

California Influenza Surveillance Project

California Department of Public Health

2009-2010

Influenza Update

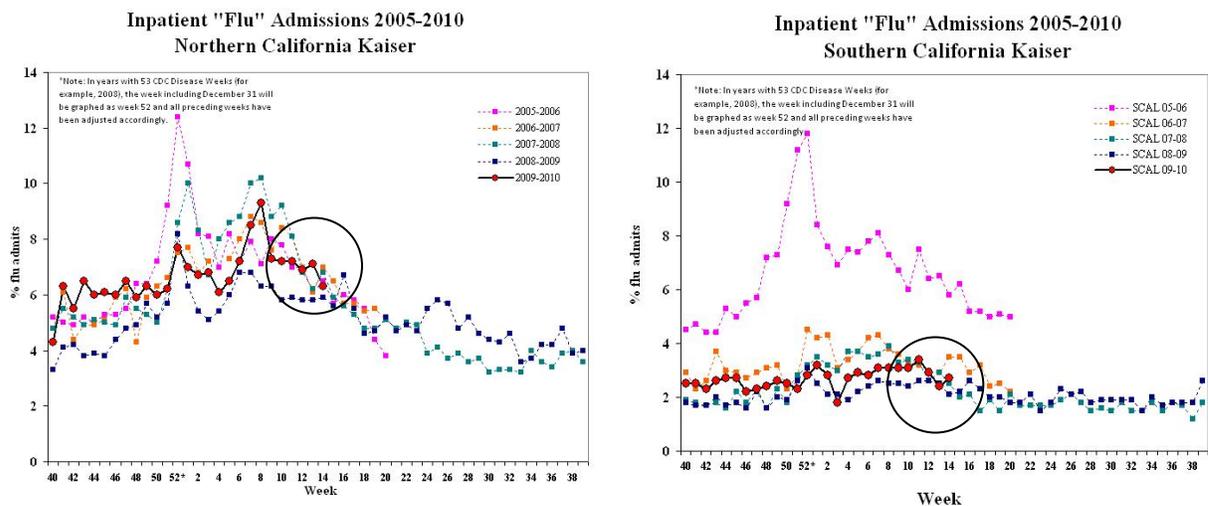
This week, overall influenza activity in California remained “sporadic” (defined by the CDC as “small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of influenza-like-illness (ILI)”). Reports of ILI from sentinel providers decreased *MMWR* week 14 (April 4-10, 2010). The percentage of Kaiser hospitalizations for pneumonia and influenza (P&I) decreased in northern California and increased slightly in southern California. Reports of ILI from sentinel providers decreased. Laboratory detections of influenza remain low and detections of respiratory syncytial virus (RSV) continue to decrease.

A. Syndromic Surveillance

1. Kaiser Permanente Hospitalization Data (“Flu Admits”)

The admission diagnoses of flu, pneumonia, and influenza (“Flu Admits”) serve as surrogate markers for the more accurate, but less timely, diagnoses contained in discharge data. Influenza activity is tracked by dividing the number of Flu Admits by the total number of hospital admissions for the same day to obtain a percentage of influenza and pneumonia admissions. As indicated in the circle, Figure 1 shows that during week 14 (April 4-10, 2010), the percentage of Kaiser hospitalizations for pneumonia and influenza (P&I) decreased in northern California. Figure 2 shows a slight increase in southern California. Both data points remain within the range of percentages seen for seasonal influenza in previous years.

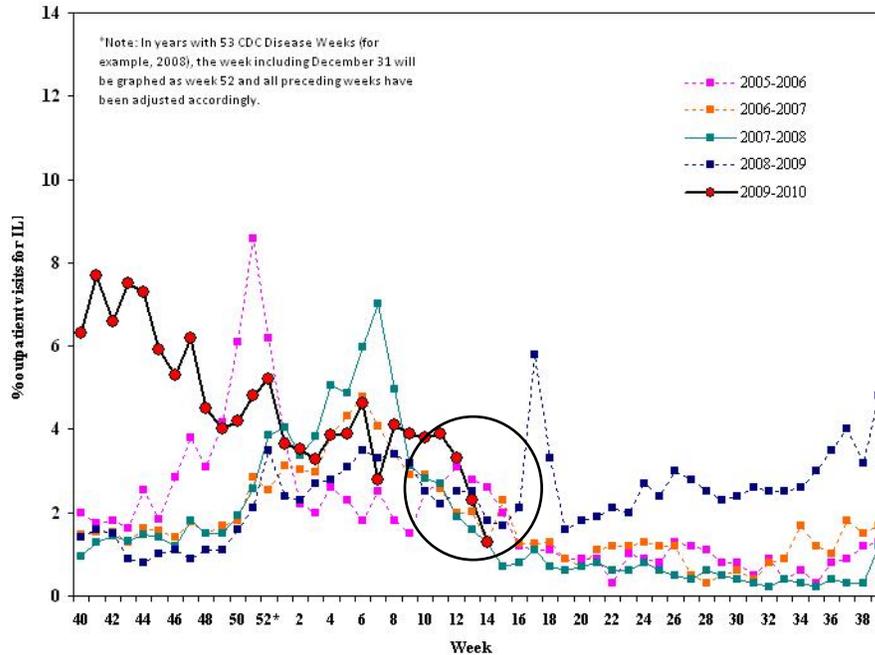
Figures 1-2. Inpatient “Flu” Admissions at Kaiser Facilities, 2005-2010.



2. CDC Influenza Sentinel Providers

Sentinel providers report the number of outpatient visits for influenza-like illness (ILI) and the total number of visits per week. These data are reported weekly as a percentage of total visits. Figure 3 shows a peak in Weeks 17-18 (April 26 – May 9, 2009) when 2009 H1N1 influenza was first identified. ILI has decreased for the past three reporting periods. As a result of a delay in reporting, the actual percentage for week 14 (April 4-10, 2010) may be higher. A total of 67 sentinel providers reported in Week 14.

Figure 3. California Sentinel Providers – Influenza-Like Visits, 2005-2010.



B. Laboratory Update

1. Respiratory Laboratory Network (RLN) Influenza PCR Surveillance Results

As noted in Table 1, during Week 14 (April 4-10, 2010), none of the specimens received by the Respiratory Laboratory Network were positive for influenza A. This is a decrease from 3% in week 13 (March 28 – April 3, 2010).

Table 1. Respiratory Laboratory Network (RLN) Influenza PCR Surveillance Results from Selected Laboratories*, Week 14 (April 4-10, 2010)

	Total Flu A tested	Flu A (% of total)	H1 (% of Flu A)	H3 (% of Flu A)	Unsubtypeable (% of Flu A)	Total Flu B tested	Flu B (% of total)	Total RSV tested (R-mix)	RSV (% of total)
Total RLN*	81	0 (0%)	0 (0%)	0 (0%)	0 (0%)	81	0 (0%)	7	0 (0%)
Northern	42	0 (0%)	0 (0%)	0 (0%)	0 (0%)	42	0 (0%)	0 (0%)	0 (0%)
Central	18	0 (0%)	0 (0%)	0 (0%)	0 (0%)	18	0 (0%)	0 (0%)	0 (0%)
Southern	21	0 (0%)	0 (0%)	0 (0%)	0 (0%)	21	0 (0%)	0 (0%)	0 (0%)

* 16 RLN laboratories reporting, including:

Northern CA: Contra Costa, El Dorado, Sacramento, San Francisco, San Mateo, Santa Clara, Shasta, Sonoma

Central CA: Fresno, Monterey, San Joaquin, Tulare

Southern CA: Orange, San Luis Obispo, Riverside, Santa Barbara

2. Laboratory Positive Results Data

Table 2 shows positive influenza and other virus results from sentinel laboratories, local public health laboratories and VRDL.

Table 2. Influenza and other respiratory virus detections, April 4-10, 2010.

		Sentinel Laboratories/Respiratory Laboratory Network [†]	Sentinel Providers
Week 14	Number	24 sites reporting	573 specimens submitted (266 positive by PCR, 2 pending)
	Influenza A	3 ^a Total tested week 14: 554	0
	Influenza B	0 Total tested week 14: 554	0
	RSV	63 ^b Total tested week 14: 536	N/A
	Other Respiratory Viruses	27 ^c Total tested week 14: 188	N/A

[†]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 San Francisco (1); solano (1); Sonoma (1)

^b Alameda (5); Contra Costa (4); Fresno (7); Kern (1); Lake (1); Long Beach (6); Madera (1); Merced (1); Monterey (1); Placer (8); Sacramento (8); San Diego (6); San Francisco (3); San Joaquin (3); Santa Clara (4); Solano (1); Stanislaus (2); Tulare (1)

^c rhinovirus (16); human metapneumovirus (6); parainfluenza type 3 (3); parainfluenza type 1 (1); adenovirus (1)

Figure 4 shows that laboratory detections for influenza peaked in week 27 (July 5 - 11, 2009). Influenza remained low during week 14 (April 4-10, 2010). Figure 5 shows that RSV continued to decrease during week 14.

Figure 4. Influenza detections at sentinel laboratories/Respiratory Laboratory Network (RLN), 2006-2010.

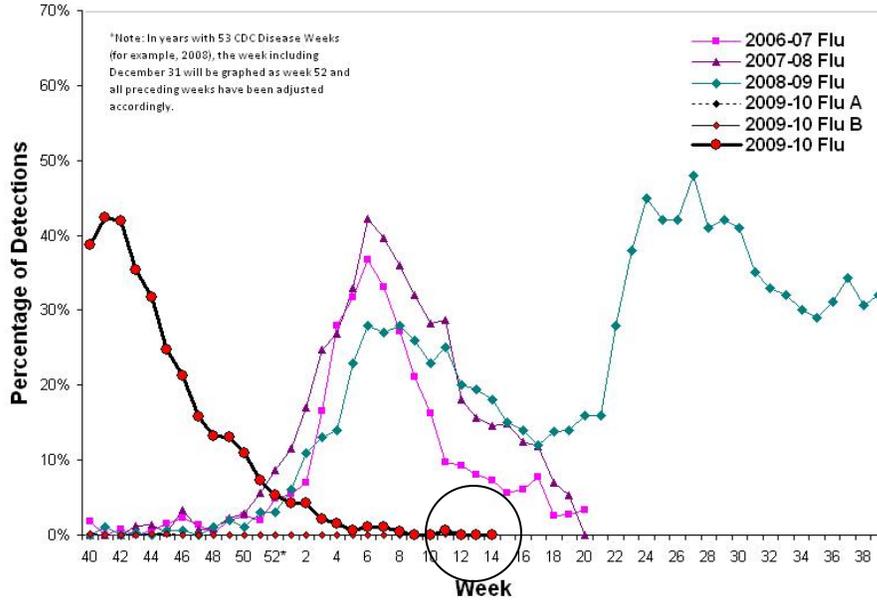


Figure 5. RSV detections at sentinel laboratories, 2005-2010.

