



# Data Security and Privacy in Health Informatics

## Origin Story

The public health system relies on data from laboratories and health care providers to track and stop the spread of dangerous diseases. Keeping this data private and secure is a critical mandate of the system, ensuring public trust and participation.

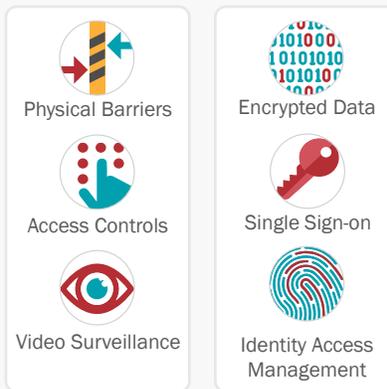
The Association of Public Health Laboratories (APHL) exchanges massive volumes of data each year with partners at state and federal levels through the APHL Informatics Messaging Services (AIMS). Protecting all this information involves a combination of industry best practices, stringent policies and the very latest technological defenses.

## Security of the Cloud

AIMS is a centralized, cloud-based platform where state labs, health care providers and federal agencies share data. It's been an invaluable resource for reporting and surveillance across a number of conditions, including COVID-19.

AIMS servers are hosted by Amazon Web Services (AWS), a trusted provider proven to meet federal requirements for hosting protected health information. AWS is responsible for securing cloud servers in data centers with safeguards such as physical barriers, access controls and video surveillance.

Data shared through AIMS is stored on AWS servers that only host protected health information.



## Security in the Cloud

While AWS secures the cloud itself, APHL protects the data within from breaches, leaks and other losses.

APHL's security team uses various prevention systems along with event management software to constantly monitor the environment. APHL also encrypts data for its entire lifetime in AIMS and limits user access to AIMS applications. For those with access, the AIMS platform supports two-factor authentication, single sign-on and identity access management.

Frequent audits of AIMS help ensure the platform is compliant with HIPAA requirements. Federal Information Security Management Act (FISMA) audits assess transmission security within the AIMS data environment, and it has granted AIMS FISMA Moderate status.

AWS Safeguards

APHL Safeguards

## Protecting COVID-19 Data

The public health community is using AIMS as a hosting platform for the Sara Alert application, which monitors potential cases of the novel coronavirus. Sara Alert helps automate the self-monitoring process by initiating regular check-ins and other aspects of case management.

AIMS stores critical health status updates that are used by Sara Alert. The secure platform provides peace of mind that public health practitioners can quickly deploy new applications, such as Sara Alert, for emerging threats without the risk of a data breach or other disruption.