



Highlights of [GAO-05-308](#), a report to congressional requesters

INFORMATION TECHNOLOGY

Federal Agencies Face Challenges in Implementing Initiatives to Improve Public Health Infrastructure

Why GAO Did This Study

The anthrax scare of October 2001 exposed serious weaknesses in the U.S. public health infrastructure. Since then, the appearance of new infectious diseases has made preparation and readiness even more critical. Information technology (IT) can be a major factor in detecting and responding to public health emergencies, including bioterrorism.

GAO was asked to review the progress of major federal IT initiatives aimed at strengthening the ability of government at all levels to respond to public health emergencies, as well as to describe key challenges facing agencies pursuing these initiatives.

What GAO Recommends

To improve the development of major public health IT initiatives, GAO recommends, among other actions, that the Secretary of Health and Human Services (1) establish clear linkage between the initiatives and the national health care strategy and federal health architecture and (2) encourage interoperability through the adoption of standards for health care data and communications.

In response to a draft of this report, HHS generally concurred with the recommendations, while DHS did not comment specifically on them. Both agencies provided additional contextual information and technical comments, which were incorporated as appropriate.

www.gao.gov/cgi-bin/getrpt?GAO-05-308.

To view the full product, including the scope and methodology, click on the link above. For more information, contact David A. Powner at (202) 512-9286 or pownerd@gao.gov.

What GAO Found

Although significant work remains, federal agencies have made progress on major public health IT initiatives. These initiatives include one broad initiative at the Centers for Disease Control and Prevention (CDC)—known as the Public Health Information Network (PHIN)—which is intended to provide the nation with integrated information systems, and two initiatives at the Department of Homeland Security (DHS), which are focused on biosurveillance (see table). CDC’s PHIN initiative has made progress by establishing communications systems and promoting standards, but more work remains on associated surveillance systems. For example, public health officials told GAO that they did not find PHIN’s BioSense application useful because of limitations in the data currently collected. DHS also has major initiatives related to public health, both of which are in development. In addition, a system associated with one of the DHS initiatives—BioWatch—has been deployed. BioWatch, an early-warning environmental monitoring system that collects air samples in order to detect trace amounts of biological materials, recently underwent modification to solve an interoperability problem: its three IT components required redundant data entry in order to communicate with each other. According to DHS, it has developed a solution to this interoperability problem and implemented it at two locations; DHS plans to install that solution in the remaining BioWatch locations.

Major Federal Public Health IT Initiatives

Initiative	Description
CDC	
Public Health Information Network	A national initiative to implement a multiorganizational business and technical architecture and associated information systems.
DHS	
Biological Warning and Incident Characterization System	An initiative to integrate data from environmental monitoring and health surveillance systems to provide warning of a biological attack and to help guide an effective response.
National Biosurveillance Integration System	An effort to combine federal medical, environmental, agricultural, and intelligence data to allow early detection of events and assist response.

Sources: CDC and DHS.

CDC and DHS face challenges in planning and implementing their major public health IT initiatives. These challenges include (1) integrating current initiatives into a national health IT strategy and federal architecture to reduce the risk of duplicative efforts, (2) developing and adopting consistent standards to encourage interoperability, (3) coordinating initiatives with states and local agencies to improve the public health infrastructure, and (4) overcoming federal IT management weaknesses to improve progress on IT initiatives. Until these challenges are addressed, progress toward building a stronger public health infrastructure will be impeded, as will the ability to share essential information concerning public health emergencies and bioterrorism.