

- West Nile Virus – Update for Clinicians
- 2011 Washoe County Obesity Forum

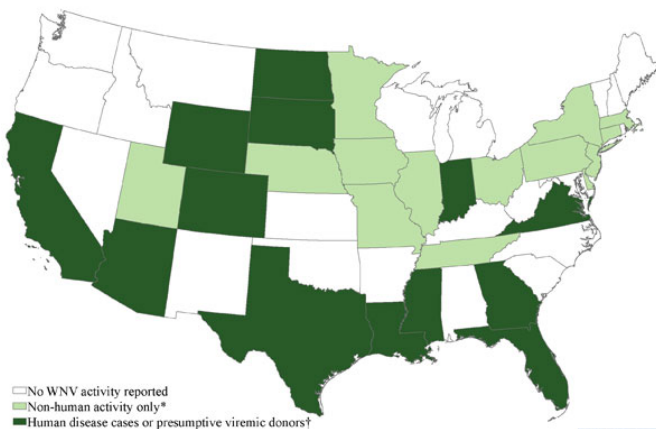
West Nile Virus – Update for Clinicians

The first West Nile Virus (WNV) positive mosquitoes of the 2011 season have been identified in Yerington on July 25, 2011; none for Washoe County yet.

Mosquito-borne disease surveillance consists of monitoring conditions necessary for viral disease transmission, including adequate extrinsic incubation temperature, a minimum density of mosquitoes, and the presence of virus. These contributing conditions are monitored in order to evaluate the risk of virus transmission to humans. The Washoe County Health District's Vector-Borne Diseases Program (VBDP) conducts field surveillance, prevention and control activities in Washoe County and northern Nevada for diseases transmitted to people by animal vectors. So far, 211 sentinel chicken blood samples were tested for antibodies against WNV and other arboviruses with no positive results reported as yet. A total of 609 mosquito pools have been tested for WNV and other arboviruses in northern Nevada. One mosquito pool from Yerington was positive for WNV on July 25, 2011. Two mosquito pools from Southern Nevada were positive for WNV on August 2, 2011.

As of August 2, 2011, 27 human cases, one of which was fatal, have been reported to CDC in 13 states (See map). Thus far, no human cases have been identified in Nevada in 2011.

West Nile virus (WNV) activity reported to ArboNET, by state, United States, 2011 (as of August 2, 2011)



□ No WNV activity reported
 ■ Non-human activity only*
 ■ Human disease cases or presumptive viremic donors†

* Includes WNV veterinary disease cases and WNV infections in mosquitoes, birds, and sentinel animals.
 † WNV activity in non-human species also might have been reported.



HIGHLIGHTS OF WNV FOR CLINICIANS

Clinical Description

- ◆ The incubation period for WNV infection ranges from 3 to 14 days after a bite from an infected mosquito. Incubation periods may be longer for immunosuppressed individuals.
- ◆ Clinical syndromes can range from febrile headache, aseptic meningitis, encephalitis or acute flaccid paralysis. Rash, myalgia, lymphadenopathy and weakness may also be prominent.
- ◆ Approximately 80% of individuals who become infected do not develop any symptoms.

When should testing for WNV be done?

- ◆ Usually summer - early fall for patients presenting with:
 - Encephalitis;
 - Aseptic Meningitis;
 - Acute flaccid paralysis; atypical Guillain Barre Syndrome; transverse myelitis, or
 - Febrile illness ($T \geq 100.4$ for > 7 days), other symptoms may include headache, rash, swollen lymph nodes, eye pain, nausea or vomiting.

Diagnostic Testing

- ◆ Diagnosis is made by serology or detection of IgM antibody in CSF for patients with severe disease.
- ◆ When using the serology method, paired acute and convalescent-phase serum samples should be acquired. The acute-phase specimen should be obtained during initial clinical presentation and the convalescent-phase specimen 7-14 days later. Both samples should be tested using the ELISA test. **Although a single acute serum may provide evidence of recent infection, a negative acute serum does not necessarily rule out infection, which is why the paired method is preferred.**
- ◆ The most conclusive diagnostic method to identify persons with WNV infection of the CNS is detecting WNV-specific IgM antibody in CSF using ELISA. Because IgM antibody does

Please share this information with all physicians/staff in your facility/office.

not readily cross the blood-brain barrier, a positive IgM antibody in CSF strongly suggests acute CNS infection.

- ◆ Patients who have been recently vaccinated against or recently infected with related flaviviruses (e.g., yellow fever, Japanese encephalitis, dengue, etc.) may have positive WNV ELISA results.
- ◆ WNV tests are available through Labcorp, Quest, and ARUP. The Nevada State Public Health Laboratory (NSPHL) performs WNV antibody testing on serum only. CSF specimens for WNV can be sent by the NSPHL to the California State Health Laboratory for testing.

Required Specimens

- ◆ **Acute and Convalescent Serum:** ≥ 2cc (red-top tube) – Send refrigerated
- ◆ **Cerebrospinal fluid (CSF):** 1-2 cc if lumbar puncture is performed.

Treatment

- ◆ No specific treatment is available.
- ◆ In severe cases, treatment consists of supportive care that often involves hospitalization, intravenous fluids, respiratory support and prevention of secondary infections.
- ◆ Several clinical trials are ongoing. More information is available at: <http://www.cdc.gov/ncidod/dvbid/westnile/clinicalTrials.htm>.

HOW TO REPORT WNV CASES

- ◆ Report human cases of WNV to the WCHD by calling (775) 328-2447 or faxing a case report form to (775) 328-3764. Case report forms can be found at <http://www.co.washoe.nv.us/repository/files/4/Blank%20Reporting%20Form.pdf>

EDUCATION

Please help educate your patients, friends, and family members about WNV prevention:

- ◆ Use insect repellants that contain an EPA-registered ingredient such as DEET, Picaridin, Oil of Lemon Eucalyptus or PMD, or IR3535. Be sure to follow label precautions.
- ◆ Clear the yard of any free-standing water that may become a mosquito breeding-ground such as wading pools, flower pots, buckets and barrels.
- ◆ Mosquitoes are most active at dusk and dawn. Be sure to use insect repellent and wear long sleeves and pants at these times or consider staying indoors.
- ◆ Install or repair window and door screens to help keep mosquitoes out.

RECOMMENDED RESOURCES

- ◆ WCHD Vector-Borne Disease Control Program: <http://www.washoecounty.us/health/ehs/vbd/p.html>
- ◆ Centers for Disease Control and Prevention: <http://www.cdc.gov/ncidod/dvbid/westnile>
- ◆ California Department of Public Health: <http://www.cdph.ca.gov/HealthInfo/discond/Pages/WestNileVirus.aspx>

NATIONAL AND LOCAL STATISTICS

Reported WNV Cases, USA, 1999-2010*

Year	Neuro-invasive disease	Neuro-invasive disease	Total Human Cases	Deaths	Case fatality Ratio (%)
1999	59	3	62	7	11.3
2000	19	2	21	2	9.5
2001	64	2	66	9	13.6
2002	2,946	1,160	4,156	284	6.8
2003	2,866	6,830	9,862	264	2.7
2004	1,142	1,269	2,539	100	3.9
2005	1,294	1,607	3,000	119	4.0
2006	1,459	2,616	4,269	177	4.1
2007	1,213	2,347	3,623	124	3.4
2008	687	624	1,356	44	3.2
2009	373	322	720	32	4.4
2010	629	392	1021	57	5.6

* Data source: www.cdc.gov

Reported WNV Cases, Nevada State and Washoe County, 1999-2010*

Year	Nevada	Washoe County		
	# cases	# WNV Neuroinvasive Disease	# WNV Fever	Total
1999-2002	0	0	0	0
2003	2	1	0	1
2004	44	1	2	3
2005	31	0	2	2
2006	124	7	10	17**
2007	12	0	1	1
2008	16	0	0	0
2009	12	0	0	0
2010	2	0	1	1

*WNV cases were likely under-reported. Data source: Washoe County CD Program and www.health.nv.gov for Nevada Stats
 ** 16 of the cases for Washoe County in 2006 were considered probable.

2011 Washoe County Obesity Forum

Community and Clinical Approaches to Preventing Obesity

Across the Lifespan

Thursday, September 8, 2011

7:30 a.m. - 4:45 p.m.

Conference Overview

This conference will inspire individuals and organizations to support efforts to prevent and reduce obesity in Washoe County through education and collaboration across the sectors.

Who Should Attend

Healthcare professionals, educators, child care providers, social workers, out-of-school time providers, nutritionists, dietitians, students, counselors, recreation program leaders, parents, and anyone wanting to make a difference.

Location

Joe Crowley Student Union – Fourth Floor
University of Nevada, Reno

Continuing Education Credit

The University of Nevada School of Medicine is a provider for continuing education credit for activities for nurses. This program is approved for 7 hours of nursing continuing education credit.

Registration

There is **no charge** for this conference but you must pre-register online.

View the complete agenda and register online at www.gethealthywashoe.com.

Additional Information

For additional information please call (775)784-4782 or
jtremain@medicine.nevada.edu.