

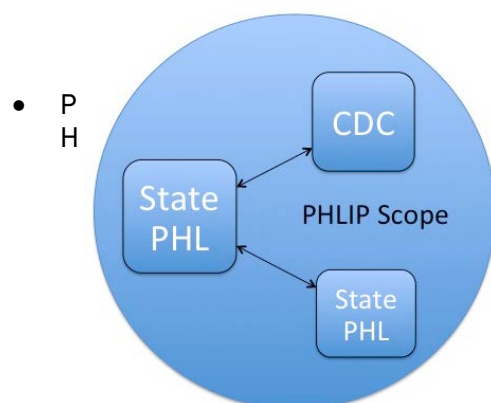
Overview

APHL's Public Health Laboratory Interoperability Project (PHLIP) is strengthening collaboration within the public health laboratory community. Sharing laboratory data is essential for public health reporting and planning, and crucial in responding to outbreaks, events and emerging health threats. The PHLIP effort furthers the goal of nationwide electronic laboratory data exchange—a major priority for public health and homeland security.



PHLIP Vision

- PHLIP's short-term goal is to give every state public health laboratory in the nation viable options for electronic transmission of laboratory test data.
- PHLIP's driving mission is to achieve interoperability: the ability for different types of systems, including computers, networks, operating systems and applications, to work together effectively in order to exchange information in a useful and meaningful way.
- PHLIP is helping state public health labs (SPHLs) and some regional labs exchange laboratory data with CDC labs and with local partners.
- PHLIP terminologists collaborate with local laboratorians, and with regulatory and standards-developing organizations, to harmonize laboratory tests and results, and to represent these consistently using standard vocabularies and terminology. In other words, PHLIP is creating a universal language that will be comprehensible to all laboratorians and public health scientists.
- PHLIP data exchange will improve response to disease outbreaks, allowing authorities to base decisions on more timely and complete data than ever



PHLIP Partners

- Association of Public Health Laboratories (APHL)
- Centers for Disease Control and Prevention (CDC)
- State Public Health Labs (SPHLs)

PHLIP Initiatives

Electronic Laboratory Surveillance Message (ELSM)

- Thanks to PHLIP, nearly three quarters of state public health labs (SPHLs) can send laboratory results for Influenza directly to CDC using automated HL7 v2.3.1 messages. These messages follow the uniform messaging standards developed by the PHLIP community. Thus, CDC epidemiologists receive more data in a format that is ready for analysis. Efforts are now underway to expand the amount and quality of the information captured to include pyrosequencing and additional epidemiological data. PHLIP teams are preparing to apply the ELSM system to other Nationally Notifiable Diseases (NNDs).
- Using the PHLIP approach, APHL and its partners are establishing an ELSM message for Vaccine Preventable Diseases from State Centers of Excellence Labs to CDC.

Electronic Test Order and Result (ETOR)

- In a bidirectional exchange of data, PHLs will send test orders to CDC and receive results back using HL7 v2.6 messages, cutting down on data entry and on chain-of-custody errors.
- PHLs will also be able to send HL7 v2.6 ETOR messages to other PHLs. Mutual assistance between labs will safeguard the surge capacity of laboratories facing unusually high demands, and the continuity of operations in response to a disaster. A pilot project will create a collaborative network between five participating states.
- APHL and its partners are making progress on ETOR data exchange pilot for Influenza and Salmonella.

Route Not Read Hubs (RnR)

- APHL has established two PHIN-MS RnR messaging hubs to coordinate the messages of partner states. APHL has developed these RnR hubs within the broader context of PHLIP, with the ability to receive, hold, and transmit the HL7 messages generated through the ELSM and ETOR initiatives.
- Routing messages through RnR hubs reduces the number of recipients (and their respective credentials) that each SPHL must manage. Partners exchange secure messages without the necessity of configuring additional firewalls.

Vocabulary and Messaging (V&M)

- The V&M workgroup, made up of PHLIP terminologists, has harmonized vocabulary for 14 NNDs, including influenza, HIV, *Salmonella*, and *E. Coli*.
- The V&M workgroup has created HL7 Implementation profiles for influenza and *Salmonella*, which guide the messaging standards for ELSM and ETOR.
- The Vocabulary Mapping Workbook and Test Encoding Guidelines developed and maintained by the V&M workgroup are critical to PHL partners as these laboratories implement electronic laboratory reporting.



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Public Health Laboratory Interoperability Project
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