



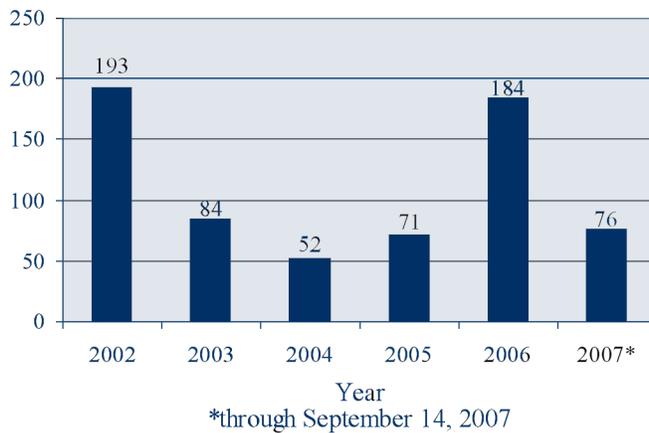
Mississippi Morbidity Report

West Nile Surveillance

West Nile virus (WNV) looks like it's here to stay in Mississippi. In 2001, the first evidence of WNV infection was reported in Mississippi, in a horse. Since then there have been human cases every year (Figure 1). The mean age of reported cases has been close to 50 years each year. Every county except Issaquena has had some evidence of WNV reported (positive mosquito pools, birds, horses or humans).

Figure 1

Reported West Nile Cases by Year, Mississippi



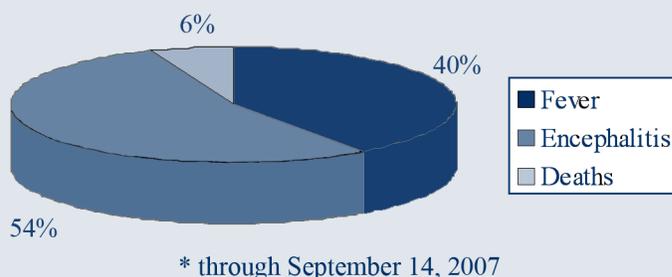
WNV is transmitted predominantly by *Culex quinquefasciatus* (the southern house mosquito) in this state. This mosquito breeds in standing water which contains large amounts of organic material.

Most infected individuals have no symptoms. Ten to 20% have West Nile fever, which may include fever, headache, sore throat, myalgia, fatigue, and occasionally a transient rash and lymphadenopathy. About one infected person in 150 will have severe disease involving the central nervous system. These patients may present with symptoms ranging from those compatible

with aseptic meningitis to encephalitis (Figure 2). With the most severe disease, there may be an alteration of consciousness, which may progress to coma. Focal neurologic deficits, tremors and movement disorders also have been noted. West Nile poliomyelitis, a flaccid paralysis syndrome associated with WNV infection, occurs, albeit uncommonly.

Figure 2

Severity of Reported WNV Infections, Mississippi 2002-2007*



Diagnosis is not simple, as the range of signs and symptoms are common and usually indistinguishable from those caused by other viruses. The Mississippi Public Health Laboratory offers testing which is outlined in Figure 3.

All cases of arboviral infection are reportable to the Mississippi State Department of Health (During working hours call: 601-576-7725 in the Jackson area and 1-800-556-0003 outside the Jackson area. After hours, weekends and holidays call: 601-576-7400).

Figure 3

Mississippi State Public Health Laboratory Arboviral Testing

Appropriate patients for testing are those with evidence of West Nile fever or West Nile neurologic disease evidenced by fever, headache and at least one of the following: stiff neck, pleocytosis, altered mental status or other neurologic signs or symptoms.

Serum:

Please collect 7 to 10 days after illness onset (If collected earlier may be falsely negative).

CSF:

IgM often present transiently early in the infection.

Testing Performed:

West Nile virus and St. Louis encephalitis virus Microsphere IgM immunoassay (MIA) performed on all specimens.*

Among patients aged 25 and younger, LaCrosse virus IgM Enzyme Linked Immunoassay (EIA) performed.

Interpretation:

IgM positive serum indicates the presence of IgM antibodies to the virus**

IgM negative indicates the IgM antibodies are not present. If the serum was drawn too acutely, obtaining another specimen is recommended.

IgM non-specific: This may indicate a low level of antibody or background interference to the test. If drawn too acutely (<7 days after onset), a repeat specimen is recommended. If drawn 7-10 days after onset, the specimen will be sent to CDC for confirmatory testing.

*Eastern Equine encephalitis virus testing will resume at the next arboviral season.

**IgM antibodies occur with acute disease but may continue to be present more than 500 days after disease occurrence. All lab tests should be correlated with clinical symptoms when making a diagnosis.

References:

<http://www.cdc.gov/ncidod/dvbid/westnile/clinicians/clindesc.htm#fever> accessed 9/12/07

Submitted by Mary Currier, MD, MPH, Interim State Epidemiologist, MSDH and Director of Medical Education, Department of Medicine at UMMC.

Dear Colleagues,

Please let us know if you would like to receive the MMR by email or by US Postal Service. Please respond by email to <mailto:mmr@msdh.state.ms.us> and include your name, and email address or preferred physical address. Alternatively you may respond by calling 1(877)978-6453 with your information.

Thank you,

Mary Currier, MD, MPH
Interim State Epidemiologist



Mississippi

Provisional Reportable Disease Statistics

August 2007

		Public Health District									State Totals*			
		I	II	III	IV	V	VI	VII	VIII	IX	August 2007	August 2006	YTD 2007	YTD 2006
Sexually Transmitted Diseases	Primary & Secondary Syphilis	0	0	1	0	2	0	1	1	1	6	6	71	42
	Total Early Syphilis	1	0	2	0	8	0	2	1	3	17	31	271	143
	Gonorrhea	46	37	75	48	180	64	51	69	62	632	934	5498	4963
	Chlamydia	186	116	225	127	442	133	136	161	143	1669	1964	14673	12749
	HIV Disease	1	8	2	7	23	1	4	7	10	63	60	429	420
Mycobacterial Diseases	Pulmonary Tuberculosis (TB)	1	1	0	2	7	0	1	0	2	14	7	71	60
	Extrapulmonary TB	0	0	1	0	0	0	0	0	1	2	1	8	5
	Mycobacteria Other Than TB	3	5	4	2	5	6	2	1	1	29	17	168	132
Vaccine Preventable Diseases	Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pertussis	0	0	9	1	0	55	0	0	1	66	6	152	25
	Tetanus	0	0	0	0	0	0	0	0	0	0	0	0	0
	Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0	0
	Measles	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mumps	0	0	0	0	0	0	0	0	0	0	0	1	2
Viral Hepatitis	Hepatitis A (acute)	0	0	0	0	0	0	0	1	0	1	0	7	5
	Hepatitis B (acute)	0	0	0	0	1	0	0	0	1	2	1	19	9
	Hepatitis C (Non-A, Non-B)	0	0	0	0	0	0	0	0	0	0	0	4	3
Enteric Diseases	Salmonellosis	4	15	1	7	33	7	5	11	15	98	111	530	451
	Shigellosis	2	0	4	0	80	1	2	8	15	112	12	378	52
	Campylobacter Disease	2	0	0	0	0	0	0	0	3	5	11	96	64
	E. coli O157:H7/HUS	0	0	0	1	0	0	0	0	0	1	5	5	7
Other Conditions of Public Health Significance	Meningococcal Infections	0	0	0	0	0	0	0	0	0	0	2	10	4
	Invasive <i>H. influenzae</i> Disease	0	0	0	0	0	0	0	1	0	1	0	7	10
	RMSF	0	0	0	0	1	0	0	0	0	1	1	7	4
	West Nile Virus	1	0	5	1	23	4	0	5	2	41	86	66	138
	Lyme Disease	0	0	0	0	0	0	0	0	0	0	0	0	3
	Animal Rabies (bats)	0	0	0	0	1	0	0	0	0	1	0	1	4

* Totals include reports from Department of Corrections and those not reported from a specific District

** Temporarily not available