



FACT SHEET

Frequently Asked Questions About the Laboratory Response Network (LRN)

What is the Laboratory Response Network?

The LRN is a national network of local, state and federal public health, food testing, veterinary diagnostic, and environmental testing laboratories that provide the laboratory infrastructure and capacity to respond to biological and chemical terrorism, and other public health emergencies. The more than 150 laboratories that make up the LRN are affiliated with federal agencies, military installations, international partners, and state/local public health departments.

The LRN is also a partnership between key stakeholders in the preparation and response to biological and chemical terrorism. The Centers for Disease Control and Prevention (CDC), the Federal Bureau of Investigation (FBI), and the Association of Public Health Laboratories (APHL) were key partners in establishing the LRN. (See "LRN Partners" for information on other LRN partners: www.bt.cdc.gov/lrn/partners.asp.)

Is the LRN separate from CDC?

The LRN was launched by CDC in 1999. While oversight of the LRN is accomplished by a committee made up of leaders from the CDC and LRN partners, the CDC is ultimately accountable for the program.

How many laboratories are members of the LRN?

On the biological side, there are currently more than 150 member laboratories, representing all 50 states, Australia, Canada and the United Kingdom. The LRN continues to add new member laboratories for biological agent detection. The majority of current members are public health laboratories. One of the LRN's goals is to expand membership to broaden the scope of biological agent detection, particularly among veterinary diagnostic, food and water testing, private, and commercial laboratories.

On the chemical side, there are 62 LRN laboratories, including 46 state and local public health laboratories that provide testing on clinical specimens to measure human exposure to toxic chemicals.

Are there two networks, one for biological response and another for chemical response?

The LRN is one network that encompasses both bioterrorism and chemical terrorism preparedness and response. In fact, LRN chemical laboratories that have the capacity to measure metabolites in clinical specimens are also public health laboratories that have been designated as reference testing laboratories for biological agent detection.

The approaches to a response, however, are different. LRN bioterrorism preparedness and response activities emphasize local laboratory response by helping to increase the number of trained laboratory workers in state and local public health facilities; distributing standardized test methods and reagents to local labs; promoting the acquisition of advanced technologies; and supporting facility improvements. The chemical side of the LRN employs a more centralized structure. This means initial testing in a suspected chemical event will occur at CDC. Using sophisticated mass spectrometry, CDC laboratories perform tests on the first 40 clinical specimens to measure human exposure. Results of these tests would be reported to affected states, and if needed, appropriate LRN members may be asked to test additional samples. This

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approach is necessary because the analytical expertise and technology resources required to respond to a chemical event is substantially high.

How are laboratories selected for membership?

Inclusion as a reference testing facility for biological agent detection is not automatic and prospective members must demonstrate certain capabilities and capacities, and meet established agent-specific performance standards. For both biological and chemical laboratory membership, the state public health laboratory director has a key role in determining whether additional laboratory capacity is critical to the state's overall emergency response goals. If needed, additional laboratories may be invited to participate by a state laboratory director.

What requirements do laboratories have to meet in order to remain members of the LRN?

Just as laboratories must demonstrate certain capabilities and capacities to be admitted to the LRN, they must also continue to prove those same characteristics. Laboratories are subjected to routine proficiency testing in order to prove testing accuracy.

How is the LRN funded?

The LRN is a CDC program. Congress appropriates money through the Department of Health and Human Services, which oversees CDC activities. Each year, through a governmental cooperative agreement, the money is distributed among LRN-member laboratories to fund laboratory positions, renovations, and acquire the latest technology. Individual states are responsible for determining how the funds are divided up among public health laboratories in their states.

Why are private and commercial laboratories a component of the LRN?

There are an estimated 25,000 private and commercial laboratories in the United States, some of which can provide critical sentinel laboratory capacity. While most of these laboratories do not have the facilities or the technology to perform confirmatory testing, they represent the first contact with patients and are in a position to alert public health officials. They can also conduct tests to rule out other diseases and ship samples to appropriate reference laboratories.

What role do veterinary laboratories play in combating terrorism?

Many diseases, such as anthrax, plague, and tularemia, are zoonotic, meaning that they can be shared by both humans and animals. Disease outbreaks are often preceded by illness among animal populations. Veterinary diagnostic laboratories serve as reference laboratories for animals and can alert public health officials to potential disease outbreaks so that agent-specific response plans can be implemented.

How is CDC helping member labs prepare for chemical terrorism?

CDC has assisted LRN members with purchasing instruments needed for measuring chemicals in blood and urine. Because of the complexity of the instrumentation, on-site operation training is provided by the instrument vendor as part of the purchase package. Through hands-on training at CDC and computer-based training, CDC is training Level 1 and Level 2 labs on analytical methods. Network members that receive methods and instrumentation must also participate in a rigorous quality assurance program to ensure that network labs provide precise, accurate, high-quality data. CDC is also providing a "train-the-trainer" course that will give chemical terrorism coordinators the tools they need to train partners in their jurisdictions, such as hospital staff, about sample collection and shipping.

For more information, visit www.bt.cdc.gov/lrn,
or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).