

New York Responds to an Outbreak of Gastrointestinal Illness

Clear and coordinated communication is critical for timely and comprehensive response.



When dozens of people in two neighboring counties began reporting symptoms of gastrointestinal illness in August 2005, the New York State Department of Health (DOH) and local public health departments quickly mounted an outbreak investigation. Case findings soon suggested the source of illness to be an upstate New York water spray park. Tests by the state public health laboratory quickly identified the cause as *Cryptosporidium*, a microscopic parasite which may cause profuse diarrhea, anorexia, and vomiting. The spray park voluntarily closed after tests confirmed the presence of the microorganism in the park's recirculating water system.

Statewide notification to health care providers and a coordinated public information campaign resulted in over 2,300 reported cases from 36 counties. The timely and comprehensive response prevented further spread of the infection into the community. The investigation also resulted in many public health improvements, including "healthy swimming" public awareness campaigns, training of spray park operators to reduce the risk of future

outbreaks, and new regulations requiring spray parks to use proper sterilization and health promotion measures.

This case illustrates how good public health emergency planning can enhance disease surveillance, laboratory testing, risk communication, and environmental mitigation. Thorough evaluation and follow-up to identify an outbreak improves response and reduces the effect that a communicable disease can have on a community.

According to the New York State Department of Health, the cooperative agreement is valuable because it has contributed greatly in advancing the state's readiness to respond to health emergencies. The state has been able to build a system and structure to develop, maintain, and manage capacities that support health emergency preparedness and response activities. Resources have been placed into existing systems at state and local public health departments and with key partners.

Snapshot of Public Health Preparedness

Below are activities conducted by New York 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 ¹	Yes
	- Primary method for receiving urgent disease reports* ²	Telephone
	Linked state and local health personnel to share information about disease outbreaks across state lines (through the CDC <i>Epi-X</i> system) ³	Yes
	Conducted year-round surveillance for seasonal influenza ⁴	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.

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



New York



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 New York laboratories in the Laboratory Response Network ¹	5
	Rapidly identified <i>E. coli</i> O157:H7 using advanced DNA “fingerprinting” techniques (PFGE): ²	
	- Number of samples received (partial year, 9/06 – 2/07)	71
	- Percentage of test results submitted to CDC database (PulseNet) within 4 days	83%
	Rapidly identified <i>Listeria monocytogenes</i> using advanced DNA “fingerprinting” techniques (PFGE): ²	
	- Number of samples received (partial year, 9/06 – 2/07)	40
	- Percentage of test results submitted to CDC database (PulseNet) within 4 days	85%
	Had a laboratory information management system that could create, send, and receive messages ³ (8/05 – 8/06)	Yes
	- System complied with CDC information technology standards (PHIN) ³ (8/05 – 8/06)	Yes
Crosscutting	Had a rapid method to send urgent messages to frontline laboratories that perform initial screening of clinical specimens ³ (8/05 – 8/06)	Yes
	Conducted bioterrorism exercise that met CDC criteria ⁴ (8/05 – 8/06)	Yes
	Conducted exercise to test chemical readiness that met CDC criteria ⁴ (8/05 – 8/06)	Yes

¹ CDC, DBPR; 2007; ² CDC, DSLR; 2007; ³ APHL, Public Health Laboratory Issues in Brief: Bioterrorism Capacity; May 2007; ⁴ 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) ^{1,2}	Yes
	New York SNS plan reviewed by CDC ²	Yes
	- Score on CDC technical assistance review (1-100)	95
	Number of New York cities in the Cities Readiness Initiative ³	3
Crosscutting	Developed roles and responsibilities for a multi-jurisdictional response (ICS) with: ¹ (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 ⁴	Yes
	Public health laboratories conducted training for first responders ⁵ (8/05 – 8/06)	Yes
	Activated public health emergency operations center as part of a drill, exercise, or real event* ¹⁶ (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 ¹⁶ (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 ¹⁶ (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.

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