

Priority 1: Improving Health Security



Did You Know?

During both real incidents and drills across the U.S. in 2013, more than 14,000 medical response personnel requested information from their local public health departments to increase incident knowledge and effective resource management.

Preparing the country to be resilient against a steady stream of health threats improves health security and minimizes negative health consequences when emergencies do arise. CDC continuously monitors these threats—from severe weather to infectious disease outbreaks to the possibility of chemical or biological terrorism—and mobilizes essential resources to affected communities. CDC also works with PHEP awardees to develop response capabilities and create resilient communities in the face of emergencies and disasters. CDC’s Emergency Operations Center (EOC), with support from PHPR’s Emergency Management Program (EMP), serves as the command center for monitoring and coordinating CDC’s response to both domestic and international public health emergencies.⁴

Clinicians, public health agencies, and the general public report potential health threats to CDC’s EMP. In 2013, EMP staff facilitated responses to over 20,000 inquiries by connecting the callers with the appropriate CDC subject matter experts, such as epidemiologists or laboratorians. Public health threats originating in other countries are also monitored by PHPR. PHPR requires states that border Mexico and Canada to pursue activities that specifically enhance cross-border public health emergency preparedness and response capabilities at the borders. CDC is also launching an initiative with American Samoa, Guam, the Commonwealth of Northern Mariana Islands, the Republic of the Marshall Islands, the Republic of Palau, and the Federated States of Micronesia to strengthen communicable disease



**20,000
INCOMING CALLS**



During 2013–2014, over 1,400 staff from 41 PHEP awardee jurisdictions received SNS training.

⁴The EMP applies emergency management principles to public health practice. PHPR’s EMP can access all of CDC’s organizational resources to coordinate public health emergency response activities and communications with international, federal, and state partners.



surveillance in the Pacific Region. This region receives over a million international travelers each year and surveillance is critical to preventing disease outbreaks in the U.S.

Mobilizing necessary resources for an effective public health emergency response requires timely and accurate communication between state and local health departments and CDC. During 2013, CDC conducted two emergency notification drills with PHEP awardees to test whether CDC's EOC and awardees' laboratorians and epidemiologists could contact each other regarding potential public health threats, such as an infectious disease outbreak, in a timely manner. The target response time was 45 minutes for each

drill. Overall, awardees successfully completed the drills, with 83% of awardees meeting the target in the first drill and 94% meeting the target in a subsequent drill.

All PHEP awardees have the capability to rapidly and securely share critical health information via health alerting network (HAN) systems. HAN systems were originally designed for emergency response purposes and have also been incorporated into routine public health and healthcare operations. HAN systems facilitate public health information sharing to partners including hospitals, healthcare systems, long-term care institutions, individual providers, professional partner organizations, emergency management, and law enforcement.

The EMP, which applies emergency management principles to public health, manages both training exercises and real public health emergency responses in the U.S. and abroad. During 2013, the EMP conducted 585 global activities, including 65 EOC activations for infectious disease outbreaks in 28 countries (including the U.S.) and 135 exercises. Global activities occurred in 27 countries outside the U.S. Examples of domestic and international engagements included laboratory response drills, providing reports on suspicious mail incidents, and alerting healthcare networks about topics such as drug allocations and preparing for bomb threats. See Appendix A for a list of all domestic and international EMP activities during 2013.

PHPR also conducts training and exercises to prepare state and local health departments to respond effectively during an emergency when Strategic National Stockpile

assets are deployed. The SNS is a national repository of medical countermeasures, vaccines, and other medical supplies stored in strategic locations around the U.S. These assets, including medical countermeasures that may not be commercially available, are designed to supplement state and



During the 2013 Boston Marathon bombing response, the Massachusetts HAN sent 106 messages across 6 days which reached a total of 61,114 recipients. The first alert went out nine minutes after the initial explosion quickly followed by two other alerts to every hospital within 30 miles of the Marathon finish line.

**FAST
FACT**

Prior to receiving PHEP funding, the Republic of Palau had no documented plan or system to notify and assemble staff in an Emergency Operations Center. Now the health department has the capacity to activate and staff an EOC within 1 hour.

local public health departments in the event of a large-scale public health emergency that causes local supplies to run out. In 2013, CDC supported 28 federal, state, and local exercises to improve medical countermeasure distribution and dispensing capabilities.



New York City's Health Department Improves Capabilities Post-9/11

New York City: Some 8.4 million people call it home. Daily commuters generate a net gain of 608,000 additional people each weekday, and tens of millions of people visit every year. Protecting a city of such magnitude can be a daunting task, and with new risks emerging every day, the NYC Department of Health and Mental Hygiene (NYC Health Department) is constantly improving how it protects citizens and visitors alike.

On September 11, 2001, the United States experienced one of the most violent terrorist attacks in its history. In New York City, the World Trade Center's twin towers were destroyed, and emergency responders quickly deployed to assist victims. Along with traditional first responder agencies, the NYC Health Department provided key short- and long-term services in response to the World Trade Center attacks, such as assessing hospital resources, assuring mental health services, issuing public health advisories, assessing injuries and loss of life, and maintaining essential public health services amidst the chaos. Working closely with CDC, NYC's Health Department also assessed the extent of worker injuries at the World Trade Center site, monitored the environment for possible health threats, and implemented hospital emergency department syndromic surveillance systems to quickly identify disease outbreaks.

Post 9/11 Changes Identified During Comprehensive Review

A robust response structure

- a primary and back-up Emergency Operations Center (EOC) to manage response efforts
- comprehensive response plans

A robust exercise and training program

Improved communication and surveillance

Enhanced information technology infrastructure to support emergency response activities

Expanded and enhanced response staffing

- an expanded pool of leaders to run a complicated response
- pre-identified and trained staff to respond
- an automated notification system to rapidly contact staff

Expanded capability to communicate with healthcare providers

Automated syndromic surveillance systems to identify potential outbreaks

Guidance to address significant environmental issues

Since 2001, the NYC Health Department has responded to many emergencies, including the 2003 Blackout, H1N1 influenza, Hurricane Irene, and smaller disease outbreaks. Using PHEP funds, the main source of public health preparedness funds in NYC, the Health Department enhanced all aspects of its emergency response infrastructure. In doing so, it has dramatically improved its capabilities to meet public health preparedness and response needs.

Perhaps the biggest test of the city's enhanced response capabilities was Superstorm Sandy in 2012. This storm is the largest Atlantic tropical storm on record, responsible for loss of life, record flooding, power outages, and the destruction of thousands of homes.

During the response to Superstorm Sandy, the NYC Health Department collaborated with the New York State Department of Health and other partners to coordinate the evacuation and subsequent return of more than 6,000 patients from 46 healthcare facilities in New York City. The NYC Health Department also developed a tracking mechanism to facilitate family reunification for approximately 1,800 long term care patients transferred to alternate locations throughout the city. Additionally, and unexpectedly, the NYC Health Department



led a multi-agency response in which teams canvassed door-to-door over 175,000 households to identify those in need of power, water, heat, and medical attention and made appropriate service referrals.

The NYC Health Department continues

to expand its capabilities by developing community engagement tools. A new public health emergency preparedness website and a much anticipated online portal will be launched, connecting more than 600 partners working on public health priorities across the city. This will allow partners to communicate frequently and quickly in preparation for and in response to public health emergencies.

The NYC Health Department is ever mindful of its mission to protect the health of all New Yorkers by preventing illness and saving lives. By using PHEP funds to expand its capabilities, NYC is significantly better positioned to respond to public health emergencies than it was more than a decade ago. Sustained PHEP funding will ensure these capabilities are maintained and that known gaps can be addressed in the context of a broad range of emergencies.



NYC has been the target of 16 known terrorist plots since September 11, 2001.

North Dakota Uses PHEP and HPP Funds to Transform Public Health and Healthcare Preparedness Capabilities

The North Dakota Department of Health’s Emergency Preparedness and Response Section (EPR) is no stranger to responding to public health emergencies. Since 2001, North Dakota has endured 22 Presidentially-declared weather-related disasters and emergencies—all while responding to other public health threats, such as communicable disease and foodborne illness outbreaks.⁵ The demand for EPR response to emergencies has remained constant over the years, but with the help of PHEP and HPP funding and CDC and ASPR guidance, EPR’s ability to respond has improved significantly.



⁵ Upon request from a state or insular area’s Governor, the President may declare that a major disaster or emergency exists, which activates Federal programs to assist in the response and recovery effort.

Prior to receiving PHEP and HPP funding, North Dakota's EPR lacked comprehensive response plans and communication, transportation, shelter, and medical resources to provide adequate care for North Dakota's citizens during an emergency. North Dakota's response to the Grand Forks flood of 1997 highlighted these shortcomings. Hospitals were unaware of the severity of the flood and did not have effective evacuation plans. Appropriate care was not available for citizens with pre-existing medical conditions. Communication systems did not have the needed bandwidth.



The infusion of PHEP and HPP funds in 2001 significantly improved North Dakota's emergency preparedness and response capabilities. EPR overhauled its planning and response framework, with a strong emphasis on system design (such as communication, transportation, and accountability systems). Public health and healthcare were integrated, along with state and local public health and emergency response organizations. EPR standardized and simplified

“We would not have the communication, transportation, shelter, and medical resources needed to treat our citizens without PHEP and HPP funding. Continued funding is needed to maintain our infrastructure, systems, and skills to successfully respond to future public health emergencies.”

Tim Wiedrich, EPR Section Chief

processes across the state and acquired significant resources, such as medical supplies and evacuation vehicles to accommodate vulnerable populations. The state developed plans to help EPR respond to multiple types of emergencies and trained staff to support responses.

By 2009, North Dakota had the necessary infrastructure, resources, and skills to better respond to public health emergencies. The new systems were tested when the Red River flooded in Fargo, which was further complicated by a simultaneous, massive snowstorm. EPR successfully evacuated over 1,600 people from medical facilities to locations across four states. On the heels of this disaster, North Dakota was hit with the H1N1 influenza outbreak. Tim Wiedrich, EPR Section Chief, stated, “These simultaneous responses crystallized the overlap of resources and systems needed for multiple types of emergencies.” North Dakota is now better prepared to respond to and recover from public health emergencies. Wiedrich credits PHEP and HPP funding and guidance with these improved outcomes.

Exercising to Ensure Administrative Emergency Preparedness

CDC's response to the 2009 H1N1 influenza pandemic was complex, multifaceted, and long term, lasting more than a year. In addition to CDC's epidemiological and public health surveillance work for H1N1 influenza, CDC distributed \$1.4 billion in Public Health Emergency Response (PHER) grant funds to 62 state, local, and territorial health departments to assist in their response efforts.

CDC issued PHER funding to awardees in four phases, a process that federal, state, and local agencies found difficult and inefficient. Many state health departments encountered hurdles such as:

- Complex funding cycles
- Burdensome legal requirements
- Inefficient procurement and allocation methods
- Difficulties working with local health departments to meet federal funding timeframes
- Problems with contracting and hiring

Upon concluding its formal response to the H1N1 influenza pandemic in June 2010, CDC partnered with ASPR, the Association of State and Territorial Health Officials (ASTHO), and the National Association of County and City Health Officials (NACCHO) to identify administrative preparedness successes, challenges, and promising practices.

Administrative preparedness, a term coined during the H1N1 influenza response, is the process of ensuring that fiscal and administrative authorities and practices (e.g., funding, procurement, contracting, hiring, and legal capabilities) used in public health emergency response and recovery are effectively managed throughout all levels of government. Administrative functions are the foundation of emergency response.



Partners implemented several strategies to address challenges. CDC developed a public health emergency response funding mechanism to streamline the funding process. In addition, ASPR and CDC required HPP and PHEP awardees to develop administrative operating procedures and emergency response plans, report administrative preparedness gaps, and develop administrative preparedness improvement plans.

CDC also worked with ASTHO and NACCHO to develop solutions, promising practices, and models that state and local public health departments can use to expedite the administrative preparedness process. ASTHO conducted a focus group of selected states to find out if and how selected practices would work in their states. NACCHO developed assessment tools to assist HPP and PHEP awardees in developing administrative preparedness processes.

In May 2014, HHS held an administrative preparedness tabletop exercise to examine processes associated with receiving and disbursing funds during a public health emergency. This was the first HHS exercise for administrative functions. More than 45 planners and staff from across HHS gathered to assess these processes, including representatives from budget and finance, contracts and grants, program, and operations.

State and local health departments now incorporate administrative and fiscal processes into emergency response plans. These processes include emergency procurement, contracting, and hiring and must define how they differ from normal operations. HPP and PHEP awardees are required to establish procedures for efficiently allocating emergency funds to local health departments. Awardees must also develop reporting and monitoring methods to ensure accountability.

Together, CDC, ASPR, other federal and national partners, and state and local health departments continue to address administrative preparedness gaps. These efforts help ensure that the necessary administrative and fiscal procedures will be in place and resources will be provided efficiently to aid in response and recovery during future public health emergencies.

