

Optimizing IMMUNIZATION PRACTICES: Your Role, Your Impact



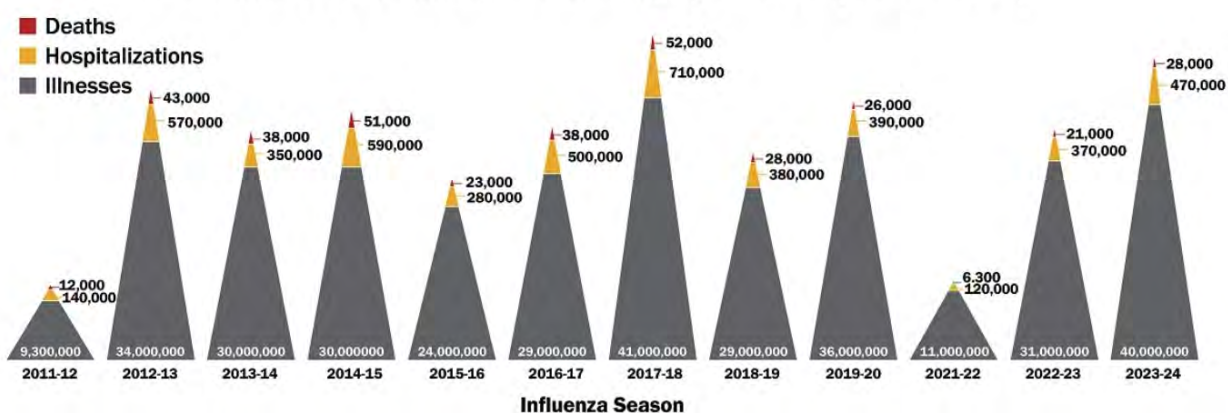
INFLUENZA

What Is Influenza?!

- Influenza, or the flu, is a contagious respiratory illness caused by influenza viruses
- It spreads mainly by droplets dispersed when infected people cough, sneeze, or talk
- Symptoms may be mild to severe and usually come on suddenly, however, about 8% of infected people do not have any symptoms
- The most common symptoms are fever (or feeling feverish/having chills), cough, sore throat, runny or stuffy nose, muscle or body ache, headache, and fatigue
- People are contagious before symptoms appear
- Flu season is usually fall and winter with peak activity from December to February, but the timing and duration can vary from year to year
- Certain populations are at increased risk, including people 65 years and older, people with chronic conditions, particularly respiratory conditions, people with metabolic disorders or obesity, people on immunosuppressive treatments, and pregnant women
- An infected person can transmit the virus beginning 1 day before symptoms develop and up to 5–7 days after symptoms appear. It is important to stay home during the infectious period.

What Is the Burden of Disease?

Estimated U.S. Influenza Burden, By Season (2011-2024)*



*Estimates are not available for the 2020-2021 season due to minimal flu activity.

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What Is the Burden of Disease? (continued)

CDC estimated flu burden 2011-2024²

- The CDC estimates that the flu has resulted in 9.3 million to 41 million illnesses, 120,000–710,000 hospitalizations, and 6,300–52,000 deaths annually between 2010 and 2024²
- **Economic burden.** Based on 2003 US population and available epidemiological data, one analysis estimated that annual influenza epidemics resulted in an average of 610,660 life-years lost, 3.1 million hospitalized days, and 31.4 million outpatient visits. Additionally, the direct medical costs averaged \$10.4 billion annually while lost earnings due to illness and loss of life were projected to be \$16.3 billion annually.³
- A systematic review of literature from 2007 to 2020 found that overall direct costs for influenza care in the US ranged from \$161 to \$363 for outpatient care and \$7067 to \$38,662 per hospitalization.⁴
- The CDC estimates that during the 2023-2024 season, **flu vaccination prevented** 9.8 million flu-related illnesses, 4.8 million medical visits, 120,000 hospitalizations, and 7,900 deaths, which significantly reduces the economic burden for individuals⁵

What Is the Current Immunization Rate for Influenza?¹⁰

- The CDC estimates that as of February 15, 2025, 45.3% (95% CI 44.4 – 46.2) of adults (≥ 18 years) have received a flu vaccination, which is similar to the last season at this same time point (45.3%)⁶
- The CDC estimates that as of November 30, 2024, 42.6% of Medicare Fee-for-Service beneficiaries 65 years and older have received the flu vaccine. Compared to White adults 65 years or older, immunization rates are lower in other ethnic groups. The rate is only 31% in Black and 21.8% in Hispanic adults.⁷

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What Vaccines Are Currently Available in the US for Influenza?⁸

- All vaccines approved for the 2024-2025 season are trivalent and include 2 influenza A viruses and one influenza B/Victoria lineage
- The virus is grown in either hen's eggs or mammalian cells. Vaccines made from the virus grown in mammalian cells are egg-free and particularly suitable for anyone with a severe egg allergy.
- The available vaccines are:

Vaccine Name	Acronym	Indications
Adjuvanted inactivated influenza vaccine, trivalent	aIIV3	≥ 65 years
Cell culture-based inactivated influenza vaccine, trivalent	ccIIV3	≥ 6 months
High-dose inactivated influenza vaccine, trivalent	HD-IIV3	≥ 65 years
Inactivated influenza vaccine, trivalent	IIV3	≥ 6 months
Live attenuated influenza vaccine, trivalent	LAIV3	2–49 years <ul style="list-style-type: none"> • Not recommended during pregnancy, for people who may be immunocompromised, people who have certain medical conditions, or people who have recently taken influenza antiviral medications • Beginning in fall 2025, this vaccine will be available, with a prescription, for home use⁹
Recombinant hemagglutinin vaccine	RIV3	≥ 18 years

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What Are the Current Immunization Recommendations for Influenza?

Schedule

Vaccine	19-26 years	27-49 years	50-64 years	≥65 years
Influenza inactivated (IIV3, cclIV3) Influenza recombinant (RIV3) ⓘ	1 dose annually			1 dose annually (HD-IIV3, RIV3, or allIV3 preferred)
Influenza inactivated (allIV3; HD-IIV3) Influenza recombinant (RIV3) ⓘ	Solid organ transplant (See Notes)			
Influenza live, attenuated (LAIV3) ⓘ	1 dose annually		60	

Legend

Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of immunity	Recommended vaccination for adults with an additional risk factor or another indication	Recommended vaccination based on shared clinical decision-making	No Guidance/Not Applicable
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Recommendations

- Everyone 6 months and older should get a flu vaccine each season
- Because the flu has seasonal peaks, it is best to receive the vaccination in September or October
- For adults 65 and over, the high dose inactivated vaccine (HD-IIV3), recombinant vaccine (RIV3), or adjuvanted inactivated vaccine (allIV3) are preferred but if they are not available, any other age-appropriate influenza vaccine should be used
- Likewise, organ transplant recipients aged 18-64 on immunosuppressive medication may receive HD-IIV3 or allIV3 without a preference over other age-appropriate influenza vaccines (IIV3 or RIV3). However, immunocompromised people should receive IIV3 or RIV3.
- The Advisory Committee on Immunization Practices (ACIP) recommends that all persons aged ≥ 6 months with an egg allergy should receive an influenza vaccine, and that any influenza vaccine (egg based or non-egg based) that is otherwise appropriate for the recipient's age and health status can be used⁸
- People who are pregnant can receive the vaccine during any trimester to protect the mother from severe disease and to potentially offer protection to a newborn

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What Are Considerations When Speaking With Patients About Being Immunized Against Influenza?

- Having to overcome myths such as, “Every time I get the flu vaccine, I get the flu.” Educate patients that they cannot get the flu from the injected vaccines because they are made from killed virus or recombinant protein.
- For adults with chronic conditions and comorbidities, one more appointment may be a burden
- Having to take several different vaccines
- Some people may say that they are pregnant and don’t want to get the baby sick. Explain that getting the vaccine will actually protect the baby.
- Some people say they don’t take the vaccine because of an egg allergy. Explain that there are egg-free vaccines for individuals with a severe egg allergy and the recommendation is to take an age-appropriate vaccine regardless of allergies to eggs.

What Are Strategies to Increase Vaccine Uptake?

- Tell your personal stories about the impact of vaccinations (or vaccine hesitancy) on you and your family and/or friends
- Make it personal for the patient by explaining how receiving the vaccination can prevent disease and, therefore, they can avoid missing work (ie, income) or December festivities
- For older patients with chronic conditions, discuss their increased susceptibility to the flu and increased risk of hospitalization and associated costs
- Inform patients that they can receive multiple vaccines at the same time
- Discuss the various vaccine options and, together, select one that is best for the patient
- Make the patient an ally in this effort—tell them to ask you the questions they have rather than asking a friend or searching the internet or listening to someone on social media
- Stock the flu vaccine and provide it during a routine visit or refer the patient to a place that has the vaccine
- Offer the vaccines that a patient is eligible for at every visit
- CDC shows that adults (≥ 18 years) who received a recommendation from a health care provider have higher rates of COVID-19 and flu vaccination than those who did not. II This points to a role for PAs in educating patients and recommending vaccines.

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Key Takeaways

- Influenza exacts a huge financial, economic, and health burden every season due to the low vaccination rates
- Because the influenza virus changes each year, everyone needs a vaccine each season
- Several vaccine options are available for anyone over 2 months of age and people with health conditions or allergies
- A health care provider recommendation can greatly influence a person's decision to get vaccinated

References

1. CDC. Influenza (Flu). [About Influenza](#). August 14, 2024
2. CDC. Flu Burden. [About Estimated Flu Burden](#). November 13, 2024
3. Molinari NA, Ortega-Sanchez IR, Messonnier ML, et al. [The annual impact of seasonal influenza in the US: measuring disease burden and costs](#). *Vaccine*. 2007;25(27):5086-5096. doi:10.1016/j.vaccine.2007.03.046
4. de Courville C, Cadarette SM, Wissinger E, Alvarez FP. [The economic burden of influenza among adults aged 18 to 64: A systematic literature review](#). *Influenza Other Respir Viruses*. 2022;16(3):376-385
5. CDC. Flu Burden. [Flu Burden Prevented from Vaccination 2023-2024 Flu Season](#). January 14, 2025
6. CDC. FluCaxView. [Weekly Flu Vaccination Dashboard](#). February 26, 2025. Accessed February 28, 2025
7. CDC. FluVaxView. [Influenza Vaccination Coverage, Adults 65 Years and Older, United States](#). February 12, 2025. Accessed February 28, 2025
8. Grohskopf LA, Ferdinands JM, Blanton LH, Broder KR, Loehr J. [Prevention and control of seasonal influenza with vaccines: recommendations of the Advisory Committee on Immunization Practices — United States, 2024–25 Influenza Season](#). *MMWR Recomm Rep*. 2024;73(No. RR-5):1–25.
9. US Food & Drug Administration. [FDA Approved Nasal Spray Influenza Vaccine for Self- or Caregiver-Administration](#). September 20, 2024
10. CDC. Influenza (Flu). [Who Needs a Flue Vaccine](#). October 3, 2024
11. CDC. RespVaxView. [Vaccination Uptake, Intent, and Confidence](#). February 21, 2025. Accessed February 28, 2025