

California Influenza Surveillance Project

Viral and Rickettsial Disease Laboratory

2007-2008

Influenza Update – Week 15 (April 6 – 12, 2008)

National Influenza Activity:

During week 15 (April 6 – 12, 2008), influenza activity continued to decrease in the United States. Three hundred fifty (11.9%) 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 has been above the epidemic threshold for 14 consecutive weeks. The proportion of outpatient visits for influenza-like illness (ILI) and the proportion of outpatient visits for acute respiratory illness (ARI) were below national baseline levels. ILI was above the region-specific baseline in one region (New England), while the proportion of outpatient visits reported for ARI was below all region and age-specific baselines. Three states reported widespread influenza activity; four states reported regional influenza activity; 16 states reported local influenza activity; 26 states and the District of Columbia and Puerto Rico reported sporadic influenza activity; and one state reported no influenza activity.

California Influenza Activity

During Week 15 (April 6–April 12, 2008), influenza activity in California was downgraded to “sporadic” (defined by the CDC as “Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak, no increase in cases of influenza-like illness (ILI)”). Most surveillance parameters continue to trend down, however laboratory detections for influenza A and B remained steady. Two new institutional outbreaks were reported this week. No new cases of severe pediatric influenza were reported this week.

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

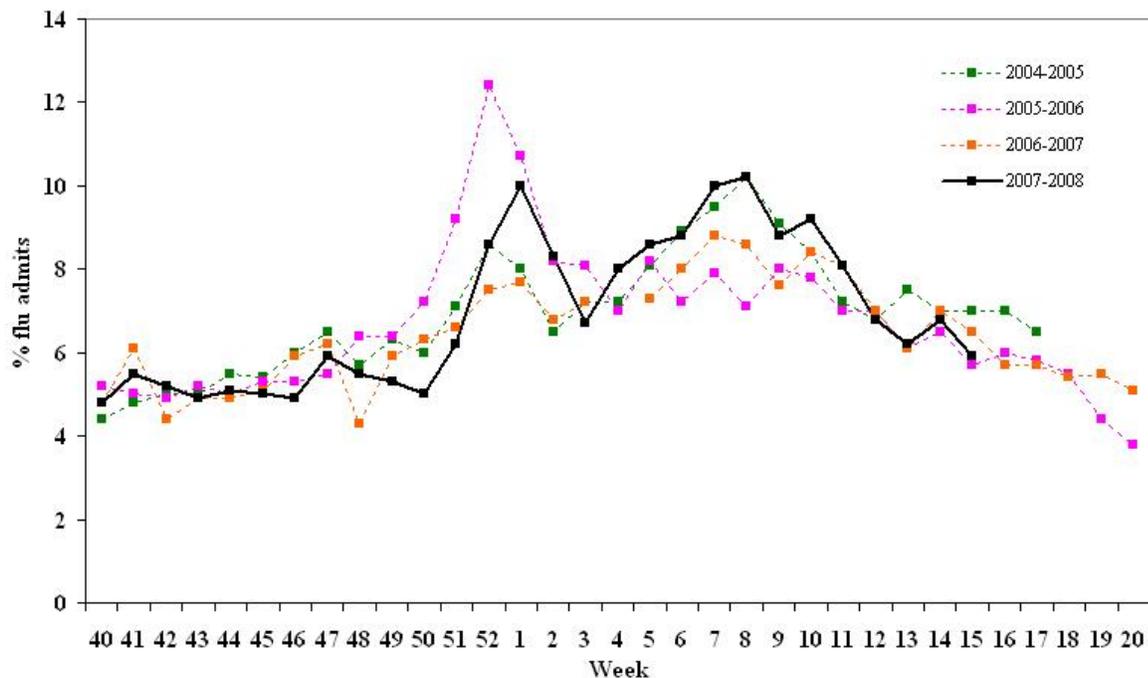
Week	Kaiser Inpatient Data % (range)*		Outpatient ILI Data %(# reported)‡	Kaiser Antiviral Data§	
	Northern CA	Southern CA		Northern CA	Southern CA
15	5.9 (1.1–10.4)	2.0 (0.0–3.7)	0.8 (58 reported)	142	78
Previous week	6.8 (3.2–14.8)	2.5 (0.8–4.9)	1.3 (80 reported)	147	91

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

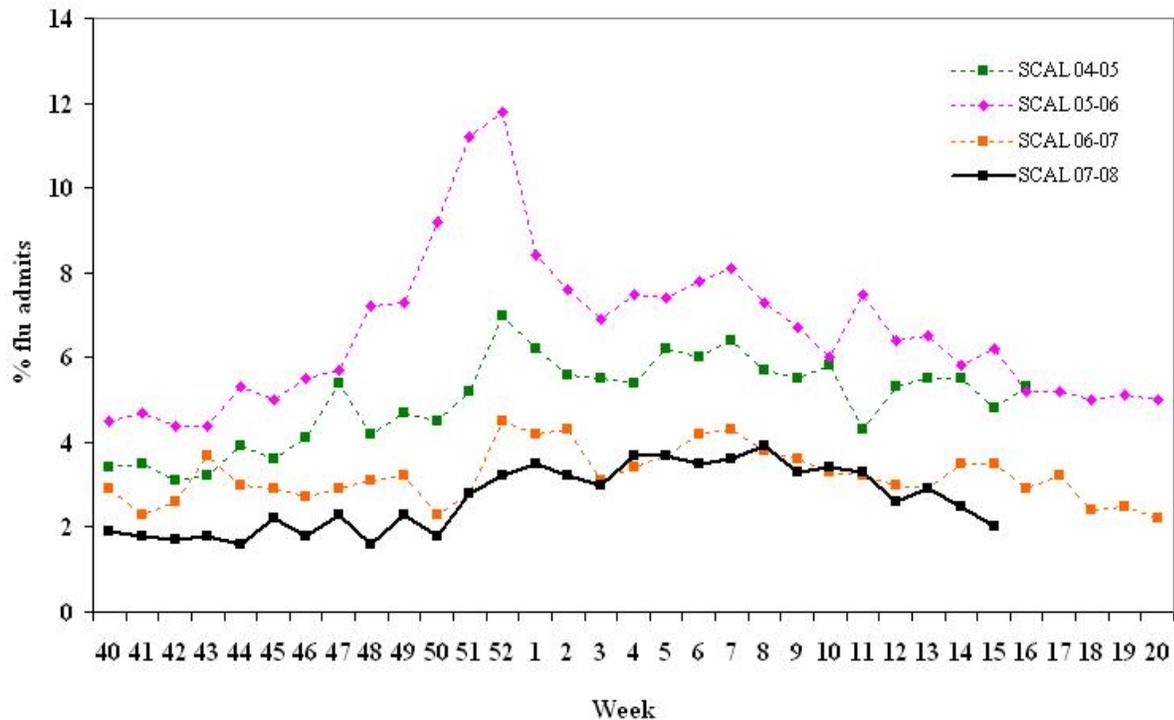
‡ The percentage of outpatient visits for influenza-like illness (ILI) is calculated by dividing the number of ILI visits by the total number of outpatient visits per week

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

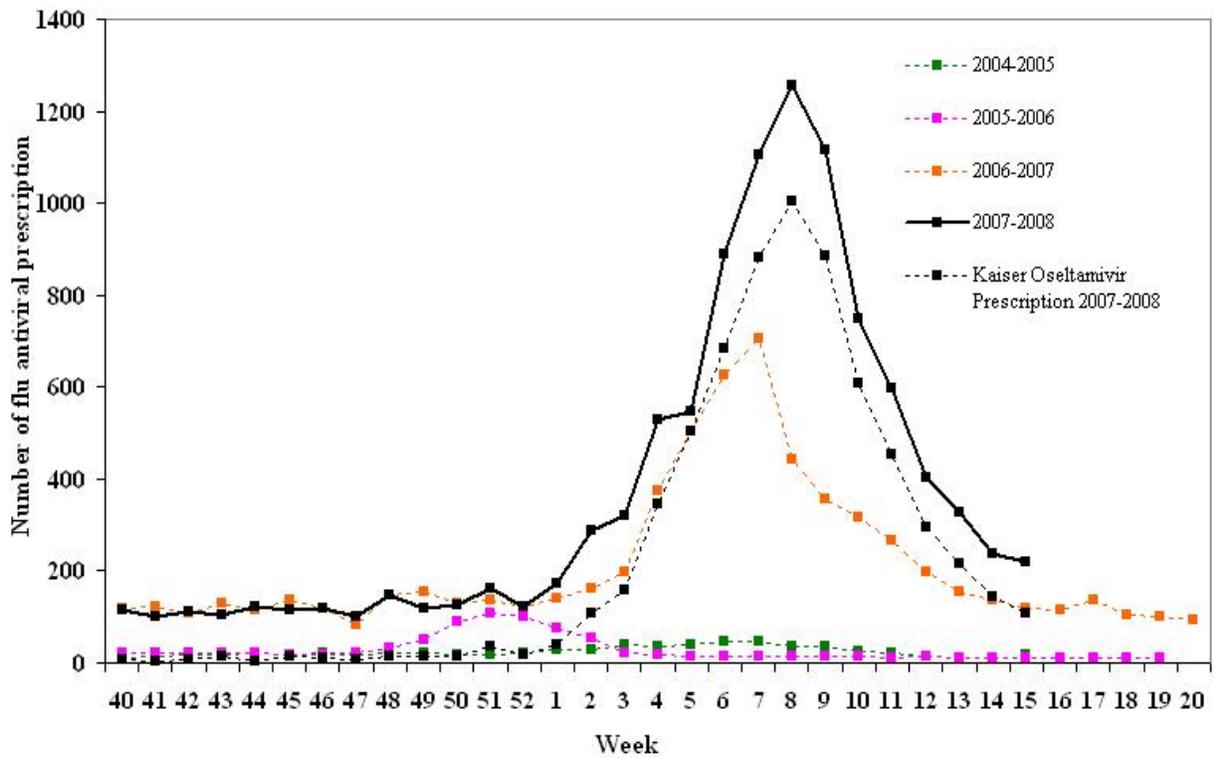
Inpatient "Flu" Admissions 2004-2008 Northern California Kaiser



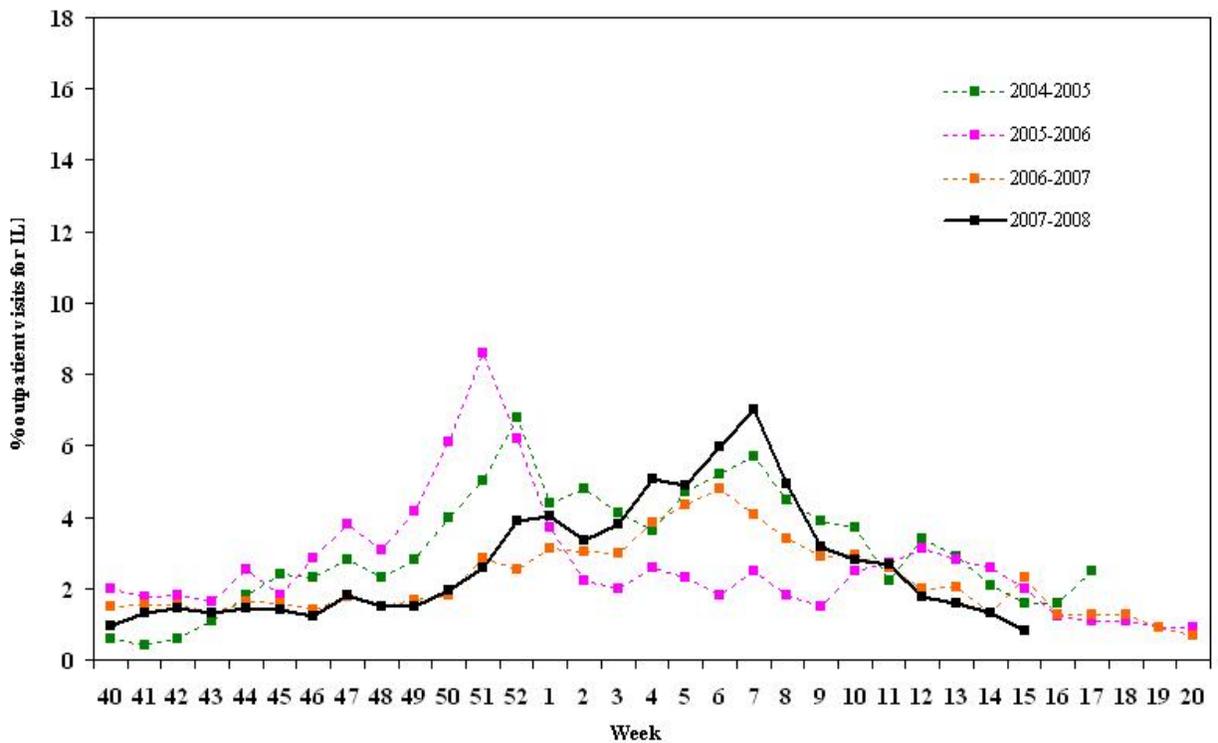
Inpatient "Flu" Admissions 2004-2008 Southern California Kaiser



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 15	Number of Sites Reporting	16	618 specimens submitted through week 15 (398 positive by culture, 10 pending)
	Influenza A	45 ^a Total to date: 6255	262
	Influenza B	46 ^b Total to date: 3747	108
	Influenza A/B	0 Total to date: 19	0
	RSV	39 ^c Total to date: 6736	2
	Other Respiratory Viruses	4 ^d Total to date: 269	26 ^e

[‡]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 (4); Contra Costa (4); Fresno (2); Marin (2); Monterey (8); Sacramento (7); San Diego (1); San Francisco (4); San Mateo (3); Santa Clara (9); Solano (1)

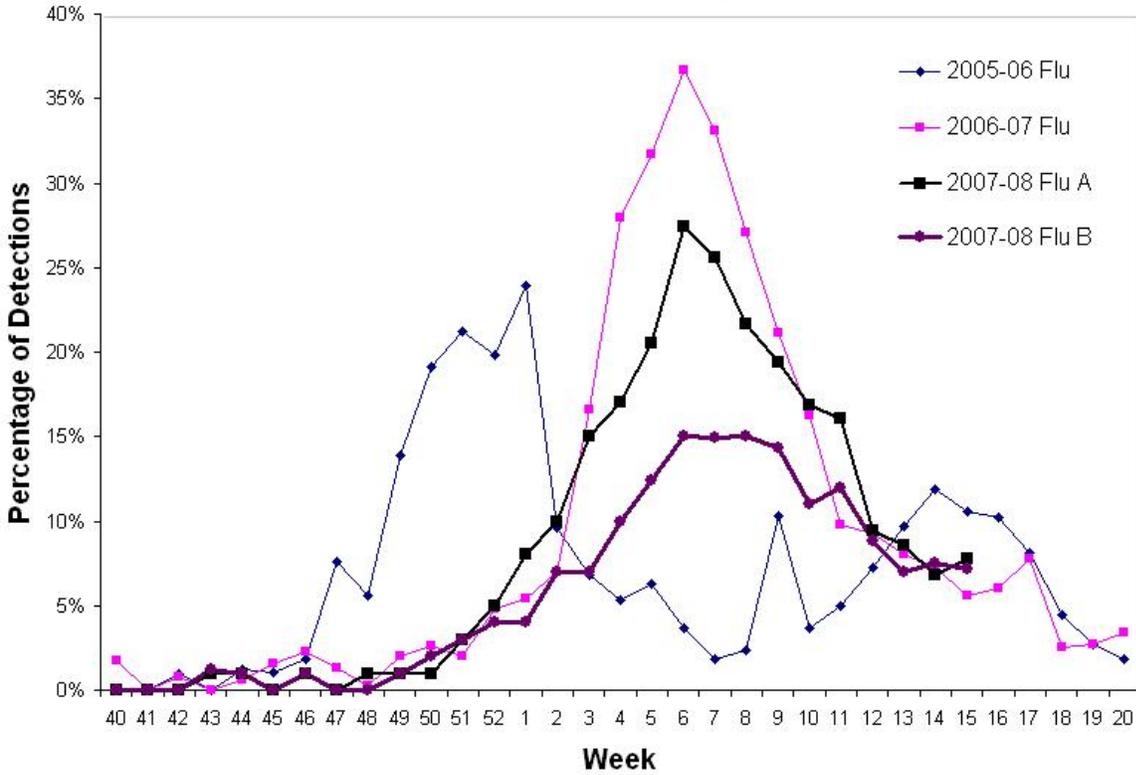
^b Alameda (4); Contra Costa (4); Fresno (3); Napa (1); Orange (2); Riverside (1); Sacramento (6); San Diego (4); San Francisco (3); San Joaquin (5); San Mateo (1); Santa Clara (5); Shasta (2); Solano (5); Sonoma (2)

^c Alameda (7); Contra Costa (1); Los Angeles (1); Monterey (1); Riverside (1); Sacramento (10); San Francisco (1); San Joaquin (2); San Mateo (1); Santa Clara (8); Solano (1); Sonoma (2); Ventura (3)

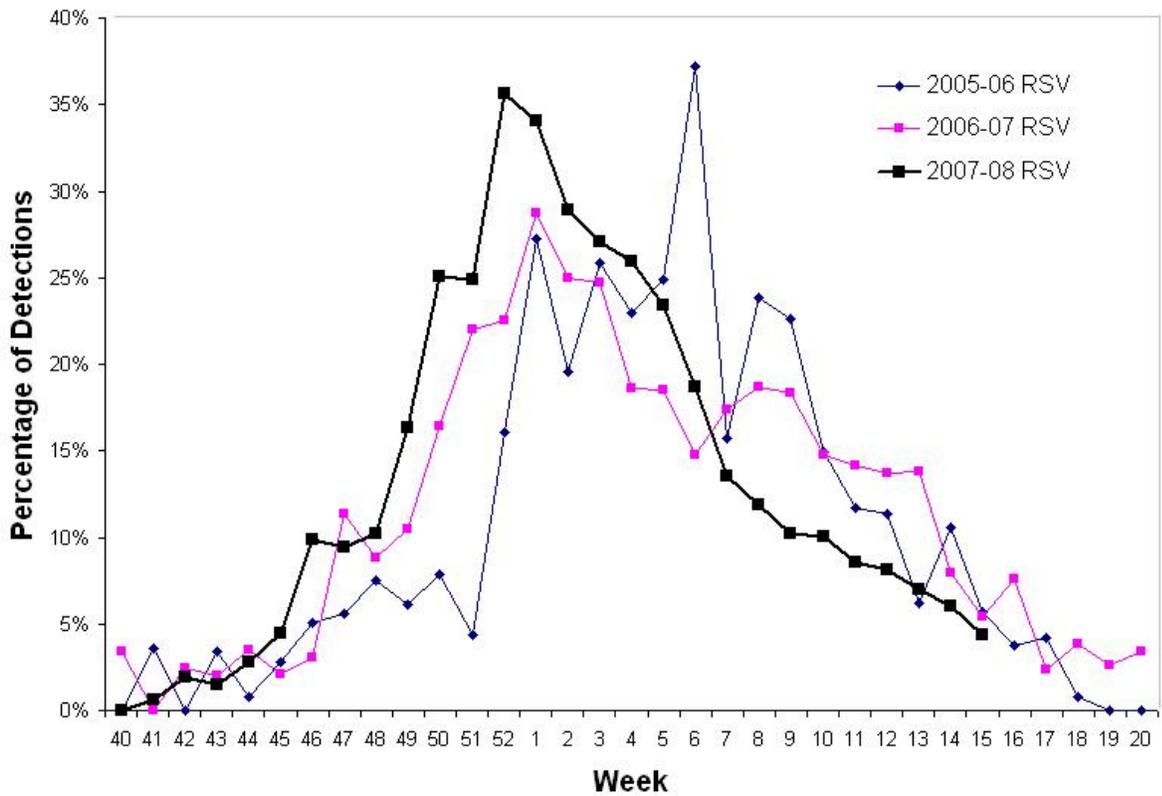
^d parainfluenza type 1 (1); parainfluenza type 3 (3)

^e adenovirus (13); 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.

Emergency Room Visits (California Emergency Physicians):

The Flu Watch Center reports the prevalence on a weekly basis of flu-related illnesses as a percentage of total CEP emergency room visits. Information for ILI reported by CEP, including surveillance methods and recent activity graphs, is available at <http://www.cep.com>.

Week	% of emergency room visits for ILI*	Regional ILI (%)		
		Southern CA	Central CA	Northern CA
12	2.8	3.1	1.7	2.9
Previous Week	2.7	2.9	2.2	2.7

* case definition: fever plus cough, sore throat, upper respiratory illness or nasal congestion

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).