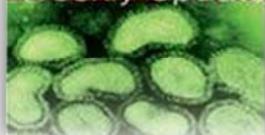


Weekly Update



California Department of Public Health Influenza Surveillance Program

California Influenza and Other Respiratory Disease Surveillance for Week 46 (November 10, 2013 to November 16, 2013)

Note: This report includes data from many different sources of influenza surveillance, including syndromic surveillance, laboratory surveillance, and mandatory reporting of influenza deaths for cases ages 0–64 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 public health jurisdictions.

Overall influenza activity in California during Week 46 was “sporadic*.”

Influenza Report Highlights

- Outpatient influenza-like illness (ILI) decreased in Week 46 (1.2%) compared to Week 45 (2.1%).
- Of 1032 specimens tested during Week 46,
 - 15 (1.5%) were positive for influenza virus; of these
 - 0 (0.0%) were influenza B and
 - 15 (100%) were influenza A
 - 3 (20.0%) were subtyped as seasonal A (H3)
 - 4 (26.7%) were subtyped as 2009 A (H1)
 - 8 (53.3%) were not subtyped.
- The California Department of Public Health Viral and Rickettsial Disease Laboratory (CDPH-VRDL) tested three 2009 A (H1) influenza isolates for antiviral resistance to date. All specimens were sensitive to neuraminidase inhibitors.
- The Centers for Disease Control and Prevention (CDC) has strain-typed two California 2009 A (H1) influenza specimens to date. Both were strain-typed as A/California/07/2009-like (H1N1), the H1N1 component included in the 2013–2014 vaccine for the Northern Hemisphere.
- No influenza-associated deaths were reported during Week 46.
- No influenza outbreaks have been reported in California to date.
- No cases of novel influenza have been detected in California to date.

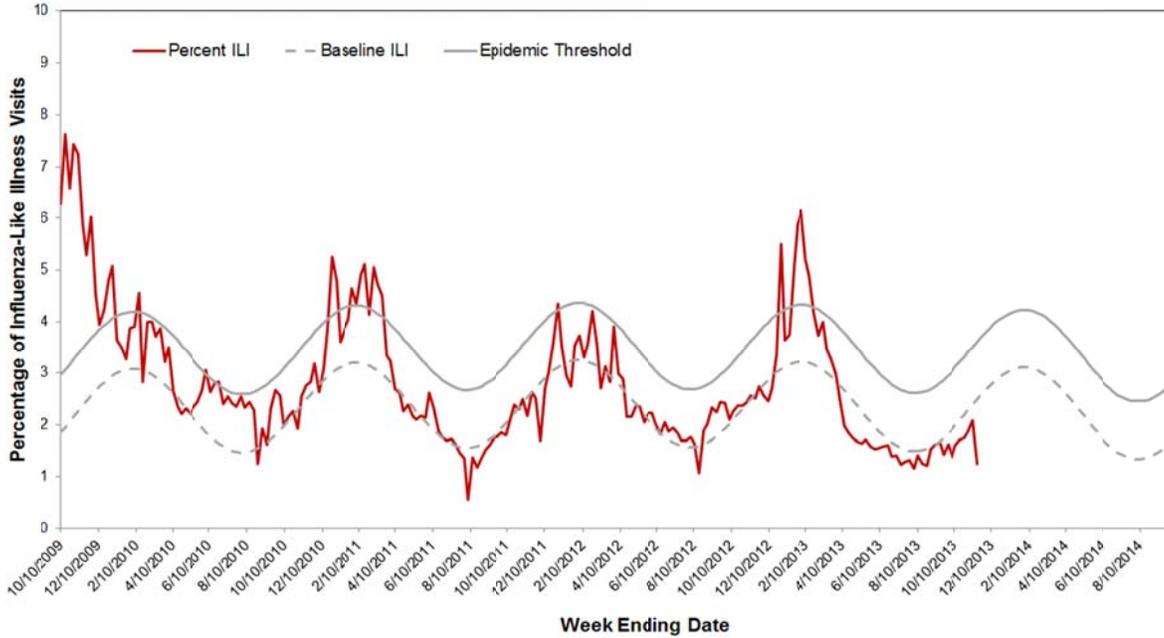
*For the Centers for Disease Control and Prevention (CDC) definitions of influenza geographic distribution, please go to <http://www.cdc.gov/flu/weekly/overview.htm>.

A. Syndromic Surveillance Update

1. CDC Influenza Sentinel Providers

A total of 85 enrolled sentinel providers have reported data for Week 46, compared to an average of 122 providers reporting for each of the previous weeks. Based on available data, the percentage of visits for ILI in Week 46 (1.2%) was below the epidemic threshold (3.5%) (Figure 1).

Figure 1. Percentage of Influenza-like Illness Visits Among Patients Seen by California Sentinel Providers, 2009–2014

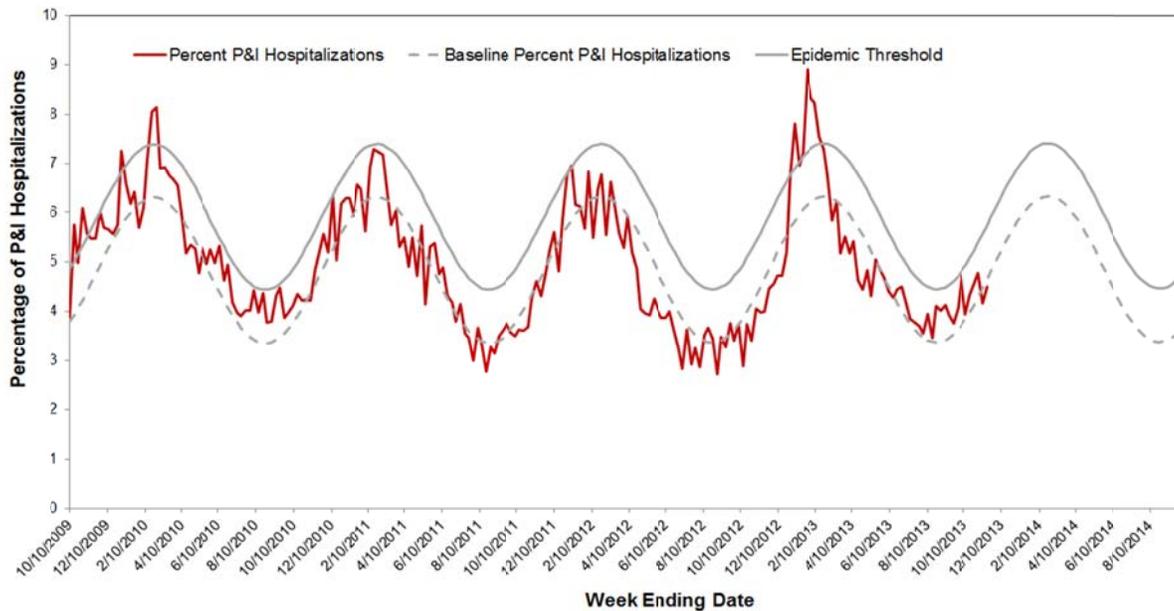


The seasonal baseline was calculated using a regression model applied to data from the previous eight years. The epidemic threshold is two standard deviations above the seasonal baseline and is the point at which the observed percentage of ILI is significantly higher than would be expected at that time of the year.

2. Kaiser Permanente Hospitalization Data

The percentage of hospitalizations for pneumonia and influenza (P&I) in Kaiser Permanente facilities in northern and southern California increased during Week 46 (4.5%), compared to Week 45 (4.2%) (Figure 2). The percentage was below the epidemic threshold (5.6%) during Week 45.

Figure 2. Percentage of P&I Hospitalizations in Kaiser Permanente Northern and Southern California Hospitals, 2009–2014



The seasonal baseline was calculated using a regression model applied to data from the previous six years. The epidemic threshold is two standard deviations above the seasonal baseline and is the point at which the observed percentage of pneumonia and influenza hospitalizations in Kaiser Permanente hospitals in northern California is significantly higher than would be expected at that time of the year.

B. Laboratory Update

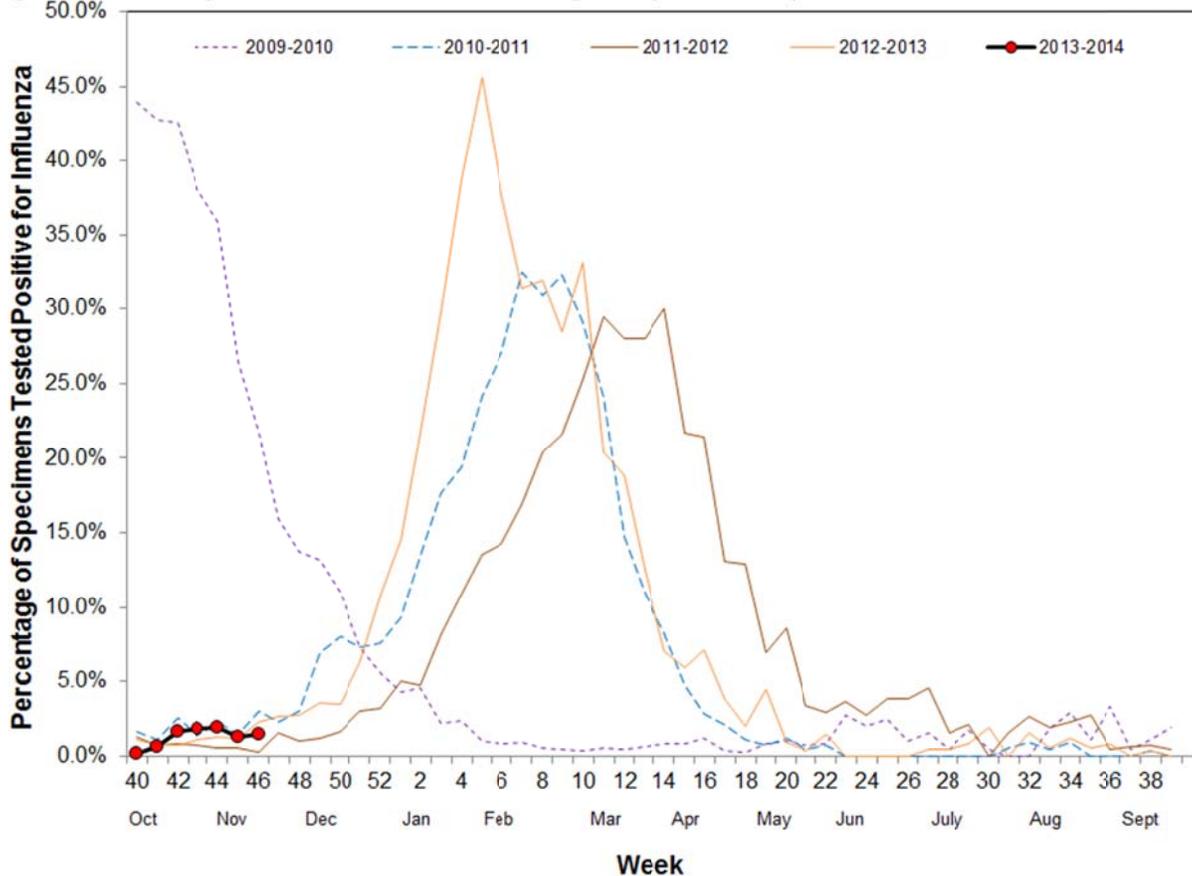
1. Respiratory Laboratory Network (RLN) and Sentinel Laboratory Surveillance Results

The percentage of influenza detections in the RLN and sentinel laboratories increased in Week 46 (1.5%, compared to 1.2% in Week 45) (Figure 3). In Week 46, of 1032 specimens tested by the RLN and sentinel laboratories, 0 (0.0%) were positive for influenza B and 15 (1.5%) were positive for influenza A. Of the 15 specimens that tested positive for influenza A, 3 (20.0%) was subtyped as seasonal A (H3), 4 (26.7%) were subtyped as 2009 A (H1), and 8 (53.3%) had no further subtyping performed.

To date for the 2013–2014 season, of 5,719 specimens tested, 75 (1.3%) were positive for influenza; of these, 8 (10.7%) were influenza B and 67 (89.3%) were influenza A. Of the 67 specimens that tested positive for influenza A, 15 (22.4%) were subtyped as seasonal A (H3), 24 (35.8%) were subtyped as 2009 A (H1), and 28 (41.8%) had no further subtyping performed. Positive specimens have been detected throughout the state.

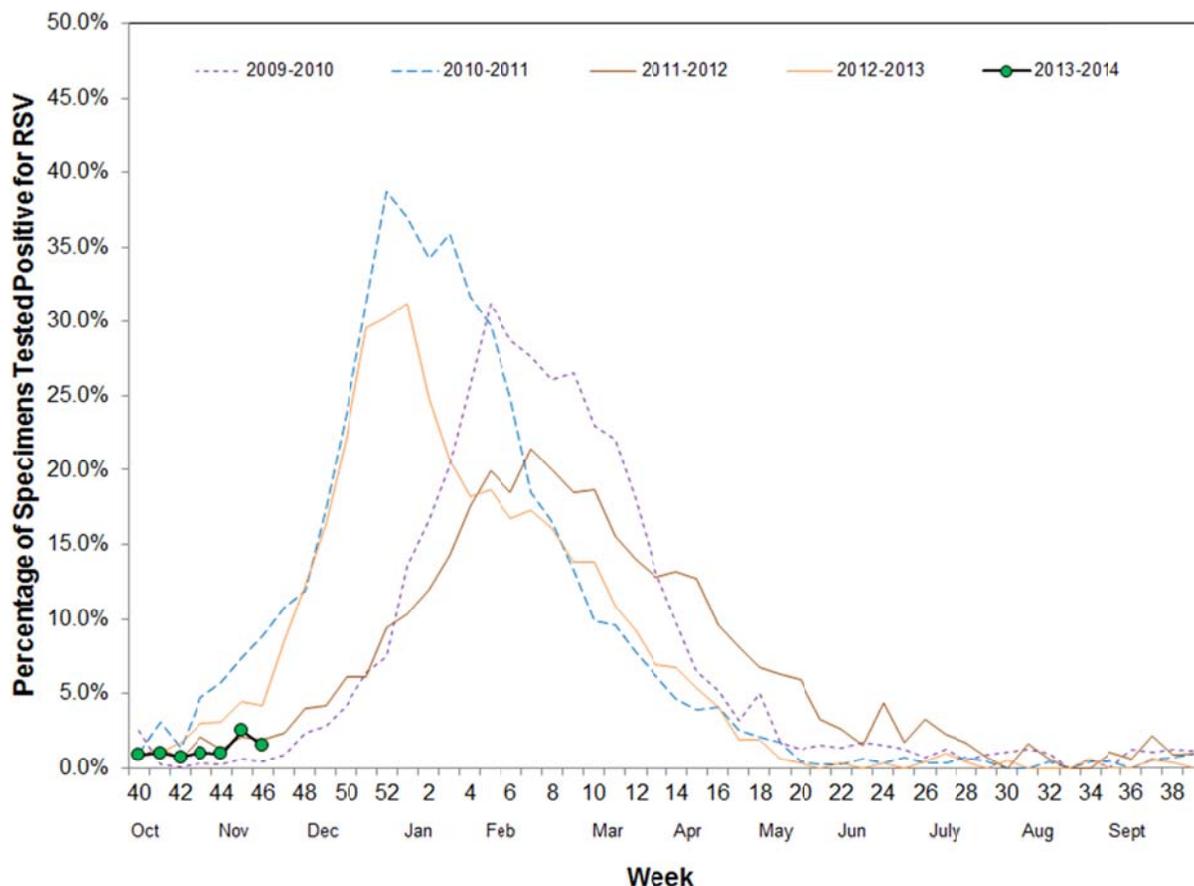
Neither the RLN nor CDPH-VRDL have identified any influenza viruses by polymerase chain reaction (PCR) typing or subtyping that are suggestive of a novel influenza virus.

Figure 3. Percentage of Influenza Detections in Respiratory Laboratory Network and Sentinel Laboratories, 2009–2014



During Week 46, 922 specimens were tested for RSV and 14 (1.5%) were positive, which represents a decrease compared to Week 45 (2.5%) (Figure 4).

Figure 4. Percentage of RSV Detections in Respiratory Laboratory Network and Sentinel Laboratories, 2009–2014

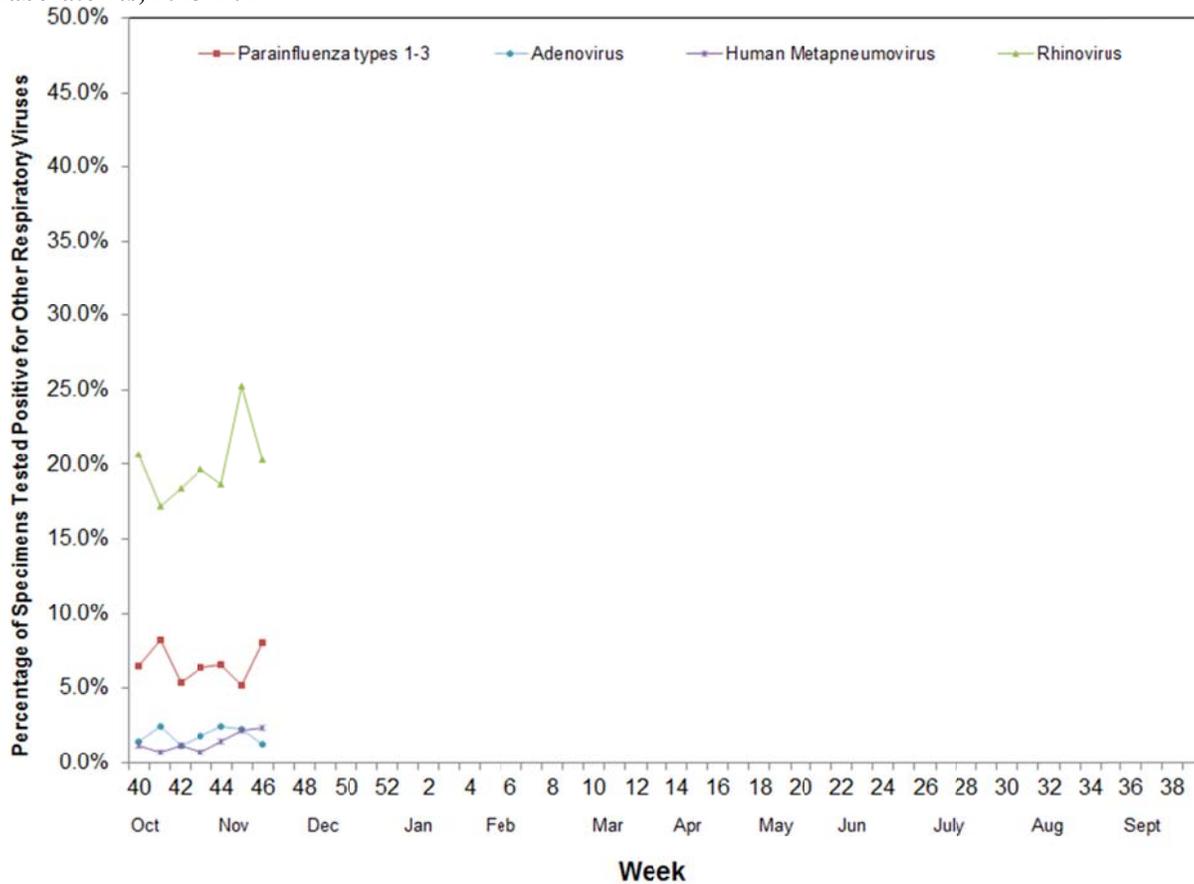


In Week 46, parainfluenza virus detections increased (8.1%, compared to 5.1% in Week 45), adenovirus detections decreased (1.3%, compared to 2.2% in Week 45), human metapneumovirus detections increased (2.3%, compared to 2.2% in Week 45), and rhinovirus detections decreased (20.3%, compared to 25.3% in Week 45) (Table 1, Figure 5).

Table 1. Number of specimens tested for other respiratory viruses and percentage positive in Week 46

Other Respiratory Pathogens	No. Specimens Tested	No. Specimens Tested Positive n (%)
Parainfluenza types 1-3	385	31 (8.1%)
Adenovirus	385	5 (1.3%)
Human Metapneumovirus	301	7 (2.3%)
Rhinovirus	241	49 (20.3%)

Figure 5. Percentage of Other Respiratory Pathogen Detections in Respiratory Laboratory Network and Sentinel Laboratories, 2013–2014



2. Antiviral Resistance Testing

The CDPH-VRDL has tested three 2009 A (H1) specimens for antiviral resistance to date during the 2013–2014 influenza season (Table 2). All specimens were sensitive to neuraminidase inhibitors.

Table 2. Number of specimens tested for antiviral resistance

	Neuraminidase Inhibitors Resistance
Influenza 2009 A (H1)	0/3
Influenza A (H3)	0/0
Influenza B	0/0

3. Influenza Virus Strain Characterization

Two 2009 A (H1) strains have been antigenically characterized to date during the 2013–2014 influenza season. Both were strain-typed as A/California/07/2009-like (H1N1); the H1N1 component included in the 2013–2014 vaccine for the Northern Hemisphere.

C. Laboratory-confirmed Fatal Case Reports

Currently, as mandated under Section 2500 of the California Code of Regulations, deaths among patients aged 0–64 years

with laboratory-confirmed influenza are reportable to CDPH.

During Week 46, no laboratory-confirmed influenza deaths were reported. To date, one laboratory-confirmed influenza death from Southern California has been reported for the 2013–2014 season.

D. Influenza-associated Outbreaks

CDPH has received no reports of laboratory-confirmed influenza outbreaks to date during the 2013–2014 influenza season.

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

For more information regarding the different influenza surveillance data sources, please visit the CDPH Influenza Surveillance Program at <http://www.cdph.ca.gov/programs/dcdc/Pages/CaliforniaInfluenzaSurveillanceProject.aspx>.

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).

A copy of the case report form for reporting any laboratory-confirmed influenza case that was either admitted to the ICU or died can be downloaded from [http://www.cdph.ca.gov/HealthInfo/discond/Pages/Influenza\(Flu\).aspx](http://www.cdph.ca.gov/HealthInfo/discond/Pages/Influenza(Flu).aspx).