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**PUBLIC HEALTH
AND BORDER
SECURITY**

**HHS and DHS Should
Further Strengthen
Their Ability to
Respond to TB
Incidents**





Highlights of [GAO-09-58](#), a report to congressional requesters

Why GAO Did This Study

In spring 2007, the Department of Health and Human Services (HHS), the Department of Homeland Security (DHS), and state and local health officials worked together to interdict two individuals with drug-resistant infectious tuberculosis (TB) from crossing U.S. borders and direct them to treatment. Concerns arose that HHS's and DHS's responses to the incidents were delayed and ineffective. GAO was asked to examine (1) the factors that affected HHS's and DHS's responses to the incidents, (2) the extent to which HHS and DHS made changes to response procedures as a result of the incidents, and (3) HHS's and DHS's efforts to assess the effectiveness of changes made as a result of the incidents. GAO reviewed agency documents and interviewed officials about the procedures in place at the time of the incidents and changes made since.

What GAO Recommends

GAO recommends that DHS explore the feasibility of enhancing its capability to create public health alerts based on other variations of biographic information, and that HHS and DHS work together to continue to inform state and local health officials about new tools and procedures and develop plans for completing actions to ensure coordination among agencies.

HHS and DHS generally concurred with GAO's recommendations and are taking actions to respond to them.

To view the full product, including the scope and methodology, click on [GAO-09-58](#). For more information, contact Cynthia A. Bascetta at (202) 512-7114 or bascettac@gao.gov or Eileen R. Larence at

PUBLIC HEALTH AND BORDER SECURITY

HHS and DHS Should Further Strengthen Their Ability to Respond to TB Incidents

What GAO Found

Various factors—a lack of comprehensive procedures for information sharing and coordination and border inspection shortfalls—hindered the federal response to the two TB incidents. GAO's past work and federal internal control standards call for collaborative communication and coordination across agencies; communication flowing down, across, and up agencies to help managers carry out their internal control responsibilities; and effective leadership, capabilities, and accountability to ensure effective preparedness and response to hazardous situations. HHS and DHS finalized a memorandum of understanding in October 2005 intended to promote communication and coordination in response to public health incidents, but they had not fully developed operational procedures to share information and coordinate their efforts. Thus, HHS and DHS lost time locating or identifying the individuals to interdict them at the U.S. border. Also, HHS lacked procedures to coordinate with state and local health officials to determine when to use federal isolation and quarantine authorities, which further contributed to the delay in the federal response to one of the incidents. Finally, DHS had deficiencies in its process for inspecting individuals at the border, which caused delays in locating the individuals with TB.

HHS and DHS have subsequently implemented procedures and tools intended to address deficiencies identified by the incidents, consistent with GAO's past work and internal control standards, but the departments could take additional steps to enhance their ability to respond to future TB incidents. Since the 2007 incidents, HHS and DHS have developed formal procedures for HHS to request DHS's assistance, and DHS has (1) developed a watch list for airlines to identify individuals with TB and other infectious diseases who are to be stopped from traveling and (2) revised its border inspection process to include a requirement that individuals with TB identified by HHS be subject to further inspection. DHS has also enhanced its process for creating public health alerts based on some variations of biographic information (e.g., name, date of birth, or travel document information), but has not explored the benefits of creating these alerts based on other variations, which impeded DHS's ability to interdict one of the individuals at the border. In addition, HHS has not yet completed efforts to provide information on changes in procedures to state and local health officials, who typically originate requests for assistance, to help mitigate delays in accessing federal assistance. HHS and DHS identified additional actions that need to be taken to further strengthen their response, but have not developed plans for completing them.

HHS and DHS have activities under way to assess the effectiveness of the new procedures and tools, including performance monitoring and cross-agency meetings to discuss and revise the new procedures and tools based on actual experiences. HHS and DHS have coordinated on more than 70 requests for assistance since the 2007 incidents through February 2008; officials said they view each incident as a test of the efficacy of their responses.

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Abbreviations

CBP	U.S. Customs and Border Protection
CDC	Centers for Disease Control and Prevention
DEOC	Director’s Emergency Operations Center
DGMQ	Division of Global Migration and Quarantine
DHS	Department of Homeland Security
FMFIA	Federal Managers’ Financial Integrity Act of 1982
HHS	Department of Health and Human Services
HIPAA	Health Insurance Portability and Accountability Act of 1996
NOC	National Operations Center
OHA	Office of Health Affairs
SARS	severe acute respiratory syndrome
SOC	Secretary’s Operations Center
TB	tuberculosis
TECS	Treasury Enforcement Communications System
TSA	Transportation Security Administration
WHTI	Western Hemisphere Travel Initiative

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United States Government Accountability Office
Washington, DC 20548

October 14, 2008

The Honorable Joseph I. Lieberman
Chairman
The Honorable Susan M. Collins
Ranking Member
Committee on Homeland Security and Governmental Affairs
United States Senate

The Honorable Charles E. Grassley
Ranking Member
Committee on Finance
United States Senate

The Honorable Hillary Rodham Clinton
United States Senate

This report is a publicly available version of our report regarding Department of Health and Human Services (HHS) and Department of Homeland Security (DHS) attempts to interdict two individuals with drug-resistant tuberculosis (TB) disease at the border so that they could direct them to treatment. Our original report was designated law enforcement sensitive because, according to DHS, it contained specific information of a sensitive nature.

An estimated 2 billion people—one-third of the world's population—are infected with *Mycobacterium (M.) tuberculosis*, the bacterium that causes TB, approximately 9 million of whom have transmissible TB disease.¹ In 2007, more than 13,000 cases of TB disease were reported in the United States.² Without proper treatment, TB can be fatal. Moreover, health officials are concerned that the number of individuals who have TB that is resistant to many of the most effective medications is increasing

¹Individuals who have been exposed to TB and have a positive TB test but who do not have TB bacteria growth in their lungs or other sites in the body are said to have latent TB infection and cannot transmit TB to other people.

²The annual number of TB cases in the United States is declining; however, the rate of decline has slowed from 7.3 percent from 1993 through 2000 to 3.8 percent from 2000 through 2007. See Centers for Disease Control and Prevention, "Trends in Tuberculosis – U.S., 2007," *Morbidity and Mortality Weekly Report*, vol. 57, no. 11 (2008).

worldwide and these individuals have fewer options for effective treatment. While the total number of individuals with drug-resistant TB in the United States is relatively small (116 cases of multiple-drug-resistant TB were reported in 2006, the most recent year for which such data are available), these cases require significant human and financial resources to provide care and treatment. An individual case of drug-resistant TB can cost an average of \$500,000 for in-patient hospital services alone. Because drug-resistant TB can develop when a patient is nonadherent—unwilling or unable to follow a treatment regimen—state and local health departments and federal agencies have a responsibility to work together to help ensure adherence as part of their effort to prevent the spread of TB in the United States.

In general, physicians and local health departments have the primary responsibility for managing day-to-day care and treatment of individuals with TB. State and local health departments are responsible for reporting cases of TB to HHS. In addition to monitoring the occurrence of disease in the United States, HHS has overall federal responsibility for preventing the introduction of communicable diseases, such as TB, from foreign countries.³ In so doing, HHS is to work with DHS, which is responsible for reducing the threat of terrorism and natural crises, including bioterrorism. By statute, U.S. customs officers are to assist in the enforcement of quarantine rules and regulations.⁴ In October 2005, HHS and DHS signed a memorandum of understanding intended to create a broad agreement for the departments to share information and work together during public health incidents.

In the spring of 2007, HHS requested DHS's assistance in attempting to interdict at the border two individuals with drug-resistant TB disease so that they could direct them to treatment. According to HHS documents, in May 2007, one of these individuals, a U.S. citizen, traveled abroad against advice from physicians. When state and local health officials were unable to find this person and serve him with a written order not to travel, they requested help from HHS. While he was traveling abroad, HHS located him and attempted to direct him to treatment. HHS then contacted DHS for assistance. However, while HHS and DHS were determining a course of action to attempt to prevent him from traveling further by airplane, he once again traveled. Furthermore, as the departments were working to

³See 42 U.S.C. § 264.

⁴42 U.S.C. § 268(b).

intercept him at the U.S. border, he was able to reenter the country because a U.S. Customs and Border Protection (CBP) officer, in violation of CBP policy, ignored a computerized alert in CBP's border screening and inspection system to detain him. In a separate incident, a Mexican citizen with drug-resistant TB who had a prior history of nonadherence to treatment crossed the U.S.-Mexico border approximately 20 times during April and May 2007. HHS and DHS worked together to try to prevent him from crossing the border, but attempts to identify him in DHS databases failed on several occasions. According to HHS officials, both individuals were eventually located and received treatment, and none of the people who might have been in contact with these individuals were reported to have contracted TB.

Both TB incidents required a coordinated federal response—mainly from HHS's Centers for Disease Control and Prevention (CDC) and DHS's Transportation Security Administration (TSA) and CBP—in order to locate the individuals and conduct activities to protect their health and the health of the public. However, HHS was unable to deter the travel of these individuals and DHS was initially unable to interdict them at the border. You raised questions concerning HHS's and DHS's responses to the TB incidents. Because of these questions, we examined: (1) What factors affected HHS's and DHS's responses to the two TB incidents? (2) To what extent have HHS and DHS made changes to response procedures as a result of the TB incidents? (3) What are HHS and DHS doing to assess the effectiveness of any operational changes they have made in response to the TB incidents?

To determine what factors affected HHS's and DHS's responses to the two TB incidents, we reviewed the policies and procedures each had in place at the time of the incidents for conducting a coordinated response to a public health incident, as well as laws and regulations. We interviewed headquarters officials at HHS, CDC, DHS, CBP, and TSA about their responses. In addition, we visited a land port of entry that was involved in one of the incidents—the Bridge of the Americas in El Paso, Texas—and an air port of entry—Dulles International Airport outside of Washington, D.C.—to obtain additional information about the procedures in place at the time of the incidents.⁵ We examined whether the existing procedures for information sharing between HHS and DHS provided for timely

⁵Ports of entry are government-designated locations where CBP screens persons, goods, and conveyances. There are 327 air, land, and sea ports of entry in the United States.

response to the incidents—that is, whether officials were sufficiently knowledgeable of their roles to respond to the incidents immediately. In so doing, we compared their responses to the incidents with prior GAO reports on practices to enhance and sustain agency collaboration and our *Standards for Internal Control in the Federal Government* for guidelines on internal controls—components of an organization’s management that provide reasonable assurance that certain objectives, including effectiveness and efficiency of operations, are being achieved.⁶

To identify changes made to response procedures as a result of the TB incidents, we reviewed new and revised policy documents and interviewed HHS and DHS officials as to whether and how their procedures were changed and whether new ones were created. We observed the use of new agency procedures and interviewed HHS and DHS officials at the Bridge of the Americas and Dulles International Airport. To identify the extent to which these changes addressed limitations identified by the incidents, we reviewed agency documents, including HHS’s and CDC’s after-action reports on the TB incident involving the U.S. citizen.⁷ These after-action reports identified deficiencies in their response to the TB incidents and made recommendations to improve their response in future incidents. We also reviewed HHS’s and CDC’s plans and policies for tracking the steps they are taking to address the recommendations identified in the after-action reports. At the time we conducted our review, DHS and the White House Homeland Security Council were preparing after-action reports on the U.S. citizen incident, and DHS and HSC officials separately briefed us

⁶See GAO, *Standards for Internal Control in the Federal Government*, [GAO/AIMD-00-21.3.1](#) (Washington, D.C.: November 1999). We used the criteria in these standards, issued pursuant to the requirements of the Federal Managers’ Financial Integrity Act of 1982 (FMFIA), to provide the overall framework for establishing and maintaining internal control in the federal government, Pub. L. No. 97-255, 96 Stat. 814. Also pursuant to FMFIA, the Office of Management and Budget issued Circular No. A-123, revised December 21, 2004, to provide the specific requirements for assessing the reporting on internal controls. Internal control standards and the definition of internal control in Circular A-123 are based on the aforementioned GAO standards. See also Related GAO Products at the end of this report.

⁷CDC does not plan to issue its after-action report on the U.S. citizen incident in a final format. An after-action report generally includes a summary of the event and observations for improvement. Neither HHS nor DHS completed after-action reports for the incident involving the Mexican citizen with TB. CDC officials said that an after-action report was not required because the response did not require the use of Director’s Emergency Operations Center (DEOC) resources or capabilities. CDC officials said that they typically prepare after-action reports only for incidents that require DEOC capabilities, according to CDC policy.

on the content of their after-action reports, including the vulnerabilities exposed by the incidents and corrective actions taken. We also analyzed the implementation of new and existing public health tools for homeland security developed as part of new HHS and DHS procedures.⁸

To determine what HHS and DHS are doing to assess the effectiveness of any operational changes they have made in response to the TB incidents, we reviewed documents, including the departments' plans to develop a compilation report of all after-action reports completed annually, to identify trends in agency response needs and to make further revisions to procedures as needed. We also interviewed HHS, CDC, and DHS officials about their plans to monitor the performance of any new procedures and tools.

We are not generalizing our findings to other infectious diseases or broader public health incident response because of the unique nature of the course of events that unfolded during the two TB incidents and because the diagnosis, pathology, and treatment of TB disease differ from those of other diseases. We also did not examine any international factors that might have affected the response to the incidents, nor did we examine the potential effect of any changes made by the departments on international health organizations or coordination for international public health incident response.⁹ We conducted this performance audit from October 2007 through October 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

⁸To determine how the new procedures worked in practice, we analyzed information provided by HHS that showed the number of requests for assistance that HHS made to DHS from May 2007 through February 2008, the type of action requested, the extent to which the request communicated the risk of the disease, and how long it took DHS to implement the requested action.

⁹At the time of the incidents, the revised International Health Regulations had been ratified but was not yet in effect. The International Health Regulations, which went into effect later that same year, is a legally binding agreement among countries that agree to the regulations and the World Health Organization that provides a framework for the coordination of the management of public health emergencies of international concern. CDC notified the World Health Organization of the TB incident involving the U.S. citizen under the auspices of the International Health Regulations; however, the World Health Organization was not involved in HHS's or DHS's attempts to locate the U.S. citizen.

Results in Brief

Various factors—a lack of comprehensive procedures for information sharing and coordination as well as border inspection shortfalls—hindered the federal response to the two TB incidents. Our *Standards for Internal Control in the Federal Government* calls for agencies to implement practices that enhance and sustain collaboration, including frequent communication among and within the agencies. In addition, our previous work also calls for agencies to demonstrate leadership, capability, and accountability for preparing for, responding to, and recovering from emergencies and hazardous situations, and establish compatible policies and procedures for operating across agency boundaries.¹⁰ At the time the two TB incidents occurred, HHS and DHS had in place an October 2005 memorandum of understanding creating a broad agreement to communicate and coordinate during public health emergencies. However, the memorandum did not outline how the departments would share information and coordinate their efforts in responding to events such as the two TB incidents. In addition, HHS had general procedures for sharing information about incidents of infectious diseases among senior managers at HHS and DHS through the agencies' operations centers. However, these procedures did not address the types of assistance available from DHS, particularly CBP and TSA, and how to request it. HHS and DHS also lacked procedures for sharing information and coordinating with senior officials within each respective department to involve them in decision making, which resulted in senior officials not being able to ensure that resources were available to take appropriate action. Also, CDC had not developed procedures for informing state and local health officials about the process for coordinating with CDC to determine whether federal isolation and quarantine authorities should be used to deter the travel of an individual with TB. Absent procedures for coordinating with CDC, state and local health officials responding to the incident involving the U.S. citizen were uncertain how to request federal assistance, causing the initial delay in the federal response. Finally, CBP had deficiencies in its traveler inspection process, which led to further delays in locating the individuals and deterring their travel. Specifically, the CBP officer at the port of entry who scanned the U.S. citizen's travel documents into the Treasury Enforcement Communications System (TECS)—CBP's computerized border screening and inspection system—ignored the electronic alert and instructions to

¹⁰See GAO, *Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies*, [GAO-06-15](#) (Washington, D.C.: Oct. 21, 2005); *Catastrophic Disasters: Enhanced Leadership, Capabilities, and Accountability Controls Will Improve the Effectiveness of the Nation's Preparedness, Response, and Recovery System*, [GAO-06-618](#) (Washington, D.C.: Sept. 6, 2006); and [GAO/AIMD-00-21.3.1](#).

refer the individual for further inspection. Instead, the officer allowed the individual to enter the United States without this inspection, in violation of CBP procedures. In the other incident, CBP was unable to locate the Mexican citizen because the information he provided on his medical records was incomplete and did not match the information available in TECS from his visa application.¹¹ Furthermore, TECS did not automatically query possible variations of certain biographic information (e.g., name, date of birth, and travel document information) that might have helped CBP locate the individual.

HHS and DHS have implemented various procedures and tools intended to address deficiencies identified by the 2007 TB incidents, but could take additional steps to enhance their ability to respond to future TB incidents. HHS and DHS have initiated actions consistent with our past work on agency coordination for, preparation for, and response to hazardous situations and federal internal control standards to enhance information sharing and coordination.¹² Specifically, following the incidents and in conjunction with the 2005 memorandum of understanding, HHS and DHS established procedures to channel information across and within the organizations to ensure that agency officials at all levels were informed about potential TB incidents so that managers in the field and at headquarters could coordinate their decisions about responding and allocate resources accordingly. Under the new request for assistance procedures, HHS officials at field offices are to notify headquarters officials when they become aware of potential TB incidents, whereupon HHS officials are to request DHS's assistance to help interdict the individuals with TB at the border. Additionally, HHS and DHS have begun to use public health screening and border inspection tools. For example, when HHS requests DHS assistance, the names of the individuals HHS identifies as public health threats are placed on a new TSA "Do Not Board" list—designed in response to concerns about TB traveler incidents—whereby airlines are notified that they should not allow the individuals on any commercial flights to or from the United States. In addition, individuals with TB whom HHS officials are trying to locate are identified

¹¹A visa is a travel document for people seeking to travel to the United States for a specific purpose, including to immigrate, study, visit, or conduct business; the document allows a person to travel to a U.S. port of entry and ask for permission to enter the country. The State Department processes visa applications, issues visas, and maintains information about individuals who have visas in various visa databases.

¹²[GAO-06-15](#), [GAO-06-618](#), and [GAO/AIMD-00-21.3.1](#).

on “public health alerts,” which are to be entered into TECS and conveyed to each CBP officer inspecting travelers at ports of entry. If an officer encounters an individual identified in a public health alert, the officer is to send the individual for further inspection and possible isolation. CBP has also modified TECS to prevent officers from overriding alerts, thereby preventing a recurrence of the events in 2007 when an officer allowed the U.S. citizen to enter the country even though CBP had instructed port officials to stop the individual. Despite these changes, DHS and HHS may be missing various opportunities to further enhance their ability to respond, as follows:

- First, DHS may be able to further strengthen its TECS search capabilities. At the time of the incidents, CBP was not able to identify the Mexican citizen and deter him from crossing the border because TECS searches did not query on various combinations of the available identifying biographic information. In response to the incidents, DHS enhanced its process for creating public health records to provide for queries on variations of some, but not all, available biographic information. CBP has not examined whether the benefits of conducting these additional searches on other types of biographic information offset the costs of increased time needed to process individuals through ports of entry. According to CBP, a slight increase in the time needed to conduct inspections, especially at land ports of entry, can result in substantial traveler delays and traffic congestion. More specifically, according to CBP, increasing TECS search capabilities has the potential to generate an increase in the number of false matches received. This could increase the amount of time needed by officers to review false matches and, according to CBP, further increase wait times at the border. Nonetheless, without exploring the benefits and costs of conducting searches on other combinations of biographic information, DHS may be missing an opportunity to increase its ability to detect persons with known cases of infectious TB and interdict them upon entry to the United States.
- Second, although HHS has developed the internal processes to inform HHS managers and DHS about potential incidents involving individuals with TB who intend to travel, HHS has not yet completed actions to systematically inform state and local health officials who work with individuals with TB about the new procedures and tools. Educating state and local health officials could help prevent delays in accessing federal assistance and ensure that new procedures and tools informing them how to access this assistance are used appropriately. Such education is especially important since state and local health officials are usually the first to become aware of TB cases.

-
- Third, HHS and DHS have identified additional actions that need to be taken to further strengthen the departments' responses to incidents involving individuals with TB who intend to travel. For example, according to DHS officials, HHS and DHS need to further examine issues related to distribution of personal and medical information of individuals with communicable diseases who pose potential public health threats. However, as of September 2008, HHS and DHS had not finalized plans for completing actions that would promote cross-coordination among federal departments and their agencies, though officials said that they planned to meet to further address the additional actions that need to be taken. Without clear plans with associated time frames for completing these actions, the agencies may not be able to further strengthen their ability to respond to and prevent the cross-border travel of individuals with known cases of infectious TB.

HHS and DHS have several activities under way to assess implementation of the new procedures and tools. Federal internal control standards call for agencies to assess the quality of performance over time so that deficiencies can be identified and addressed.¹³ HHS's and DHS's activities include monitoring the performance of the new request for assistance procedures and tools, holding cross-agency meetings to discuss how information sharing and coordination could be further improved, and creating an annual report, based on after-action reports conducted after some incidents, intended to analyze trends and identify potential improvements. In addition, HHS and DHS are evaluating the new procedures and tools based on TB incidents as they arise. According to HHS and DHS officials, they view the more than 70 requests for assistance that HHS made of DHS from May 2007 through February 2008 as "natural exercises" of the request for assistance procedures.

To ensure continuing improvements in HHS's and DHS's new procedures and tools developed in response to the 2007 TB incidents and to improve awareness of these changes, we are making the following three recommendations.

We recommend that the Secretary of DHS direct CBP to determine whether the benefits exceed the costs of enhancing TECS capabilities when creating public health alerts to include other variations of biographic information that could further enhance its ability to locate individuals who

¹³ [GAO/AIMD-00-21.3.1.](#)

are subject to public health alerts and, if so, to implement this enhancement. We also recommend that the Secretary of HHS and the Secretary of DHS work together to

- continue to inform and educate state and local health officials about the new procedures and tools and
- develop plans with time frames for completing additional actions that require cross-agency coordination to respond to future TB incidents.

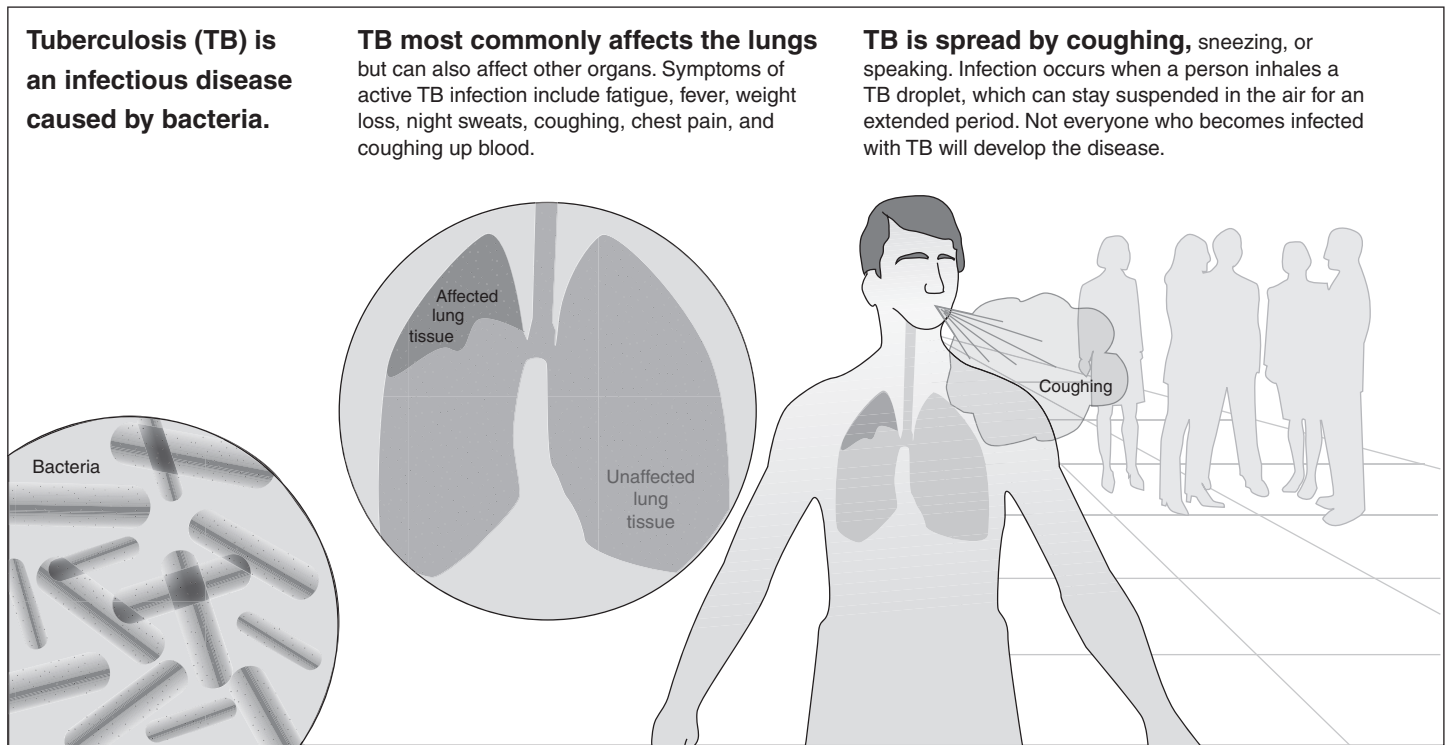
In commenting on a draft of this report, HHS and DHS generally concurred with our recommendations.

Background

M. tuberculosis, the bacterium that causes TB, is spread from person to person, usually through coughing, sneezing, or speaking. TB disease occurs when the bacteria actively multiply in the lungs or other sites in the body.¹⁴ If left untreated, a person with TB disease can spread the bacteria to an average of 10 to 15 people each year. Also, without proper treatment, TB can be fatal. Because the bacteria that cause TB are naturally slow-growing, final confirmed diagnosis of TB disease, including a determination of drug resistance, can take from 6 to 16 weeks, according to CDC. This lengthy process, along with other factors, makes diagnosis of TB difficult. (Fig. 1 provides information about the characteristics of TB.)

¹⁴Five to 10 percent of people with latent TB infection will develop active TB disease sometime in their lives. Only individuals with active TB disease can transmit TB to other people.

Figure 1: Characteristics of TB



Source: GAO analysis of CDC information.

TB disease is treated with a combination of TB medications that must be taken regularly. Individuals who have TB bacteria that are not resistant to drugs can be treated with 6 to 9 months of the most effective medications. Those with TB bacteria that are resistant to at least two of the most effective medications (multiple-drug-resistant TB) require treatment for 18 to 24 months with other TB medications that are much less effective, usually have more negative side effects, and are more expensive.¹⁵ Nonadherence to the drug regimen can lead to the development of drug-resistant TB, which can be transmitted from a person with active disease to an uninfected person in the same way that non-drug-resistant TB is

¹⁵With proper treatment, more than 95 percent of individuals with non-drug-resistant TB can be cured, whereas from 30 percent to 80 percent of individuals with drug-resistant TB can be cured, depending on the level of drug resistance.

transmitted. If a person infected with a drug-resistant strain of TB develops TB disease, his or her strain will be drug resistant as well.

Because adherence to treatment regimens is essential to prevent TB bacteria from becoming resistant to available medications, individuals diagnosed with TB disease in the United States are typically treated via directly observed therapy. In such therapy, patients take their medications in the presence of a health care provider, from several times a week to every day. Individuals enrolled in directly observed therapy are more likely to complete their treatment regimens.

Coordination for TB Public Health Incidents

State and local health departments and federal agencies are to work together to prevent the spread of TB in the United States.

State and Local Health Department Roles and Responsibilities

In addition to day-to-day care and treatment for patients with TB disease, state and local health departments have the primary responsibility for TB control efforts. Each state health department has a state TB controller who oversees TB prevention and control programs in the local health departments, where in most cases their workers provide care and treatment for TB patients, including directly observed therapy. State and local health departments are to work closely with staff at CDC to alert them to problems as they arise and, if necessary, request CDC assistance with nonadherent individuals with TB. Individuals with or exposed to certain diseases, including TB disease, are also subject to state and federal isolation and quarantine authorities.¹⁶ State and local jurisdictions have the primary legal authority to issue isolation and quarantine orders, and consequently do not regularly involve the federal government when attempting to locate individuals who are or may become nonadherent to their drug regimens. Isolation and quarantine laws vary across states;

¹⁶Isolation and quarantine are public health measures intended to stop the spread of communicable disease. Isolation refers to the separation of people who are sick with an infectious illness from those who are not infected. Quarantine refers to the separation of persons who are not currently sick but have been exposed to an infectious agent and may become sick, spread illness to others, or both. Both isolation and quarantine restrict the movement of those who are infected. In most cases, isolation is voluntary. HHS's isolation and quarantine authorities are limited to a list of quarantinable communicable diseases specified by Executive Order of the President, which, in addition to infectious TB, currently includes cholera, diphtheria, plague, smallpox, yellow fever, viral hemorrhagic fevers, severe acute respiratory syndrome, and influenza caused by novel or reemerging viruses that are causing or have the potential to cause a pandemic. *See* 42 U.S.C. § 264(b); Exec. Order No. 13295, 68 Fed. Reg. 17255 (Apr. 4, 2003), as amended by Exec. Order No. 13375, 70 Fed. Reg. 17299 (Apr. 1, 2005).

officials in some states must obtain a court order or establish that a patient is not adhering to medical advice or treatment prior to issuance of an isolation order. Furthermore, states may vary in their enforcement of such orders. However, according to state and federal health officials, the majority of TB patients adhere to treatment recommendations, including remaining in isolation units in hospitals or in isolation at home until they are no longer infectious.

HHS Roles and Responsibilities

HHS has largely delegated to CDC the task of preventing the introduction, transmission, and spread of communicable diseases, such as infectious TB, from foreign countries into the United States, including the ability to apprehend, detain, isolate, or conditionally release a person entering the United States believed to be infected with certain communicable diseases. CDC's overall mission is to protect the health of all Americans through health promotion, disease prevention, and preparedness. CDC's centers, divisions, and offices also develop and disseminate guidance to state and local health departments on federal recommendations and procedures for disease control and prevention. CDC also provides resources and funding and collaborates with U.S. and Mexican health agencies for TB care and treatment for U.S. or Mexican citizens who cross the U.S.-Mexico border frequently.

Within CDC, the Division of Tuberculosis Elimination is responsible for directing TB prevention and control programs in the United States, formulating national TB policies and guidelines, and helping to control TB worldwide. The Division of Tuberculosis Elimination also provides programmatic consultation, technical assistance, outbreak response assistance, and laboratory support to state and local health departments, and provides technical assistance to TB programs in other countries by collaborating with international partners.¹⁷ CDC's Division of Global Migration and Quarantine (DGMQ) is responsible for working to reduce illness and death from infectious diseases, such as TB, among immigrants, refugees, international travelers, and other mobile populations that cross international borders, as well as for preventing the introduction of infectious diseases into the United States and promoting the health of people living along the U.S. borders. To facilitate this work, DGMQ

¹⁷CDC works closely with the World Health Organization, whose Stop TB Strategy aims to reduce the global burden of TB by 2015. During international public health incidents, the World Health Organization also coordinates rapid outbreak response and manages and disseminates relevant information to its global partners.

operates CDC's 20 quarantine stations at U.S. ports of entry.¹⁸ Quarantine station officials are responsible for assessing whether ill persons can enter the country and determining what measures should be taken to prevent the spread of infectious diseases into the United States. Most of the quarantine stations are located in airports and work closely with state and local health departments and CBP officers at nearby or collocated ports of entry. DGMQ trains CBP officers on how to identify and respond to travelers, animals, and cargo that may pose an infectious disease threat.

CDC's Coordinating Office for Terrorism Preparedness and Emergency Response works under the Assistant Secretary for Preparedness and Response in HHS and is responsible for directing and coordinating CDC's response to public health threats. This office operates the Director's Emergency Operations Center (DEOC), which collects information about potential public health threats 24 hours a day, 7 days a week, and is the central location for CDC's public health response activities for specific incidents. The DEOC is responsible for sharing information with, and if necessary, requesting additional resources from HHS through its Secretary's Operations Center (SOC) during a response to a public health incident. The SOC, managed by HHS's Office of the Assistant Secretary for Preparedness and Response, is the focal point for synthesis of critical public health and medical information on behalf of the U.S. government. Both the SOC and the DEOC are intended to provide a formal, central point of management and oversight at their respective agencies to enable senior agency officials and subject-matter experts to take advantage of agency resources and capabilities in responding to an incident.

DHS Roles and Responsibilities

DHS is responsible for coordinating with federal, state, local, and private entities to secure the nation, prevent terrorist attacks within the United States, and provide emergency management and planning, among other activities. According to statute, DHS is to aid HHS in the enforcement of federal quarantine rules and regulations.¹⁹ The Office of Health Affairs (OHA), which began operations in April 2007, serves as DHS's principal agent for medical and health matters. It is responsible for managing DHS's

¹⁸Each quarantine station has jurisdiction over one to five states, which includes the ports of entry located in those states. The exceptions are the three quarantine stations a piece in California and Texas, each of which has jurisdiction over ports of entry in part of the state, in addition to jurisdiction over ports of entry in one or more additional states. DGMQ quarantine station officials work closely with and train DHS, CBP, and other partners at ports of entry.

¹⁹42 U.S.C. § 268(b).

biodefense programs, ensuring the nation's health preparedness in the event of terrorism or natural disasters, and protecting the health of DHS's workforce. Also, TSA, CBP, and the Office of Operations Coordination operate within DHS.

TSA is responsible for ensuring the security of the national transportation network while ensuring the free movement of people and commerce. TSA has responsibility for safeguarding all modes of transportation, including strengthening the security of airport perimeters and restricted airport areas; screening passengers against terrorist watch lists, such as the No Fly list; and inspecting passengers, baggage, and cargo at over 400 commercial airports nationwide.²⁰ TSA is tasked with preventing a public health threat on commercial air carriers through its broad authority to protect the transportation system against any threat that could endanger individuals during travel. TSA's Freedom Center is the primary coordination point for the federal, state, and local agencies dealing with transportation security on a daily basis.

A key part of CBP's mission is to prevent the entry of terrorists into the United States. CBP screens people, conveyances, and goods entering the United States, while facilitating the flow of legitimate trade and travel into and out of the United States. CBP's mission also includes carrying out traditional border-related responsibilities, including narcotics interdiction, enforcing immigration and customs laws, protecting the nation's food supply and agriculture industry from pests and diseases, and enforcing trade laws. All travelers requesting to enter the United States, including U.S. citizens, are subject to examination. Individuals may be referred for enhanced inspection for a variety of reasons, such as criminal records, inclusion on a national registry for sex offenders, or prior immigration or customs violations, or may be randomly selected. As appropriate, CBP also conducts searches of people, merchandise, and conveyances entering or exiting the United States, to ensure that merchandise may be lawfully imported or exported and duties collected.

²⁰The No Fly list contains the names of individuals with known or suspected links to terrorism and is a subset of the consolidated terrorist watch list that is maintained by the Federal Bureau of Investigation's Terrorist Screening Center. While the Terrorist Screening Center maintains the No Fly list, TSA is responsible for the administration of the list as well as for disseminating it to airlines once daily.

CBP officers are responsible for conducting inspections to permit admissible individuals to enter the country. In general, U.S. citizens who demonstrate their citizenship are to be admitted, although those citizens believed to be infected with or exposed to TB or other communicable diseases specified by Executive Order may be subject to isolation or quarantine immediately upon admission.²¹ Noncitizens seeking entry must establish that they are admissible under U.S. immigration law; those determined to have a communicable disease of public health significance are inadmissible, unless granted a waiver.²² During the inspection process, CBP officers are to use TECS—CBP’s computerized border screening and inspection system—in addition to other databases to assess admissibility and purpose for entering the country and to corroborate information. Individuals may be admitted or denied entry and returned to the country of origin. In addition, individuals may be detained temporarily pending an admissibility determination, detained for purposes of prosecuting a violation of U.S. law, or turned over to another law enforcement entity. (App. I provides more detailed information about the CBP inspection process.) In addition to electronic alerts available in databases, CBP officers also rely on be-on-the-lookout notices—which are similar to wanted posters, disseminated by CBP’s Office of Field Operations and hung at ports of entry—to identify individuals who pose potential threats attempting to enter the United States. The Commissioner’s Situation Room—CBP’s 24-hour, 7-day-a-week center for facilitating communication between CBP headquarters and the field offices—serves as the entry point for reporting of incidents from field offices. CBP also assists CDC quarantine station officials with the distribution of health risk information for the traveling public, such as notices that alert travelers to possible exposure to communicable diseases abroad and offer guidance on how to protect themselves.

The DHS Office of Operations Coordination is responsible for monitoring the nation’s security on a daily basis and coordinating activities within DHS and with external entities, such as governors’ offices and law enforcement partners. Within the Office of Operations Coordination, the National Operations Center (NOC) serves as the focal point for these coordination efforts by collecting information about potential homeland security threats 24 hours a day, 7 days a week. The NOC serves as the

²¹See 42 U.S.C. § 264; 42 C.F.R. § 71.32(a); and Exec. Order No. 13295, 68 Fed. Reg. 17255 (Apr. 4, 2003), as amended by Exec. Order No. 13375, 70 Fed. Reg. 17299 (Apr. 1, 2005).

²²DHS has the authority to grant waivers of inadmissibility if certain criteria are met.

primary hub for federal emergency and public health preparedness and response by combining and sharing information, communications, and operations coordination pertaining to the prevention of terrorist attacks and domestic emergency management with other federal, state, local, tribal, and nongovernmental emergency operations centers, including TSA's Freedom Center and CBP's Commissioner's Situation Room.

HHS and DHS Memorandum of Understanding

In October 2005, HHS and DHS signed a memorandum of understanding that was intended to provide a basis for federal cooperation to enhance the nation's preparedness to prevent the introduction, transmission, and spread of quarantinable and serious communicable diseases, such as TB, from foreign countries into the United States. According to CBP officials, the memorandum was developed following the 2003 outbreak of severe acute respiratory syndrome (SARS) in order to prepare the departments for circumstances that would need a coordinated response. CDC is the designated agency with responsibility for HHS activities supported by the memorandum. CBP, Coast Guard, and Immigration and Customs Enforcement are the designated DHS agencies with responsibility for assisting CDC in the enforcement of isolation and quarantine authorities.

The Two Spring 2007 TB Incidents

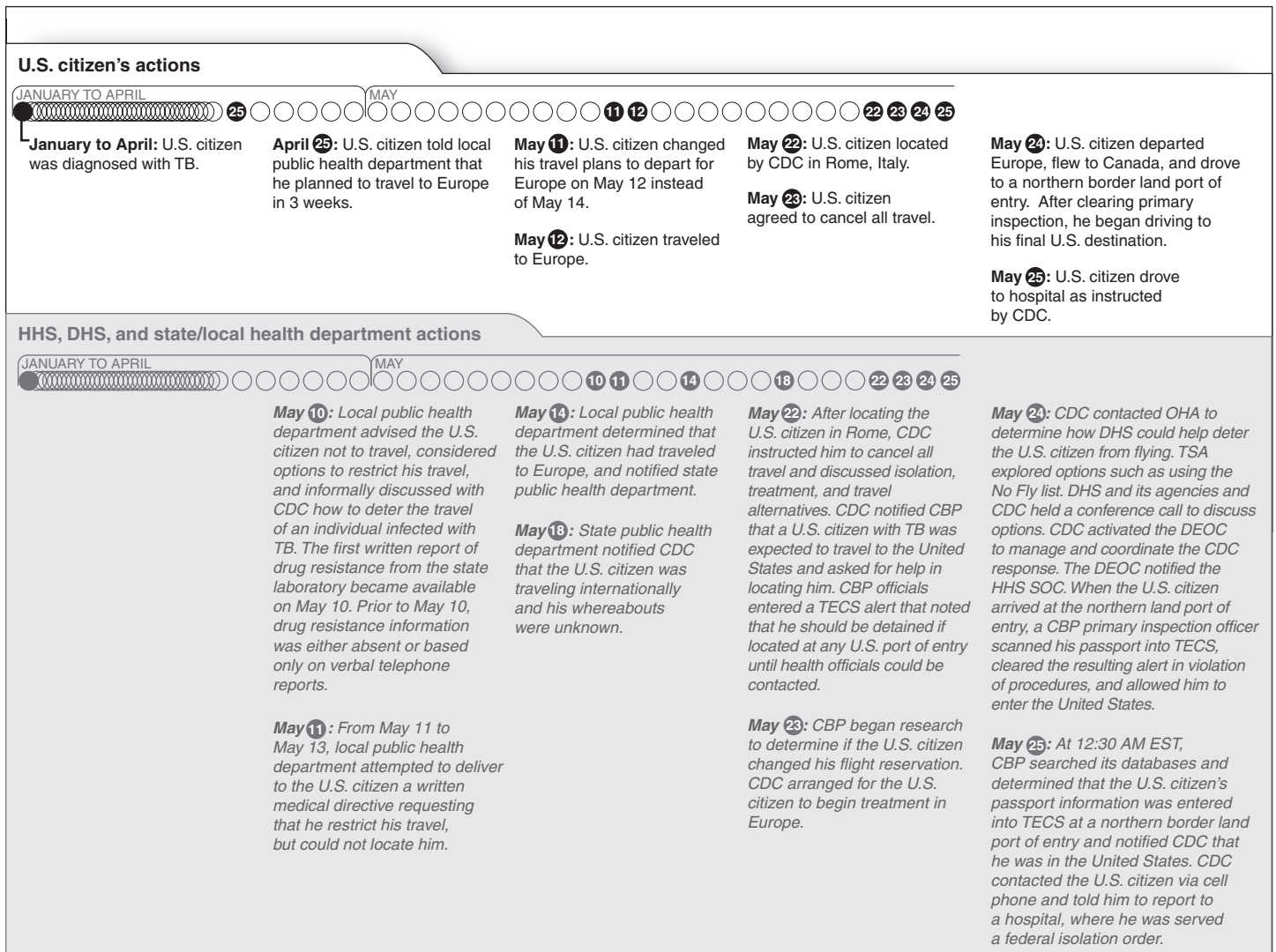
Two TB incidents occurred in spring 2007. One involved a U.S. citizen who traveled by commercial airline internationally and subsequently reentered the United States at the Canadian border at the Champlain, New York, land port of entry. The other involved a Mexican citizen who crossed the U.S.-Mexico border multiple times at the El Paso, Texas, land port of entry. In both incidents, according to HHS, the individuals with TB did not follow the medical advice of federal, state, and local public health officials and instead continued to travel.

In the incident involving the U.S. citizen, state and local health officials reported that once they determined that the U.S. citizen posed a public health threat, they orally recommended to him that he not travel and reviewed options to restrict his international travel. State and local health officials reported that from May 11 to May 13, they attempted to hand deliver a letter to the individual that emphasized the seriousness of drug-resistant TB and the potential threat he posed to others, and included a recommendation that he postpone his travel. However, according to CDC officials, state and local health officials reported that they were unable to deliver the letter because, unbeknownst to them, the individual had left the United States 2 days earlier than he had previously planned, despite advice not to travel. When federal public health officials became involved in the response, they contacted the individual overseas and made efforts to

advise him about seeking treatment and how to return to the United States. Once CDC notified CBP of the incident, CBP entered an alert in TECS that provided instructions to detain the individual if he was encountered at any port of entry. However, HHS reported that the individual continued with his travel plans against medical advice. For example, when a CDC quarantine officer located the individual abroad and attempted to direct him to treatment in Europe, the individual changed his travel plans again, left his hotel, and did not contact CDC until he returned to the United States. Upon his return, according to HHS, CDC was able to contact him via cell phone and he agreed to undergo treatment for drug-resistant TB.²³ (Fig. 2 provides more details about the incident involving the U.S. citizen and officials' actions.)

²³Once the individual reentered the United States, CDC issued a provisional federal isolation order—the first since 1963. Upon his return to the United States, CDC arranged his travel under this isolation order.

Figure 2: Description of TB Incident Involving the U.S. Citizen, January through May 2007

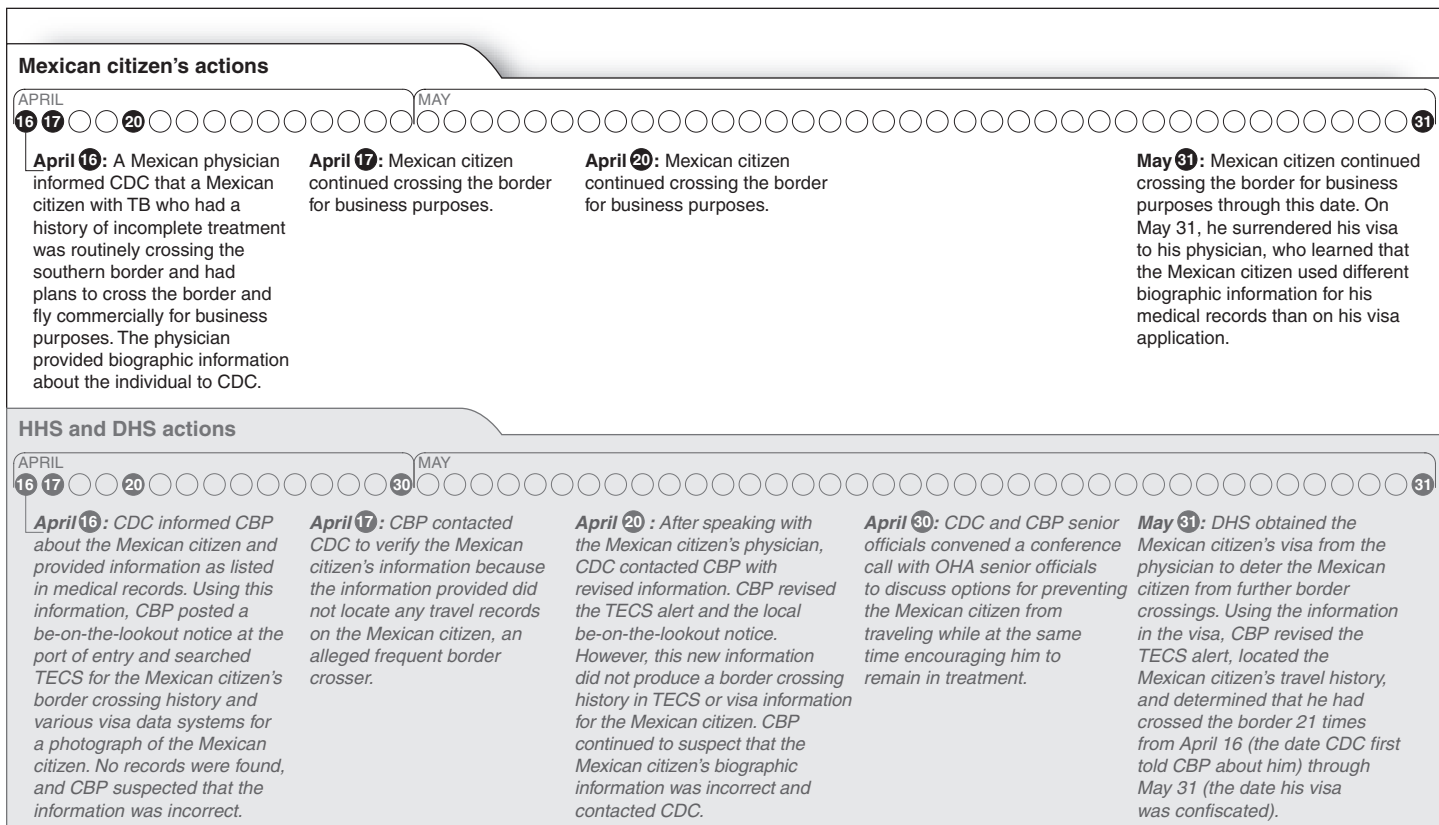


Source: GAO analysis of HHS, DHS, and state/local health department information.

In the incident involving the Mexican citizen, the individual's physician in Mexico notified U.S. state and local health officials on April 16 that the individual was routinely crossing the U.S.-Mexico border. Those officials immediately contacted CDC officials, who also notified CBP and requested that it issue a be-on-the-lookout notice and enter a TECS alert to deter the individual from traveling. However, according to both agencies, federal officials were unable to locate information about him in available

databases. Despite multiple searches by CBP, he was checked at the border approximately 20 times during April and May 2007, and was able to cross into the United States. According to officials from both agencies, the Mexican citizen did not turn over his visa when his physician initially requested it, which would have allowed CDC and CBP officials to locate information about him. On May 31, approximately a month after state and local health officials first notified federal officials of the incident, the Mexican citizen gave his visa to his physician. (Fig. 3 provides more details about the incident involving the Mexican citizen and officials' actions.)

Figure 3: Description of TB Incident Involving Mexican Citizen, April through May 2007



Source: GAO analysis of HHS and DHS information.

Note: We followed up in February 2008, at which time the patient remained in treatment according to CDC officials, and had not made any subsequent attempts to cross the border according to CBP officials.

HHS's and DHS's Lack of Comprehensive Procedures for Information Sharing and Coordination and CBP Inspection Deficiencies Hindered the Response to the TB Incidents

Various factors—a lack of comprehensive procedures for information sharing and coordination as well as border inspection shortfalls—hindered the federal response to the two TB incidents. HHS and DHS lacked formal procedures for sharing information with each other. They had established a memorandum of understanding in October 2005 creating a broad agreement to communicate and coordinate during public health emergencies. However, the departments were unable to carry out the intent of the memorandum because they had not developed specific operational procedures to share information and coordinate their efforts to respond to events such as the two TB incidents. In addition, HHS had general procedures for sharing information about incidents of infectious diseases among senior managers at HHS and DHS through the agencies' operations centers. However, HHS and CDC did not have procedures that outlined what assistance was available to them from DHS, particularly from CBP and TSA, and how to request it. The two departments also lacked internal procedures outlining how to share information and coordinate with senior officials within each department about the TB incidents to involve them in decision making, which resulted in senior officials not being able to ensure that resources were available to take appropriate action. In addition, CDC had not developed procedures to inform state and local health officials about the process for coordinating with CDC to determine whether federal isolation and quarantine authorities should be used to deter the travel of an individual with TB, causing the initial delay in the federal response. Furthermore, CBP had deficiencies in its traveler inspection process, which led to further delays in locating the individuals and deterring their travel.

HHS and DHS Lacked Comprehensive Procedures to Share Information and Coordinate Their Responses and Resources in the Two TB Incidents

Despite the memorandum of understanding between HHS and DHS in place at the time of the incidents, the departments lacked comprehensive procedures needed to share information with each other and coordinate resources to deter cross-border travel of nonadherent individuals with infectious disease, such as TB. Our previous work has identified practices to enhance and sustain agency collaboration, including frequent communication among the agencies and the establishment of compatible policies, procedures, and other means of operating across agency boundaries.²⁴ Additionally, *Standards for Internal Control in the Federal Government* calls for (1) management to ensure that there are adequate means of communicating with, and obtaining information from, external

²⁴GAO-06-15.

stakeholders that may have a significant impact on the agency achieving its goals and (2) effective communication flowing down, across, and up the organization to enable managers to carry out their internal control responsibilities.²⁵ Finally, our work on emergency management outlines three basic elements that constitute effective preparedness and response to hazardous situations, including the spread of infectious diseases. The three basic elements are (1) leadership, where clear roles and responsibilities are effectively communicated and understood in order to facilitate rapid and effective decision making; (2) capabilities, for which plans are integrated and key players define what needs to be done, where, by whom, and how well; and (3) accountability, where officials work to ensure that resources are used appropriately for valid purposes, including developing operational plans that are tested and taking corrective action as needed.²⁶

Although the memorandum of understanding outlined a broad agreement to promote information sharing in the event of a public health incident, it did not provide specific operational procedures for the departments and their component agencies to share information with each other to respond to events such as the two TB incidents. In addition, HHS had general procedures for senior managers to share information about infectious diseases with senior DHS officials through their operations centers. However, we learned through discussions with DHS officials and from the HHS and CDC after-action reports that during the incident involving the U.S. citizen, HHS and CDC did not have procedures outlining what assistance was available from DHS, particularly from CBP and TSA, and how to request it. Some of the DHS capabilities that were unclear to HHS and CDC decision makers included

- CBP's search capabilities for locating individuals and their travel itineraries, their travel histories, or both in order to stop cross-border travel;
- the availability of TECS and be-on-the-lookout notices through CBP, which could have assisted officers in identifying the individuals so that they could locate them at any U.S. port of entry; and

²⁵ [GAO/AIMD-00-21.3.1.](#)

²⁶ [GAO-06-618.](#)

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- TSA’s ability to prevent the individuals from flying into and out of the United States.²⁷

Because CDC was unsure whether or how DHS could offer assistance for public health purposes, CDC did not request assistance from CBP until 4 days after state health department officials notified CDC of the incident.

HHS and DHS also lacked procedures for sharing individual health information between the departments for public health incident response, including how broadly to share it, which delayed the federal response to the incidents. CDC and DHS officials we interviewed said that CDC was initially slow to provide this identifying information to TSA officials while the agencies were determining a course of action and whether TSA’s No Fly list could be used to prevent the U.S. citizen’s air travel, thus hindering their ability to locate and deter the individual from traveling. Public health and law enforcement authorities generally have different approaches to sharing such information, as reflected in their missions and responsibilities. According to CDC officials, in an effort to limit disclosure of individuals’ private medical information, agency staff generally refrain from sharing identifying information with each other, even when discussing a potential incident, preferring to refer to people and places as “the patient” or “hospital A.” On the other hand, CBP and TSA, as a law enforcement and security agency, respectively, need accurate and complete identifying information to locate and detain individuals. In the incident involving the U.S. citizen, CDC officials took several hours to provide the person’s name and health information after initially contacting DHS for assistance because they were unsure how the information was going to be used and protected. CDC’s hesitancy delayed CBP’s dissemination of a be-on-the-lookout notice and placement of an alert in TECS. CDC officials indicated that generalized concerns over the applicability of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and Privacy Act restrictions on the sharing of individual information²⁸ contributed to a delay in their sharing this information with

²⁷Although TSA had policies and procedures in place for nominating individuals with suspected ties to terrorism to the No Fly list, it did not have a comparable way to prevent someone from flying because of public health concerns.

²⁸HIPAA, Pub. L. No. 104-191, subtitle F of title II, 110 Stat. 1936, 2021-2034 (pertinent part codified as amended at 42 U.S.C. §§ 1320d to d-8) (restrictions apply only to health plans, health care clearinghouses, and, in certain instances, health care providers). Privacy Act of 1974, Pub. L. No. 93-579, § 3, 88 Stat. 1896, 1897 (codified as amended at 5 U.S.C. § 552a) (restrictions apply to agencies).

DHS. However, as CDC has concluded, in this instance both laws appear to permit the disclosure to DHS, without patient authorization, of individually identifiable health information acquired for the purpose of controlling the spread of disease.²⁹ According to CDC, there was a concern that the lack of procedures for sharing identifying and health information between agencies resulted in this information being disseminated over law enforcement channels more broadly than may have been necessary under the circumstances. In addition, concerns were raised that password protection for the information disseminated may have been insufficient.

HHS and DHS Lacked Specific Procedures for Information Sharing within Each Department to Respond to the TB Incidents

Along with a lack of comprehensive procedures for information sharing with each other, HHS and DHS lacked specific procedures for communicating across their respective component agencies about public health incidents, which contributed to uncertainty about whether and when CDC, TSA, or CBP should notify senior officials at HHS or DHS about potential incidents. According to *Standards for Internal Control in the Federal Government*, effective communication should occur in a broad sense with information flowing down, across, and up organizations. Lacking specific procedures, HHS and CDC officials used a “standard of reasonableness” that involves professional discretion as a basis for determining whether the individual posed a potential public health threat and when to notify senior officials. CDC officials told us that using this standard involves some subjective judgment. According to CDC, its quarantine station officials initially believed that the two TB incidents could be resolved locally without notifying senior officials, which led to delays in the federal response in both incidents. For example, in the U.S. citizen incident, senior officials at HHS and CDC were not notified by CDC quarantine station officials at the field office level about the incident early enough to ensure timely use of federal isolation and quarantine authorities to deter his travel. In addition, CBP and TSA lacked written procedures for internal communication regarding how to handle public health incidents and when to notify DHS senior officials about the efforts of officials in the field to respond to requests from CDC quarantine station officials. During this incident, CBP officials at the air port of entry became involved on May 22, but they did not notify DHS senior officials until May 24. In the incident involving the Mexican citizen, CBP officials at the land port of entry did not notify DHS senior officials until 14 days (April 16 to April 30) after CDC requested CBP assistance.

²⁹See 45 C.F.R. § 164.512(b) (2007), and 5 U.S.C. § 552a(b).

CDC Lacked Procedures to Coordinate with State and Local Health Officials to Determine Use of Federal Isolation and Quarantine Authorities

CDC had not developed procedures to inform state and local health officials about the process for coordinating with CDC to determine whether federal isolation and quarantine authorities should be used to deter the travel of an individual with TB, causing the initial delay in the federal response. Although some information on federal isolation and quarantine authorities was available on CDC's Web site, guidance on the process by which state and local health officials were to obtain federal assistance had not been developed.³⁰ As a result, state and local health officials responding to the incident involving the U.S. citizen were uncertain how to request federal assistance and, prior to doing so, attempted but failed to contact the individual to deter him from traveling, ultimately contributing to the delay in the federal response. Eight days (May 10 to May 18) elapsed from when a state health department official discussed options for restricting the U.S. citizen's international travel with a CDC quarantine station official, without confirming that a specific individual intended to travel, to when the state requested formal assistance from CDC. Officials from an association representing state and local health officials and CDC officials stated that many state and local health officials are not aware of federal isolation and quarantine authorities and how they are to be implemented and enforced. CDC is preparing further guidance to clarify the implementation and enforcement of these authorities.

CBP Inspection Deficiencies Contributed to Delays in Locating the Individuals with TB

Deficiencies in CBP's traveler inspection operations further contributed to the delay in federal efforts to locate the two individuals with TB and direct them to treatment. When responding to HHS's request for assistance to deter the U.S. citizen from traveling, CBP issued a TECS alert to determine when the U.S. citizen planned to return to the United States. When he crossed the border at a land port of entry after having flown into Canada, the CBP officer queried the individual's travel documents in TECS to check against law enforcement systems for outstanding warrants, or criminal or administrative violations, and to assist with determining admissibility into the United States. However, the officer ignored the electronic alert and instructions to refer the individual for further inspection, in violation of CBP procedures. Instead, the CBP officer cleared the TECS alert and allowed the individual to enter the country

³⁰According to CDC, while state and local public health authorities may require formal hearings to compel patient isolation or restrict patient movement, federal authorities to temporarily isolate or quarantine a patient can be applied quickly, without a formal hearing.

without the required further inspection. When responding to the incident involving the Mexican citizen, CDC and CBP officials did not know that they had received incomplete or inaccurate biographic information or both. As a result, at the time of the incidents, a TECS database search would not prompt a “match” if incomplete or inaccurate biographic information was used for a query. According to CBP officials, incomplete and inaccurate information delayed the identification of the individual by over 1 month and allowed him to travel into the United States approximately 20 times after CDC first notified CBP to look for and deter him.

According to CBP officials, they realized within a day of initiating the TECS searches that the identifying information was incomplete because the searches did not produce a travel history, which typically shows an individual’s travel in and out of the United States. Also, the searches of visa databases, which could have provided more information about his identity, did not produce any information on the individual, who was said to be a frequent traveler.³¹ Once CBP officers realized that the Mexican citizen’s identifying information was incomplete, they contacted CDC the next day to confirm the identifying information and told CDC officials that they suspected that the information was incomplete. According to agency officials, 4 days after CDC first notified CBP about the Mexican citizen, CDC notified CBP that some of the biographic information from the Mexican citizen’s medical records was inaccurate. Using corrected information, CBP immediately revised the TECS alert and the local be-on-the-lookout notice; however, when a new TECS search still did not produce information, CBP contacted CDC. Although CDC had made attempts, it did not obtain accurate and complete biographic information. On May 31, about 6 weeks after CDC first contacted CBP officials, the Mexican citizen gave his border-crossing card, a type of visa, to his physician. CDC was then able to provide CBP with the complete and accurate biographic information, and DHS took possession of his card, thus preventing further crossing. With the accurate information from the Mexican citizen’s documents, DHS officials located his travel history in TECS on May 31, determined that he had crossed the southern border

³¹The State Department issues a type of visa, the border-crossing card, to Mexican citizens for travel to the United States. Mexican citizens can apply for a border-crossing card at U.S. consulates throughout Mexico. Once the State Department approves their applications, Mexican citizens are able to use the cards to apply for entry to the country without additional documentation, provided they are seeking admission by land or sea as temporary visitors for business or pleasure from a contiguous territory.

21 times from April 16 through May 31, and entered an accurate alert in TECS.

HHS and DHS Implemented Procedures and Tools to Address Response Deficiencies, but Could Take Further Steps to Complete Actions Identified as a Result of the 2007 TB Incidents

HHS and DHS have implemented various procedures and tools intended to address deficiencies identified by the 2007 TB incidents. However, CBP has not implemented TECS modifications that might further help officers identify individuals who have been diagnosed with TB at ports of entry. In addition, CDC has not yet completed efforts to inform state and local health officials about the existence of the new procedures and tools or how to successfully use them in order to facilitate requesting federal assistance and ensure that new procedures and tools are used appropriately. Finally, HHS and DHS have identified additional actions that need to be taken to further strengthen the departments' ability to respond to incidents involving individuals with TB who intend to travel. However, as of September 2008, HHS and DHS had not finalized plans for completing these actions.

HHS and DHS Implemented New Procedures and Tools Intended to Address Information Sharing, Coordination, and Public Health Screening and Border Inspection Deficiencies Identified by the TB Incidents

HHS and DHS officials—including officials from CDC, CBP, and TSA—met in June 2007 to develop new procedures and tools to determine how DHS might be able to help HHS respond to public health incidents, develop a framework for coordinating with each other during responses to public health incidents, and ensure the appropriate level of agency involvement and use of agency resources. To help promote enhanced information sharing across and within both departments, HHS and DHS developed new procedures for HHS to request assistance from DHS. These new procedures are consistent with practices identified in our past work for enhancing and sustaining agency collaboration and for establishing leadership, capabilities, and accountability for preparedness and response.³² They are also consistent with *Standards for Internal Control in the Federal Government*, which calls for management to ensure that there are adequate means of communicating internally and with external stakeholders.³³ Under the new procedures, HHS officials at field offices, such as quarantine stations and ports of entry, are to notify headquarters officials when a TB or other public health incident develops, whereupon

³²See [GAO-06-15](#) and [GAO-06-618](#).

³³See [GAO/AIMD-00-21.3.1](#).

these officials are to make requests to DHS headquarters to task TSA and CBP officials at ports of entry with taking action to interdict individuals with TB and other infectious diseases at the borders. HHS prepares written requests for assistance that include the information DHS needs to respond, such as the individual's name, date of birth, and action to be taken if the individual is encountered.³⁴ DHS and HHS have also included safeguards designed to ensure the privacy of the individual in the request for assistance process. The request for assistance form is received only by appropriate HHS and DHS officials responsible for responding to and completing requests, and officials from both departments send the written requests via e-mail, as password-protected documents. CDC and DHS officials said that the new procedures for information sharing are also intended to allow the agencies to take advantage of existing procedures, resources, and capabilities while maintaining the close professional relationships between CDC and CBP officers at ports of entry.

DHS, particularly TSA and CBP, has also worked with HHS, particularly CDC, to implement new tools intended to deter the cross-border travel of individuals with infectious TB. Specifically, TSA modified an existing tool—the No Fly list—to create a Do Not Board list for infectious air travelers who are nonadherent with treatment and intend to travel. The Do Not Board list is a roster of individuals whom CDC requests be denied boarding onto a commercial airline flight into, out of, or within the United States because they pose a potential public health threat to passengers, air carriers, or the transportation system. CDC's criteria for placement of an individual on the Do Not Board list include public health officials' belief that (1) the individual has an a communicable disease that would constitute a public health threat if he or she were allowed to travel by airplane; (2) the individual is unaware of, or will become nonadherent to, public health recommendations regarding treatment or other instructions; and (3) the individual intends to travel by airplane. According to CDC officials, the agency requests removal of an individual from the list when state or local health officials confirm that the individual has undergone

³⁴According to CDC officials, the procedures for HHS to request assistance from DHS also provide a formal, streamlined mechanism for CDC to request information from CBP and air carriers to conduct contact tracing. To assist in this effort, CBP compiles passenger records and provides the information directly to the DEOC, rather than routing it back through the NOC and the SOC, to protect individuals' privacy. CBP then notifies the NOC that the information was provided to the DEOC to complete the request. Upon request from DHS, airlines also directly provide CDC with information collected from passenger manifests and the departure/arrival forms airline passengers complete when flying internationally.

sufficient treatment to be determined noninfectious. HHS officials said that the list is reviewed at least monthly. TSA maintains the Do Not Board list, which is separate from other watch lists for air carriers, such as the No Fly list used to prevent known terrorists from boarding airplanes, but functions in a similar manner. TSA sends the Do Not Board list to domestic and foreign air carriers on a daily basis as an addendum to the No Fly list.³⁵ U.S. air carriers are to screen all passengers against the Do Not Board list (regardless of the flight's origination or destination). International carriers are to screen passengers who are arriving in or departing from the United States but not passengers traveling outside the United States.

HHS and DHS officials said they believe that the request for assistance process and the Do Not Board list could be used to address travelers with other infectious diseases, though CDC officials said the most likely use would be for travelers with infectious TB.³⁶ Although the Do Not Board list was created in response to the incident involving the U.S. citizen, officials said that individuals with infectious diseases other than TB, such as measles, SARS, or a strain of influenza with pandemic potential, could be placed on the Do Not Board list if they met the criteria. Generally, CDC expects that it could use the new procedures and tools in instances where health officials have identified infectious individuals who have a substantial risk to expose others and there is a strong belief by health officials that an infected individual intends to travel. However, according to CDC officials, the use of the Do Not Board list to prevent travel by individuals with other infectious diseases would be less likely because they would become ill more quickly and feel too unwell to travel, be more visibly ill, and recover more quickly than individuals with TB. In addition, CDC officials said that the Do Not Board list requires careful review of individual cases. In the event of a large disease outbreak, CDC's ability to look at individual cases to place them on the Do Not Board list would be limited, officials said.

³⁵According to CDC, foreign ministries of health or the World Health Organization can request that individuals be placed on the Do Not Board list and would request that assistance through CDC.

³⁶In the year since the new procedures and tools have been developed and implemented, CDC has not had to request DHS assistance or use the tools to deter travel in any cases other than for individuals with TB.

CBP also created and implemented a new TECS public health alert (1 week after the U.S. citizen reentered the country) to help ensure that DHS is able to assist CDC in locating individuals with infectious diseases, including TB, who are attempting to enter the United States. According to CBP officials, prior to the TB incidents, TECS public health alerts were indistinguishable from other types of alerts and information on how to manage an individual with infectious disease, including TB, was not prominently displayed in the alert. Now, when CDC requests CBP assistance for individuals who intend to travel against medical advice, if the individual's license, passport, visa, or other identifying document or biographical information is scanned or manually entered into TECS, the new TECS public health alert is displayed prominently on the CBP officer's computer screen, with specific instructions for the officer to isolate the individual and contact CDC immediately. As with the Do Not Board list, federal officials must know an individual has an infectious disease, including TB, to place a public health alert in TECS. Furthermore, according to CBP officials, if the identifying information provided to physicians or recorded in health records does not match the information entered in visa databases, visas and other travel documents generated from these databases will not produce a match when queried and CBP officers will not know to detain the individual, as in the case involving the Mexican citizen. Furthermore, if an individual's information (passport or visa) is not scanned or manually entered into TECS when he or she enters the United States, officers will not discover the public health alert and will not detain the individual.

CBP also took other actions to strengthen TECS computer screening mechanisms and search capabilities for public health alerts. These changes were intended to ensure that CBP officers at ports of entry adhere to agency protocols and instructions for all TECS alerts, either public health or otherwise. At the time of the incident involving the U.S. citizen, the CBP officer who admitted the individual into the country was able to bypass the requirement to refer individuals for further inspection because there was no supervisory review. According to CBP officials, to prevent this, CBP upgraded TECS computer programming so that all TECS public health alert matches are automatically sent to terminals where referrals receive supervisory review intended to ensure that individuals receive the required additional inspection and referral to CDC. With this change, officers are no longer able to override the public health alert in TECS without first diverting the individual for further screening. The public health alert can only be overridden in TECS once the individual has cleared the more detailed inspection (called secondary inspection).

In addition, CBP enhanced computer search capabilities for TECS public health alerts. According to CBP officials, in the incident involving the Mexican citizen, the officer who entered the TECS alert did not use varying combinations of the biographic information during his search because he believed that the information CDC provided was accurate. According to CBP officials, as of May 2008, when a public health alert is entered into TECS, the system is now programmed to create multiple public health alerts on variations of specific types of the biographic information entered. However, CBP officials told us that the TECS programming changes do not create variations on other combinations of an individual's available biographic information. A CBP official told us that CBP could further modify TECS to create public health alerts using different combinations of other available biographic information, but CBP had not explored the feasibility of making this change and had not examined whether the benefits of conducting these additional searches on other types of biographic information offset the cost of a possible increase in the time needed to process individuals through busy ports of entry. According to CBP, a slight increase in the time needed to conduct inspections, especially at land ports of entry, can result in substantial traveler delays and traffic congestion. Nonetheless, without exploring whether the costs of conducting searches on these other combinations of biographic information exceed the benefits, DHS may be missing an opportunity to enhance its ability to detect persons with known cases of infectious disease and deter them from entering the United States.

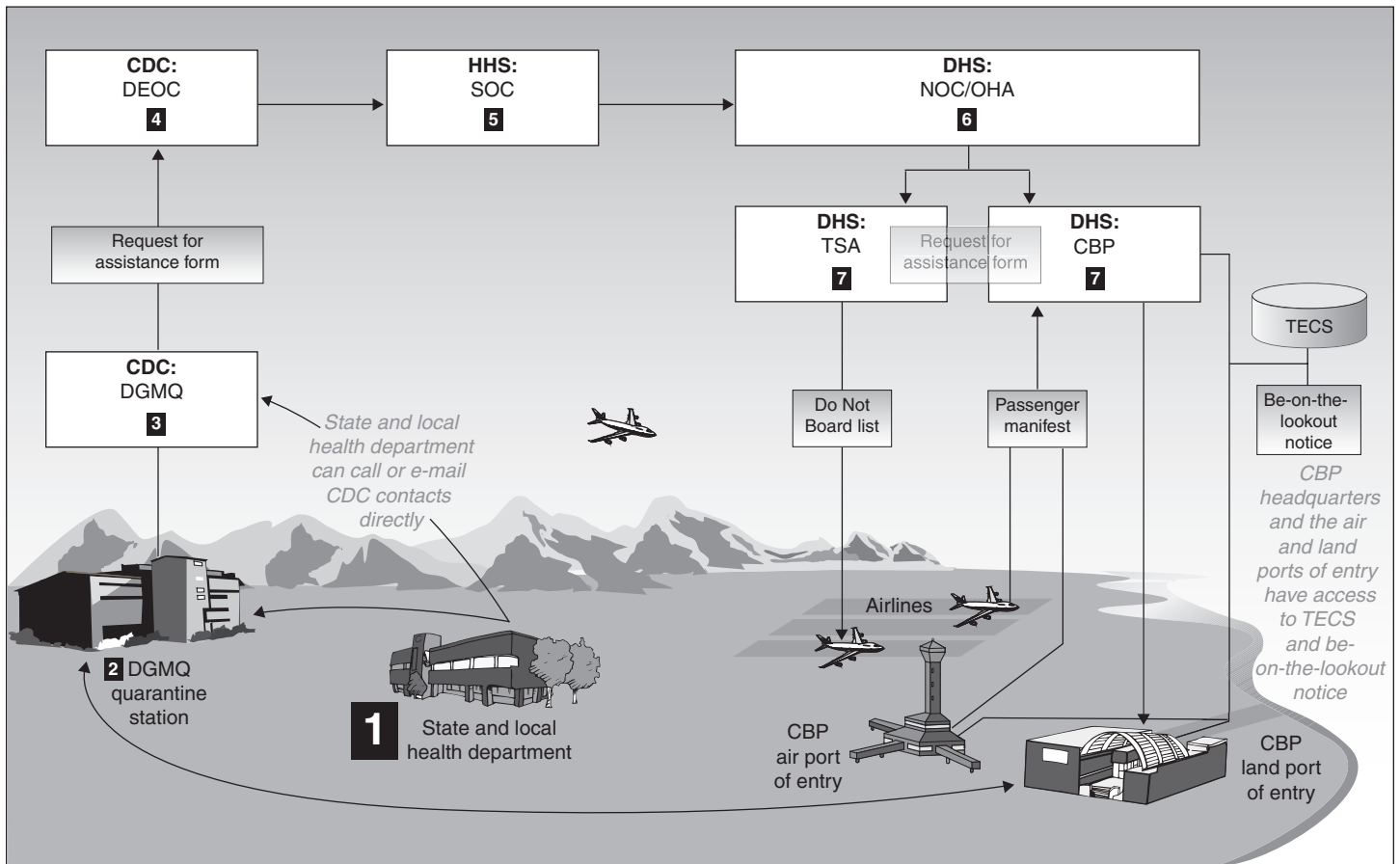
These changes to TECS notwithstanding, CBP's ability to identify individuals who are the subject of public health alerts—and ultimately deter their cross-border travel—largely depends on CBP officers' compliance with prescribed inspection procedures. In November 2007, we reported on weaknesses in inspection procedures at U.S. ports of entry.³⁷ We said that CBP had taken action to address weaknesses in 2006 inspection procedures, such as not verifying the citizenship and admissibility of each traveler, that contributed to failed inspections. However, our follow-up work conducted months after CBP's actions showed that weaknesses still existed. In July 2007, CBP issued detailed procedures for conducting inspections, including requiring field office managers to assess compliance with these procedures. However, CBP had not established an internal control to ensure that field office managers

³⁷See GAO, *Border Security: Despite Progress, Weaknesses in Traveler Inspections Exist at Our Nation's Ports of Entry*, GAO-08-219 (Washington, D.C.: Nov. 5, 2007).

share their assessments with CBP headquarters to help ensure that the new procedures are consistently implemented across all ports of entry and reduce the risk of failed traveler inspections. We recommended that CBP implement internal controls to help ensure that field office directors communicate to agency management the results of their monitoring and assessment efforts so that agencywide results can be analyzed and necessary actions taken to ensure that new traveler inspection procedures are carried out in a consistent way across all ports of entry. CBP agreed with our recommendation and stated that it has begun to take action to address it. A CBP official told us that CBP intends to finalize the results of field office assessments in October 2008.

Figure 4 shows the flow of requests for assistance from HHS to DHS, together with the steps each agency takes to prepare, submit, and complete these requests. Step-by-step procedures for each agency are explained in table 1.

Figure 4: Information Flow for HHS Requests for DHS Assistance



Sources: GAO (data), Art Explosion (graphics).

Table 1: Step-by-Step Procedures for HHS to Request Assistance from DHS

Step 1	State or local health officials contact the closest CDC quarantine station and provide information about a particular case.
Step 2	Quarantine officer convenes conference call to local TB controller, state health official, and officials from CDC's Division of Tuberculosis Elimination and GMQ to review the request and information about the case and to discuss appropriate available assistance. ^a The quarantine officer then routes the information to senior DGMQ officials at CDC headquarters.
Step 3	DGMQ officials determine what type of assistance to request from TSA/CBP ^b and prepare a written request with information necessary to complete requested action to submit to the DEOC. Written requests for assistance typically include information about the individual (name, date of birth, passport information), type of illness, history of nonadherence to treatment or history of travel, and instructions for TSA or CBP officials who may encounter the individual. Request forms also include contact information for CDC officials who can provide TSA or CBP with additional information about or assistance with the case. DGMQ confirms action taken with health department and encourages health officials to contact the individual to inform him or her of the (1) placement on the Do Not Board list, (2) entering of his or her name in TECS as a public health alert, and (3) importance of adhering to TB treatment regimen.
Step 4	DEOC officials submit written request for assistance to the HHS SOC for review.
Step 5	HHS SOC officials review the request to determine if the agency can provide additional resources or assist CDC with the case and submit the request to the DHS NOC.
Step 6	OHA medical officer on duty in the NOC reviews the request for assistance. OHA contacts DGMQ directly with any questions. ^c
Step 7	Depending on the type of assistance requested, TSA, CBP, or both take the requested action. TSA confirms request with OHA, manually adds individual's name to the Do Not Board list, and sends it to airlines as with the No Fly list. In instances in which several hours will pass before the list is forwarded to the airlines, TSA will send messages to the airlines noting the addition of a single name to the Do Not Board list. CBP enters a TECS public health alert and searches passenger name records to attempt to locate the individual. ^d CBP also prepares a be-on-the-lookout notice for posting at ports of entry.

Source: GAO analysis of HHS and DHS information.

^aNot all requests for assistance result in the placement of individuals on the Do Not Board list or in TECS. CDC sometimes advises the local health department to work with individuals to consider other options for treatment. CDC also encourages health officials to begin the process to issue a state isolation order if necessary. On the other hand, CDC officials also stated that in some instances in which physicians or local health officials did not feel strongly that an individual with TB met the criteria for placement on the list, CDC disagreed and requested assistance from DHS.

^bIn order to help ensure that individuals with TB undergo a complete course of treatment, CDC also works with DHS to extend an individual's authorized stay in cases in which, for example, an individual's visa will expire soon or to change travel dates for airline tickets.

^cOHA officials stated that in cases in which they had to follow up with CDC regarding a request, it was usually to verify with CDC reasons for requesting placement of an individual on the Do Not Board list but not requesting a TECS public health alert for that individual, or vice versa. OHA officials stated that they defer to CDC's determination for assistance.

^dAccording to CBP officials, in cases in which an individual with TB is highly infectious, CBP is able to search passenger name records multiple times in an hour.

The departments and their component agencies were able to test how the new procedures worked in practice because information provided by HHS for the period May 2007 to February 2008 showed that HHS coordinated with DHS to request assistance for 72 actions to place individuals on, or

remove them from, the Do Not Board list, or to place or remove public health alerts in TECS.³⁸ Of these 72 requests, 21 were to add an individual to the Do Not Board list.³⁹ Table 2 shows the number of requests for assistance CDC prepared for HHS to submit to DHS by type of request in this period.⁴⁰

Table 2: HHS Requests for Assistance regarding Individuals with TB Disease Submitted to DHS from May 2007 through February 2008

HHS types of requests for assistance	Number of requests
Request to enter a public health alert in TECS	10
Request to remove a public health alert from TECS	25
Request to add a name to Do Not Board list	21
Request to remove a name from Do Not Board list	16
Total requests for individuals with TB disease	72

Source: GAO analysis of information provided by CDC.

³⁸For the purposes of our review, totals were derived from request forms prepared by CDC for HHS to submit to DHS. The total number of requests for assistance represents the total number of written request forms CDC prepared for HHS to submit electronically to DHS, not the total number of individuals with TB or other infectious diseases planning travel. Some forms included requests for more than one type of assistance, such as a request to place an individual on the Do Not Board list and a request to place a public health alert in TECS for the same individual. CDC officials explained that any discrepancies in the number of requests—for example, more requests to remove a public health alert from TECS than the number of requests to place a public health alert in TECS—may be because public health alerts were entered into TECS at a port of entry prior to the implementation of the procedures that centralized the process for requesting assistance and were therefore not submitted on a written request form.

³⁹In addition, for the period May 2007 to February 2008, HHS requested passenger locator information from CBP in 56 instances so that CDC could conduct contact tracing investigations to identify and contact individuals who may have been exposed to TB on board an airplane, bringing the total number of requests to 128. These 56 requests were for passenger manifests on flights where individuals may have been exposed to measles, mumps, rubella, and TB.

⁴⁰In September 2008, HHS officials provided updated numbers for requests for assistance made during the period from June 2007 through May 2008. During that time frame, officials said that HHS requested assistance for 103 actions to place individuals with TB disease on, or remove them from, the Do Not Board list or to place or remove public health alerts in TECS.

All requests were for individuals with TB disease who fit the criteria jointly established by CDC and DHS. In reviewing these requests for assistance, we found that actions were typically completed within 24 hours of the time CDC initiated the request.⁴¹ According to DHS officials, all requests were considered high priority and were addressed. We also determined that CDC's requested assistance complied with its criteria and included CDC contact information and detailed instructions, such as how CBP officers should protect themselves and others if they encounter the individual.

CDC Has Made Some Efforts to Inform State and Local Health Officials of New Procedures and Tools, but Has Not Completed All Actions

Although CDC has made some efforts to educate health officials, according to CDC officials the agency has not yet completed all actions to provide information to health officials who work with individuals with TB about the new procedures and tools, or about the criteria for adding individuals to or removing them from the Do Not Board list or TECS. For example, CDC has presented information on the Do Not Board list at various conferences and association meetings, such as the June 2008 meeting of the state epidemiologists association and the November 2007 meeting of its advisory council for TB elimination. Additionally, CDC has used the *Morbidity and Mortality Weekly Report*⁴²—a publication CDC makes available on its Web site at no charge—to provide state and local officials with information about the criteria for placement on or removal from the Do Not Board list or TECS. The article describing the criteria was published in a September 2008 issue. However, other CDC actions to inform state and local officials have yet to be completed. CDC plans to publish a companion product to the *Morbidity and Mortality Weekly Report* article, which would consist of a letter notifying officials of the publication and a guidance document describing the new tools and procedures that would be sent via e-mail to state and local health officials. According to CDC officials, the companion product will also be posted on

⁴¹We did not examine how quickly CBP provided CDC with passenger locator information. CDC is currently updating regulations to expand reporting requirements for ill passengers on board flights and ships arriving from foreign countries. 70 Fed. Reg. 71,892, 71,928 (Nov. 30, 2005) (to be codified at 42 C.F.R. pts. 70 and 71). The proposed regulations would require airlines and ocean liners to maintain passenger and crew lists with detailed contact information and submit these lists electronically to CDC within 12 hours of a request. 70 Fed. Reg. at 71,940 (to be codified at 42 C.F.R. § 71.10).

⁴²The *Morbidity and Mortality Weekly Report* is a primary vehicle for informing state and local public health officials about new federal guidance.

CDC's Web site, and CDC will host Web-based seminars for state and local TB programs.

According to health officials, HHS requests for DHS assistance to deter individuals with TB from traveling originate primarily with state and local health officials, such as TB controllers, state and local health department staff, and public and private physicians, who typically have primary contact with individuals with TB and are more likely to be aware that an individual might be planning to travel. Knowledge of the new procedures and tools among these officials could prevent delays in accessing federal assistance, as occurred with the U.S. citizen. According to CDC officials, some health officials should already be familiar with the new procedures because a number of them helped CDC develop the criteria to determine whether an individual with TB should be removed from the Do Not Board list or TECS. Furthermore, CDC officials said they believe that state and local health department officials should be aware of the changes because of CDC's close relationships with their professional associations. These associations have a role in promoting national policy and serving as liaisons between local, state, and territorial and federal health departments. However, an official with one such association said that staff independently discovered the new procedures and tools, while staff from another association told us that they were not aware of them.

Additionally, information about the new procedures and tools may be especially important for those states with lower relative numbers of TB cases, which may have less experience in accessing federal assistance. Moreover, providing information about the criteria for new procedures and tools can help ensure that state and local health officials can use them appropriately. For example, in one case, an individual with TB who had been added to the Do Not Board list presented a letter from county health officials to airline staff stating that he no longer posed a health risk to other travelers. Because county health officials did not follow the correct procedure to notify CDC and request the individual's removal from the Do Not Board list, he was not allowed to board his flight.⁴³

⁴³According to CDC officials, the county health department faxed its request to a quarantine station rather than to a specific contact at CDC headquarters. CDC officials told us that the individual left the airport before airline officials or CBP could direct him to CDC.

HHS and DHS Have Not Finalized Plans to Complete Coordination Actions between Federal Agencies

As of September 2008, the two departments had not finalized plans for completing additional actions they identified that are intended to further strengthen their ability to respond to incidents involving individuals with TB who intend to travel. HHS and DHS officials told us that this was because their proposals for the additional work were undergoing internal department review, required implementation over time, or required further coordination with other departments and their component agencies. It is unclear how much additional work is needed because the departments did not have detailed plans and time frames for completing these actions. Without these plans and time frames, HHS and DHS will not have fulfilled the actions they identified as necessary to strengthen their ability to respond to and prevent the cross-border travel of individuals with infectious TB. HHS and DHS officials said that they planned to meet in the fall of 2008 to further address the additional actions that need to be taken.

Examples of some incomplete actions that require cross-agency coordination include the following:

- HHS, in conjunction with CDC and DHS, plans to develop a training module for its personnel to increase awareness of existing agency capabilities, available resources, procedures for requesting assistance, and communication protocols, according to the department's after-action report on the U.S. citizen incident. HHS officials said that while the agency may have specific procedures in place, they may be applied inconsistently if officials in field offices are unaware of them. However, these officials did not specify how they would coordinate with CDC and DHS to finalize plans to develop or conduct the training.
- CDC recommended that DGMQ, which operates the quarantine stations at ports of entry, provide training and materials on infection control for communicable diseases to CBP officers stationed at the ports of entry. Specifically, DGMQ planned to give CBP officers small cards with information on the use of personal protective equipment and procedures for isolating individuals with suspected or confirmed infectious diseases at ports of entry, to accompany officers' personnel badges. However, according to DGMQ officials, CDC's progress on this recommendation was delayed because of several factors, including the need to negotiate with the CBP officers' union, which DGMQ did not foresee. DGMQ officials told us that they had coordinated with the CBP officers' union, but they did not have a specific date for when they planned to issue the cards, which are still under agency review.

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- CDC is collaborating with the Department of State and other agencies, that are developing policies and procedures for using federal resources to assist in transporting citizens and legal residents involved in a public health incident abroad back to the United States. In the incident involving the U.S. citizen, CDC did not use its plane to fly the individual from Europe to the United States because the agency did not want to expose the crew and any other passengers to TB. According to CDC, while the agency worked to develop alternate suggestions for travel or medical care for the U.S. citizen overseas, he once again traveled against medical advice. CDC officials we spoke with said that the agency was in the process of equipping the CDC plane with appropriate medical equipment to transport individuals with infectious respiratory diseases. However, officials said that activities related to the transport of U.S. citizens back into the country require continued coordination with the Department of State, which has primary responsibility for assisting U.S. citizens abroad, and the Department of Defense, which has appropriate medical equipment available.
 - According to DHS officials, HHS and DHS need to further examine issues related to ensuring that the distribution of personal and medical information of individuals with communicable diseases who pose potential public health threats is limited to protect privacy, while at the same time conducting the necessary public health and law enforcement activities to deter their travel and direct them to treatment. Officials from both departments told us that they are concerned that a perceived lack of procedures for safeguarding personal information could provide a disincentive for an individual both to disclose his or her illness and to seek treatment. DHS has recommended convening subject-matter experts in patients' rights and the rights of the public to be protected from potential exposure to infectious diseases to determine appropriate procedures for law enforcement officers who assist HHS in locating nonadherent individuals. DHS officials said that the chief privacy officers for HHS and DHS have begun to work together to address this issue.

HHS and DHS Have Activities Under Way to Assess Their Ability to Respond to TB Incidents

According to CDC officials, both departments have activities under way to assess the effectiveness of the new procedures and tools. Specifically, they plan to conduct performance monitoring of the new request for assistance procedures and tools, discuss how information sharing and coordination could be further improved, and develop an annual report based on after-action reports that analyzes trends and identifies potential improvements in agency response. In addition, both departments are evaluating the new procedures and tools based on TB incidents as they arise.

CDC Officials Are Conducting Some Performance Monitoring of the New Procedures and Tools

According to CDC officials, the agency is conducting some performance monitoring of the new procedures and tools, such as tracking the number of individuals who are being placed on and removed from the Do Not Board list and the time lapse between when HHS submits a request for assistance to DHS and when DHS completes the request. CDC officials review this information during monthly staff meetings to identify areas for improvement. In addition, CDC officials said that the request for assistance procedures would be included as part of a measure that will be monitored by its Division of Emergency Operations. This division regularly monitors about 60 protocols for operations at any one time to find ways to improve the performance of the protocols. CDC officials also stated that they plan to implement CDC's secure data network to transmit written requests for assistance between the departments, as opposed to the current method of e-mailing requests as password-protected documents, to improve security and decrease processing time.

HHS and DHS Officials Are Communicating Regularly in Order to Review Changes Made to Procedures and Tools

According to HHS and DHS officials, they communicate on a monthly and weekly basis to discuss changes made to procedures and tools as a result of the 2007 TB incidents and their continued applicability to responding to TB cases, as well as issues related to information sharing for responding to such cases. For example, these officials reported that in addition to the initial June 2007 meeting, they hold in-person monthly meetings to help officials refine the new procedures and tools as necessary to better address potential limitations in future incident response. For example, during these meetings, officials discuss what information DHS needs to complete an HHS request for assistance to ensure that the appropriate action is taken. Officials said that they also use these meetings as an opportunity to discuss the differences in the approaches CDC, TSA, and CBP officials have toward public health incidents, such as the agencies' practices for sharing identifying information. Officials from HHS, CDC, and DHS's OHA also reported that they communicate by phone and e-mail several times a week to discuss the status of current requests for assistance and other public health issues that may require DHS assistance. According to CDC and DHS officials, this informal and frequent contact encourages information sharing across the departments and their component agencies, allowing them to better understand and effectively address issues.

CDC Plans to Analyze Future After-Action Reports to Identify Improvements in Agency Response

CDC officials said that they plan to develop an annual compilation report analyzing all after-action reports, including those for TB, that were completed in the previous year. Analysis of these reports, which is to generally include summaries of the events and observations for improvement, allow CDC officials to identify trends, review progress over time, and determine recommendations for broad agency improvement for future public health response. CDC plans to issue the first annual compilation report for those after-action reports completed in 2008, but has not set a target date for issuance. As of September 2008, CDC officials told us that the first compilation report would not include the incident involving the U.S. citizen, and would only include those incidents occurring after August 2008.

HHS and DHS Officials Continue to Revise New Procedures and Tools Based on Subsequent TB Cases

According to HHS and DHS officials, they are using the departments' responses to subsequent TB cases as opportunities to revise the new procedures and tools and develop skills to help enhance their response to future TB incidents. Internal control standards for the federal government call for agencies to assess the quality of performance over time so that deficiencies can be identified and addressed.⁴⁴ CDC and DHS officials said that they view each use of the request for assistance procedures and tools as a "natural exercise" that provides an opportunity to identify areas for improvement and refine the procedures and tools as necessary. For example, according to DHS officials, CDC officials responded to DHS feedback by increasing the level of detail about the medical condition of the individual included on requests submitted to DHS while simultaneously increasing the privacy protections of the identifying information provided on the forms. Also, after subsequent incidents, CDC officials determined that it was necessary to specify which agency officials should participate in the conference calls that include CDC, state, and local officials to determine whether an individual with an infectious disease, such as TB, who intended to travel justified a need to request assistance from DHS. According to HHS officials, the agency's coordination with DHS for more than 70 requests for assistance since the 2007 TB incidents also has helped agency officials become familiar with their roles in the information-sharing process that is outlined in the new procedures.

⁴⁴GAO/AIMD-00-21.3.1.

Conclusions

The new procedures and tools that HHS and DHS established in the wake of the spring 2007 incidents involving the two individuals with drug-resistant TB have improved federal interagency information sharing and coordination for responding to TB incidents and could lay the foundation for continuing improvement in responding to future TB incidents. In addition, as a result of the collaboration between HHS and DHS in making these changes, each department now has a clearer view of how the other's mission and approach to public health incidents differs from its own, which could further enhance their ability to collaborate in responding not only to similar TB incidents but also to other future public health threats.

Despite DHS's progress in enhancing TECS so that CBP officials can better identify individuals via electronic public health alerts, this enhancement is applicable only for some types of biographic information, but not others. Not exploring the costs and benefits of further modifying TECS to create public health alerts based on variations of additional types of biographic information may result in missed opportunities to locate persons subject to public health alerts and deter them from entering the United States.

Additionally, HHS and DHS have more opportunities to improve their information-sharing efforts in responding to future TB incidents. For example, unless state and local health officials are informed and educated about the new tools and procedures, delays in accessing federal assistance, like those encountered during the two TB incidents, could persist. Specifically, without wide dissemination of the procedures for placing individuals with TB on, or removing them from, the Do Not Board list, or for placing or removing a public health alert in TECS, state and local health officials may not be aware of the federal assistance at their disposal for use in locating individuals with TB who are nonadherent with treatment and may intend to travel against medical advice. Additionally, state and local health officials who have limited knowledge of these changes and no previous experience in working with federal officials at the field office level may encounter difficulties in using the new procedures and tools.

Furthermore, HHS and DHS have identified additional actions that they need to take to further strengthen their ability to respond to incidents involving individuals with TB who intend to travel, including some actions that require cross-agency coordination for completion. However, the departments have not developed an action plan for ensuring that these multiagency efforts are accomplished. Absent a clear plan with associated time frames for completing cross-agency actions, the departments may not

be accountable for taking the corrective actions and ensuring that all identified deficiencies are mitigated.

Recommendations for Executive Action

To ensure continuing improvements in HHS's and DHS's new procedures and tools developed in response to the 2007 TB incidents and to improve awareness of these changes, we are making the following three recommendations.

We recommend that the Secretary of DHS direct CBP to determine whether the benefits exceed the costs of enhancing TECS capabilities when creating public health alerts to include variations on other types of biographic information that could further enhance its ability to locate individuals who are subject to public health alerts and, if so, to implement this enhancement. We also recommend that the Secretary of HHS and the Secretary of DHS work together to

- continue to inform and educate state and local health officials about the new procedures and tools and
- develop plans with time frames for completing additional actions that require cross-agency coordination to respond to future TB incidents.

Agency Comments and Our Evaluation

We requested comments on a draft of this report from HHS and DHS. Both departments provided written comments in letters dated September 24, 2008, and September 30, 2008, respectively, which are summarized below and reprinted in appendixes II and III.

HHS and DHS generally agreed with our recommendations. With regard to our first recommendation on enhancing TECS capabilities to include variations on other types of biographic information, DHS said that CBP has completed a cost-benefit analysis and determined that this enhancement would increase to an unmanageable level the number of possible alerts requiring further research by CBP officers and increase delays at ports of entry. However, in response to our recommendation, CBP is drafting a policy and new procedures that when implemented will require that officers (1) review an individual's biographic information when entering public health alerts to determine whether variations on this information could produce an accurate public health alert and, if so, (2) create a new public health alert based on the variation of this biographic information. CBP believes that this approach will enhance capabilities without causing delays, although we believe that it will be

important to monitor implementation to ensure that the approach provides the intended results.

With regard to our second recommendation, HHS and DHS stated that they were working together on efforts that, once completed, will help to ensure that state and local health officials are better informed about the new procedures and tools. Finally, HHS and DHS stated that they were working to address our third recommendation to develop plans with time frames for completing the remaining actions that require cross-agency coordination, but did not address whether they were developing plans with time frames for completing the other remaining additional actions. We believe that absent these plans, there is no guarantee the departments will complete these actions that are important for ensuring full cross-agency coordination in response to future TB and other public health incidents.

In commenting on a draft of this report, HHS stated that it disagreed with our assessment of “the lack of agency coordination.” However, we found that following the incidents HHS and DHS had identified coordination deficiencies in their responses, which they deemed serious enough to require the development of new procedures and tools. DHS also raised two issues regarding our findings related to CBP. First, DHS noted that CBP field locations often receive and handle requests from CDC regarding individuals with communicable diseases and that CBP officials at the time handled the incident involving the Mexican citizen at the local level according to existing protocols. Second, CBP wished to clarify that although procedures have been “fine-tuned” since the incident occurred, CBP believes that the procedures in place at the time of the incidents were comprehensive. We maintain that the fact that CBP created new standard operating procedures for communicating with HHS and for restricting international travel of persons with such public health concerns is evidence that the protocols and procedures in place at the time were not comprehensive or effective.

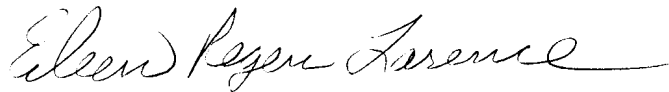
HHS and DHS also provided technical comments. We have amended our report to incorporate these clarifications where appropriate.

As agreed with your offices, unless you publicly release its contents earlier, we plan no further distribution of this report until 30 days after its issuance date. At that time, we will send copies to the Secretary of Health and Human Services and the Secretary of Homeland Security. Additional copies will be sent to other interested congressional committees. In addition, the report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staff members have any questions about this report, please contact Cynthia A. Bascetta at (202) 512-7114 or bascettac@gao.gov, or Eileen R. Larence at (202) 512-6510 or larencee@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.



Cynthia A. Bascetta
Director, Health Care

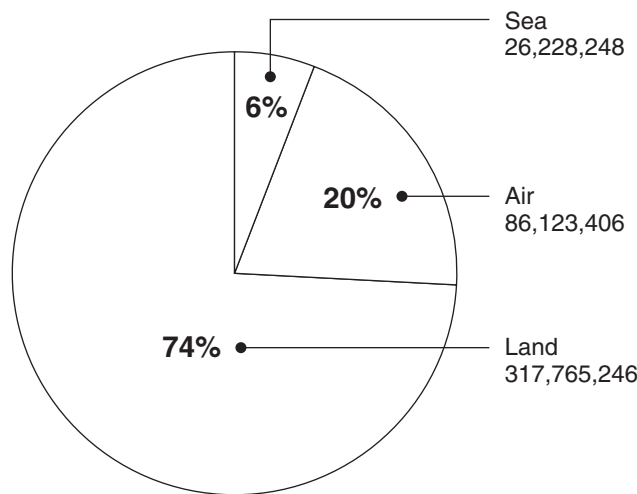


Eileen R. Larence
Director, Homeland Security and Justice

Appendix I: CBP Traveler Inspection Procedures at Air and Land Ports of Entry

U.S. Customs and Border Protection (CBP), a component agency of the Department of Homeland Security (DHS), is the agency in charge of inspecting individuals seeking to enter the United States at air, land, and sea ports of entry.¹ Each day, over 1 million individuals, both non-U.S. citizens and U.S. citizens, seek entry into the United States. In addition to determining whether these individuals are eligible to enter the country, CBP officers perform a wide range of law enforcement duties, such as screening cargo for weapons or illegal goods, preventing narcotics and agricultural pests from entering the country, and identifying and arresting persons with criminal warrants. Nearly 75 percent of all border crossings are at land ports of entry, and nearly 95 percent are at air or land ports.² (See fig. 5.)

Figure 5: Border Crossings at Ports of Entry in Fiscal Year 2005



Source: CBP.

Note: Fiscal year 2005 is the most recent year for which data on travelers entering the United States are available by mode of entry.

¹A port of entry is a government-designated location where CBP inspects persons, goods, and conveyances arriving by air, land, or sea to determine whether they may be lawfully admitted into the country.

²There are a total of 327 air, land, and sea ports of entry in the United States.

Primary and Secondary Inspection Processes

According to CBP officials, the inspection of individuals arriving at air and land ports of entry is described as a layered process designed to ensure management, control, and security of U.S. borders while facilitating the flow of millions of legitimate individuals and goods into the United States. Officers are trained in customs and immigration law, law enforcement techniques, and agricultural requirements and must be able to carefully observe individuals, while using available tools, equipment, and support, in order to make sound decisions on whether to admit, detain, or deny entry to a traveler. CBP policies and procedures for inspecting individuals at all ports of entry require officers to determine the nationality of individuals and their admissibility, that is, whether they are eligible to enter the country. Because most individuals attempting to enter the country through ports of entry have a legal basis for doing so, a streamlined screening procedure referred to as primary inspection is used to process those individuals who can readily be identified as admissible.

Persons whose admissibility cannot be readily determined may be subjected to a more detailed review called secondary inspection. This involves a closer inspection of travel documents and possessions, additional questioning by CBP officers, and cross-references through multiple law enforcement databases, including the Treasury Enforcement Communications System (TECS), to verify the traveler's identity, background, and purpose for entering the country, and to detect any violations or risks to the public. In secondary inspection, an officer makes the final determination to admit the traveler, deny admission, or take other actions (such as releasing the traveler to another law enforcement entity for prosecution) based upon the results of the inspection. When possible, CBP officers also rely on canine and antiterrorism task force teams to conduct discretionary inspections of travelers throughout the inspection process.

Differences in Inspection Procedures at Air and Land Ports of Entry

Although the procedures for inspecting individuals are generally the same at air and land ports of entry, there are differences that are due to variations in the ports' operational environments.

Air Ports of Entry

The procedures for inspecting individuals at air ports of entry differ from those at land ports of entry because commercial airlines are required to electronically transmit passenger manifest information to CBP through the Advanced Passenger Information System prior to the departure of international flights either from the United States or from other countries that are bound for the United States. This advance manifest information allows CBP time to conduct prescreening by querying a variety of law enforcement databases, including TECS and other types of alerts, to detect lookout records and warnings for various violations before individuals enter the country. Upon arrival in the United States at an air port of entry, however, individuals undergo the same general process in primary and secondary inspection as they do at land ports of entry. During primary inspection, individuals arriving by air must present documentation of citizenship and admissibility, such as a U.S. passport, permanent resident card, or foreign passport containing a visa issued by the Department of State.³ CBP officers must take physical possession of identification and match the photo with the individual, request declaration of residence, obtain an oral declaration concerning length of stay, ascertain purpose or intent of travel, and obtain a binding written customs declaration. However, unlike procedures at land ports of entry, CBP officers perform TECS queries during primary inspection on all individuals to identify potential matches to lookouts and warnings that were detected through the prescreening process. When an officer determines through primary inspection that additional questioning or inspection is required, individuals are referred to secondary inspection along with individuals who are matched to a TECS alert or warning as detected through the prescreening process.

Land Ports of Entry

CBP officers face a greater challenge to identify and screen individuals at land ports of entry, in part because of the lack of advance traveler information and the high volume of travelers who can arrive by vehicle or on foot at virtually any time. Given these challenges, CBP officers rely

³In accordance with section 7209 of the Intelligence Reform and Terrorism Prevention Act of 2004, as amended (Pub. L. No. 108-458, § 7209, 118 Stat. 3638, 3823), DHS implemented new document requirements at air ports of entry on January 23, 2007, for U.S. citizens and nonimmigrant citizens of Canada, Bermuda, and Mexico entering the United States from within the Western Hemisphere. They generally have been required to present a valid passport since January 23, 2007, but were not previously required to do so. DHS refers to these new requirements as the Western Hemisphere Travel Initiative (WHTI). DHS is required by law to implement WHTI document requirements at land ports of entry no earlier than June 1, 2009.

heavily on observation and interview skills to be able to quickly detect suspicious activity or potential violations that may render a person inadmissible. During primary inspection, CBP officers are directed to conduct inspections on all travelers. As part of that inspection process, CBP officers are to perform TECS queries on as many travelers as feasible.⁴ All vehicles are queried in TECS using license plate readers installed in primary inspection vehicle lanes. For pedestrian lanes, the traveler's name can be machine read from the travel document or manually keyed into TECS by the CBP officer. For vehicles, CBP officers frequently inspect multiple travelers entering in a single vehicle, and TECS queries are generally conducted on the individuals and the vehicle data. In addition, CBP officers visually examine the vehicle and inspect car passengers, verify license plate information, and monitor for the presence of radioactive material, among other tasks.⁵ For vehicles, CBP officers frequently inspect multiple travelers entering in a single vehicle, and the TECS queries are generally conducted on the individuals and on the vehicle. If necessary, CBP officers are to refer the travelers and their vehicle for secondary inspection.

Public Health at Air and Land Ports of Entry

In addition to screening millions of travelers during primary and secondary inspection, CBP officers are responsible for observing all travelers for obvious signs and symptoms of quarantinable and communicable diseases, such as (1) fever, which could be detected by a flushed complexion, shivering, or profuse sweating; (2) jaundice (unusual yellowing of skin and eyes); (3) respiratory problems, such as severe cough or difficulty breathing; (4) bleeding from the eyes, nose, gums, or ears or from wounds; and (5) unexplained weakness or paralysis. However, CBP officials emphasized that CBP officers are not medically trained or qualified to physically examine or diagnose illness among arriving travelers.

⁴CBP officials stated that the number of TECS queries conducted during primary inspection depends upon various factors at land ports of entry, including the volume of travelers seeking entry. However, CBP officers are required to perform name queries on all travelers who appear to be inadmissible to the United States, or who are suspected of violating U.S. laws. If this cannot be accomplished during the primary inspection, it is required that such travelers be referred for further processing.

⁵Field officers are required to carry personal radiation detectors while on duty. Personal radiation detectors are devices that allow officers to monitor for the presence of radioactive material while inspecting vehicles.

There are three general scenarios in which CBP officers encounter ill persons who are in need of medical attention or who may pose a public health threat:

- In the most common scenario, CBP officers encounter an individual who discloses that he/she needs medical attention for various health reasons.
- CBP officers suspect an individual may need medical attention or may pose a public health risk to others (e.g., individual exhibits obvious signs and symptoms of illness, such as fever, weakness, or both, as observed by officers).
- CBP officers encounter an individual who is an exact match to a public health alert in TECS and may pose a public health risk to others.

In all three scenarios, CBP protocols require officials, at a minimum, to isolate the person while notifying officials at CDC and, depending on the circumstance, to contact the designated local public health authorities (e.g., hospitals and emergency medical personnel).⁶ Each port of entry is supplied with personal protective equipment, including masks and gloves, and inspecting officers must use this equipment in dealing with travelers suspected of having communicable or quarantinable illnesses, as well as while handling the individuals' documents and belongings. CBP officers are responsible for coordinating with CDC to provide assistance in identifying arriving individuals from areas with known communicable disease outbreaks.

⁶If the incident occurs at a port of entry collocated with a quarantine station, CBP officials are instructed to notify the CDC official at the quarantine station on-site.

Appendix II: Comments from the Department of Health and Human Services



DEPARTMENT OF HEALTH & HUMAN SERVICES

OFFICE OF THE SECRETARY

Assistant Secretary for Legislation
Washington, DC 20201

SEP 24 2008

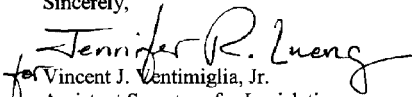
Cynthia Baschetta
Director, Health Care
Government Accountability Office
441 G Street NW
Washington, DC 20548

Dear Ms. Baschetta:

Enclosed are the Department's comments on the U.S. Government Accountability Office's (GAO) draft report entitled: "PUBLIC HEALTH AND BORDER SECURITY: HHS and DHS Should Further Strengthen Their Ability to Respond to TB Incidents" (GAO-08-1076N1).

The Department appreciates the opportunity to review and comment on this report before its publication.

Sincerely,


for Vincent J. Ventimiglia, Jr.
Assistant Secretary for Legislation

Attachment

The report number referenced in these comments changed to GAO-09-58.

**GENERAL COMMENTS OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
(HHS) ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S (GAO) DRAFT REPORT
ENTITLED: HHS AND DHS SHOULD FURTHER STRENGTHEN THEIR ABILITY TO
RESPOND TO TB INCIDENTS (GAO-08-1076N)**

The Centers for Disease Control and Prevention (CDC) wishes to thank the GAO for the opportunity to review and comment on this Draft Report. CDC concurs with the GAO's recommendations and respectfully submits the following general comments.

With regards to privacy issues – specifically pages 10, 24, 25, 41: CDC has published a system of records notice ("SORN") setting forth the agency's routine uses for how it may distribute individually identifiable information relating to quarantine activities pursuant to the Privacy Act. A copy of this system notice will be sent to center policy along with these comments.

With regards to CDC's communication with partners – specifically in the opening of the document and found on pages: Highlights section/opening page, 7, 10, 11, 22, 26, 27, 29, 38, 39, and 40, 45, and 46: CDC has made extensive efforts to provide information to its partners and stakeholders. This has included presentations at the following:

- Council of State and Territorial Epidemiologists
- National Public Health Preparedness Summit
- National TB Controller Association
- Advisory Committee for the Elimination of TB
- Los Angeles County Public Health Conference
- 58th Annual TB/RD Institute - Tuberculosis: Shrinking World, Growing Problem
- National Tuberculosis Controllers Workshop in Atlanta
- Annual FBI/CDC Joint Criminal and Epidemiological Investigations Workshop (Denver, CO)
- Advisory Council for the Elimination of Tuberculosis
- World Tuberculosis Day Conference Held by Miami-Dade County Health Department
- California Tuberculosis Controllers' Conference
- Southwest Tuberculosis Controllers Meeting.

CDC has also walked through the criteria and procedure with the numerous state health departments involved in requesting DHS assistance since June 2007.

As stated above, CDC concurs with GAO's recommendations surrounding the collaboration, communication and implementation planning with DHS in informing state and local health officials about the new procedures and tools. We also concur with GAO's recommendation regarding planning for future incidents that require cross-agency coordination. However, we disagree with GAO's assessment of the lack of agency coordination; in the attached Technical Comments, we provide examples of this collaboration – many specifically related to the May 2007 incident referenced in the Report.

Appendix III: Comments from the Department of Homeland Security

U.S. Department of Homeland Security
Washington, DC 20528



**Homeland
Security**

September 30, 2008

Ms. Cynthia Bascetta
Director, Health Care

Ms. Eileen R. Larence
Director, Homeland Security and Justice

U.S. Government Accountability Office
441 G St., NW
Washington, DC 20548

Dear Ms. Bascetta & Ms. Larence:

The U.S. Department of Homeland Security (DHS) appreciates the opportunity to review and comment on the Government Accountability Office's (GAO) draft report GAO-08-1076NI titled *PUBLIC HEALTH AND BORDER SECURITY: HHS and DHS Should Further Strengthen Their Ability to Respond to TB Incidents* (290670).

The GAO report examined two public health incidents that took place in the spring of 2007; one involving a U.S. citizen and a second incident involving a Mexican citizen. Regarding the incident involving the U.S. citizen, U.S. Customs and Border Protection (CBP) had a single point of failure in this case. The GAO recognized that the situation has been corrected and has resulted in structural and technological improvements to border security due to immediate and decisive action by CBP leadership. CBP reiterates its commitment to proactively utilize the lessons learned from this incident to strengthen homeland defenses and response to infected travelers.

With regard to the incident involving the Mexican citizen, the report states that "CBP officials at the land port of entry did not notify DHS senior officials until 14 days after CDC (Centers for Disease Control and Prevention) requested CBP assistance." CBP ports of entry and field locations often receive requests from local CDC counterparts regarding individuals with communicable diseases. Some of the CDC stations are co-located with CBP at ports of entry. CBP was handling this incident on the local level according to existing protocols. CBP placed nationwide alerts in its databases for the name, as provided by the CDC, but it did not result in any matches. Upon learning of the individual's true identity, CBP updated the original nationwide alert with accurate identification information. CBP has no record of the individual crossing through a port of entry into the United States after the Mexican citizen's true identity was established.

The report number referenced in these comments changed to GAO-09-58.

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The report also states that DHS lacked comprehensive procedures for information sharing and coordination and had border inspection shortfalls which hindered the federal response to the two TB incidents. We would like to clarify that although procedures have been fine-tuned as a result of the two incidents, they were comprehensive. Moving forward and incorporating lessons learned, we have developed standard operating procedures that support both the DHS and U.S. Department of Health and Human Services (HHS) operational protocols. Our procedures describe the communication pathways between HHS and DHS for requesting public health assistance, and procedures to restrict international travel of a person, or persons, suspected or diagnosed with a quarantinable disease or a communicable disease of public health significance.

DHS generally concurs with the report's three recommendations to enhance the federal response to future TB incidents. Following are our recommendation-specific comments; technical comments were provided under separate cover.

GAO Recommendation 1: We recommend that the Secretary of DHS direct CBP to determine whether the benefits exceed the costs of enhancing TECS capabilities when creating public health alerts to include variations on other types of biographic information which could further enhance their ability to locate individuals who are subject to public health alerts and, if so, to implement this enhancement.

DHS Response: Concur. Upon evaluation of the benefits and costs of enhancing TECS search capabilities, CBP concluded that further variation on the biographic information would not only result in increased delays, but substantially increase the number of possible matches. The possible matches would be so numerous that officers would not be able to direct their attention to the most critical closest matches.

In an effort to satisfy the intent of this recommendation, CBP is drafting a new policy and procedures for officers creating subjects of special interest (e.g. Public Health). These new procedures would include a review of the biographic information to determine if variations to the information are possible. This solution offers a controlled and expandable approach to extending the biographic search for measurement against operational impacts.

GAO Recommendation 2: The Secretary of HHS and the Secretary of DHS work together to inform and educate state and local health officials about the new procedures and tools.

DHS Response: Concur. This effort is already underway through routine CDC outreach to state and local health officials, but also, formally, via a Morbidity and Mortality Weekly Report article and commentary that was released September 18, 2008. CDC was the primary author, but DHS collaborated. DHS and CDC have an ongoing working relationship with state, local, and tribal authorities to continually improve mutual understanding of each other's role.

GAO Recommendation 3: Secretary of HHS and Secretary of DHS work together to develop plans with timeframes for completing additional actions that require cross-agency coordination to respond to future TB incidents.

DHS Response: Concur. The jointly developed Standard Operating Procedures (SOPs) for this effort which were formalized and presented to the appropriate oversight committees in Congress were placed in operation late last summer and have an excellent history of enabling close, formal cooperation on TB incidents. In addition, as GAO is aware, DHS has an ongoing program of

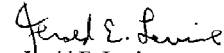
**Appendix III: Comments from the Department
of Homeland Security**

- 3 -

periodic meetings to assess the efficiency of the system and to modify it as needed. The next formal interagency meeting, involving not only HHS and DHS, but the U.S. Department of State, U.S. Department of Justice and U.S. Department of Defense will occur the week of September 29, 2008.

We thank you for the opportunity to review and provide comments on this draft report and look forward to working with you on future homeland security issues.

Sincerely,



Jerald E. Levine

Director

Departmental GAO/OIG Liaison Office

Appendix IV: GAO Contacts and Staff Acknowledgments

GAO Contacts

Cynthia A. Bascetta, (202) 512-7114 or bascettac@gao.gov
Eileen R. Larence, (202) 512-6510 or larencee@gao.gov

Acknowledgments

In addition to the contacts named above, Karen Doran, Assistant Director; John Mortin, Assistant Director; George Bogart; Frances Cook; Katherine Davis; Shana Deitch; Jennifer DeYoung; Raymond Griffith; Catherine Kim; Maren McAvoy; Carolina Morgan; Roseanne Price; Janay Sam; Jessica Smith; and Ellen Wolfe made significant contributions to this report.

Related GAO Products

Border Security: Despite Progress, Weaknesses in Traveler Inspections Exist at Our Nation's Ports of Entry. [GAO-08-329T](#). Washington, D.C.: January 3, 2008.

Global Health: U.S. Agencies Support Programs to Build Overseas Capacity for Infectious Disease Surveillance. [GAO-07-1186](#). Washington, D.C.: September 28, 2007.

Border Security: Security Vulnerabilities at Unmanned and Unmonitored U.S. Border Locations. [GAO-07-884T](#). Washington, D.C.: September 27, 2007.

Influenza Pandemic: Further Efforts Are Needed to Ensure Clearer Federal Leadership Roles and an Effective National Strategy. [GAO-07-781](#). Washington, D.C.: August 14, 2007.

Global Health: Global Fund to Fight AIDS, TB and Malaria Has Improved Its Documentation of Funding Decisions but Needs Standardized Oversight Expectations and Assessments. [GAO-07-627](#). Washington, D.C.: May 7, 2007.

Border Security: Continued Weaknesses in Screening Entrants into the United States. [GAO-06-976T](#). Washington, D.C.: August 2, 2006.

Emergency Preparedness: Some Issues and Challenges Associated with Major Emergency Incidents. [GAO-06-467T](#). Washington, D.C.: February 23, 2006.

Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies. [GAO-06-15](#). Washington, D.C.: October 21, 2005.

Emerging Infectious Diseases: Review of State and Federal Disease Surveillance Efforts. [GAO-04-877](#). Washington, D.C.: September 30, 2004.

Global Health: Challenges in Improving Infectious Disease Surveillance Systems. [GAO-01-722](#). Washington, D.C.: August 31, 2001.

Public Health: Trends in Tuberculosis in the United States. [GAO-01-82](#). Washington, D.C.: October 31, 2000.

Managing for Results: Barriers to Interagency Coordination. [GAO/GGD-00-106](#). Washington, D.C.: March 29, 2000.

Related GAO Products

Standards for Internal Control in the Federal Government.
[GAO/AIMD-00-21.3.1](#). Washington, D.C.: November 1999.

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