

California Influenza and Respiratory Disease Surveillance for Week 3 (January 16-22, 2011)

Note: This report includes data from many different sources of influenza surveillance, including syndromic surveillance, laboratory surveillance, voluntary case-based reporting of severely ill cases and mandatory reporting of influenza deaths for cases ages 0-17 years. The information contained in this report should be viewed as a “snapshot” of influenza activity for each surveillance week, and should not be considered as population-based data or representative of all California jurisdictions.

Based on increasing influenza-like illness and influenza laboratory detections in Northern California and continued elevated activity in Southern California, overall influenza activity in California for week 3 was upgraded to “regional.”*

Influenza and Respiratory Disease Highlights (Week 3)

- With 86 sentinel providers reporting Week 3 data so far, influenza-like illness (ILI) activity increased by 0.1% in Week 3 compared to the previous week. The ILI activity in California for Week 3 was upgraded from “minimal” to “low.”**
- Of 186 specimens tested by PCR statewide by the Respiratory Laboratory Network (RLN) during Week 3, 69 (37.1%) were positive for influenza; 44 (63.8%) were influenza A and 25 (36.2%) were influenza B. The influenza A specimens were subtyped as H3 (24 specimens) and 2009 H1N1 (20 specimens). While influenza A (H3) was the predominant influenza A subtype identified during the early part of the season, increasing numbers of influenza A (2009 H1N1) specimens have been identified in recent weeks. An increasing number of specimens from northern California have been positive.
- The percentage of influenza detections in sentinel laboratories increased during Week 3; 355 (16.0%) of 2,220 specimens tested were positive, compared to 225 (10.7%) of 2,097 specimens tested during the previous week.
- During Week 3, the proportion of specimens tested statewide that were positive for respiratory syncytial virus (RSV) increased slightly; 813 (37.2%) of 2,186 specimens tested were positive, compared to 744 (35.4%) of 2,102 specimens tested during the previous week. Overall RSV activity remains high; the percentage of RSV detections in Week 3 exceeds the range of percentages seen for RSV at the same time in previous years.
- Eleven influenza A (2009 H1N1) specimens and 32 influenza A (H3N2) specimens have undergone resistance testing by the CDPH Viral and Rickettsial Disease Laboratory (CDPH-VRDL); none have been found to have neuraminidase-inhibitor resistance.

*Regional activity is defined by the CDC as “outbreaks of influenza or increases in influenza-like illness (ILI) and recent laboratory-confirmed influenza in at least two but less than half the regions of the state with recent laboratory evidence of influenza in those regions.”

**Activity levels range from minimal to high and are based on the percent of outpatient visits due to ILI compared to the average percent of ILI visits that occur during spring and fall weeks with little or no influenza virus circulation.

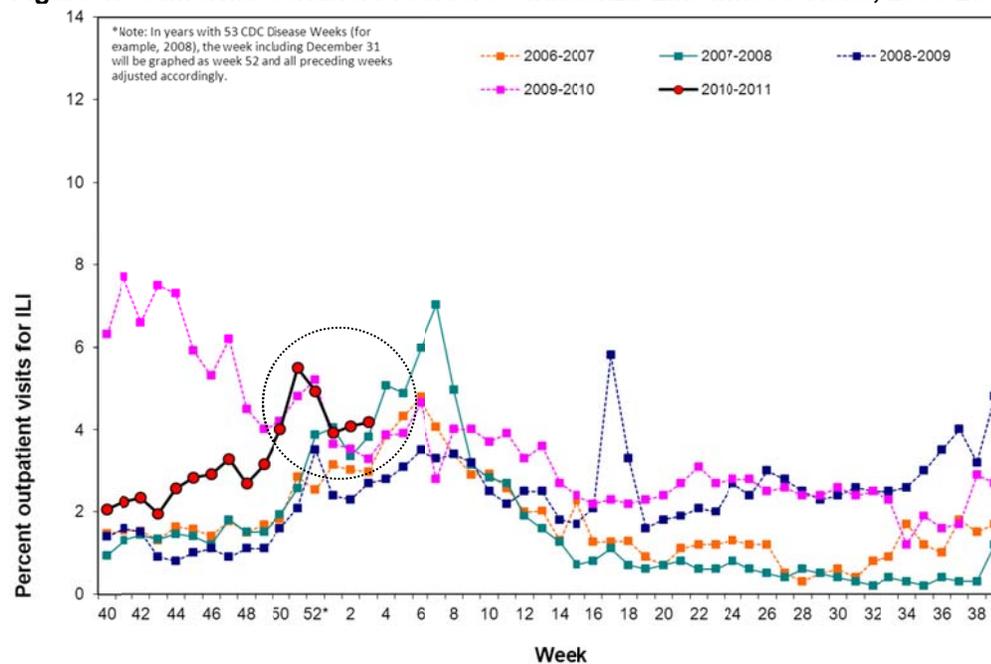
A. Syndromic Surveillance

1. 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.

There was a slight increase in the percentage of ILI visits during Week 3 (4.2%) compared to the previous week (4.1%). Because this percentage was near the baseline percent of ILI visits that occur during spring and fall weeks with little or no influenza virus circulation, the CDC reclassified the level of ILI activity in California for Week 3 from “minimal” to “low”. A total of 86 sentinel providers reported data in Week 3 compared to an average of 122 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 in Week 3 (37.1%) compared to Week 2 (47.1%). Of 186 specimens tested by the RLN during Week 3, 44 (23.7%) were positive for influenza A, including 24 (54.5%) influenza A (H3) and 20 (45.5%) influenza A (2009 H1N1). An additional 25 (13.4%) specimens were positive for influenza B (Table 2). The

majority of positive specimens were from southern California, though the number of positive specimens from northern California has increased in recent weeks.

The percentage of specimens that tested positive for RSV from the RLN decreased in Week 3 (17.4%) compared to Week 2 (20.6%). 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 16–22, 2011

	Total RLN*	Northern CA	Central CA	Southern CA
	No. (%)	No. (%)	No. (%)	No. (%)
Number of specimens tested by PCR	186	18	15	153
Influenza A	44 (23.7) [†]	5 (27.8) [†]	1 (6.7) [†]	38 (24.8) [†]
A (seasonal H1N1)	0 (0.0) [‡]	0 (0.0)	0 (0.0)	0 (0.0)
A (H3)	24 (54.5) [‡]	0 (0.0)	0 (0.0)	24 (63.2) [‡]
A (2009 H1N1)	20 (45.5) [‡]	5 (100.0) [‡]	1 (100.0) [‡]	14 (36.8) [‡]
Influenza B	25 (13.4) [†]	0 (0.0)	0 (0.0)	25 (16.3) [†]
Number of specimens tested by R-mix	23	0	21	2
RSV	4 (17.4) [¶]	0 (0.0)	4 (19.0) [¶]	0 (0.0)
Other respiratory viruses	0 (0.0) [¶]	0 (0.0)	0 (0.0)	0 (0.0)

* RLN labs reporting Week 3 data, by region:

Northern CA: Contra Costa, Placer, Sacramento, San Francisco, Shasta, Sonoma

Central CA: Fresno, Monterey, 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

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 3. The percentage of specimens that tested positive for influenza increased in Week 3 (355 of 2,220; 16.0%) compared to the previous week (225 of 2,097; 10.7%). Of the 2,220 specimens tested for influenza in Week 3, 242 (10.9%) were positive for influenza A and 113 (5.1%) were positive for influenza B. Of 2,163 specimens tested for RSV during Week 3, 809 (37.4%) were positive. This was a slight increase from the previous week, when 737 (35.6%) of 2,068 specimens tested positive for RSV.

Table 2. Influenza and other respiratory virus detections from Sentinel Laboratories, January 16–22, 2011

	No. (%)
Number of sites reporting	72
Total specimens tested for influenza	2,220
Influenza A	242 (10.9)*
Influenza B	113 (5.1)†
Total specimens tested for RSV	2,163
RSV	809 (37.4)‡

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

* Alameda (35), Contra Costa (12), Fresno (7), Imperial (28), Long Beach (7), Los Angeles (28), Marin (4), Orange (3), Placer (5), Riverside (1), Sacramento (9), San Bernardino (3), San Diego (11), San Francisco (26), San Joaquin (4), San Mateo (10), Santa Clara (34), Shasta (1), Solano (8), Sonoma (5), Stanislaus (1)

† Alameda (14), Contra Costa (4), Fresno (6), Imperial (2), Kern (1), Long Beach (7), Los Angeles (24), Madera (1), Marin (3), Monterey (1), Orange (2), Placer (1), Riverside (3), Sacramento (5), San Bernardino (2), San Diego (7), San Francisco (4), San Mateo (7), Santa Clara (15), Solano (3), Yolo (1)

‡ Alameda (82), Contra Costa (46), Fresno (101), Imperial (22), Kern (7), Kings (8), Long Beach (52), Los Angeles (60), Madera (16), Marin (7), Mendocino (1), Merced (4), Napa (1), Nevada (1), Orange (4), Placer (23), Plumas (1), Riverside (17), Sacramento (54), San Bernardino (10), San Diego (51), San Francisco (25), San Joaquin (21), San Mateo (33), Santa Clara (100), Solano (20), Sonoma (18), Stanislaus (20), Tulare (4)

Figures 2 through 4 summarize the combined laboratory data from both the RLN and the sentinel laboratories. Figure 2 shows that influenza detections increased sharply in Week 3 (17.6%) compared to the previous week (13.7%). Of the samples tested during Week 3, 11.9% were influenza A and 5.7% were influenza B (Figure 6). Figure 4 shows that the percentage of RSV detections increased slightly in Week 3 (37.2%) compared to the previous week (35.4%). Overall RSV activity remains high; the percentage of RSV detections in Week 3 exceeds the range of percentages seen for RSV at the same time in previous years.

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

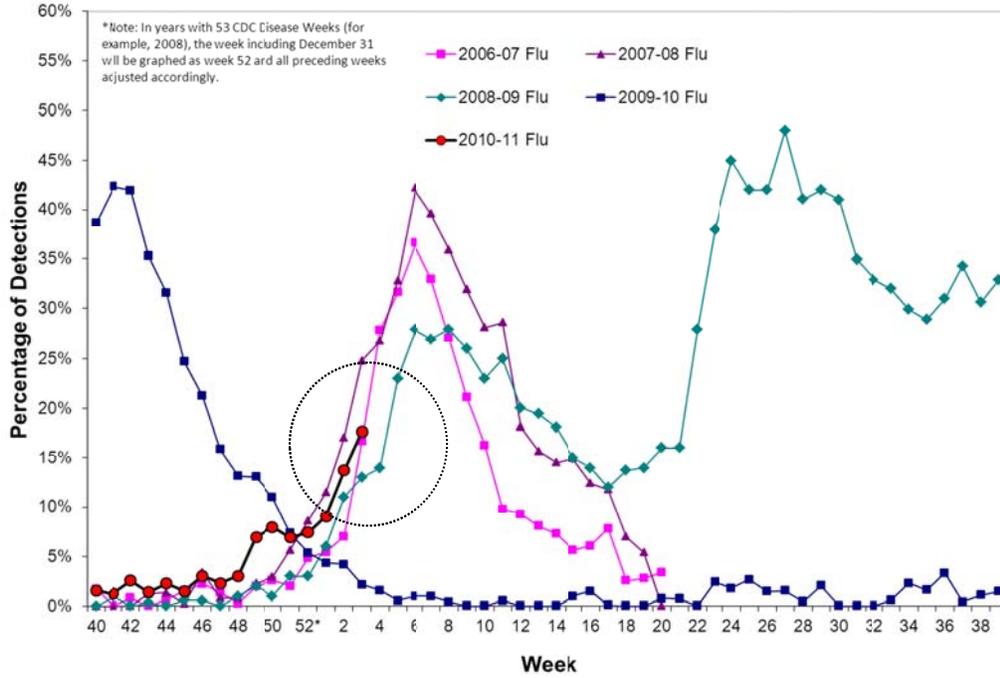


Figure 3. Influenza detections in Sentinel Laboratories/Respiratory Laboratory Network, by influenza type

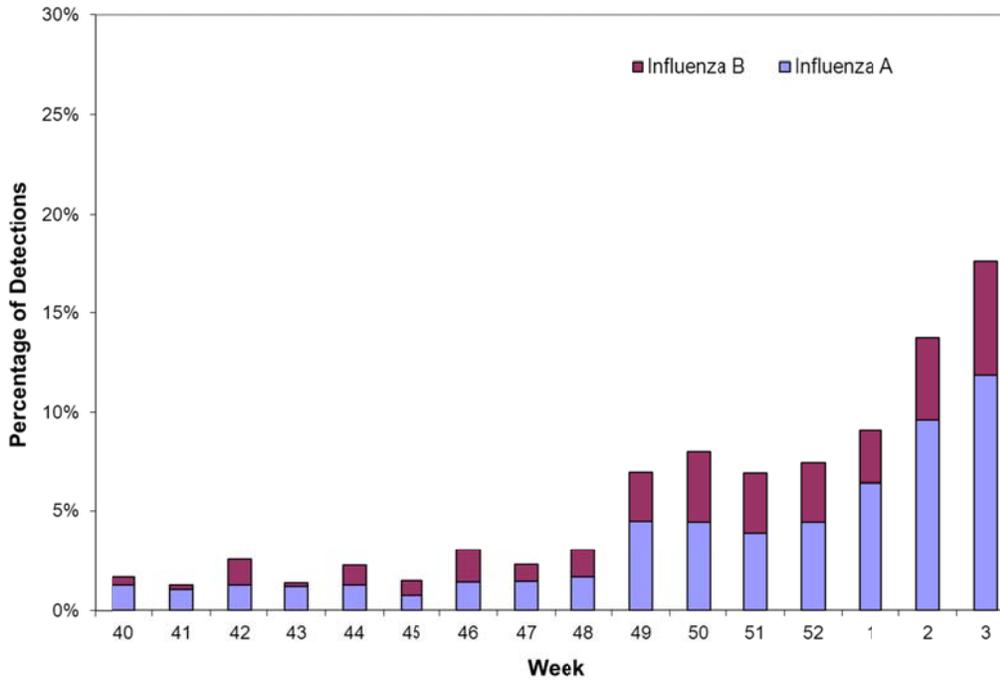
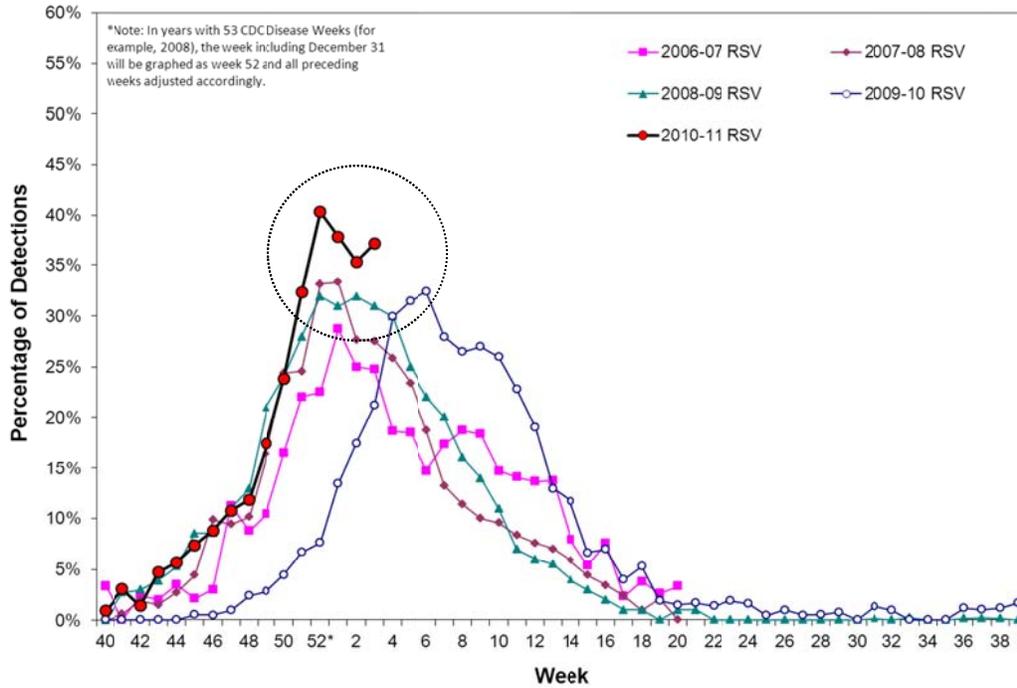


Figure 4. RSV detections in Sentinel Laboratories/Respiratory Laboratory Network, 2006-2011



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).