

Response: David E. Stallknecht

Questions for the Record by Democratic Members Questions from Representative Cohen

1. How does having ecologists and wildlife experts – boots on the ground – involved in planning and implementing U.S. surveillance of animal diseases improve how we respond to disease outbreaks?

Surveillance is dependent upon gathering relevant data and the collection and testing of samples. The interpretation of surveillance data also is dependent on local, biological, and technical knowledge. We spend a lot of time thinking about the need for big data and national labs dedicated to animal disease diagnostics and surveillance but an equal consideration needs to be dedicated to the acquisition of the samples and data that effective and comprehensive surveillance programs depend on. The goals of surveillance are to detect and understand the epidemiology of diseases not only to prevent diseases events but also appropriately respond to them. Diseases are the product of interactions between three things: the agent, the host, and the environment. This is a basic epidemiological concept. With diseases involving wildlife, who better than a wildlife biologist or ecologist to provide needed information on host and the environments where these agents and wildlife hosts interact. On a more practical side, wildlife biologists are the ones who know how to effectively collect samples, how to obtain supportive population metadata needed to understand disease interactions in wildlife populations, who manage wildlife populations and habitats, and who work daily at the human/wildlife interface. They also provide a “local” presence that provides needed perspective to understand community risks, guide surveillance objectives and approaches, and provide a community based professional to interact and communicate with the public. It is important to always remember that any success related to surveillance or response is dependent on community understanding and support. In my testimony I centered on States, but this also applies to Tribal jurisdictions.

2. What are the biggest areas of need when it comes to improving surveillance?

There are several:

- State infrastructure related to meeting wildlife disease surveillance and research needs and capacity need to be improved in all states. These needs vary considerably between states. This is a funding issue at both State and Federal levels.
- Surveillance efforts should be ongoing and provide both general (new diseases or syndromes) and targeted (specific problems such as influenza, rabies) objectives. Both are important. With targeted surveillance, clear objectives need to be in place. More general surveillance is dependent on sustainable funding.
- Discussions are needed related to building a more effective Federal/State/Academic/Tribal network. There is no “one size fits all” model, but perhaps some new approaches should be discussed such as the development of regional labs or improved funding models. Fortunately, this is starting to be addressed through an American Fish and Wildlife Agencies attempt to revise the “National Fish and Wildlife Health Initiative”. The steering committee for that initiative include Federal, State, Academic, and Tribal representatives and hopefully will provide some guidance and possibilities.
- As per question 1, there needs to be more State/Tribal involvement in prioritizing, planning, and implementing wildlife disease surveillance and research initiatives.

Questions from Representative Porter

- 1. During the hearing, you mentioned how the highly pathogenic avian influenza is harming bald eagle populations. In your experience, are there sufficient resources available for research focused on disease in wildlife themselves? Do research organizations like yours or the states you work with have any issues accessing funding for purely wildlife-focused disease surveillance?**

This is the area that I am concerned about because funding for this type of work falls often between the cracks. NIH funding needs a human health connection. USDA funding needs a domestic animal health connection with relatively low competitive funding levels and limited opportunity. NSF does not fund basic disease-related studies that cover many of the types of research that are needed (such as understanding pathogenesis or developing diagnostics). Likewise, funding provided to USDA Wildlife Services for influenza, Covid-19, and feral swine disease surveillance are magnitudes higher than anything available for research and surveillance directed at pathogens known to affect wildlife health, some of which (white-nose syndrome) have threatened entire species. This leaves USGS and the States. Both partner with labs such as ours but funding levels are relatively low and often cannot be sustained. I really worry about the level and reliability of funding when the primary concern is wildlife health. I cannot speak for the states but from a personal standpoint we (SCWDS) do not see a lot of Federal funding opportunities in this area. As I mentioned in my response to Representative Cohen, discussions related to revising the “National Fish and Wildlife Health Initiative” though AFWA may provide some potential and perhaps innovative paths to address this problem.

- 2. Is there any additional information about your views on domestic U.S. surveillance of wildlife-borne diseases for future pandemic prevention that you would like to share for the record?**

One of the things we struggle with when justifying funding and work related to wildlife diseases in the context of pandemic prevention or preparedness, is that we cannot promise deliverables that provide immediate or even timely solutions. It is possible that surveillance and research “**may**” provide key information to predict the next pandemic. We “**may**” be able to prevent the next pandemic, human or domestic animal disease, or the next wildlife disease if we know what potential pathogens are out there and what the drivers for emergence are. We “**may**” be able to even mitigate disease impacts in the event of a new disease. We can honestly only present these as “potential” deliverables. What we can guarantee, however, is that without additional knowledge provided by research, and additional field intelligence provided by surveillance, we “**will not**” be able to accomplish any of them.