FLORIDA DEPARTMENT OF HEALTH IN PINELLAS COUNTY

EPI WATCH

Monthly Epidemiology and Preparedness Newsletter

July 2013

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For more information, or to add your e-mail address to the distribution list, please contact the Editor.

Disease Reporting

To report diseases and clusters of illness (*other than TB/STD/HIV/AIDS*)
Phone: (727) 507-4346
Fax: (727) 507-4347

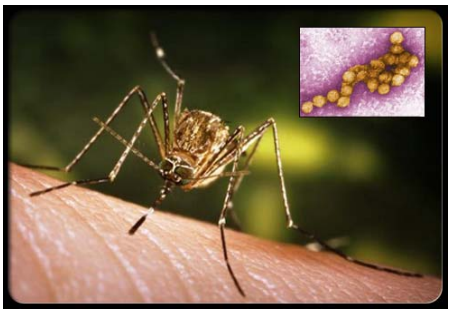
For TB,STD or HIV/AIDS Reporting
Phone: (727) 824-6932

Animal Bite Reporting
Phone: (727) 524-4410

Arbovirus Season: Summer 2013

Sharlene E. Edwards, MPH

Arthropod-borne viruses (i.e. arboviruses), are viruses that are transmitted to susceptible animal hosts by blood-feeding arthropods (e.g., mosquitoes and ticks). Most arboviruses that cause human encephalitis are members of three of the major virus families: the Togaviridae (genus Alphavirus), Flaviviridae, and Bunyaviridae. In the United States, arboviruses that cause encephalitis include: St. Louis Encephalitis Virus (SLEV), West Nile Virus (WNV), Eastern Equine Encephalitis Virus (EEEV), Western Equine Encephalitis Virus (WEEV), Venezuelan Equine Encephalitis Virus (VEEV), Everglades Virus (EVEV), and the California serogroup viruses including La Crosse Encephalitis Virus, all of which are transmitted by mosquitoes.



Most cases of arboviral encephalitis occur during the summer months from June through September, when arthropods are most active. In Florida, arthropods are active late into the year, causing cases to occur in the winter months. Most human infections are asymptomatic or may result in a nonspecific flu-like syndrome. Onset may be insidious or sudden with fever, headache, myalgia, malaise and occasionally prostration. A small proportion of cases may lead to encephalitis, with a fatal outcome or permanent neurologic sequelae.

Laboratory criteria for arboviral disease diagnosis include: Seroconversion in virus-specific IgM or IgG- negative acute sample to IgM or IgG positive convalescent sample; Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in, tissue, blood, CSF, or other body fluid; virus-specific IgM antibodies in CSF and a negative result for other IgM antibodies in CSF for arboviruses endemic to the region where exposure occurred; Virus-specific IgM antibodies in serum with confirmatory virus-specific neutralizing antibodies in the same or a later specimen.

In some instances, arboviruses from the same genus produce cross-reactive antibodies. In geographic areas where two or more closely related arboviruses occur, serologic testing for more than one virus may be needed and results compared to determine the specific causative virus. This is currently being seen in Florida where imported Dengue Fever viruses are being mistaken for West Nile Virus (WNV). Differentiating WNV from dengue infections is difficult in patients without symptoms of neuroinvasive disease *(Surveillance and Control of Selected Mosquito-borne Diseases in Florida, 2013 Guidebook).*

Differentiating between Dengue Fever and West Nile Virus (WNV) infections:

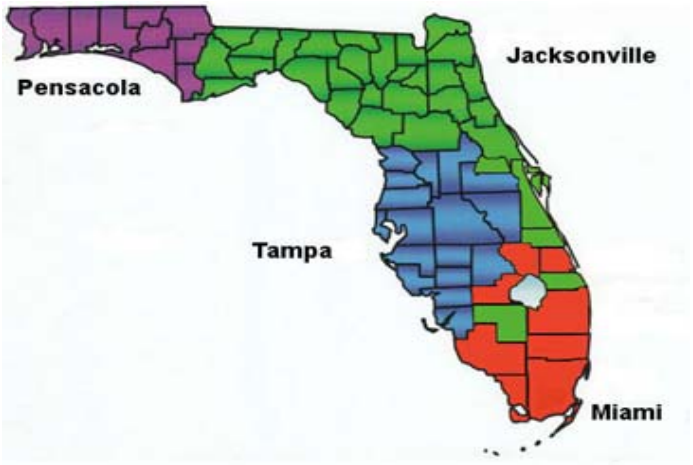
- Neuroinvasive disease is relatively uncommon with Dengue and more likely with WNV.
- Travel to a Dengue endemic country in the 2 weeks prior to febrile illness onset or travel of a household member to a dengue endemic country in the 4 weeks prior to illness should increase suspicion of Dengue.
- Joint pain, is often much more severe in cases of Dengue versus WNV.
- Thrombocytopenia and leukopenia are more common in cases of Dengue versus WNV.
- WNV IgM titers are negative or low positive in patients with Dengue fever.

Resources:
Florida Department of Health: http://myfloridaeh.com/medicine/arboviral/index.html

Centers for Disease Control and Prevention: http://www.cdc.gov/ncidod/dvbid/westnile/index.htm

The Florida Department of Health, Bureau of Public Health Laboratories (BPHL) is committed to providing diagnostic screening, monitoring, reference, emergency and research public health laboratory services to local health departments and other official agencies, physicians, hospitals and private laboratories.

The BPHL headquarters is located in Tallahassee, Florida with four locations around the state providing laboratory service to all 67 counties.



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Miami, FL 33125
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Did you know: Laboratories are required to submit certain specimens to the State lab for confirmation?

Yes, laboratories are ***required*** to send specimens, including isolates, sera, slides, or diagnostic preparations, for certain etiologic agents to the BPHL for confirmation and/or additional characterization of the organism. Submission of these specimens is encouraged in any instance where additional characterization or confirmation is needed in order to confirm the etiology of diseases of public health importance. During epidemiological investigations, public health investigators may, in addition to the designated required submissions, request specimens to be sent to the BPHL in order to further characterize or confirm the etiology of the disease. **For information on specific specimens, please see the Laboratory Guidelines of Notifiable Diseases in Florida:** http://www.doh.state.fl.us/disease_ctrl/epi/surv LaboratoryPacket.pdf.

Quality Results Require Quality Specimens!

- Follow proper collection, packaging, and shipping methods specific to your specimen.
- When submitting specimens, always provide the following information: patient demographics, submitting laboratory, ordering provider, and specimen information.
- On submittal paperwork to the health department, please provide full name, contact information, and address for the person who results should be reported to.
- Contact the lab in advance if a specimen is related to an outbreak.
- Specimens can be submitted to the BPHL from local health departments, hospitals, and/or clinical laboratories.

For additional information and online forms, please visit
the Florida Department of Health, Bureau of Public Health Laboratories website:
http://www.doh.state.fl.us/lab/index.html

Selected Reportable Diseases in Pinellas County

Disease	2013 June	2013 YTD	Pinellas 3 YR YTD-AVG	Florida 2013 YTD
A. Vaccine Preventable				
Mumps				
Pertussis	2	5	4	274
B. CNS Diseases & Bacteremias				
Creutzfeldt-Jakob Disease (CJD)				12
H. influenzae (Invasive Disease)	1	7	6	159
Meningitis (Bacterial, Cryptococcal, Mycotic)		2	4	72
Meningococcal Disease			1	33
Streptococcal Disease, Group A, Invasive	2	6	2	146
S. Pneumoniae, Invasive Disase, Drug Resistant	3	13	12	330
S. Pneumoniae, Invasive Disase, Susceptible	1	8	10	378
C. Enteric Infections				
Campylobacteriosis	4	31	25	904
Cryptosporidiosis	1	9	11	159
Cyclosporiasis				2
E. coli O157:H7				
E. coli Shiga Toxin (+)	1	4	3	90
Giardiasis		13	12	489
Hemolytic Uremic Syndrome (HUS)	1	1		3
Listeriosis			1	19
Salmonellosis	17	64	75	1988
Shigellosis		1	26	305
D. Viral Hepatitis				
Hepatitis A			1	50
Hepatitis B: Pregnant Woman +HBsAg	1	7	14	268
Hepatitis B, Acute	1	19	5	167
Hepatitis C, Acute		10	4	117
E. Vector Borne, Zoonoses				
Animal Rabies				44
Dengue			1	51
Eastern Equine Encephalitis				2
Lyme Disease		1	2	32
Malaria		1	1	28
Rabies, possible exposure	14	117	59	1311
St. Louis Encephalitis				
West Nile Virus				
F. Others				
AIDS**	9	68	57	N/A
Chlamydia	319	2127	1941	N/A
Gonorrhea	102	677	538	N/A
Hansen's Disease				5
HIV**	20	105	109	N/A
Lead Poisoning: Children < 6 years:		1	2	73
Legionellosis	1	4	7	92
Mercury Poisoning				
Syphilis, Total	1	56	59	N/A
Syphilis, Infectious (Primary and Secondary)	1	21	26	N/A
Syphilis, Early Latent		24	19	N/A
Syphilis, Congenital				N/A
Syphilis, Late Syphilis (Late Latent; Neurosyphilis)		11	14	N/A
Tuberculosis	4	14	14	N/A
Vibrio Infections	2	3	6	57

Provisional cases reported by the Pinellas County Health Department. Blank cells indicate no cases reported. For a complete list of reportable diseases and guidelines for reporting, please visit: http://www.doh.state.fl.us/disease_ctrl/epi/index.html

** Current HIV Infection data reflects any case meeting the CDC definition of "HIV infection" which includes all newly reported HIV cases and newly reported AIDS cases with no previous report of HIV. Previous reports of HIV data reflected *only* newly reported HIV cases, which were HIV (not AIDS) at the time of report. Newly reported HIV Infection cases do not imply they are all newly diagnosed cases. For a more detailed explanation on changes in reporting and changes in trends, please contact the HIV/AIDS Program: 727-824-6932.