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# NAHLN Activities

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Meeting national needs for diagnostic testing for foreign and emerging diseases is a critical responsibility that requires accuracy and timeliness in testing.

The NAHLN has established and implemented the following founding principles in order to ensure confidence in diagnostic test results, both domestically and internationally:

- **Quality Management Standards:** Operating within a quality management system that meets AAVLD, ISO 17025, or equivalent requirements
- **Standardized Testing:** Using standardized protocols, reference materials, and equipment in facilities with biosafety/biosecurity levels requisite for testing performed
- **Competency of Laboratory Personnel:** Establishing and maintaining competency of laboratory personnel performing testing on behalf of the NAHLN through training and proficiency testing
- **Secure Communications:** Confirming laboratory participation in electronic communications and reporting systems established by the NAHLN
- **Biosafety and Biosecurity:** Using facilities with biosafety/biosecurity levels requisite for testing performed
- **Laboratory Preparedness:** Evaluating preparedness (identify and prioritize gaps) through scenario testing

## Quality Management Standards

All Level 1 and Level 2 NAHLN laboratories must either be accredited by the American Association of Veterinary Laboratory Diagnosticians (AAVLD) or by an independent third-party accrediting body according to the ISO 17025 standard covering general requirements for the competence of testing and calibration laboratories. If a Level 3, Affiliate, or Specialty NAHLN laboratory is not accredited, it must have a functional quality system in place that is consistent with these ISO 17025 standards. Additionally, these laboratories must be willing to participate in regular site visits and must be approved by the NAHLN Program Office for performing testing on behalf of APHIS Veterinary Services.

[AAVLD Requirements for Accredited Veterinary Medical Diagnostic Laboratories ISO/IEC 17025:2005 Standards](#)

## Standardized Testing

[NAHLN SOPs](#)

[Get a current list of NAHLN SOPs.](#)

[NAHLN SOP Deviation Request Form](#)

[\(PDF, 284.24 KB\)](#)

[Get a copy of the current Deviation Request form and instructions for submitting it to the NAHLN Program Office.](#)

## Diseases Under NAHLN Scope

NAHLN laboratories are trained and proficiency tested, and follow standardized testing protocols for the following diseases and animal species. For more information on these diseases and VS surveillance and preparedness activities, visit [Livestock and Poultry Disease](#).

Disease	Animal Species	Laboratories Approved for Testing
African Swine Fever and Classical Swine Fever	Swine	<a href="#">Approved NAHLN laboratories</a>
Bovine Spongiform Encephalopathy	Cattle	<a href="#">Approved NAHLN laboratories</a>
Chronic Wasting Disease	Captive cervids (deer, elk)	<a href="#">Approved NAHLN laboratories—IHC</a> <a href="#">Approved NAHLN laboratories—ELISA</a>
Foot-and-Mouth Disease	Cattle, swine	<a href="#">Approved NAHLN laboratories</a>
Infectious Salmon Anemia	Fish	<a href="#">Approved NAHLN laboratories</a>
Influenza A Virus in Avian	Poultry, wild birds	<a href="#">Approved NAHLN laboratories</a>
Influenza A Virus in Swine	Swine	<a href="#">Approved NAHLN laboratories</a>
Newcastle Disease	Poultry, wild birds	<a href="#">Approved NAHLN laboratories</a>
Pseudorabies Virus	Swine	<a href="#">Approved NAHLN laboratories</a>
Scrapie	Sheep, goats	<a href="#">Approved NAHLN laboratories</a>
Spring Viremia of Carp	Fish	<a href="#">Approved NAHLN laboratories</a>
Vesicular Stomatitis Virus	Horses	<a href="#">Approved NAHLN laboratories</a>
Viral Hemorrhagic Septicemia	Fish	<a href="#">Approved NAHLN laboratories</a>

[See More](#) [See Less](#)

## Other Activities

[Expand All](#)

### Competency of Laboratory Personnel: Proficiency Testing and Training

#### Proficiency Testing

The NAHLN Program Office coordinates with the National Veterinary Services Laboratories (NVSL) reference laboratories to ensure NAHLN laboratory personnel are annually trained and proficiency tested. [Learn more about NVSL's proficiency testing](#) for the diseases listed above or other diseases, or [contact NVSL](#).

#### Training

##### Quality Management Systems Training

The NAHLN Program Office collaborates with members of the AAVLD Accreditation Committee and NVSL personnel to develop and deliver a Quality Management System (QMS) Training Program for member NAHLN laboratories. This annual training program, generally held in July or August, provides an interactive class environment that encompasses training on quality system requirements, including document control, complaints, corrective actions, equipment, training, internal audits, and management review. A mock audit workshop also provides the opportunity for participants to apply what they have learned by conducting an audit to recognize non-conformances, analyzing root causes of the non-conformances, and writing corrective actions.

Laboratories around the United States and the world are increasingly aware of the need for implementing and maintaining effective quality systems. A readily available source for training on the important concepts and strategies of quality system implementation and management was needed for laboratory staff around the globe.

This online course was developed by Washington State University, in conjunction with the NAHLN and with contributions from multiple NAHLN laboratory quality managers. This course provides quality system training to laboratories in their own locations via the Internet or other electronic media. It provides a consistent message for quality system implementation and management that can be used to train not only quality related personnel, but all laboratory staff.

[Go to the QMS online training course](#)

## **Additional Training Planned This Year**

### **Train the Trainer Program**

Through this program, the NAHLN has increased the number of laboratory personnel prepared to respond to a national animal health emergency and has provided the United States with a cadre of trainers available to teach others when needed. The successful implementation of this program is a significant step for the NAHLN in achieving its goals of sufficient diagnostic capability and capacity to address an animal health emergency. Trainings are scheduled on a case-by-case basis, based on the training need and regional location.

For more information on this program, contact the [NAHLN Program Office](#).

## **Previous Training Conducted by the NAHLN Program Office**

[This document](#) (109.56 KB) provides historical information on various training activities and workshops conducted through the NAHLN Program Office.

## **Secure Communications**

NAHLN laboratories play a critical role in APHIS Veterinary Services' (VS) outbreak and surveillance testing programs. As such, the ability to securely share information, data and test results between Federal and non-Federal entities is a high priority for the NAHLN.

## **NAHLN Electronic Messaging of Test Results**

The NAHLN electronic messaging system was established using international data and messaging standards so that accurate and consistent diagnostic information could be quickly and securely transmitted to VS during animal disease outbreaks, or as part of APHIS surveillance programs or during emerging disease situations.

For more background on NAHLN messaging, visit [NAHLN Information Technology System](#).

## Preparedness

### Exercises and Drills

Another of the NAHLN founding principles is ensuring continuous laboratory preparedness for animal disease outbreaks and other emergency situations. This is accomplished by conducting planned and unplanned exercises or other scenario-based drills.

The NAHLN Exercises and Drills Working Group (NAHLN-EDWG) plays a key role in the development and implementation of exercises and drills conducted by the NAHLN. The findings of this working group enhance awareness of the variety of issues that are encountered during an outbreak and ongoing evaluation for the NAHLN Coordinating Council. The group provides input on various aspects of NAHLN exercises and drills, including:

- Determining processes for performing NAHLN exercises and drills,
- Determining the content and scope of exercises to ensure they address laboratory preparedness,
- Assisting with conducting NAHLN exercises and drills,
- Assisting with compiling and distributing distribution of After Action Reports following NAHLN exercises and drills, and
- Assisting with addressing gaps identified by the After Action Reports and in implementing changes.

### Web-Based Exercises

The NAHLN Program Office conducts web-based exercises that provide NAHLN laboratories and States the opportunity to use and integrate the Laboratory Capacity Estimation Model (LCEM), the NAHLN Portal, and several other VS tools to exercise real-time capacity management. The goals of these exercises are to:

- Improve the participants' understanding and skill in each individual tool,
- Illustrate how these assets can integrate to provide current, accurate information on the expected number of samples to be tested under an outbreak surveillance plan,
- Assess individual laboratory and network capacity, and
- Provide a secure mechanism to exchange operational information during an outbreak.

### **Tabletop Exercises**

NAHLN, in collaboration with other stakeholder groups, has conducted several tabletop exercises to help identify gaps when addressing major animal disease outbreaks. These exercises were designed to practice policy implementation, decision making, and communications with laboratory, VS, and State field personnel. Participants gained enhanced awareness of laboratory issues encountered during an outbreak and assessed the completeness of their response plans. Additional exercises have been held at the NVSL to increase internal preparedness with focus on decision making, primary and support role activities, interaction and support of NAHLN laboratories, collaborations, and communications.

### **Immediate Response Drills**

In preparation for potentially disastrous occurrences such as severe weather or man-made emergencies, the NAHLN Program Office has initiated immediate response drills to help labs understand what they may see in response to an actual event. Emails are sent to all NAHLN laboratories that have personnel trained and proficiency tested to conduct a particular disease assay such as foot-and-mouth disease (FMD) polymerase chain reaction (PCR). The email notifies the laboratories of the possible closure of the reference laboratories and requests that each lab provide specific information as soon as possible (within 24 hours of receiving the email) regarding their immediate capacity based on the availability of reagents, personnel, equipment, and other parameters. NAHLN laboratories have proven that the network is very responsive with up to 98 percent of labs responding to these

drills within 24 hours.

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## Related Links

- [NAHLN Laboratories](#)
- [NAHLN Assay Performance Characteristics](#)

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