

## West Nile Virus Update – October 2002

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Human cases of West Nile virus (WNV) in the US have been identified in 33 states and Washington D.C. as of October 3, 2002: 2631 laboratory confirmed cases have been reported to the Centers for Disease Control and Prevention (CDC), including 136 deaths.

Recent findings indicate that WNV may be transmitted in ways not requiring the bite of a mosquito. In August, four patients developed WNV infections after receiving organs from a WNV positive donor. These infections have been attributed to the transplanted organs; however, the source of infection in the donor is unknown. Prior to passing away, this individual had received transfusions of blood pooled from multiple donors. An investigation is underway to determine whether any of the blood donors were infected with WNV. Theoretically, it is possible for WNV to be transmitted through blood transfusions, although this mode of transmission has not been confirmed. The Food and Drug Administration and CDC are requesting that any cases in which a blood recipient develops WNV be reported.<sup>1</sup> Contact the CCHD Office of Epidemiology at 702-383-1378 if you are aware of such cases.

Severe illness from WNV, which occurs in less than 1% of WNV infections, generally involves neurologic illnesses such as encephalitis and meningitis. Acute flaccid paralysis (AFP) has also been attributed to WNV infection. CDC presented six such case summaries in the September 20, 2002 issue of Morbidity and Mortality Weekly Report. All six individuals presented with painless asymmetrical weakness, though sensation in the extremities was normal. In some cases, this condition was mistakenly attributed to Guillain-Barre Syndrome (GBS). However, the therapies associated with GBS (anticoagulation, IVIG, plasmapheresis and high-

dose corticosteroids) have no beneficial effect for AFP, and can actually cause complications in such cases. Table 1 compares clinical and laboratory characteristics of the two conditions.<sup>2</sup>

Characteristics	WNV-associated Acute Flaccid Paralysis	Guillain-Barre Syndrome
Symmetry of Weakness	Asymmetric	Symmetric
Associated Pain	No	Yes
Sensory changes	No	Generally yes; May involve paresthesias
CSF protein levels	Elevated	Elevated
Pleocytosis	Yes (all but one case)	No
Neurologic involvement	Anterior horn cells of the spinal cord and motor axons	Predominantly demyelinating, with or without motor axon involvement*

**Table 1:** Clinical and Laboratory Characteristics of WNV-associated AFP and GBS

\*A pure motor axonal variant of GBS is typically characterized by symmetric, distally prominent weakness and subclinical sensory nerve involvement on EMG/NCS.<sup>2</sup>

A WNV case may be identified in Clark County, given the many tourists and local residents returning from travel to states in which West Nile virus has been identified. It is unlikely, however, that any WNV case presenting in Clark County will be locally acquired, as mosquito populations in the area are sparse.

References:

1. "Update: Investigations of West Nile Virus Infections in Recipients of Organ Transplantation and Blood Transfusion". *MMWR* 51(37); 833-836. ([www.cdc.gov/mmwr/preview/mmwrhtml/mm5137a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5137a1.htm))
2. "Acute Flaccid Paralysis Syndrome Associated with West Nile Virus Infection---Mississippi and Louisiana, July---August 2002". *MMWR* 51(37); 825-828. ([www.cdc.gov/mmwr/preview/mmwrhtml/mm5137a5.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5137a5.htm))