

Improving Management of States Test Service Data by CDC and APHL

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Abstract

Objective: To provide a comprehensive view of state public health laboratories (PHL) test services data to support decision making, sharing of services among states, and stewardship of financial resources.

Method: The early design stage of the Laboratory Efficiencies Initiative (LEI), co-sponsored by CDC and the Association of Public Health Laboratories (APHL) highlighted the need to identify and combine state laboratories' existing test service data as a baseline "snapshot" of public health laboratory capacity. Data was collected both electronically and in hard copy from 7 CDC programs (PHEP, ELC, Arbovirus, TB, LRN-B, LRN-C, Enteric Diseases) and APHL's Core and Comprehensive Laboratory Service surveys which included 50 states and the District of Columbia. This data was put into a uniform format for visualization and analysis of testing capabilities by state. Analytic findings served as the basis for a subsequent CDC/APHL consultation to develop guiding principles for improved data management within and between the two entities.

Results: The data provided a preliminary picture of testing capabilities and infrastructure that has helped to inform decisions. In two joint stakeholders meetings state, local, CDC, and APHL representatives provided guidance and recommendations for further steps to coordinate service data collection efforts across programs and organizations. Together, APHL and CDC are taking steps to recognize and address sensitivities of sharing data while increasing access to data for the public health laboratories and CDC programs. Key steps include continued development of laboratory profiles with combined APHL survey data, consolidating data collection by CDC programs, developing data sharing agreements, consolidating survey data, addressing informatics aspects (test coding and LIMS interoperability), and increasing access between CDC and APHL.

Conclusions: The outputs of the data consolidation process were used in guiding two CDC and APHL stakeholders meetings to share the current state of laboratory information collection. The meetings assisted in the establishment of a charter, framework, principles, and processes for CDC and APHL collaboration that will lead to standardization and sharing of data collection instruments, reporting formats, and increase data utilization. Ongoing next steps are to address alignment and consolidation to improve the efficient collection and use of data

Objective

To provide a comprehensive view of states' PHLs test services data as a resource for aiding decision making, sharing of services between states, and stewardship of funding.

Introduction

Introduction: The Nation's Public Health Laboratories (PHL) perform critically needed services to protect the public's health and support patient treatment. The ability for PHLs to maintain their current capacities is being challenged by the economic landscape locally and nationally. Information collected from PHLs are important to not only gain a thorough understanding of the PHL community from both a macro and micro point of view, but to also tell the story of the important role PHLs fulfill from a public health perspective. This information is currently being collected by both APHL and CDC programs separately which can result in redundant requests and increased burden on state and local public health laboratories.

This information on testing capabilities, however, is critical to guide program investments and serves as a baseline for work to build and maintain a sustainable public health laboratory infrastructure. This data is also essential for states and local entities when making decisions for changes in test services and for surge or shared services scenarios. There is potential to use existing APHL and CDC data to provide comprehensive information on PHL test services to PHL directors and selected public health officials to help inform decisions.



Figure 1: Cover of the 1991 Consolidated Annual Report which contains a state by state breakdown of test volumes

Methods

Test service data was collected electronically from 7 CDC programs (PHEP, ELC, Arbovirus, TB, LRN-B, LRN-C, Enteric Diseases) and APHL's Core and Comprehensive Laboratory Service (CLSS) surveys which included 50 states and the District of Columbia (APHL, p. 2011). This data was then consolidated into a standard Excel table that separated each question by state. It is important to note that not all states participated in the APHL Core and CLSS Surveys and that CDC program data included all states as well as the larger local PHLs.

In addition to this data collection and analysis exercise, two meetings were jointly held by CDC and APHL in order to engage

the key stakeholders in the test service data collection and sharing process. The first meeting was held in December of 2011 and included 36 representatives from state and local public health laboratories, CDC programs, ASTHO, and APHL. A second follow-up meeting was held in April of 2012 of a subset of the December participants to agree on some short-term "quick wins" and long-term strategies for collecting and sharing state and local PHL test service data

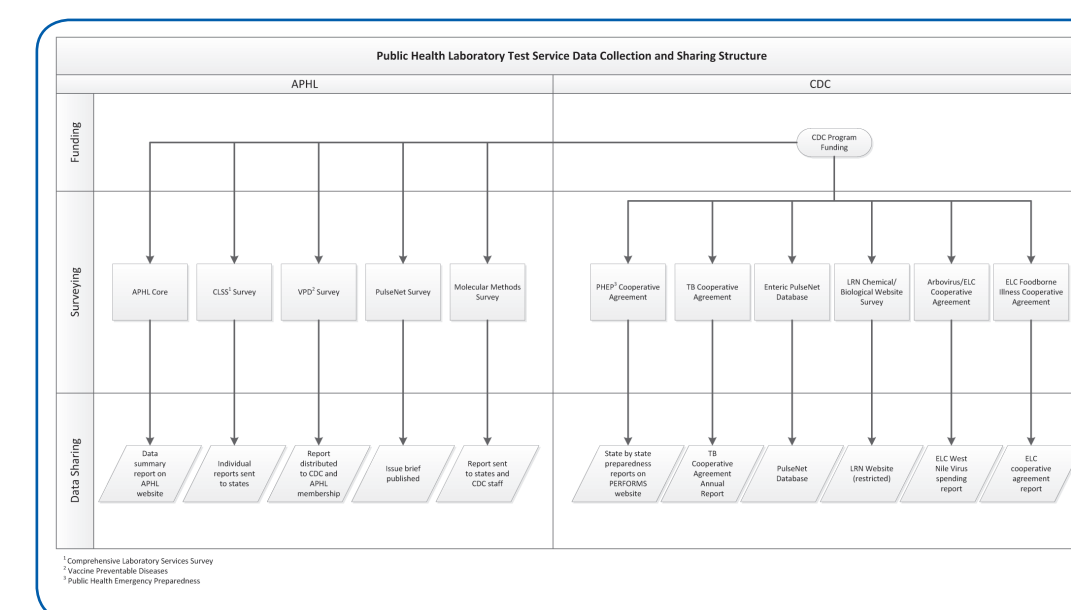


Figure 2: An initial analysis of public health laboratory test service data funding, collection, and sharing at CDC and APHL.

Results

The first meeting of stakeholders resulted in the development of the following guiding principles and framework related to the collection and sharing of state and local PHL test service data.

- Principles for the Analysis and Reporting of Data for the Joint Data Collection Process
 - Coordinate data requests and responses
 - Standardize terms, definitions, and data format
 - Identify and address areas of sensitivity
 - Articulate clear data collection purpose
 - (Explore) the use of Data Use/Sharing Agreements
- Guiding Principles for Access to and Transparency of the Data
 - Broad process allowing for the most technologically feasible transparency and access.
 - "If you contribute, you should have access"
 - User-friendly
 - Access and collaboration between CDC and APHL and among their programs; internally and externally
- Framework for Improving the Data Collection Process
 - Develop governance structure and charter for the group that will manage improving the data collection process
 - Foster a culture of change both at CDC, at APHL, and amongst APHL's members; engaging stakeholders from all three groups
 - Knowledge exchange; sharing data beyond the current

audience in user friendly interfaces and making available inventories of past questions and responses

- Enterprise business plan of where public health laboratories should be focusing their efforts in the future and what efficiencies they can realize in the near term (continuous improvement)
- Sustained involvement from both CDC and APHL leadership as well as APHL's members to keep momentum and allocate appropriate resources

Conclusions and Next Steps

As a follow-up to the first meeting a smaller group of five state laboratory directors and APHL representatives, along with seven representatives from CDC programs, identified next steps to improve the collection and sharing of test service data. The next steps identified were;

- Data Sharing Agreements:** Investigate existing MOU's and data sharing agreements currently in use by PHLs and PulseNet users and contributors. Leverage these existing agreements to develop a framework of recommendations for a data sharing agreement between state and local PHL staff and appropriate CDC staff for sharing of test service data.
- Survey Reports:** Conduct an analysis on existing reports developed by CDC and APHL to identify which formats may serve as a good framework for PHL test service data. Create an outline of a potential standard report for review by the committee.
- Consolidating Survey Data:** Investigate the potential to create a database to consolidate CDC and APHL test service data that can be shared with PHL directors and selected CDC staff in a user-friendly format. Determine what subset of this data can be distributed broadly to improve transparency at the state and local level. A first step may be to identify which questions and resulting responses PHLs at CDC and the state and local level find most important and distribute the information more broadly.
- CDC Office of Infections Disease (OID) Laboratory Database:** Adapt the OID Laboratory Database (developed by the Laboratory Quality Management Program [LQMP]) for use at state and local PHLs. Disseminate the database to state and local PHLs to improve internal management of information and to streamline survey responses. These state based databases would then offer the potential to import and export test service data to APHL and CDC rather than responding to as many surveys.

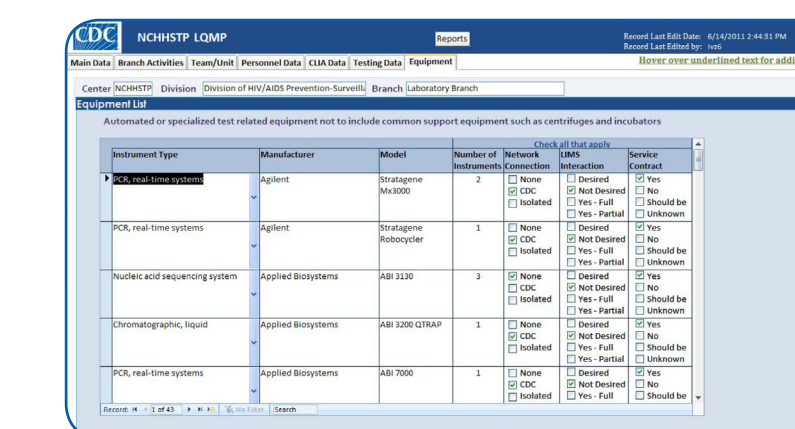


Figure 3: Screenshot of the OID Laboratory Database that captures all equipment within a particular branch

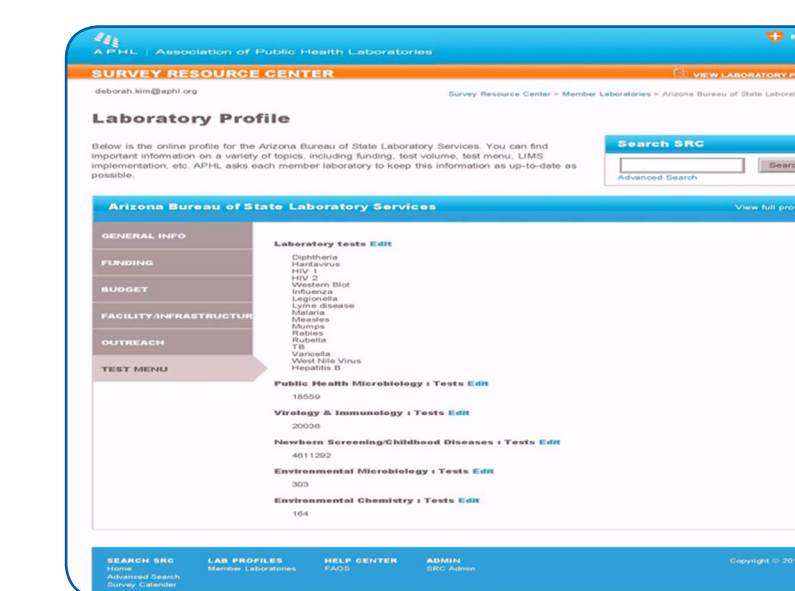


Figure 4: Screen shot of the APHL Laboratory Profiles from the Survey Resource Center (SRC) which will consolidate all APHL survey data

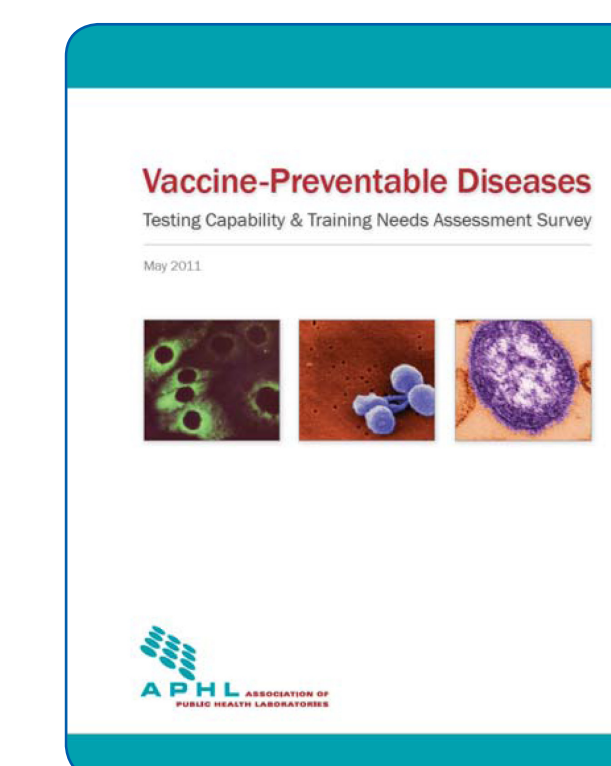


Figure 5: VPD survey report developed by APHL/CDC supported by ARRA funds

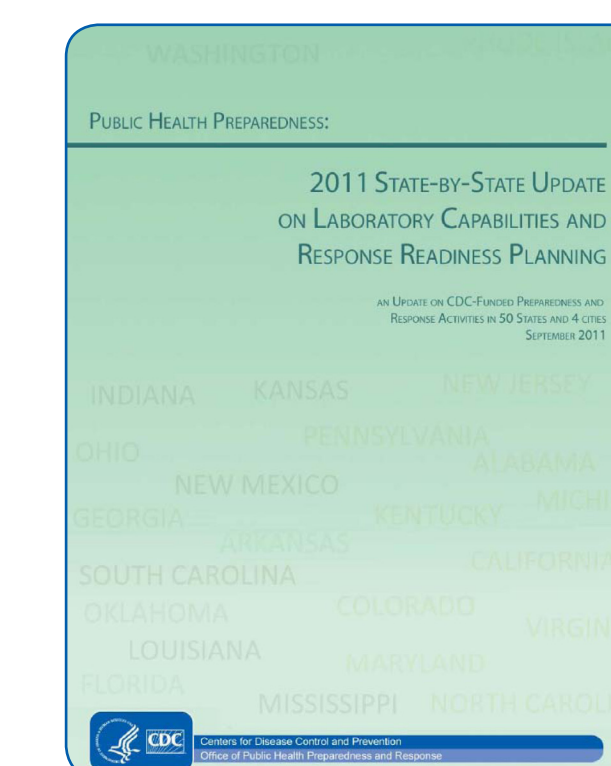


Figure 6: Example of PHEP state by state report

References

APHL. (2011). *Data Summary of the 2011 Core Laboratory Profiles Survey (Snapshot of State Public Health Laboratories August 2011)*. Silver Spring, MD: Association of Public Health Laboratories.



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