

California Influenza Surveillance Project

Viral and Rickettsial Disease Laboratory

2007-2008

Influenza Update – Week 13 (March 23 - March 29, 2008)

National Influenza Activity:

During week 13 (March 23 - 29, 2008), influenza activity continued to decrease in the United States. Seven hundred three (17.7%) specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories were positive for influenza. The proportion of deaths attributed to pneumonia and influenza was above the epidemic threshold for the twelfth consecutive week. The proportion of outpatient visits for influenza-like illness (ILI) was at national baseline levels. Seven states reported widespread influenza activity; 27 states reported regional influenza activity; 11 states reported local influenza activity; and five states and the District of Columbia reported sporadic influenza activity.

California Influenza Activity

During Week 13 (March 23–March 29, 2008), influenza activity in California remained at “regional” (defined by the CDC as “Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least two but less than half the regions of the state”). Most surveillance parameters continue to trend down. Three new institutional outbreaks were reported during week 13.

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

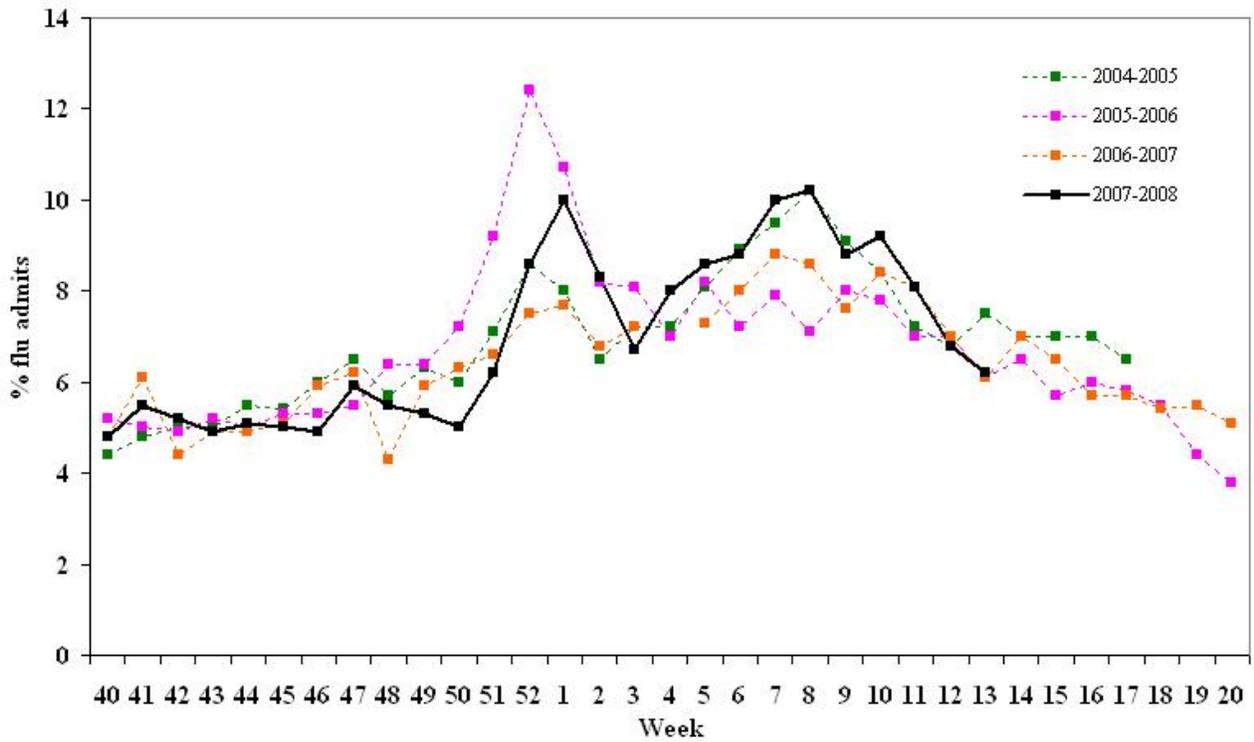
Week	Kaiser Inpatient Data % (range)*		Outpatient ILI Data %(# reported)‡	Kaiser Antiviral Data§	
	Northern CA	Southern CA		Northern CA	Southern CA
13	6.2 (2.2–9.6)	2.9 (0.7–6.0)	1.8 (59 reported)	207	120
Previous week	6.8 (1.6–12.5)	2.6 (0.6–5.5)	1.8 (69 reported)	264	140

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

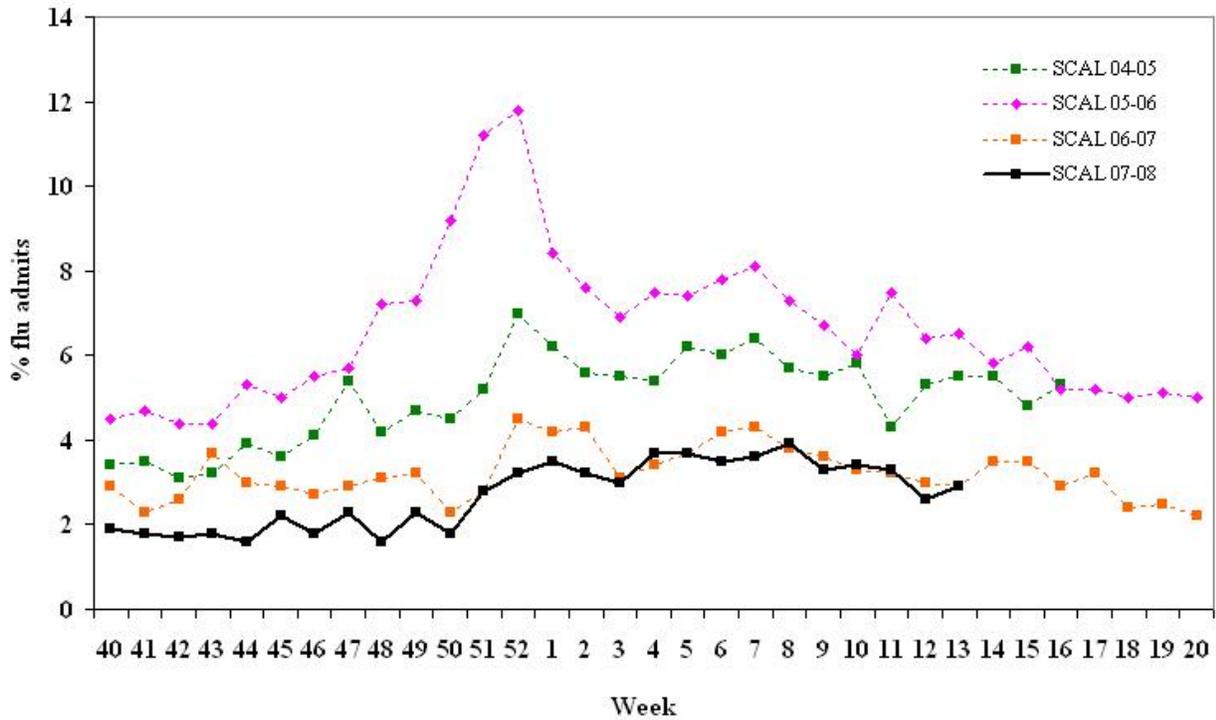
‡ The percentage of outpatient visits for influenza-like illness (ILI) is calculated by dividing the number of ILI visits by the total number of outpatient visits per week

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

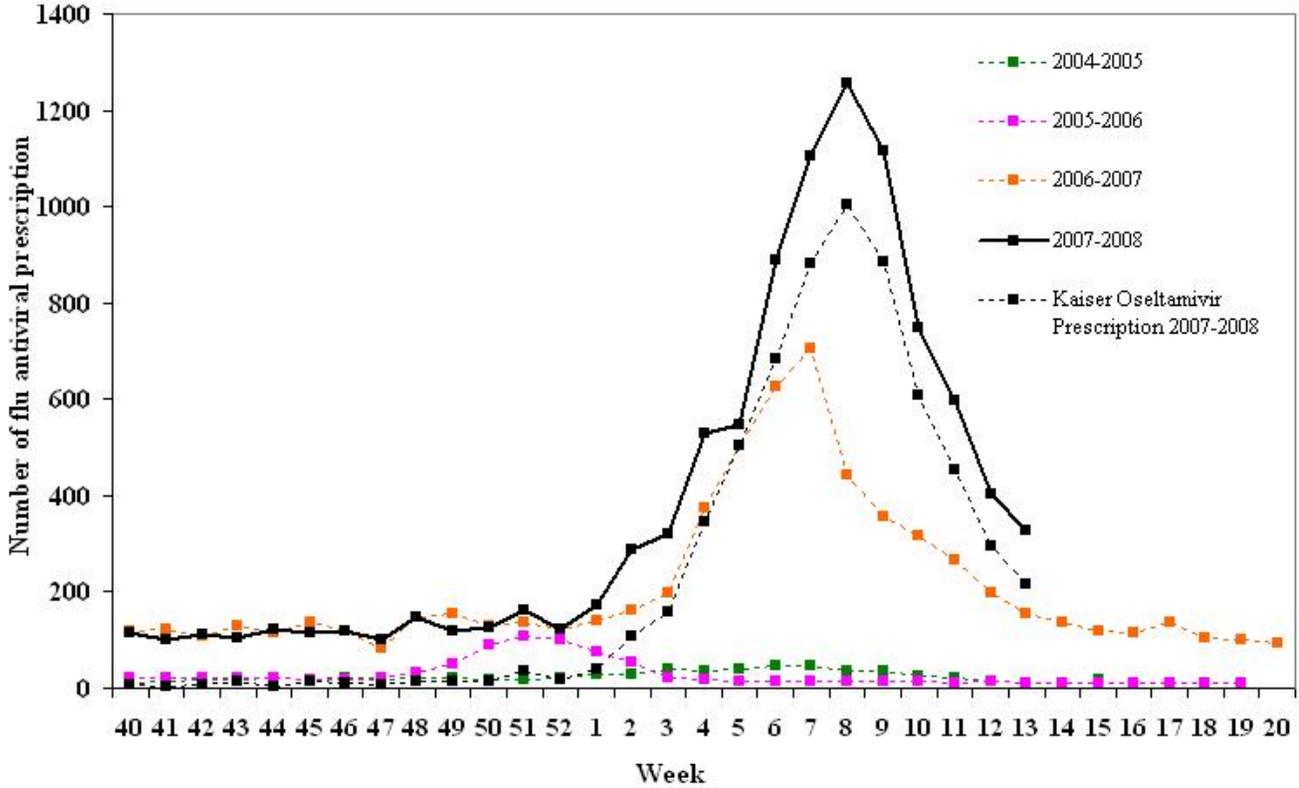
Inpatient "Flu" Admissions 2004-2008 Northern California Kaiser



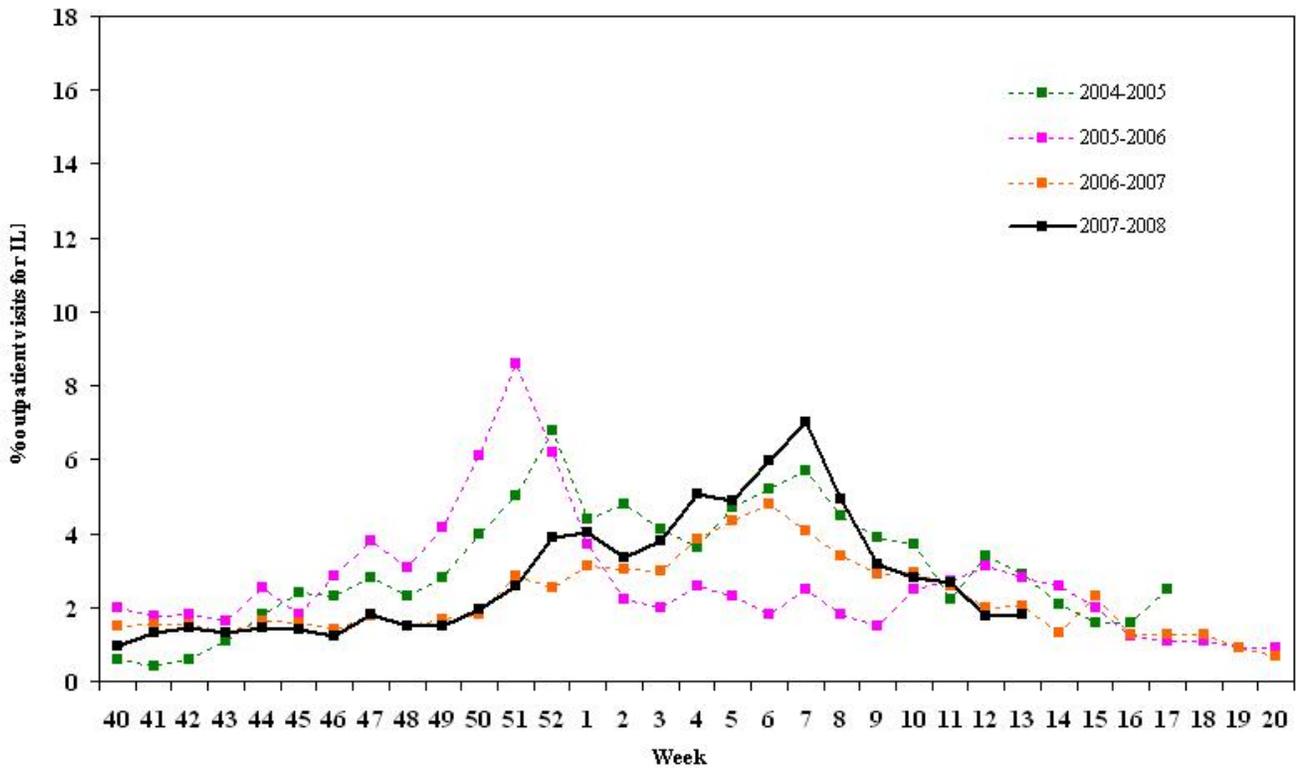
Inpatient "Flu" Admissions 2004-2008 Southern California Kaiser



Kaiser Pharmacy Data Influenza Antiviral Usage 2004-2008



California Sentinel Providers Influenza-Like Illness (ILI) Visits 2004-2008



Laboratory Data (viral isolation and detection)

Please note that for the 2007–2008 season, sentinel laboratory and the respiratory laboratory network data are combined.

		Sentinel Laboratories/Respiratory Laboratory Network [‡]	Sentinel Providers
Week 13	Number of Sites Reporting	15	610 specimens submitted through week 13 (363 positive by culture, 54 pending)
	Influenza A	107 ^a Total to date: 6141	242
	Influenza B	85 ^b Total to date: 3630	95
	Influenza A/B	3 ^c Total to date: 18	0
	RSV	76 ^d Total to date: 6643	2
	Other Respiratory Viruses	6 ^e Total to date: 257	24 ^f

[‡]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 26 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 (15); Contra Costa (7); Los Angeles (1); Marin (4); Napa (1); Orange (4); Placer (3); Sacramento (10); San Diego (12); San Francisco (7); San Joaquin (3); San Mateo (6); Santa Clara (21); Solano (7); Sonoma (5); Unknown (1)

^b Alameda (14); Contra Costa (7); Fresno (5); Los Angeles (2); Marin (1); Merced (1); Riverside (1); Sacramento (14); San Diego (13); San Francisco (3); San Joaquin (1); San Mateo (2); Santa Clara (14); Solano (4); Sonoma (2); Unknown (1)

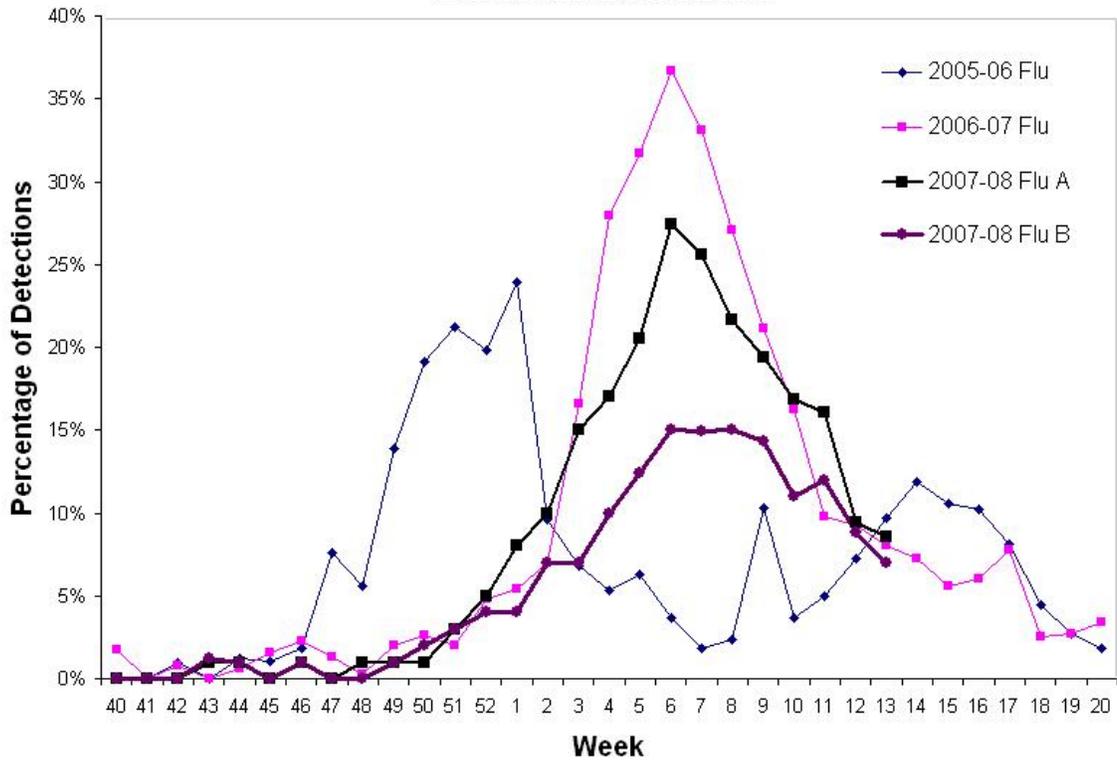
^c San Diego (3)

^d Alameda (3); Contra Costa (1); Fresno (7); Los Angeles (28); Madera (2); Marin (1); Monterey (2); Nevada (1); Orange (2); Riverside (3); Sacramento (7); San Diego (5); San Francisco (3); San Joaquin (2); San Mateo (2); Santa Clara (3); Solano (2); Sonoma (1); Yolo (1)

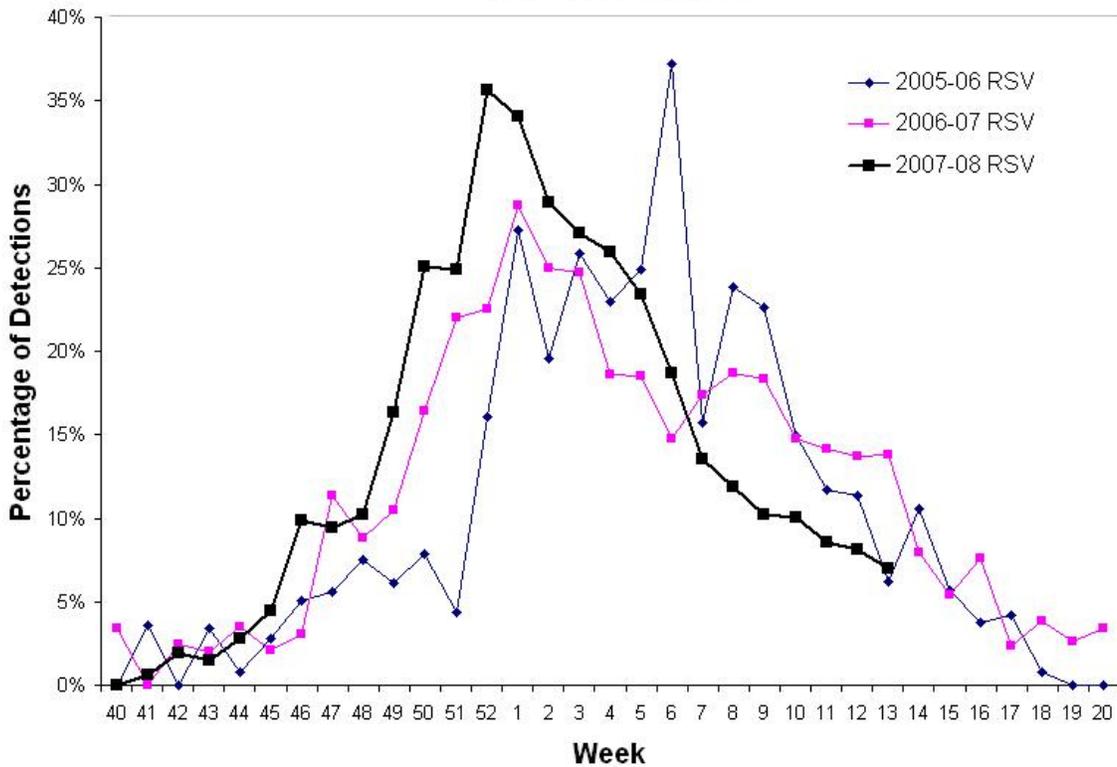
^e adenovirus (1); human metapneumovirus (4); parainfluenza type 3 (1)

^f adenovirus (11); echovirus type 9 (1); enterovirus (1); herpes simplex virus type 1 (1); human metapneumovirus (1) parainfluenza type 1 (8); parainfluenza type 2 (1)

Sentinel Laboratories/Respiratory Laboratory Network Influenza Detections



Sentinel Laboratories/Respiratory Laboratory Network RSV Detections



Antiviral Resistance Testing:

To date this season, 77 influenza-confirmed specimens have been tested for antiviral resistance. 100% (23/23) of influenza A/H3 specimens and 5% (3/54) of influenza A/H1 specimens have had the S31N mutation consistent with adamantane resistance. No mutations consistent with resistance to the neuraminidase inhibitors were seen in A/H3 (0/23). Seven percent (4/54) of A/H1 viruses had the H274Y mutation associated with oseltamivir resistance.

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 Somayeh Honarmand (somayeh.honarmand@cdph.ca.gov) or Erica Boston (erica.boston@cdph.ca.gov).