

Massachusetts Department of Public Health

Recommendations for the Use of Seasonal Influenza Vaccines for the 2026-2027 Respiratory Season

Summary

Seasonal influenza causes substantial public health burden and societal costs each year. Fortunately, there are effective strategies to mitigate the health impacts of influenza. Annual influenza vaccination is the cornerstone of preventing and reducing influenza infection and associated morbidity. Massachusetts Department of Public Health (DPH) has adopted the respiratory pathogen vaccine recommendations of American Academy of Family Physicians, American Academy of Pediatrics, American College of Obstetricians and Gynecologists, and the Infectious Diseases Society of America. The consolidated respiratory virus immunization recommendations from these medical societies with links to evidence reviews are available [\[here\]](#). A [\[one-page summary\]](#) of the recommendations is also available. **DPH continues to recommend that all persons 6 months of age and older should receive an influenza vaccination every year unless there is a contraindication to vaccination.** Prevention of influenza among healthcare personnel is essential to maintaining healthcare capacity and protecting the patients they serve. **All healthcare personnel should receive one dose of a 2026-2027 influenza vaccine.**

Background

Influenza, also called flu, is a disease caused by infection of the respiratory tract with influenza viruses. Influenza viruses typically circulate annually in the United States from the late fall through the early spring and cause seasonal epidemics of influenza disease. Typical symptoms of influenza are abrupt onset of fever, cough, runny nose, headache, malaise and muscle aches. While most people with influenza will recover without serious complication, for some people, influenza causes serious illness, hospitalization, or death. Serious influenza complications include pneumonia (bacterial or viral), myocarditis, encephalitis, myositis, rhabdomyolysis, and multi-organ failure. Additionally, influenza frequently triggers exacerbations of underlying pulmonary and cardiac disease. **Older adults, very young children, pregnant people, and people of all ages with certain underlying medical conditions are particularly susceptible to severe influenza (Table 1).**

Based on data from October 1, 2025 to May 23, 2026, the Centers for Disease Control and Prevention (CDC) estimates that, in the US, there were 32 to 57 million illnesses, 15 to 25

million medical visits, 390,00 to 800,00 hospitalizations and 24,000 to 81,000 deaths related to influenza during the 2025 to 2026 respiratory season.¹

In addition to the health impacts, the economic costs of seasonal influenza are substantial, affecting healthcare systems, businesses and individual households. One analysis found that influenza among adults was estimated to be associated with \$29 billion in total economic burden in the 2023 to 2024 respiratory season, including approximately \$16 billion in direct healthcare costs and \$13 billion in productivity losses.² The researchers also estimated that if the US adult population were able to achieve historical peak vaccination coverage during that season, \$3 billion in costs could have been averted and more than 8000 deaths prevented.

Seasonal Influenza Vaccine Effectiveness

Vaccination provides important protection from influenza illness and its potential complications. Routine annual influenza vaccination for all persons aged ≥ 6 months who do not have contraindications has been recommended by major medical and public health organizations since 2010.³

The effectiveness of influenza vaccination varies year-to-year depending on multiple factors including the types and subtypes of influenza viruses circulating in the community, and the degree of similarity between circulating viruses and those included in the vaccine. However, despite variability of impact each season, vaccination provides important protection from influenza illness and its potential complications at both the individual and population level. One study demonstrated that during each of the six influenza seasons from 2010–11 through 2015–16, influenza vaccination prevented an estimated 1.6–6.7 million illnesses, 790,000–3.1 million outpatient medical visits, 39,000–87,000 hospitalizations, and 3,000–10,000 respiratory and circulatory deaths in the United States during each of those seasons.⁴

The interim estimate of vaccine effectiveness (VE) of influenza vaccine for the 2025 to 2026 respiratory season was lower than it has been during other recent influenza seasons.⁵ The lower VE compared to other seasons was likely driven by genetic drift in the dominant circulating strain of the virus—an influenza A(H3N2) subclade K variant. This variant strain appeared after the vaccine components for the 2025-2026 season had already been selected. Among children and adolescents aged less than 18 years, VE was 38–41% against influenza outpatient visits and 41% against influenza-associated hospitalization. Among adults 18 years of age and older, VE was 22–34% against influenza outpatient visits and 30% against influenza-associated hospitalization.

Vaccination can have significant population health benefits even when the vaccine strain does not match the circulating strain very well and/or the VE is relatively low. For example, during the severe 2017–18 influenza season, notable for an unusually long duration of widespread high influenza activity throughout the United States and higher rates of outpatient visits and hospitalizations compared with prior seasons, vaccination prevented an estimated 7.1 million illnesses, 3.7 million medical visits, 109,000 hospitalizations, and 8,000 deaths, despite an overall estimated VE of 29%.⁶

There is evidence that influenza vaccination is effective against influenza associated pediatric deaths. Although relatively rare in children, influenza-associated deaths occur annually in pediatric populations, with incidence varying depending on the influenza season. During the 2025–2026 influenza season, nine pediatric influenza-associated deaths were reported in Massachusetts, with 191 pediatric influenza-associated deaths reported nationwide. A case-cohort study was conducted which compared influenza vaccination among children who died of influenza with vaccination coverage in comparison pediatric cohorts to estimate vaccine effectiveness against pediatric influenza mortality.⁷ The analysis found that influenza vaccination reduced the risk of fatal influenza by 80% among children with or without known underlying medical conditions.

Vaccine Composition for the 2026–27 Influenza Season

All influenza vaccines available in the United States during the 2026–27 season will be trivalent vaccines containing hemagglutinin derived from 1) an influenza A/Missouri/11/2025 (H1N1) pdm09-like virus; 2) an influenza A/Darwin/1454/2025 (H3N2)-like virus; and 3) an influenza B/Tokyo/EIS13-175/2025 (B/Victoria lineage)-like virus (for egg-based vaccines) or a B/Pennsylvania/14/2025 (B/Victoria lineage)-like virus (for cell or recombinant vaccines). This composition reflects an update in the influenza A(H3N2) component to protect against H3N2 subclade K compared with the vaccines during the 2025–26 influenza season.

DPH Recommendations for the Use of 2026-2027 Influenza Vaccines

DPH recommends that all persons 6 months of age and older should receive an influenza vaccination every year, to include one dose of a 2026-2027 influenza vaccine, unless there is a contraindication to vaccination. All healthcare personnel should receive one dose of a 2026-2027 influenza vaccine. DPH guidance aligns with the guidance of American Academy of Pediatrics (AAP), American Academy of Family Practice Physicians (AAFP), Infectious Disease Society of America (IDSA), American College of

Obstetricians and Gynecologists (ACOG). <https://www.ama-assn.org/amaone/vaccine-recommendations>

- These vaccine recommendations are to provide guidance to healthcare professionals, public health officials and the public on DPH recommended use of influenza vaccines. DPH influenza vaccine recommendations are also informed by [CDC Interim Clinical Considerations for the Use of Seasonal Influenza Vaccines in the United States](#) for the [2026-2027 Flu Season](#)

Timing of Vaccination

For most people who require only a single dose of influenza vaccine for the season, vaccination should ideally be offered during September or October. However, vaccination should continue after October and throughout the influenza season for as long as influenza viruses are circulating.

Vaccination during July and August is not recommended for most groups because of potential waning of vaccine-induced immunity during the influenza season, particularly among older adults. However, vaccination during July or August may be considered for any recipient if there is concern that later vaccination might not be possible.

Children aged 6 months through 8 years who did not receive ≥ 2 trivalent or quadrivalent influenza vaccine doses before July 1, 2026, or whose influenza vaccination history is unknown, require 2 doses of influenza vaccine for the current season. These children should receive their first dose as early as possible (including during July and August, if vaccine is available) to permit receipt of the second dose (which must be administered ≥ 4 weeks later), ideally by the end of October.

Vaccination during July and August can be considered for individuals who are in the third trimester of pregnancy during these months because vaccination has been associated in multiple studies with reduced risk for influenza illness in their infants during the first months after birth, when they are too young to receive influenza vaccine.⁸⁻¹¹ For pregnant people in the first or second trimester during July and August, waiting until September or October to vaccinate is preferable, unless there is concern that later vaccination might not be possible.

Available Influenza Vaccines

Vaccine Type	Abbreviation	Manufactured	Administration & Age Group	Notes
Cell-Culture-Based Inactivated Influenza Vaccine	ccIIV3	Grown in mammalian cells (egg-free), then inactivated	Intramuscular (IM); ages ≥6 months	
High-Dose Inactivated Influenza Vaccine	HD-IIV3	High dose of antigen grown in eggs, then inactivated	Intramuscular (IM); ages ≥65 years or solid organ transplant recipients aged 18 - 64 years receiving immunosuppressive medication	Contains 4 times the antigen of a standard dose to create a stronger immune response in older adults.
Adjuvanted Inactivated Influenza Vaccine	aiIV3	Inactivated virus mixed with an adjuvant (ingredient to boost immune response)	Intramuscular (IM); primarily for ages ≥65 years and older or solid organ transplant recipients aged 18 - 64 years receiving immunosuppressive medication	Adjuvant creates a stronger immune system in older adults.
Recombinant Influenza Vaccine	RIV3	Synthetically manufactured using recombinant DNA technology	Intramuscular (IM); for ages ≥9 years	
Live Attenuated Influenza Vaccine	LAIV3	Contains a weakened, live virus	Intranasal spray (IN); for non-pregnant ages 2 through 49 years	Can be self-administered or given by a caregiver. Not recommended for some people with certain health conditions

mRNA Influenza Vaccine	TBD	lipid nanoparticle - encapsulated mRNA-based vaccine	Intramuscular (IM); ages ≥ 50 years
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Selection of Influenza Vaccine

For those 6 months to 64 years old, there are no preferential recommendations for a specific influenza vaccine or vaccine type if more than one licensed and age-appropriate recommended vaccines are available. For adults aged 65 years and older either a higher dose (HD-IIV3, RIV3), adjuvanted influenza vaccines (aIIV3) or recombinant influenza vaccine (RIV3) are preferentially recommended. If none of these three vaccine types are available at an opportunity for vaccine administration for an older adult, any other available age-appropriate influenza vaccine should be used.

Live attenuated vaccine that is nasally administered (LAIV3) is not recommended during pregnancy, for immunocompromised people, or for people younger than 2 years or older than 49 years.

The newest type of influenza vaccine is an mRNA vaccine and was approved by the U.S. Food and Drug Administration (FDA) in August 2026. This vaccine is approved for adults 50 years of age and older and contains mRNA that encodes surface hemagglutinin antigens from the three recommended influenza strains for cell- or recombinant-based vaccines. A pre-licensure randomized controlled trial of this vaccine demonstrated strong efficacy with showing that the mRNA vaccine was observed to have about 27% higher relative effectiveness against influenza illness than a standard flu shot.¹² Additionally, reactogenic symptoms, such as injection site pain, fatigue, headache and myalgia were higher with the mRNA vaccine. Based on these data, the mRNA influenza vaccine received full approval for adults aged 50 to 64. However, this trial did not compare the mRNA vaccine with the high dose, recombinant influenza vaccine and/or adjuvanted vaccines that are preferentially recommended for adults ≥ 65 years of age. Therefore, it is not clear how the effectiveness of the mRNA influenza vaccine compares to those options in older adults. FDA has provided an accelerated approval for adults ≥ 65 years of age based on early immune response data in this age group, but the manufacturer must conduct a post-licensing trial including high dose and adjuvanted comparators to confirm clinical benefits of the vaccine for the older age group.

Number of Influenza Vaccine Doses

Children aged 6 months through 8 years who have received two or more previous doses of influenza vaccine ≥ 4 weeks apart before July 1, 2026, should receive one dose of 2026–27 influenza vaccine. The previous two doses are not required to have been received during the same or consecutive influenza seasons. Children aged 6 months through 8 years who have not received two or more doses of influenza vaccine administered ≥ 4 weeks apart before July 1, 2026, or whose influenza vaccination history is unknown, should receive two doses of 2026–27 influenza vaccine ≥ 4 weeks apart. For children aged 8 years who require two doses of vaccine, both doses should be administered even if the child reaches age 9 years between receipt of dose one and receipt of dose two. All persons aged ≥ 9 years need only one dose of a 2026–27 influenza vaccine.

Vaccination of Healthcare Personnel

Vaccinating healthcare personnel annually against influenza is a key strategy for protecting healthcare personnel, preventing outbreaks in clinical settings and reducing work absenteeism during the influenza season. DPH recommends that all health care personnel, including all paid and unpaid persons working in health care settings who have the potential for exposure to patients should receive 2026-2027 influenza vaccination.

Safety

Several studies support the safety of annual influenza vaccination for children and adults. Adverse effects of influenza vaccination are usually minor and self-limited. Mild pain and swelling at the injection site are the most common adverse effect of influenza vaccination. Systemic symptoms, such as feverish feeling, myalgia, and fatigue can occur after vaccination but are relatively uncommon. However, vaccinated people who have systemic side effects may mistakenly think that the vaccine is causing influenza. Such reactions are not a contraindication to future vaccination.

Guillain-Barré syndrome (GBS) is a rare autoimmune neurologic disorder which can cause muscle weakness and sometimes paralysis. Most people recover fully from GBS, but some people have long-term nerve damage. Most cases of GBS occur after respiratory or gastrointestinal infection, however on very rare occasions, GBS may develop in the days or weeks after getting certain vaccinations, including influenza. The association between seasonal flu vaccine and GBS is closely monitored and has been found to vary from season to season. There has not always been an observed association of influenza vaccine with GBS during each influenza season. When there has been an increased risk observed during an influenza season, it has consistently been in the range of 1-2 additional GBS

cases per million flu vaccine doses administered. Studies suggest that it is more likely that a person will get GBS associated with influenza infection compared to after influenza vaccination.¹³⁻¹⁵

The National Childhood Vaccine Injury Act of 1986 requires health care providers to report any adverse event listed by the vaccine manufacturer as a contraindication to future doses of the vaccine or any adverse event listed in the VAERS Table of Reportable Events

Following Vaccination

(https://vaers.hhs.gov/docs/VAERS_Table_of_Reportable_Events_Following_Vaccination.pdf) that occurs within the specified period after vaccination. In addition to the mandated reporting, vaccinators are encouraged to report any clinically significant adverse event after vaccination to VAERS. Information on how to report a vaccine adverse event is available at <https://vaers.hhs.gov/index.html>

Contraindications and Precautions

Manufacturer package inserts should be consulted for information on the specific contraindications and precautions for individual influenza vaccine products. Certain influenza vaccines are contraindicated in persons who have history of a severe allergic reaction or anaphylaxis to a previous dose of influenza vaccine or a specific vaccine ingredient (excluding egg). A history of anaphylaxis following an influenza vaccine does not necessarily preclude vaccination with a different influenza vaccine. People with history of a severe allergic reaction to a specific type of influenza vaccine should not receive the same vaccine type again, but some may be able to receive a different influenza vaccine type. For the newly licensed mRNA influenza vaccine, the FDA prescribing information specifies contraindication to vaccination only for individuals with a history of severe allergic reaction to the mRNA influenza vaccine or one of its components. Individuals with a history of severe allergic reaction to an influenza vaccine should have the prior vaccine and suspected allergen reviewed before receiving an alternative influenza vaccine; consultation with an allergist may be appropriate when the responsible component is uncertain.

Contraindications and Precautions for Persons with a History of Severe Allergic Reaction to an Influenza Vaccine

Previous influenza vaccine associated with severe allergic reaction	Egg-based IIV3 and LAIV3	Cell-culture IIV3 (ccIIV3)	Recombinant IIV3 (RIV3)	mRNA influenza vaccine
Egg-based IIV or LAIV	Contraindication	Precaution	Precaution	Consult FDA labeling; Cross-vaccine guidance not yet specifically established
Cell-culture IIV (ccIIV)	Contraindication	Contraindication	Precaution	Consult FDA labeling; Cross-vaccine guidance not yet specifically established
Recombinant IIV (RIV)	Contraindication	Precaution	Contraindication	Consult FDA labeling; Cross-vaccine guidance not yet specifically established
mRNA influenza vaccine	Consult FDA labeling; Cross-vaccine guidance not yet specifically established	Consult FDA labeling; Cross-vaccine guidance not yet specifically established	Consult FDA labeling; Cross-vaccine guidance not yet specifically established	Consult FDA labeling; Cross-vaccine guidance not yet specifically established
Influenza vaccine type unknown	Allergist consultation recommended	Allergist consultation recommended	Allergist consultation recommended	Consider allergist consultation

This information was adapted from the table is published in the link reference [here](#).

All persons aged ≥ 6 months with egg allergy should receive influenza vaccine. Multiple studies indicate that egg-allergic persons are not at increased risk of severe allergic reactions to egg-based influenza vaccines. Any influenza vaccine that is otherwise appropriate for the recipient's age and health status (egg based or non-egg based) can be administered to persons with egg allergy. Egg allergy alone necessitates no additional safety measures for influenza vaccination beyond those recommended for any recipient of any vaccine, regardless of severity of previous reaction to egg. All vaccines should be

administered in settings in which personnel and equipment needed for rapid recognition and treatment of acute hypersensitivity reactions are available.

Moderate or severe acute illness with or without fever is a general precaution for vaccination. A history of GBS within 6 weeks after receipt of a previous dose of influenza vaccine is considered a precaution for the use of all influenza vaccines.

Live attenuated vaccine (LAIV3) is contraindicated during pregnancy, for immunocompromised people, and for people younger than 2 years or older than 49 years.

Coadministration

Influenza vaccine can be administered at the same visit when other vaccines are being administered, including coadministration with the COVID-19, RSV, and pneumococcal vaccines. Studies support the safety and effectiveness of getting a flu vaccine and COVID-19 vaccine or an influenza vaccine and RSV vaccine at the same visit.¹⁶⁻¹⁹ Patients receiving more than one vaccine at a time may be slightly more likely to report systemic symptoms such as chills, headache, myalgia and fatigue, in the week following simultaneous vaccination, however such symptoms are usually mild and short lived. When giving multiple injections during a single visit, administer each vaccine at a separate injection site.

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Table 1 - People at Increased Risk for Flu Complications

Risk Group	Examples/Details
Older adults	Adults 65 years and older
Young children	Children younger than 2 years old
Chronic lung disease	Asthma, Chronic obstructive pulmonary disease (COPD), cystic fibrosis, and other chronic lung diseases
Neurologic and neurodevelopmental conditions	Disorders of the brain and spinal cord, cerebral palsy, seizure disorders, stroke, intellectual disability, moderate to severe developmental delay, muscular dystrophy, spinal cord injury
Blood disorders	Sickle cell disease and other blood disorders
Endocrine disorders	Diabetes mellitus and other endocrine disorders
Heart disease	Congenital heart disease, congestive heart failure, coronary artery disease, and other heart diseases
Kidney disorders	People with chronic kidney disease at any stage
Liver disorders	People with chronic liver disorders and cirrhosis
Metabolic disorders	Inherited metabolic disorders, mitochondrial disorders, and other metabolic disorders
Severe obesity	People with a body mass index (BMI) of 40 kg/m ² or higher
Long-term aspirin or salicylate use	People younger than 19 years who are receiving long-term aspirin- or salicylate-containing medications
Weakened immune system	People with immunocompromising conditions (such as HIV/AIDS or certain cancers, including leukemia) or those taking immunosuppressive medications, including chemotherapy, radiation therapy, chronic corticosteroids, or other immunosuppressive drugs
History of stroke	People who have had a stroke

Table 1 - People at Increased Risk for Flu Complications

Risk Group	Examples/Details
Certain disabilities	Particularly disabilities that may affect muscle function, lung function, coughing, swallowing, or the ability to clear fluids from the airways
Pregnancy	Pregnant people, including those up to 2 weeks after the end of pregnancy
Long-term care residence	People who live in nursing homes or other long-term care facilities
Certain racial and ethnic groups	Non-Hispanic Black people, Hispanic or Latino people, and American Indian or Alaska Native people have been identified as having increased risk for hospitalization with influenza

<https://www.cdc.gov/flu/highrisk/index.htm>