CDC Key Points:
Circulation of Drifted Influenza A(H3N2) Viruses Compared and Clinical Implications
December 30, 2025

In this document:

Summary Key Points

- Seasonal influenza activity is elevated across the United States and is continuing to increase in most areas.
- A new influenza A(H3N2) virus subclade J.2.4.1, also called "H3N2 subclade K," was identified by CDC in August 2025.
- Influenza viruses in this subclade have small changes (mutations) that make their hemagglutinin gene different and have been antigenically characterized as "antigenically drifted" in comparison to other recently circulating A(H3N2) viruses, including the virus selected as the A(H3N2) component of the U.S. 2025-26 seasonal influenza vaccines.
- During seasons when circulating influenza viruses have drifted from influenza vaccine viruses, individual and population-level immunity to the drifted viruses might be low and annual influenza vaccine effectiveness might be reduced.
- The effect of antigenic drift on annual influenza vaccine protection is not easy to predict; even in past years with drifted circulating influenza viruses, substantial protection against the drifted influenza viruses has been observed.
- **Influenza vaccination continues to be recommended for the 2025-26 influenza season.** The decision to vaccinate is a personal one. Individuals should discuss risks and benefits of vaccination with their healthcare provider.
- At this time, there is no indication that A(H3N2) subclade K influenza viruses are resistant to available prescription influenza antiviral medications.
- **Healthcare providers should continue to initiate prompt treatment with influenza antiviral medications for patients with confirmed or suspected influenza who are hospitalized; who have severe, complicated or progressive disease; or who are at higher risk for influenza-associated complications.**

Background

- CDC tracks and analyzes global influenza activity year-round.
- Multiple influenza viruses usually co-circulate each season, so influenza vaccines are formulated to protect against three different seasonal influenza virus types/subtypes, an A(H3N2) virus, an A(H1N1) virus, and an influenza B virus.
- In late 2025, reports noted a rapidly emerging group of A(H3N2) viruses called "H3N2 subclade K." These viruses have genetic differences (10 additional mutations in the

hemagglutinin gene) compared with the J.2 subclade A(H3N2) virus selected in early 2025 to produce this season's annual U.S. influenza vaccines.
- These differences might result in reduced vaccine effectiveness against these A(H3N2) subclade K viruses.

Influenza Activity in the United States
- Based on U.S. influenza surveillance data, which include illness and laboratory surveillance, national seasonal influenza activity is elevated and increasing.
- So far during the 2025-26 influenza season, the majority of influenza A(H3N2) viruses detected have been subclade K.
    - During Week 51, of the 2,086 influenza viruses reported by public health laboratories, 2,029 were influenza A and 57 were influenza B.
    - Of the 1,627 influenza A viruses subtyped during Week 51, 134 (8.2%) were influenza A(H1N1)pdm09 and 1,493 (91.8%) were A(H3N2).
    - Among 246 influenza A(H3N2) viruses collected since September 28, 2025, that underwent additional genetic characterization at CDC, 89.5% belonged to subclade K.
- In the past, influenza A(H3N2) predominant influenza seasons have been associated with more influenza-associated hospitalizations and deaths in people 65 years.
- It is too early in the season to predict which influenza viruses will be most common and in what proportion, or how well the annual influenza vaccines will work throughout the 2025-26 influenza season in the United States.
- CDC is conducting studies to determine whether antibodies elicited by this season's influenza vaccines in humans will protect against these A(H3N2) subclade K viruses.

Influenza Vaccine Effectiveness
- Early estimates of 2025-26 annual influenza vaccine effectiveness in the United Kingdom against influenza-associated hospitalization remained within expected ranges of 70-75% for children and 30-40% for adults, suggesting that influenza vaccination remains an effective tool in preventing influenza-related hospitalizations this season.
- During seasons when circulating influenza viruses are drifted from viruses represented in the annual influenza vaccines, influenza vaccination continues to provide benefits, including:
    - 1) protection against severe influenza illness, hospitalization, and death;
    - 2) protection against other circulating influenza viruses represented in the influenza vaccines; and
    - 3) help to reduce the overall community spread of influenza.
- Influenza vaccine effectiveness networks are collecting real-world data to produce early estimates of vaccine effectiveness in the United States once influenza activity increases.

Recommendations for Clinicians and Public Health Practitioners
- **CDC recommends offering seasonal influenza vaccination for all eligible persons aged 6 months and older who have not already received influenza vaccination this season.**

    - There are several influenza vaccine options for the 2025-26 influenza season. CDC recommends seasonal influenza vaccines only in single dose formulations that are free of thimerosal as a preservative.
- CDC and medical professional societies recommend **treatment with influenza antiviral drugs as soon as possible** for patients with suspected or confirmed influenza who are hospitalized; who have severe, complicated or progressive disease; or who are at higher risk for influenza-associated complications.
- Treatment with influenza antiviral drugs may also be offered to patients with uncomplicated influenza to shorten their illness duration or lessen symptoms based on clinician judgment.
- A summary of influenza antiviral medication for clinicians is available, including age ranges approved by U.S. Food and Drug Administration (FDA) and recommended by CDC, dosing, routes of administration, contraindications, and adverse events.
    - Influenza antiviral drugs are most effective when started within two days after the beginning of influenza illness symptom onset. It is possible that antiviral drugs started later might offer some benefit.
    - Because of the importance of early treatment, decisions about starting antiviral medications should not wait for laboratory confirmation of influenza.
    - For **hospitalized patients** or **outpatients with complications or progressive disease** (e.g., pneumonia, or exacerbation of underlying chronic medical conditions), and suspected or confirmed influenza, initiation of antiviral treatment with oral or enterically administered oseltamivir (Tamiflu) is recommended.
    - For **outpatients** with suspected or confirmed uncomplicated influenza, oral oseltamivir (Tamiflu), oral baloxavir marboxil (Xofluza), inhaled zanamivir (Relenza) and intravenous peramivir (Rapivab) may be used for treatment depending on approved age groups and contraindications.
- Information to assist clinicians about influenza testing decisions are available.

For More Information

Resources for Clinicians and Public Health Practitioners

- ACIP Recommendations Summary | Influenza (Flu) | CDC
- Clinical Guidance for Influenza | Influenza (Flu) | CDC
- Influenza Antiviral Medications: Summary for Clinicians | Influenza (Flu) | CDC
- Laboratory Information for Collection of Respiratory Specimens for Influenza Virus Testing | Influenza (Flu) | CDC
- Interim Guidance for Influenza Outbreak Management in Long-Term Care and Post-Acute Care Facilities | Influenza (Flu) | CDC
- How Flu Viruses Can Change: "Drift" and "Shift" | Influenza (Flu) | CDC
- General Best Practices for Immunization | Vaccines & Immunizations | CDC
- Signs and Symptoms of Flu | Influenza (Flu) | CDC
- Information for Laboratories | Influenza (Flu) | CDC

Resources for Clinicians to Share with Patients

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- Influenza (Flu) | CDC
- Healthy Habits to Prevent Flu | Influenza (Flu) | CDC
- Preventing Seasonal Flu | Influenza (Flu) | CDC Who Needs a Flu Vaccine | Influenza (Flu) | CDC
- Misconceptions About Seasonal Flu and Flu Vaccines | Influenza (Flu) | CDC
- Treatment of Flu | Influenza (Flu) | CDC

References

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2. Kirsebom FCM, Thompson C, Talts T, et al. Early influenza virus characterisation and vaccine effectiveness in England in autumn 2025, a period dominated by influenza A(H3N2) subclade K. Euro Surveill. 2025;30(46).
3. Grohskopf LA, Blanton LH, Ferdinands JM, et al. Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2025–26 Influenza Season. *MMWR Morb Mortal Wkly Rep* 2025;74:500–507.
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5. Committee on Infectious Diseases. Recommendations for Prevention and Control of Influenza in Children, 2025-2026: Policy Statement. *Pediatrics*. 2025:e2025073620.
6. American College of Obstetricians and Gynecologists. Influenza in Pregnancy: Prevention and Treatment. Available at: https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2025/08/influenza-in-pregnancy-prevention-and-treatment. Accessed November 14, 2025.