

California Influenza and Respiratory Disease Surveillance for Week 01 (January 2-8, 2011)

For Week 1, overall influenza activity in California was upgraded from sporadic to “local” due to increasing influenza activity in the southern region of the state. Local activity is defined by the Centers for Disease Control and Prevention (CDC) as “outbreaks of influenza or increases in influenza-like illness (ILI) cases and recent laboratory-confirmed influenza in a single region of the state.”

Influenza and Respiratory Disease Highlights (Week 1)

- Reports of influenza-like illness (ILI) decreased by 1.1% in Week 1 compared to the previous week; however a low number of sentinel providers reported in Week 1 (78 compared to an average of 120 in previous weeks). The ILI activity in California for Week 1 remained “minimal**”.
- Of 161 specimens tested by polymerase chain reaction (PCR) statewide by the Respiratory Laboratory Network (RLN) during Week 1, 41 (25.5%) were positive for influenza; 25 (61%) were influenza A and 16 (39%) were influenza B. The influenza A specimens were subtyped as H3 (20 specimens) and 2009 H1N1 (5 specimens). The majority of positive specimens were from Orange and San Diego counties.
- The percentage of influenza detections in sentinel laboratories increased in Week 1 (7.9%) compared to the previous week (5.4%).
- During Week 1, the proportion of specimens tested statewide that were positive for respiratory syncytial virus (RSV) decreased slightly; 828 (38.7%) of 2,142 specimens tested were positive, compared to 671 (40.1%) of 1,674 specimens tested during the previous week. However, overall RSV activity remains high, and the percentage of RSV detections in Week 1 exceeds the range of percentages seen for RSV at the same time in previous years.
- Of 8 specimens tested by the CDPH Viral and Rickettsial Disease Laboratory (CDPH-VRDL), no case of oseltamivir resistance has been identified among California residents with laboratory-confirmed 2009 H1N1 influenza infections.
- Of 25 specimens tested by CDPH-VRDL, no case of neuraminidase inhibitor resistance has been identified among California residents with laboratory-confirmed A (H3N2) influenza infections.

**Minimal is defined by the CDC as ILI activity from outpatient clinics being below the average percent of ILI visits that occur during spring and fall weeks with little or no influenza virus circulation.

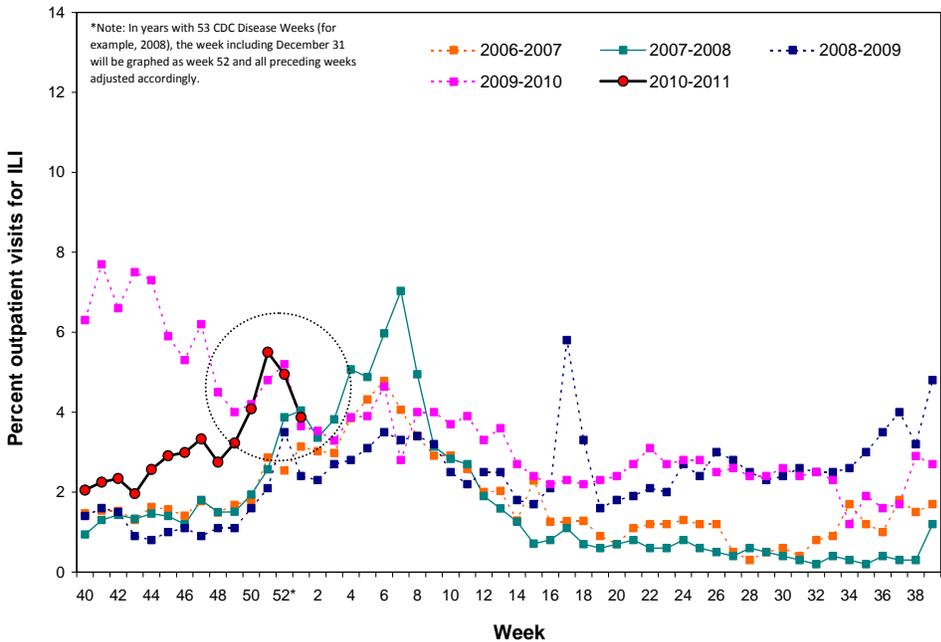
A. Syndromic Surveillance

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 due to ILI. The ILI case definition is fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat in the absence of a known cause other than influenza.

ILI decreased during Week 1 (3.9%) compared to the previous week (5.0%). A total of 78 sentinel providers reported data in Week 1 compared to an average of 120 providers reporting in prior weeks. Some ILI visits during recent weeks may not yet be reported.

Figure 1. California Sentinel Providers – Influenza-Like Illness Visits, 2006-2011



B. Laboratory Update

1. Respiratory Laboratory Network (RLN) 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, and parainfluenza virus type 1-3).

The percentage of specimens that tested positive for influenza decreased slightly in Week 1 (25.5%) compared to the previous week (27.3%). Of 161 specimens tested by the RLN during Week 1, 25 (15.5%) were positive for influenza A, including 20 influenza A (H3) and 5 influenza A (2009 H1N1). An additional 16 (9.9%) specimens were positive for influenza B (Table 1). The majority of positive specimens were from Orange and San Diego counties.

The percentage of specimens that tested positive for RSV from the RLN decreased in Week 1 (3.0%) compared to Week 52 (5.6%). However, the overall number of specimens tested by R-mix has been small.

Table 1. Respiratory Laboratory Network (RLN) Surveillance Results from Selected Laboratories*, January 2–8, 2011

	Total RLN*	Northern CA	Central CA	Southern CA
	No. (%)	No. (%)	No. (%)	No. (%)
Number of specimens tested by PCR	161	38	16	107
Influenza A	25 (15.5) [†]	3 (7.9) [†]	7 (43.8) [†]	15 (14.0) [†]
A (seasonal H1N1)	0 (0.0) [‡]	0 (0.0)	0 (0.0)	0 (0.0)
A (H3) [‡]	20 (80.0) [‡]	3 (100.0) [‡]	2 (28.6) [‡]	15 (100.0) [‡]
A (2009 H1N1) [€]	5 (20.0) [‡]	0 (0.0)	5 (71.4) [‡]	0 (0.0)
Influenza B [§]	16 (9.9) [†]	0 (0.0)	1 (6.3) [†]	15 (14.0) [†]
Number of specimens tested by R-mix	33	1	15	17
RSV	1 (3.0) [¶]	1 (100.0) [¶]	0 (0.0)	0 (0.0)
Other respiratory viruses	1 (3.0) ^{¶,††}	0 (0.0)	1 (6.7) [¶]	0 (0.0)

* RLN labs reporting Week 1 data, by region:

Northern CA: Contra Costa, Placer, Sacramento, Santa Clara, Shasta

Central CA: Fresno, San Joaquin, Tulare

Southern CA: Long Beach, Los Angeles, Orange, Riverside, San Diego, San Luis Obispo, Santa Barbara

[†] Percent of total specimens tested for influenza by PCR

[‡] Percent of influenza A positives

[¶] Percent of total specimens tested by R-mix

^{††} Adenovirus (1)

2. Sentinel Laboratory Surveillance Results

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 2 shows positive influenza and RSV results reported from sentinel laboratories during Week 1. The percentage of specimens that tested positive for influenza increased in Week 1 (7.9%) compared to the previous week (5.4%). Of the 2,103 specimens tested for influenza in Week 1, 123 (5.8%) were positive for influenza A and 43 (2.0%) were positive for influenza B. Of 2,109 specimens tested for RSV during Week 1, 827 (39.2%) were positive. This was a slight decrease from the previous week, when 669 (40.8%) of 1,638 specimens tested positive for RSV.

Table 2. Influenza and other respiratory virus detections from Sentinel Laboratories, January 2–8, 2011

	No. (%)
Number of sites reporting	72
Total specimens tested for influenza	2,103
Influenza A	123 (5.8)*
Influenza B	43 (2.0) [†]
Total specimens tested for RSV	2,109
RSV	827 (39.2) [‡]

Total number of positive lab results reported, by local health jurisdiction of patient's residence and/or site location:

* Alameda (17), Contra Costa (4), Fresno (6), Imperial (23), Long Beach (2), Los Angeles (7), Marin (1), Sacramento (7), San Diego (10), San Francisco (10), San Joaquin (2), San Mateo (9), Santa Clara (23), Sonoma (2)

[†] Alameda (3), Contra Costa (1), Fresno (2), Imperial (3), Long Beach (4), Los Angeles (8), Sacramento (2), San Bernardino (3), San Diego (8), San Francisco (2), San Joaquin (1), Santa Clara (5), Solano (1)

[‡] Alameda (83), Contra Costa (42), Fresno (75), Imperial (24), Kern (14), Kings (3), Long Beach (52), Los Angeles (60), Madera (17), Marin (4), Mariposa (1), Merced (4), Orange (7), Placer (25), Riverside (32), Sacramento (47), San Bernardino (6), San Diego (53), San Francisco (21), San Joaquin (32), San Mateo (49), Santa Clara (117), Solano (20), Sonoma (16), Stanislaus (18), Tulare (3), Yolo (2)

Figures 2 and 3 summarize the combined laboratory data from both the RLN and the sentinel laboratories. Figure 2 shows that influenza detections increased in Week 1 (9.1%) compared to the previous week (7.3%). Of the samples tested during Week 1, 6.5% were influenza A and 2.6% were influenza B. Figure 3 shows that there was a slight decrease in the percentage of RSV detections during Week 1 (38.7%) compared to the previous week (40.1%), though overall activity remained high. The percentage of RSV detections in Week 1 exceeds the range of percentages seen for RSV at the same time in previous years.

Figure 2. Influenza detections at Sentinel Laboratories/Respiratory Laboratory Network, 2006-2011

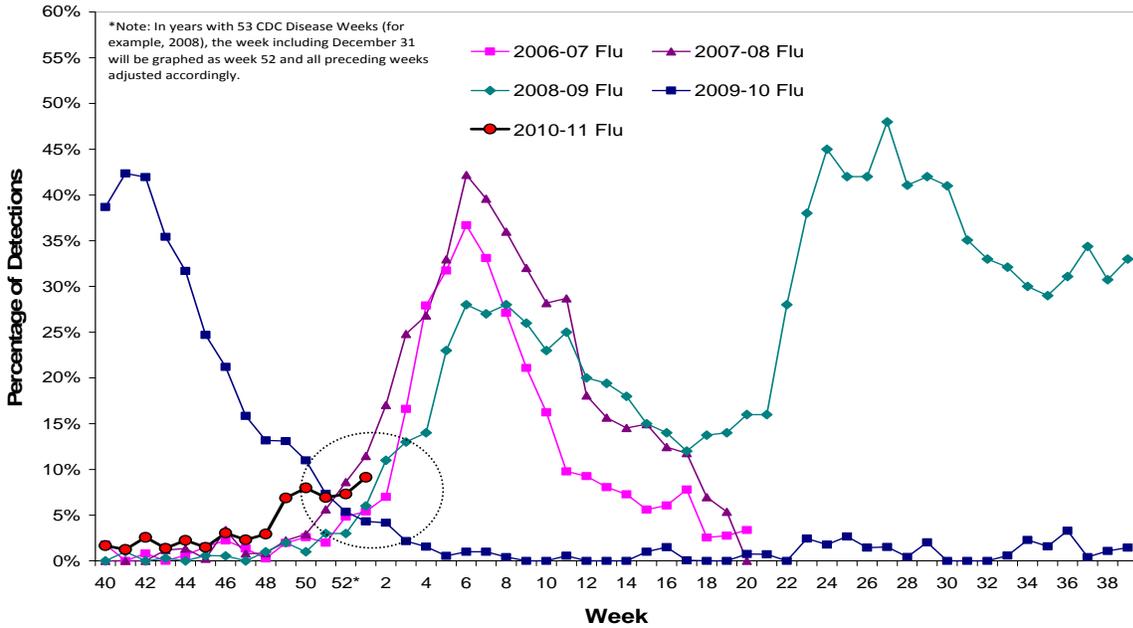
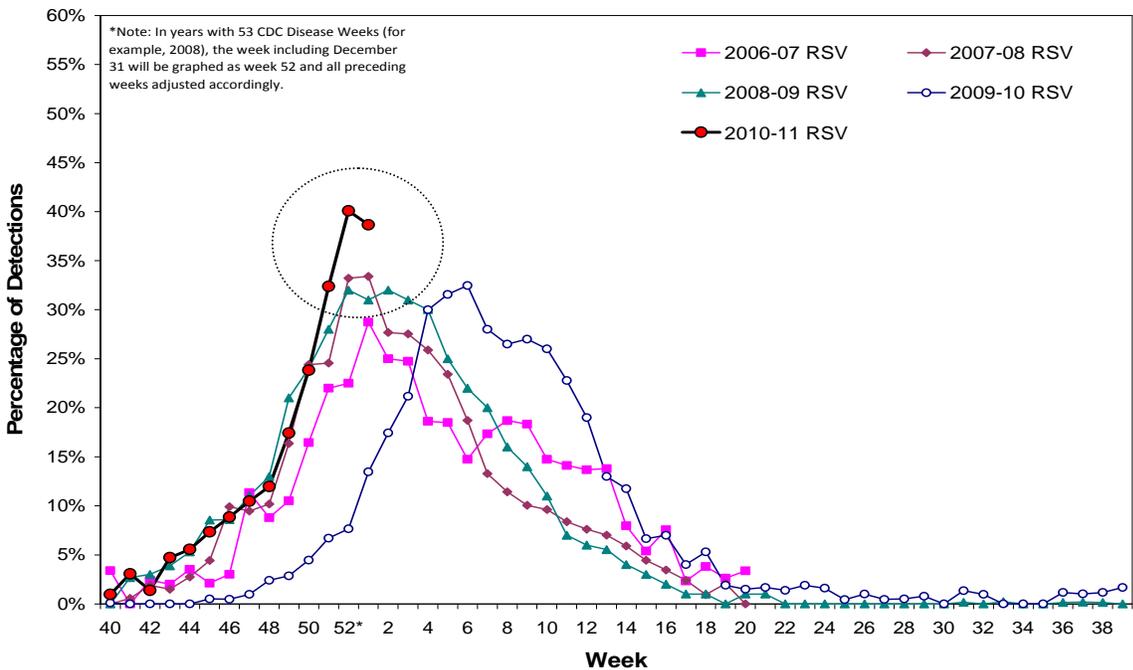


Figure 3. RSV detections at Sentinel Laboratories/Respiratory Laboratory Network, 2006-2011



For questions regarding this report or influenza surveillance and reporting in California, please email InfluenzaSurveillance@cdph.ca.gov. This account is monitored daily by several epidemiologists.

To obtain additional information regarding influenza, please visit the CDPH influenza website at [http://www.cdph.ca.gov/HealthInfo/discond/Pages/Influenza\(Flu\).aspx](http://www.cdph.ca.gov/HealthInfo/discond/Pages/Influenza(Flu).aspx).