S.C. Department of Health and Environmental Control

South Carolina Health Alert Network

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CDC Health Advisory

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Increasing Seasonal Influenza A (H3N2) Activity, Especially Among Young Adults and in College and University Settings, During SARS-CoV-2 Circulation

Summary

The Centers for Disease Control and Prevention (CDC) is issuing this Health Alert Network (HAN) Health Advisory about increased influenza A(H3N2) activity that could mark the beginning of the 2021-2022 influenza season. The purpose of this HAN Health Advisory is to:

1. Remind public health practitioners and clinicians to recommend and offer the current seasonal influenza vaccine to all eligible persons aged six months and older. ***Note: Flu vaccine and COVID-19 vaccine can be given at the same visit***.
2. Remind clinicians to consider testing for both influenza virus and SARS-CoV-2 in patients with influenza-like illness (ILI).
3. Advise clinicians that antiviral treatment is recommended as early as possible for any patient with confirmed or suspected influenza who is:
    a) hospitalized;
    b) at higher risk for influenza complications; or
    c) developing progressive illness.

    Note: In patients with suspected influenza, decisions about starting antiviral treatment should not wait for laboratory confirmation of influenza, however COVID-19 should be excluded if a rapid assay is available.
4. Remind public health practitioners and clinicians to consider mitigation measures including antiviral post-exposure prophylaxis during influenza outbreaks in institutions (e.g., long-term care facilities, university dormitories) in the setting of co-circulation of SARS-CoV-2.
5. Remind public health practitioners and clinicians to urge the public to use non-pharmaceutical interventions (NPI) or everyday preventive actions, in addition to getting a flu vaccine. Everyday preventive actions include staying home when sick, covering coughs and sneezes, and washing hands often.

Background

Recent increases in influenza activity in many places in the United States could mark the beginning of the 2021-2022 influenza season in the United States. While influenza activity is still low overall nationally, an increase of influenza A(H3N2) viruses has been detected in recent weeks, with most of these infections occurring in young adults. CDC also is aware of influenza outbreaks in colleges and universities in several states. Influenza vaccination coverage is still low and there is still time this season to benefit from getting an annual influenza vaccine.

Influenza activity during the 2020–2021 season was low throughout the United States and the timing and intensity of the upcoming 2021–2022 influenza season is uncertain. Because influenza activity was low last season, we are anticipating a lower level of community protection that we rely on year after year to reduce the risk of a severe influenza season. Thus, CDC is anticipating an increase of influenza illness this winter, and both A(H3N2) and B-Victoria viruses are already cocirculating. Moreover, as SARS-CoV-2 continues to circulate in the United States, illnesses associated with both viruses might stress healthcare systems. A growing body of scientific studies suggest that even when vaccination does not prevent infection it can reduce the severity of influenza illness, helping to avert serious outcomes including hospitalization and death.

CDC recommends that healthcare providers continue to recommend and offer influenza vaccination to persons aged six months and older because influenza activity is ongoing. Vaccination protects against four different viruses (A(H1N1)pdm09, A(H3N2), B/Victoria lineage, and B/Yamagata lineage viruses) and is likely to reduce hospitalization and death associated with currently circulating influenza viruses and other influenza viruses that might circulate later in the season. Influenza antiviral medications are an important adjunct that should be used in addition to influenza vaccination. While vaccination is the primary means for preventing influenza, antiviral medications are a second line of defense used to treat influenza after infection has occurred. Early treatment with influenza antiviral medications is the most effective way to treat influenza and reduce complications.[1-5]

Influenza antivirals also can be used for post-exposure prophylaxis (PEP) to prevent infection.[1,2,6] This can reduce the risk of influenza among persons who are exposed to someone who has influenza. Influenza antivirals have historically been used for PEP among residents in institutional settings, such as long-term care facilities, to help control influenza outbreaks. In the context of SARS-CoV-2 co-circulation, influenza antiviral treatment and PEP could also be considered in other communal settings (e.g., shelters, university dormitories, prisons) to reduce strain on healthcare services in these institutions during influenza outbreaks. In general, CDC recommends initiating influenza antiviral PEP within 48 hours of contact with someone who has influenza.

Recommendations for Clinicians and Public Health Practitioners

1. Recommend and offer influenza vaccination for all eligible persons aged six months and older

Anyone who has not received an influenza vaccine this season should get vaccinated now. For 2021-2022, CDC recommends using any licensed, age-appropriate influenza vaccine as an option for vaccination this season.[7] Vaccination coverage is lower this season as of the week

ending November 6, 2021 in certain groups at higher risk of severe influenza illness, such as pregnant persons and children, compared with the same period in 2020.[8] Vaccination is the best way to reduce the spread of influenza and reduce influenza illness and complications that can result in hospitalization and death. Both influenza and COVID-19 vaccines can be administered at the same visit, without regard to timing. If a patient is due for both vaccines, providers are encouraged to offer both vaccines at the same visit.

2. Treat patients with suspected or confirmed influenza who meet clinical criteria with influenza antivirals

CDC recommends influenza antiviral medications to treat influenza as an important adjunct to vaccination. Treatment with influenza antivirals has been shown to be safe. Influenza antivirals benefit clinical and public health by reducing illness and severe outcomes of influenza based on evidence from observational studies, randomized controlled trials, and meta-analyses of randomized controlled trials.[1-5,9]

- CDC recommends influenza antiviral treatment **as soon as possible** for patients with suspected or confirmed influenza who are:
  - Hospitalized
  - Outpatients at increased risk for complications[6]
  - Outpatients with progressive disease [6]
- Influenza antiviral treatment may be offered to patients with uncomplicated influenza based on clinician judgment to shorten their illness duration or lessen symptoms. The use of antiviral treatment in patients with uncomplicated influenza might help lessen the stress on healthcare systems when both influenza and SARS-CoV-2 are co-circulating.
- Antivirals are most effective when started **within two days after the beginning of illness**. It is also possible that antiviral treatment started after 48 hours may offer some benefit.[1,5,9]
- Potential also exists for co-infection of influenza and SARS-CoV-2 viruses. In such situations, influenza antivirals can be given for influenza illness.
- Because of the importance of early treatment, **decisions about starting antiviral treatment should not wait for laboratory confirmation of influenza.** However, COVID-19 should be excluded with a rapid diagnostic assay if one is available.

There are two oral influenza antiviral medications approved by the U.S. Food and Drug Administration (FDA) **commonly available by prescription** to treat influenza virus infection that can also be used for PEP following influenza exposure.[6] These include *oseltamivir* (trade name Tamiflu®), and *baloxavir marboxil* (trade name Xofluza®) (Table 1). *Inhaled zanamivir and intravenous peramivir* **antiviral medications are used less frequently**.[6] Additional information on these influenza antiviral medications is available here.

Table 1: Summary of most common antiviral medications for treatment and post-exposure prophylaxis of influenza[6]

	Oseltamivir (Tamiflu®)	**Baloxavir (Xofluza®)**
Approved by FDA	1999	2018
Mechanism	Neuraminidase inhibitor	Cap-dependent endonuclease inhibitor

Route of administration	**Oral**	**Oral**
Treatment dosing	**Daily dosing for 5 days** • Adults: 75 mg **twice daily** • Children: varies by age/weight[6]	**Single dose only** • <80 kg: 40 mg • ≥80 kg: 80 mg
Post-exposure prophylaxis dosing	**Daily dosing for 7 days** • Adults: 75 mg **once daily** • Children: varies by age/weight[6]	**Single dose only** • <80 kg: 40 mg • ≥80 kg: 80 mg
Age	**Treatment**: any age for treatment **PEP:** ≥3 months	**Treatment or PEP**: ≥12 years
Contraindications	Known hypersensitivity	Known hypersensitivity

3. Use of influenza antivirals for post-exposure prophylaxis (PEP)

Both oseltamivir and baloxavir are FDA-approved for influenza PEP. The efficacy of PEP in reducing virus acquisition to uninfected household contacts is high for oseltamivir (68%-89%)[10] and baloxavir (86%).[2] In general, before the COVID-19 pandemic, CDC did not recommend widespread or routine use of influenza antiviral medications for PEP in the community.[6] However, PEP has been recommended previously in closed settings such as long-term care facilities or crowded group settings such as refugee resettlement facilities. In these situations, CDC has recommended using clinical judgment for antiviral PEP for certain exposed non-ill close contacts of persons with suspected or confirmed influenza. Given the unique considerations of influenza outbreaks in various settings in the context of co-circulation with SARS-CoV-2, influenza antiviral PEP might be considered for persons

- Who have had recent close contact with a person with influenza (e.g., roommates)
- In confined quarters (e.g., dormitories, shelters, prisons) with increasing incidence of influenza
- Who are at increased risk for severe illness from influenza[11]
- Who have had recent close contact with a person with influenza and will be traveling for the holidays to reduce transmission during travel as well as to reduce transmission to family members or friends who may be at higher risk for influenza complications[11]

Considerations for choice of PEP antivirals (Table 1):

- A key difference between the drugs relates to the longer half-life of baloxavir (days) vs. the shorter half-life of oseltamivir (hours). Thus, for PEP, **baloxavir can be administered as a single dose** while **oseltamivir requires daily dosing for seven days**.
- **Dosing:** Treatment and prophylaxis (prevention) dosing is the same for baloxavir, but for oseltamivir, treatment dosing is twice daily, and prophylaxis is once daily.
- **Timing of PEP***:* CDC recommends initiating PEP within 48 hours of contact with an influenza case, if PEP is provided. In general, PEP for oseltamivir should not be started >48 hours after exposure due to concerns about resistance with lower PEP dose in persons with active influenza.

- **Duration of PEP:** Antiviral medications are effective as PEP only if a person takes them the entire time they are around another person who has influenza.
- Rates of oseltamivir and baloxavir resistance among circulating influenza A viruses remain low. However, additional monitoring is necessary, especially with baloxavir, which has had limited use compared to oseltamivir.

4. Influenza testing

Information to assist clinicians about influenza testing decisions, including in the context of SARS-CoV-2 co-circulation, is available here. The most accurate influenza tests (high sensitivity and specificity) are molecular assays. Molecular assays are recommended for hospitalized patients with suspected influenza. Information on influenza molecular assays is available here.

5. Non-pharmaceutical interventions

Because no single intervention can provide complete protection against influenza virus transmission, emphasis should be placed on multiple strategies, including pharmaceutical (e.g., influenza vaccines and antiviral medications) and non-pharmaceutical interventions. Measures that are used for COVID-19 might also provide protection against influenza. Non-pharmaceutical interventions may include

- Community measures (e.g., physical distancing, masking)
- Environmental measures (e.g., routine surface cleaning)
- Advising and encouraging symptomatic persons to stay home and use frequent hand hygiene, and proper cough etiquette

For More Information

CDC Tracking Flu in Young Adults
Healthy Habits to Help Protect Against Flu

Additional Resources for Clinicians:

- Summary of Influenza Antiviral Treatment Recommendations for Clinicians
- Clinical Description and Lab Diagnosis of Influenza
- Interim Guidance for Influenza Outbreak Management in Long-Term and Post-Acute Care Facilities
- Influenza Virus Testing in Investigational Outbreaks in Institutional or Other Closed Settings

References

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6. CDC: Influenza Antiviral Medications: Summary for Clinicians. (https://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm Last accessed on: 16 November 2021).
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10. Fiore AE, Fry A, Shay D, et al. Antiviral agents for the treatment and chemoprophylaxis of influenza --- recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR Recomm Rep 2011;60(1):1-24. (https://www.ncbi.nlm.nih.gov/pubmed/21248682).
11. CDC. People at Higher Risk of Flu Complications. (https://www.cdc.gov/flu/highrisk/index.htm Last accessed on: 16 November 2021).

DHEC contact information for reportable diseases and reporting requirements

Reporting of **avian or other novel strains of influenza, influenza associated deaths (all ages), lab-confirmed (eg. culture, RT-PCR, DFA, Molecular assay) influenza, and influenza associated hospitalizations** is consistent with South Carolina Law requiring the reporting of diseases and conditions to your state or local public health department. (State Law # 44-29-10 and Regulation # 61-20) as per the DHEC 2021 List of Reportable Conditions available at: https://www.scdhec.gov/sites/default/files/Library/CR-009025.pdf

Federal HIPAA legislation allows disclosure of protected health information, without consent of the individual, to public health authorities to collect and receive such information for the purpose of preventing or controlling disease. (HIPAA 45 CFR §164.512).

Regional Public Health Offices – 2021

Mail or call reports to the Epidemiology Office in each Public Health Region

MAIL TO:

Lowcountry	Midlands	Pee Dee	Upstate
4050 Bridge View Drive, Suite 600 N. Charleston, SC 29405 Fax: (843) 953-0051	2000 Hampton Street Columbia, SC 29204 Fax: (803) 576-2993	1931 Industrial Park Road Conway, SC 29526 Fax: (843) 915-6506	200 University Ridge Greenville, SC 29602 Fax: (864) 282-4373

CALL TO:

Lowcountry	Midlands	Pee Dee	Upstate
Allendale, Bamberg, Beaufort, Berkeley, Calhoun, Charleston, Colleton, Dorchester, Hampton, Jasper, Orangeburg Office: (843) 441-1091 Nights/Weekends: (843) 441-1091	**Aiken, Barnwell, Chester, Edgefield, Fairfield, Kershaw, Lancaster, Lexington, Newberry, Richland, Saluda, York** Office: (888) 801-1046 Nights/Weekends: (888) 801-1046	**Clarendon, Chesterfield, Darlington, Dillon, Florence, Georgetown, Horry, Lee, Marion, Marlboro, Sumter, Williamsburg** Office: (843) 915-8886 Nights/Weekends: (843) 409-0695	**Abbeville, Anderson, Cherokee, Greenville, Greenwood, Laurens, McCormick, Oconee, Pickens, Spartanburg, Union** Office: (864) 372-3133 Nights/Weekends: (864) 423-6648

For information on reportable conditions, see
https://www.scdhec.gov/ReportableConditions

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Categories of Health Alert messages:

Health Alert	Conveys the highest level of importance; warrants immediate action or attention.
Health Advisory	Provides important information for a specific incident or situation; may not require immediate action.
Health Update	Provides updated information regarding an incident or situation; unlikely to require immediate action.
Info Service	Provides general information that is not necessarily considered to be of an emergent nature.