



Vector-Borne Disease

2015 Annual Surveillance Report



Center for Acute Disease Epidemiology | Acute Disease Prevention and Emergency Response & EH | [West Nile Virus Website](http://WestNileVirusWebsite)

West Nile Virus (WNV)

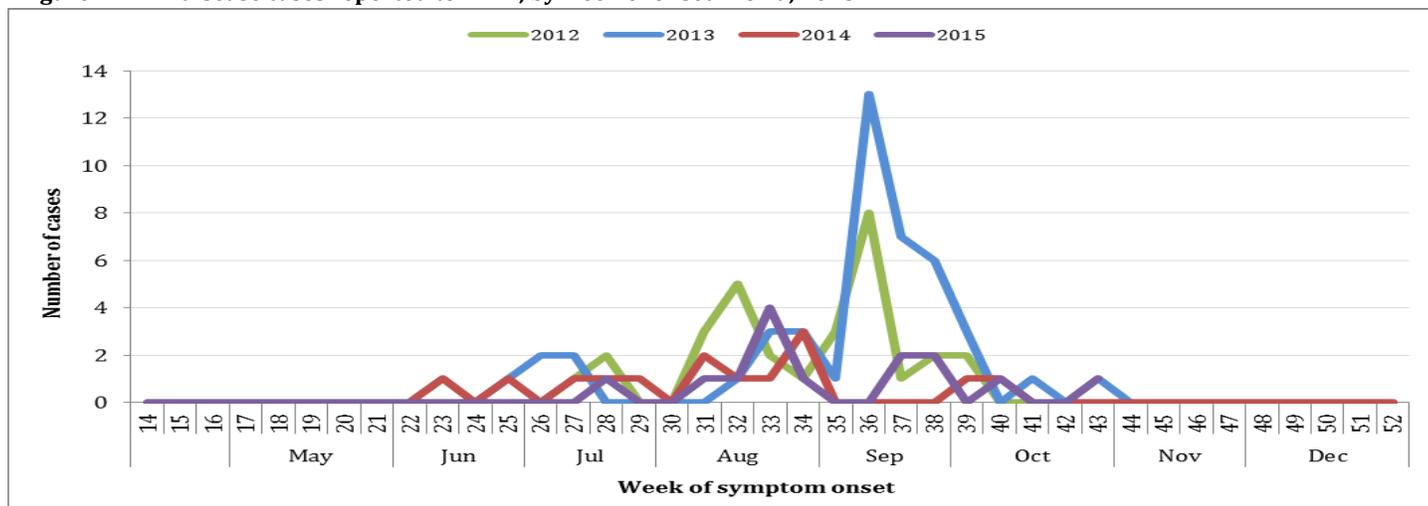
WNV is endemic in Iowa and activity usually peaks in late summer and early fall. IDPH works in collaboration with Local Public Health (LPH) and other appropriate partners to investigate all reported cases.

In addition, IDPH in collaboration with the State Hygienic Laboratory (SHL), Iowa State University (ISU), and local public environmental health partners conducts ecological surveillance in four counties across the state by monitoring mosquitoes and testing for infected populations.

Fourteen human cases of WNV and five presumptive viremic blood donors have been reported in Iowa in 2015 [Table 1]. Seventeen mosquito pools and three horses have also tested positive for this virus. During the 2014 surveillance season, 15 human cases of WNV were reported, in 11 Iowa counties [Figure 1].

County	Human	Blood Donor	Horses	Mosquito Pools		
				<i>Culex pipiens</i>	<i>Culex pipiens</i> Complex	<i>Culex restuans</i>
Adams	1	0	0	N/A	N/A	N/A
Cedar	0	1	0	N/A	N/A	N/A
Clarke	1	0	0	N/A	N/A	N/A
Dallas	1	1	0	N/A	N/A	N/A
Davis	0	0	1	N/A	N/A	N/A
Dubuque	0	1	0	N/A	N/A	N/A
Hancock	1	0	0	N/A	N/A	N/A
Harrison	0	1	0	N/A	N/A	N/A
Jefferson	0	0	1	N/A	N/A	N/A
Lee	1	0	1	N/A	N/A	N/A
Louisa	1	0	0	N/A	N/A	N/A
Lyon	1	0	0	N/A	N/A	N/A
Mahaska	2	0	0	N/A	N/A	N/A
Plymouth	1	0	0	N/A	N/A	N/A
Polk	1	0	0	0	1	2
Ringgold	1	0	0	N/A	N/A	N/A
Story	0	0	0	7	2	5
Tama	1	0	0	N/A	N/A	N/A
Warren	1	0	0	N/A	N/A	N/A
Webster	0	1	0	N/A	N/A	N/A
Total	14	5	3	7	3	7

Figure 1. WNV disease cases reported to IDPH, by week of onset - Iowa, 2015



For additional information on Iowa West Nile virus activity, visit <http://idph.iowa.gov/cade/disease-information/west-nile-virus>.

Chikungunya

Chikungunya is a viral disease that is spread to people by the bite of an infected *Aedes aegypti* and *Aedes albopictus* mosquito. Mosquitoes become infected when they feed on a person already infected with this virus. These species of mosquitoes are not sustained in Iowa.

In 2014, four imported cases of chikungunya virus disease were reported in Iowa. Cases occurring in Iowa are in travelers returning from parts of the world where Chikungunya transmission occurs. Three cases of chikungunya have been reported in Iowa in 2015.

Jamestown Canyon Virus (JCV)

Jamestown Canyon virus is a Bunyavirus within the California serogroup. It is transmitted to humans through the bite of an infected mosquito.

One case has been reported in Iowa. This is the first case of Jamestown Canyon virus identified in Iowa.

Dengue Fever

Dengue is a disease caused by any one of four related viruses, which are passed by the bite of an infected *Aedes aegypti* or *Aedes albopictus* mosquito. Infection with one of the four viruses does not protect against the others and consecutive infections put people at greater risk of developing dengue hemorrhagic fever (DHF).

Dengue is not found in Iowa. Cases are in travelers and immigrants returning from parts of the world where dengue transmission occurs. Four cases of Dengue have been reported in Iowa in 2015. In 2014, four cases of Dengue were reported to IDPH.

Malaria

Malaria is a serious and sometimes fatal disease caused by a parasite that commonly infects *Anopheles* mosquitoes. Malaria is spread to humans by the bite of the infected female mosquito. Only *Anopheles* mosquitoes can transmit malaria and they must have been infected through a previous blood meal taken from an infected person.

Seventeen cases of malaria have been reported in Iowa. Cases are in travelers and immigrants returning from parts of the world where malaria transmission occurs. In 2014, 17 cases of Malaria were reported to IDPH.

Rocky Mountain spotted fever (RMSF)

American dog ticks are carriers of *Rickettsia rickettsii*, the bacteria that causes RMSF. The American dog tick is the most common species of tick in Iowa and can be found in every county in the state. The tick is most active late March through August.

Nine cases of RMSF have been reported in Iowa. In 2014, 10 cases of RMSF were reported to IDPH.

Ehrlichiosis/Anaplasmosis

There are at least three species of bacteria responsible for ehrlichiosis/anaplasmosis in the United States: *Ehrlichia chaffeensis*, *Ehrlichia ewingii*, and *Anaplasma phagocytophilum*. Ehrlichiae are transmitted by the bite of an infected lone star tick (*Amblyomma americanum*) which is found in Iowa. *A. phagocytophilum* is transmitted by the bite of an infected blacklegged tick (or deer tick, *Ixodes scapularis*) in Iowa. The clinical signs and symptoms of these infections are similar.

Eleven cases of ehrlichiosis/anaplasmosis have been reported in Iowa. In 2014, 17 cases of ehrlichiosis/anaplasmosis were reported to IDPH.

Lyme

Lyme disease is caused by *Borrelia burgdorferi* and in Iowa is transmitted to humans by the bite of an infected tick, the blacklegged tick (or deer tick, *Ixodes scapularis*). Ticks are most likely to spread the Lyme disease bacterium during their pre-adult stage (nymph). They are most common between May and July and found in tall grasses and brush of wooded areas.

In 2015, 318 confirmed and probable cases of Lyme have been reported in Iowa. In 2014, 193 cases of Lyme disease were reported to IDPH.