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# Definition of a Local Public Health Laboratory<sup>1</sup> System or Network

*(Within a State Public Health Laboratory System<sup>2,3</sup>)*

A public health laboratory system is an alliance of laboratories and other partners within a state or locality that supports the ten essential public health services. System members and stakeholders operate in an interconnected and interdependent way to facilitate the exchange of information, optimize laboratory services, and help control and prevent disease and public health threats.

**INTRODUCTION.** A Public Health Laboratory System (PHL System) consists of all the participants in public health testing, including those who initiate testing and those who ultimately use the test results. All states have a PHL System and some local jurisdictions may have sufficient stakeholders to convene a Local PHL System.

Local PHL Systems are a part of the larger State PHL System but are unique in that they support and respond in real-time to local jurisdictional needs. In Milwaukee, the Local PHL System is a part of the larger State PHL System as well as being part of the broader local and statewide public health system.

The concept of a PHL System is embodied in the Association of Public Health Laboratory (APHL) Core Functions and Capabilities of State Public Health Laboratories<sup>4</sup>. Local PHLs fulfill many of the same roles and often perform many or portions of the 11 Core Functions and Capabilities of State PHLs.

The PHL System (local or state) includes individuals, organizations and agencies that are involved in assuring that laboratory testing and data support the 10 Essential Services of Public Health<sup>5</sup>.

More in-depth information on these topics can be found at the APHL website at [www.aphl.org](http://www.aphl.org).

**STAKEHOLDERS.** Primary stakeholders and partners that make up the Local PHL System are those who are directly involved in creating and using laboratory data. Partners include epidemiologists; first responders; environmental professionals in water, food and air surveillance activities; private clinical and environmental laboratories; and other local public health professionals and laboratories. Additional stakeholders include those who are concerned with complementary Essential Services such as Workforce Development and Education and Public Health Related Research.

A successful National Laboratory System<sup>6</sup> is dependent on the creation of fully integrated and coordinated networks at the state and local level.

**FUNCTIONS.** PHL Systems (local and state) assure that:

1. Public health threats are detected and intervention is timely;
2. Stakeholders are appropriately informed of potential threats;
3. Reportable conditions are monitored;
4. Specimens and isolates for public health testing are sufficient to provide comprehensive public health surveillance and response; and
5. Public health laboratory data are transmitted to appropriate local, state and federal agencies responsible for disease surveillance and control.

The PHL (local and state) has a leadership role in developing and promoting the system through active collaboration with system stakeholders. The PHL provides leadership to assure that essential and state-of-the-art laboratory services are provided and that clinical laboratories that perform public health testing on reportable infectious diseases submit results to the public health surveillance system using state and national testing guidelines.

**THE LOCAL PHL SYSTEM.** The Local PHL monitors essential components of the Local PHL System and assures that accurate results are reported in a manner that assures an effective public health response. A successful Local PHL System requires proactive leadership to monitor public health testing processes by clinical laboratories.

To assure that the Local PHL System is effective, the Local PHL should at a minimum:

1. Maintain an integrated information system that includes all stakeholders that rely on accurate laboratory data;
2. Define a public health laboratory system coordinator;

3. Create a standing public health laboratory advisory committee; and

4. Provide an interactive website or other electronic system to maintain regular communication channels for system partners.

Local PHL Systems differ but complement State PHL Systems in several important ways including:

1. Providing and prioritizing testing at the site of patient care and/or addressing local environmental issues;
2. Supporting the mission of local public health departments;
3. Serving as surge capacity for State PHLs, particularly for testing in support of emergency response.
4. Typically being co-located in the local public health agency and working as a team with investigators, inspectors and community and public health professionals to provide rapid and relevant responses to community needs.
5. Strong ties and proximity to the community it serves.

*Adapted from APHLs "Definition of a State Public Health Laboratory System," June 2010.*

**REFERENCES:**

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3. The State Public Health Laboratory System. Public Health Reports. 125:2010.
4. MMWR. September 20, 2002/51 (RR14); Core Functions, etc.
5. <http://www.cdc.gov/od/ocphp/nphsp/essentialphservices.htm>
6. [wwwn.cdc.gov/mlp/nls.aspx](http://wwwn.cdc.gov/mlp/nls.aspx)