Seasonal Influenza Report 2016-17

San Mateo County Health System, Public Health Policy and Planning
Weeks 1 & 2 (January 1 to 14, 2017)

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Current Influenza Activity

San Mateo County

- During week 2 (ending 1/14/17), San Mateo County reported increased influenza activity.
- Week 2 of the current season had more influenza detections than week 2 of the previous season (Figures 1 and 2).
- Within the County, based on laboratory reports from reporting county and hospital laboratories*, a total of 3,442 specimens have been tested for influenza since the beginning of influenza season, with 453 (13.2%) testing positive. A total of 550 specimens have been tested for RSV since the beginning of the influenza season, with 40 (7.3%) testing positive (Figures 1, 3, and 4).
- San Mateo County Public Health Laboratory (SMC PHL) has the ability to further subtype positive influenza specimens; there were 41 H3 specimens and one H1 specimen in week 1 and 39 H3 specimens in week 2.
- No influenza-related deaths for 0-64 years old were reported during weeks 1 & 2.
- Influenza-like illness (ILI) surveillance of chief complaint data from San Mateo Medical Center ED shows increased activity compared to the same period last season (Figure 5).
- There were two laboratory-confirmed outbreaks during week 1 and five laboratory-confirmed outbreaks during week 2.

California

- Influenza activity in California remained "widespread§" during week 2.
- Of 6,331 specimens tested in week 2, 1,936 (30.6%) tested positive for influenza. Of these positive specimens, 1,897 (98.0%) tested positive for influenza A, of which six (0.3%) were H1, 328 (17.3%) were H3, and 1,563 (82.4%) were not subtyped. The 39 (2.0%) remaining positive specimens tested positive for influenza B.
- Outpatient visits for ILI were 2.8% of patient visits during week 2, which is above expected levels for this time of year.
- There were 23 laboratory-confirmed outbreaks during week 1 and 36 laboratory-confirmed outbreaks during week 2.
- Hospital visits for Pneumonia and Influenza (P&I) for week 2 were similar (8.7%) to week 1 (10.2%), which were above expected levels for this time of the year.†

United States

- During week 2, influenza activity increased in the United States.
- Of the 27,805 specimens tested by clinical laboratories, 4,258 (15.3%) were positive for influenza, of which 3,916 (92.0%) were influenza A and 342 (8.0%) were influenza B.
- Of the 1,761 specimens tested by public health laboratories, 875 (49.7%) were positive for influenza. Of the positive specimens, 824 (94.2%) were influenza A, of which 16 (1.9%) were 2009 H1N1, 761 (92.4%) were H3, and 47 (5.7%) were not subtyped. Of the remaining positive specimens, 51 (5.8%) were influenza B, of which 21 (41.2%) were of Yamagata lineage, 10 (19.6%) were of Victoria lineage, and 20 (39.2%) did not have lineage performed.
- During week 52, 7.0% of all deaths reported through the National Center for Health Statistics Mortality Surveillance System were due to Pneumonia and Influenza (P&I)‡, below the epidemic threshold of 7.3% for week 52. Due to a backlog of records, this was the most recent data to date.
- Two influenza-associated pediatric deaths were reported during week 2.
- During week 2, 3.3% of patient visits reported through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) were due to ILI. This is above the national baseline of 2.2%.
- Six states (MO, NJ, NY, OK, SC, TN) experienced high ILI activity; eight states (AL, AK, GA, LA, PA, UT, VA, WY) experienced moderate ILI activity; 14 states (AZ, AR, CA§, CO, HI, ID, IL, KS, KY, MI, MS, NE, NV, SD) experienced low ILI activity; the remaining 22 states experienced minimal ILI activity.

Figure 1

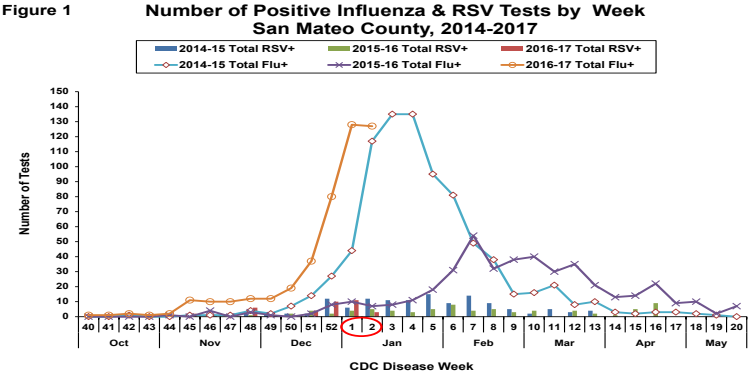


Figure 2

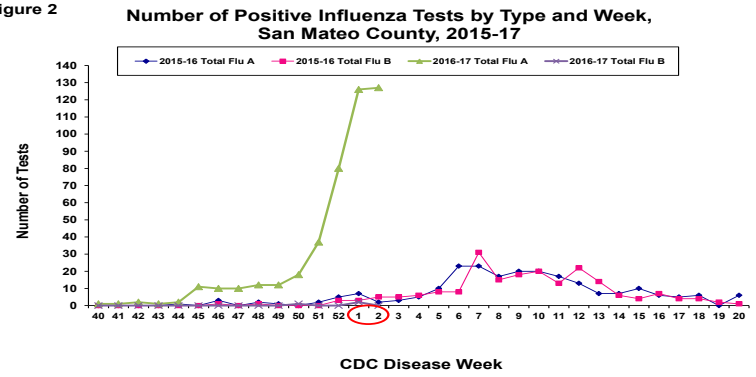


Figure 3

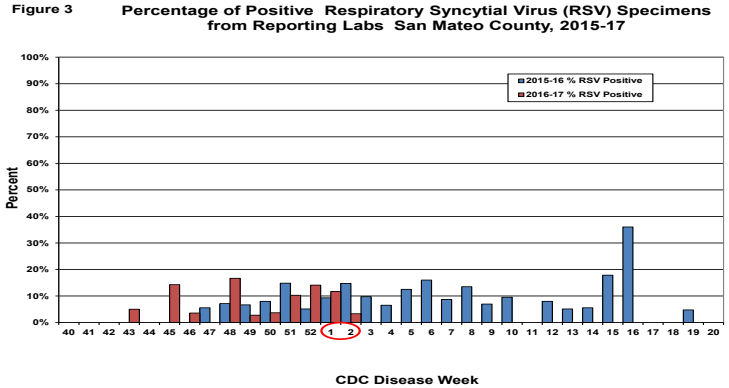


Figure 4

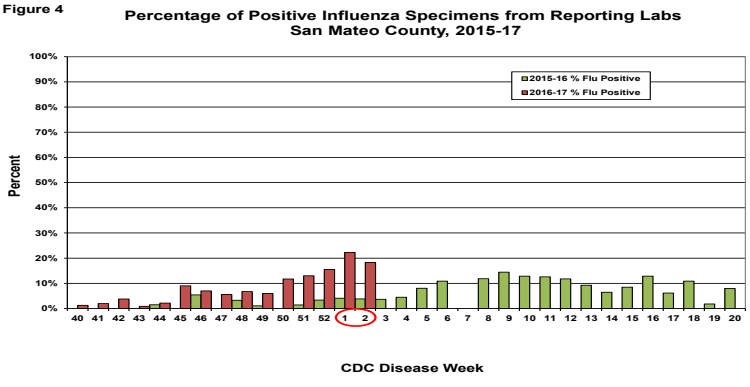
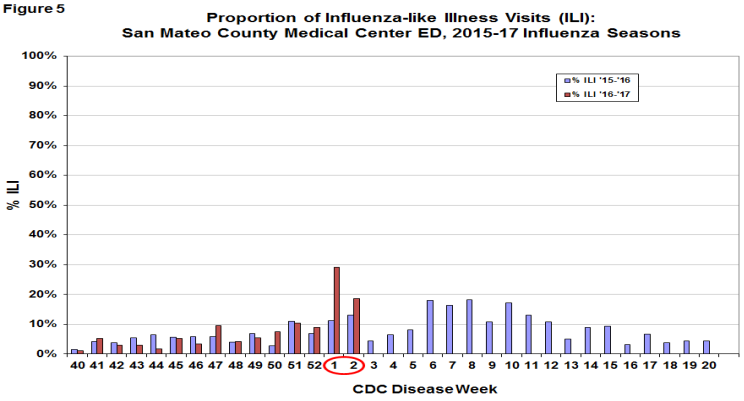


Figure 5



*Our reported numbers do not represent all cases of influenza within SMC, but are intended to demonstrate trends in influenza activity. This issue does not represent data from Kaiser. Sources: SMC: San Mateo Medical Center, Sequoia Hospital, Mills-Peninsula Hospital, San Mateo County Public Health Laboratory; CA: California Influenza Surveillance Project: http://www.cdph.ca.gov/PROGRAMS/DCDC/Pages/CaliforniaInfluenzaSurveillanceProject.aspx; US: CDC Influenza Activity and Surveillance: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

†This data reflects Kaiser hospitalizations only.

‡The CDC notes: "P&I percentages for recent weeks may be artificially low due to a backlog of records requiring manual processing. Percentages will likely increase to levels more similar to the baseline as more data becomes available."

§ The California Department of Public Health measures influenza activity with data on outbreaks, ILI cases, and laboratory-confirmed cases; the Center for Disease Control and Prevention measures influenza activity by geography by looking at outpatient visits to healthcare providers only. The differing definitions may result in a seeming discrepancy in description of influenza activity.

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FLU REPORT HEADLINES

- **Test or Treat?**
- **Recommendations for the Prevention and Control of Influenza in California Long-term Care Facilities**
- **Report to Communicable Disease Control**
- **Recommendations for influenza and other respiratory virus reporting and testing**

TEST OR TREAT?

Flu activity in San Mateo County is increasing. 127 specimens during week 2 tested positive for influenza.

- Test outpatients with suspected flu and high risk of complications, who are being considered for antiviral treatment. Consider empiric treatment in high-risk outpatients and those with progressive disease. Consider testing children <2 years of age to rule out RSV vs. influenza.
- Test hospitalized patients with suspected flu. Consider empiric treatment, especially in high-risk patients and those with progressive disease.
- Five licensed prescription influenza antiviral medications are available in the United States.
- **Three are recommended for use in the United States during the 2016-2017 influenza season: oral oseltamivir (Tamiflu), inhaled zanamivir (Relenza) and intravenous peramivir (Rapivab).** These drugs (neuraminidase inhibitors) have activity against both influenza A and influenza B viruses.
- Amantadine and rimantadine belong to a class of drugs called adamantanes. They are active against influenza A viruses but not against influenza B viruses. As in past seasons, there continues to be high levels of resistance (>99%) to adamantanes among influenza A (H3N2) and influenza A (H1H1) pdm09 ("2009 H1N1") viruses. Therefore **amantadine and rimantadine are not currently recommended for antiviral treatment or chemoprophylaxis.**
- **For dosing guidelines and other information regarding antiviral medications, please go to: https://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm**

The California Department of Public Health (CDPH) updated **its Recommendations for the Prevention and Control of Influenza in California Long-term Care Facilities** in October 2016. The revised recommendations can be found at https://www.cdph.ca.gov/programs/hai/Documents/RecommendationsForThePreventionAndControlOfInfluenzaOct2016.pdf and outline measures to lessen the effect of influenza outbreaks on residents, including vaccinating residents and staff, looking for possible cases of influenza, testing for influenza, providing chemoprophylaxis and treatment with antivirals as indicated, as well as implementing infection control precautions and reporting to the local health department.

PLEASE REPORT TO COMMUNICABLE DISEASE CONTROL

- **Report ALL cases with severe febrile respiratory illness and suspected seasonal influenza which are (1) hospitalized in the ICU ages 0-64 or (2) deceased ages 0-64 by calling (650) 573-2346** or by submitting a Confidential Morbidity Report (CMR) and faxing it to (650) 573-2919.
- Immediately report any respiratory outbreaks in your facility to Communicable Disease Control by calling (650) 573-2346.

Recommendations for influenza and other respiratory virus reporting and testing

1. Continue **reporting** of laboratory-confirmed **influenza fatal cases age 0–64 years.**
2. Continue **reporting** of laboratory-confirmed **influenza cases age 0–64 years requiring intensive care.**
3. **Report respiratory syncytial virus (RSV)-associated deaths in children <5 years of age.**
4. **Encourage influenza testing, preferably by real-time RT-PCR (reverse transcription - polymerase chain reaction)**, for the situations listed below:
   A. Hospitalized, intensive care unit (ICU) and/or fatal cases with ILI (Influenza-like illness = fever (≥100°F or 37.8°C) and cough or sore throat, in the absence of a known cause other than influenza)
   B. Acute respiratory outbreaks
   C. ILI in any person where history of travel, or recent close contacts, or exposures within 10 days of symptom onset, suggests concern for variant or novel influenza infection (e.g., swine (H3N2v) influenza, influenza A/H7, influenza A/H5, or other novel influenza A)
5. **Rapid influenza diagnostic tests** (RIDTs) may vary in terms of sensitivity and specificity when compared with RT-PCR. RIDTs **may produce** false positives, especially when influenza prevalence is low, and **false negatives when influenza prevalence is high** (as is currently the case in Northern California).
6. **Real-time RT-PCR is the preferred laboratory testing method** when there is strong clinical suspicion of influenza infection, **even if the RIDT result is negative.**
7. **Upper respiratory samples** suitable for RT-PCR include: nasopharyngeal (NP) swabs, nasal swabs, throat swabs, nasal aspirate, nasal washes, NP wash, and NP aspirate. For patients hospitalized with pneumonia, specimens from the lower respiratory tract should also be obtained.
8. **Lower respiratory tract samples** suitable for RT-PCR include: bronchoalveolar lavage (BAL), bronchial wash, tracheal aspirate, and lung tissue.
9. **Swab specimens should be collected** using swabs with a synthetic tip (e.g., polyester or Dacron®) and an aluminum or plastic shaft. Swabs with cotton tips and wooden shafts are NOT recommended. Specimens collected with swabs made of calcium alginate are NOT acceptable.
   A. Place appropriate swab specimen in a standard container with 2–3 ml of viral transport media (VTM).
   B. Specimens should be collected within the first 24–72 hours of onset of symptoms and no later than 5 days after onset of symptoms. The specimens should be kept refrigerated at 4°C and sent on cold packs if they can be received by the laboratory within 3 days of the date collected. If samples cannot be received by the laboratory within 3 days, they should be frozen at -70°C or below and shipped on dry ice.