

# California Influenza Surveillance Project

## Viral and Rickettsial Disease Laboratory

### 2008-2009

#### Influenza Update – Week 53 (December 28 – January 3, 2009)

##### National Influenza Activity

During week 53 (December 28, 2008 – January 3, 2009), influenza activity in the United States remained at approximately the same level as in the previous week. Seventy-nine (3.2%) specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories and reported to CDC/Influenza Division were positive for influenza. The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold. The proportion of outpatient visits for influenza-like illness (ILI) was below national and region-specific baseline levels. Four states reported regional activity; 11 states reported local influenza activity; the District of Columbia and 30 states reported sporadic influenza activity; and five states reported no influenza activity.

##### California Influenza Activity

Influenza activity, including sentinel provider outpatient influenza-like illnesses (ILI), Kaiser Permanente P&I (pneumonia and influenza) hospitalizations and influenza laboratory tests in both Northern and Southern California, remained sporadic (defined by the CDC as “Isolated cases of lab confirmed influenza in the state, but ILI activity is not increased”).

##### VRDL laboratory data:

Because of the low activity so far this season, VRDL has characterized only a few influenza viruses. Out of 42 influenza specimens, both influenza A (29) and influenza B (13) have been identified. The subtypes of the influenza A have included both H1 (13) and H3 (10). Strain typing results to date are shown below; "low reactors" are influenza viruses that do not appear by hemagglutinin inhibition assay to match current vaccine strains and are sent to CDC for further characterization. Surveillance for antiviral resistance is also ongoing; of four influenza A/H1 subtype viruses tested so far, three were resistant and one was sensitive to oseltamivir, and two of four tested were sensitive to the adamantane drugs. Of the two influenza A/H3 viruses tested so far, both were resistant to the adamantane drugs and sensitive to oseltamivir. The source of the majority of the influenza specimens characterized so far have been from the Kaiser Permanente Northern California Regional Laboratory.

<b>Straintyping</b>	<b>H1</b>	A/Brisbane/59/2007	2
		Low Reactor	2
	<b>H3</b>	A/Brisbane/10/2007	3
	<b>B</b>	B/Florida/4/06	2
		B-Victoria lineage	2

**Kaiser Permanente inpatient, sentinel providers' outpatient influenza-like illnesses, and Kaiser Permanente antiviral data:**

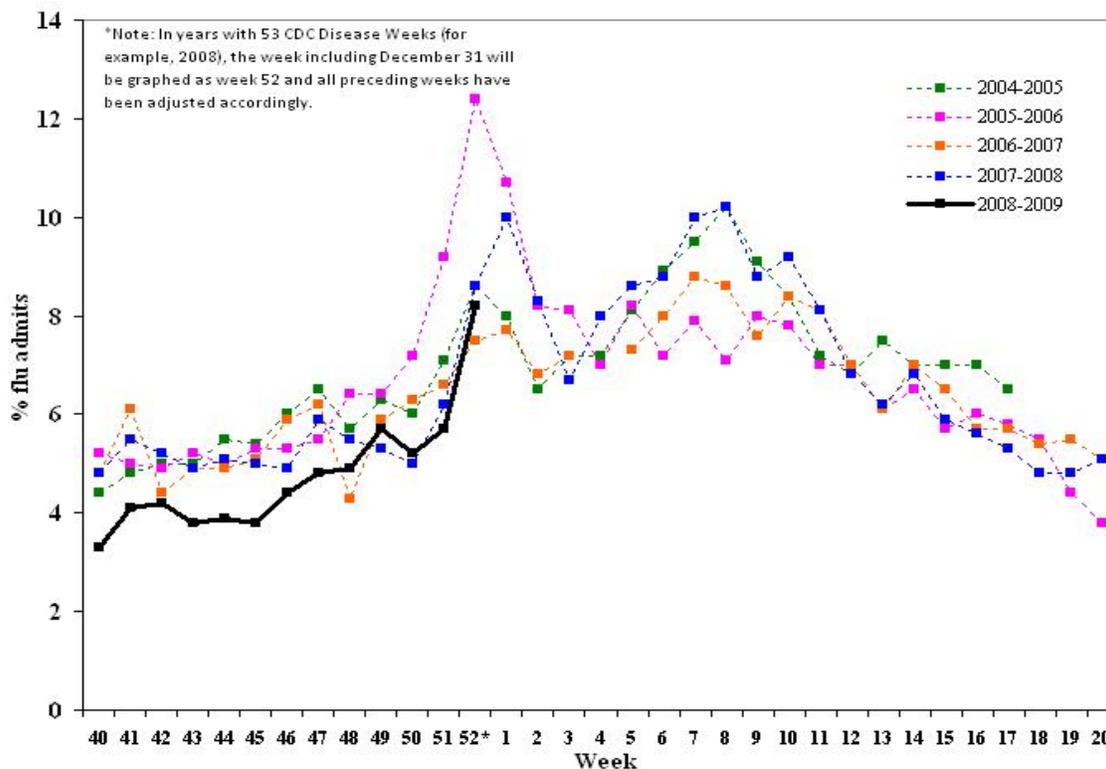
Week	Kaiser Inpatient Data % (range)*		Outpatient ILI Data %(# reported)‡	Kaiser Antiviral Data§	
	Northern CA	Southern CA		Northern CA	Southern CA
53	8.2 (3.7–14.8)	3.1 (1.3–5.8)	1.4 (76 reported)	66	68
Previous week	5.7 (0.0–13.1)	2.6 (0.9–5.0)	1.8 (89 reported)	53	70

\* “Flu admissions” are present year-round. During the off-season, these consist chiefly of pneumonia, which represents approximately 3–5% of all admissions

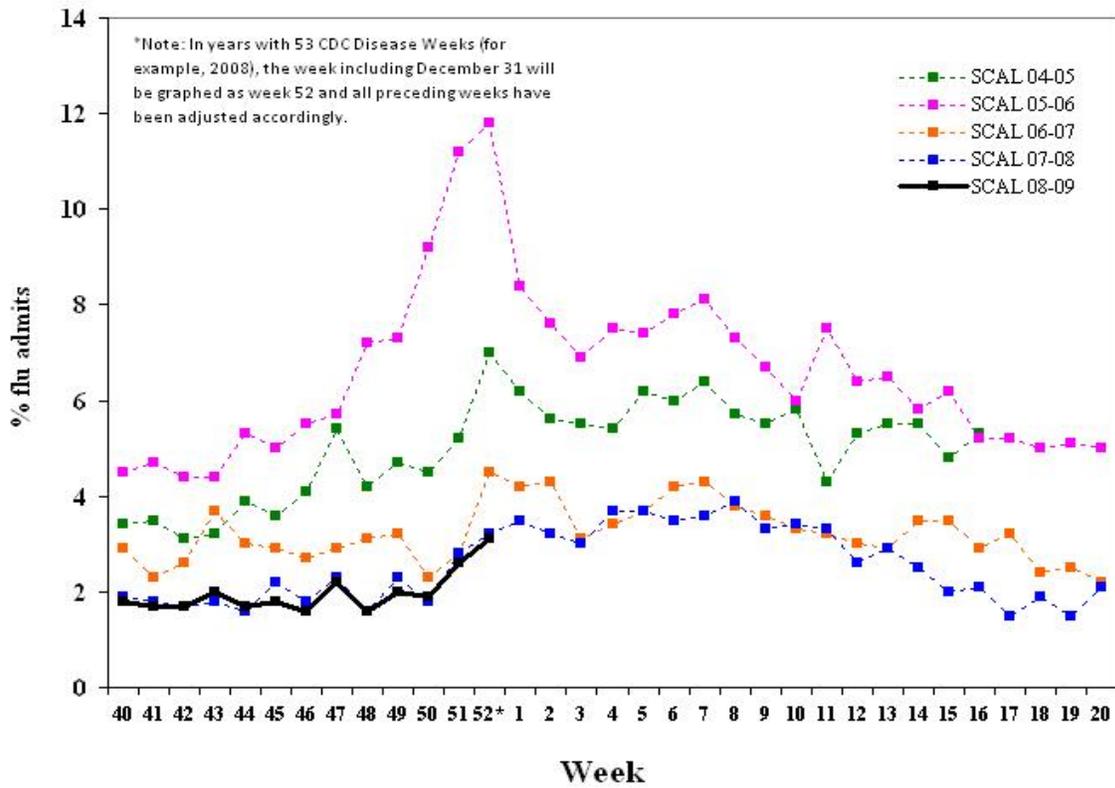
‡ The percentage of outpatient visits for influenza-like illness (ILI) is calculated by dividing the number of ILI visits by the total number of outpatient visits per week

§ The number of prescriptions filled for the antiviral drugs used for influenza (amantadine, rimantadine, zanamivir, and oseltamivir) by Kaiser outpatient pharmacies in California

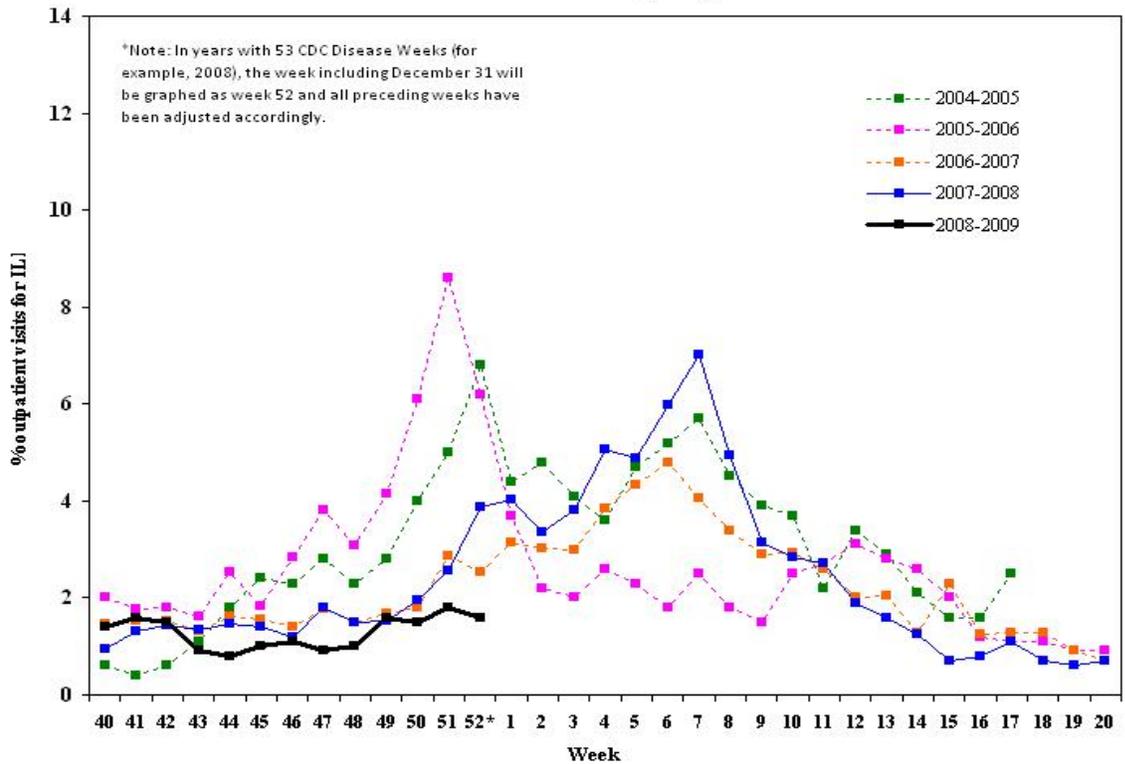
**Inpatient "Flu" Admissions 2004-2009  
Northern California Kaiser**



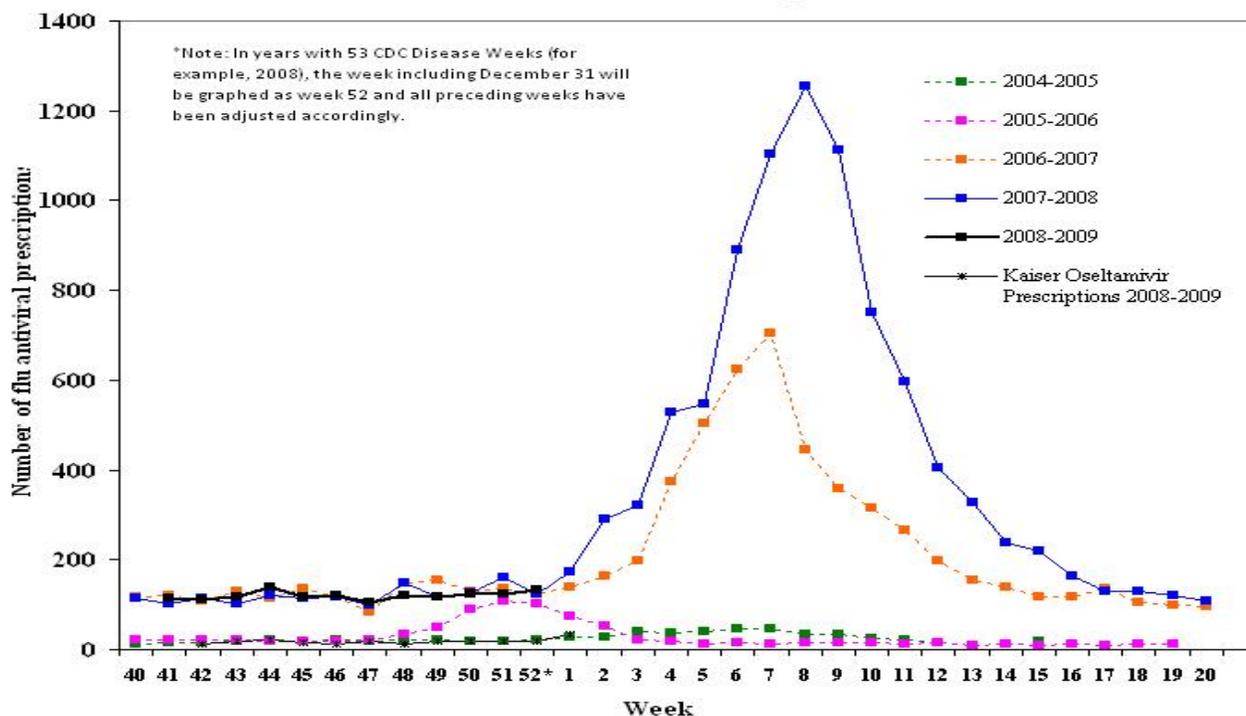
## Inpatient "Flu" Admissions 2004-2009 Southern California Kaiser



## California Sentinel Providers Influenza-Like Illness (ILI) Visits 2004-2009



## Kaiser Pharmacy Data Influenza Antiviral Usage 2004-2009



### Laboratory Data (viral isolation and detection)

		Sentinel Laboratories/Respiratory Laboratory Network <sup>‡</sup>	Sentinel Providers
<b>Week 53</b>	<b>Number of Sites Reporting</b>	28	58 specimens submitted through week 53 (2 pending, 2 positive by PCR)
	<b>Influenza A</b>	45 <sup>a</sup> Total to date: 110	1 <sup>e</sup>
	<b>Influenza B</b>	3 <sup>b</sup> Total to date: 23	1 <sup>f</sup>
	<b>Influenza A/B</b>	0 Total to date: 0	0
	<b>RSV</b>	442 <sup>c</sup> Total to date: 1575	0
	<b>Other Respiratory Viruses</b>	2 <sup>d</sup> Total to date: 82	0

<sup>‡</sup>Sentinel laboratories are hospital, academic, private, and public health laboratories located throughout California that provide data on the number of laboratory-confirmed influenza and other respiratory virus detections and isolations. The Respiratory Laboratory Network (RLN) is a network of 23 local public health laboratories that offer enhanced diagnostic testing with the “R-mix” shell vial assay, which detects several respiratory pathogens, including influenza A and B viruses, respiratory syncytial virus, parainfluenza virus, and adenovirus. Some RLN labs also offer PCR testing for influenza A and B.

<sup>a</sup> Alameda (4); Contra Costa (2); Los Angeles (2); Marin (2); Sacramento (2); San Diego (9); San Francisco (1); San Mateo (7); Santa Clara (6); Shasta (1); Solano (2); Sonoma (4); Stanislaus (1); Tulare (1); Unknown (1)

<sup>b</sup> Sacramento (2); San Francisco (1)

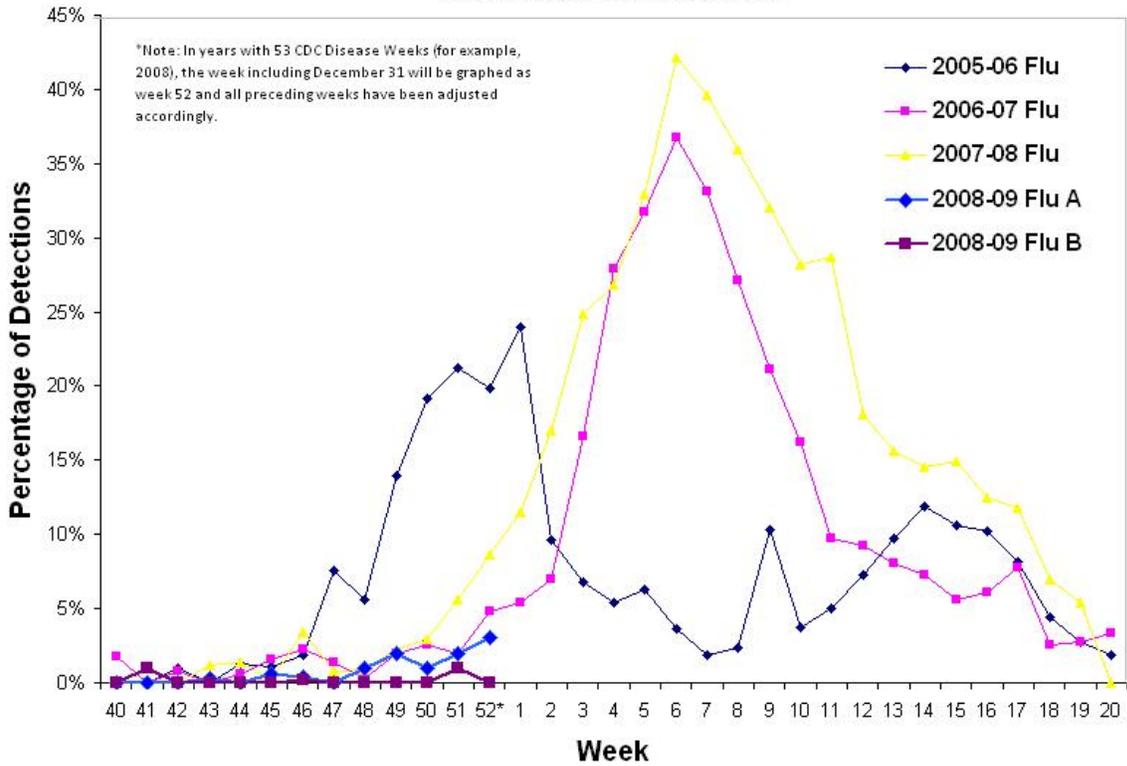
<sup>c</sup> Alameda (61); Contra Costa (33); Fresno (23); Kern (4); Kings (4); Long Beach (65); Los Angeles (22); Madera (5); Marin (14); Orange (1); Placer (10); Sacramento (25); San Bernardino (1); San Diego (17); San Francisco (18); San Joaquin (17); San Mateo (21); Santa Clara (66); Solano (14); Sonoma (7); Stanislaus (11); Tulare (3)

<sup>d</sup> human metapneumovirus (1); adenovirus (1)

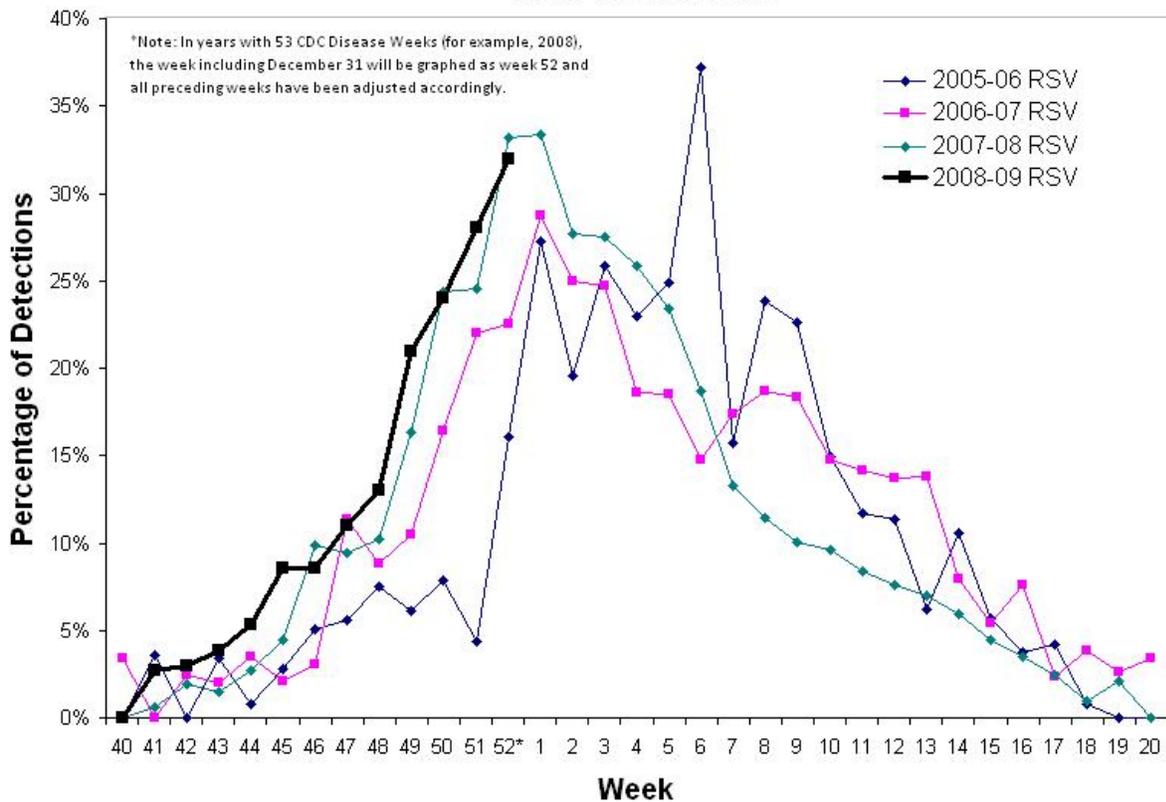
<sup>e</sup> Northern California (1)

<sup>f</sup> Northern California (1)

## Sentinel Laboratories/Respiratory Laboratory Network Influenza Detections



## Sentinel Laboratories/Respiratory Laboratory Network RSV Detections



**Respiratory Laboratory Network:**

<b>County Name</b>	<b>Rmix</b>	<b>PCR</b>
Alameda	X	X
El Dorado	X	X
Contra Costa		X
Fresno	X	X
Humboldt		X
Imperial	X	
Long Beach	X	X
Los Angeles	X	X
Monterey		X
Orange	X	X
Placer	X	X
Riverside		X
Sacramento	X	
San Bernardino	X	X
San Diego	X	X
San Francisco	X	X
San Joaquin	X	X
Santa Clara	X	X
Shasta	X	X
Solano	X	X
Sonoma	X	
Stanislaus	X	
Tulare	X	X
Ventura	X	X
VRDL	X	X

**Please continue to assist us in recruiting primary care providers (physicians, nurse practitioners, and physician assistants) to be sentinel physicians in your area.** For more information, contact Melissa Dahlke at [flu@cdph.ca.gov](mailto:flu@cdph.ca.gov) or 510-620-3494.

For questions about the California Influenza Surveillance Project, please contact Erica Boston ([erica.boston@cdph.ca.gov](mailto:erica.boston@cdph.ca.gov)) or Janice Louie ([janice.louie@cdph.ca.gov](mailto:janice.louie@cdph.ca.gov)).