

California Arbovirus Surveillance Bulletin #1

Week 14 Friday, April 6, 2018



Weekly Update

Humans

No human infections have been reported in 2018.

2017 Final Summary

West Nile virus: In 2017, a total of 553 human cases of West Nile virus (WNV) illness were reported from 27 counties. Of the 553 symptomatic infections, 401 (73%) had neuroinvasive disease and 44 fatalities were reported. The median age of all cases was 60 years (range: 4–96 years), and 358 (65%) were male. Dates of symptom onset ranged from March 16–December 24, 2017. In addition to the 553 symptomatic cases, 47 asymptomatic infections were reported from 12 counties in 2017.

St. Louis encephalitis virus: In 2017, 4 human cases of St. Louis encephalitis virus (SLEV) disease were reported from 4 counties. Of the 4 cases, 2 (50%) had neuroinvasive disease and no fatalities were reported. The median age of all cases was 61 years (range: 56–77 years), and 3 (75%) were male. Dates of symptom onset ranged from July 24–October 3, 2017.

Dead Birds

One WNV positive dead bird was reported from San Mateo County this week. In 2018, a total of 4 WNV positive dead birds have been reported from 2 counties: San Mateo (2) and Santa Clara (2). At this time last year, 3 WNV positive birds had been reported from 3 counties.

Note: The WNV and Dead Bird Hotline will begin taking live calls on April 16. The public can report dead birds via the hotline (877-WNV-BIRD) or website (www.westnile.ca.gov).

Mosquito Pools

No positive mosquito pools have been reported in 2018.

Sentinel Chickens

No seroconversions have been reported in 2018.

Website Information: For updated information on WNV in California, please visit the California WNV website, www.westnile.ca.gov, or the California Vectorborne Disease Surveillance System website, www.calsurv.org. For national information on WNV and other arboviruses, please visit the CDC websites: www.cdc.gov and https://www.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html

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YTD WNV Activity by Element and County, 2018				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
San Mateo		2		
Santa Clara		2		
Totals	0	4	0	0

2017 & 2018 YTD West Nile Virus Comparisons		
	2017	2018
Total # Dead Bird Reports	721	567
# Positive Counties	3	2
# Human Cases	0	0
# Positive Dead Birds / # Tested	3 / 78	4 / 99
# Positive Mosquito Pools / # Tested	0 / 2,198	0 / 880
# Seroconversions / # Tested	0 / 64	0 / 70

TESTING SUMMARIES

Humans

		WNV	SLE	WEE
Human Cases	Week	0	0	0
	YTD	0	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	4	1
	YTD	99	4

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	70	0	0	0
	YTD	70	0	0	0

Mosquitoes

		Positive / Total Tested						
Mosquito Pools		WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	0 / 103	0 / 103	0 / 103	0 / 0	0 / 0	0 / 0
		YTD	0 / 880	0 / 880	0 / 880	0 / 14	0 / 14	0 / 14

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POSITIVES

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
San Mateo	San Mateo Co MVCD	Foster City	94404	American Crow	2/5/2018	WNV
San Mateo	San Mateo Co MVCD	South San Francisco	94080	American Crow	4/2/2018	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94301	American Crow	1/3/2018	WNV
Santa Clara	Santa Clara Co VCD	Mountain View	94043	American Crow	1/11/2018	WNV

TEST PROTOCOLS

Humans:

Specimens are tested by local laboratories with an IgM or IgG immunofluorescent assay (IFA) and/or an IgM enzyme immunoassay (EIA). Specimens with inconclusive results are forwarded to the California Department of Public Health Viral and Rickettsial Disease Laboratory (VRDL) for further testing with a plaque reduction neutralization test (PRNT).

Dead Birds

Oral swab samples collected from bird carcasses are tested at the UC Davis Arbovirus Research and Training laboratory (DART) or at a local agency for West Nile virus by RT-qPCR.

Sentinel Chickens:

Dried blood spot samples from sentinel chickens are tested at the California Department of Public Health Vector-Borne Disease Laboratory for IgG antibodies to West Nile, St. Louis encephalitis, and western equine encephalomyelitis viruses by an EIA. Positive samples are confirmed by IFA, western-blot, or PRNT.

Mosquito Pools:

Mosquito pools are tested at DART or at a local agency for West Nile, western equine encephalomyelitis, and St. Louis encephalitis viral RNA using a multiplex RT-qPCR. Invasive *Aedes* mosquitoes (*Ae. aegypti* and *Ae. albopictus*) are also tested at DART for chikungunya, dengue, and Zika viral RNA by a separate RT-qPCR.
