

Implementing Public Health Data Exchange Solutions Using an AIMS Framework

The need for a reliable, efficient, scalable and secure exchange of data is vital to sustaining strong healthcare systems. Effective data exchange infrastructure improves the ability to accurately detect public health threats and identify and monitor disease trends—allowing decision makers to rapidly and appropriately plan and respond to emerging disease outbreaks and issues of public health concern.

The Benefits of Centralized Data Exchange

A centralized data exchange platform can streamline and maximize efficiency of reporting public health data, including laboratory results, immunization data, case reports and other health records. By creating a common, centralized hub where information is sent, data can be securely and effectively exchanged across multiple public health entities, such as healthcare providers, public health agencies and laboratories, and other government agencies. A centralized data exchange system allows for:

- Reduced need for costly intermediary systems or resources, including hardware and software
- Standardization, translation and transformation of data from disparate sources and across systems
- Consistent and accurate analysis and visualization of data
- Scalable solutions for reporting outbreaks and expansion of laboratory testing activities

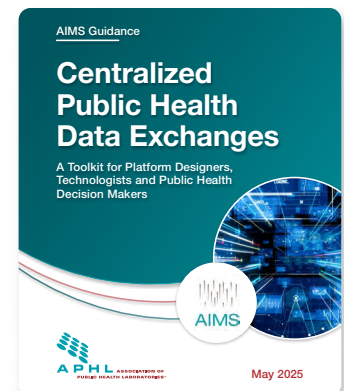


Depiction of how electronic test order and result data from different file sources can be sent to a centralized data exchange platform from multiple public health entities.

Modern, Scalable Solutions and a Centralized Data Exchange Proof of Concept

The Association of Public Health Laboratories (APHL) has developed a guide, “[Centralized Public Health Data Exchanges](#),” that presents a cloud-hosted or on-premises secure data exchange solution that is compliant with local health governance, policy, privacy and security regulations to facilitate the exchange of health- and public health-related data across verified data exchange partners. The health data exchange solution can serve as a central hub designed to receive, validate and route data to appropriate entities. This method of centralized data exchange allows for secure, timely and accurate communication of electronic laboratory reporting and case reporting data, while reducing maintenance and third-party technical resources needed by submitting entities. This model, with its efficient streamlined approach, also allows for increased flexibility and scalability during public health emergencies, such the COVID-19 pandemic response.

This guide includes best practices for technology, including security, infrastructure, data processing flows and storage, ensuring data quality and data governance, as well as operational and business recommendations for communication and strategic planning with stakeholders.



Learn More

Read the [guide](#) and email globalhealth@aphl.org to learn more!