

WEST NILE FEVER

Background

This case definition was developed by the Armed Forces Health Surveillance Center (AFHSC) for the purpose of epidemiological surveillance of a condition important to military-associated populations.

Clinical Description

The virus that causes West Nile fever is most often spread to humans and other animals by the bite of an infected mosquito. Approximately 80% of infected individuals will have no clinical symptoms. The other 20% will have mild symptoms such as fever, headache, body aches, nausea, vomiting, swollen lymph glands, and skin rash on the chest, stomach and back. Symptoms can last for a few days up to several weeks. About 1/150 people develop severe illness, which may include symptoms of high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness, and paralysis. These severe symptoms can last up to several weeks; neurological effects may be permanent and can lead to death.¹

Case Definition and Incidence Rules

For surveillance purposes, a case of West Nile fever is defined as:

- *One hospitalization* with any of the defining diagnoses of West Nile fever (see ICD9 and ICD10 code lists below) in *any* diagnostic position; or
- *Two outpatient medical encounters*, occurring *within a 60-day period*, with any of the defining diagnoses of West Nile fever (see ICD9 and ICD10 code lists below) in *any* diagnostic position; or
- One record of a reportable medical event of a confirmed case of West Nile fever.

Incidence rules:

For individuals who meet the case definition:

- The incidence date is considered the date of the first reportable medical event, hospitalization, or outpatient medical encounter that includes a defining diagnosis of West Nile fever.
- An individual is considered an incident case only *once per lifetime*.

Exclusions:

- None

¹ “West Nile Virus: What You Need to Know.” Centers for Disease Control and Prevention. http://www.cdc.gov/ncidod/dvbid/westnile/wnv_factsheet.htm. Accessed on: Oct 21, 2011.



Codes

The following ICD9 and ICD10 codes are included in the case definition:

Condition	ICD-10-CM Codes	ICD-9-CM Codes
West Nile fever	A92.3 (West Nile virus infection)	--
	- A92.30 (West Nile virus infection, unspecified)	066.40 (West Nile fever, unspecified)
	- A92.31 (West Nile virus infection with encephalitis)	066.41 (West Nile fever with encephalitis)
	- A92.32 (West Nile virus infection with other neurologic manifestations)	066.42 (West Nile fever with other neurologic manifestation)
	- A92.39 (West Nile virus with other complications)	066.49 (West Nile fever with other complications)

Development and Revisions

- In April of 2014 the case definition was updated to include ICD10 codes.
- This case definition was developed in 2011 by AFHSC staff for the Annual Vector Borne Reports, which provide information on cases of vector-borne illnesses during the last 10 years, including details by Service for active component, Reserve/Guard, and other beneficiaries. The case definition was based on reviews of the ICD9 codes, the scientific literature, and previous AFHSC analyses.

Case Definition and Incidence Rule Rationale

- The specification of *within a 60-day period* for the two outpatient encounters is used to allow for the likelihood that “true” cases of West Nile fever would likely have a second encounter within that interval. The interval also allows enough time to elapse for laboratory confirmation of disease.

Reports

AFHSC reports on West Nile fever in the following reports:

- Annually: “West Nile Fever Report” for the Armed Forces Pest Management Board; released in April of each year; Available on the AFHSC website at: <http://www.afhsc.mil>; see “Reports and Publications”.
- Weekly: DoD Communicable Disease Weekly Report; Summary of Communicable Reportable Events by Service; Available on the AFHSC website at: <http://www.afhsc.mil>; see “Reports and Publications”.

Review

Apr 2014 Case definition reviewed and updated by the AFHSC Surveillance Methods and Standards (SMS) working group.



Nov 2011	Case definition reviewed and adopted by the AFHSC Surveillance Methods and Standards (SMS) working group.
Apr 2011	Case definition developed and reviewed by AFHSC staff.

Comments

Armed Forces Reportable Events: West Nile fevers are reportable medical events in the Armed Forces Reportable Events surveillance system. The condition became a reportable event in 2004.

