

## Florida Responds to a Measles Outbreak

Epidemiological investigations are critical for effective surveillance in public health emergencies.



In May 2007, a university student went to the student health service center with a rash-like illness that was diagnosed as measles and later confirmed through subsequent testing. It had been over 20 years since the last case of measles in Alachua County. The student was a member of a religious group that, while not prohibiting vaccination, did not actively receive immunizations. Investigations proved that several other members of this religious group had been ill, with one potential case having returned from a major festival in India. Because of the highly contagious nature of measles, the public health department needed to respond quickly and conduct ongoing monitoring.

The Alachua County Health Department established a basic Incident Command System (ICS) structure for the measles outbreak. While all of the staff involved had been trained in ICS and most had used it in major hurricane deployments, this was their first use of the system in a biological event. Public health workers are now convinced that this training and the system itself provided a better framework to identify activities and outcomes, track completion of assignments, and allow for proper accounting of the associated costs.

Public health workers responded by conducting surveillance of the entire primary care medical community for new cases, looking back for unreported cases (four were found), setting up immunization clinics at the religious group's headquarters, school sites, and satellite clinics, and establishing an ongoing "rash room" entrance for diagnosis and prevention of potential new cases from entering the general population. As a result, no further cases occurred, and the incident was closed in June, only one month after the first diagnosis.

**According to the Florida Department of Health, the cooperative agreement is valuable because** funds have allowed the state to hire dedicated preparedness personnel to coordinate and facilitate planning, training, and exercising of public health and response partners. Florida also has been able to provide ICS training that has drastically increased the state's ability to respond, eliminate duplication of efforts, and maximize the use of resources.

## Snapshot of Public Health Preparedness

Below are activities conducted by Florida 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



# Florida



## 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 Florida laboratories in the Laboratory Response Network <sup>1</sup>	5
	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)	17
	- Percentage of test results submitted to CDC database (PulseNet) within 4 days	82%
	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	
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	
Crosscutting	Conducted bioterrorism exercise that met CDC criteria <sup>4</sup> (8/05 – 8/06)	No
	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
	Florida SNS plan reviewed by CDC <sup>2</sup>	Yes
	- Score on CDC technical assistance review (1-100)	86
	Number of Florida cities in the Cities Readiness Initiative <sup>3</sup>	3
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)	Yes
	Activated public health emergency operations center as part of a drill, exercise, or real event <sup>*16</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>16</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>16</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.

<sup>1</sup> 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