



APHL Position Statement

The Need for Sustained Funding of Public Health Laboratories to Ensure All-Hazard Preparedness

A. Statement of Position

Public health laboratories are at the frontline of state and local responses to all-hazard public health threats such as those caused by natural, accidental or deliberate dissemination of hazardous biological, chemical or radiological agents. This response capability at the state and local level is critical to our nation's preparedness. As such, APHL believes it is essential that public health laboratories receive sustained funding to acquire and maintain the sophisticated instrumentation, highly trained technical staff and essential infrastructure necessary to ensure their ability to respond to all-hazard emergencies quickly and reliably at any time.

B. Implementation

1. The leadership of APHL including standing committees and subcommittees, such as the Public Health Preparedness and Response Committee and LRN Operational Workgroup, will collaborate with the CDC and association members to develop a plan and identify supporting material to inform Congress of the need to provide reliable, adequate levels of sustained funding of the LRN through the Public Health Emergency Preparedness Cooperative Agreement.
2. APHL will make recommendations and continue to work with the CDC and other federal agencies

to develop a comprehensive program to analyze environmental samples and clinical specimens for hazardous biological, chemical and radiological agents.

C. Background/Data Supporting Position

With the terrorist attack on the World Trade Center in September 2001, and the subsequent introduction of anthrax into the U.S. Postal System in October of the same year, the role of public health laboratories in emergency preparedness and response became recognized as vitally important. Prior to these events, state and local public health laboratories served their respective jurisdictions primarily by providing population-based, analytical testing to detect and identify infectious organisms, biological toxins, radiological contaminants and hazardous chemicals for the health care community and to support programmatic requirements of state and local governmental agencies. These traditional agencies included public health, pollution control, natural resources, transportation, agriculture and labor and industry. Since the events of 2001, the nature and scope of analytical testing done by these public health laboratories have changed dramatically. The number of official entities that depend on the analytical support provided by these laboratories has been markedly increased to include public safety, homeland security, emergency management, HazMat teams, National Guard Bureau Civil Support Teams and the Federal

Bureau of Investigation. Today, the traditional entities and all of these additional governmental entities have become dependent on public health laboratories to provide the essential data they need for decision-making to protect the health of the public and those that respond to emergencies.

The ability of public health laboratories to begin meeting this new emergency response challenge was made possible in large part by funds appropriated through the U.S. Congress to the Department of Health and Human Services for distribution by the Centers for Disease Control and Prevention (CDC) in the form of cooperative agreements with the states (1). Through the use of these funds, a robust national Laboratory Response Network (LRN) has been developed and strengthened to serve as a nationwide and international, inter-laboratory system for emergency response. Created later in the process by the Food and Drug Administration (FDA), the US Department of Agriculture (USDA) and the US and Environmental Protection Agency (EPA), other networks such as the Food Emergency Response Network (FERN) and the Environmental Laboratory Response Network (ERLN) have specialized roles in the emergency response efforts as well.

Originally designed by CDC in collaboration with the APHL and FBI, the LRN connects each state public health laboratory with jurisdiction-wide sentinel clinical laboratories as well as the national laboratories at the CDC (2). Within this LRN, the state and some large city and county public health laboratories serve as essential LRN reference and chemical laboratories. As reference facilities, these laboratories have the analytical capabilities necessary to rapidly and accurately detect, identify or confirm the presence of biological or chemical threat agents in clinical specimens obtained from exposed individuals. Development of this clinical capability has required a major investment of cooperative agreement funds to recruit and train

qualified staff, to purchase and operate costly instrumentation, to transfer standardized technology from the CDC to the states, and to train first responders about the LRN's capability and availability. As a direct result of this investment of funds, the LRN infrastructure was established as a demonstrably effective system for responding to biological or chemical threat agents present in clinical specimens.

Despite the demonstrated effectiveness of the LRN in addressing the analysis of clinical specimens for biological or chemical agents, there remain significant gaps in the ability of public health laboratories to respond to all-hazard emergencies involving the analysis of environmental samples and food for the same type of agents as well as radiological agents. These gaps represent a major unresolved challenge complicated by reality. In today's world, there are rising expectations by state and local officials that the public health laboratories that serve as LRN reference laboratories within their jurisdictions have the ability to quickly and accurately identify any and all biological, chemical or radiological threat agents in any unknown environmental sample. This expectation is driven by necessity at the local level. Timely analysis of environmental samples to determine the presence or absence of a biological or chemical threat is critical to the overall outcome of any terrorist attack or accidental exposure. The 50 state and District of Columbia public health laboratories reported thousands of samples tested annually from potential threats (3). When such incidents occur at the local level, there are questions that must be answered with gripping urgency and absolute reliability: Is there a threat agent? If so, what is it? Is it a criminal event? Are responders at immediate risk? What actions need to be taken to protect the public? Is there an impact on business? How long does business need to be suspended? Answers to these questions, and many

others, must be available to local and state officials as soon as possible, at any time of the day or week. While the public health laboratories that serve as LRN reference facilities are increasingly expected by these officials to provide the answers they need, these laboratories cannot always do so because of the gaps that still remain in their overall preparedness. Among these gaps are the need for (i) highly skilled workforce, which encompasses the recruitment, hiring and retention of appropriately trained clinical microbiologists, analytical chemists and radio chemists, (ii) standardized testing methods for a broader range of biological, chemical and radiological agents in a wide variety of environmental matrices, (iii) additional resources to purchase the required analytical instrumentation, maintain these instruments and (iv) common protocols for electronic data exchange.

The current trend to decrease federal funding of state and local emergency preparedness and response efforts is of great concern to APHL and its members. Consistently, the base amount of Public Health Emergency Preparedness (PHEP) Cooperative Agreement available to public health laboratories for their LRN activities has been reduced (4). If this negative trend continues, the substantial past investments made by Congress to develop and strengthen the networks will be lost. The remarkable laboratory infrastructure that we now have in place nationwide to respond to biological or chemical threats present in clinical specimens is already beginning to collapse, and the gaps that currently exist in our ability to respond to biological, chemical or radiological threats in the environment will remain as dangerous or even worse, if they go unresolved, thereby hindering state and local preparedness and response efforts.

Consequently, APHL strongly believes it is essential that public health laboratories receive sustained federal funding to maintain and improve the various response networks to appropriately address all-

hazard emergencies. Additionally, APHL believes such sustained funding must be at levels that go beyond the initial purchase of expensive instrumentation and the hiring of analytical personnel. To actually sustain the networks, consistent, continuous funding must be available to state and large city and county public health laboratories to pay for annual preventative maintenance of complex instrumentation, replacement of equipment as it ages and as technology advances, recruitment and retention of qualified staff, supplies and materials required for testing protocols, maintenance of reliable statewide specimen/sample transport systems, development and transfer of technology from the CDC to these laboratories, continuous education and training of the sentinel clinical laboratories and first responders, and planning and execution of exercises and drills. With sustained funding to cover all of these real and on-going costs, the nation will be assured that state and local communities will be prepared to respond effectively to all-hazards.

D. References

1. "Public Health Emergency Preparedness Cooperative Agreement, Budget Period 10 Extension Guidance," Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, available at http://emergency.cdc.gov/cdcpreparedness/coopagreement/10/PHEP%20BP10%20Extension%20Guidance_Instructions_Appendices_05-13-2010_FINAL.pdf, accessed August 4, 2010.
2. CDC: The Laboratory Response Network, Partners in Preparedness, available at <http://www.bt.cdc.gov/lrn/>, accessed August 4, 2010.
3. APHL: Public Health Laboratories: Diminishing Resources in an Era of Evolving Threats, June 2010, available at <http://www.aphl.org/aphlprograms/ep/ahr/Documents/DiminishingResourcesEvolvingThreats.pdf>, accessed August 4, 2010.
4. APHL: 2009 APHL All-Hazards Laboratory Preparedness Survey Data, June 2010, available at <http://www.aphl.org/aphlprograms/ep/ahr/Documents/APHLAllHazWhitePaperEPR.pdf>, accessed August 4, 2010.

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