



2023 Public Health Laboratory Capability Assessment

In February 2023, the Association of Public Health Laboratories (APHL) launched the first bi-annual Public Health Laboratory Capability Assessment survey to identify strengths and gaps in public health laboratory capabilities for new public health services, including the Data Modernization Initiative, as well as monitor for trends and patterns. The survey was distributed to APHL state, local, and territorial members via 113 email addresses. The survey closed in May 2023, with a total of 106 people receiving the survey and 75 completing it (71% response rate).

As a [champion of Healthy People 2030](#), APHL incorporated two [Healthy People 2030 public health laboratory-specific developmental objectives](#) into the survey, with aggregate reporting to the US Centers for Disease Control and Prevention (CDC):

- Increase the proportion of state public health laboratories that provide services to support emerging issues (PHI D04).
- Increase the proportion of state public health laboratories that use emerging technology to provide enhanced services (PHI D05).

Survey Respondents

The survey received 75 responses from:



38 State Laboratories



32 Local Laboratories



5 Territorial Laboratories

Major Themes

The following are major themes related to the public health laboratories' ability to meet the needs of emerging public health issues and implement emerging technology:

Strengths

- Laboratories, for the most part, reported that they have efficient internal workflow processes, the essential equipment and instrumentation, and have access to the supply chain (supplies and reagents).
- They have safety and security systems in place, as well as effective policies, rules and regulations.
- Laboratories also indicated that they are aligned with the priorities of other system partners, state and/or local agencies, such as the health department, board of health, environmental and agricultural agencies.

Challenges

The following were identified as challenges or barriers to improving the laboratories' ability to provide or assure:

Comprehensive Laboratory Services for Emerging Public Health Issues

- Universal data management (e.g., data visualization, analytics, transformation of raw data into knowledge).
- Adequate long-term funding.
- Essential interoperability in-place (e.g., ability to connect with different data sources and consume/share data in a standardized manner).
- Formal agreements in-place (e.g., a memorandum of understanding (MOU) or agreement (MOA) for emerging public health issues.

Implementation of Emerging Technology

- Adequate long-term funding.
- Adequately trained informaticians and bioinformaticians with available capacity.
- Essential facilities, such as adequate laboratory space.
- Efficient internal workflow processes in place.
- Effective internal workflow processes in place.



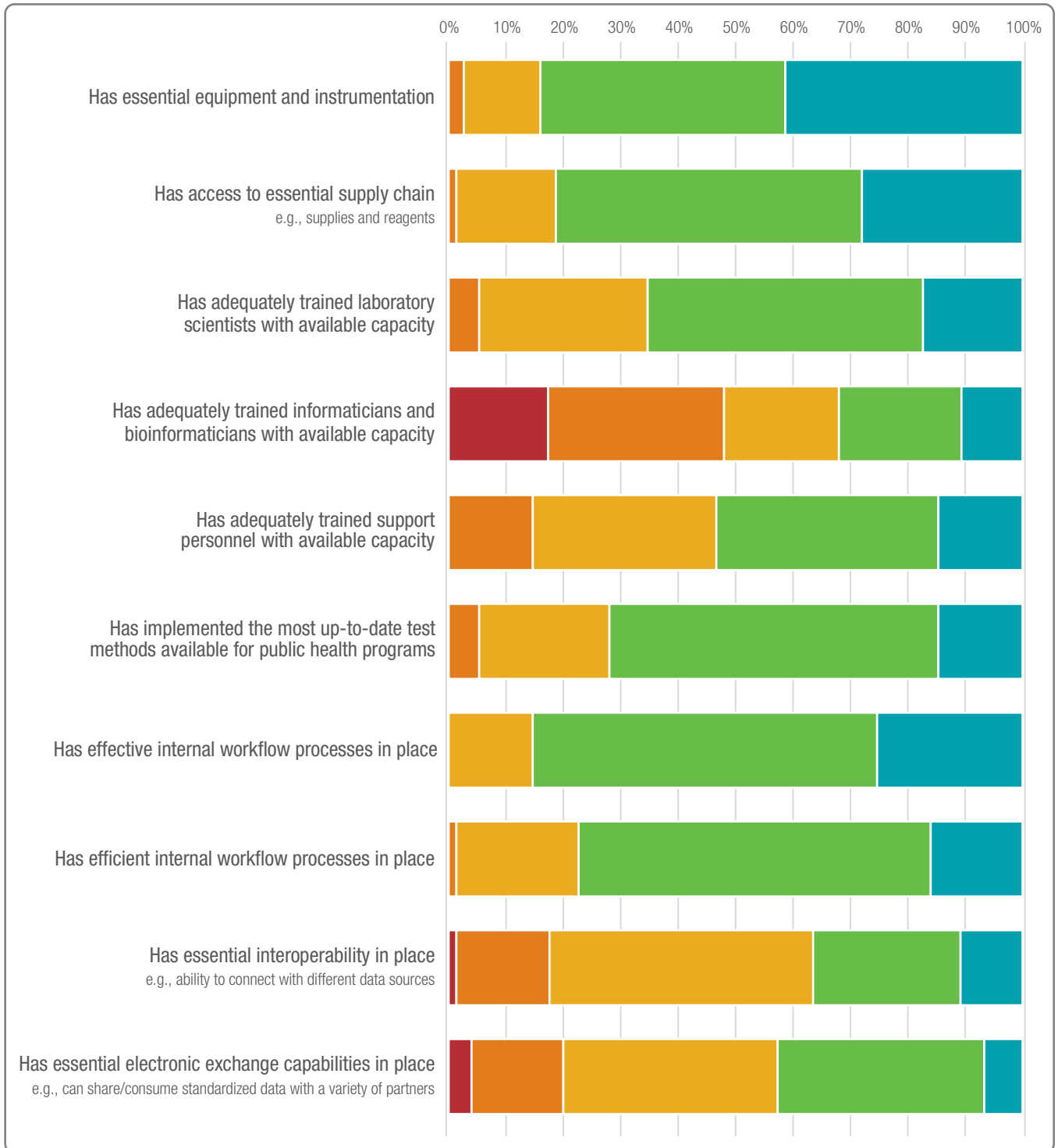
APHL would like to acknowledge members of the 2023 Laboratory Systems and Standards and Informatics Committees who supported this initiative.

Summary of Findings

Responses were based on specific capability statements using the following scoring criteria:



Figure 1. Number of public health laboratories that indicated their level of capability of providing or assuring comprehensive laboratory services (*continued on next page*).



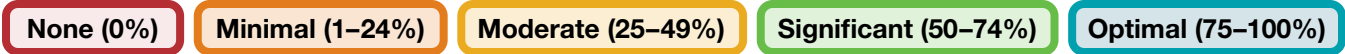
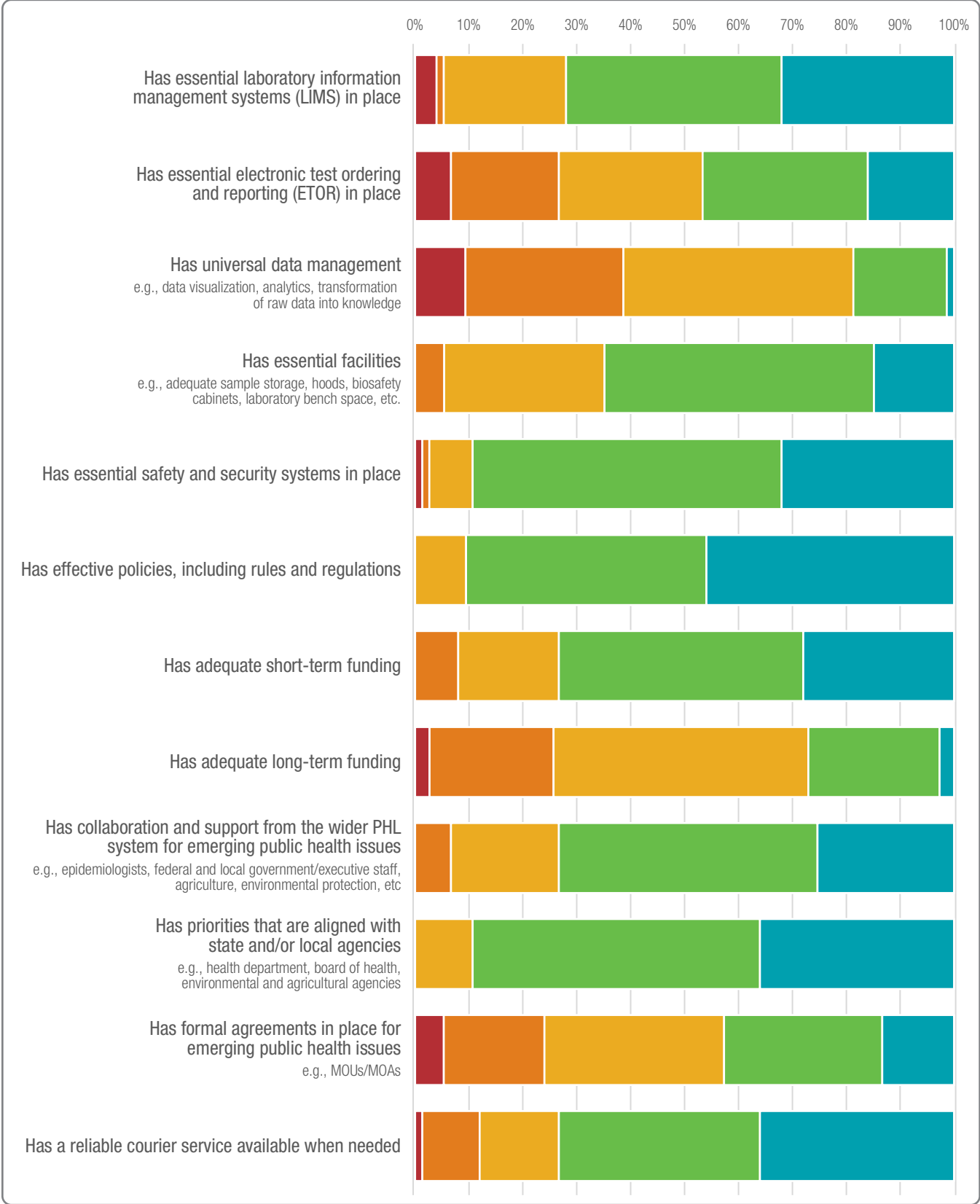


Figure 1, continued. Number of public health laboratories that indicated their level of capability of providing or assuring comprehensive laboratory services.



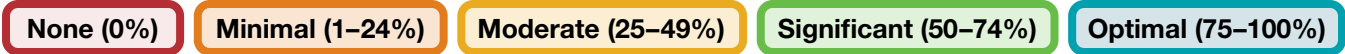


Figure 2. Number of public health laboratories that indicated their level of capability of providing or assuring services related to emerging technology.

