

California Arbovirus Surveillance Bulletin #1

Week 14 Friday, April 5, 2019



Weekly Update

Humans

No human infections have been reported in 2019.

2018 Final Summary

West Nile virus: In 2018, a total of 218 symptomatic and 25 asymptomatic infections with West Nile virus (WNV) were reported from 31 counties. Of the 218 symptomatic infections, 154 (71%) had neuroinvasive disease and 11 fatalities were reported. The median age of all cases was 60 years (range: 1–91 years), and 140 (64%) were male. Dates of symptom onset ranged from May 6 to December 20, 2018.

St. Louis encephalitis virus: In 2018, 5 human cases of St. Louis encephalitis virus (SLEV) disease were reported from 4 counties. Of the 5 cases, 4 (80%) had neuroinvasive disease and no fatalities were reported. The median age of all cases was 63 years, and 2 (40%) were male. Dates of symptom onset ranged from August 23 to October 28, 2018.

Dead Birds

To date in 2019, one WNV positive dead bird has been reported from San Diego County. At this time last year, 4 WNV positive dead birds had been reported from 2 counties.

Note: The WNV and Dead Bird Hotline will begin taking live calls on April 15. The public can report dead birds via the hotline (877-WNV-BIRD) or website (www.westnile.ca.gov).

Mosquito Pools

To date in 2019, one WNV positive mosquito pool has been reported from Orange County. At this time last year, no positive mosquito pools had been reported.

Sentinel Chickens

No seroconversions have been reported in 2019.

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://wwwn.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html

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YTD WNV Activity by Element and County, 2019				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Orange			1	
San Diego		1		
Totals	0	1	1	0

2018 & 2019 YTD West Nile Virus Comparisons		
	2018	2019
Total # Dead Bird Reports	567	643
# Positive Counties	2	2
# Human Cases	0	0
# Positive Dead Birds / # Tested	4 / 99	1 / 141
# Positive Mosquito Pools / # Tested	0 / 880	1 / 945
# Seroconversions / # Tested	0 / 70	0 / 78

ESTING 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	0
	YTD	1	141

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	0	0	0	0
	YTD	78	0	0	0

Mosquitoes

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Mosquito Pools	Week	0 / 153	0 / 153	0 / 153	0 / 0	0 / 0	0 / 0
	YTD	1 / 945	0 / 853	0 / 853	0 / 7	0 / 7	0 / 7

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POSITIVES

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
San Diego	San Diego Co VCP	Lakeside	92040	Cooper's Hawk	3/12/2019	WNV

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Orange	ORCO0003	70	Cx. quinquefasciatus	Garden Grove	19	GRVD	1/29/19	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.
