

California Influenza and Respiratory Disease Surveillance for October 17-23, 2010

For week 42, overall influenza activity in California was “sporadic**”.

Influenza Highlights (Week 42)

- In week 42, CDPH received the first report this season of a severely ill case under age 65 years with laboratory-confirmed influenza that required hospitalization in the ICU.
- Reports of influenza-like illness (ILI) from sentinel providers decreased slightly this week compared to the previous week. According to a new CDC algorithm for assessing the ILI data which is weighted on the basis of state population and accounts for region-specific historical baselines, ILI activity this week in California was “minimal” (more information is available at the [CDC Flu Activity & Surveillance Page](https://www.cdc.gov/flu/weekly/fluactivitysurv.htm) : <https://www.cdc.gov/flu/weekly/fluactivitysurv.htm>).
- The percentage of Kaiser Permanente hospitalizations for pneumonia and influenza (P&I) increased in northern but decreased in southern California.
- There were seven laboratory detections of influenza A and four detections of influenza B.
- As of October 22, 2010, no antiviral resistance testing has been performed by the Viral and Rickettsial Disease Laboratory (VRDL)

Other Respiratory Diseases:

- Non-influenza respiratory viruses detected this week included RSV (1), parainfluenza virus 2 (6), parainfluenza virus 3 (2) and rhinovirus (1).

Syndrome Surveillance

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

“Flu Admissions” are defined as a text diagnosis of “flu”, “pneumonia”, or “influenza” recorded at time of admission to the hospital. Influenza activity is tracked by dividing the number of Flu Admissions by the total number of hospital admissions for the same day to obtain a percentage of influenza and pneumonia admissions.

As indicated in the circles, Figures 1 and 2 show that during week 42 (October 17-23, 2010), the percentage of Kaiser hospitalizations for pneumonia and influenza (P&I) increased in northern California and decreased in southern California. Both data points remain within the range of percentages seen for seasonal influenza in previous years.

*Sporadic is defined by the Centers for Disease Control and Prevention (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)

Figure 1. Inpatient “Flu” Admissions at Northern California Kaiser Facilities, 2006-2011

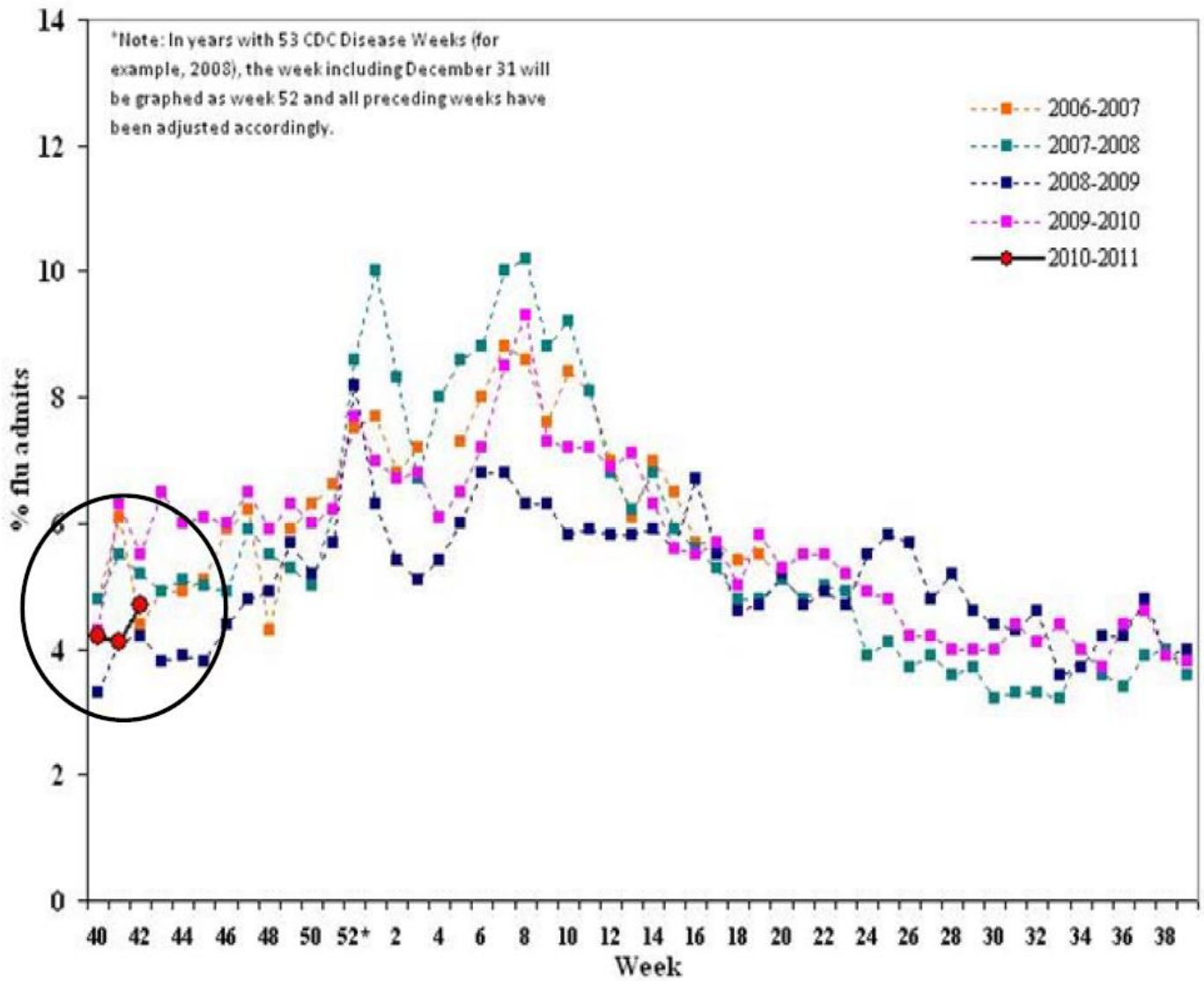
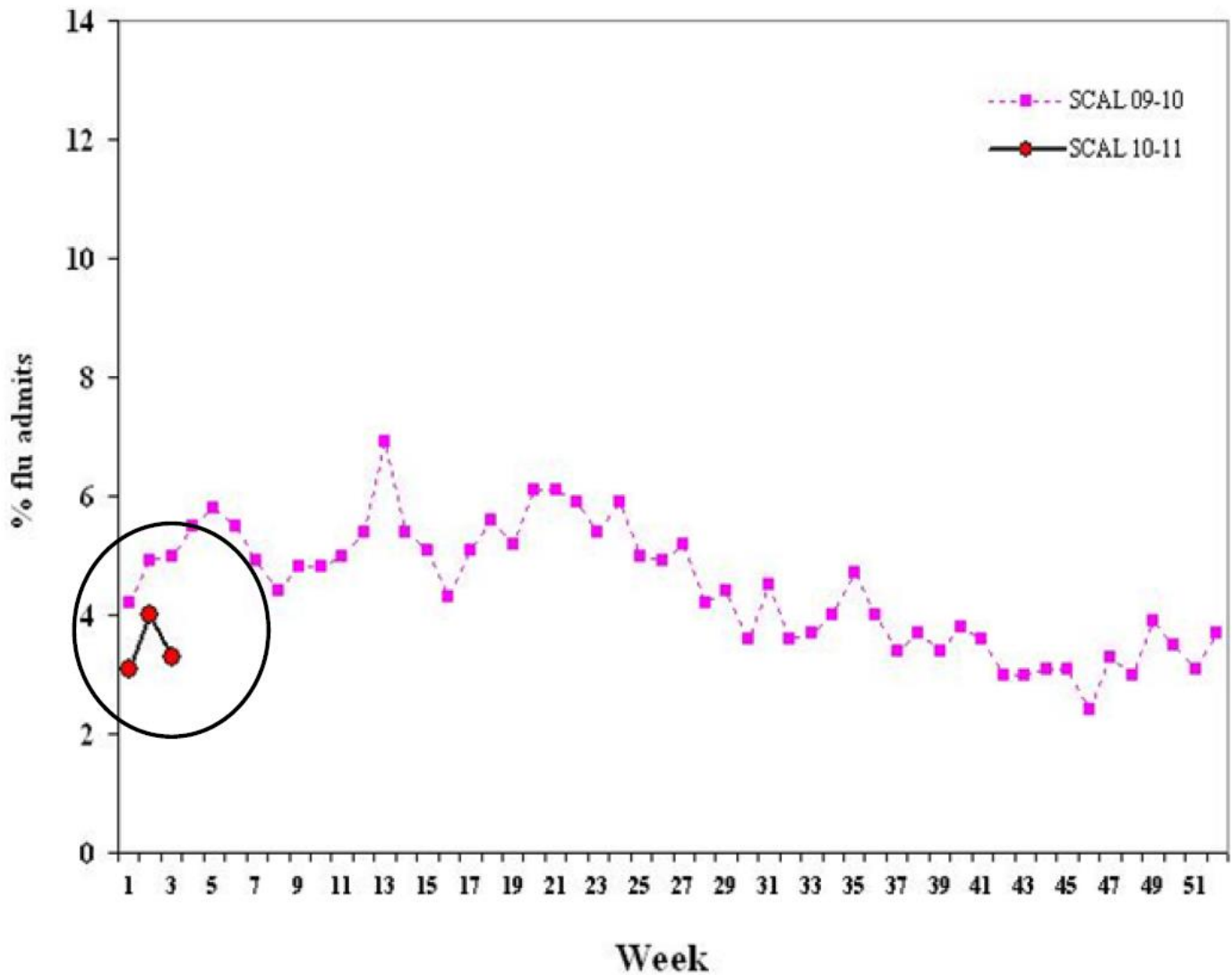


Figure 2. Inpatient “Flu” Admissions at Southern California Kaiser Facilities, 2009-2011

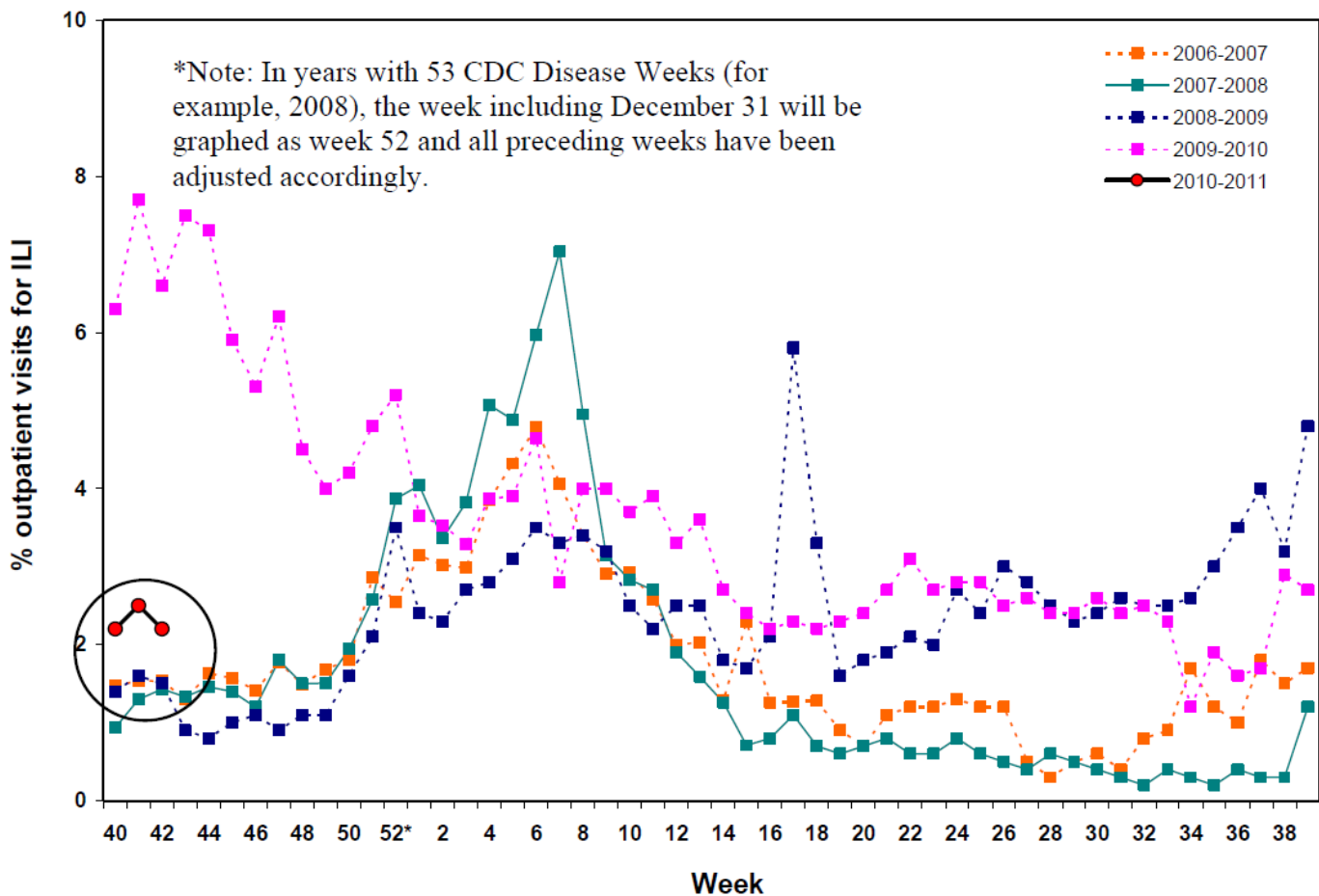


2. CDC Influenza Sentinel Providers

Sentinel providers report the number of outpatient visits for ILI and the total number of visits per week. These data are reported weekly as a percentage of total visits due to ILI. The ILI case definition is fever $\geq 100^{\circ}\text{F}$ (37.8°C), oral or equivalent, AND cough and/or sore throat (in the absence of a known cause other than influenza).

ILI decreased slightly in Week 42 (October 17-23, 2010) compared to the previous week. A total of 74 sentinel providers reported in Week 42.

Figure 3. California Sentinel Providers – Influenza-Like Illness Visits, 2006-2010.



Laboratory Update

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

The Respiratory Laboratory Network is composed of 23 local public health laboratories that offer PCR testing for influenza A and B and testing using the R-mix shell vial culture system to identify five other common respiratory viruses (RSV, adenovirus, parainfluenza virus type 1-3)

During Week 42 (October 17-23, 2010), of 31 specimens tested by the RLN four (13%) were positive for influenza, including influenza A/H3 (2), A/2009 H1N1 (1), and influenza B (1).

Table 2. Respiratory Laboratory Network (RLN) Influenza PCR Surveillance Results from Selected Laboratories^d, Week 42 (October 17-23, 2010)

California RLN Region	Total Flu tested (PCR)	Flu A Number (%) ^a	H1 Number (%) ^b	H3 Number (%) ^b	2009 H1N1 (confirmed or probable) Number (%) ^b	Flu B Number (%) ^a	Total R-mix tested	RSV Number (%) ^c	Other Respiratory Viruses Number (%) ^c
Total RLN^d	31	3 (10)	0 (0)	2 (67)	1 (33)	1 (3)	22	0 (0)	0 (0)
Northern	10	2 (20)	0 (0)	1 (50)	1 (50)	0 (0)	0	0 (0)	0 (0)
Central	12	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0	0 (0)	0 (0)
Southern	9	1 (11)	0 (0)	1 (100)	0 (0)	1 (11)	0	0 (0)	0 (0)

^a Percent of "Total flu tested (PCR)"

^b Percent of positive "Flu A"

^c Percent of "Total R-mix tested"

^d Northern CA: Contra Costa, Sacramento, San Francisco, San Mateo, Santa Clara, Shasta

Central CA: Fresno, San Joaquin, Tulare

Southern CA: Long Beach, Orange, San Diego, San Luis Obispo

2. Sentinel Laboratory Positive Results Data

Sentinel laboratories are a network of clinical, commercial, academic and hospital laboratories located throughout California that provide weekly data on the number of laboratory-confirmed influenza and other respiratory virus detections and isolations.

Table 3 shows positive influenza and other virus results in the past week (October 17-23, 2010) from sentinel laboratories. Of the 206 tested for influenza, 4 (2%) were positive for influenza A and 3 (1%) were positive for influenza B. The other most frequently detected virus was parainfluenza virus type 2.

Table 3. Influenza and other respiratory virus detections from 4 Sentinel Laboratories for Week 42, October 17-23, 2010.

Virus Strains	Number (%) and Total Tested
Influenza A	4 (2%) ^a Total tested week 42: 206
Influenza B	3 (1%) ^b Total tested week 42: 206
RSV	1 (0%) ^c Total tested week 42: 203
Other Respiratory Viruses	9 (7%) ^d Total tested week 42: 132

^a Alameda (1); Sonoma (3)

^b San Diego (2); Sonoma (1)

^c parainfluenza type 2 (2)

^d parainfluenza type 2 (6); parainfluenza type 3 (2); rhinovirus (1)

Figures 4 and 5 summarize the combined laboratory data from both the RLN and the Sentinel Laboratories.

Figure 4 shows that detections of influenza increased slightly during Week 42 (October 17-23, 2010); of all the samples tested, 3% were influenza A and 2% were influenza B. Figure 5 shows that RSV decreased during Week 42.

Figure 4. Influenza detections at Sentinel Laboratories/Respiratory Laboratory Network, 2007-2010.

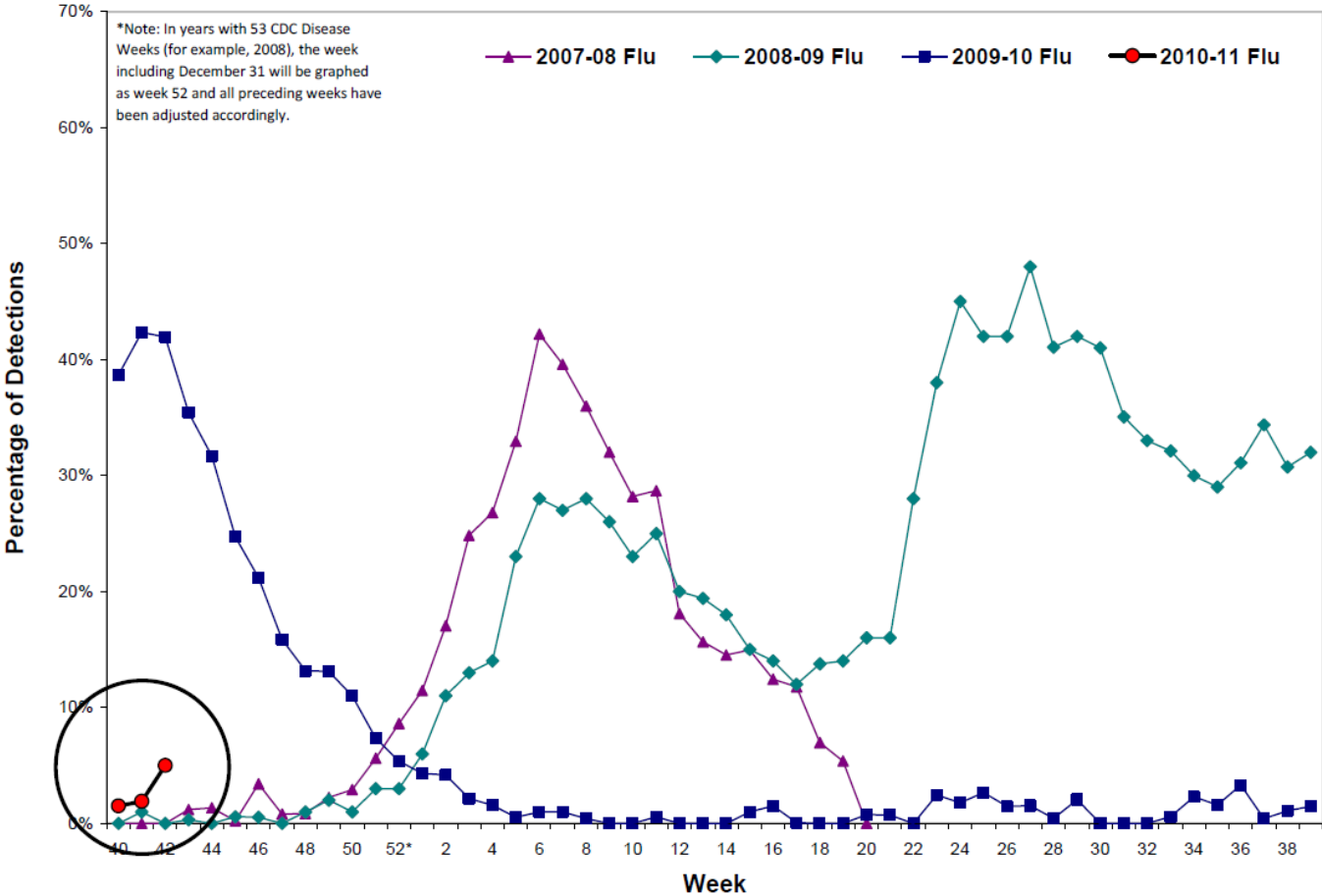


Figure 5. RSV detections at Sentinel Laboratories/Respiratory Laboratory Network, 2006-2010.

