

## Utah Responds to Potential Smallpox Case

Localized laboratory testing capabilities ensure the rapid confirmation of potential diseases.



In 2006, a long-haul truck driver who had just arrived in Salt Lake City, Utah, from Seattle, Washington, showed up at an emergency room with skin lesions and a fever. The attending physician in the emergency room determined that the appearance of the lesions was compatible with the symptoms of smallpox infection. Immediately recognizing the complexity of the situation, the physician notified the Salt Lake Valley Health Department. The emergency room was immediately closed and anyone present at the time the truck driver arrived was not allowed to leave. After consulting with the Utah Department of Health (UDOH) and CDC, a sample was taken to the UDOH laboratory for testing. It was quickly determined that the man fortunately did not have smallpox, but instead had atypical chicken pox.

Quick response and resolution occurred because individuals involved in this response were trained to communicate with both the local and state public health departments. The state laboratory was equipped with the

technology to quickly confirm whether the truck driver had smallpox. Utah has the capability to complete rapid testing, which takes only a matter of hours, whereas before the cooperative agreement, the sample would have required transportation to CDC in Atlanta, Georgia, for confirmation. All select bioterrorism agents can now be tested within the state. Also, local public health departments have working relationships with the hospitals in their area, which were fostered due to cooperative agreement funds.

**According to the Utah Department of Health, the cooperative agreement is valuable because** it has allowed Utah to develop an all-hazard response plan, implement systems for surveillance and detection, enhance laboratories, and increase capabilities in communications.

## Snapshot of Public Health Preparedness

Below are activities conducted by Utah 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



## 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 Utah 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)	35
	- Percentage of test results submitted to CDC database (PulseNet) within 4 days	94%
	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)	4
	- Percentage of test results submitted to CDC database (PulseNet) within 4 days	100%
	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)	Yes
	Conducted exercise to test chemical readiness that met CDC criteria <sup>4</sup> (8/05 – 8/06)	No Response

<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
	Utah SNS plan reviewed by CDC <sup>2</sup>	Yes
	- Score on CDC technical assistance review (1-100)	66
	Number of Utah 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	No
	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>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)	Yes	
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.

<sup>†</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