



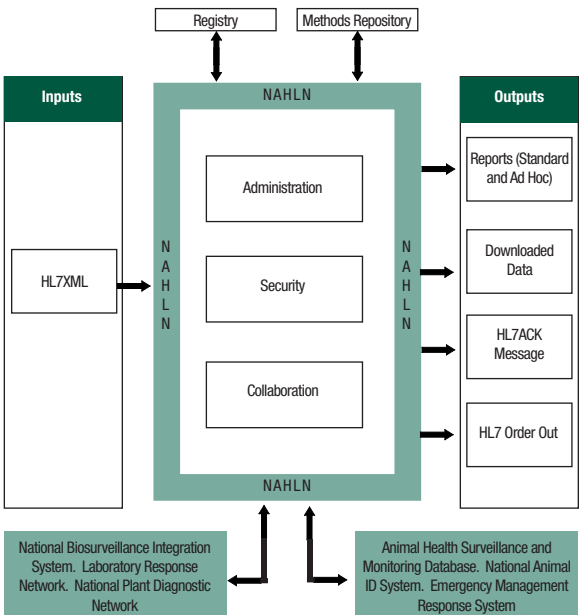
National Animal Health Laboratory Network

Information Technology (IT) System

A critical aspect of the National Animal Health Laboratory Network (NAHLN) is the effort to standardize data, improve data quality, and increase the speed of reporting laboratory results through electronic data transfer via the IT infrastructure and data repository. The NAHLN IT system is used to quickly and accurately report laboratory results in the event of an animal disease outbreak, enhance surveillance programs, and recognize emerging issues. It is also designed to provide automated alerts on defined animal-health events to authorized personnel who support disease prevention and response.

The system allows NAHLN labs to securely transmit and store data using nationally recognized health information standards that improve data quality and data reuse in systems such as Veterinary Services' Animal Health Surveillance and Monitoring System (AHSM) and Emergency Management Response System (EMRS) and the U.S. Department of Homeland Security's National Biosurveillance Integration System (NBIS).

The NAHLN IT system is being integrated with numerous existing animal-health and veterinary-diagnostic data networks. The standardized data-centric approach allows seamless electronic transfer of information from the time diagnostic samples are collected in the field to the addition of appropriate diagnostic test information from the NAHLN veterinary diagnostic laboratories. The daily reporting of relevant laboratory findings for each



submission is considered essential for effective data routing and central aggregation in the NAHLN repository database.

Standardization of Data

The NAHLN IT system incorporates well-defined terminology (Systematized Nomenclature of Medicine [SNOMED] and Logical Observation Identifiers Names and Codes [LOINC] standards) with the diagnostic electronic message structure (Health Level Seven [HL7] standards) that is currently used for human-health informatics systems. Standardization of data helps ensure that information is accurately transferred from one system to another and allows comparison of similar data sets from various NAHLN laboratories.

Improving Data Quality

The NAHLN works closely with the U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service, Veterinary Services' National Center for Animal Health Programs and Centers for Epidemiology and Animal Health to ensure that the data collected from diagnostic sample submissions include appropriate detail for further epidemiologic study and modeling of disease transmission. In the event of an outbreak, rapid assimilation of this information is vital to managing an emergency response.

Maximizing Efficiency of Data Transfer

Although Web-based entry of laboratory submissions and test results is available for VS surveillance and animal disease-control programs, reporting efficiencies will result when, through the NAHLN, data from field personnel are automatically uploaded and the results of diagnostic tests are automatically reported from individual laboratory information-management system databases. Automating this process will eliminate the need to enter the same data repeatedly.

Making the NAHLN IT System Work

The NAHLN IT system was originally pilot-tested in five laboratories and is now available to all NAHLN laboratories. Documentation on the NAHLN IT process also is available, and training will periodically be provided to NAHLN laboratory IT personnel to assist them as they link their laboratory information-management systems with the NAHLN IT system.

Contact Information

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NAHLN, a State and Federal partnership to safeguard animal health

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