

10

Year Anniversary
NAHLN
National Animal Health Laboratory Network

— 2002 - 2012 —

10 Years of Successful Partnership--

When the NAHLN was established in 2002, Founding Principles were established to guide our efforts and support our mission. Over the past ten years, every activity has been conducted in support of those Founding Principles. While significant changes and progress have been made through a decade of partnership and collaboration, and capabilities of the NAHLN have advanced markedly, the foundations upon which NAHLN was built have not changed.

On this 10th Anniversary of the NAHLN, it is important to reflect on our accomplishments as well as to look to the future.

Quality management standards

Our commitment to quality laboratories and test results has been demonstrated throughout the history of NAHLN. This includes establishing a laboratory review process in conjunction with the AAVLD Accreditation Committee; requiring all NAHLN laboratories to implement and continually improve a quality management system (QMS) consistent with international standards; developing and providing QMS training to representatives from NAHLN laboratories, other laboratory networks as well as international participants; and developing QMS distance learning modules.

Competency of laboratory personnel

The NAHLN relies heavily on a Train the Trainer Program which has markedly increased the number of personnel trained and proficiency tested from twenty-four to hundreds network wide. This has improved our nation's preparedness to respond to an adverse animal health event. For example, since Federal fiscal year (FY) 2004, the number of approved laboratories increased from 12 to 38 and the number of approved analysts increased from 24 to 167 for foot-and-mouth disease and classical swine fever.

Standardized protocols, equipment, and reference materials

NVSL's development, coordination, and administration of standard operating procedures (SOPs) and reference materials, including proficiency tests, have ensured comparable diagnostic test results across the network. The NAHLN Methods Technical Working Group (MTWG) has developed processes for methods comparison; reviewed processes related to the release of NAHLN SOPs; discussed critical gaps in assays and related projects; and evaluated projects related to NAHLN capabilities and capacities. Additionally, the MTWG reviews all data related to assay validation and provides recommendations for use of new or modified diagnostics in NAHLN laboratories.

Secure electronic communications and reporting

The work of the NAHLN information technology (IT) experts has created a system for messaging test results in a standardized Health Level 7 (HL7®) format that is unprecedented among other laboratory networks. Additional IT tools have been developed to capture individual laboratory and network capacity and serve as a secure mechanism for sharing information through the NAHLN Portal.

Adequate biosafety/biosecurity and assessment of preparedness through scenario testing

Extensive avian influenza and foot-and-mouth disease table-top exercise series have involved animal health professionals across the U.S. These exercises have led to improved processes, guidance and overall NAHLN preparedness for a foreign animal disease outbreak. Further, the exercises have helped to prioritize gaps and have resulted in assay development to address the gaps.

Application of Founding Principles

We've applied the Founding Principles through the implementation of national surveillance programs. We've partnered with stakeholders to conduct testing for classical swine fever, wild bird avian influenza, bovine spongiform encephalopathy, pseudorabies, and most recently swine influenza. A number of additional assays have been deployed for emergency preparedness, such as the foot-and-mouth disease PCR that can be used during foreign animal disease investigations. None of these advancements would have been possible without our partners!

Please join me in celebrating the success of an outstanding network that we have built together!

Happy 10th Anniversary NAHLN!



VISION

The NAHLN is the nationwide model for effective diagnostic networks that respond quickly and efficiently and communicate diagnostic outcomes to decision makers. The NAHLN is organized and supported so that it has the capacity to respond to animal-disease outbreaks nationwide.

MISSION

- Provide accessible, timely, accurate, and consistent animal disease laboratory services nationwide;
- Provide laboratory data to meet epidemiological and disease reporting needs;
- Maintain the capacity and capability to provide laboratory services in support of responses to foreign animal disease outbreaks or other adverse animal health events; and
- Focus on diseases of livestock (exotic, zoonotic, and emerging diseases), while including diseases of non-livestock species.

FOUNDING PRINCIPLES

- Quality management standards
- Competency of laboratory personnel
- Standardized protocols, equipment, and reference materials
- Adequate biosafety/biosecurity
- Secure electronic communications and reporting
- Assessment of preparedness through scenario testing

PARTNERSHIP

Key to NAHLN's Success

Federal, State, and University Groups

State Animal Health Officials

NAHLN Laboratory Personnel

National Center for Food Protection and Defense

National Center for Foreign Animal and Zoonotic Disease Defense

National Agricultural Biosecurity Center

U.S. Department of Agriculture

- Agricultural Research Service

- Animal and Plant Health Inspection Service

- International Services

- Veterinary Services

- Center for Veterinary Biologics

- Field Operations – Eastern and Western Regional Offices

- National Animal Health Policy and Programs

- National Center for Animal Health Emergency Management

- National Veterinary Services Laboratories

- Plant Protection and Quarantine

- Wildlife Services

- National Institute of Food and Agriculture

U.S. Department of Homeland Security

Organizational Partners

American Association of Veterinary Laboratory Diagnosticians

American Veterinary Medical Association

National Institute for Animal Health

United States Animal Health Association

Animal Agriculture Coalition

NAHLN

NAHLN Timeline

FMD Outbreak in the U.K. and Anthrax Threats Following 9/11

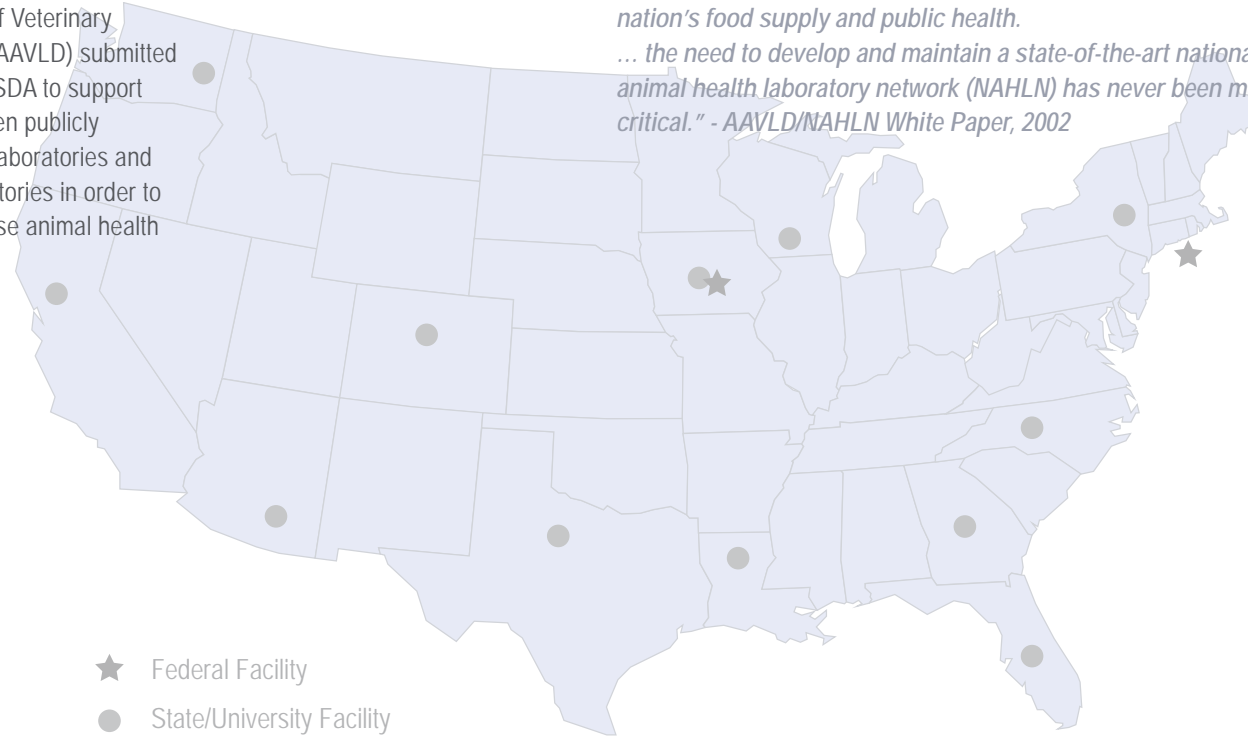
The nation's public health and food supply is at constant risk, demonstrated in 2001 by the FMD outbreak in the U.K. and anthrax threats following 9/11. These threats prompted the need to leverage diagnostic resources in the U.S.

AAVLD/NVSL Memorandum of Understanding (MOU)

An MOU was initiated between NVSL and AAVLD to clarify mutual goals and objectives while promoting and enhancing animal health diagnostic services in the United States.

AAVLD White Paper

The American Association of Veterinary Laboratory Diagnosticians (AAVLD) submitted a White Paper request to USDA to support a shared partnership between publicly funded state animal health laboratories and federal animal health laboratories in order to effectively respond to adverse animal health events in the U.S.



"A national strategy, melding the nation's Federal, State, and local resources, would be capable of responding to any type of animal health emergency, including bioterrorist events, newly emerging diseases, and foreign animal disease agents that threaten the nation's food supply and public health. ... the need to develop and maintain a state-of-the-art national animal health laboratory network (NAHLN) has never been more critical." - AAVLD/NAHLN White Paper, 2002

NAHLN Laboratories Proficiency Tested for Foreign Animal Disease Detection

NAHLN laboratories were successfully proficiency tested for classical swine fever, foot-and-mouth disease, and vesicular stomatitis.

Interim Coordinator Named

2001

Animal Health Safeguarding Review

In October 2001, the National Association of State Departments of Agriculture Research Foundation issued a report titled, "The Animal Health Safeguarding Review Results and Recommendations Executive Summary". The primary recommendation was that Congress and USDA provide funding and act to rebuild the State and National infrastructure for animal disease control, emergency disease preparedness, and response.

Initial Study on IT Messaging Requirements

A study was conducted on information technology system requirements for automating test orders to laboratories and the return of laboratory test result data. This led to the NAHLN result messaging pilot project.

2002

NAHLN CREATED

Special funds for Homeland Security were awarded to twelve State/University diagnostic laboratory facilities in order to develop capacity and surveillance programs for eight high priority foreign animal diseases. The original twelve laboratories formed the National Animal Health Laboratory Network (NAHLN) which would coordinate Federal laboratory capacity with the extensive infrastructure (facilities, professional expertise, and support) of State-supported laboratories.

Public Health Security and Bioterrorism Preparedness and Response Act of 2002, Section 335

The Act authorized the Secretary of Agriculture to develop an agricultural early warning surveillance system to counteract growing risks of accidental or malicious introduction of exotic animal diseases.

NAHLN Information Technology Committee Formed

The Committee was established to assist NAHLN laboratories in the reporting of standardized animal health and veterinary diagnostic data through the electronic transfer of data from the laboratories' LIMs systems to Veterinary Services (VS) databases. The concept of this system was to improve data quality and increase the speed of reporting laboratory results, as well as to meet the NAHLN goal of a secure communication alert and reporting system.

2003

Steering Committee Formed

The NAHLN Steering Committee was formed to provide oversight and guidance to ensure that the combined local, State, and Federal diagnostic capabilities are adequate to respond quickly and effectively to a terrorist attack, major disease outbreak, or other disaster affecting the national agriculture or food infrastructure and also provide on-going surveillance for diseases that currently are in or may enter the United States.

Decision Made to Adopt Health Level 7 (HL7®) as the Standard Messaging Format for NAHLN



BSE Surveillance Enhanced

Following the December 2003 detection of BSE in an imported cow, USDA implemented an enhanced BSE surveillance program to more accurately determine the prevalence of the disease in the U.S. cattle population. Six NAHLN laboratories were proficiency tested and approved to conduct BSE testing.

IT System Expanded

In response to enhanced BSE surveillance, the NAHLN IT system electronically combined laboratory results reporting with field epidemiologic data collection. The 'HL7 Implementation Guide for Data Submission to the NAHLN' was published.

Two Student Positions Added to the NAHLN Program Office

NAHLN Surveillance Testing Expanded

USDA Administrators (APHIS and National Institute of Food and Agriculture-formerly CSREES) formally announced that NAHLN surveillance activities would be expanded to also include chronic wasting disease, scrapie, avian influenza, and exotic Newcastle disease.

USDA Provides Additional Funding Support to NAHLN Laboratories

Initial infrastructure funding was provided to NAHLN laboratories and laboratory designations were established.

First NAHLN Symposium at AAVLD

The first NAHLN/AAVLD Quality Assurance (QA) Joint Symposium was developed in collaboration with the AAVLD QA Committee and held in conjunction with the USAHA/AAVLD annual meetings. Since that time, symposia have been held each year, disseminating information and updates and fostering table discussions with NAHLN laboratory personnel and other stakeholders.

Associate Coordinator Position Added to the NAHLN Program Office

Integrated Consortium of Laboratory Networks (ICLN) Established

NAHLN is part of the ICLN which was established by a Memorandum of Agreement signed in 2005. Senior officials of Federal agencies with primary responsibility for current and emerging networks, as well as those with a strong supporting role, joined together to endorse the laboratory organizational framework. The goal of the effort is to create the basis for a system of laboratory networks capable of integrated and coordinated response to and consequence management of acts of terrorism and other major incidents requiring laboratory response capabilities.

2004

Homeland Security Presidential Directive/ HSPD-9

The White House Office of the Press Secretary released a directive in February 2004, to establish a national policy to defend the agriculture and food system against terrorist attacks, major disasters, and other emergencies.

Homeland Security Presidential Directive/HSPD-10

The White House Office of the Press Secretary released a directive in April 2004, to establish biodefense for the 21st Century, including the development of an integrated and comprehensive attack warning system to rapidly recognize and characterize the dispersal of biological agents in animal populations.

NAHLN Coordinator Position Established

Train the Trainer Program Established

The Train the Trainer program was established in response to a need to increase the number of people trained and proficiency tested to address animal health emergencies.

2005

NAHLN IT System Implemented

The NAHLN IT system was originally pilot-tested in the six BSE laboratories and made available to all NAHLN laboratories for result messaging.

Marketing Material Developed

Marketing materials (brochures and information cards) describing NAHLN were developed for distribution to stakeholders.

Personnel from Thirty-nine NAHLN Laboratories Proficiency Tested for Avian Influenza and Exotic Newcastle Disease Virus

2006

CSF Surveillance Initiated

Classical Swine Fever surveillance was implemented as VS' first fully collaborative Foreign Animal Disease (FAD) surveillance system.

NAHLN Methods Technical Working Group Formed

The NAHLN Methods Technical Working Group was established to provide input on various aspects of methods validation and approval of methods and included NVSL, NAHLN laboratory, and international representation. The group has been instrumental in developing processes to adapt different sample types and platforms to existing assays as well as reviewing input on NAHLN-related assays.

NAHLN Symposium

A NAHLN Symposium titled "Laboratory Emergency Management" was developed in collaboration with others in VS and held in conjunction with the USAHA/AAVLD annual meetings.

Program Assistant Position Added to the NAHLN Program Office

NAHLN Included in APHIS Operational Plans

NAHLN Strategic Plan Developed by the NAHLN Steering Committee

Administrative Support Assistant Position Added to the NAHLN Program Office

IT Messaging Training

Efforts begin to train NAHLN laboratories to successfully send NAHLN surveillance test results via HL7 messages. As a result of the training, the 'Hitchhiker's Guide to NAHLN Messaging' was developed.

Train the Trainer Program Expanded

Proficiency testing was added to the Train the Trainer Program for foot-and-mouth disease, classical swine fever, avian influenza, and exotic Newcastle disease virus.

2007

Exercises and Drills Working Group Formed

The Exercises and Drills Working Group was established and is comprised of representatives from Core Member, Member, and Contract laboratories as well as VS. This group assisted in developing laboratory based questions used in the AI table-top exercises and assist in developing and implementing future drills for the NAHLN laboratories. The group has been instrumental in addressing recommendations from the NAHLN high-pathogenic avian influenza exercise program.

Diagnostic Testing Capacity Increased

In order to ensure adequate capacity to respond to diagnostic testing during an outbreak, high-throughput equipment was purchased and distributed to NAHLN laboratories based on a risk-based model for the introduction and spread of highly pathogenic avian influenza.

Microbiologist Position Added to the NAHLN Program Office

AAVLD/NAHLN Toxicology Working Group Formed

The Toxicology Working Group was established in recognition of the need for a National plan to support, coordinate, and establish formal lines of communication among the existing State veterinary analytical toxicology laboratories and appropriate governmental agencies in the U.S. It is comprised of professionals from State veterinary diagnostic laboratories who analyze and diagnose chemical toxicoses and deficiencies in animals.

NAHLN Symposium

A NAHLN Symposium titled "Methods Validation and Assessment" was developed in collaboration with the Methods Technical Working Group and held in conjunction with the USAHA/AAVLD annual meetings.



Wild Bird Avian Influenza Surveillance Program Initiated

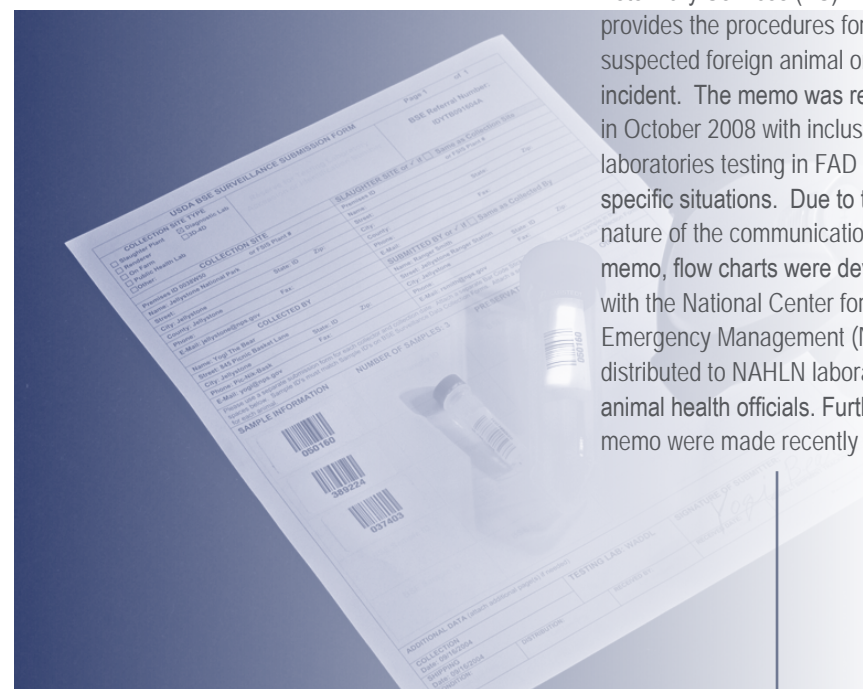
The wild bird avian influenza surveillance program was initiated in NAHLN laboratories as a collaborative effort with APHIS' Wildlife Services. This strengthened interagency relationships, expanded the scope of NAHLN surveillance, and expanded electronic messaging capabilities.

NAHLN Program 5-year Review - Survey Results

The results and recommendations of the NAHLN Phase I Review indicated that additional input was needed from the Laboratory Directors, State Veterinarians, and USDA/APHIS/VS. A survey was developed by the NAHLN Steering Committee and administered by AAVLD. A summary report indicated that there was consensus among the three surveyed groups. The data collected from the NAHLN Phase 1 Review, and the survey, were used to establish priorities and determine goals.

Authorized Foreign Animal Disease Investigation Testing in NAHLN Laboratories

Veterinary Services (VS) Memorandum 580.4 provides the procedures for investigating a suspected foreign animal or emerging disease incident. The memo was revised and finalized in October 2008 with inclusion of NAHLN laboratories testing in FAD investigations in specific situations. Due to the complicated nature of the communications involved in the memo, flow charts were developed in 2010 with the National Center for Animal Health Emergency Management (NCAHEM) and distributed to NAHLN laboratories and State animal health officials. Further revisions to the memo were made recently in 2012.



2008

2009

NAHLN Program 5-year Review

The Phase 1 review was completed and released in September 2007, identifying the following areas as needing further evaluation and study, or more progress:

- NAHLN Program Leadership, Management and Organization
- Laboratory Network Structure
- Information Technology
- Communication
- Priority Agents
- Laboratory Quality

High-throughput Training Conducted

The initial training workshop was held for high-throughput equipment for avian influenza, classical swine fever, and foot-and-mouth disease testing in collaboration with the NVSL's reference laboratories. The "Train the Trainer" session was a two-day training course including an overview of high-throughput systems, instruction on equipment programming, breakout sessions for hands-on training, and proficiency testing upon completion of the training. Five additional workshops were held in 2008.

NAHLN Symposium

A NAHLN Symposium titled "Emergency Response" was developed in collaboration with VS units and held in conjunction with the USAHA/AAVLD annual meetings.

Program Analyst Position Added to the NAHLN Program Office

AI Table-top Exercise Series

Laboratory preparedness was assessed during a series of highly pathogenic avian influenza (HPAI) table-top exercises. In total, thirty-eight exercises were held, involving animal health responders from forty-five states.

SIV Surveillance Developed and Implemented

Veterinary Services developed and implemented a surveillance plan for swine influenza virus (SIV), including the pandemic H1N1 2009 virus (pH1N1), in swine. The surveillance plan is aimed at identifying the pH1N1 strain as well as other non-typical strains of SIV. Initially, thirty-six NAHLN laboratories participated in the SIV surveillance activities. Collaboration with the NAHLN Methods Technical Working Group and USDA'S APHIS and the Agricultural Research Service led to rapid deployment of influenza assays used to detect the novel 2009 H1N1.

First Issue of The NAHLN Newsletter Released

The first issue of The NAHLN Quarterly, an electronic newsletter with the purpose of increasing communication with stakeholders, was distributed to NAHLN Laboratory Directors in February 2009. Since that time subscriptions have increased to over 1500 and include Laboratory Directors, State Animal Health Officials, APHIS Program Staff, animal industry representatives, and other State, Federal, and international representatives.

NAHLN Symposia at WAVLD and AVMA

A NAHLN Symposium titled "Development and Implementation of Veterinary Diagnostic Laboratory Networks – The Principles of Laboratory Network Development and Function" was developed and held in conjunction with the World Association of Veterinary Laboratory Diagnosticians (WAVLD) annual meeting. A NAHLN Symposium titled "One Medicine" was developed in collaboration with other VS units and held in conjunction with the American Veterinary Medical Association's (AVMA) annual convention.

Microbiologist Position Added to the NAHLN Program Office

Annual Reports Distributed to NAHLN Laboratories

The NAHLN Program Office initiated the distribution of customized annual reports to the NAHLN laboratories. Each report details the previous Federal fiscal year's accomplishments and activities for the individual laboratory in addition to those of NAHLN overall.

Performance of Assays Used in NAHLN Laboratories Monitored

NAHLN laboratories participated in a pilot with a vendor providing real-time analysis and reporting of data from Quality Control tests generated from laboratories performing serology and nucleic acid testing for infectious diseases. The intent of the pilot was to monitor the performance of the assays used in NAHLN laboratories for the detection of avian influenza, classical swine fever, and swine influenza virus.

Additional IT Guidance Developed

HL7 implementation and messaging guidance was simplified with a series of instruction manuals to assist NAHLN laboratories with developing messaging capabilities.

2010

Program Assistant Position Added to the NAHLN Program Office

NAHLN Participated in AST I

The National Center for Foreign Animal and Zoonotic Disease Defense (FAZD), through the Department of Homeland Security (DHS), funded the first workshop on agricultural screening tools (AST). The goals of the meeting were to define agricultural screening tools, evaluate their current status, identify and discuss the gaps and needs defined by the agricultural community, and obtain stakeholder input on requirements.

NAHLN Portal

Initial planning and development of a secure website within the CoreShield framework began. This framework was developed by multiple Federal partners with the purpose of supporting Federal, State and local governmental regulatory agencies and laboratories in defending the food supply through web-based tools. These tools focus on enhancing threat prevention and response, risk management, communication and asset coordination, as well as public education. The NAHLN Portal has been developed within that framework to securely share information with laboratories, such as standard operating procedures, proficiency testing status, financial agreements and assay performance monitoring data. This approach promotes leveraging resources to generate products for multiple groups and networks.

NAHLN Laboratory Review Process Established

NAHLN Program Staff collaborated with AAVLD to establish a review process for NAHLN laboratories, ensuring the development and implementation of a quality management system consistent with AAVLD, OIE, and ISO standards. Standardized reports detailing non-conformances and requirements to maintain NAHLN status are provided to each audited laboratory.

PRV Surveillance Expanded

The pseudorabies virus (PRV) surveillance program expanded in 2010. As an extension of VS' already established slaughter surveillance efforts, VS implemented PRV surveillance testing in twelve NAHLN laboratories to increase rapid detection of PRV in commercial swine. This surveillance activity, now occurring in sixteen NAHLN laboratories, supports the USDA's PRV surveillance goals which also include demonstration of freedom and monitoring domestic sources for PRV.

MTWG Methods Comparison Process Developed

The Methods Technical Working Group developed and implemented a methods comparison process to efficiently compare the performance of assays when changes such as sample type or platform were needed for an existing assay.

Codification Process Initiated

The NAHLN Program Staff initiated the codification of NAHLN as part of the Code of Federal Regulations (CFR) by drafting and submitting information collection information as part of the Paperwork Reduction Act to the VS Writing, Editing, and Regulatory Coordination staff to determine the burden imposed on the public when information is requested. Laboratory approval processes currently in the CFR were used as a guide.

QMS Training Program Developed and Delivered

The NAHLN Program Office collaborated with members of the AAFLD Accreditation Committee and NVSL personnel to develop and deliver a Quality Management System (QMS) Training Program. The training program provided an interactive class environment that included training on quality system requirements, document control, internal auditing, and root cause analysis. In addition, a wet laboratory provided opportunity for participants to conduct an audit, recognize non-conformances, analyze root cause, and write corrective actions. In August 2010, the first QMS training was held in Ames, Iowa, with a total of eighty-seven participants, representing forty NAHLN laboratories, eight prospective laboratories, four Federal laboratories, and a laboratory in Canada.

NVSL Table-top Exercise and Follow-up VS Policy Workshop Held

As a continuation of the FMD table-top exercise series, additional table-top exercises were held at NVSL for AI and FMD, addressing roles and responsibilities, standard operating procedures, and communication during outbreak scenarios affecting both Ames and Plum Island campuses. A follow-up policy workshop was conducted with VS personnel to address policy gaps identified throughout the FMD exercise series.

QMS Training Program Continues, Including International Participants

While the original QMS course was developed to assist the NAHLN laboratories in implementing and continually improving quality management systems, it has expanded to assist other laboratory networks. In May, a training program was delivered to the National Plant Diagnostic Network. An additional training program was conducted in Tanzania in July for international participants with representatives from Burundi, Djibouti, Eritrea, Ethiopia, Kenya, North Sudan, Rwanda, Somalia, South Sudan, Tanzania, and Uganda. In August, QMS training was offered at the National Centers for Animal Health in Ames, Iowa and included individuals from ten NAHLN laboratories as well as participants from Iraq, Kazakhstan, Kenya, Russia, Tanzania, and Ukraine.

NAHLN Coordinating Council Formed

The inaugural meeting of the NAHLN Coordinating Council was held in Ames, IA and included strategic planning sessions focusing on high consequence and emerging diseases and laboratory network structure. The Coordinating Council was formed to provide input on the following: the strategic plan, goals, and operational objectives of NAHLN; specific criteria that define a NAHLN laboratory; policies that relate to the NAHLN; and new efforts for the NAHLN.

FMD Table-top Exercise Series

NAHLN evaluated improvement in laboratory preparedness through sixteen foot-and-mouth disease table-top exercises. The series of sixteen exercises, most of which were regionally focused, involved personnel from thirty-four states and the province of British Columbia. The series was kicked off with a policy workshop to identify existing FMD-related policies and gaps.

Negative Cohort Studies for African Swine Fever (ASF), Foot-and-Mouth disease (FMD), and Rinderpest (RP) Conducted

Negative Cohort Studies for ASF, FMD, and RP were initiated in 2010 and carried out in cooperation with the NAHLN laboratories and NVSL-FADDL. The primary objective of the studies was to further validate the rRT-PCRs for FMD, ASF, and RP through a better understanding of the performance characteristics of the assays. Additionally, the laboratories were provided an opportunity to assess and improve laboratory procedures and processes for sample selection, testing, and result communication.

2011

Photo courtesy of Brian Maki



NAHLN Participated in AST II and III

FAZD, with DHS funds, facilitated a second meeting on agricultural screening tools. During this meeting, industry perspectives on diagnostic testing were discussed and input was obtained on diagnostic screening tools for transboundary, emerging, and zoonotic diseases. Policy gaps were discussed and input was obtained on priorities for diagnostic method development. AST III involved many NAHLN stakeholders that provided input on lab-related concept of operations-- specifically use of diagnostic assays during an outbreak, laboratory operations; and prioritization of samples and reagents.

Training for Foreign Animal Disease Investigations Developed and Delivered

In May, the NAHLN Program Office developed and delivered training to NAHLN laboratory representatives that described the investigation and communication that should occur during a potential Foreign Animal Disease Investigation or Emerging Disease Incident (Veterinary Services Memorandum 580.4). Following a thorough review of the information in VS Memo 580.4, State and Federal representatives from all groups involved in the process of investigating and communicating an adverse animal health event took part in scenarios and responded as they would in their positions during an actual investigation.

Additional Associate Coordinator Position Added to the NAHLN Program Office

Laboratory Capacity Estimation Model Developed

The development and initial deployment of the Laboratory Capacity Estimation Model (LCEM) occurred in 2011. The National Center for Foreign Animal and Zoonotic Disease Defense (FAZD) at Texas A&M University collaborated with NAHLN Program Staff and NAHLN laboratories to develop a diagnostic testing capacity estimation program. The software enhances NAHLN preparedness by allowing laboratories to define their specific processes, apply them to testing scenarios, and generate an estimate of individual laboratory and overall network capacity prior to and during an animal disease outbreak.

IT HL7® Messaging Training

In August, NAHLN Program Staff hosted an IT messaging training course delivered to ten NAHLN laboratories. IT subject matter experts provided an overview of NAHLN and IT message standards, HL7 content mapping, terminology mapping, message construction options, message transport and security, and message creation.

NAHLN Symposium

A NAHLN/AAVLD Quality Symposium was developed in collaboration with AAVLD and held in conjunction with the USAHA/AAVLD annual meetings. Topics included mock audit work stations as well as corrective action and root cause analysis workshops.

Development of the NAHLN Concept Paper

The structure of the network was reviewed by the NAHLN Coordinating Council in 2011 to ensure that the NAHLN meets the missions of early detection, rapid response, and appropriate recovery from adverse animal health events. The concept paper was originally drafted by the NAHLN Coordinating Council and provided to stakeholders for comment at the 2011 AAVLD/USAHA annual meetings.

NAHLN Participated in AST IV

AST IV was held with NAHLN Coordinating Council members and several other stakeholders to review and provide input on laboratory related policies and procedures discussed in AST III.

NAHLN Symposium

A NAHLN/AAVLD Joint Symposium was developed in collaboration with the AAVLD Accreditation Committee and held in conjunction with the USAHA/AAVLD annual meetings. Topics covered included responding to a site visit report and internal auditing.

2012

International QMS Training Program Continues

In June, the Quality Management System Training Program was delivered to an Iraqi Exchange Scholar and again in August to representatives from twelve NAHLN laboratories as well as individuals from India, Iraq, Kazakhstan, Kenya, Pakistan, Russia, Tajikistan, Tanzania, Uganda, and Ukraine.

FMD Negative Cohort Studies

Assay development and validation projects were conducted to address gaps identified by stakeholders in the course of the NAHLN FMD table-top exercise series and the FAZD AST workshops. Projects completed in 2012 include a FMD penside negative cohort study in two NAHLN laboratories and an FMD milk PCR interlaboratory comparison among five NAHLN laboratories, FADDL, and the Pirbright Institute for Animal Health in the United Kingdom. Additional planning of collaborative projects include negative cohorts for the FMD milk PCR, FMD serology, and a larger FMD penside study for late fall 2012 implementation.

LOOKING TO THE FUTURE

FUTURE

Further Development of the NAHLN Concept Paper

The structure of the network was again reviewed in 2012 by the NAHLN Coordinating Council to ensure that the NAHLN meets the missions of early detection, rapid response, and appropriate recovery from adverse animal health events. APHIS anticipates the concept paper will be published in the Federal Register in 2013 for comment prior to moving forward with rulemaking.

User Acceptance Testing and Further Enhancements to the NAHLN Portal

The NAHLN Program Office and NAHLN laboratories are involved in ongoing user acceptance testing of the current functionalities of the NAHLN Portal. Additional enhancements of the NAHLN Portal will be completed in 2013.

"A national strategy, melding the nation's Federal, State, and local resources, would be capable of responding to any type of animal health emergency, including bioterrorist events, newly emerging diseases, and foreign animal disease agents that threaten the nation's food supply and public health... the need to develop and maintain a state-of-the-art national animal health laboratory network (NAHLN) has never been more critical." - AAVLD/NAHLN White Paper, 2002

Our mission has not changed over the last ten years and it's not anticipated that it will change in the next decade. The National Animal Health Laboratory Network (NAHLN) is the nationwide model for effective diagnostic networks that respond quickly and efficiently and communicate diagnostic outcomes to decision makers. The NAHLN provides animal health diagnostic testing to detect biological threats to the nation's food animals, thus protecting animal health, public health, and the nation's food supply.

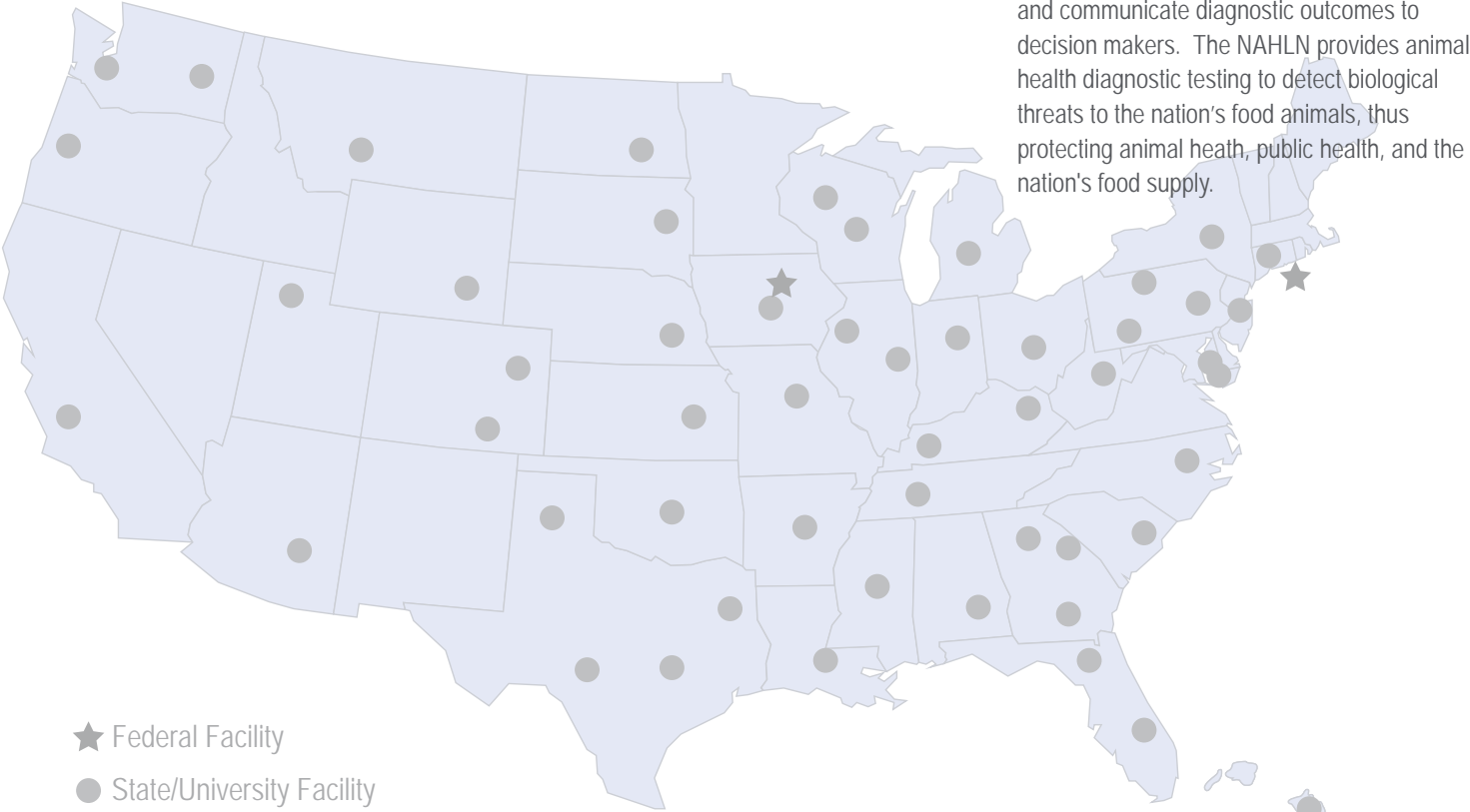
Ours is a nationally coordinated network where partnership is the key to success. By building upon the Founding Principles, the network's credibility has and will continue to be maintained at national and international levels. The Founding Principles have provided a firm foundation and allow us to identify gaps and incrementally address current as well as future national animal health testing needs.

Together we have strategically combined the infrastructure and expertise in the state veterinary diagnostic laboratories and the National Veterinary Services Laboratories to establish the animal health laboratory backbone of the United States emergency response and recovery program. We have implemented national, standardized surveillance for high priority diseases. If we intend to build on our successes, we must continue to work together to leverage our collective resources and continue to apply the Founding Principles by:

- Operating within a quality management system that meets AAVLD, ISO 17025, or equivalent requirements
- Establishing and maintaining competency of laboratory personnel Using standardized protocols, reference materials, and equipment
- Participating in communications and reporting systems established by the NAHLN
- Using facilities with biosafety/biosecurity levels requisite for testing performed
- Evaluating preparedness (identifying and prioritizing gaps) through scenario testing

Our partners will continue to be critically important to our success. Together we will identify needs, prioritize actions and implement change. Together we will improve our nation's ability to address adverse animal health events.

Thanks for your ongoing support!



NAHLN

"As a State Veterinarian, NAHLN activities and test exercises have encouraged seamless communication and interaction with our lab counterparts, and gives me a tool to have data available quickly to use in the decision making process during disease investigations. Our industries are greatly appreciative of these enhanced local capabilities, and I am convinced that testing results provided by NAHLN capabilities have saved our industry millions of dollars by averting misguided or overly aggressive regulatory action to the detriment of commerce."

Dave Marshall
State Veterinarian and President, USAHA
North Carolina Department of Agriculture and Consumer Services
Veterinary Division
Raleigh, North Carolina

"While it was a stressful time, it was also exciting to see this idea evolve into a working network, with active surveillance projects being performed and the network serving as an important component of the total homeland security program, with a special emphasis on biosecurity in the agricultural sector."

William C. Wagner
Former Program Manager with USDA's
National Institute of Food and Agriculture
(previously CSREES)

"NAHLN staff has been very encouraging, supportive and mentoring of all our efforts, and that has contributed towards our success."

Virginia Pierce
NAHLN Laboratory Director
Frederick Animal Health Laboratory
Frederick, Maryland

"Working with NAHLN increased the molecular detection capability of our laboratory in terms of state of the art equipment, proficiency trained personnel, and standardization of assays... Our two significant accomplishments are the identification of our weakness/strengths and laboratory capacity and expansion of our ability to detect agents of foreign animal disease and high consequence pathogens. ...NAHLN is one of the best uses of our tax dollars. It has provided a critical role in our state's ability to rapidly detect and respond to animal disease outbreaks."

Karen Post
NAHLN Laboratory Director
Rollins Diagnostic Laboratory
North Carolina Department of Agriculture
Raleigh, North Carolina

"NAHLN is a critical program that ties the different states' diagnostic entities together for a cohesive preventative force against foreign and domestic diseases. Your program serves to unite us under a consistent set of diagnostic procedures to ensure that the results we provide our clients are accurate and uniform. ..NAHLN has done a lot in conjunction with the AAVLD to improve the quality of livestock diagnostics all across the nation."

Bill J. Johnson
NAHLN Laboratory Director
Oklahoma Animal Disease Diagnostic Laboratory
Oklahoma State University
Stillwater, Oklahoma

"This experience of testing for FADs at the NAHLN labs further allows for a cadre of labs ready and able to assist in the event of a large scale FAD outbreak. ...The NAHLN is a very effective 'lighthouse' and 'first responder' for animal agriculture."

David Pyburn
Veterinary Medical Officer
Swine Health Programs
National Center for Animal Health Programs
National Animal Health Policy and Programs
USDA, APHIS, VS

"NAHLN and swine disease surveillance have grown up together. The CSF rRT PCR was the first FAD assay validated for use in the NAHLN system back in 2004. It's not often that a group of people in regulatory medicine get a chance to build a system from scratch, but Swine Program Staff, the emerging National Surveillance Unit (NSU), and the newborn NAHLN took advantage of the opportunity. We spent many hours meeting via conference call and in person developing protocols and procedures that have stood the test of time. It's been extremely gratifying to see NAHLN truly become a system over those 10 years. When we began SIV surveillance in the NAHLN system in 2009, many of the protocols and business processes developed for CSF were there for adaptation to SIV (and also PRV). I have no doubts that if we are faced with an FAD emergency in the future, our regulatory health system is much better prepared because of 10 years of hard work and success in developing NAHLN."

John Korslund
Staff Epidemiologist
National Surveillance Unit
Centers for Epidemiology and Animal Health
USDA, APHIS, VS

"...the value and need for the NALHN was always crystal clear. We needed better surveillance capability for FAD's as well as for domestic disease programs, and this was best facilitated and coordinated through a network of state laboratories...just having this come to fruition while I was in leadership roles at APHIS continues to give me a strong sense of accomplishment. This is monumentally important for US animal agriculture and a model for the world. ...Animal agriculture across the country is far safer and better prepared to respond to an animal health emergency. We all benefit from the NAHLN at the local, state, and national level."

Ron DeHaven
Former APHIS Administrator and Current
President, AVMA

"The existing NAHLN surveillance network gives us a chance to participate on a regional and national level with animal and public health issues....participation in NAHLN has also given us a new visibility within the university system and state agriculture agencies."

Neil Dyer
NAHLN Laboratory Director
Veterinary Diagnostic Laboratory
North Dakota State University
Fargo, North Dakota

"When you see or hear 'NAHLN', the words – partnership, collaboration, teamwork and leveraging immediately come to mind. Together we have created a flexible, credible, national diagnostic laboratory system that positions us well to meet animal health and public health challenges of the future. Congratulations and thanks to all for their crucial contributions to the first 10 years of NAHLN."

Beth Lautner
Director, National Veterinary Services
Laboratories
USDA, APHIS, VS

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Year Anniversary
NAHLN
National Animal Health Laboratory Network
