

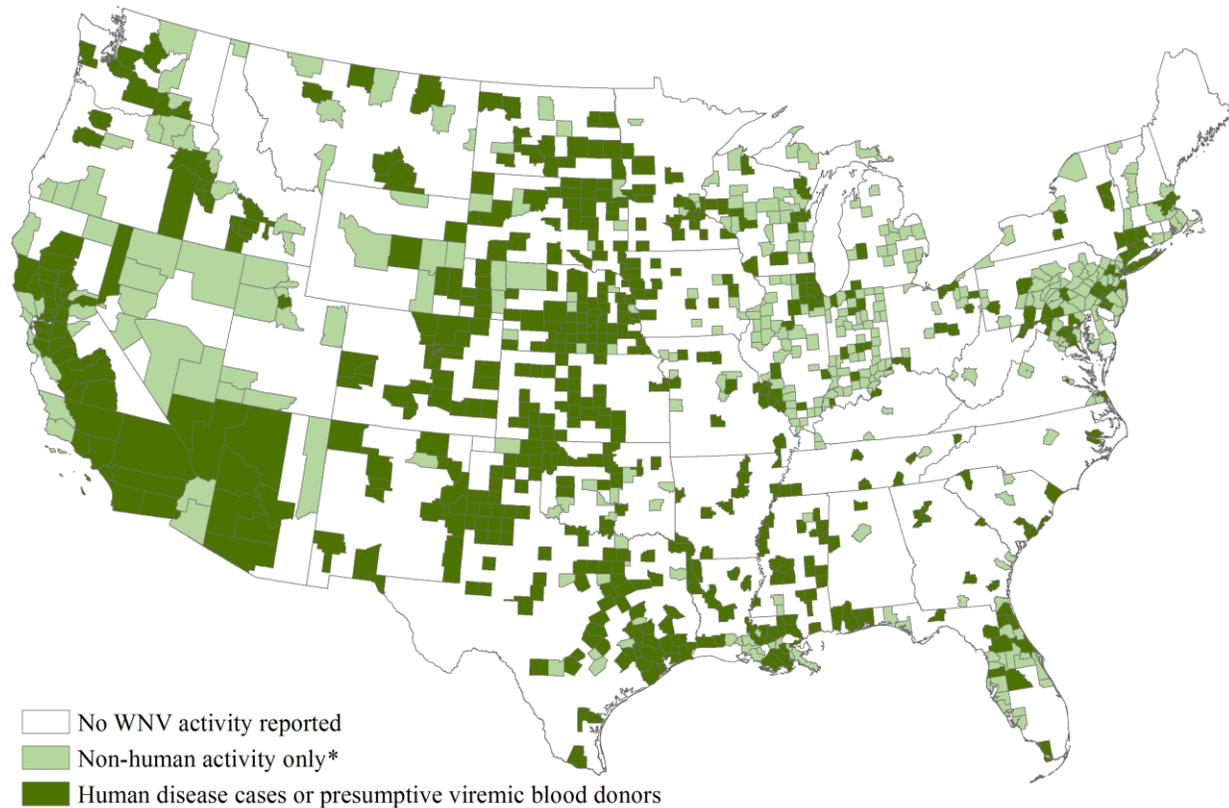
West Nile virus and other arboviral activity -- United States, 2014 Final 2014 data reported to ArboNET

These are final 2014 data reported to ArboNET for nationally notifiable arboviruses other than dengue. Additional resources for ArboNET and arboviral diseases are provided on page 10.

West Nile virus (WNV) activity in 2014

In 2014, 932 counties in 48 states and the District of Columbia reported WNV activity to ArboNET; 566 counties in 44 states and the District of Columbia reported WNV human disease cases or viremic blood donors [Figure 1].

Figure 1. West Nile virus (WNV) activity reported to ArboNET, by county — United States, 2014



*WNV veterinary disease cases or WNV infections in mosquitoes, birds, or sentinel animals.

WNV human infections reported for 2014

Reported WNV disease cases

In 2014, a total of 2,205 human cases of WNV disease were reported from 503 counties in 42 states and the District of Columbia [Figure 2]. Of all WNV disease cases reported, 1,347 (61%) were classified as neuroinvasive disease (e.g., meningitis, encephalitis, acute flaccid paralysis) and 858 (39%) were classified as non-neuroinvasive disease [Table 1]. Ninety percent of the reported cases had onset of illness in July–September [Figure 3].

Presumptive viremic donors (PVDs)

In 2014, a total of 344 WNV presumptive viremic blood donors were reported from 31 states [Table 1]. Of these, 28 (8%) developed clinical illness and are also included as disease cases.

Figure 2. West Nile virus (WNV) disease cases reported to ArboNET, by county — United States, 2014

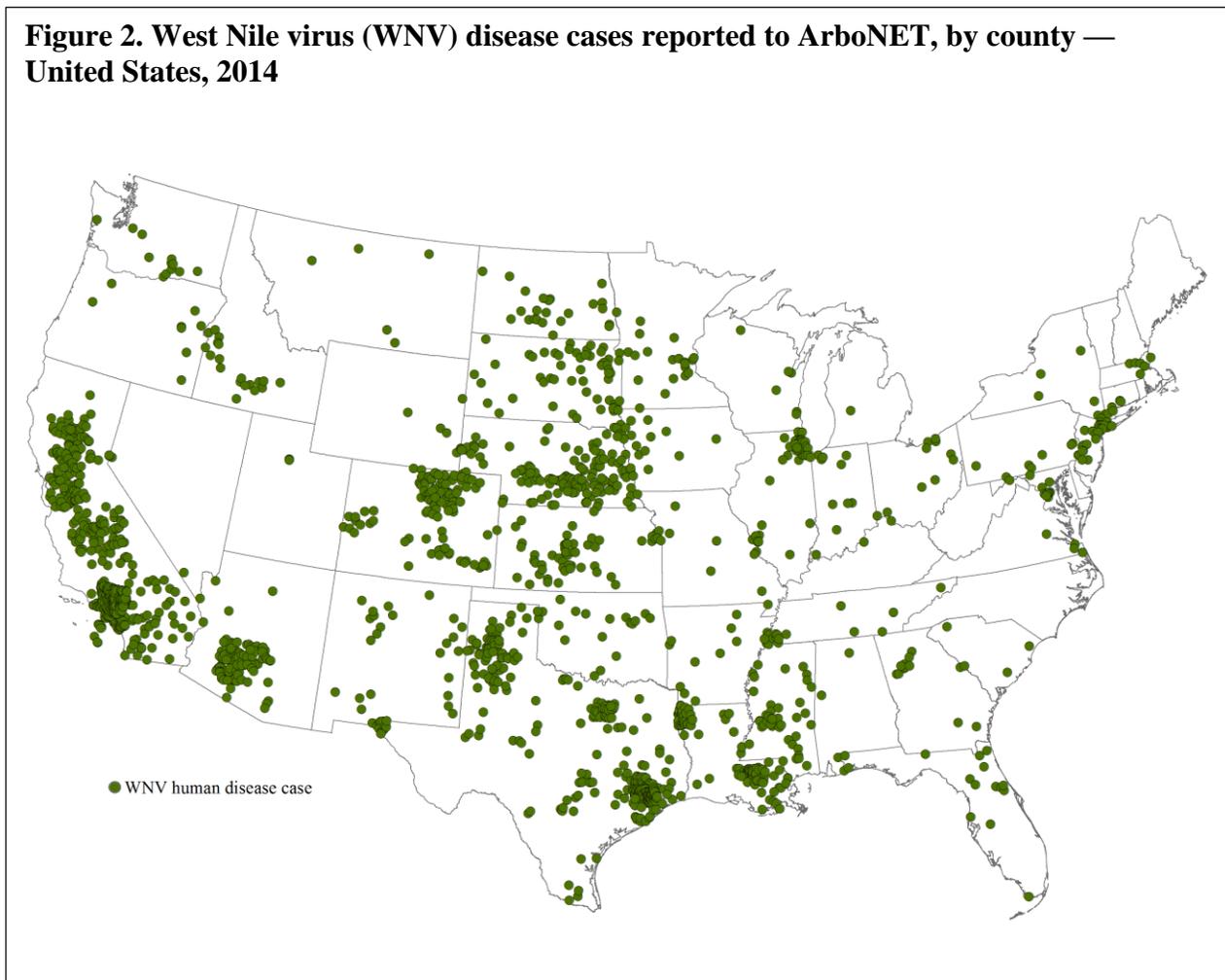


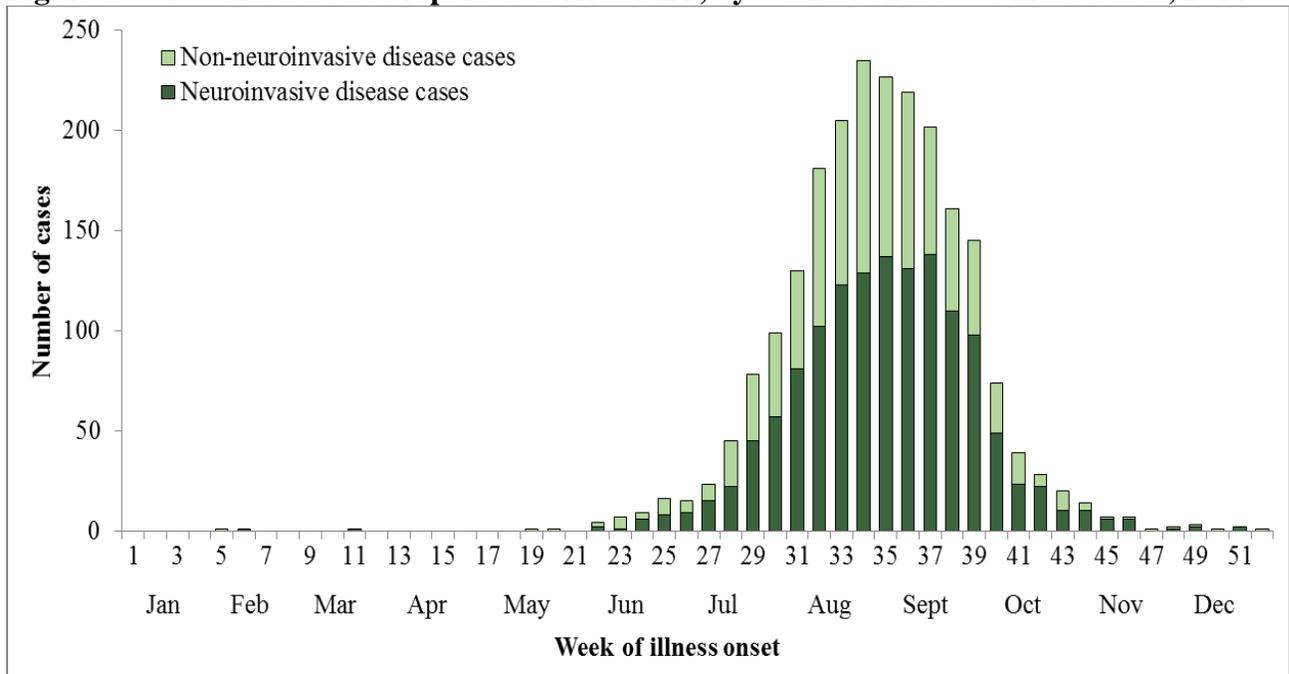
Table 1. West Nile virus infections in humans reported to ArboNET, 2014

State	Human disease cases reported to CDC*				Presumptive viremic blood donors†
	Neuroinvasive	Non-neuroinvasive	Total	Deaths	
Alabama	0	2	2	1	3
Arizona	80	27	107	13	17
Arkansas	9	2	11	1	0
California	561	240	801	31	96
Colorado	46	72	118	5	9
Connecticut	3	3	6	0	3
District of Columbia	1	2	3	0	0
Florida	12	5	17	1	5
Georgia	11	2	13	1	0
Hawaii	0	1	1	0	0
Idaho	6	13	19	0	0
Illinois	36	8	44	3	3
Indiana	9	1	10	0	2
Iowa	5	10	15	0	3
Kansas	18	36	54	0	15
Kentucky	0	1	1	0	0
Louisiana	61	64	125	13	16
Maryland	6	0	6	0	2
Massachusetts	5	1	6	0	1
Michigan	1	0	1	0	1
Minnesota	6	15	21	0	5
Mississippi	26	17	43	7	5
Missouri	10	3	13	2	8
Montana	2	3	5	0	0
Nebraska	41	101	142	1	33
Nevada	3	0	3	0	0
New Jersey	6	2	8	0	0
New Mexico	19	5	24	1	4
New York	19	7	26	3	9
North Carolina	0	0	0	0	1
North Dakota	12	11	23	2	1
Ohio	10	1	11	1	0
Oklahoma	9	9	18	0	12
Oregon	7	1	8	0	0
Pennsylvania	11	2	13	1	5
South Carolina	3	0	3	1	2
South Dakota	12	45	57	0	0
Tennessee	12	4	16	1	2
Texas	253	126	379	6	61
Utah	1	1	2	0	0
Virginia	5	2	7	1	1
Washington	7	5	12	0	6
West Virginia	0	0	0	0	2
Wisconsin	3	3	6	1	11
Wyoming	0	5	5	0	0
Totals	1,347	858	2,205	97	344

*Includes confirmed and probable cases; †Of the 344 presumptive viremic blood donors, 28 (8%) developed clinical illness and are also included as “Human disease cases reported to CDC”.



Figure 3. WNV disease cases reported to ArboNET, by week of onset — United States, 2014



La Crosse virus (LACV) activity in 2014

In 2014, a total of 61 counties in 10 states reported LACV activity to ArboNET, including nine states with human disease cases and one additional state with LACV activity in non-human species only [Figure 4 and Table 2].

Figure 4. La Crosse virus (LACV) activity reported to ArboNET, by state — United States, 2014

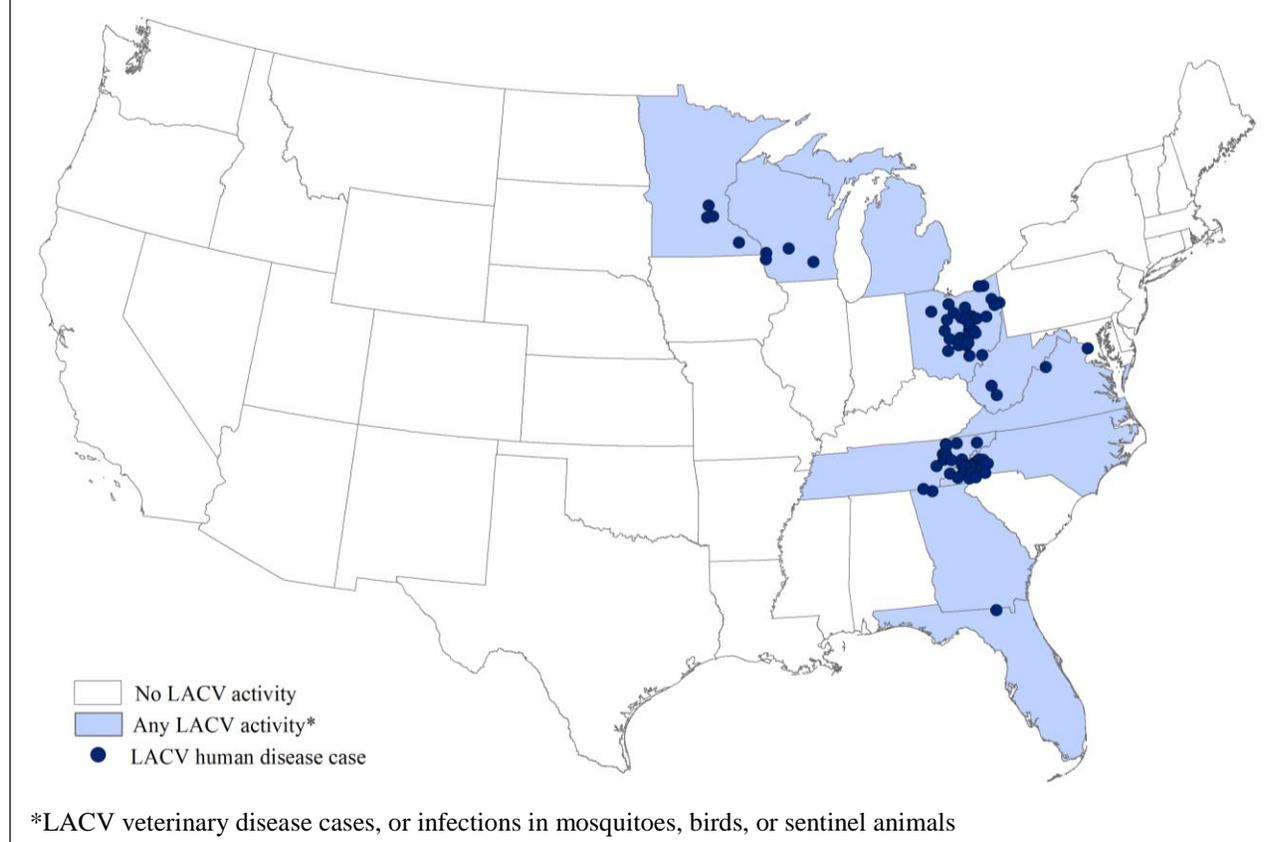


Table 2. La Crosse virus human disease cases reported to ArboNET, United States, 2014

	Neuroinvasive disease cases	Nonneuroinvasive disease cases	Total cases*	Deaths
Florida	1	0	1	0
Georgia	1	1	2	1
Minnesota	4	0	4	0
North Carolina	23	0	23	0
Ohio	30	1	31	0
Tennessee	11	0	11	0
Virginia	2	0	2	1
West Virginia	1	1	2	0
Wisconsin	3	1	4	1
Totals	76	4	80	3

*Includes confirmed and probable cases.

Jamestown Canyon virus (JCV) activity in 2014

In 2014, a total of 17 counties in six states reported JCV activity to ArboNET, including four states with human disease cases and two additional states with reported JCV activity in non-human species only [Figure 5 and Table 3].

Figure 5. Jamestown Canyon virus (JCV) activity reported to ArboNET, by state — United States, 2014

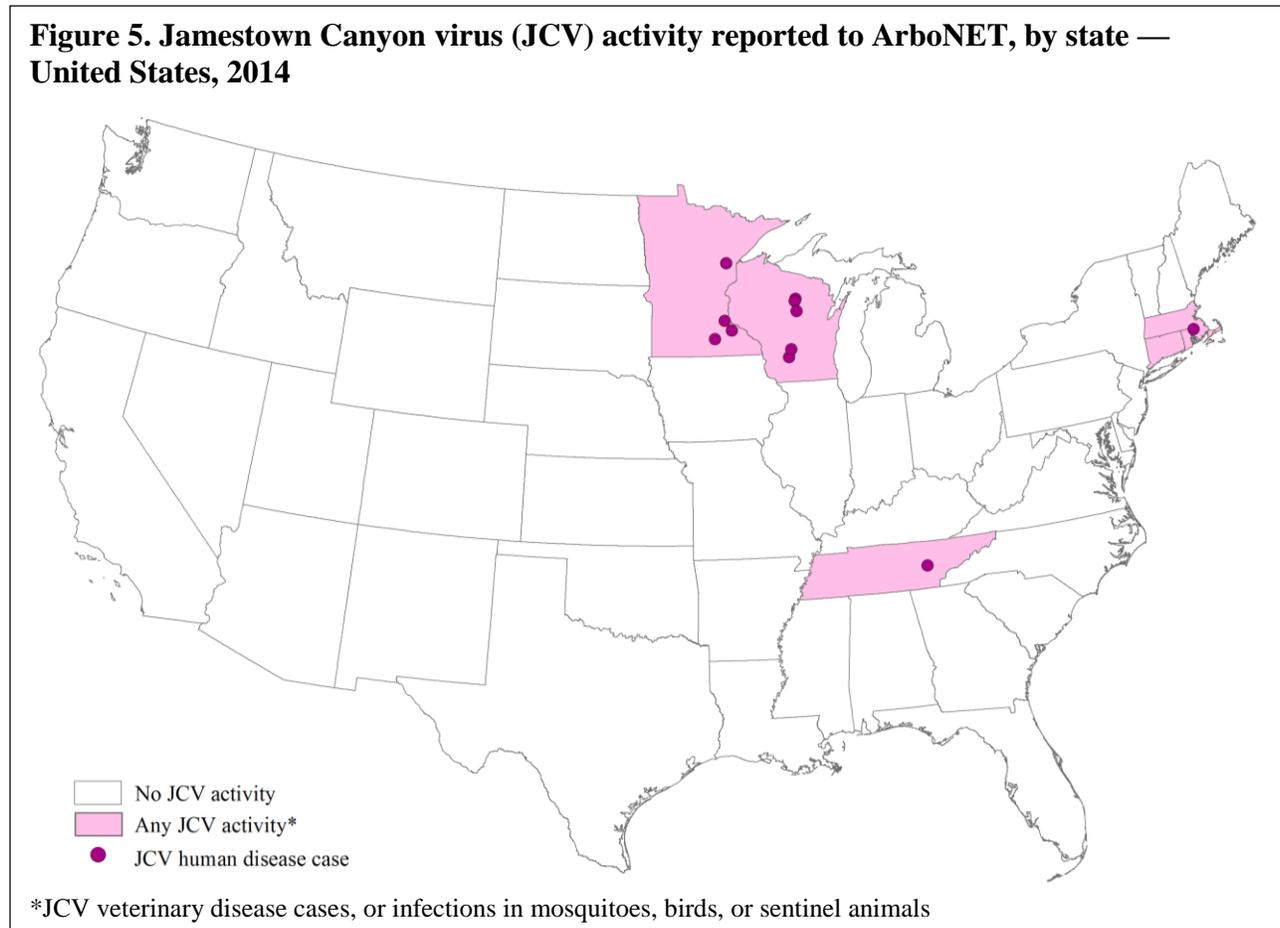


Table 3. Jamestown Canyon virus human disease cases reported to ArboNET, United States, 2014

	Neuroinvasive disease cases	Nonneuroinvasive disease cases	Total cases*	Deaths
Massachusetts	1	0	1	0
Minnesota	2	2	4	0
Tennessee	1	0	1	0
Wisconsin	2	3	5	0
Totals	6	5	11	0

*Includes confirmed and probable cases.

St. Louis encephalitis virus (SLEV) activity in 2014

In 2014, a total of 26 counties in seven states reported SLEV activity to ArboNET; including five states with human disease cases and two additional states with reported SLEV activity in non-human species only [Figure 6 and Table 4].

Figure 6. St. Louis encephalitis virus (SLEV) activity reported to ArboNET, by state — United States, 2014

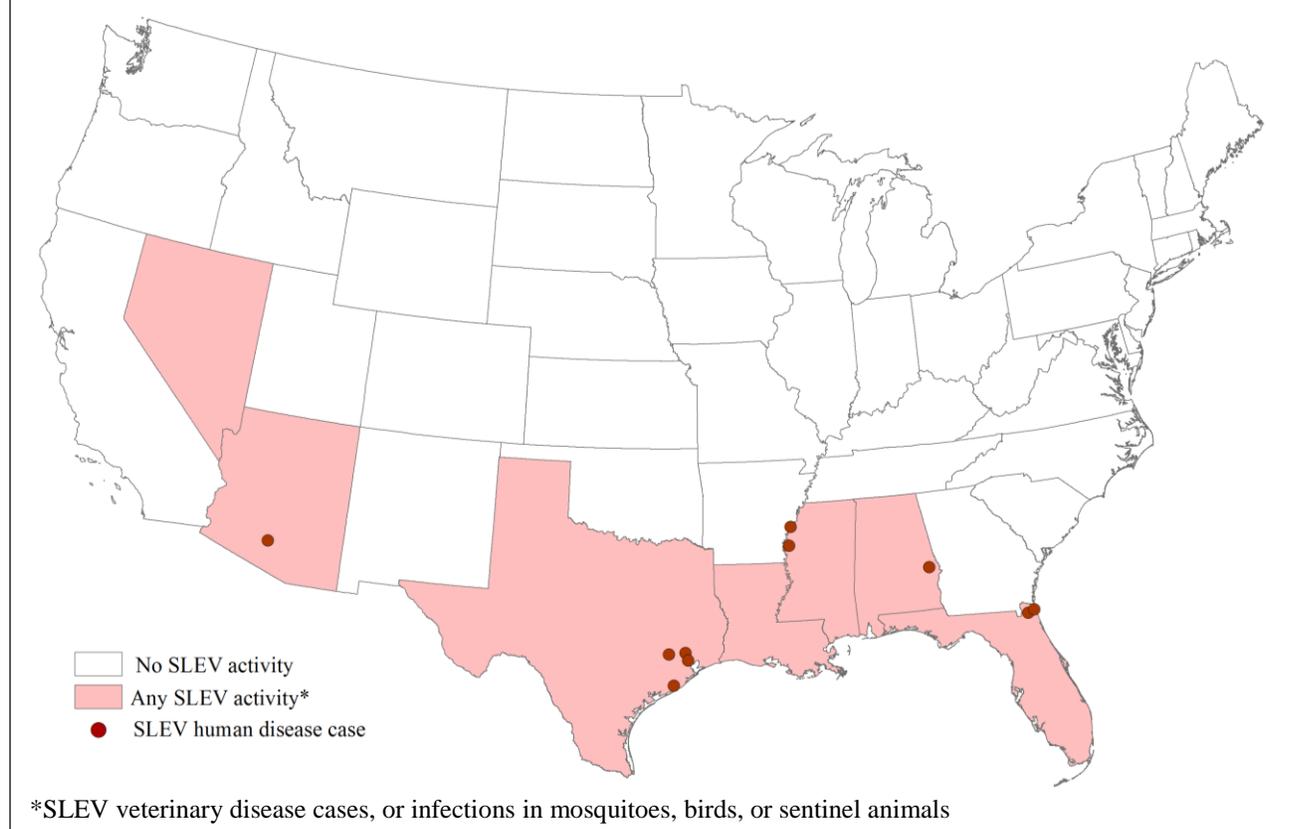


Table 4. St. Louis encephalitis virus human disease cases reported to ArboNET, United States, 2014

	Neuroinvasive disease cases	Nonneuroinvasive disease cases	Total cases*	Deaths
Alabama	1	0	1	0
Arizona	0	1	1	0
Florida	2	0	2	0
Mississippi	2	0	2	0
Texas	1	3	4	0
Totals	6	4	10	0

*Includes confirmed and probable cases.

Eastern equine encephalitis virus (EEEV) activity in 2014

In 2014, a total of 112 counties in 18 states reported EEEV activity to ArboNET, including five states with human disease cases and 13 additional states with EEEV activity in non-human species only [Figure 7 and Table 5].

Figure 7. Eastern equine encephalitis virus (EEEV) activity reported to ArboNET, by state — United States, 2014

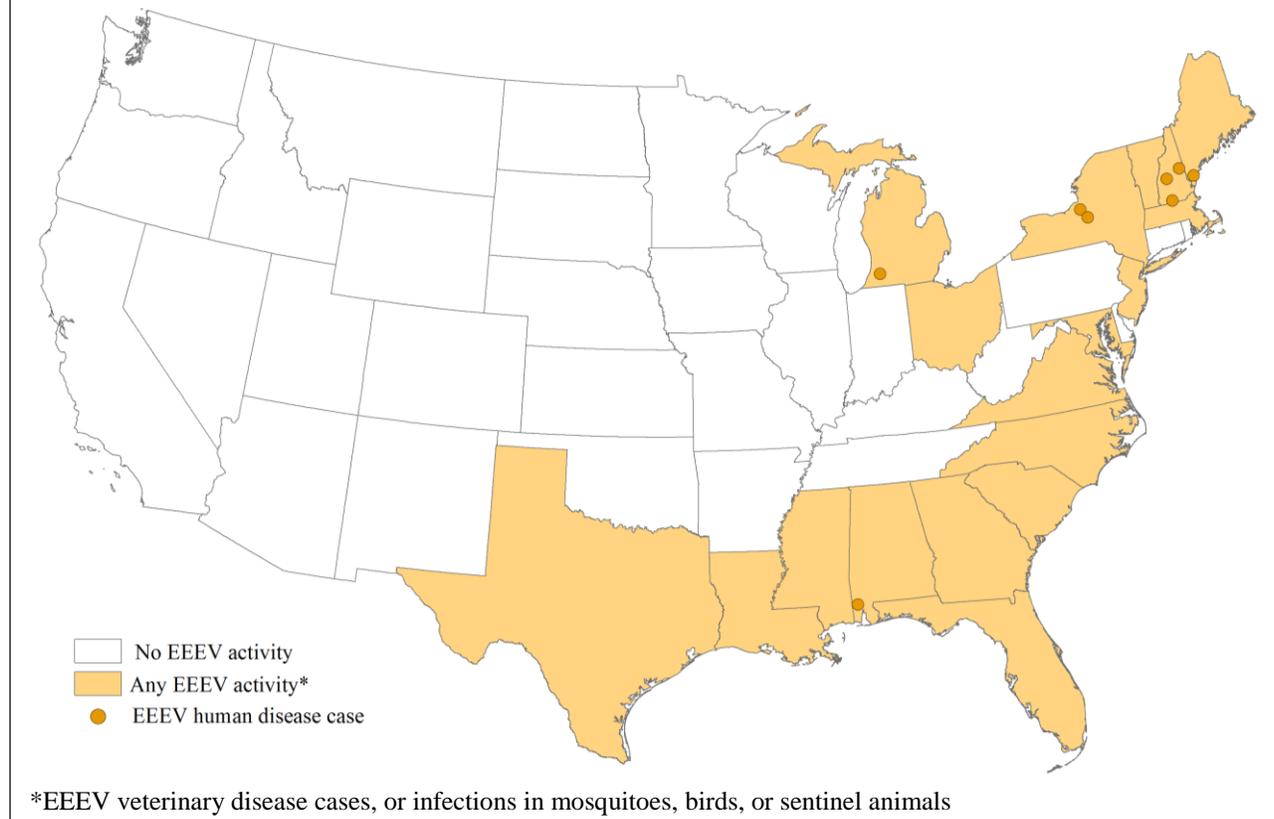


Table 5. Eastern equine encephalitis virus human disease cases reported to ArboNET, United States, 2014

	Neuroinvasive disease cases	Nonneuroinvasive disease cases	Total cases*	Deaths
Alabama	1	0	1	0
Maine	1	0	1	0
Michigan	1	0	1	0
New Hampshire	3	0	3	2
New York	2	0	2	0
Totals	8	0	8	2

*Includes confirmed and probable cases.

Powassan virus (POWV) activity in 2014

In 2014, a total of seven counties in four states reported human cases of POWV disease to ArboNET [Figure 8 and Table 6].

Figure 8. Powassan virus (POWV) activity reported to ArboNET, by state — United States, 2014

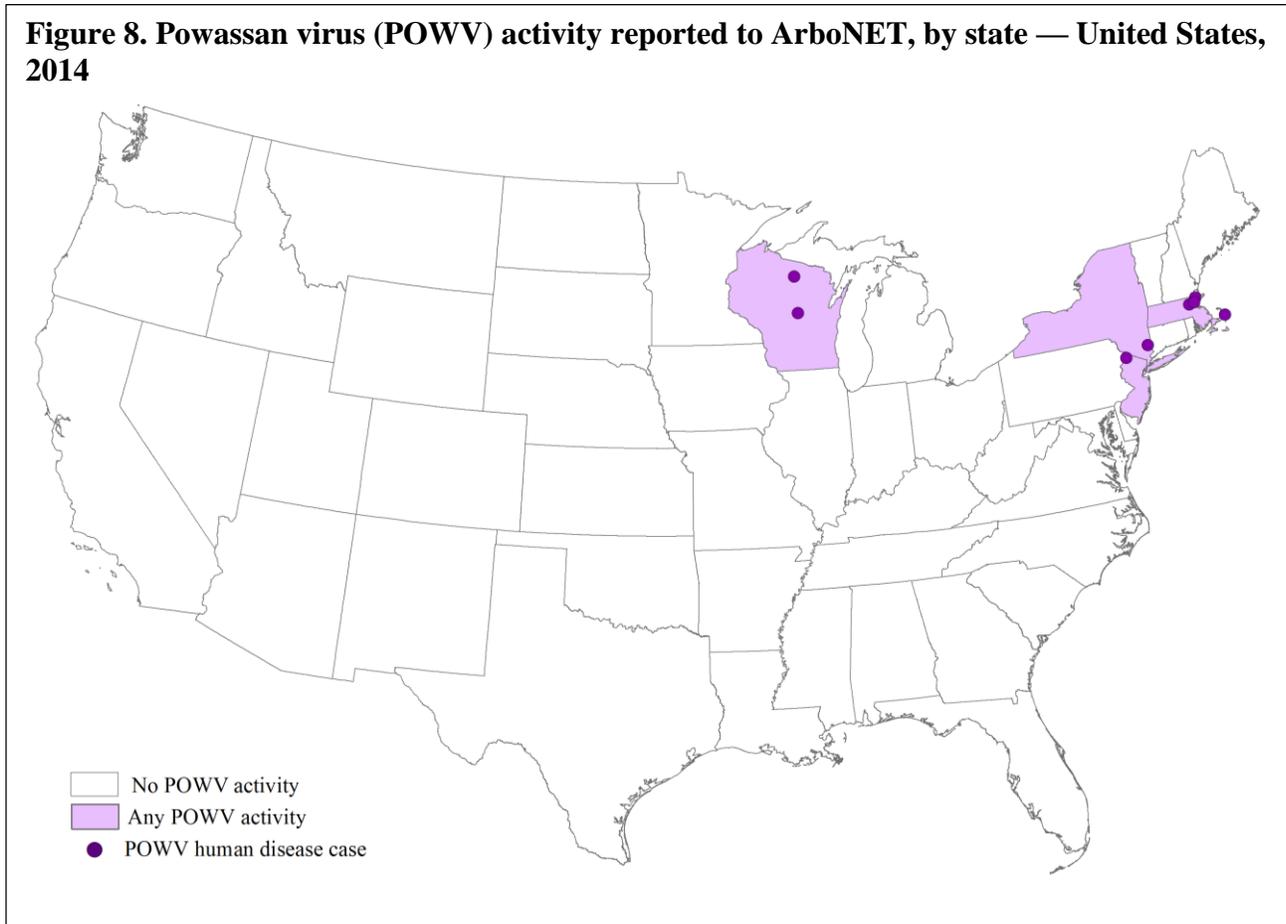


Table 6. Powassan virus human disease cases reported to ArboNET, United States, 2014

	Neuroinvasive disease cases	Nonneuroinvasive disease cases	Total cases*	Deaths
Massachusetts	4	0	4	0
New Jersey	1	0	1	0
New York	0	1	1	0
Wisconsin	2	0	2	0
Totals	7	1	8	0

*Includes confirmed and probable cases.



About ArboNET

ArboNET is a national arboviral surveillance system managed by CDC and state health departments. In addition to human disease, ArboNET maintains data on arboviral infections among presumptive viremic blood donors (PVDs), veterinary disease cases, mosquitoes, dead birds, and sentinel animals. As with other national surveillance data, ArboNET data has several limitations that should be considered in analysis, interpretation, and reporting [**Box**].

Box: Limitations of ArboNET data

The following should be considered in the analysis, interpretation, and reporting of ArboNET data:

1. ArboNET is a passive surveillance system. It is dependent on clinicians considering the diagnosis of an arboviral disease and obtaining the appropriate diagnostic test, and reporting of laboratory-confirmed cases to public health authorities. Diagnosis and reporting are incomplete, and the incidence of arboviral diseases is underestimated.
2. Reported neuroinvasive disease cases are considered the most accurate indicator of arboviral activity in humans because of the substantial associated morbidity. In contrast, reported cases of nonneuroinvasive arboviral disease are more likely to be affected by disease awareness and healthcare-seeking behavior in different communities and by the availability and specificity of laboratory tests performed. Surveillance data for nonneuroinvasive disease should be interpreted with caution and generally should not be used to make comparisons between geographic areas or over time.

Additional resources

For additional arboviral disease information and data, please visit the following websites:

- CDC's Division of Vector-Borne Diseases:
<http://www.cdc.gov/ncezid/dvbd/>
- National Notifiable Diseases Surveillance System:
<http://wwwn.cdc.gov/NNDSS/script/casedef.aspx?CondYrID=963&DatePub=1/1/2015 12:00:00 AM>
- U.S. Geological Survey (USGS):
<http://diseasemaps.usgs.gov/>
- AABB (American Association of Blood Banks):
<http://www.aabb.org/research/hemovigilance/Pages/wnv.aspx>