

WEST NILE VIRUS SUMMARY FOR HEALTH-CARE PROVIDERS

West Nile virus (WNV) is in the genus Flavivirus that includes Japanese encephalitis and St. Louis encephalitic viruses. WNV can affect humans, horses, birds and other vertebrates. The clinical presentation cannot be distinguished from other viral encephalitis infections. Human cases of Western equine encephalitis (WEE) and St. Louis encephalitis (SLE) virus have occurred in Oregon in the past. Most cases occurred in eastern Oregon locations. Most WNV cases occur in the late summer and fall.

The incubation period is usually 2-14 days, although longer incubation periods have been documented in immunosuppressed persons. Most infections are mild and symptoms include fever, headaches and body aches, often with skin rash and swollen lymph glands. More severe infection may involve meningoencephalitis with a range of neurological and systemic manifestations including headache, high fever, neck stiffness, stupor, disorientation, cranial nerve abnormalities, nausea, vomiting, coma, tremors, convulsion, muscle weakness (present in 40% of New York cases), paralysis (present in 20% of New York cases with electromyographic findings consistent with and axonal neuropathy) and, rarely, death. Case-fatality rates range from 3% to 15% and are highest in the elderly.

West Nile virus cases and outbreaks have been described in Africa, Europe, and the Middle East, west and central Asia, Oceania (sub-type Kunjin), and, as of August 1999, North America. In 1999, 62 cases of severe disease, including 7 deaths, occurred in New York City. WNV is transmitted by the bite of infected mosquito. Mosquitoes become infected from infected birds. Since 1999, 60 species of mosquito have been found to carry West Nile virus in the United States. WNV is not transmitted person-to-person or to humans directly from dead or living animals.

There is no vaccine and specific therapy. 1 of 140 cases may develop neuroinvasive disease. In more severe cases, intensive supportive therapy is indicated; i.e., hospitalization, intravenous (IV) fluids, airway management, respiratory support (ventilator) if needed, prevention of secondary infections (pneumonia, urinary tract, etc.), and good nursing care. Risk of neuroinvasive disease increase with age and organ transplant recipients. Many survivors of neuroinvasive disease have long-term disabilities.

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