

Interim Recommendations Regarding West Nile Virus Surveillance in Alaska

Background

The Alaska Division of Public Health, Sections of Epidemiology and Laboratories, are working with representatives from the US Centers for Disease Control and Prevention (CDC), US Fish and Wildlife Service, US Geological Survey, University of Alaska Museum, Alaska Department of Fish and Game, Anchorage Department of Health and Human Services, and other agencies to establish a comprehensive program for statewide surveillance for West Nile virus (WNV). Guidelines for submitting human specimens for WNV testing were previously published in a recent *Epidemiology Bulletin*.¹

West Nile Virus Infection in Birds

Birds that are infected with WNV, both those that die and those that survive, have a short period of viremia in which they can transmit the virus to biting mosquitoes. Studies have found that this period of viremia lasts from 3 to 7 days in most birds and usually begins within 2 days of being bitten by an infected mosquito. Mosquitoes often require multiple blood meals to attain enough virus in their systems to subsequently be able to transmit WNV to another bird or mammal.

According to bird migration experts, it is theoretically possible that a migratory bird infected with the virus in the Lower 48 or southern Canada might be able to reach Alaska while still infectious. As WNV becomes prevalent in bird populations closer to Alaska, the probability that an infected bird will reach Alaska increases. Results from WNV testing of birds in the US and Canada can be found on the internet.²⁻⁴

It is unlikely that WNV infection will occur among Alaska's bird populations this year. Many bird species are beginning southerly migrations and the mosquito populations necessary to transmit the virus from bird to bird or bird to human are dying off as temperatures drop.

Until West Nile virus reaches the Alaska bird populations, it is likely that any person presenting with WNV infection in Alaska will have a history of recent travel to areas in the Lower 48 with West Nile virus activity.

Surveillance Activities

We plan to establish statewide surveillance for WNV by April 2003. Because the WNV transmission lifecycle is complex with several different potential vectors and hosts

(Figure 1), comprehensive surveillance for WNV will involve multiple species and components. Specific activities will likely include development of laboratory capability for WNV testing at the State Virology Laboratory in Fairbanks; development of protocols for collecting and testing of certain dead bird species; and possible monitoring, in conjunction with other agencies, of live animals (e.g., horses or birds) for the presence of the virus.

Interim Recommendations

1. Dead birds are not being collected at this time by the Sections of Epidemiology or Laboratories for WNV infection testing. It is unlikely that any dead bird found this fall or winter in Alaska will have died of West Nile virus. Please refer to the following guidelines for reporting of dead birds:
 - Birds that are suspected to have been electrocuted, shot, poisoned, or otherwise killed under suspicious circumstances should be reported to the US Fish and Wildlife Service (USFWS) Law Enforcement Division (800-858-7621 or 907-271-2828 in Anchorage).
 - Persons finding a large number of dead birds should notify the USFWS (907-786-3309) or the local Alaska Department of Fish and Game (ADFG). The main contact number for ADFG in Juneau is 907-465-6197.
2. Individuals with questions about WNV infection in horses and the availability of equine WNV vaccine may call the State Veterinarian's Office in Palmer (907-745-3236).
3. As outlined in *Epidemiology Bulletin* No. 20, "The Threat of West Nile Virus in Alaska," testing for WNV infection is recommended for any patient admitted to the hospital with a presumptive diagnosis of viral encephalitis.¹ Please continue to report any suspect case-patients to the Section of Epidemiology at 907-269-8000 or 800-478-0084 (after hours). We will facilitate specimen transport from the Alaska State Virology Laboratory in Fairbanks to the CDC.

References

1. State of Alaska *Epidemiology Bulletin* 20, August 21, 2002, "The Threat of West Nile Virus in Alaska."
www.epi.hss.state.ak.us/bulletins/docs/b2002_20.pdf
2. CDC: www.cdc.gov/ncidod/dvbid/westnile/index.htm
3. Health Canada: www.hc-sc.gc.ca/pphb-dgspsp/wnv-vwn/index.html
4. USGS: cindi.usgs.gov/hazard/event/west_nile/west_nile.html

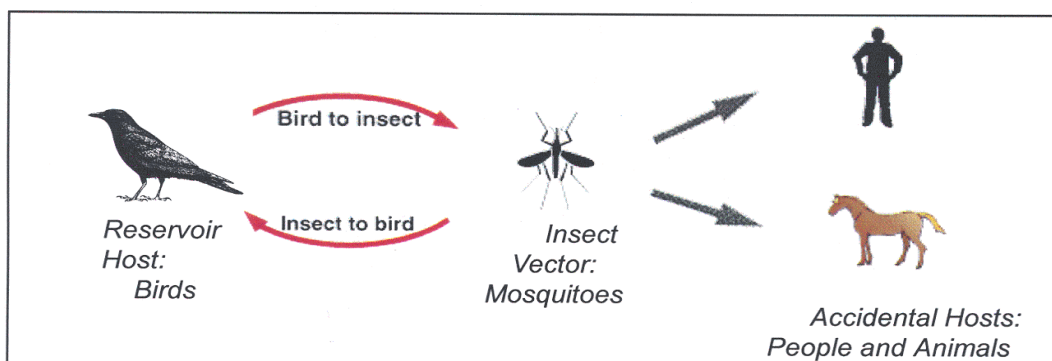


Figure 1. Transmission Lifecycle of West Nile Virus.

Adapted from California Department of Health Services.