

Hot Tips: Public Health Advisory #136 Date: 8/21/2023

Please copy and distribute to ALL physicians at your location.

Increasing West Nile Virus Activity

Key Messages

- The California Department of Public Health (CDPH) has seen a surge in activity of West Nile Virus (WNV) as captured by ongoing surveillance of mosquito and bird populations this year which will likely translate into an increase in human cases.
- We are likely to see an earlier as well as more robust resurgence of WNV transmission this season.
- Mosquito-borne illness is expected to become increasingly more common throughout our region as temperatures rise and we continue to see greater amounts of rainfall throughout the year.
- Physicians should recognize the clinical presentation of WNV disease and inquire about their patient's history and possible exposure to mosquitoes.
- Any suspected or confirmed cases of WNV should be reported to Ventura County Public Health (VCPH) through a Confidential Morbidity Report (CMR) or by calling (805) 981-5201.

Situation

WNV transmission is affected by various factors, including climate, the dynamics among local bird and mosquito populations, as well as the level of immunity to WNV in bird populations. As of this week, CDPH has announced that a total of 287 dead birds have tested positive for WNV across the state, comprising a roughly 25% positivity rate among all dead birds tested. As of this time last year, only 78 birds or approximately 8% of those tested were positive for the virus. In addition, a greater number of mosquito samples tested for WNV have resulted positive this year, and we have observed a significant increase in the percent positivity of these samples over the past 4 weeks. A notable increase has been observed in the number of human cases reported so far this year when compared to this time last year as well. Within Ventura County, local officials have identified 3 dead birds that have tested positive for WNV since late June whereas only 1 positive dead bird was identified for the entirety of 2022. This uptick in WNV activity throughout the state could be attributed to multiple factors including the growing population of mosquito species that can transmit the virus, the increase in rainfall observed this year, as well as rising temperatures.

The incubation period for WNV typically ranges from 2-14 days following exposure to an infected mosquito. The most common presentation of WNV disease is characterized by a febrile illness accompanied by headache, myalgia, fatigue, gastrointestinal symptoms, dehydration, and/or a morbilliform, maculopapular and non-pruritic rash. In certain cases, patients may develop West Nile Neuroinvasive Disease which could result in meningitis or encephalitis, and often lead to death. Development of severe disease is characterized

by acute onset of high fever, headache, disorientation, stupor, nuchal rigidity, positive Kernig's and/or Brudzinski's signs, photophobia or phonophobia, tremors or convulsions, numbness, or paralysis. This type of presentation is most noted in patients over the age of 60, or those who are immunocompromised. Suspicion of WNV disease should be accompanied by an assessment of the patient's history or exposure to mosquitoes, as well as appropriate testing of blood or cerebrospinal fluid specimens for confirmation. Detection of anti-WNV IgM in serum or CSF is the most common and available way to diagnose WNV infection. Occasionally, serum may remain positive for up to one year so may reflect past infection. Clinicians should report any suspected or confirmed cases of WNV disease to Ventura County Public Health by submitting a Confidential Morbidity Report (CMR) or by calling (805) 981-5201. Our staff are equipped to provide guidance and facilitate testing of any specimens collected.

Individuals are urged to protect themselves against mosquito bites by utilizing EPA-registered repellent, such as DEET, picaridin, IR3535, oil of lemon eucalyptus, para-menthane-diol, or 2-undecanone while following their respective instructions for use. It is also recommended to wear loose-fitting clothing such as long-sleeved shirts and pants to prevent exposing one's skin to mosquito bites. Furthermore, community members are urged to participate in local vector control efforts by identifying, eliminating, or reporting potential mosquito breeding sites, as well as reporting any dead birds throughout their community. More information on filing a report in Ventura County can be found at: [Vector Control Program \(vcrma.org\)](http://vcrma.org).

Resources

For the latest information on WNV activity in California, please visit Westnile.ca.gov | California West Nile Virus Website. Additional resources and recommendations for physicians can be found at [Diagnosis and Management of West Nile Virus Infection: A Case-Based Approach \(medscape.org\)](http://Diagnosis and Management of West Nile Virus Infection: A Case-Based Approach (medscape.org)).

This bulletin is intended to improve the public health in our county by keeping physicians and nurses informed of noteworthy diagnoses, disease trends, and other events of medical interest. Another goal of a public health department is to educate. We hope that you will use this information to increase your awareness. Please allow us to continue in our role of speaking to the press so that we may maximize the educational message to the benefit of all citizens of Ventura County.