



2025 Public Health Laboratory Capability Assessment

To better understand the APHL membership's capability to respond to emerging public health issues as well as implement emerging technology, APHL will collect annual assessment data from state, territorial and local public health laboratories on these topics. The findings from the survey will be used to inform APHL on barriers and addressing gaps.

Additionally, this survey will also serve as the data source for Healthy People 2030 and support data modernization efforts. APHL will only report aggregate de-identified data. A copy of your individual report will be made available to you after the survey closes.

For reference, a printable PDF copy of the survey questions can be accessed [here](#).

The estimated time to complete this survey is 15-20 minutes.

Demographics

1. What best describes your laboratory?

- ☐ State
 - ☐ Territorial
 - ☐ Local
-

Assessment of Comprehensive Laboratory Services

Assessment of Comprehensive Laboratory Services

This section covers questions regarding the capability of public health laboratories to support emerging public health issues. Identification of barriers is included as part of the assessment.

Examples of potential emerging public health issues within your jurisdiction could include:

- Infectious Diseases- vector-borne, respiratory, AMR, VPD, HIV, STI
- Food Safety- WGS, PFAS, Cannabis, water testing for enteric pathogens
- Environmental Health and Toxicology- PFAS, drugs of abuse, pharmaceuticals, vaping, pesticides, heavy metals, ambient air quality, other organic chemicals
- Newborn Screening and Genetics- new disorders, late-onset disorders and epigenetics.

2. Rate your Laboratory's level of capability to the following statements. **To meet the needs of emerging public health issues within your jurisdiction, can the Laboratory provide or assure the following categories:**

	None 0%	Minimal 1% - 24%	Moderate 25% - 49%	Significant 50% - 74%	Optimal 75% - 100%
Has essential equipment and instrumentation	☐	☐	☐	☐	☐
Has access to essential supply chain (supplies and reagents)	☐	☐	☐	☐	☐
Has adequately trained laboratory scientists with available capacity	☐	☐	☐	☐	☐
Has adequately trained informaticians and bioinformaticians with available capacity	☐	☐	☐	☐	☐
Has adequately trained support personnel with available capacity	☐	☐	☐	☐	☐
Has implemented the most up-to-date test methods available for public health programs	☐	☐	☐	☐	☐
Has effective internal workflow processes in place	☐	☐	☐	☐	☐
Has efficient internal workflow processes in place	☐	☐	☐	☐	☐
Has essential interoperability in place (ex. ability to connect with different data sources)	☐	☐	☐	☐	☐
Has essential electronic exchange capabilities in place (ex. can share/consume standardized data with a variety of partners)	☐	☐	☐	☐	☐
Has essential laboratory information management systems- LIMS in place	☐	☐	☐	☐	☐

	None 0%	Minimal 1% - 24%	Moderate 25% - 49%	Significant 50% - 74%	Optimal 75% - 100%
Has essential electronic test ordering and reporting- ETOR in place	☐	☐	☐	☐	☐
Has universal data management (data visualization, analytics, transformation of raw data into knowledge)	☐	☐	☐	☐	☐
Has essential facilities, such as adequate sample storage, hoods, biosafety cabinets, laboratory bench space, etc.	☐	☐	☐	☐	☐
Has essential safety and security systems in place	☐	☐	☐	☐	☐
Has effective policies, including rules and regulations	☐	☐	☐	☐	☐
Has adequate short-term funding	☐	☐	☐	☐	☐
Has adequate long-term funding	☐	☐	☐	☐	☐
Has collaboration and support from the wider PHL system, such as epidemiologists, federal and local government/executive staff, agriculture, environmental protection, etc. for emerging public health issues	☐	☐	☐	☐	☐
Has priorities that are aligned with state and/or local agencies, such as the health department, board of health, environmental and agricultural agencies	☐	☐	☐	☐	☐
Has formal agreements in place, such as MOUs/MOAs, for emerging public health issues	☐	☐	☐	☐	☐
Has a reliable courier service available when needed	☐	☐	☐	☐	☐

3. Indicate the level of challenge or barrier that prevents you from being able to provide or assure comprehensive laboratory services for emerging public health issues. The items that you scored less than significant (49% and below) in the previous question are listed below.

	Minimal	Moderate	Significant
Has essential equipment and instrumentation	☐	☐	☐
Has access to essential supply chain (supplies and reagents)	☐	☐	☐
Has adequately trained laboratory scientists with available capacity	☐	☐	☐
Has adequately trained informaticians and bioinformaticians with available capacity	☐	☐	☐
Has adequately trained support personnel with available capacity	☐	☐	☐
Has implemented the most up-to-date test methods available for public health programs	☐	☐	☐
Has effective internal workflow processes in place	☐	☐	☐
Has efficient internal workflow processes in place	☐	☐	☐
Has essential interoperability in place (ex. ability to connect with different data sources)	☐	☐	☐
Has essential electronic exchange capabilities in place (ex. can share/consume standardized data with a variety of partners)	☐	☐	☐
Has essential laboratory information management systems- LIMS in place	☐	☐	☐
Has essential electronic test ordering and reporting- ETOR in place	☐	☐	☐
Has universal data management (data visualization, analytics, transformation of raw data into knowledge)	☐	☐	☐
Has essential facilities, such as adequate sample storage, hoods, biosafety cabinets, laboratory bench space, etc.	☐	☐	☐
Has essential safety and security systems in place	☐	☐	☐
Has effective policies, including rules and regulations	☐	☐	☐

Has adequate short-term funding	☐	☐	☐
Has adequate long-term funding	☐	☐	☐
Has collaboration and support from the wider PHL system, such as epidemiologists, federal and local government/executive staff, agriculture, environmental protection, etc. for emerging public health issues	☐	☐	☐
Has priorities that are aligned with state and/or local agencies, such as the health department, board of health, environmental and agricultural agencies	☐	☐	☐
Has formal agreements in place, such as MOUs/MOAs, for emerging public health issues	☐	☐	☐
Has a reliable courier service available when needed	☐	☐	☐

Assessment of Emerging Technology

Assessment of Emerging Technology

This section covers questions regarding the implementation of emerging technology within public health laboratories. Identification of barriers is included as part of the assessment.

Examples of emerging technology can include:

- Equipment and instrumentation that uses the latest technology
 - The use of existing equipment and instrumentation for new test methods
 - New test methodology
 - Data Modernization Initiatives (DMI) such as Artificial Intelligence/Predictive Machine Learning, centralized data exchange and data analytics resources, Instrument interfacing, etc.
-

Page Break

4. Rate your Laboratory's level of capability to the following statements. **To enhance public health laboratory services within your jurisdiction, can the Laboratory provide or assure the following categories:**

	None 0%	Minimal 1% - 24%	Moderate 25% - 49%	Significant 50% - 74%	Optimal 75% - 100%
Has implemented new equipment and instrumentation that uses the latest technology (ex. NGS)	☐	☐	☐	☐	☐
Has implemented instrument interfacing	☐	☐	☐	☐	☐
Has implemented the newest test methods that are currently available	☐	☐	☐	☐	☐
Has implemented artificial Intelligence/Predictive Machine Learning for decision making	☐	☐	☐	☐	☐
Has implemented data analytics resources	☐	☐	☐	☐	☐
Has implemented data storage and management innovations (data lakes, warehouses, data visualization)	☐	☐	☐	☐	☐
Has implemented centralized data exchange to establish wide scale network connectivity across multiple partners	☐	☐	☐	☐	☐
Has implemented HL7 FHIR	☐	☐	☐	☐	☐
Has implemented Bioinformatics	☐	☐	☐	☐	☐

5. Indicate the level of challenge or barrier that prevents you from being able to provide or assure the implementation of emerging technology.

	Minimal	Moderate	Significant
Has adequately trained informaticians and bioinformaticians with available capacity	☐	☐	☐
Has effective internal workflow processes in place	☐	☐	☐
Has efficient internal workflow processes in place	☐	☐	☐
Has essential facilities, such as adequate laboratory space	☐	☐	☐
Has essential safety and security systems in place	☐	☐	☐
Has effective policies, including rules and regulations	☐	☐	☐
Has adequate short-term funding	☐	☐	☐
Has adequate long-term funding	☐	☐	☐
Has collaboration and support from the wider PHL system, such as epidemiologists, federal and local government/executive staff, agriculture, environmental protection, etc.	☐	☐	☐
Has priorities that are aligned with state and/or local agencies, such as health department, board of health, environmental and agricultural agencies	☐	☐	☐
Has formal agreements in place, such MOUs/MOAs	☐	☐	☐

Additional Comments

6. Please provide any additional comments regarding your ability to meet the needs of emerging public health issues and implementation of emerging technology.

End of Survey
