

California Arbovirus Surveillance Bulletin #40

Week 48 Friday, November 30, 2012



Human Cases

A total of 17 new cases of West Nile virus (WNV) have been reported from the following 6 counties: Kings (1), Los Angeles (7), Orange (3), Riverside (2), San Bernardino (3), and San Joaquin (1). As of November 29, 2012, a total of 434 human cases of WNV illness have been reported in 31 counties. Of the 434 case-patients, 280 (65%) had neuroinvasive illness. The median age of the 434 individuals is 55 years (range: 1-94 years); 254 (59%) are male. Dates of symptom onset for all patients ranged from May 23 to November 8, 2012. A total of 16 WNV-related fatalities have been reported to date in Fresno (2), Glenn (1), Kern (2), Los Angeles (5), Merced (1), Placer (1), Sacramento (2), San Bernardino (1), and Sutter (1) counties. A total of 61 WNV-positive blood donors have been reported this year; 18 individuals developed symptoms and were reclassified as cases.

At this time last year, 154 WNV cases had been reported from 22 counties.

National Comments: As of November 27, 2012, 5,245 cases had been reported nationwide from 48 states and the District of Columbia (DC). This is the highest number of cases reported through the last week of November since 2003. Eighty percent of the cases have been reported from 13 states (Texas, California, Louisiana, Illinois, Mississippi, Michigan, South Dakota, Oklahoma, Nebraska, Colorado, Arizona, Ohio, and New York). Of the 5,245 cases, 2,663 (51%) were classified as neuroinvasive disease, and 236 (4%) patients died.

Horses

No new equine cases were reported this week. In 2012, 22 horses from 13 counties have tested positive for WNV; 8 (36%) died or were euthanized as a result of their illness. At this time last year, 15 equine cases of WNV from 7 counties had been reported.

Dead Birds & Squirrels

Seven WNV positive dead birds have been reported from 3 counties: Los Angeles (5), Orange (1), and San Joaquin (1). In addition, one bird tested positive for chronic WNV infection. In 2012, 1,639 dead birds and 22 squirrels have tested WNV positive from 39 and 6 counties, respectively. At this time last year, 682 dead birds from 26 counties and 24 tree squirrels from 6 counties had tested positive for WNV.

Mosquito Pools

A total of 9 WNV positive mosquito pools have been reported from 3 counties: Los Angeles (7), Riverside (1), and San Bernardino (1). In 2012, 2,848 mosquito pools from 28 counties have tested positive for WNV. At this time last year, 2,087 mosquito pools had tested positive for WNV from 26 counties.

Sentinel Chickens

Two new WNV seroconversions have been reported from a flock located in Los Angeles County. In 2012, 534 WNV antibody-positive chickens have been detected among 111 flocks in 22 counties. At this time last year, 388 WNV positive chickens had been detected among 69 flocks in 15 counties.

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YTD WNV Activity by Element and County, 2012						
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Alameda	2		15			1
Butte	10	1	53	27	45	2
Calaveras		1				
Colusa	3		5		6	
Contra Costa	3		66	19	7	
El Dorado			5			
Fresno	23	3	25	147		
Glenn	7	1	16	4	8	
Imperial	1			4	10	
Kern	25	2	14	571	74	
Kings	4		2	102		
Lake	1		10	23	4	
Los Angeles	139		270	339	129	15
Madera	1	1	2	14		
Marin			1			
Mendocino			6			
Merced	13	1	42	4	14	
Monterey	1					
Napa			1	1		
Nevada			3			
Orange	39		91	69		
Placer	12		60	108	8	
Riverside	18		5	132	63	
Sacramento	29	2	466	487	36	1
San Bernardino	28		39	58	45	
San Diego	1		1			
San Francisco	1		1			
San Joaquin	11	2	56	169		
San Luis Obispo			1			
San Mateo			5			
Santa Clara			19	3		2
Santa Cruz			1			
Shasta	1	5	36	17	6	1
Solano	2		28	3	2	
Sonoma			8	3	1	
Stanislaus	25	1	51	210	8	
Sutter	8		29	19	38	
Tehama	4		5			
Tulare	7		54	144	11	
Ventura	4		38	2	2	
Yolo	6	1	98	154	4	
Yuba	5	1	11	15	13	
Totals	434	22	1,639	2,848	534	22

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2011 & 2012 YTD West Nile Virus Comparisons		
	2011	2012
Total # Dead Bird Reports	9,838	20,423
# Positive Counties	35	42
# Human Cases	154	434
# Horse Cases	15	22
# Positive Dead Birds / # Tested	682 / 2,448	1,639 / 4,311
# Positive Mosquito Pools / # Tested	2,087 / 32,640	2,848 / 32,783
# Seroconversions / # Tested	388 / 22,591	534 / 22,508
# Positive Squirrels / # Tested	24 / 108	22 / 180

TESTING SUMMARIES

Humans and Horses

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	17	0	0	0	0	0
	YTD	434	0	0	0	0	0
Horse Cases	Week	0	0	0	0	0	0
	YTD	22	0	0	0	0	0

Dead Birds & Squirrels

		Number Tested	WNV Positive (recent only)
Dead Birds	Week	48	7
	YTD	4,311	1,639
Squirrels	Week	2	0
	YTD	180	22

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	324	2	0	0
	YTD	22,508	534	0	0
Mosquito Pools	Week	198	9	0	0
	YTD	32,783	2,848	0	0

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POSITIVES: WEEK 48

Humans

WNV Cases							
ID	Report Date	County/Local Health Jurisdiction	Age	Sex	Clin Pres	Onset Date	WNV Fatality?
12-0418	11/15/12	RIVERSIDE	75	M	WNND	10/11/12	NO
12-0419	11/15/12	LOS ANGELES	89	M	WNND	10/21/12	NO
12-0420	11/15/12	LOS ANGELES	53	F	WNF	09/20/12	NO
12-0421	11/15/12	LOS ANGELES	33	M	WNND	10/24/12	NO
12-0422	11/15/12	LOS ANGELES	94	M	WNF	10/05/12	NO
12-0423	11/15/12	LOS ANGELES	41	F	WNND	09/25/12	NO
12-0424	11/15/12	LOS ANGELES	45	M	WNND	09/26/12	NO
12-0425	11/19/12	SAN BERNARDINO	66	F	WNND	09/25/12	NO
12-0426	11/19/12	SAN BERNARDINO	52	F	WNF	09/28/12	NO
12-0427	11/20/12	ORANGE	79	M	WNF	Week 45	NO
12-0428	11/20/12	ORANGE	75	F	WNND	Week 43	NO
12-0429	11/20/12	ORANGE	61	F	WNND	Week 43	NO
12-0430	11/26/12	SAN JOAQUIN	87	F	WNND	09/26/12	NO
12-0431	11/27/12	SAN BERNARDINO	59	F	WNF	10/15/12	NO
12-0432	11/27/12	RIVERSIDE	57	M	WNND	10/17/12	NO
12-0433	11/27/12	PASADENA CITY	94	M	WNF	10/13/12	NO
12-0434	11/28/12	KINGS	>18	F	WNF	N/A	NO
Presumptive Viremic Blood Donors (Asymptomatic Infections)							
BD12-0049	11/19/12	SAN BERNARDINO	19	F			

Dead Birds & Squirrels

County	Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Los Angeles	LA Co Vet	Los Angeles	90045	American Crow	11/27/2012	WNV	Recent	VecTest
Los Angeles	LA Co Vet	Los Angeles	90066	American Crow	11/15/2012	WNV	Recent	VecTest
Los Angeles	LA Co Vet	Beverly Hills	90212	American Crow	11/18/2012	WNV	Recent	VecTest
Los Angeles	LA Co Vet	Los Angeles	90036	American Crow	11/14/2012	WNV	Recent	VecTest
Los Angeles	LA Co Vet	Santa Monica	90402	American Crow	11/16/2012	WNV	Recent	VecTest
Orange	Orange Co VCD	Fullerton	92832	American Crow	11/13/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95864	Swainson's Hawk	11/16/2012	WNV	Chronic	RT-PCR
San Joaquin	San Joaquin MVCD	Lathrop	95330	Cooper's Hawk	11/16/2012	WNV	Recent	RT-PCR

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Mosquito Pools

County	Site Code	Pool #	City	Species	# in Pool	Trap Type	Collected	Virus	Test Method
Los Angeles	GRLA2078	1397	Los Angeles	Cx. quinquefasciatus	50	GRVD	11/21/2012	WNV	RTPCR
Los Angeles	GRLA2100	1362	Norwalk	Cx. quinquefasciatus	50	GRVD	11/15/2012	WNV	RTPCR
Los Angeles	GRLA2247	1369	Pico Rivera	Cx. quinquefasciatus	50	GRVD	11/15/2012	WNV	RTPCR
Los Angeles	GRLA2247	1371	Pico Rivera	Cx. quinquefasciatus	50	GRVD	11/15/2012	WNV	RTPCR
Los Angeles	GRLA2414	6310	Granada Hills	Cx. quinquefasciatus	50	GRVD	11/15/2012	WNV	RTPCR
Los Angeles	GRLA2512	6330	Los Angeles	Cx. quinquefasciatus	46	GRVD	11/20/2012	WNV	RTPCR
Los Angeles	GRLA2897	1403	Long Beach	Cx. quinquefasciatus	50	GRVD	11/21/2012	WNV	RTPCR
Riverside	COAV0328	3308		Cx. quinquefasciatus	17	GRVD	11/16/2012	WNV	RTPCR
San Bernardino	WVAL2020	704	Fwy CA 71	Cx. quinquefasciatus	38	GRVD	11/16/2012	WNV	RTPCR

Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02
Los Angeles	GRLA2615	Newhall	11/13/2012	WNV	3512	3513

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 or confirmation.

Horses:

Serum or brain tissue specimens from horses displaying neurological symptoms are submitted to the California Animal Health and Safety Laboratory (CAHFS) and tested by EIA and PRNT.

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Dead Birds and Tree Squirrels:

Dead birds and tree squirrels are necropsied at CAHFS laboratory at University of California, Davis. Oral swabs from American Crows and kidney tissue from all other dead birds and squirrels are forwarded to the UC Davis Center for Vectorborne Diseases (CVEC) for West Nile virus testing using the singleplex RT-PCR Taqman assay and confirmed with a second primer set.

Sentinel Chickens:

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

Mosquito Pools:

Mosquito pools are submitted to CVEC and screened for WEEV, SLEV, 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), California Department of Public Health, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Tina Feiszli by phone (510) 412-6253 or email: tina.feiszli@cdph.ca.gov.

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 website, www.cdc.gov, and the USGS website, www.westnilemaps.usgs.gov.