



Health Update:

Influenza and Respiratory Illness 2018 – 19

November 1, 2018

Situation: Seasonal influenza activity has begun in California and is expected to increase. Visit www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/Influenza.aspx for activity updates.

Actions Requested of San Francisco Clinicians

- **Report influenza and other acute respiratory outbreaks, influenza-associated deaths in persons aged 0 – 64 years, and RSV-associated deaths in young children**, according to reporting guidance below.
- **Encourage and administer annual influenza vaccine** to everyone aged ≥ 6 months. Provide pneumococcal vaccination with Prevnar13[®] and/or Pneumovax23[®] as recommended by CDC.
- **Prescribe antiviral treatment** for patients with suspected or confirmed influenza who are hospitalized for severe illness or who are at higher risk for influenza-related complications. Treat early and empirically, without waiting for lab test results.
- **Prescribe antiviral chemoprophylaxis** for those at higher risk for influenza-related complications who have been exposed to influenza, especially those in congregate settings.
- **Review and implement influenza infection control precautions.** In the outpatient setting, those with influenza-like illness (ILI) should be instructed to stay at home until 24 hours after fever resolves, except to access medical evaluation and care. All patients with ILI should wear a (surgical) face mask in all health care settings.

Reporting

SFDPH Communicable Disease Control phone (415) 554 – 2830; fax (415) 554 – 2848. See www.sfcddcp.org/communicable-disease/disease-reporting/influenza-reporting-resources/.

PLEASE REPORT:

Outbreaks of influenza or acute respiratory illness occurring in institutions or congregate settings (e.g., long-term care, rehab, assisted living, jail) (*report by phone within 24 hours*).

- See recommendations checklist and other resources at www.sfcddcp.org/longtermcare.

Fatal laboratory-confirmed influenza-associated cases aged 0 – 64 years (*report within 7 days*).



- Complete a case history form (www.sfcdcp.org/influenzareporting.html).
- Note that SFDPH may request that retained specimens from fatal cases be sent to CDPH for viral culture, strain typing and antiviral resistance testing. Goals are to characterize circulating strains, guide antiviral treatment recommendations and look for emergence of novel strains.

Fatal respiratory syncytial virus (RSV)-associated cases aged 0 – 4 years (*report within 7 days*).

Novel influenza (e.g., avian flu H7N9 or H5N1) (*report immediately by phone if suspected*).

- These are characterized by ILI severe enough to require inpatient medical care in a person with recent (within 10 days of illness onset): (a) close contact with a confirmed or suspected case of human infection with a novel influenza virus; OR (b) travel to areas where a novel virus has been detected in humans or animals; OR (c) working with a novel influenza virus in a lab.
- See: www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/Influenza.aspx (CDPH Novel Influenza A Quick Sheet 2017) and www.cdc.gov/flu/avianflu/healthprofessionals.htm.

Testing, Specimen Collection, and Submission

Influenza testing is indicated when it will help guide clinical decision-making. Testing may be most useful in hospitalized and/or critically ill patients, and at the beginning and end of influenza season when the pre-test probability is lower. Treatment with antivirals should not be delayed pending test results.

Rapid influenza diagnostic tests (RIDT) and reverse transcription polymerase chain reaction tests (RT-PCR): A positive RIDT result is 90-95% likely to be true positive, but a negative result is only 50-70% likely to be true negative. To minimize false negative results: collect respiratory specimens for RIDT within 3-4 days of illness onset and consider confirmatory testing with RT-PCR, particularly if an RIDT result is negative during a period of high community influenza activity.

Influenza testing by RT-PCR is readily available at hospital and commercial laboratories and is particularly encouraged: (1) for hospitalized, intensive care, and fatal cases of ILI; (2) during acute respiratory outbreaks; and (3) in persons with ILI whose history of travel or contacts suggests concern for variant or novel influenza.

San Francisco Public Health Laboratory (SFPHL) offers influenza testing by RT-PCR in special situations, such as ILI outbreaks in institutional settings, and only with pre-approval. Instructions can be found at: www.sfcdcp.org/communicable-disease/disease-reporting/influenza-reporting-resources/.

Vaccination

Influenza Vaccination: Annual vaccination is recommended for everyone aged 6 months and older, regardless of risk group, to ensure protection throughout the 2018 – 19 influenza season. For complete recommendations and products see:

<https://www.cdc.gov/mmwr/volumes/67/rr/rr6703a1.htm>.



- For 2018-19, most influenza vaccine is quadrivalent (2 flu A and 2 flu B strains), though trivalent vaccine is still acceptable. Latex is now absent from all U.S. flu vaccine formulations.
- The live, attenuated quadrivalent intranasal flu vaccine (LAIV4; FluMist®) is available this year. It performed poorly during recent flu seasons but has been reformulated with a new H1N1 strain shown to generate a robust immune response in the recipient. For healthy individuals aged 2 – 49 years, CDC recommends either FluMist or inactivated, injectable flu vaccine without preference. However, the American Academy of Pediatrics (AAP) preferentially recommends inactivated vaccine this year, pending further study of FluMist effectiveness, reserving FluMist for children who would not otherwise be vaccinated.
- Children aged 6 months through 8 years who previously received 0-1 lifetime doses of influenza vaccine should receive 2 doses of the 2018 – 19 formulation, given at least 4 weeks apart. Those with 2 or more prior lifetime doses require just 1 dose this year.
- Children aged 6 – 35 months and pregnant women require preservative-free vaccine.
- Persons with a history of severe allergic reaction to egg (any symptom beside hives) should be vaccinated in a medical setting supervised by a provider who is able to recognize and manage severe allergic conditions. The only 2018 – 19 flu vaccine that contains zero traces of egg is the recombinant vaccine, Flublok®.

Health Care Workers (HCW): By order of the Health Officer, dated 8/23/2018, all hospitals, skilled nursing, and other long-term care facilities in San Francisco must require their HCW to receive an annual flu vaccination or, if they decline, to wear a mask in patient care areas during the influenza season. See www.sfcddcp.org/wp-content/uploads/2018/01/2018-19-Flu-Masking-Memo-SF.pdf.

In addition, CA law (Health & Safety Code §1288.7 / Cal OSHA §5199) mandates either flu vaccination or a signed declination form for all acute-care hospital workers and most other HCW including skilled nursing facility, long-term care facility, and clinic and office-based staff.

Pneumococcal Vaccination: The 13-valent pneumococcal conjugate vaccine (Pneumovax13®) is routinely recommended for all infants and everyone aged ≥65 years. Pneumovax13 and the 23-valent pneumococcal polysaccharide vaccine (Pneumovax23®) are also indicated for many persons with chronic medical or immune compromising conditions. The following algorithms are useful for determining eligibility, sequencing, and timing of these vaccines for adults (eziz.org/assets/docs/IMM-1152.pdf) and for children (eziz.org/assets/docs/IMM-1159.pdf).

For vaccination locations in SF see: www.sfcddcp.org/immunizations/where-to-get-immunized/.

Antiviral Treatment & Chemoprophylaxis

CDC's 2018 – 19 influenza antiviral recommendations are undergoing review to reflect the most recent guidance, including the recent FDA-approval of a new influenza antiviral drug, baloxavir marboxil (Xofluza®). The 2017 – 18 recommendations are summarized below. For additional information and future updates, please see: www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm.



2017 – 18 Treatment Recommendations: Antiviral medications can reduce illness severity, shorten duration of illness and hospitalization, and reduce risk of complications and mortality from influenza. Treatment with oseltamivir, zanamivir, or peramivir is recommended for persons with suspected or confirmed influenza who are hospitalized, have severe, complicated, or progressive illness, or who due to age or medical condition have higher risk for influenza-related complications.

Treatment decisions should be made empirically and not await lab confirmation of influenza since testing could delay treatment and a negative rapid test does not rule out influenza. Generally, treatment should be initiated as early as possible and within 48 hours of illness onset and continued for 5 days. For hospitalized patients and those with severe, complicated, or progressive illness, antiviral treatment should still be initiated in patients presenting >48 hours after illness onset, and therapy duration can be extended pending clinical course.

2017 – 18 Chemoprophylaxis Recommendations: Antiviral medications are 70 – 90% effective in preventing influenza and are useful adjuncts to vaccination. Chemoprophylaxis is recommended if it can be initiated within 48 hours after exposure to influenza, among:

- Persons with severe immune deficiencies who might not respond to influenza vaccination
- Persons at high risk of influenza complications who have a contraindication to influenza vaccination, or who were exposed to a person with influenza within the first 2 weeks following vaccination
- Residents of institutions such as nursing homes who may have been exposed to influenza at the facility, regardless of whether they have received influenza vaccine. Chemoprophylaxis should also be considered for unvaccinated institutional staff.

Antiviral chemoprophylaxis should continue for the duration of potential exposure to a person with influenza, and until 7 days after the last known exposure. In addition, for institutional outbreaks, the minimum duration of chemoprophylaxis is 14 days.

Infection Control Precautions for Healthcare Settings

All healthcare facilities should adopt standard and droplet precautions when caring for patients with ILI, or with suspected or confirmed seasonal influenza infection. Specifically:

- All patients with fever and cough should wear a (surgical) face mask.
- In addition to standard precautions, staff entering the exam room of any patient with ILI should wear a (surgical) face mask.
- Isolate unmasked patients with ILI as soon as possible, ideally in a private exam room or at a distance of at least 3 feet from others.
- When a patient with influenza symptoms stays in a healthcare facility, isolation precautions should be continued for 7 days after illness onset or until 24 hours after the resolution of fever and respiratory symptoms, whichever is longer.



- When patients with suspected or confirmed influenza are to be subjected to aerosol-generating procedures, airborne precautions should be added to standard and droplet precautions.

See www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm for detailed guidance on infection prevention strategies for seasonal influenza.

For the more highly pathogenic avian flu strains (H7N9, H5N1, and other avian flu strains), standard plus contact and airborne precautions are recommended (www.cdc.gov/flu/avianflu/novel-flu-infection-control.htm).

Reminders and Resources

SFDPH flu pages: www.sfdcp.org/infectious-diseases-a-to-z/d-to-k/influenza-flu/

CDPH flu pages: www.cdph.ca.gov/Programs/CID/DCDC/pages/immunization/influenza.aspx

To report influenza deaths and/or cases or outbreaks as described above, call SFDPH Communicable Disease Control Unit at (415) 554 – 2830 or fax (415) 554 – 2848.

Within San Francisco, the public can call 311 for basic information about influenza.

Definition of influenza-like illness (ILI): Fever $\geq 100^{\circ}$ F (37.8° C) and cough and/or sore throat, in the absence of a known cause other than influenza.

Program Contact Information:

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