.

Appendix III: Comments from the Department of Defense

ASSISTANT SECRETARY OF DEFENSE
2600 DEFENSE PENTAGON
WASHINGTON, DC 20301-2600

HOMELAND
DEFENSE

AUG 31 2006

Ms. Davi M. D'Agostino
Director, Defense Capabilities and Management
U.S. Government Accountability Office
441 G Street, N.W.
Washington, DC 20548

Dear Ms. D'Agostino:

The Department of Defense (DoD) concurs with comment to all four recommendations in the report. Our concurrence is contingent on the following adjustments to the GAO report:

- The report needs to reflect the most current actions by DoD. The recommendations in the report reflect information that is now over a year old. The Department has or is currently taking actions addressed in the report's recommendations.

- The report contains technical errors that must be corrected to reflect a more accurate picture of the Department's efforts.

Our responses to the recommendations and technical comments are attached. My point of contact for this action is Colonel Richard M. Chavez, (703) 697-5415.

Sincerely,

Peter F. Verga
Principal Deputy

Attachments:
1. DoD Response to the Recommendations
2. DoD Technical Response

GAO DRAFT REPORT – DATED AUGUST 17, 2006
GAO CODE 350890/GAO-06-1042

"INFLUENZA PANDEMIC: DoD Has Taken Important Actions to Prepare, but Accountability, Funding, and Communications Need to be Clearer and Focused Departmentwide"

DEPARTMENT OF DEFENSE COMMENTS TO THE RECOMMENDATIONS

RECOMMENDATION 1: The GAO recommended that the Secretary of Defense designate a lead individual within DOD who is accountable to the Secretary of Defense for influenza pandemic planning and preparedness efforts, and provide the individual with the authority to establish oversight mechanisms, including reporting requirements, for the department's pandemic influenza efforts.

DOD RESPONSE: DoD concurs with comment. The Deputy Secretary of Defense designated the Assistant Secretary of Defense for Homeland Defense, working in coordination with the Assistant Secretary of Defense for Health Affairs, to lead the Department's preparation for a potential pandemic influenza. To integrate and optimize all Department preparedness and response efforts, a Pandemic Influenza Task Force was created, chaired by Mr. Paul McHale, the Assistant Secretary of Defense for Homeland Defense. Dr. William Winkenwerder, Assistant Secretary of Defense for Health Affairs, has responsibility for avian influenza force health protection programs and actions, and supports the task force to ensure optimal public health support to civilian health authorities. This response is derived from the following documents: Department of Defense Implementation of the National Plan for Pandemic Influenza, signed by Mr. Pete Verga, July 25, 2006 and the Avian Influenza Pandemic Task Force memo, (no date) signed jointly by Mr. McHale and Dr. Winkenwerder to all Departmental entities.

RECOMMENDATION 2: The GAO recommended that the Secretary of Defense designates a lead to communicate the roles and responsibilities of the offices and components that will be involved in DOD's preparedness efforts and the goals and performance measures for DOD's efforts.

DOD RESPONSE: DoD concurs with comment. The January 25, 2006, Department of Defense Influenza Pandemic Preparation and Response Health Policy Guidance lays out specific roles and responsibilities of the Office of the Secretary of Defense, the Joint Staff, the Military Departments, Installation

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Commanders, and Military Treatment Facility Commanders. In addition, the National and the DoD Implementation Plans list specific tasks designed to make the U.S. government prepared in the face of a pandemic. These tasks come with very specific timelines for completion and individuals have been assigned as leads for each task. Some of these tasks require DOD to work with the other Departments and Agencies to further define specific roles and responsibilities - many of which will not be realized until all Department and COCOM plans are completed. Additionally, the Departments plan is specific to addressing the concerns of the National Implementation Plan. The measures of performance are clearly outlined within each task and the goals are to complete the actions within the identified timeline. In support of this effort, DoD is required to submit a bi-monthly status report on these tasks to the White House. The SES General Officer/Flag Officer Steering Committee is the oversight committee within DoD to track and monitor that status of these tasks and approve the submission of the bi-monthly report to the White House.

RECOMMENDATION 3: The GAO recommended that the Secretary of Defense designates a lead to task the Combatant Commands and Military Departments to identify funding requirements that are linked to the Department's preparedness goals and build them into DOD's future budget requests.

DOD RESPONSE: DoD concurs with comment. Prior to assessing potential Pandemic Influenza preparedness costs, several baseline plans had to be completed in at least draft final status; The National Pandemic Influenza Implementation plan, The DoD Implementation Plan and the Geographic Combatant Command plans. The plans provided the draft framework by which we could then judge our funding requirements. All the above referenced plans are now complete or in draft. DoD has conducted a data call to all Services and Combatant Commands for PI Preparedness costs for FY07 and FY08. We have captured those projected costs and are now working the appropriate funding vehicle. Options include, but are not limited to, inclusion in the 08-13 Program Objective Memorandum, or pursuing supplemental funding.

RECOMMENDATION 4: The GAO recommended that the Secretary of Defense designates a lead to instruct the Assistant Secretaries of Defense for Public and Health Affairs to clarify and implement a comprehensive and effective communications strategy Departmentwide that is transparent as to what actions each group of personnel should take and limitations of the efficacy, risks, and potential side effects of vaccines and antivirals.

DOD RESPONSE: DoD concurs with comment. OASD(PA) has developed an annex, which was submitted earlier this year, for the Department's implementation plan and public affairs guidance that will be issued in September.

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In addition, an integrated internal communications plan for pandemic influenza is being developed by OASD(PA)'s internal communications division. This plan identifies opportunities to reach and inform DoD's internal audiences, including military and civilian personnel, dependents and retirees about PI and the government's PI response plan, how to protect against avian flu, and the role of DoD and service members facing a pandemic threat in the U.S. and internationally.

The plan will utilize broadcast, web, print and outreach tools to educate and prepare personnel. Internal communications resources include: Pentagon Channel (Public Service Announcements), Defense Link, American Forces Press Service, American Forces Radio Television Services, Stars and Stripes, and American Forces Network.

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Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

Davi M. D'Agostino, Director, 202-512-5431, dagostinod@gao.gov

Staff Acknowledgments

Mark A. Pross, Assistant Director; Susan Ditto; Nicole Gore; Simon Hirschfeld; Aaron Johnson; John E. Miller; and Hilary Murrish made key contributions to this report.

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