

California Influenza Surveillance Project

Viral and Rickettsial Disease Laboratory

2008-2009

Influenza Update – Week 3 (January 18 – January 24, 2009)

National Influenza Activity

During week 3 (January 18-24, 2009), influenza activity continued to slowly increase in the United States. Five hundred eighty-eight (15.8%) 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 the national baseline. The New England region reported ILI above its' region-specific baseline. Two states reported widespread influenza activity, 14 states reported regional activity; 12 states reported local influenza activity; and the District of Columbia, Puerto Rico and 22 states reported sporadic influenza activity. One human infection with a novel influenza A virus was reported.

California Influenza Activity

During week 3 (January 18-24, 2009), laboratory detections of influenza and influenza-like illness (ILI) began trending up in Northern California. As a result, influenza activity in California was upgraded to “local” (defined by CDC as outbreaks of influenza or increases influenza-like illness (ILI) cases and laboratory-confirmed influenza in a single region of the state).

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

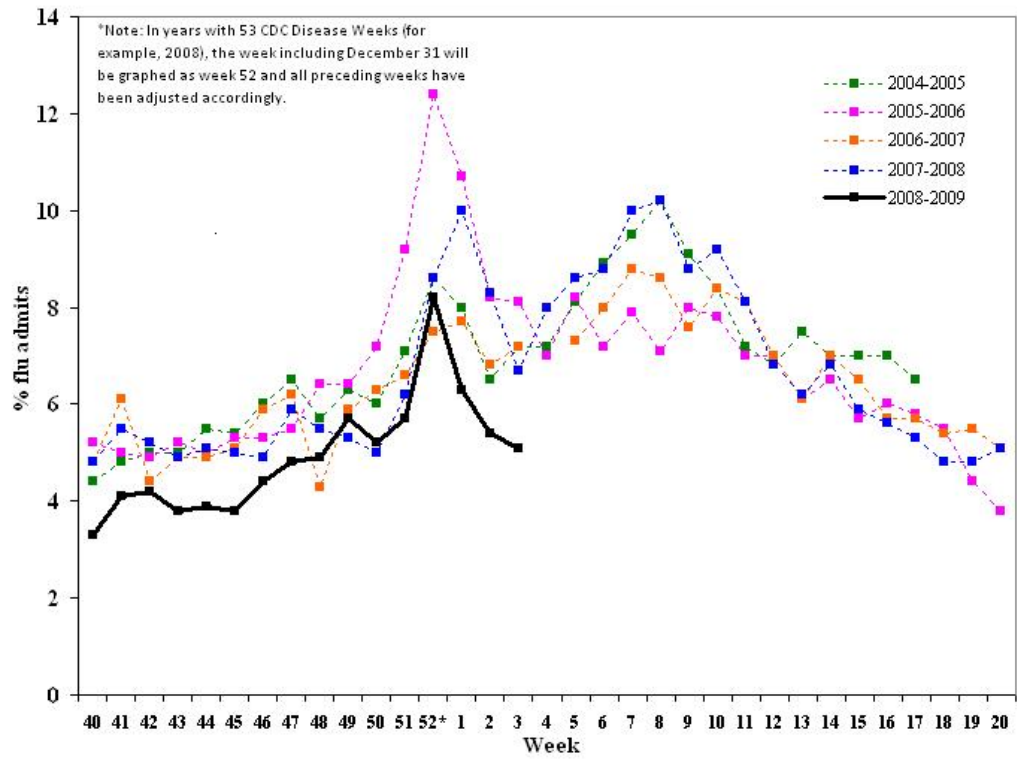
Week	Kaiser Inpatient Data % (range)*		Outpatient ILI Data %(# reported)‡	Kaiser Antiviral Data§	
	Northern CA	Southern CA		Northern CA	Southern CA
3	5.1 (0.4–9.7)	2.1 (0.7–3.7)	2.1 (77 reported)	108	89
Previous week	5.4 (2.2–11.0)	2.1 (0.4–4.7)	1.3 (99 reported)	73	82

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

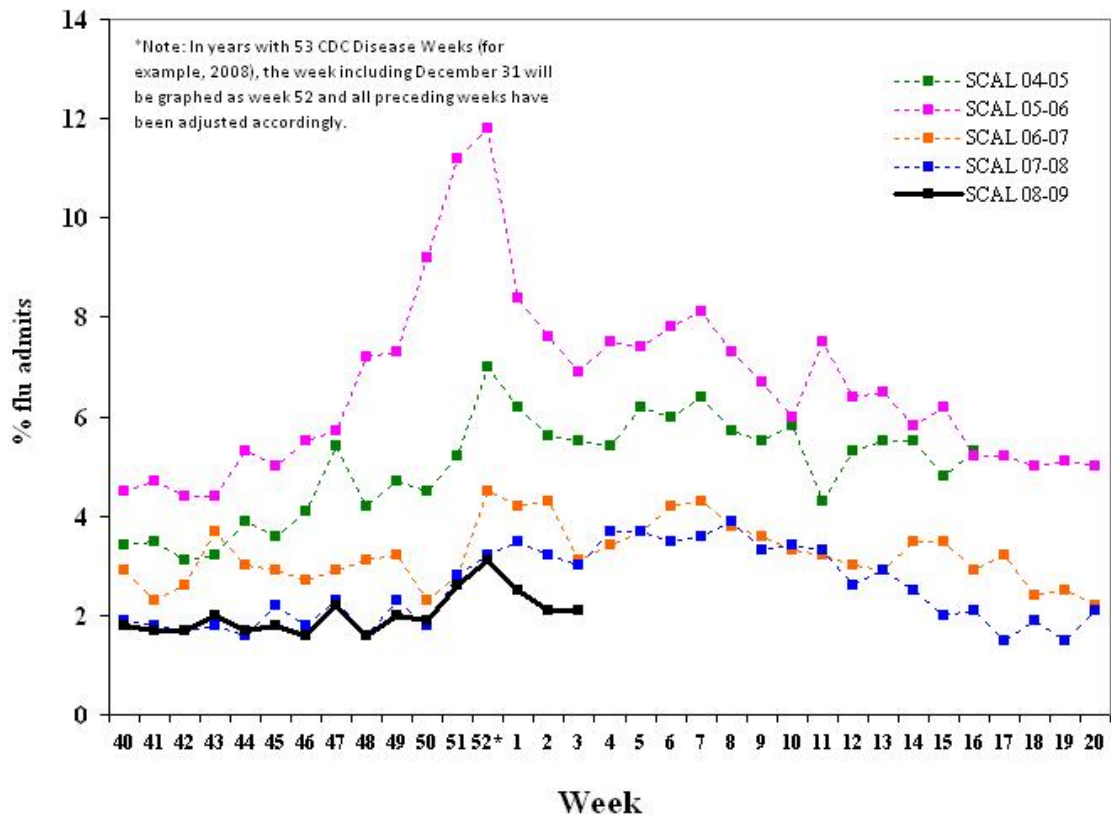
‡ The percentage of outpatient visits for influenza-like illness (ILI) is calculated by dividing the number of ILI visits by the total number of outpatient visits per week

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

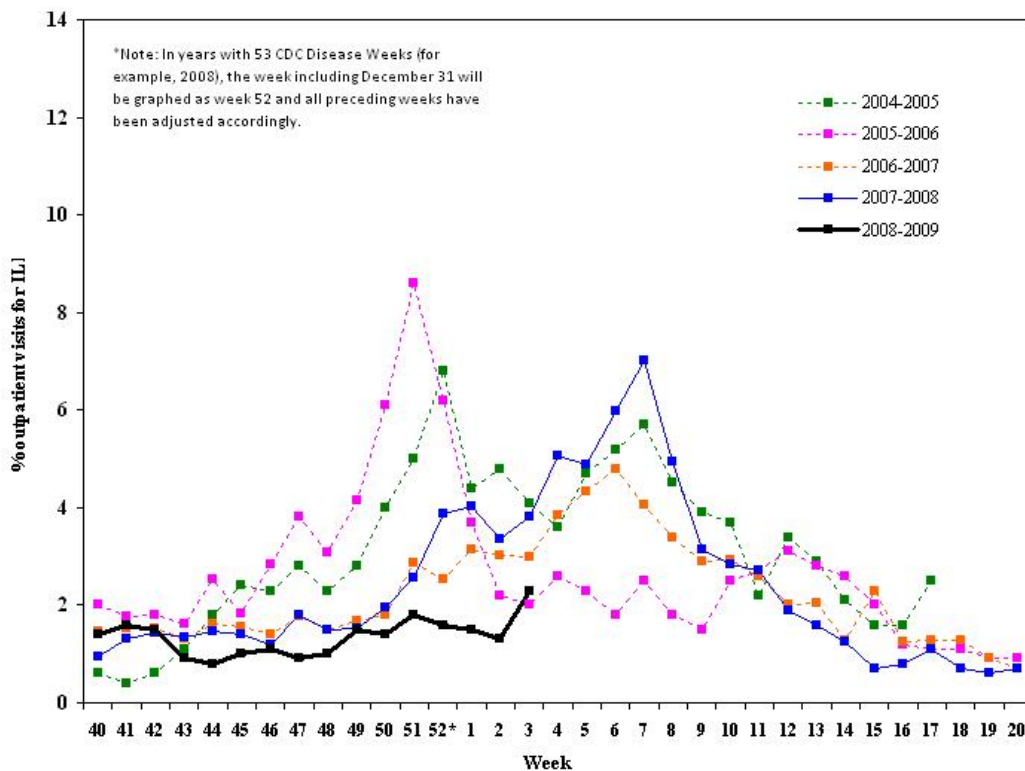
Inpatient "Flu" Admissions 2004-2009 Northern California Kaiser



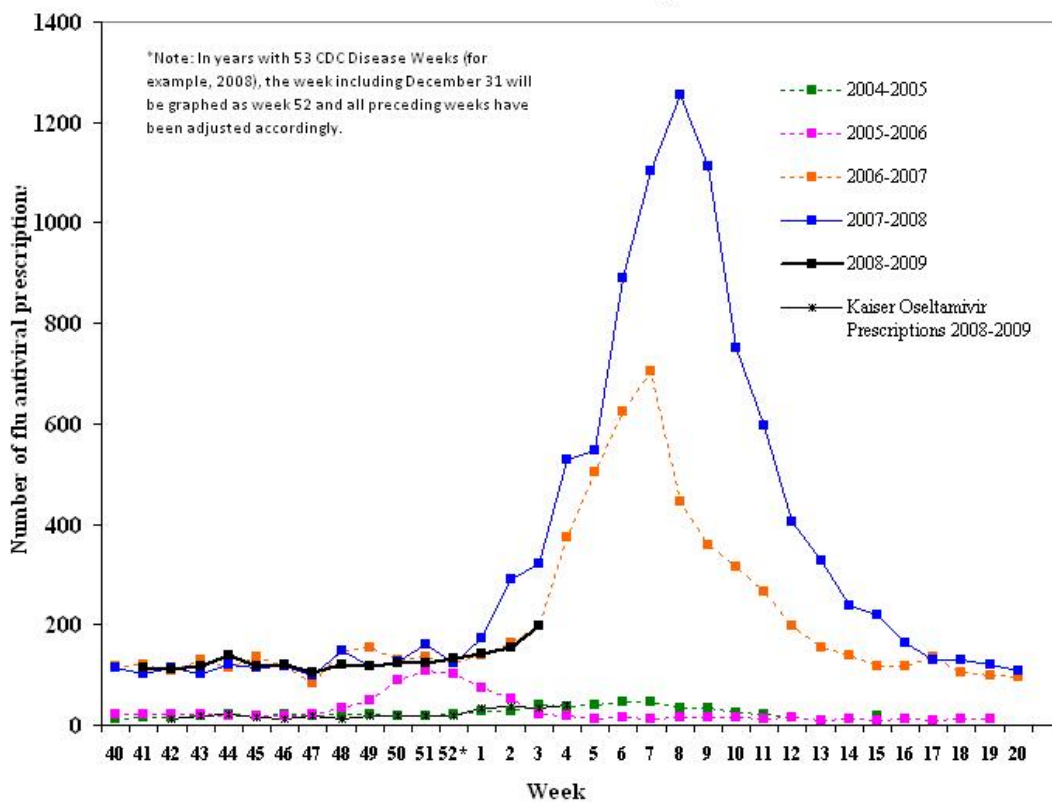
Inpatient "Flu" Admissions 2004-2009 Southern California Kaiser



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



Kaiser Pharmacy Data Influenza Antiviral Usage 2004-2009



Laboratory Data (Positive influenza and other virus results from sentinel laboratories, local public health laboratories and VRDL)

		Sentinel Laboratories/Respiratory Laboratory Network [‡]	Sentinel Providers
Week 3	Number of Sites Reporting	26	114 specimens submitted through week 3 (11 pending, 28 positive by PCR)
	Influenza A	201 ^a Total to date: 534	23 ^d
	Influenza B	45 ^b Total to date: 99	5 ^e
	Influenza A/B	0 Total to date: 0	0
	RSV	569 ^c Total to date: 3169	0
	Other Respiratory Viruses	0 Total to date: 87	0

[‡]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.

^a Alameda (42); Contra Costa (10); Fresno (8); Kern (1); Los Angeles (5); Marin (7); Napa (1); Orange (6); Placer (1); Riverside (1); Sacramento (10); San Diego (23); San Francisco (8); San Joaquin (6); San Mateo (14); Santa Clara (43); Solano (9); Sonoma (3); Ventura (1); Yolo (2)

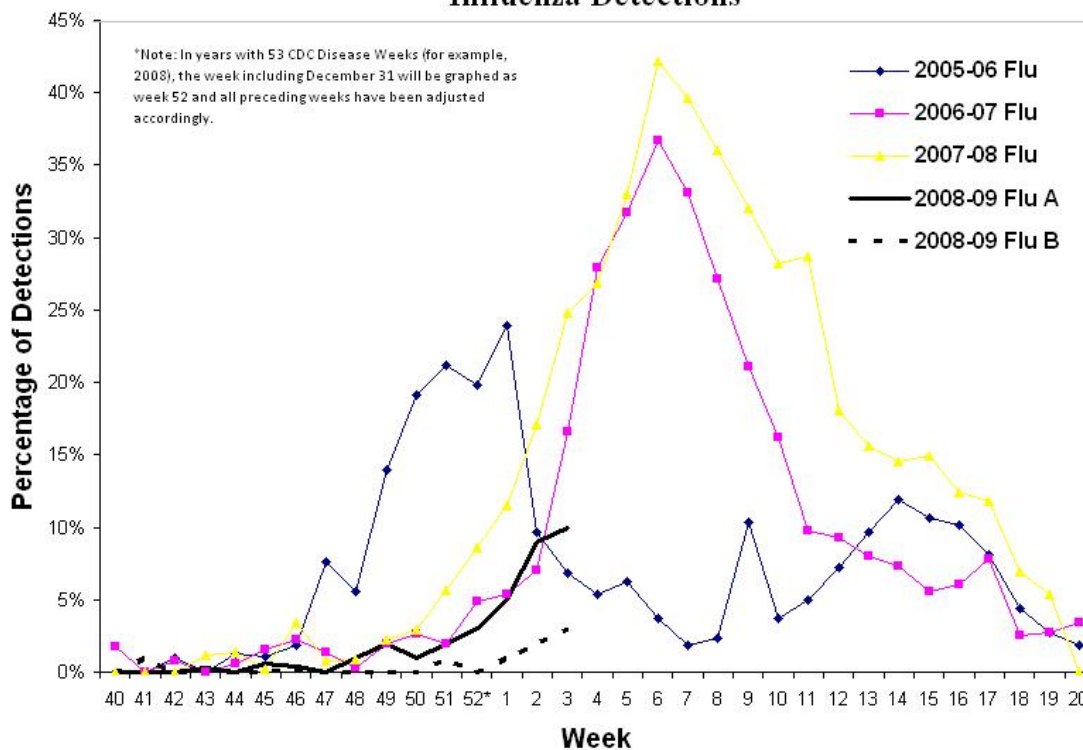
^b Alameda (1); Contra Costa (1); Fresno (1); Marin (5); Placer (3); Orange (1); Sacramento (20); San Diego (1); San Joaquin (1); San Mateo (2); Santa Clara (7); Sonoma (1); Yolo (1)

^c Alameda (66); Contra Costa (33); Fresno (42); Kern (3); Kings (1); Los Angeles (23); Madera (11); Marin (12); Merced (2); Napa (2); Orange (2); Placer (26); Riverside (2); Sacramento (77); San Bernardino (3); San Diego (13); San Francisco (21); San Joaquin (18); San Mateo (24); Santa Clara (128); Solano (23); Sonoma (7); Stanislaus (22); Tulare (5); Yolo (2); Unknown (1)

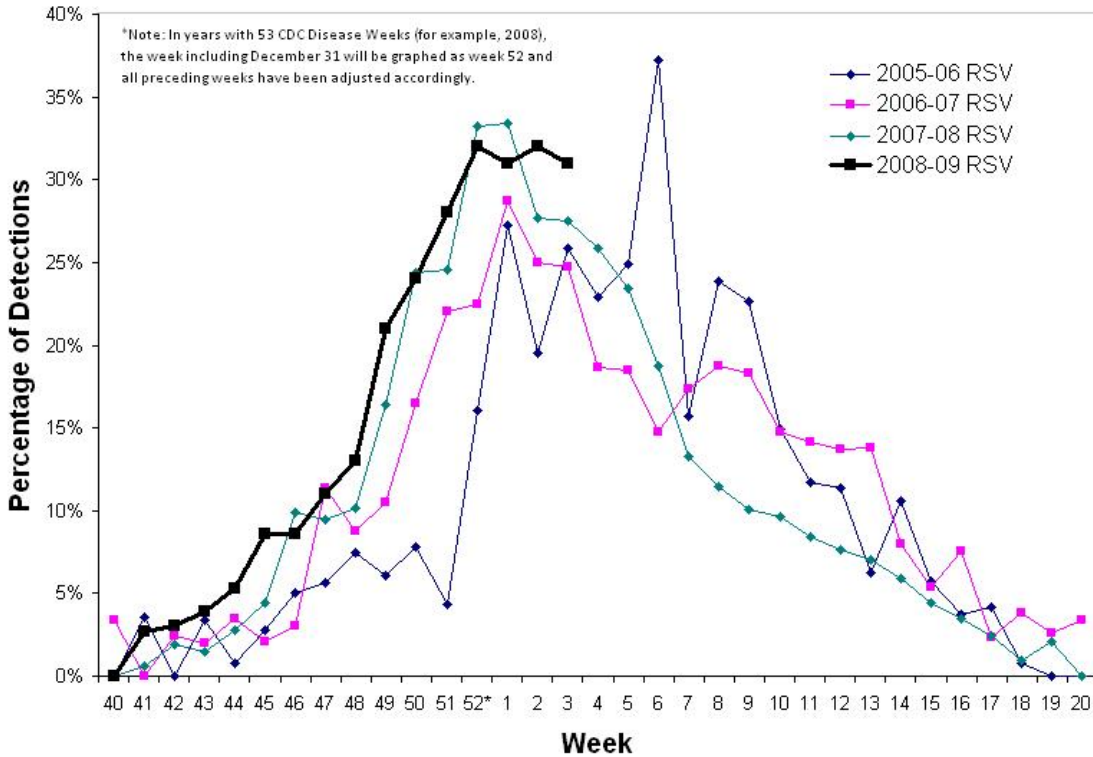
^d Alameda (3); Butte (2); El Dorado (1); Fresno (2); Kern (1); Los Angeles (1); Sacramento (1); San Bernardino (1); San Francisco (3); Santa Barbara (3); Santa Clara (2); Santa Cruz (1); Tulare (1); Ventura (1)

^e San Francisco (2); Alameda (1); El Dorado (1); Sacramento (1)

Sentinel Laboratories/Respiratory Laboratory Network Influenza Detections

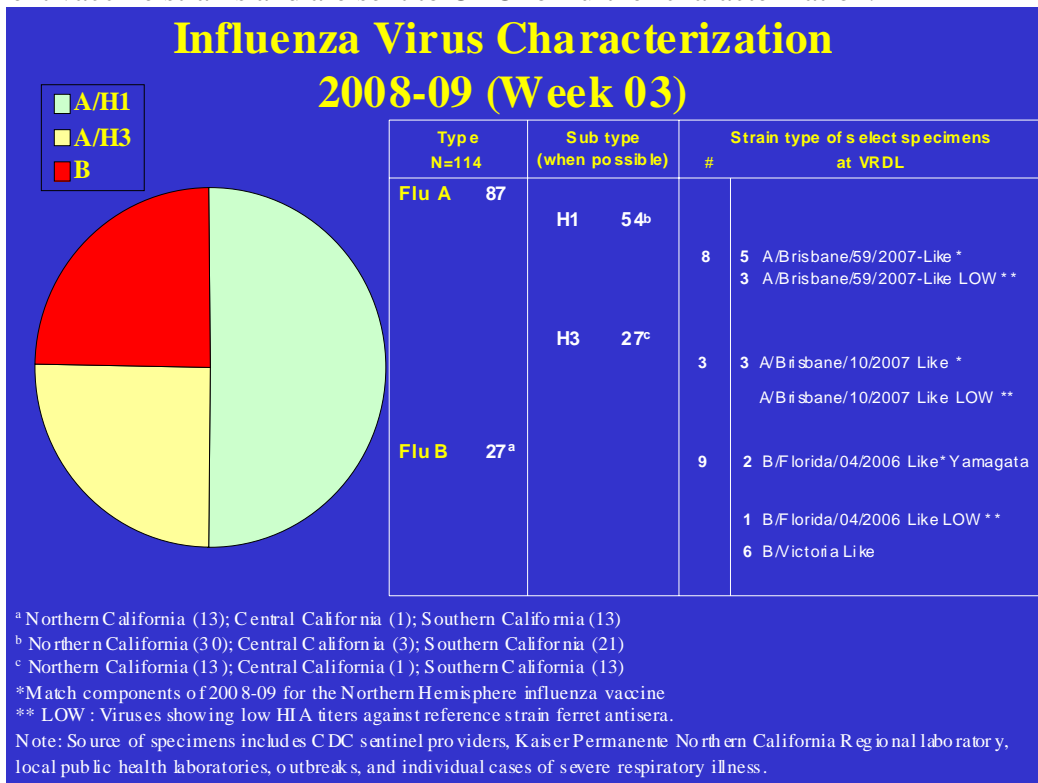


Sentinel Laboratories/Respiratory Laboratory Network RSV Detections



Virologic Characterization at VRDL and Local Public Health Laboratories

Out of 114 influenza specimens characterized so far, both influenza A (87) and influenza B (27) have been identified. Results to date for influenza subtypes and antigenic characterization (strain-typing) 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.



Antiviral Resistance

In December 2008, a Health Advisory was issued by the CDC providing interim recommendations for use of antiviral medications given the observation of high levels of resistance to oseltamivir in influenza A/subtype H1 viral isolates. The CDC Health Advisory can be accessed at: <http://www2a.cdc.gov/HAN/ArchiveSys/ViewMsgV.asp?AlertNum=00279>.

Identification of subtype following confirmation of influenza A infection may be very useful in situations such as institutional outbreaks (e.g. long term care facilities or prisons), where implementation of mass treatment or chemoprophylaxis with antivirals is considered. Subtyping is available at some local public health laboratories as well as VRDL. Throughout the season the CDPH Viral and Rickettsial Disease Laboratory will continue to perform surveillance for antiviral resistance and provide periodic updates.

Respiratory Laboratory Network:

County Name	Rmix	PCR
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 or 510-620-3494.

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