New this week and highlights:

- In Santa Clara County, influenza activity is increased from Week 3. There have been 4 cases of severe influenza and 2 deaths reported in persons under the age of 65 during Week 4.
- Overall influenza activity in California remained “widespread” during Week 3.
- Influenza activity continues to be elevated nationwide.

Outpatient influenza-like-like illness

Influenza-like Illness (ILI) – defined as illness with fever (≥100°F or 37.8°C) and cough and/or sore throat – is voluntarily reported by seven sentinel providers in Santa Clara County. These providers submit a weekly report of the number of patients seen with ILI in five CDC designated age categories, and the total number of patients seen for any reason. In addition, they submit specimens to the state laboratory for testing.

As of January 26, 2013, the percent of outpatient ILI visits among patients seen by Sentinel Providers in Santa Clara County was lower than in the previous flu season. During Week 4 (1.9%), outpatient ILI visits decreased by 0.8 percentage points compared to Week 3 (2.7%).

HOW INFLUENZA ACTIVITY IS TRACKED

We use a variety of data sources to track trends in influenza activity, and to compare these trends to influenza trends in previous influenza seasons. Most of these data are collected through state or nationwide influenza surveillance systems, and a subset are local data. For example, in Santa Clara County, we track outpatient visits for influenza-like-illness using data from sentinel providers, and emergency department visits for influenza-like-illness using chief complaint data collected by emergency departments.

We also track reported outbreaks of influenza in schools, daycares or facilities.

As far as individual cases, providers are mandated to report only laboratory-confirmed influenza deaths in patients <65 yrs of age, and may voluntarily report severe influenza requiring ICU-level care in patients <65 yrs. Both events are likely underreported. Aside from these, individual cases of influenza, influenza hospitalizations and influenza deaths are not reportable.

Trends in influenza deaths in persons > 65 years are tracked through the CDC’s 122 Cities Pneumonia and Influenza Mortality Reporting System. National data is available at the Centers for Disease Control and Prevention website: http://www.cdc.gov/flu/weekly.
Seasonal Influenza Report 2012-13
Santa Clara County Public Health Department
CDC Disease Week 4 (data updated through January 26, 2013)

Figure 1: Percentage of ILI Visits Among Patients Seen by Santa Clara County Sentinel Providers, 2011-2013

Hospital Emergency Department Visits for Influenza-like Illness (ILI)

ESSENCE (Electronic Surveillance System for the Early Notification of Community-Based Epidemics), is a real time, automated syndromic surveillance system that collects chief complaint data from Emergency Department visits at seven Santa Clara County hospitals. Chief complaint data are sorted by syndrome, and statistical algorithms are used to calculate unexpected rises in selected syndromes.

Syndromic surveillance done at emergency departments indicates that ILI visits are increasing overall. The proportion of weekly emergency department visits for ILI during Week 4 (9.6%) was lower than during Week 3 (11.5%) among individuals 0-4 years of age. The proportion of weekly emergency department visits for ILI for individuals 5-17 years continued to increase between Week 3 (6.4%) and Week 4 (9.9%) as in the previous weeks. Visits among individuals 18-64 years also increased slightly between Week 3 (2.9%) and Week 4 (3.0%). Emergency department visits for ILI increased slightly for individuals ≥65 years between Week 2 (1.9%) and Week 3 (2.1%).
Figure 2. Weekly Percent of Emergency Department Visits for ILI by age group

Source: Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE), 2012-2013

Laboratory-confirmed Influenza Severe Cases and Deaths*

Only deaths due to laboratory-confirmed influenza in individuals ages 0-64 years are reportable in California. Although severe influenza (ICU level care for persons ≤64 years with laboratory-confirmed influenza) reporting is recommended, it is not required in California and cases are under-reported.

Four new laboratory confirmed cases requiring ICU-level hospitalization have been reported in Santa Clara County between January 20-26, 2013. Two laboratory-confirmed influenza deaths in persons less than 65 years of age have been reported during the same time-period.

Table 1. Reports of laboratory confirmed Severe Influenza Cases and deaths in persons <65 yrs, and influenza outbreaks, Santa Clara County, September 30, 2012 – January 26, 2013

<table>
<thead>
<tr>
<th>Laboratory confirmed influenza cases resulting in ICU-level hospitalization or death</th>
<th>Severe (ICU)</th>
<th>Fatalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult (18 – 64 yrs)</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Pediatric (&lt; 18 yrs)</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

| Influenza Outbreaks | 2 |

^Santa Clara County counts based on "closest onset date," which is calculated based on one of the following dates: date of onset, date of diagnosis, date specimen collected, date of death, or date reported to the Santa Clara County Public Health Department. Sources: California Reportable Disease Information Exchange (CalREDIE), 2012-2013.
Statewide & National data

Influenza activity in California remained at “widespread**” for Week 3. Five influenza-related deaths were reported in an individual less than 65 years of age in California during Week 3. No cases of novel influenza have been detected in California to date. Antiviral resistance testing has been done by CDPH on a sample of specimens for epidemiological purposes. Of the 12 influenza A (H3) specimens tested to date, all have been sensitive to neuraminidase inhibitors. California specimens are routinely forwarded to the Centers for Disease Control and Prevention (CDC) for strain typing. Three California specimens have been strain typed by CDC and all 3 matched with components of the 2012–2013 vaccine for the Northern Hemisphere. Additional information about influenza activity statewide can be obtained from the CDPH, Influenza Surveillance Project: http://www.cdph.ca.gov/programs/dcdc/Pages/CaliforniaInfluenzaSurveillanceProject.aspx

Nationwide, the United States is experiencing elevated influenza activity, with much of the country experiencing high levels of ILI activity. Since October 1, 2012, 6,191 laboratory-confirmed influenza-associated hospitalizations have been reported nationwide. Between January 13-19, 2013, 942 hospitalizations and 8 pediatric influenza-related deaths were reported. Both influenza A viruses, including H1N1 and H3N2, as well as influenza B viruses have been circulating this season. For more information about influenza activity in the United States, please visit the CDC Influenza Surveillance website: http://www.cdc.gov/flu/weekly/

* Only deaths due to laboratory-confirmed influenza in individuals ages 0-64 are reportable in California. Though severe influenza (ICU level care for persons ≤64 years with laboratory-confirmed influenza) reporting is recommended in California, cases are under-reported. Data for this report were compiled from various sources, including sentinel provider data, laboratory testing data, syndromic surveillance, and countywide reporting for patients meeting select criteria. The data presented are not population based and cannot be applied to Santa Clara County as a whole.

**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.

- No Activity: No laboratory-confirmed cases of influenza and no reported increase in the number of cases of ILI.
- Sporadic: 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 ILI.
- Local: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of the state.
- Regional: Outbreaks of influenza or increases in 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.
- Widespread: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

SCC flu surveillance and definitions—ILI: Influenza-Like Illness; CDC Disease Week: a standardized weekly calendar provided by CDC, allowing data to be compared over multiple years

Sources: California Sentinel Provider program, 2011-2013; Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE), 2012-2013; California Reportable Disease Information Exchange (CalREDIE), 2012-2013.

Additional resources: Centers for Disease Control and Prevention, California Department of Public Health