



## Clinical Advisory (January 2, 2018) Influenza

In California and throughout the United States (U.S.), influenza activity has increased significantly over recent weeks with influenza A(H3N2) viruses predominating so far this season. California Department of Public Health (CDPH) surveillance data sources for the 2017–2018 influenza season indicate influenza activity is widespread throughout California and is trending up earlier than in the 2016–2017 season. See the [influenza disease page](#) for more information.

A majority of influenza specimens have been typed as A(H3N2) in California this season. In the past, A(H3N2) virus-predominant influenza seasons have been associated with more hospitalizations and deaths in persons aged 65 years and older and young children compared to other age groups. In addition, influenza vaccine effectiveness in general has been lower against A(H3N2) viruses than against influenza A(H1N1) or influenza B viruses; however, all influenza viruses from California that have been antigenically characterized have matched the strains included in vaccine for this season. Vaccine effectiveness for the current season in the U.S. is not yet known; preliminary estimates are expected in February 2018.

CDPH is issuing this advisory to:

- Direct clinicians to national recommendations on testing and treatment of influenza included in a recent [health alert](#) from the federal Centers for Disease Control and Prevention. In summary, all patients with suspected or confirmed influenza who are hospitalized or severely ill or at higher risk for complications should be treated as soon as possible with a neuraminidase inhibitor antiviral agent, such as zanamivir and oseltamivir. While antiviral drugs work best when treatment is started within 2 days of illness onset, clinical benefit has been observed even when treatment is initiated later. Patients who are at higher risk for complications include:
  - children younger than 2 years (although all children younger than 5 years are considered at higher risk for complications from influenza, the highest risk is for those younger than 2 years)
  - adults aged 65 years and older
  - persons with chronic pulmonary, cardiovascular (except hypertension alone), renal, hepatic, hematological (including sickle cell disease), and metabolic disorders or neurologic and neurodevelopment conditions

- people with immunosuppression, including those caused by medications or by HIV infection
  - women who are pregnant or postpartum (within 2 weeks after delivery)
  - people aged younger than 19 years who are receiving long-term aspirin therapy
  - American Indians/Alaska Natives
  - people with extreme obesity (i.e., body-mass index is equal to or greater than 40)
  - residents of nursing homes and other chronic-care facilities
- Offer influenza immunization. CDPH recommends immunization of all persons 6 months and older who have not yet received influenza vaccine this season. Even if vaccine effectiveness is limited, immunization can reduce illness, hospitalization and death due to influenza. As a reminder, children younger than 9 years of age who have never received influenza vaccine before require 2 doses at least 4 weeks apart during their first season. Supplies of influenza vaccine in California remain ample.
  - Review CDPH guidelines, summarized below, on:
    - Laboratory testing
    - Reporting of influenza cases to public health
    - Infection control

### **Laboratory Testing**

- 1) Collect both upper and lower respiratory tract specimens for influenza testing in hospitalized patients with suspected influenza. If the patient is ventilated, endotracheal aspirate specimens should be collected unless bronchoalveolar lavage (BAL) is done for other diagnostic reasons. Lower respiratory tract specimens can yield the diagnosis when influenza virus is no longer detectable in the upper respiratory tract; therefore, negative influenza testing results on an upper respiratory tract specimen in a critically ill patient with lower respiratory tract disease does not exclude influenza. Please refer to [CDPH Viral and Rickettsial Disease Laboratory](#) specimen collection guidelines.
- 2) For influenza testing, real-time reverse transcription polymerase chain reaction (rRT-PCR) is recommended. There are FDA-approved molecular assays commercially available, and testing can be done at public health laboratories and academic medical centers. Antigen detection tests such as rapid influenza diagnostic tests and immunofluorescence assays (DFA) are not recommended due to decreased testing sensitivity and the possibility of false negative results.
- 3) Patients receiving antiviral medications who do not respond to treatment might have an infection with an antiviral-resistant influenza virus. Oseltamivir resistance, sometimes within 1 week of treatment initiation, has been reported among immunocompromised patients receiving treatment. Oseltamivir resistance should be suspected in treated patients who are persistently positive with repeated PCR testing, particularly if they are immunocompromised. Specimens from these patients can be sent to the CDPH Viral and Rickettsial Disease Laboratory (VRDL) for antiviral resistance testing.

- 4) All specimens collected on critically ill or fatal cases with suspected or laboratory-confirmed influenza should be referred to a public health laboratory for further PCR confirmation and subtyping. The CDPH VRDL is also available for surge capacity testing as needed.

## Reporting

Hospitals, clinicians, and nursing homes: Laboratory-confirmed fatal influenza-associated cases <65 years of age are reportable in California. In addition, laboratory-confirmed influenza cases requiring intensive care are voluntarily reportable, and some local health jurisdictions have asked that hospitals report these cases.

Local health departments are asked to promptly report to CDPH any laboratory-confirmed influenza in cases requiring intensive care and fatal cases age 0-64 years. Cases should be reported using CalREDIE or by faxing the "[Severe Influenza Case History Form](#)."

## Infection Control

Infection prevention and control for influenza should include the following measures (excerpted from [CDC's Prevention Strategies for Seasonal Flu in Healthcare Settings](#)).

See also [CDPH recommendations for the prevention and control of influenza in California long-term care facilities](#) and [All Facilities Letter \(AFL\)](#).

- 1) [Promote](#) and administer seasonal influenza vaccine to health care providers and patients.
- 2) Take steps to minimize potential exposures.
  - a. Before arrival to a healthcare setting
    - When scheduling appointments, instruct patients and persons who accompany them to inform healthcare personnel (HCP) upon arrival if they have symptoms of any respiratory infection and to take appropriate preventive actions (e.g., wear a facemask upon entry, follow triage procedure).
    - During periods of increased influenza activity, take steps to minimize elective visits by patients with suspected or confirmed influenza. For example, provide telephone consultation to patients with mild respiratory illness to determine if there is a medical need to visit the facility.
  - b. Upon entry and during visit to a healthcare setting
    - Take steps to ensure all persons with symptoms of a respiratory infection adhere to [respiratory hygiene](#), cough etiquette, hand hygiene, and triage procedures throughout the duration of the visit. Post visual alerts at the

- entrance and in waiting areas, elevators, cafeterias, etc. to provide patients and HCP with instructions (in appropriate languages) about respiratory hygiene and cough etiquette. See [CDC](#) and [CDPH](#) signage.
- Provide facemasks to patients with signs and symptoms of respiratory infection.
  - Provide supplies to perform hand hygiene to all patients upon arrival to facility and throughout the entire duration of the visit to the healthcare setting.
  - Provide space and encourage persons with symptoms of respiratory infections to sit as far away from others as possible. If available, facilities may wish to place these patients in a separate area while waiting for care.
  - During periods of increased community influenza activity, facilities should consider setting up triage stations that facilitate rapid screening of patients for symptoms of influenza and separation from other patients
- 3) Monitor and manage ill healthcare personnel. Ill healthcare personnel should be excluded from work.
  - 4) Adhere to standard and droplet precautions. Use caution when performing aerosol-generating procedures.
    - Influenza patients should be isolated in a single room or cohorted with other influenza patients if a single room is not available.
    - For aerosol-generating procedures, healthcare personnel should use an N95 respirator or higher level of respiratory protection.
  - 5) Manage visitor access and movement within the facility. Visitors should be screened for illness. Visitors to patients in isolation for influenza should be limited to persons who are necessary for the patient's emotional well-being and care. Visitors who have been in contact with the patient before and during hospitalization are a possible source of influenza for other patients, visitors, and staff.
  - 6) Monitor influenza activity. Healthcare settings should establish mechanisms and policies by which HCP are promptly alerted about increased influenza activity in the community or if an outbreak occurs within the facility and when collection of clinical specimens for viral culture may help to inform public health efforts.