

Public Health Emergency Response (PHER) Grant One-time Federal Funding for Missouri's H1N1 Pandemic Response July 31, 2009 – Present

BACKGROUND

When the H1N1 influenza virus struck, states received one-time federal grant funding from the Centers for Disease Control and Prevention (CDC) in July 2009. Funding through the Public Health Emergency Response (PHER) Grant was provided in three phases and was dedicated to help accelerate state and local mass vaccination planning, begin mass vaccination implementation and to improve healthcare systems ability to respond to an influenza pandemic.

PHER Phase I

The first phase of PHER funding provided a total of \$260 million to 62 awardees across the nation for vaccination planning, antiviral distribution/dispensing and administration, community mitigation, laboratory testing, epidemiology, surveillance, and other associated pandemic preparedness and response activities. Of that, Missouri received \$4,998,123. The Missouri Department of Health and Senior Services (DHSS) distributed \$3,998,498 to Local Public Health Agencies (LPHAs) and retained \$999,625 to support personnel and planning activities associated with establishing a statewide vaccine distribution model, antiviral distribution, developing intensified community containment measures including outreach, and public education efforts. In addition, DHSS intensified its surveillance efforts to assist with determining severity of the illness and risks of infection. Missouri's State Public Health Laboratory increased capacity for improved testing processes to enhance systems for transport kit assembly, sample accession, specimen extraction and analysis, reporting, communication and outreach.

PHER Phase II

In August 2009, CDC announced an additional \$248 million in national funding. The money was to go toward further accelerating mass vaccination planning for a national H1N1 flu vaccination campaign in the Fall 2009. Of the national funding total, Missouri received \$4,652,662. DHSS distributed \$3,772,130 to LPHAs and retained \$930,552 to address gaps identified as a result of activities conducted under Phase I. The identified gaps included public information and outreach activities, as well as implementation planning activities for the vaccination campaign with special emphasis on mass vaccination readiness.

PHER Phase III

CDC then announced the third funding phase in late August 2009, and provided \$846 million for implementation of the vaccination campaign. Missouri received \$16,158,145. DHSS distributed \$11,310,702 to LPHAs and established a contingency reserve of \$4,847,443 to address unmet needs on the state and local level as the vaccination campaign developed. Plans included funding a statewide public information and education campaign to address vaccine availability and locations, increased antiviral distribution/dispensing expenses and information technology infrastructure.

Missouri Department of Health and Senior Services PHER Grant Administration

Vaccination Planning and Distribution

Public health planning for mass vaccination was accomplished through a multi-partner coordination committee including representatives from DHSS, LPHAs in each region, the Missouri Hospital Association and Washington University. This group developed a detailed H1N1 vaccine distribution guidance document for LPHAs. The group also developed a model to determine vaccine security threats and assured updated mass vaccination plans were developed for all 115 LPHAs. A variety of communication models have been employed with this group including a “living” Frequently Asked Questions document, a secure web site for posting vaccine related materials, conference calls and webinars.

Missouri is allocated vaccine by the federal government. The first shipment of limited supply was received in early October 2009. Missouri utilized a model in which vaccine was allocated to each LPHA. LPHAs then distribute the vaccine within their jurisdictions. Methods for dispensing the vaccine in the community include distribution to healthcare providers, school-based clinics, and community clinics sponsored in different locations throughout the LPHA’s local community.

DHSS developed a sophisticated algorithm for distributing the vaccine to LPHAs based on their proportionate share of vaccine priority groups. At first, vaccine was allocated based on the following groups:

- Pregnant women
- People who live with or care for children younger than 6 months of age
- Healthcare and emergency medical services personnel with direct patient contact
- Children 6 months through 4 years of age
- Children 5 through 18 years of age with chronic medical conditions

When the demand in these groups had been met, allocation was made based on the following broader priority groups:

- Pregnant women
- People who live with or care for children younger than 6 months of age
- Healthcare and emergency services personnel
- Children, adolescents and young adults between the ages of 6 months and 24 years of age
- People from ages 25 through 64 years who are at higher risk for novel H1N1 because of chronic health disorders or compromised immune systems

When the demand in these groups had been met, the public health system expanded vaccine availability to the general population.

The federal government used a centralized vaccine distribution model where vaccine was shipped directly to designated receiving sites, based on orders submitted by DHSS. Ancillary supplies (e.g., syringes, needles, etc.) were also shipped with the vaccine. By the end of the pandemic, nearly two million doses of H1N1 vaccine had been shipped to Missouri.

Surveillance and Reporting

One of DHSS' first response actions was to alert its statewide disease surveillance systems, elevate their awareness to influenza-like illness, and increase the number of healthcare providers serving as sentinels (testing sites for H1N1 influenza). DHSS also gathered and analyzed data on emergency room visits due to influenza-like illness and provided daily case reports to CDC, including weekends and holidays.

Strategic National Stockpile (SNS) Program

In the Spring 2009, as the flu pandemic was emerging the federal government notified states that a portion of the Strategic National Stockpile (SNS) would be delivered. Antiviral medications to treat the H1N1 influenza began arriving at DHSS' Receiving, Staging and Storage (RSS) site on April 30, 2009. More than 824,000 adult courses of Tamiflu and Relenza were distributed to 115 local public health jurisdictions across Missouri by May 1, 2009. Nearly 40,000 pediatric courses of Tamiflu and Relenza were distributed to 115 local public health jurisdictions throughout Missouri by May 5, 2009.

Medical Response

Any public health emergency requires public health and medical communities to work side-by-side in a united effort. DHSS worked closely with medical clinicians and other healthcare providers to attain and maintain a strong, coordinated pandemic response. That effort included producing health updates and advisories that provide crucial guidance on issues like virus diagnosis, case management and protocol for lab testing and reviewing the constantly changing CDC medical and epidemiological guidelines and sharing them with response partners. DHSS also worked closely with the Missouri Hospital Association, St. Louis Area Response System and Mid-America Regional Council to coordinate response efforts among Missouri hospitals. Assessing community mitigation strategies, such as school closures and mass gatherings, was another key DHSS role, as well as serving as medical liaison between Missouri's LPHAs and CDC for tracking major issues such as numbers of H1N1 cases, school closures and other key developments.

State Public Health Laboratory

The Missouri State Public Health Laboratory (MSPHL) played an integral part in Missouri's public health response to the H1N1 influenza. As initial demand for testing began, the MSPHL collaborated with DHSS' epidemiologists to implement a mechanism for sample approval based upon CDC guidance. Supply orders were expedited, sample collection kits assembled by staff from all areas of the lab, and scientists worked six days a week to keep up with specimen analysis and prevent backlog. Additional scientists were called in and trained to help with various aspects associated with the analysis and special emergency courier services were set up in strategic locations by collaborating with hospitals.

Communication

A comprehensive statewide communication and public education campaign was launched to encourage Missourians to protect themselves and their families by getting vaccinated and educate them on the H1N1 Vaccine InfoLine. The campaign included print advertisements, radio and television messages, billboards, mass transit advertisements, newsletter articles, news releases, Facebook and on-line advertisements. Many of the advertisements were translated in Spanish and Bosnian and a strong emphasis was placed on targeting the hard to reach populations in rural areas of the state.

H1N1 InfoLine

DHSS created a statewide, toll-free H1N1 Vaccine InfoLine, answered 24 hours a day, 7 days a week by health specialists to respond to questions about flu symptoms, when to seek medical care and where to receive the H1N1 flu vaccine. DHSS established an ongoing contract with Missouri Poison Center to support and staff the InfoLine. By the end of the pandemic, the InfoLine received approximately 10,000 calls regarding H1N1 flu.

Nurse Hotline

To assist medical providers seeking detailed consultation on a wide variety of related issues, volunteers for DHSS' nurse hotline were activated to answer calls in April 2009. These consultations determined whether potential H1N1 influenza cases met the criteria to be tested through the State Public Health Laboratory, as well as addressed a myriad of questions and concerns posed from Missouri's medical community. The hotline received more than 1,200 calls during their 19-day activation in spring 2009.

Local Public Health Agencies

Every day Missouri's local public health agencies (LPHAs) provide critical public health services to people across the state. An invaluable aspect of LPHAs' service to Missourians is their role in public health emergency preparedness planning and response, assuring that Missouri communities are well prepared to respond to emergencies, then taking a lead in responding to public health emergency events, such as major disease outbreaks. In this way, LPHAs played a key leadership role in effectively responding to the H1N1 pandemic in Missouri.

The linchpin to Missouri's overall H1N1 response was the statewide mass-vaccination campaign. To successfully assure that an adequate supply of H1N1 vaccine was made available to Missourians, hundreds of thousands of vaccine doses had to be ordered directly from the manufacturers, then distributed to Missouri's local public health agencies. The vaccine would then be further distributed to private providers or given directly to local residents, depending upon each local public health agency's plans. Of course, PHER funding provided crucial financial support to the vital work Missouri's LPHAs did in the "trenches" combating H1N1 in communities across the state.

Following is just a sample of the countless ways LPHAs helped lead Missouri's H1N1 pandemic response:

- Received, distributed, stored and secured H1N1 vaccine according to state and federal guidelines.
- Conducted mass vaccination clinics to priority groups as recommended by the CDC and DHSS.
- Secured provider agreements with local health care providers for the receipt, storage and administration of H1N1 vaccine.
- Coordinated H1N1 vaccine distribution to local health care providers including submission of ordering and accountability reports to DHSS.
- Surveyed hospitals, physicians' offices, pharmacies, day care providers, schools, to determine interest in administering H1N1 vaccine.
- Responded to citizen and provider inquiries regarding H1N1 including questions about vaccine and infection.
- Warehoused and distributed antiviral medications from the Strategic National Stockpile.
- Co-sponsored mass vaccination clinics with neighboring LPHAs in overlapping school districts and jurisdictional boundaries.
- Coordinated vaccine distribution and administration in health care systems that overlap both local and state jurisdictional boundaries.
- Provided language translation for non-English speaking people desiring vaccinations for H1N1.

Assistant Secretary for Preparedness and Response (ASPR) Pandemic Influenza Grant Funding for Healthcare Systems Readiness

Missouri received \$1,726,867 for healthcare systems preparedness and response efforts through the Assistant Secretary for Preparedness and Response (ASPR) Pandemic Influenza Grant. With this additional funding, DHSS created the Pandemic Influenza Healthcare Preparedness (PIHP) program. The PIHP program focused on assisting Missouri's healthcare entities across the state in their H1N1 preparedness and response efforts. This included employee workplace policies, healthcare system decompression, alternate care site capability, and personal protection equipment. Additionally, DHSS contracted \$82,500 with the Missouri Primary Care Association to extend this focus and provide assistance to Missouri's Federally Qualified Health Centers.

With \$1,265,000 of this funding, DHSS purchased portable ventilators and contracted with MO-1 Disaster Medical Assistance Team for a ventilator maintenance program that included storage, training and deployment.

FUTURE H1N1-RELATED ACTIVITIES PHER EXPANSION SPEND PLAN

When the H1N1 pandemic struck, Missouri launched a strong response early in the pandemic. However, PHER funding was crucial in allowing us to maintain a strong, effective pandemic influenza response over a longer time than we could have otherwise.

While our response was a success, we faced a number of barriers that affected key aspects of our overall response effort and, therefore, hindered our ability to more effectively fight the H1N1 virus on all fronts. Further, we identified numerous lessons-learned that we now can use to strengthen our plans, preparations, resources and capabilities to mount a more powerful response to the next pandemic.

Missouri will now depend on PHER Expansion funding to fuel our effort to move ahead with rebuilding and strengthening our plans and capabilities for the future. Continued PHER funding will determine whether and to what extent we will be able to avoid similar barriers faced during the H1N1 response while building on the key lessons.

Included in our PHER Expansion funding requests are activities that will strengthen our ability to identify, locate and communicate with healthcare providers across the state and to gain a better understanding of what healthcare resources, including volunteer healthcare professionals, are available, where they are and how they can be used in an emergency. We will also reach out to Missouri's medical community to better understand how public health is perceived and to determine gaps in the relationship between Missouri's public health and healthcare systems in order to build better relational bridges between the two.

PHER funding will also support activities to continue and enhance some of our key technically based systems and processes to strengthen those previously existing or to maintain new systems created during the H1N1 response. Other technical enhancements will be made at the State Public Health Laboratory's capacity to support pandemic response activities by providing special equipment that conducts highly useful tests on influenza viruses, including tests to detect virus mutations showing antiviral resistance. Expansion funding will also support current projects to conduct multi-state disease surveillance and data sharing across state lines.

Other funding requests include activities that will provide required training for volunteers working in Strategic National Stockpile Points of Dispensing. This training will help create a ready cadre of trained volunteers who could assist communities with providing shots and dispensing other medications (in accordance with state law), thus greatly facilitating future local, regional and state pandemic response capacities.

Local Public Health Agency PHER Activities

All 115 Local Public Health Agencies (LPHA) were given the opportunity to request additional funds for pandemic preparedness based on the amount of funding the LPHAs had remaining after their H1N1 response. Nearly all LPHAs submitted a proposal to continue pandemic influenza preparedness based upon needed improvements or gaps identified in their after-action reports from the H1N1 response.

Some of the preparedness gaps identified during after-action review include emergency response plan improvements, essential equipment and supplies, volunteer coordination, identification badge systems, disease surveillance software, and other items needed to effectively prepare for the next pandemic. The LPHAs also identified the need to improve their means of communication with at-risk populations and the importance of appropriate and effective messaging to limit misperceptions and to reach various cultures. In addition, the need for improved education and training on cold-chain storage of vaccines by current providers was found and needs to be addressed. PHER expansion funds will also be used at the local level to purchase additional Strategic National Stockpile (SNS) points of dispensing supplies, various equipment and other needed items for future pandemic preparedness.

LPHA's will be required to submit a detailed budget for use of PHER extension funds. These budgets will be broken down into the following categories: personal services, fringe, travel, supplies, equipment, other, contractual, and administrative fee.

Following is a comprehensive list of PHER Expansion Plan Projects submitted to CDC for approval. All of these projects were approved for PHER funding to assist Missouri with strengthening plans and preparations for the next pandemic.

- PHER Guidance – Vaccination, Volunteer Recruitment, Training, Sentinel Providers, Surveillance: **Missouri Health Work Registry Exchange (MoHWoRX) database.**
- After Action Report (AAR)/Improvement Plan and Missouri Priority Project/Risk Communications for H1N1 Flu Pandemic: **Health Care Providers Gap Analysis and Outreach Tool Development.**
- AAR/Improvement Plan and Missouri Priority Project/Risk Communications for H1N1 Flu Pandemic: **Underserved Population Gap Analysis and Outreach Tool Development.**
- Missouri Priority Project/Influenza Mortality Data Tracking: **Pneumonia and Influenza Mortality Reporting.**
- Missouri Priority Project/Influenza Mortality Data Tracking: **Cause of Death Reporting/Quality Assurance Activities to close the 2010 mortality file.**
- PHER Guidance/Communications and AAR/Improvement Plan: **Digital Recorder purchase.**
- PHER Guidance/Communications and AAR/Improvement Plan: **Department Situation Room (DSR) Enhancements.**
- PHER Guidance Focus Area 1/Vaccination, Anti-viral distribution, Dispensing and Administration: **Point Of Dispensing Volunteer Training.**
- Missouri Priority Project/CRA Web-based Reporting Application: **Countermeasure Response Administration Inventory Tracking.**
- PHER Guidance/Developing information technology infrastructure for tracking H1N1 personnel, contractors, contracts, inventory, grant funding and other expenses: **Fiscal Support.**
- Missouri Priority Project/Enhancing Laboratory Capacity and AAR/Improvement Plan: **Laboratory Support.**
- PHER Guidance/ Focus Area 2 – Laboratory, epidemiology, surveillance, and other associated pandemic preparedness response activities and AAR/Improvement Plan: **HL-7 Messaging in real-time from immunization providers and laboratories.**
- PHER Guidance/ Focus Area 2 – Laboratory, epidemiology, surveillance, and other associated pandemic preparedness response activities and AAR/Improvement Plan: **Immunization Registry (ShoMeVax).**

- PHER Guidance/ Focus Area 2 – Laboratory, epidemiology, surveillance, and other associated pandemic preparedness response activities and AAR/Improvement Plan: **Communicable Disease Surveillance HL-7 messaging.**
- Missouri’s Priority Project/Enhancing Laboratory Capacity, PHER Guidance/ Focus Area 2 – Laboratory, epidemiology, surveillance, and other associated pandemic preparedness response activities and AAR/Improvement Plan: **Expand the State Public Health Laboratory Electronic lab result reporting.**
- PHER Guidance/ Focus Area 2 – Laboratory, epidemiology, surveillance, and other associated pandemic preparedness response activities: **Regional Surveillance with Illinois and Kansas.**
- PHER Guidance/ Focus Area 2 – Laboratory, epidemiology, surveillance, and other associated pandemic preparedness response activities: **State Disease Surveillance Platform project.**
- AAR/Improvement Plans and PHER Guidance: **Local Public Health Agency (LPHA) activities.**

Estimated PHER Extension Funding	
PHER Focus Area	Amount of Estimated Funds for the PHER Extension Period
Focus Area 1	\$2,728,021
Focus Area 2	\$2,963,583
Focus Area 3	\$5,137,457
Total	\$10,829,061
PHER Funding to LPHAs	\$6,765,250 (63% of total)