

NATIONAL ANIMAL HEALTH SURVEILLANCE SYSTEM

A comprehensive, coordinated, integrated surveillance system is the foundation for animal health, public health, food safety and environmental health.”
—Animal Health Safeguarding Review 2001



The National Animal Health Surveillance System (NAHSS) is a network of Federal, State, industry, university, laboratory, and other partners that collaborate through surveillance to protect animal health. The goal of the NAHSS is to systematically collect, collate, and analyze animal health data and promptly disseminate vital information, especially to those partners responsible for maintaining animal health. In carrying out this mission, the NAHSS integrates existing animal health monitoring programs and surveillance activities into a comprehensive and coordinated system and develops new surveillance methods and approaches.

The Veterinary Services (VS) branch of the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) created the NAHSS in response to the Animal Health Safeguarding Review (2001). A primary recommendation of the review was that the United States should develop a comprehensive, coordinated, and integrated animal health surveillance system. Through its infrastructure, animal health expertise, and array of established agency partnerships, VS has been uniquely positioned to lead and coordinate the NAHSS.

A COLLABORATIVE EFFORT

The NAHSS is supported by a network of government and private partners and multiple units across VS that collaborate to carry out the NAHSS mission. A key partnership component is the NAHSS steering committee, which represents stakeholders including livestock, aquaculture, and poultry industries; State animal health agencies; diagnostic laboratory organizations; academic institutions; private practitioner organizations; and relevant Federal agencies.

ENHANCING ANIMAL HEALTH SURVEILLANCE

Working together, the NAHSS partners are building a system that protects animal health, public health, national economic viability, and the food supply. In addition, the NAHSS focuses on increasing the efficiency of existing animal health surveillance programs and initiatives and assures international trading partners of the health of the Nation's herds.

Ongoing efforts underway to carry out the goals of NAHSS' strategic plan include:

- **Providing early detection and global risk surveillance for foreign and emerging animal diseases**—The NAHSS monitors and assesses animal diseases and health events occurring worldwide to provide early warning of emerging diseases and to determine their potential impact on the U.S. agriculture animal population.



- **Enhancing surveillance for current program diseases**—Through the NAHSS, a coordinated network of VS area and regional field staff, State animal health officials, and accredited veterinarians carry out surveillance activities throughout the Nation.
- **Monitoring and surveillance for diseases with a major impact on production and marketing**—The NAHSS collaborates with all sectors of animal agriculture (i.e., beef, dairy, equine, poultry, sheep, swine, goat, and aquaculture) to monitor disease threats and production trends within each industry and provide timely and accurate animal health information.
- **Improving the Nation's ability to identify the early warning signs of biological threats**—This work entails close cooperation with the U.S. Department of Homeland Security; the U.S. Department of Health and Human Services; and other Federal, State, and industry partners.
- **Collaborating with the National Animal Health Laboratory Network**—The laboratory network is an integral part of a national strategy to coordinate the efforts of all organizations providing surveillance and testing services.
 - **Establishing surveillance and data standards**—A standardized approach to building surveillance systems and their underlying information management systems assures uniformity in collecting animal disease information so that decisionmakers can more effectively mitigate animal disease events and achieve the goals set forth in U.S. trade negotiations.

- **Managing animal health information effectively**—The NAHSS establishes an organization-wide information system that gathers and coordinates animal health data for VS disease management and surveillance programs.



CURRENT STATUS

Since the inception of the NAHSS, VS and its partners have completed a number of projects and activities to move the system forward. This work has increased the efficiency of existing animal health surveillance programs and initiatives in the United States.

Specifically, the NAHSS partners have made significant progress in three key areas of surveillance: planning and evaluation, tools and methods, and reporting and communication.

Planning and Evaluation

- Developed surveillance plans for numerous animal diseases of significance, including avian influenza, bovine spongiform encephalopathy (BSE), brucellosis, classical swine fever, pseudorabies, scrapie, vesicular diseases, viral hemorrhagic septicemia (VHS), and emerging diseases;



- Conducted national studies to monitor animal health trends and industry practices, which are also used to support surveillance planning;
- Evaluated scrapie, brucellosis, and BSE surveillance systems; and,
- Collaborated with stakeholders to prioritize surveillance for multiple swine and cattle diseases, as well as VHS in fish populations.

Tools and Methods

- Developed targeted methods for increasing the efficiency of animal health surveillance;
- Developed the U.S. Animal Health and Productivity Surveillance Inventory (<http://nsu.aphis.usda.gov/inventory>), a database that enables users to search for information about surveillance and monitoring programs, epidemiological studies, and other animal health activities;
- Applied analytic methods incorporating the opinions of scientists and other experts into effective surveillance strategies; and,
- Incorporated epidemiological simulation modeling, pathways assessment, and spatial analysis tools into the surveillance planning process to help predict, rapidly detect, and control disease.

Reporting and Communication

- Enhanced U.S. disease reporting through the National Animal Health Reporting System (NAHRS), a voluntary system that collects monthly data from State animal health officials on the presence or absence of diseases that are reportable to the World Organization for Animal Health (OIE);
- Created the NAHSS Web site (www.aphis.usda.gov/vs/nahss/nahss.htm), which

provides current information about animal health surveillance in the United States;

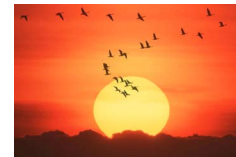


- Developed *NAHSS Outlook*, a quarterly e-newsletter for VS employees;
- Produced emerging animal disease notices, which examine occurrences of emerging diseases, for dissemination to APHIS managers, epidemiologists, and partners;
- Distributed *Animal Health Tracks*, a weekly compilation of open-source information regarding significant emerging animal health issues monitored by VS' Centers for Epidemiology and Animal Health (CEAH), to APHIS managers, epidemiologists, and certain partners; and,
- Enhanced Web-based reporting of equine and avian disease surveillance information in cooperation with industry partners, States, and other agencies.

NEXT STEPS

As the NAHSS continues to develop, activities carried out by its network of partners will include:

- Developing comprehensive, integrated systems that encompass multiple species and diseases rather than focusing on individual diseases;
- Expanding the scope of animal health surveillance to cover new diseases of concern;
- Structuring national databases that can support rapid analysis for health and trade policies;
- Designing new approaches to epidemiological analysis to make surveillance more cost-effective and efficient; and,
- Building and strengthening partnerships.



FOR MORE INFORMATION

To learn more about the NAHSS, contact the National Surveillance Unit of CEAH at 2150 Centre Avenue, Building B, Mailstop 2E6, Fort Collins, CO 80526-8117. You may send e-mail to the unit at national.surveillance.unit@aphis.usda.gov. Additional information is available on the Web at <http://nsu.aphis.usda.gov/>.



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