

Indiana Responds to a Nationwide Botulism Outbreak

Well-trained staff and established communications systems are critical for effective emergency response.



During a 2007 nationwide outbreak of botulism from contaminated commercial food products, the Indiana State Department of Health (ISDH) investigated cases, monitored recall efforts, and relayed information to health care providers, local health departments, and the public.

The work of epidemiologists, public health coordinators, and communications specialists was crucial. Field epidemiologists facilitated communication between the local and state health departments and increased investigative capacity. Central office epidemiologists tracked cases, assisted local health departments with case investigations, and coordinated with other ISDH program areas and CDC. In addition, the Public Health Emergency Surveillance System allowed near real-time evaluation of chief complaint data from 73 hospitals statewide. Chief complaints that suggested botulism infection were immediately forwarded to an ISDH epidemiologist for investigation.

District public health coordinators assisted the ISDH Food Protection Program in contacting local health departments to determine the effectiveness of the recall.

Field public information officers prepared news releases, answered media inquiries, and staffed media interviews, including a news conference with the State Health Commissioner. State-of-the-art personal communications systems with wireless handheld devices and statewide networks were essential to providing timely, seamless communication. The Indiana Health Alert Network was used to rapidly communicate with large numbers of people in different disciplines and locations throughout the response.

According to the Indiana State Department of Health, the cooperative agreement is valuable because funds have greatly improved personnel and infrastructure for public health preparedness. Without this funding source, having state and local personnel devoted to preparedness, the health alert system, and increased syndromic surveillance activities would not have been possible, and continued maintenance would not occur.

Snapshot of Public Health Preparedness

Below are activities conducted by Indiana 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	Fax
	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



Indiana



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 Indiana laboratories in the Laboratory Response Network ¹	1
	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)	22
	- 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): ²	
	- 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 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
	Indiana SNS plan reviewed by CDC ²	Yes
	- Score on CDC technical assistance review (1-100)	91
	Number of Indiana cities in the Cities Readiness Initiative ³	1
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* ⁶ (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 ⁶ (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 ⁶ (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