

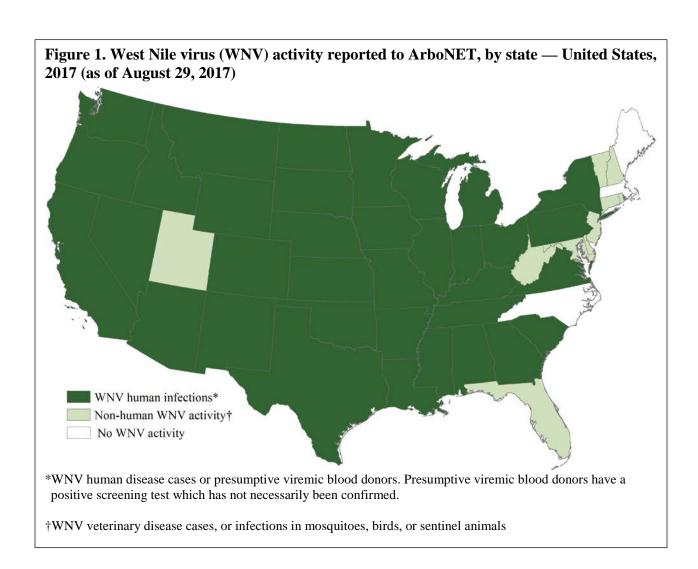
West Nile virus and other domestic arboviral activity -- United States, 2017 Provisional data reported to ArboNET

Tuesday, August 29, 2017

This update from the CDC Arboviral Disease Branch includes provisional data reported to ArboNET for **January 1** – **August 29, 2017** for West Nile virus and selected other nationally notifiable domestic arboviruses. Additional resources for ArboNET and arboviral diseases are provided on page 9.

West Nile virus (WNV) activity in 2017

As of August 29th, 740 counties from 45 states and the District of Columbia have reported WNV activity to ArboNET for 2017, including 35 states with reported WNV human infections (i.e., disease cases or viremic blood donors) and 10 additional states and the District of Columbia with reported WNV activity in non-human species only (i.e., veterinary cases, mosquito pools, dead birds, or sentinel animals) [Figure 1].





Reported WNV disease cases

To date, 450 human WNV disease cases have been reported from 225 counties in 34 states [**Table 1**]. Dates of illness onset for cases ranged from March–August [**Figure 2**].

Of these, 269 (60%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 181 (40%) were classified as non-neuroinvasive disease [Figure 3].

Presumptive viremic donors (PVDs)

Overall, 91 WNV PVDs have been reported from 27 states [Table 1].

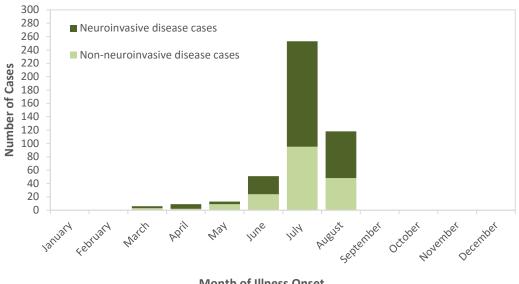
Table 1. West Nile virus infections in humans reported to ArboNET, 2017

	Hu	Human disease cases reported to CDC*			
State	Neuroinvasive	Non-neuroinvasive	Total	Deaths	viremic blood donors
Alabama	1	0	1	0	0
Arizona	32	5	37	2	7
Arkansas	3	3	6	1	4
California	44	15	59	0	10
Colorado	5	2	7	0	2
Georgia	16	1	17	3	3
Idaho	1	1	2	0	0
Illinois	1	3	4	0	0
Indiana	3	1	4	0	2
Iowa	3	1	4	0	4
Kansas	2	3	5	0	1
Kentucky	3	1	4	0	0
Louisiana	15	5	20	2	1
Michigan	0	0	0	0	5
Minnesota	4	8	12	0	14
Mississippi	33	8	41	2	3
Missouri	6	2	8	0	0
Montana	1	4	5	0	1
Nebraska	7	17	24	0	9
Nevada	9	10	19	1	2
New Mexico	7	0	7	1	1
New York	2	2	4	0	1
North Dakota	10	24	34	0	1
Ohio	1	3	4	0	2
Oklahoma	6	4	10	0	2
Oregon	0	1	1	0	1
Pennsylvania	2	2	4	1	0
South Carolina	3	2	5	0	1
South Dakota	13	22	35	1	2
Tennessee	7	4	11	0	2
Texas	23	25	48	2	6
Virginia	4	0	4	0	0
Washington	0	1	1	0	1
Wisconsin	2	0	2	0	3
Wyoming	0	1	1	0	0
Totals	269	181	450	16	91

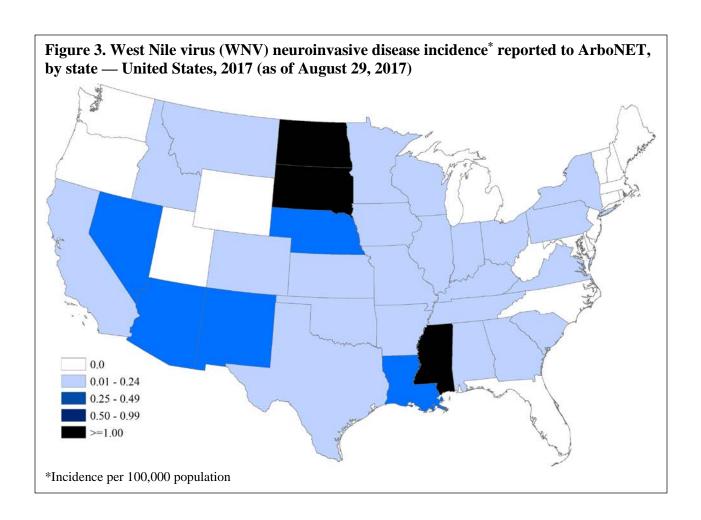
^{*}Includes confirmed and probable cases



Figure 2. West Nile virus disease cases reported to ArboNET, by month of onset — United **States, 2017 (As of August 29, 2017)**



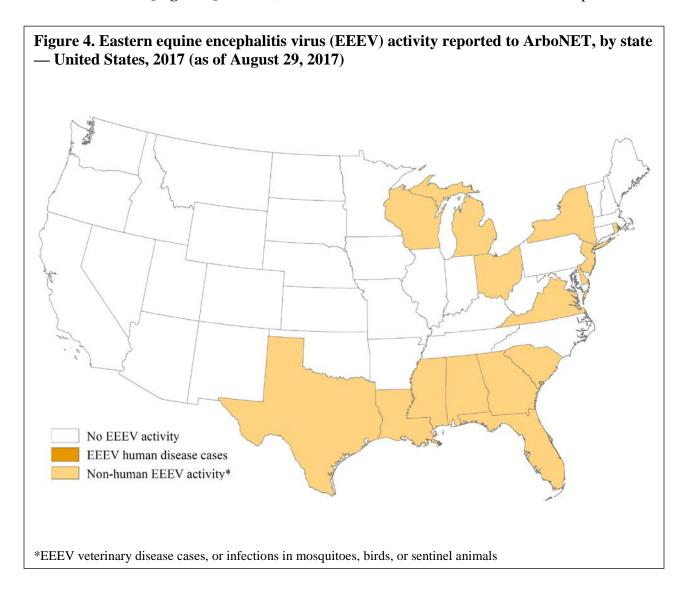
Month of Illness Onset





Eastern equine encephalitis virus (EEEV) activity in 2017

As of August 29th, 35 counties in 15 states reported EEEV activity in non-human species to ArboNET for 2017 [**Figure 4**]. To date, no human cases of EEEV disease have been reported.





Jamestown Canyon virus (JCV) activity in 2017

As of August 29th, 20 counties in five states have reported human cases of JCV disease to ArboNET for 2017 [**Figure 5 and Table 2**]. Seven counties in Connecticut reported JCV activity in non-human species only.

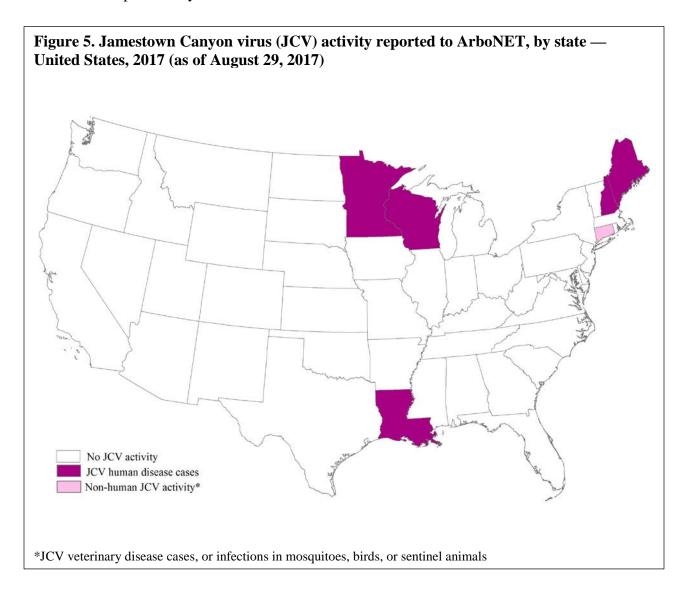


Table 2. Jamestown canyon virus human disease cases reported to ArboNET, United States, 2017

	Neuroinvasive disease cases	Non-neuroinvasive disease cases	Total cases*	Deaths
Louisiana	1	0	1	0
Maine	1	1	2	0
Minnesota	6	4	10	0
New Hampshire	0	1	1	0
Wisconsin	4	4	8	0
Totals	12	10	22	0

^{*}Includes confirmed and probable cases.



La Crosse encephalitis virus (LACV) activity in 2017

As of August 29th, 15 counties in three states have reported human cases of LACV disease to ArboNET for 2017 [**Figure 6 and Table 3**].

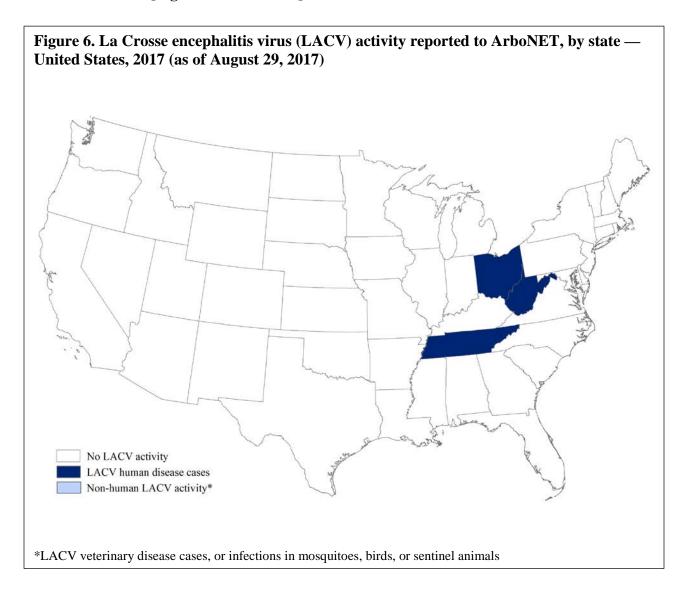


Table 3. La Crosse encephalitis virus human disease cases reported to ArboNET, United States, 2017

	Neuroinvasive disease cases	Non-neuroinvasive disease cases	Total cases*	Deaths
Ohio	7	0	7	0
Tennessee	9	0	9	0
West Virginia	2	0	2	0
Totals	18	0	18	0

^{*}Includes confirmed and probable cases.



<u>Powassan virus (POWV) activity in 2017</u> As of August 29th, 12 counties in nine states have reported human cases of POWV disease to ArboNET for 2017 [Figure 7 and Table 4].

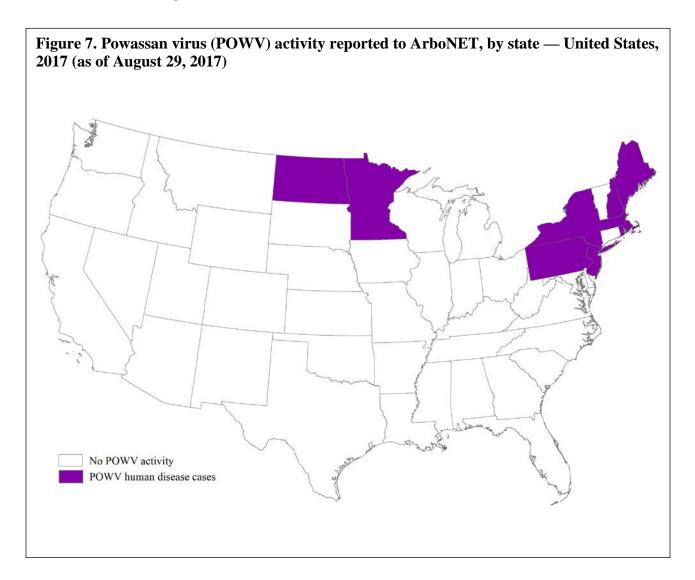


Table 4. Powassan virus human disease cases reported to ArboNET, United States, 2017

	Neuroinvasive disease cases	Non-neuroinvasive disease cases	Total cases*	Deaths
Maine	3	0	3	0
Massachusetts	1	0	1	0
Minnesota	5	1	6	0
New Hampshire	1	0	1	0
New Jersey	1	0	1	0
New York	2	1	3	1
North Dakota	1	0	1	0
Pennsylvania	1	0	1	0
Rhode Island	1	0	1	1
Totals	16	2	18	2

^{*}Includes confirmed and probable cases.



St. Louis encephalitis virus (SLEV) activity in 2017

As of August 29th, two counties in Arizona have reported human cases of SLEV disease to ArboNET for 2017 [Figure 8 and Table 5]. Additionally, 18 counties in five other states reported SLEV activity in non-human species only.

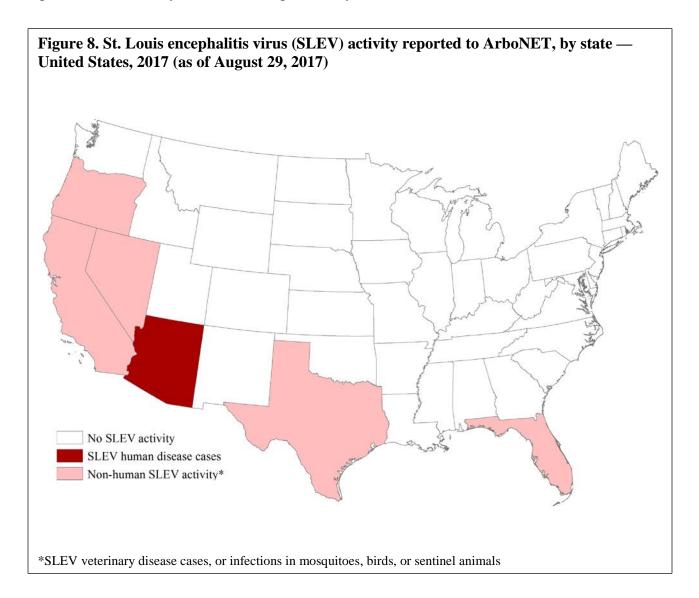


Table 5. St. Louis encephalitis virus human disease cases reported to ArboNET, United States, 2017

	Neuroinvasive	Non-neuroinvasive		
	disease cases	disease cases	Total cases*	Deaths
Arizona	1	1	2	0
Totals	1	1	2	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/conditions/arboviral-diseases-neuroinvasive-and-non-neuroinvasive/case-definition/2015/
- U.S. Geological Survey (USGS): http://diseasemaps.usgs.gov/mapviewer/
- AABB (American Association of Blood Banks):
 www.aabb.org/programs/biovigilance/Pages/wnv.aspx