

## Mississippi Improves Communication and Surge Capacity Identifying and filling gaps in the public health system improves emergency response.



Mississippi used cooperative agreement funding to improve preparedness, specifically for communication and medical care for displaced individuals. Recently, the Mississippi State Department of Health (MSDH) used the Mississippi Health Alert Network (HAN) to notify the state's healthcare system of a serious outbreak of pertussis (whooping cough). HAN allowed one person to notify every participating physician, every hospital, and many other medical providers (over 5,000 contacts) in about 6 hours, with a verified delivery rate approaching 90%. Previously, this process was very labor intensive, taking a minimum of 12 to 14 hours with a 50% success rate.

In addition, following Hurricane Katrina, MSDH realized that it did not have the medical surge capacity to care for the thousands of individuals with special medical needs displaced by the storm. The cooperative agreement is funding medical surge capacity enhancement that utilizes Mississippi's community college system. Buildings on selected campuses are being equipped to act as special medical needs shelters for use in the event of storms, a pandemic outbreak, or other natural or man-made

disaster. Enough hospital-grade equipment, medical supplies, and pharmaceuticals are being purchased to enable each surge capacity site to care for at least 100 patients and 100 caregivers, plus staff. MSDH is also upgrading electrical power systems to enable climate control and life support systems to function in the event of power loss. Showers and bathrooms are being retro-fitted for use by physically challenged individuals and to meet the Americans with Disabilities Act requirements. During the next disaster, Mississippi will be more prepared to care for displaced people who need ongoing medical care.

**According to the Mississippi State Department of Health, the cooperative agreement is valuable because** it has covered salaries for bioterrorism surveillance nurses in each of the nine public health districts. Mississippi also has been able to add a testing area with enhanced security within their main laboratory that allows for routine and overflow testing.

## Snapshot of Public Health Preparedness

Below are activities conducted by Mississippi in the area of public health preparedness. They support CDC preparedness goals in the areas of detection and reporting, control, and improvement; crosscutting activities help prepare for all stages of an event. These data are not comprehensive and do not cover all preparedness activities.

### Disease Detection and Investigation

The sooner public health professionals can detect diseases or other health threats and investigate their causes and effects in the community, the more quickly they can minimize population exposure.

Detect & Report	Could receive and investigate urgent disease reports 24/7/365 <sup>1</sup>	Yes
	- Primary method for receiving urgent disease reports* <sup>2</sup>	Telephone
	Linked state and local health personnel to share information about disease outbreaks across state lines (through the CDC <i>Epi-X</i> system) <sup>3</sup>	Yes
	Conducted year-round surveillance for seasonal influenza <sup>4</sup>	Yes

\* Telephone, fax, and electronic reporting are all viable options for urgent disease reporting, as long as the public health department has someone assigned to receive the reports 24/7/365.

<sup>1</sup> CDC, DSLR; 2005; <sup>2</sup> CDC, DSLR; 2006; <sup>3</sup> CDC, *Epi-X*; 2007; <sup>4</sup> HHS, OIG; 2007



# Mississippi



## Public Health Laboratories

Public health laboratories test and confirm agents that can threaten health. For example, advanced DNA “fingerprinting” techniques and subsequent reporting to the CDC database (PulseNet) are critical to recognize nationwide outbreaks from bacteria that can cause severe illness, such as *E. coli* O157:H7 and *Listeria monocytogenes*.

Detect & Report	Number of Mississippi laboratories in the Laboratory Response Network <sup>1</sup>	1
	Rapidly identified <i>E. coli</i> O157:H7 using advanced DNA “fingerprinting” techniques (PFGE): <sup>2</sup>	
	- Number of samples received (partial year, 9/06 – 2/07)	3
	- Percentage of test results submitted to CDC database (PulseNet) within 4 days	33%
	Rapidly identified <i>Listeria monocytogenes</i> using advanced DNA “fingerprinting” techniques (PFGE): <sup>2</sup>	
	- Number of samples received (partial year, 9/06 – 2/07)	None
	- Percentage of test results submitted to CDC database (PulseNet) within 4 days	N/A
	Had a laboratory information management system that could create, send, and receive messages <sup>3</sup> (8/05 – 8/06)	Yes
	- System complied with CDC information technology standards (PHIN) <sup>3</sup> (8/05 – 8/06)	No
Crosscutting	Had a rapid method to send urgent messages to frontline laboratories that perform initial screening of clinical specimens <sup>3</sup> (8/05 – 8/06)	Yes
	Conducted bioterrorism exercise that met CDC criteria <sup>4</sup> (8/05 – 8/06)	Yes
	Conducted exercise to test chemical readiness that met CDC criteria <sup>4</sup> (8/05 – 8/06)	Yes

<sup>1</sup> CDC, DBPR; 2007; <sup>2</sup> CDC, DSLR; 2007; <sup>3</sup> APHL, Public Health Laboratory Issues in Brief: Bioterrorism Capacity; May 2007; <sup>4</sup> CDC, DSLR; 2006

## Response

Planning provides a framework for how a public health department will respond during an emergency. The plans can be tested through external reviews, exercises, and real events. After-action reports assess what worked well during an exercise or real event and how the department can improve.

Control	Developed a public health response plan, including pandemic influenza response, crisis and emergency risk communication, and Strategic National Stockpile (SNS) <sup>1,2</sup>	Yes
	Mississippi SNS plan reviewed by CDC <sup>2</sup>	Yes
	- Score on CDC technical assistance review (1-100)	96
	Number of Mississippi cities in the Cities Readiness Initiative <sup>3</sup>	1
Crosscutting	Developed roles and responsibilities for a multi-jurisdictional response (ICS) with: <sup>1</sup> (8/05 – 8/06)	
	- Hospitals	Yes
	- Local/regional emergency management agencies	Yes
	- Federal emergency management agencies	Yes
	Public health department staff participated in training to support cooperative agreement activities <sup>4</sup>	Yes
	Public health laboratories conducted training for first responders <sup>5</sup> (8/05 – 8/06)	No
	Activated public health emergency operations center as part of a drill, exercise, or real event* <sup>6</sup> (partial year, 9/06 – 2/07)	Yes
Conducted a drill or exercise for key response partners to test communications when power and land lines were unavailable <sup>6</sup> (partial year, 9/06 – 2/07)	No	
Improve	Finalized at least one after-action report with an improvement plan following an exercise or real event <sup>6</sup> (partial year, 9/06 – 2/07)	Yes

\* Activation means rapidly staffing all eight core ICS functional roles in the public health emergency operations center with one person per position. This capability is critical to maintain in case of large-scale or complex incidents, even though not every incident requires full staffing of the ICS.

† States were expected to perform these activities from 9/1/2006 to 8/30/2007. These data represent results from the first half of this period only.

<sup>1</sup> CDC, DSLR; 2006; <sup>2</sup> CDC, DSNS; 2007; <sup>3</sup> CDC, DSNS CRI; 2007; <sup>4</sup> CDC, DSLR; 1999-2005; <sup>5</sup> APHL, Chemical Terrorism Preparedness; May 2007; <sup>6</sup> CDC, DSLR; 2007