New this week and highlights

- Nationwide, the United States is experiencing elevated influenza activity, though activity levels vary from state to state.
- No cases of Influenza A (H3N2) Variant Virus have been reported in Santa Clara County to date.*
- During the 2012-13 influenza season, one Santa Clara County resident required ICU-level hospitalization for influenza as of December 29, 2012.

Laboratory-confirmed Influenza Severe Cases and Deaths*

During the 2012-13 influenza season, one laboratory confirmed case requiring ICU-level hospitalization has been reported in Santa Clara County. No laboratory-confirmed influenza deaths have been reported during the 2012-13 influenza season in Santa Clara County. *

Table 1. Reported Influenza Cases and Deaths and Outbreaks Investigated, January 1 – December 29, 2012

<table>
<thead>
<tr>
<th>Confirmed Influenza Cases</th>
<th>Onset(^\text{a}) during the 2012-13 flu season</th>
<th>Cumulative (1/1/2012 - 12/29/2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(9/30/2012 – 12/295/2012)</td>
<td></td>
</tr>
<tr>
<td>Cases requiring ICU-level hospitalization and fatalities related to Influenza</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Severe (ICU)</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Adult</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Pediatric</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fatalities</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Adult</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pediatric</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Influenza Outbreaks</td>
<td>0</td>
<td>9</td>
</tr>
</tbody>
</table>

\(^a\)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: Automated Vital Statistics System (AVSS), 2012; California Reportable Disease Information Exchange (CalREDIE), 2012
Santa Clara County Public Health Laboratory sends specimens to the California Department of Public Health (CDPH), Viral & Rickettsial Disease Laboratory (VRDL) routinely for antiviral resistance testing. A sample of specimens are tested at VRDL for epidemiologic research purposes, but results are not available at a county level.

ILI Sentinel Provider Data

Influenza-like Illness (ILI) is defined as illness with fever (≥100°F or 37.8°C) and cough and/or sore throat (in the absence of a known cause). Providers report the number of patients seen with ILI in five CDC designated age categories (0-4 years, 5-24 years, 25-49 years, 50-64 years, >64 years) and the total number of patients seen for any reason. Sentinel providers are physicians, nurse practitioners, and physician assistants in any specialty or of any type of practice (e.g., private practice, public health clinic, urgent care center, emergency room, university student health center) who voluntarily report weekly ILI visits and submit specimens to the state laboratory for testing. Their participation allows us to better understand disease burden in the county, the state, and the nation as a whole. In Santa Clara County, seven sentinel providers report ILI visits to the CDC on a weekly basis.

As of December 15, 2012, 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 49 (0.7%), outpatient ILI visits increased by 0.3 percentage points compared to Week 48 (0.4%). Data for outpatient ILI visits reported by Sentinel Providers is unavailable for Weeks 50-51 due to the holidays but will be updated in next week’s influenza report.

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 52 (8.6%) was lower than during Week 51 (10.2%) among individuals 0-4 years of age. The proportion of weekly emergency department visits for ILI for individuals 5-17 years decreased between Week 51 (5.4%) and Week 52 (4.2%). Visits among individuals 18-64 years increased between Week 51 (0.8%) and Week 52 (1.3%). Emergency department visits for ILI increased for individuals ≥65 years between Week 51 (0.4%) and Week 52 (1.4%).

Figure 2. Weekly Percent of Emergency Department Visits for ILI by age group

Sources: Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE), 2012
Pneumonia and Influenza (P & I) Mortality Surveillance

- Santa Clara County participates in a CDC-sponsored surveillance effort called 122 Cities Mortality Reporting System. On a weekly basis, deaths due to influenza or pneumonia are evaluated for the City of San Jose.

- During December 23 – December 29, 2012 3.7% (6/161) of all deaths reported for San Jose were due to pneumonia. The age group most affected was 85 years or older. This age group accounts for two-thirds of all P & I deaths during that period. No deaths reported during this period were due to influenza.

New Influenza Strain: Influenza A (H3N2) Variant Virus

As of December 29, 2012, no cases of influenza A (H3N2) Variant Virus have been reported in Santa Clara County or in California. Since July 2012, there have been outbreaks of H3N2v viruses throughout the United States. As of December 21, 2012, 309 cases have been reported in 12 states, including 16 hospitalizations and one fatality. This compares to 12 cases in five states in 2011.

Transmission of H3N2v variant influenza A viruses has been associated with exposure to swine, as well as some limited human-to-human transmission. So far, the severity of illnesses associated with this virus has been similar to the severity of illnesses associated with seasonal flu virus infections. Most have presented with self-limited, mild respiratory illnesses. Most of the cases have been children, who do not carry immunity for this virus. Individuals who have been previously infected with seasonal influenza A (H3N2) would have immunity to the H3N2v strain. Individuals at highest risk for seasonal influenza should also take precautions against H3N2v by avoiding or limiting contact with pigs, and getting the seasonal flu vaccine.

For more information about H3N2v variant influenza A virus, visit the CDC website: http://www.cdc.gov/flu/swineflu/h3n2v-cases.htm

Statewide & National data

Overall influenza activity in California remains “sporadic.” No novel strains or outbreaks due to influenza have been reported to date. One influenza-related death has been reported in an individual less than 65 years of age in California. Antiviral resistance testing has not been done by CDPH to date. California specimens are routinely forwarded to the Centers for Disease Control and Prevention (CDC) for strain typing. No California specimens have been strain typed to date. Additional information about influenza activity statewide can be obtained from the CDPH, Influenza Surveillance Project. http://www.cdph.ca.gov/programs/dc/dc/Pages/CaliforniaInfluenzaSurveillanceProject.aspx
Nationwide, the United States is experiencing elevated influenza activity, though activity levels vary from state to state. Since October 1, 2012, 1,522 laboratory-confirmed influenza-associated hospitalizations have been reported nationwide. Between December 16-22, 2012, 509 influenza-associated hospitalizations and eight pediatric influenza-related deaths have been 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/summary.htm

Flu Vaccination

- Vaccination is recommended for all persons 6 months and older. It is particularly important for individuals over age 65, those with certain chronic medical conditions (such as asthma, diabetes, or heart disease), pregnant women, and children less than 5 years of age to be vaccinated, as they are at greater risk for developing flu-related complications.
- Flu vaccines are available through your provider and at most drug stores.
- Individuals who are 18 years or older and uninsured or underinsured can obtain a flu vaccine through the Santa Clara County Public Health Adult Immunization Clinic for $17.50.
- Seniors with Medicare can obtain a flu vaccine for free through the Santa Clara County Public Health Adult Immunization Clinic.
- This year’s flu vaccine includes the following strains: A/California/7/2009 (H1N1)-like virus, A/Victoria/361/2011 (H3N2)-like virus, B/Wisconsin/1/2010-like virus.
- Visit http://flushot.healthmap.org/ to find a location in your area that offers flu shots.

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

* 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.

Sources: Automated Vital Statistics System (AVSS), 2012; California Reportable Disease Information Exchange (CalREDIE), 2012; California Sentinel Provider program, 2011-2012; Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE), 2011, U.S. Food and Drug Administration

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