



Lineman's Guide to Avian Diseases

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Photo Courtesy of Xcel Energy

As linemen, you may occasionally encounter birds (alive and dead), and may have to handle bird nests during the course of your work. Lately, the media has been full of stories of avian diseases, and their impact on humans. This guide has been put together to inform you of the current state of affairs of those diseases in New Mexico, and the proper procedures to protect yourselves.

Avian Flu – Overview

Although Avian Influenza (flu) viruses are relatively common in wild birds, most do not cause obvious symptoms. These viruses are primarily spread through saliva and feces. Most do not infect humans; however in 1997, a particular strain (called H5N1) was found that could spread directly from birds to humans. This is highly contagious and is deadly to poultry. Despite the ability to infect humans, only about 200 cases of H5N1 in humans have been reported worldwide. However, nearly half of those cases have been fatal. No human or avian cases of H5N1 have been reported in the U.S. at the time of writing.

“Will H5N1 come to the USA?”

There are reports of infected migratory birds in Asia; therefore, there is potential for the virus to be carried to North America. However, there is currently little evidence that migratory birds play a major role in the dispersal of H5N1.

“Will we know if it does arrive?”

Although there is currently little evidence that migrants disperse Avian Flu, this remains the most likely natural route. The virus could be transmitted via birds that come into contact with each other in the arctic, and then disperse south to Asia and North America. The accidental or intentional import of infected birds is a far more likely route to the U.S. Currently, there is a ban on the import of all birds and bird products from H5N1-infected countries. Additionally, the inter-agency National Influenza Pandemic Preparedness Task Force, organized by the U.S. Secretary of Health and Human Services, is monitoring migratory birds for Avian Flu, especially in areas where those birds interact with others from countries where H5N1 is already present.

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Common Avian Flu Misconceptions

“There is an Avian Flu pandemic right now” – False. The current form of H5N1 is not efficient at passing from birds to humans. Therefore, although H5N1 is highly contagious and dangerous to birds, and can be transmitted to humans, the passage is difficult. Because the virus does not appear to spread easily to humans, it cannot spread rapidly among humans, as would be necessary for a pandemic to occur.

“Avian Flu is present in the U.S.” – Partially True. There are types of Avian Flu present in the U.S. but the H5N1 form has not been detected in either birds or humans.

“All types of Avian Flu are dangerous” – False. Very few forms of Avian Flu are dangerous to birds, and even less are dangerous to humans. The majority do not cause visible symptoms in birds and are not transmissible to humans.

“Any bird I come in contact with is likely to have Avian Flu” – False. The majority of outbreaks have been in domestic poultry farms. Although wild birds are known to be able to carry Avian Flu, they are less likely to be infected than poultry. In addition, birds in the U.S. do not have H5N1.

“There is no cause for concern about Avian Flu” – False. There is some cause for concern, and it is better to be prepared than to be caught unaware. Although H5N1 does not currently transmit easily between birds and humans, nor from human to human, viruses can mutate over time and it is possible that one or both of those factors could change. In the event that the virus changes in a way that increases transmission, H5N1 could spread quickly and become a pandemic.

Avian Flu Links

Center for Disease Control - www.cdc.gov/flu/avian/index.htm
National Wildlife Health Center - www.nwhc.usgs.gov/disease_information/avian_influenza/index.jsp
NWHC Safety Guidelines for Handling Wild Birds www.nwhc.usgs.gov/publications/wildlife_health_bulletins/WHB_05_03.jsp
OSHA - www.osha.gov/dts/shib/shib121304.pdf
World Health Organization - www.who.int/csr/disease/avian_influenza/en/
Federal Government - www.pandemicflu.gov
US Dept of Interior - www.doi.gov/issues/avianflu.html
US Dept of Homeland Security - www.whitehouse.gov/homeland/nspi.pdf
US Dept of Agriculture - www.usda.gov/birdflu



Photo Courtesy of US FWS

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West Nile Virus (WNV) Overview

WNV has been in the U.S. since 1999 and in New Mexico since 2002. Since then, there have been approximately 330 laboratory-confirmed human cases, and 4 deaths in New Mexico. It is safe to assume that WNV is present in some local birds; however, very few mosquitoes carry the virus. WNV is transmitted when a mosquito that has bitten an infected bird also bites a human. The majority of human cases occur in immune-compromised individuals and the elderly. Occasionally healthy adults will contract WNV.



Mosquito (*Culex tarsalis*) photo courtesy of the CDC

Frequently Asked Questions

“Can I get WNV from human contact, or by contact with dead birds?”

No. WNV is transmitted by mosquito bite. However, it is always a good idea to wear gloves when handling sick or dead animals.

“Do all mosquitoes carry WNV?”

No. Most mosquitoes do not carry WNV. In fact some species of mosquito can't transmit the virus even if they are carriers. Even if you are in a location where you are frequently bitten by mosquitoes, you are still unlikely to become infected with WNV.

“Do all birds carry WNV?”

No. Similarly to mosquitoes, most birds do not carry WNV. Some carriers never exhibit symptoms, others cannot pass it on. WNV only stays active in most birds systems for 3-7 days, making it very difficult to pass on to a mosquito.

“What are the symptoms?”

The majority of people infected with WNV exhibit no symptoms, and never realize they were infected. About 1/5th of those infected will have mild flu-like symptoms (fever, fatigue, headache, etc.). About 1 in 150 people infected progress to West Nile encephalitis which is much more serious. Its symptoms can include: high fever, disorientation, tremors, convulsions, paralysis, coma or even death. Symptoms of WNV usually last for only a few days, although severe symptoms may last for weeks. Some neurological effects may be permanent.

Links

New Mexico Health Department - <http://www.health.state.nm.us/wnv.html>

Centers for Disease Control - <http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>

US Geological Survey - <http://westnilemaps.usgs.gov/>

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Avian Ectoparasites

“What is an ectoparasite?”

Ectoparasites are parasites that live on the outside of animals, as opposed to endoparasites which live inside animals. Examples include: fleas, ticks, mites, flies, lice etc.

“Where would I encounter them?”

Many ectoparasites live on the bodies of animals and birds, however some also live in the nest material and only feed when the host (the animal or bird) is around. Therefore, if you are handling a bird or nest material, you may be exposed to any number of parasites. Many of these will abandon a dead host, but dead birds may also be infested with flies or ants, eating or laying eggs in the body.

“Are they dangerous?”

The vast majority of avian ectoparasites are host-specific, meaning that they will only live on one particular species or group of birds. Some will travel from bird to bird, but almost none are likely to bother humans, other than the “lck” factor! Some spiders, which may also inhabit nests, can give a nasty bite, as can ants which may be defending a food supply (e.g. a dead bird).

Bird handling

Although the H5N1 form of Avian Flu has not yet arrived in North America, it is a good idea to take precautions when handling dead or injured birds. **PNM currently recommends that a dust mask and gloves be worn when handling birds. Additionally, some form of eye protection, as well as a long sleeved shirt and pants to reduce skin exposure are all good ideas.**

Viruses are transmitted primarily through oral secretions and feces, so avoid contact with either. If this is not possible, avoid touching your eyes, ears, nose, and mouth after handling any bird or nest, and wash hands thoroughly with antibacterial soap as soon as possible.

Local Contact Numbers

Hawks Aloft Inc. – 505-828-9455

US FWS – 505-248-6911

NM Public Health – 505-827-2613

USDA Wildlife Services – 1-866-487-3297

NM Game & Fish – 505-222-4700

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