

Partnerships Are Key to Effective Wildlife Disease Surveillance

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Surveillance and monitoring for wildlife disease is becoming increasingly important for public and animal health. Many new and emerging livestock and human diseases may first appear in wildlife. And, wildlife health is important for conservation management and may serve as an indicator of environmental health.

For some diseases, programs that include wildlife surveillance may support domestic animal health, increase international trade and consumer confidence in products, or protect public health. Thus, wildlife disease surveillance and monitoring should be approached through partnerships and cooperation among Federal and State wildlife, agriculture and public health agencies; industry; nongovernmental organizations such as the United States Animal Health Association, and academia, all depending on areas of responsibility and interest.

As with any surveillance or monitoring program, clearly defined objectives are essential to effectively develop a plan, determine the needs to obtain those objectives, successfully implement the program, and evaluate the results. Common disease surveillance objectives may include:

- Early detection of a foreign animal disease,
- Monitoring risk of introduction,
- Establishing baseline data on herd or population health,
- Estimation of disease prevalence, or
- Assessment of population health in the case of an epidemic.

Three current examples of national collaborative efforts for disease surveillance in wildlife are the interagency approaches for surveillance of classical swine fever (CSF),

highly pathogenic avian influenza (HPAI), and chronic wasting disease (CWD). These interagency efforts involve surveillance for a foreign animal or emerging disease and rely heavily on cooperative relationships at the local level, as well as diagnostic support through partnerships such as the National Animal Health Laboratory Network (NAHLN).

CSF Program

CSF is a highly contagious viral infection affecting only swine and has been eradicated from many developed nations with extensive swine production but remains endemic in much of the world. The United States has been recognized as free of CSF since 1978. Outbreaks in countries free of CSF can have a severe economic impact due to high swine mortality and swine and pork product export restrictions, in addition to the costs to control and eradicate the disease. The objectives of the overall CSF program in the United States are four-fold: rapid detection of CSF in U.S. swine, surveillance on hazards associated with the introduction of CSF into U.S. swine, documenting freedom of CSF in order to facilitate trade, and tracking international CSF status (particularly of neighboring countries and trading partners). One surveillance stream in the overall program is sampling feral swine populations in more than 20 States considered high risk locations of possible CSF introductions. Intra-agency relationships provide the strong support needed to conduct surveillance on a national level, with local relationships providing the expertise and knowledge to effectively implement the program.

HPAI Surveillance

The surveillance for HPAI in wild, migratory birds is a collaborative effort between the USDA, Department of Interior, Association of Fish and Wildlife Agencies, State wildlife agency partners, the NAHLN, and universities, among others. Surveillance in domestic poultry for notifiable avian influenza strains (all H5 and H7 and highly

pathogenic strains) has been a Federal-State-industry cooperative program for years. However, the emergence of HPAI H5N1 strain in many countries in Asia, Africa and Europe has forced all agencies responsible for addressing animal health issues to collaborate to build an effective surveillance network. With the potential effect on domestic poultry and wild bird populations, USDA recognized the importance of surveillance for the agent in wild, migratory birds to enhance overall efforts for early detection. Using expertise from agriculture, wildlife and public health, the collaborative effort allowed agencies and organizations to develop a comprehensive surveillance plan with shared objectives and standardized approaches for surveillance in their regions. Most importantly, the effort allowed efficient implementation of the surveillance for a disease of importance to all three sectors.

CWD Program

CWD is a transmissible spongiform encephalopathy found in both wild and captive deer and elk. First recognized in 1967 in northern Colorado, the disease has since been found in wild and captive cervids in 11 other States. The collaborative surveillance program consists of partners from Federal and State agriculture and wildlife management agencies and the NAHLN, working together to identify infected populations and determine disease prevalence in States or areas. Surveillance relies heavily on involvement from the hunting public to provide the required sample sizes to detect a disease at such a low prevalence. This type of involvement reinforces the need to collaborate with government agencies and departments, as well as individuals.

Wildlife disease surveillance and monitoring is increasingly recognized for its important role in better understanding the health of wildlife populations; the interactions between wildlife, domestic animals and humans; and the importance of assessing and

monitoring animal health. These objectives can only be achieved by addressing issues through continued cooperation and partnerships involving all interested parties.