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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	Approved NAHLN laboratories
Bovine Spongiform Encephalopathy	Cattle	Approved NAHLN laboratories
Chronic Wasting Disease	Captive cervids (deer, elk)	Approved NAHLN laboratories—IHC Approved NAHLN laboratories—ELISA
Foot-and-Mouth Disease	Cattle, swine	Approved NAHLN laboratories
Infectious Salmon Anemia	Fish	Approved NAHLN laboratories
Influenza A Virus in Avian	Poultry, wild birds	Approved NAHLN laboratories
Influenza A Virus in Swine	Swine	Approved NAHLN laboratories
Newcastle Disease	Poultry, wild birds	Approved NAHLN laboratories
Pseudorabies Virus	Swine	Approved NAHLN laboratories
Scrapie	Sheep, goats	Approved NAHLN laboratories
Spring Viremia of Carp	Fish	Approved NAHLN laboratories
Vesicular Stomatitis Virus	Horses	Approved NAHLN laboratories
Viral Hemorrhagic Septicemia	Fish	Approved NAHLN laboratories

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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.

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.

Related Links

- NAHLN Laboratories
- NAHLN Assay Performance Characteristics

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