Executive Summary

Public health threats are always present. They include natural disasters; biological, chemical, and radiological incidents; and explosions. The impact of these threats can range from local outbreaks to incidents with national or global ramifications. The 2009 H1N1 influenza pandemic underscored the importance of communities being prepared for potential threats. Being prepared to prevent, respond to, and rapidly recover from public health threats can protect the health and safety of the public and emergency responders.

Public health preparedness is ongoing. Preparing adequately for public health emergencies requires continual and coordinated efforts that involve every level of government, the private sector, non-governmental organizations, and individuals. The Centers for Disease Control and Prevention (CDC) plays a pivotal role in efforts to prepare our nation for all types of public health threats.[5]

CDC's mission is to collaborate to create the expertise, information, and tools that people and communities need to protect their health. CDC seeks to accomplish this mission in preparedness by building and strengthening capabilities that can be used broadly for all types of hazards and tailored to particular incidents. Critical core public health capabilities include surveillance and epidemiology, laboratories, and response readiness activities that include communicating, planning, exercising, and evaluating.

CDC support to states, localities, and U.S. insular areas.[6] CDC works with public health departments by providing funding, technical assistance, and coordination of activities for responding to public health threats. For severe emergencies, states, localities, and U.S. insular areas can request additional public health resources from CDC to assist with a response.

Preparedness funding. Congress has supported CDC public health preparedness and response activities by appropriating approximately $1.5 billion per year since 2002. CDC's Office of Public Health Preparedness and Response (OPHPR; formerly the Coordinating Office for Terrorism Preparedness and Emergency Response)[7] manages these funds, which support a wide variety of activities at CDC and at state and local levels. Congress appropriates three-quarters of this funding for two programs, the Public Health Emergency Preparedness (PHEP) cooperative agreement and the Strategic National Stockpile. OPHPR allocates the remainder of the funding to preparedness programs across CDC. In 2009, Congress also provided emergency supplemental funding in response to the 2009 H1N1 influenza pandemic.

Reporting on preparedness. To demonstrate how these federal investments are improving the nation's ability to respond to public health emergencies, CDC has published three preparedness reports.[8] This is CDC's second report focusing on state preparedness activities, including capability-based performance measures for states and localities receiving PHEP funding. Fact sheets in this report cover activities occurring primarily from October 1, 2007 to September 30, 2008 (fiscal year 2008). In addition, some data from 2009 are included.

The Centers for Disease Control and Prevention plays a pivotal role in efforts to prepare our nation for all types of public health threats.

States, localities, and U.S. insular areas received supplemental funding to prepare for and respond to the 2009 H1N1 influenza pandemic. Funds were used to assess response capabilities and address remaining gaps in vaccination; antiviral drug distribution and dispensing; and laboratory, epidemiology, and surveillance activities.

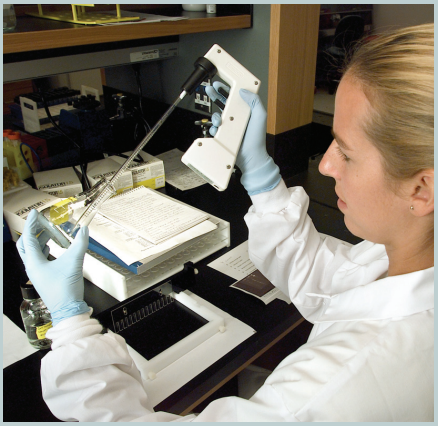
Photo source: Boston Public Health Commission

While these data do not represent all preparedness activities occurring in states, localities, and U.S. insular areas, they significantly expand on the information provided in CDC's first state preparedness report published in 2008.[9] All three CDC reports provide the most comprehensive picture available on the breadth of public health preparedness and response efforts across the nation.[10]

Strengthening Preparedness

Much progress has been made to build and strengthen national public health preparedness and response capabilities. Accomplishments highlighted in this report include the following:

- Biological laboratory capabilities and capacities were strong in most states and localities. Most laboratories in the Laboratory Response Network (LRN) could be reached 24/7, rapidly identified certain disease-causing bacteria and sent reports to CDC, and passed proficiency tests for detecting other biological agents. (See Table 3 on page 26.)
- A majority of LRN chemical laboratories demonstrated proficiency in core methods for detecting and measuring exposure to chemical agents, and some were proficient in one or more additional methods identified by CDC as important for responding to chemical emergencies. (See Table 3 on page 26.)
- All states and localities could receive urgent disease reports 24/7, and most states used rapid methods to communicate with other laboratories for outbreaks, routine updates, and other needs. (See Table 8 on page 34.)
- All states received acceptable CDC review scores for their plans to receive, distribute, and dispense medical assets from CDC's Strategic National Stockpile and other sources. (See 2008-2009 data in Table 8 on page 34.)
- Most states and localities demonstrated the ability to activate and rapidly staff their emergency operations centers for drills, exercises, or real incidents, and developed after action reports and improvement plans following these activities. (See Table 8 on page 34.)



CDC manages the Laboratory Response Network, a group of local, state, federal, and international laboratories that can detect and characterize health threats.

Photo source: CDC

Moving Forward

CDC has identified the areas listed below for improving state and local preparedness.

Maintain preparedness gains and resolve gaps. Important gains have been made since CDC's 2008 state preparedness report in the areas of laboratory and response readiness. Data presented in this report show improvement in rapid laboratory testing for biological agents and readiness to receive, distribute, and dispense assets from CDC's Strategic National Stockpile. CDC will continue to work with state and local health departments to maintain these improvements and to identify and resolve gaps in these and other core capabilities important for preparedness and response. Improvements are needed in continuity of operations plans for state public health laboratories.

Build on the successes and lessons learned from the response to the 2009 H1N1 influenza pandemic. The first influenza pandemic in 40 years provided a real world test of our response capabilities. CDC is working with all levels and sectors of the public health and medical communities toward systematically assessing this response, developing plans to address identified gaps and challenges, and incorporating needed changes.

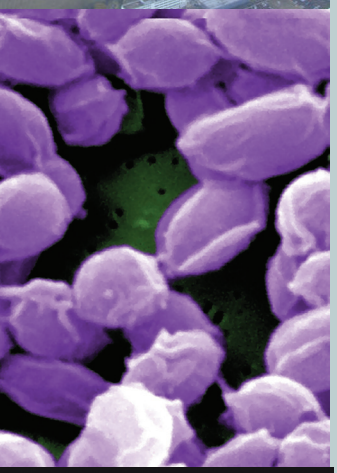
Ensure continuous funding to build and maintain a skilled state and local public health workforce. The surge in effort needed to respond to the 2009 H1N1 influenza pandemic placed an increased strain on a system already weakened by workforce shortages and budget shortfalls. The response revealed that the combination of the continued erosion of the general all hazards preparedness capacities, infrastructure, and staffing, along with the fiscal issues facing state and local governments proved to be challenging for public health departments. Preparing adequately for future outbreaks – and other public health emergencies that are inevitable and may occur simultaneously – requires predictable and adequate long-term funding to improve infrastructure, staffing, and training in the areas of surveillance, epidemiology, laboratories, and response readiness.

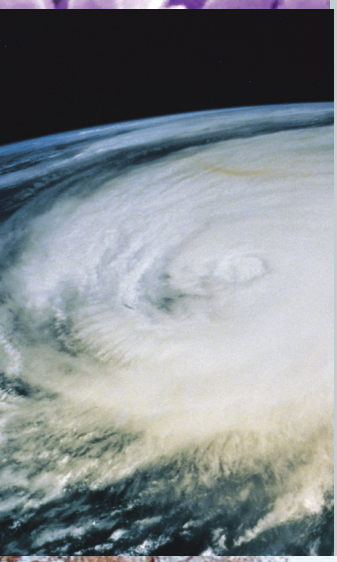
Expand performance measurement to assess and monitor preparedness activities and to drive program improvement and accountability. CDC will continue to work with state and local partners to develop performance measures that are indicators of preparedness and response capabilities and align with the objectives of the National Health Security Strategy[11] as well as the Pandemic and All-Hazards Preparedness Act.[12] Major gaps exist for measuring preparedness in the areas of surveillance and epidemiology. New performance measures are being piloted for these areas as well as for laboratory activities.

All 62 PHEP-funded states, localities and U.S. insular areas have plans to receive, distribute, and dispense medical assets from CDC's Strategic National Stockpile and other sources.

Photo source: Indiana State Department of Health

Promote health and prevent disease, injury, and disability in communities. Healthy populations are more resilient to new health threats. State and local health departments must continue to strengthen their collaboration with individuals, families, and communities as essential partners in building resilience to all types of public health hazards. Building healthier communities also helps provide greater protection to populations who are more vulnerable during emergencies and supports broader CDC health protection goals and national health reform efforts.





Protecting the Nation from Public Health Threats

Whether caused by natural, accidental, or intentional means, public health threats are always present. Being prepared to prevent, respond to, and recover rapidly from these events can save lives and protect the health and safety of the public, including emergency responders.

What are public health threats?

Biological threats can be natural, accidental, or deliberate. They include viruses, bacteria, parasites, and fungi (or their toxins) that can cause illness or death in people, animals, or plants, and are spread through air, water, or food.

Natural disasters include extended heat waves, severe snow or ice storms, earthquakes, catastrophic hurricanes, and extensive floods. Other environmental threats include exposure to chemicals that pose carcinogenic, reproductive, developmental, and neurological risks.

Chemical and radiological materials released accidentally or intentionally could create large-scale public health emergencies, especially in densely populated areas.

Explosions – by far the most common cause of casualties associated with terrorism[13] – can result in large numbers of casualties with complex injuries not commonly seen after natural disasters such as floods or hurricanes.

Who is responsible for responding to public health emergencies?

All response begins at the local level. State and local health departments are first responders for public health emergencies, regardless of whether they are local outbreaks or incidents with global ramifications, such as pandemics. Since 1999, CDC's Public Health Emergency Preparedness cooperative agreement has helped build and strengthen state and local capabilities that help ensure an effective emergency response, but significant challenges remain. Core public health functions needed for preparedness and response include surveillance, epidemiology, laboratories, and response readiness.

Individuals, families, and communities are essential partners for building community resilience to public health hazards. Community resilience is a goal of the National Health Security Strategy published in December 2009.[14] A resilient community has the sustained ability to withstand and recover – in both the short and long term – from adversity, such as an influenza pandemic or terrorist attack.[15] Vulnerable populations[16] and those with chronic conditions, such as asthma and obesity, may require additional care during emergencies such as specialized medications, equipment, and other assistance.