

## Montana Responds to a Case of Multi-Drug Resistant Tuberculosis

Clear isolation and quarantine statutes contribute to a more timely and authoritative response.



When Montana state and local health departments learned of a multi-drug resistant tuberculosis (MDR TB) case in 2006, urban

and rural counties worked seamlessly with the state health department TB program to prevent the spread of the disease. First, the local health department issued an isolation order restricting the infected patient's travel.

Because the infected patient had planned to travel internationally from an airport located in an adjacent, urban county, that county's public health department also issued an order restricting flight from that airport. To restrict air travel from any other city, the regional CDC quarantine office and airline were notified. The infected patient was permitted to travel, within specified parameters, to a hospital for treatment. When no longer contagious, the patient was allowed to return home.

After-hours communication and relationships among state and local laboratories facilitated the exchange of clinical testing results. In addition, a communicable disease nurse was dedicated to manage the complex public health and medical issues related to this case.

Cooperative agreement funds contributed to the successful response. Local health authorities could rapidly issue a county isolation order because Montana had reviewed and updated its public health statutes, including isolation and quarantine authorities, and local public health departments adopted and updated their protocols. Montana also updated its high-level biosafety laboratory with the infrastructure needed to protect staff from highly infectious samples, such as MDR TB.

**According to the Montana Department of Public Health and Human Services, the cooperative agreement is valuable because without funding, the completion of state, local, and tribal public health workforce assessments, as well as public health worker training in risk communication and other topics related to preparedness, would not have been possible. The cooperative agreement also has enabled the state to provide Incident Command System training at the state, local, and tribal levels.**

## Snapshot of Public Health Preparedness

Below are activities conducted by Montana 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



# Montana



## 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 Montana 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)	5
	- Percentage of test results submitted to CDC database (PulseNet) within 4 days	100%
	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)	Yes
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)	N/A

<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
	Montana SNS plan reviewed by CDC <sup>2</sup>	Yes
	- Score on CDC technical assistance review (1-100)	80
	Number of Montana 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)	No
Improve	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
	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