

California Arbovirus Surveillance Bulletin #1

Week 17 Friday, April 30, 2021



Weekly Update

Humans

No human infections have been reported in 2021.

2020 Final Summary

West Nile virus: In 2020, a total of 231 symptomatic and 27 asymptomatic infections with West Nile virus (WNV) were reported from 26 counties. Of the 231 symptomatic cases, 178 (77%) had neuroinvasive disease and 11 (4.8%) fatalities were reported. The median age of all cases was 60 years and 149 (65%) were male. Dates of symptom onset ranged from June 2 to December 21, 2020.

St. Louis encephalitis virus: In 2020, six cases of St. Louis encephalitis virus disease were reported from four counties. Of the six cases, five (83%) had neuroinvasive disease and one (17%) fatality was reported. The median age of all cases was 75 years and five (83%) were male. Dates of symptom onset ranged from July 20 to October 1, 2020.

Dead Birds

No positive dead birds have been reported in 2021.

Mosquito Pools

No positive mosquito pools have been reported in 2021.

Sentinel Chickens

No seroconversions have been reported in 2021.

2020 & 2021 YTD West Nile Virus Comparisons		
	2020	2021
Total # Dead Bird Reports	799	1,346
# Positive Counties	1	0
# Human Cases	0	0
# Positive Dead Birds / # Tested	3 / 125	0 / 215
# Positive Mosquito Pools / # Tested	0 / 1,400	0 / 1,619
# Seroconversions / # Tested	0 / 136	0 / 167

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.maps.calsurv.org. For national information on WNV and other arboviruses, please visit the CDC websites: www.cdc.gov and www.cdc.gov/arbonet/maps/ADB_Diseases_Map/index.html

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TESTING SUMMARIES

Humans

		WNV	SLEV	WEEV
Human Cases	Week	0	0	0
	YTD	0	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	24	0
	YTD	215	0

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	103	0	0	0
	YTD	167	0	0	0

Mosquitoes

		Positive / Total Tested						
Mosquito Pools		WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	0 / 342	0 / 249	0 / 249	0 / 0	0 / 0	0 / 0
		YTD	0 / 1,619	0 / 1,440	0 / 1,440	0 / 0	0 / 0	0 / 0

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.

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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.
