Vector-Borne Disease

2025 Weekly Surveillance Report

July 3, 2025

IOWA Health and Human Services

All data presented in this report are provisional and may change as additional reports are received.

West Nile Virus (WNV)

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

In 2024, 21 human cases were identified. Thus far in 2025, three mosquito samples have tested positive for WNV [Table 1].

Table 1. Human/Mosquito Surveillance, 2025 Positive Samples

			Mosquitoes	
County	Human	Blood Donor	*Culex restuans*	*Culex pipiens*
Black Hawk	0	0	1	0
Polk	0	0	0	1
Woodbury	0	0	1	0
Total	**0**	**0**	**2**	**1**

Mosquito Surveillance

Iowa HHS in collaboration with Iowa State University (ISU) and local public environmental health partners conducts ecological surveillance in 10 counties across the state by monitoring mosquitoes and testing for WNV infected populations.

Table 2. 2025 mosquitoes tested for West Nile virus

Species	# of Samples Tested	WNV Negative	WNV Positive
Cx. pipiens	38	37	1
Cx. tarsalis	7	7	0
Cx. restuans	63	61	2
Total	**108**	**105**	**3**

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. One case of dengue has been reported in Iowa, thus far in 2025. In 2024, nine cases of dengue were reported to Iowa HHS.

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.

Five 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 2024, 35 cases of malaria were reported to Iowa HHS.

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.

Three cases of RMSF have been reported in Iowa. In 2024, five cases of RMSF were reported to Iowa HHS.

Anaplasmosis

Anaplasmosis is a disease caused by the bacterium Anaplasma phagocytophilum. A. phagocytophilum is transmitted by the bite of an infected blacklegged tick (or deer tick, Ixodes scapularis) in Iowa.

Eight cases of anaplasmosis have been reported in Iowa. In 2024, 26 cases of anaplasmosis were reported to Iowa HHS.

Ehrlichiosis

There are three species of bacteria responsible for ehrlichiosis in the United States: Ehrlichia chaffeensis, Ehrlichia ewingii, and Ehrlichia muris eauclairensis. E.chaffeensis and E. ewingii are transmitted by the bite of an infected lone star tick (Amblyomma americanum), which is found in Iowa. The majority of all reported cases of ehrlichiosis are due to infection by E. chaffeensis.

Eight cases of ehrlichiosis have been reported in Iowa. In 2024, 18 cases of ehrlichiosis were reported to Iowa HHS.

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.

As of July 3rd, 51 confirmed and probable cases of Lyme disease have been reported in Iowa [Figure 1]. In 2024, 162 cases of Lyme disease were reported to Iowa HHS.

Figure 1. 2025 Lyme disease case count and incidence rate by county of residence.