

California Arbovirus Surveillance Bulletin # 7

Week 13 Monday, April 3, 2006

Weekly Summary

Comments

Humans:

No human cases have been reported in 2006.

2005 Update:

Six additional human cases in 2005 were reported, bringing the YTD total to 935 cases.

In 2005, 935 human West Nile virus (WNV) infections were identified from the following local health jurisdictions: Alameda (1), Amador (4), Butte (25), Calaveras (2), Colusa (2), Contra Costa (11), El Dorado (1), Fresno (68), Glenn (13), Humboldt (1), Imperial (1), Kern (68), Kings (32), Los Angeles (47), Madera (19), Merced (28), Nevada (4), Orange (17), Placer (35), Plumas (1), Riverside (104), Sacramento (177), San Bernardino (35), San Diego (1), San Francisco (2), San Joaquin (36), San Mateo (1), Santa Barbara (2), Santa Clara (5), Shasta (1), Solano (5), Sonoma (1), Stanislaus (92), Sutter (9), Tehama (4), Tulare (60), Tuolumne (1), Ventura (1), Yolo (12), and Yuba (6). Of the 935 infections, 101 were initially detected in asymptomatic individuals through screening done at blood banks; 42 individuals later developed symptoms. Eight of the 101 presumptively viremic blood donors did not confirm in follow-up testing, and were subsequently removed from the list. In addition to the individuals detected at blood banks, four individuals who had no symptoms for WNV were detected through the local health department. Of the 880 WNV cases with symptoms, 305 were classified as West Nile neuroinvasive disease cases, 534 as West Nile fever, and 41 were of unknown clinical presentation. The median age for all symptomatic cases where data is available was 51 years (range: 2-95 years). 483 (55%) of the cases were male. There were 19 WNV-related fatalities reported in California in 2005, from Amador (1), Butte (1), Fresno (2), Kings (3), Madera (1), Plumas (1), Riverside (5), Sacramento (1), San Bernardino (1), San Joaquin (1), Stanislaus (1), and Tulare (1) counties. The median age of the 19 fatalities was 78 years.

Horses:

The California Department of Food & Agriculture has reported no new case of equine WNV this year.

Dead Birds:

In the last two weeks, the hotline has received 1,457 dead bird reports for a YTD total of 5,084 reports. Three out of 137 (2.2%) dead birds collected from 28 counties tested positive for WNV.

- 0/123 dead birds tested positive via RT-PCR.
- 1/8 dead birds tested positive via VecTest.
- 0/1 dead birds tested positive via RAMP.
- 2/5 dead birds tested positive via IHC.

The following bird species tested positive for WNV: American Crow (2); common raven (1). See "WNV Positive Dead Birds" table for details.

Since January 1, 2006, 10 out of 551 (1.8%) dead birds have tested positive for WNV from four counties: Orange (4); Sacramento (1); San Diego (1); and Santa Clara (4).

Mosquito Pools:

CVEC has reported no positive mosquito pools in 2006.

Sentinel Chickens:

VRDL has reported no seroconversions in 2006.

Website Information:

For updated information on WNV, please visit the California WNV website, www.westnile.ca.gov, the CDC website, www.cdc.gov, and the USGS website, www.westnilemaps.usgs.gov. Please go to the Vector website at <http://vector.ucdavis.edu/arbo.html> for flock location and more information on WNV and other vector-borne diseases.

California Arbovirus Surveillance Bulletin # 7

Week 13 Monday, April 3, 2006

TEST SUMMARIES for 2006

Humans and Horses

		Number Tested	WNV Positive		WEE Positive		SLE Positive		Other Positive	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested	Week	55	0	0	0	0	0	0	0	0
	YTD	258	0	0	0	0	0	0	0	0
Horses Tested	Week	5	0	0	0	0	0	0	0	0
	YTD	69	0	0	0	0	0	0	0	0

Dead Birds

	Number Tested	WNV Positive
Week	137	3
YTD	551	10

Sentinel Chickens and Mosquito Pools*

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Other Positive
Chicken sera	Week	123	0	0	0	0
	YTD	781	0	0	0	0
Mosquito pools	Week	43	0	0	0	0
	YTD	581	0	0	0	0

*Total has been adjusted to include local agency submission

WNV Positive Dead Birds Reported (March 20- March 31)

Species	County	City	Zip Code	Date Collected	Date Tested	Tested By
American Crow	Orange	Brea	92821	3/8/06	3/8/06	IHC
American Crow	Santa Clara	Saratoga	95070	3/13/06	3/13/06	VecTest
Common Raven	Orange	Brea	92821	3/9/06	3/9/06	IHC

No new national update.

California Arbovirus Surveillance Bulletin # 7

Week 13 Monday, April 3, 2006

TEST PROTOCOLS

Dead Birds:

All bird species, except chickens, doves, and pigeons, from all zip codes are currently being accepted for testing unless otherwise requested by a local agency. Positive RAMP and Vec-Tests from oral swabs from corvids are no longer confirmed. Other bird species are tested by singleplex RT-PCR and confirmed with a second primer set.

Dead birds are necropsied at the California Animal Health and Food Safety (CAHFS) Laboratories and kidney tissue from the dead birds are forward to the UC Davis Center for Vectorborne Diseases (CVEC) for WNV using the PCR Taqman assay. Organ pools from PCR positive carcasses are tested using cell culture for virus isolation. The WNV Dead Bird Surveillance Coordinator, Ryan Carney, can be reached directly at (510) 412-6254.

Sentinel Chickens:

Dried blood spot specimens from sentinel chickens submitted each week to the DHS Viral and Rickettsial Disease Laboratory (VRDL) are tested for the presence of antibodies to West Nile virus (WNV), western equine encephalomyelitis (WEE), and St. Louis encephalitis (SLE) viruses by EIA and IFA. The VRDL performs additional testing, including plaque reduction neutralization (PRNT), on specimens from sentinel chickens from geographic areas where WNV is detected for the first time. The VRDL also forwards selected serum to CVEC for additional testing for WNV, WEE, and SLE antibodies as needed.

Mosquito Pools:

All mosquito pools are screened for WEE, SLE, and WNV viral RNA using a Taqman multiplex RT-PCR. CVEC will cease confirmation testing on PCR-positive pools of *Cx. tarsalis* and *Cx. quinquefasciatus* but will continue to confirm multiplex PCR-positive results for other mosquito species using singleplex RT-PCR.

Prepared by the Vector-Borne Disease Section (Infectious Diseases Branch) and the Viral and Rickettsial Disease Laboratory Branch, Division of Communicable Disease Control, California Department of Health Services, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Tina Albrecht by phone (510) 412-6298, FAX (510) 412-6263, or email [talbrech@dhs.ca.gov].