

# GAO Highlights

Highlights of [GAO-18-562](#), a report to the Chairman, Subcommittee on Emergency Preparedness, Response, and Communications, Committee on Homeland Security, House of Representatives

## Why GAO Did This Study

Recent chemical attacks abroad and the threat of using chemical weapons against the West by the Islamic State of Iraq and Syria (ISIS) have raised concerns about the potential for chemical attacks occurring in the United States. DHS's chemical defense responsibilities include, among others, managing and coordinating federal efforts to prevent and protect against domestic chemical attacks.

GAO was asked to examine DHS's chemical defense programs and activities. This report examines (1) DHS programs and activities to prevent and protect against domestic chemical attacks and (2) the extent to which DHS has integrated and coordinated all of its chemical defense programs and activities. GAO reviewed documentation and interviewed officials from relevant DHS offices and components and reviewed DHS strategy and planning documents and federal laws and directives related to chemical defense.

## What GAO Recommends

GAO recommends that the Assistant Secretary for the CWMD Office develop a strategy and implementation plan to help DHS guide, support, integrate, and coordinate chemical defense programs and activities. DHS concurred with the recommendation and identified actions to address it.

View [GAO-18-562](#). For more information, contact Christopher P. Currie at (404) 679-1875 or [CurrieC@gao.gov](mailto:CurrieC@gao.gov).

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# CHEMICAL TERRORISM

## A Strategy and Implementation Plan Would Help DHS Better Manage Fragmented Chemical Defense Programs and Activities

### What GAO Found

The Department of Homeland Security (DHS) manages several programs and activities designed to prevent and protect against domestic attacks using chemical agents (see figure). Some DHS components have programs that focus on chemical defense, such as the Science and Technology Directorate's (S&T) chemical hazard characterization. Others have chemical defense responsibilities as part of their broader missions, such as U.S. Customs and Border Protection (CBP), which interdicts chemical agents at the border. DHS recently consolidated some chemical defense programs and activities into a new Countering Weapons of Mass Destruction (CWMD) Office.

However, GAO found and DHS officials acknowledged that DHS has not fully integrated and coordinated its chemical defense programs and activities. Several components—including CBP, U.S. Coast Guard, the Office of Health Affairs, and S&T—have conducted similar activities, such as acquiring chemical detectors or assisting local jurisdictions with preparedness, separately, without DHS-wide direction and coordination. As components carry out chemical defense activities to meet mission needs, there is a risk that DHS may miss an opportunity to leverage resources and share information that could lead to greater effectiveness addressing chemical threats. It is too early to tell the extent to which the new CWMD Office will enhance the integration of DHS's chemical defense programs and activities. Given the breadth of DHS's chemical defense responsibilities, a strategy and implementation plan would help the CWMD Office (1) mitigate the risk of fragmentation among DHS programs and activities, and (2) establish goals and identify resources to achieve these goals, consistent with the Government Performance and Results Modernization Act of 2010. This would also be consistent with a 2012 DHS effort, since abandoned, to develop a strategy and implementation plan for all chemical defense activities, from prevention to recovery. DHS officials stated the 2012 effort was not completed because of leadership changes and competing priorities.

### Examples of Chemical Agents Used in Attacks and Their Effects

Toxic industrial and commercial chemicals



**Example: Chlorine**

Exposure to chlorine can cause nose, throat, and eye irritation; chest pain; vomiting; lung injury; and death.

Chemical warfare agents



**Example: Sarin**

Exposure to sarin can lead to loss of consciousness, seizures, paralysis, respiratory failure, and death.

Chemical toxins of biological origin



**Example: Ricin**

Exposure to ricin can lead to vomiting and diarrhea, blood in the urine, seizures, organ failure, and death.

Source: GAO summary of National Academies, Department of Homeland Security, and Centers for Disease Control and Prevention information; Art Explosion (clip art); Steve Hurst, hosted by the U.S. Department of Agriculture—Natural Resources Conservation Service Plant List of Accepted Nomenclature, Taxonomy and Symbols (PLANTS) Database (adapted photograph). | GAO-18-562