NVAP Reference Guide: Disease Surveillance

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In all the following surveillance activities, veterinary practitioners play a key role. Veterinarians in the field are often the first line of defense against the incursion of a disease. Because the veterinary practitioner is usually the primary contact person with the owners of livestock or pets, it is imperative that he or she do all that is possible to educate owners, to be aware of unusual clinical signs, to be aware of current disease outbreaks or threats, and to immediately report possible diseases of concern to both Federal and State Animal Health Officials.

9 CFR Part 161.4(f) requires an accredited veterinarian to immediately report to the Veterinarian-in-Charge and the State Animal Health Official all diagnosed or suspected cases of a communicable animal disease for which APHIS has a control or eradication program in 9 CFR Chapter I, and all diagnosed or suspected cases of any animal disease not known to exist in the United States as provide by Part 71.3(b) of this chapter.

The classic action plan for disease control and eradication is as follows:

1. Find—surveillance;
2. Contain—prevention of spread from infected herds; and

3. Eradicate—elimination of the disease.

In a disease eradication program, it is critically important to recognize that an effective surveillance system is a critical first step that must be in place to be successful. It is imperative to (1) be able to find the disease in order to eliminate it, and (2) find the disease before it has had a chance to spread. If the disease can be identified and eliminated before it has had a chance to spread, eradication can be achieved.

The mission of APHIS –VS is to protect and improve the health, quality, and marketability of our Nation's animals, animal products, and veterinary biologics by preventing, controlling, or eliminating animal diseases and monitoring and promoting animal health and productivity. To accomplish this, it is critical to be able to detect foreign animal diseases and emerging domestic diseases, monitor disease trends and threats in the United States and other countries, detect risk, evaluate disease control and eradication programs, and provide adequate animal health information. Animal health surveillance plays a key role in accomplishing these goals.

The National Animal Health Surveillance System (NAHSS) is a comprehensive, integrated, coordinated system created to detect events and trends related to animal health for all stakeholders involved in public, animal, and environmental health. Comprehensive and Integrated Surveillance (CIS) is an approach to surveillance within the NAHSS that enables VS to have a surveillance system that provides a dynamic knowledge base for actions designed to reduce morbidity, mortality, and economic losses while improving animal health, productivity, marketability, and product safety in an efficient an integrated way. Such a system is the foundation for animal health, public health, food safety, and environmental health.

In addition to the obvious role surveillance plays in monitoring endemic diseases and providing actionable information for disease eradication programs (e.g., for brucellosis, tuberculosis, and others), there are a several other significant justifications for animal health surveillance. These include the rapid detection of emerging animal and public health issues and accidentally or intentionally introduced foreign animal disease agents. Animal health surveillance also provides support for the marketability of animals and animal products by demonstrating quality and safety attributes of products through quality assurance and certification

programs and by providing scientifically sound evidence of regional prevalence for trade-significant diseases.

Historically, animal health surveillance systems in the United States have been designed primarily for specific disease control or eradication programs. Now, however, working in collaboration with State and industry partners, APHIS is moving toward an organizational and informational infrastructure that supports baseline animal health monitoring and “grows” a dynamic knowledge base for actions designed to reduce morbidity, mortality, and economic losses while improving animal health, productivity, marketability, and product safety. APHIS –VS is focusing on several key areas during the enhancement of current national animal health surveillance efforts:

- Enhancement of surveillance for current program diseases,
- Rapid detection of emerging and foreign animal diseases,
- Surveillance for diseases affecting marketability or economics of industry,
- Surveillance based on risk of disease,
- Monitoring of animal health trends, and
- Ability to do focused surveillance as needed.

In closing this chapter, we cannot overemphasize the key role veterinary practitioners play in national disease surveillance efforts. The veterinarian in the field is the critical first line of defense against an emerging or foreign animal disease incursion.

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