MAINE PUBLIC HEALTH ALERT NETWORK SYSTEM

Maine Department of Health and Human Services
Maine Center for Disease Control and Prevention (Maine CDC)
(Formerly Bureau of Health)
11 State House Station
Augusta, Maine 04333-0011
Phone 1-800-821-5821 / Fax 207-287-7443

*****ADVISORY – Important Information*****

2011PHADV009

TO: All Academic, All Animal Care, All Epidemiologists, HETL, City and County Health Departments, All Healthcare, Lab Facilities, County EMA Directors, MMA Central Office, Public Health – Required, Public Health Nursing, Emergency Medical Services, RRCs

FROM: Sheila Pinette, D.O., Public Health Director
Stephen Sears, M.D., M.P.H., State Epidemiologist

SUBJECT: **Human Arbovirus Update for Healthcare Providers**

DATE: Tuesday, July 12, 2011

TIME: 11:40 AM

PAGES: 2

PRIORITY: **Low**

Human Arbovirus Update for Healthcare Providers in Maine, 2011

Arboviral diseases, including Eastern equine encephalitis (EEE) and West Nile Virus (WNV), are very serious infections that are transmitted by the bite of an infected mosquito. Although rare, these diseases have potentially severe and even fatal consequences for those who contract them. The purpose of this health advisory is to alert clinicians to the potential for human disease activity in Maine, and to consider testing for arboviral disease in patients presenting with unexplained encephalitis, meningitis or high fever during the late summer and early fall.

Background

EEE and WNV were first detected in Maine in 2001 in birds. In 2009 Maine experienced unprecedented EEE activity with 19 animals and 2 mosquito pools testing positive. In the fall of 2008 a man vacationing in Cumberland County died of the disease. It is unclear where he contracted the infection. In 2010, Maine had a single EEE positive turkey in Penobscot County, and a mosquito pool in York County tested positive for WNV. This year a turkey has tested positive for EEE in Franklin County. Regionally, Connecticut and Massachusetts have reported WNV activity in mosquitoes within the last month. Although there has yet to be any human or mammalian arboviral activity in Maine this year, high numbers of mosquitoes are expected to be present this summer due to high rainfall activity.

Clinical Features of Mosquito-borne Infections

EEE: Symptoms of EEE usually appear 3 to 10 days after the bite of an infected mosquito, and range from mild flu-like illness to high fever, encephalitis, coma, and death. The EEE case fatality rate is about 35%-50%. It is estimated that 35% of people who survive EEE will have residual neurological deficits.

WNV: The incubation period for WNV in humans ranges from 2 to 15 days. Most people infected with WNV are asymptomatic. Symptoms can range from a mild flu-like illness to headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, paralysis and, sometimes, death.

Risk Groups

EEE and WNV infect many more people than are recognized because many people remain asymptomatic. Diagnosed cases tend to exhibit more severe illness. The following groups of people are at higher risk for clinically significant arboviral infection:

- Residents of and visitors to areas with mosquito activity
- People who engage in outdoor work and recreational activities
- Persons over age 50 (EEE and WNV) and younger than age 15 (EEE)

Diagnostic Tests for EEE and WNV Infections

Clinical Suspicion: Diagnosis relies on a high index of suspicion and on results of specific laboratory tests. EEE, WNV or other arboviral infections should be considered in any individual – but especially those over age 50 or younger than age 15 - who has onset of unexplained encephalitis, meningitis, or high fever in the late summer or early fall. The local presence of EEE and WNV in animals and mosquito pools should further raise the index of suspicion.