West Nile Virus
Summary of West Nile Virus in Massachusetts, 2000

West Nile (WN) virus infection is caused by WN virus, a flavivirus previously found only in Africa, Eastern Europe, Australia, and West Asia. Mild infections are common and include fever, headache, and body aches, often with skin rash and swollen lymph glands. Severe headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, occasional convulsions, paralysis, meningitis, encephalitis and occasionally death indicate more severe infection. Notable clinical illness with WN virus infection occurs in about 2-5% of exposed individuals. West Nile virus infection mortality ranges from 3% to 15% of hospitalized cases (higher rates among the elderly).

An outbreak of WN virus infection, which is a mosquito-transmitted, was identified for the first time in North America in New York during the summer of 1999, causing illness and death in people, birds, and horses. Other states known to be affected in 1999 were New Jersey, Connecticut, and Maryland.

In the spring of 2000, the Massachusetts Department of Public Health (MDPH) began conducting statewide surveillance for WN virus. Birds, mosquitoes, human and horse specimens were tested at the State Laboratory Institute (SLI) in Jamaica Plain, Massachusetts. Also, the MDPH informed health care providers, veterinarians and local boards of health about WN virus disease testing and prevention.

In late July 2000, WN virus was isolated from an adult dead crow found on July 22nd near Willow Pond in Jamaica Plain. By October 1st , more than 210 birds tested positive for WN virus in Massachusetts.

After detecting WN virus in birds in Massachusetts, the MDPH implemented active surveillance for human cases of encephalitis and meningitis and began screening suspect cases for WN virus infection. Suspect cases include patients with fever and clinical evidence of encephalitis, meningitis or meningoencephalitis (not of bacterial etiology), with or without other neurologic signs, symptoms, or rash. As of October 1st, more than 200 human specimens were tested for WN virus infection, but no human infection was documented.

As of October 1st , one (1) horse from Middlesex County, with symptom onset on August 26th, and 4 pools of mosquitoes collected in Suffolk and Norfolk Counties have tested positive for WN virus.

For a list of prevention measures, refer to the West Nile Virus Encephalitis Fact Sheet and the Steps You Can Take To Prevent West Nile Virus Encephalitis information sheet on the MDPH Website. For a detailed and comprehensive summary of the WN virus outbreak in the United States, visit the USDA's Veterinary Services Website. Additional information can also be found on the CDC Website at www.cdc.gov.

Source: MDPH, Communicable Disease Update, Fall 2000.