

California Influenza and Respiratory Disease Surveillance for July 8 – 31, 2010

During the past month, 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, Kaiser Permanente hospitalizations for pneumonia and influenza, and laboratory detections of influenza and respiratory syncytial virus (RSV) have remained low during the past month.

CALIFORNIA INFLUENZA HIGHLIGHTS

2009 H1N1 Influenza:

- Effective May 1, 2010, reporting of weekly aggregate numbers of hospitalized/fatal cases of 2009 H1N1 is no longer required. CDPH case report forms continue to be submitted for individuals with probable or confirmed 2009 H1N1 who require hospitalization in an intensive care unit (ICU cases) or who die (fatal cases).
- A total of 2100 severe cases (defined as cases admitted to the ICU and/or died) of 2009 H1N1 influenza have been reported to CDPH since April 23, 2009 (through July 31, 2010).
- CDPH received zero reports of fatal 2009 H1N1 influenza cases for the period July 8 - 31, 2010. No reported deaths due to 2009 H1N1 influenza have occurred in California since the week of April 17, 2010. A total of 592 deaths associated with 2009 H1N1 influenza have been reported to CDPH to date.
- The statewide cumulative fatality rate of reported 2009 H1N1 influenza is 1.5 cases per 100,000 population. As in previous months, the fatality rate remains highest among individuals aged 50-64 years (3.2 per 100,000) and lowest among children aged 1-4 years (0.2 per 100,000).
- Since the last update, no new cases meeting the case definition for severe pediatric influenza have been reported. Since April 1, 2009, a total of 621 severe pediatric influenza cases have been reported, 535 (86%) of which have been confirmed or probable 2009 H1N1 influenza. A total of 40 fatalities have been reported among these 621 severe pediatric influenza cases.
- Of 2281 specimens tested, eight cases of oseltamivir resistance have been identified in California residents with laboratory-confirmed 2009 H1N1 influenza infections.
- Three preliminary outbreaks of respiratory disease were reported during the period July 4 - 31, 2010.

Seasonal Influenza:

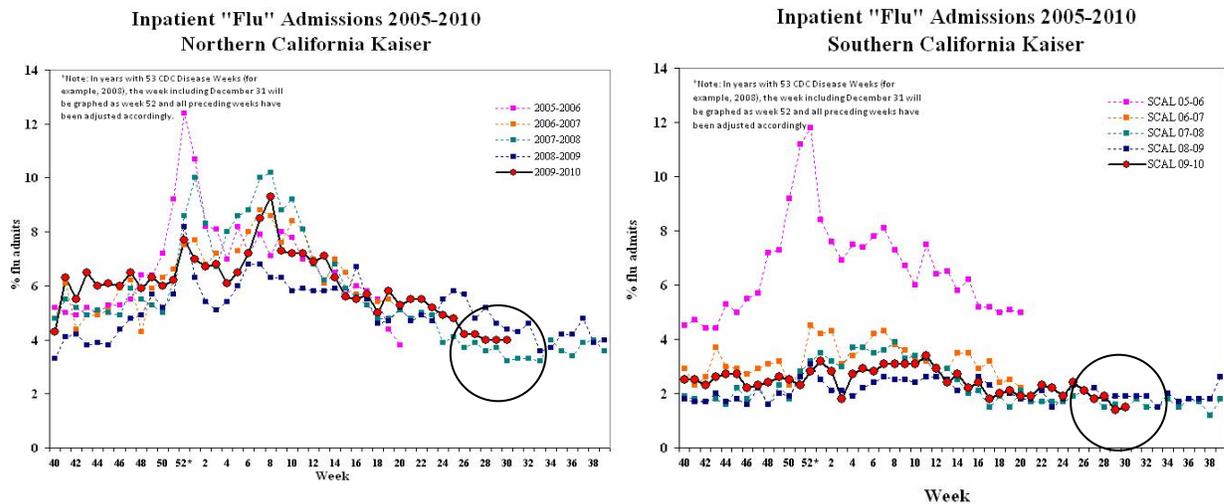
- Reports of ILI from sentinel providers have remained low during the past month.
- Influenza detections by sentinel labs have remained low for the last several reporting periods. Sporadic influenza B cases have been seen in the border counties in the past few months.

1. Syndrome 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 circles, Figures 1 and 2 show that during the past month, the percentage of Kaiser hospitalizations for pneumonia and influenza (P&I) has remained steady in northern and southern California. The trend data for both regions remain within the range of percentages seen for seasonal influenza in previous years.

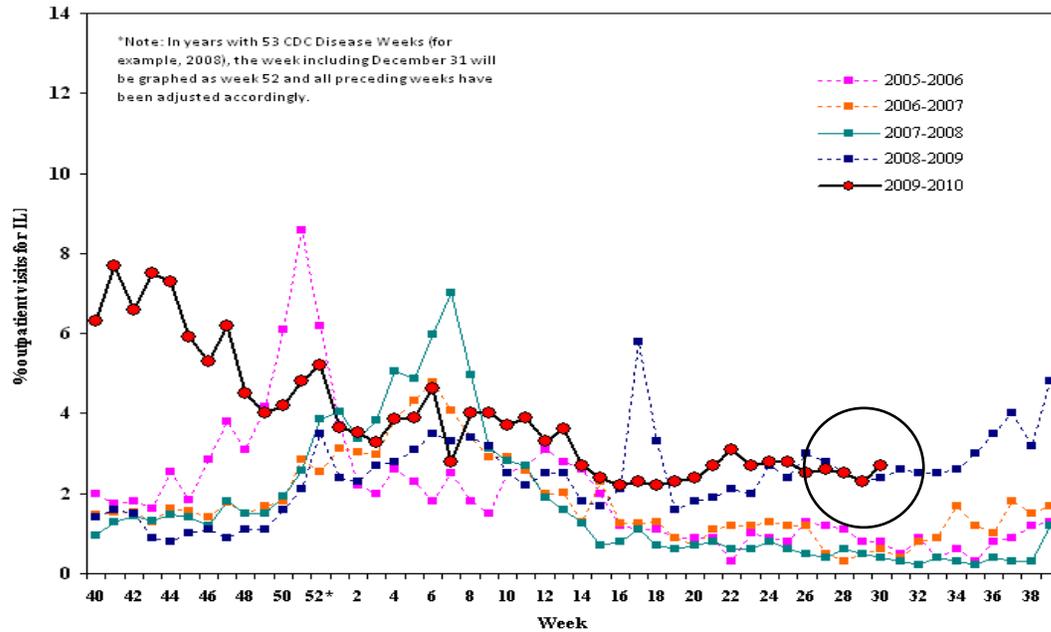
Figures 1-2. Inpatient "Flu" Admissions at Kaiser Facilities, 2005-2010.



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. During the 2009-10 influenza season, the percentages of ILI were highest in week 41 (October 11-17, 2009) through week 44 (November 1-7, 2009). Since then, there has been a downward trend in ILI percentage; however the percentage of ILI in the past three months has been similar to what was seen at this time last year when 2009 H1N1 was the most prevalent influenza virus circulating.

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



2. Laboratory Update

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

As noted in Table 1, during Week 30 (July 25-31, 2010), none of the specimens received by the Respiratory Laboratory Network (RLN) were positive for influenza.

Table 1. Respiratory Laboratory Network (RLN) Influenza PCR Surveillance Results from Selected Laboratories*, Week 30 (July 25-31, 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*	2	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2	0 (0%)	1	0 (0%)
Northern	1	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1	0 (0%)	0 (0%)	0 (0%)
Central	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0	0 (0%)	1 (0%)	0 (0%)
Southern	1	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1	0 (0%)	0 (0%)	0 (0%)

* 14 RLN laboratories reporting, including:

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

Central CA: Fresno, Monterey, San Joaquin, Tulare

Southern CA: Long Beach, Riverside, San Luis Obispo, 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. To date, sentinel providers have submitted 617 respiratory specimens since the start of the 2009-10 flu season (week 40, October 4-10, 2009). Of these, 268 were positive for influenza A, none were positive for influenza B, 16 were positive for RSV, and 36 were positive for other respiratory viruses (human metapneumovirus (19); adenovirus (8); parainfluenza type 1(4); para influenza type 3 (4); para influenza type 4 (1)).

Table 2. Influenza and other respiratory virus detections, July 25-31, 2010.

		Sentinel Laboratories/Respiratory Laboratory Network [‡]
Week 30	Number	17 sites reporting
	Influenza A	0 Total tested week 30: 76
	Influenza B	0 Total tested week 30: 76
	RSV	0 Total tested week 30: 76
	Other Respiratory Viruses	2 ^a Total tested week 30: 76

[‡]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 parainfluenza type 3 (1); rhinovirus (1)

Figure 4 shows that laboratory detections for influenza peaked in week 27 of 2009 (July 5-11, 2009). Detections of influenza have remained low during the past month.

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

