Practice Guidelines

Influenza Vaccination: Updated 2020-2021 Recommendations from ACIP

Key Points for Practice

- Influenza vaccination continues to be recommended for all people six months and older and is especially important during the COVID-19 pandemic to reduce health care system burden.
- Vaccination in September or October is most effective, especially for older adults.
- Two new high-dose quadrivalent vaccines are available for patients 65 years and older.

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The Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices (ACIP) has released its recommendations for routine influenza vaccination in the 2020-2021 season. Updates this year include the antigenic composition of seasonal influenza vaccines available in the United States, the addition of two new influenza vaccines for use in people 65 years and older, and new contraindications and precautions for the use of live attenuated influenza vaccine (LAIV).

Because the 2020-2021 influenza season will coincide with the coronavirus disease 2019 (COVID-19) pandemic, vaccination of people six months and older is of particular importance to reduce symptoms that could be confused with those of COVID-19 and to alleviate stress on the health care system. During the 2017-2018 influenza season, which had an unusually long duration of widespread influenza activity and high hospitalization rates, vaccination was calculated to have prevented an estimated 7.1 million illnesses, 3.7 million medical visits, 109,000 hospitalizations, and 8,000 deaths.

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This series is coordinated by Michael J. Arnold, MD, contributing editor.

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Influenza vaccination is recommended for all people six months and older who do not have contraindications. Vaccination is most effective if received by the end of October, although a vaccine administered in December or later is likely still beneficial. Children six months to eight years of age who are not known to have received at least two doses of influenza vaccine at least four weeks apart before July 1, 2020, require two doses of vaccine this season and should receive the first dose when the vaccine is available so the second dose can be administered by the end of October. For people who require only one dose this season, immunity will be best with vaccination in September or October, particularly among older adults. Influenza vaccination can be delayed in people with suspected or confirmed COVID-19 until they are no longer acutely ill.

Inactivated influenza vaccines, recombinant influenza vaccine, and LAIV are available for the 2020-2021 influenza season *(Table 1)*. Standard-dose and high-dose, unadjuvanted, inactivated influenza vaccines are available in quadrivalent formulations. Adjuvanted inactivated vaccines are available in trivalent and quadrivalent formulations. Recombinant influenza vaccine and LAIV are available in quadrivalent formulations. For the 2020-2021 influenza season, all inactivated vaccines are egg based, except for Flucelvax Quadrivalent, which is cell culture based, and Flublock Quadrivalent, a recombinant vaccine. People with egg allergy can receive any vaccine, although those with a history of severe allergy to egg should be supervised in a health care setting after administration.

The composition of the 2020-2021 U.S. influenza vaccines includes updates to the influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B/Victoria lineage components. These updated components are included in the trivalent and quadrivalent vaccines. Quadrivalent vaccines include an additional influenza B virus component from the B/Yamagata lineage, which is unchanged from the 2019-2020 season.

Two new vaccines are available this season for older adults: Fluzone High-Dose Quadrivalent, which replaces the trivalent high-dose formulation, and Fluad Quadrivalent.

LAIV may be used intranasally in children at least two years of age and in adults up to 49 years of age. LAIV should not be used in pregnant women. Newly added contraindications for the use of LAIV include anatomic and functional asplenia; active communication between the cerebrospinal

TABLE 1

Influenza Vaccines—United States, 2020-2021 Influenza Season

Trade name	Formulation	Age indication	Hemagglutinin or virus count per vaccine virus (per dose)	Route of administration	Mercury from thimerosal (mcg per 0.5 mL)
IIV4, standard dose, egg based*					
Afluria Quadrivalent	0.25-mL prefilled syringe†	6 to 35 months	7.5 mcg per 0.25 mL	IM‡	—
	0.5-mL prefilled syringe†	≥ 3 years	15 mcg per 0.5 mL	IM‡	—
	5.0-mL multidose vial†	≥ 6 months (needle/syringe) 18 to 64 years (jet injector)	7.5 mcg per 0.25 mL/15 mcg per 0.5 mL	IM‡	24.5
Fluarix Quadrivalent	0.5-mL prefilled syringe	≥ 6 months	15 mcg per 0.5 mL	IM‡	—
Flulaval Quadrivalent	0.5-mL prefilled syringe	≥ 6 months	15 mcg per 0.5 mL	IM‡	—
Fluzone Quadrivalent	0.5-mL prefilled syringe§	≥ 6 months	15 mcg per 0.5 mL	IM‡	—
	0.5-mL single-dose vial	≥ 6 months	15 mcg per 0.5 mL	IM‡	—
	5.0-mL multidose vial	≥ 6 months	15 mcg per 0.5 mL	IM‡	25
IIV4, standard dose, cell culture based					
Flucelvax Quadrivalent	0.5-mL prefilled syringe	≥ 4 years	15 mcg per 0.5 mL	IM‡	—
	5.0-mL multidose vial	≥ 4 years	15 mcg per 0.5 mL	IM‡	25
IIV4, high dose, egg based*					
Fluzone High-Dose Quadrivalent	0.7-mL prefilled syringe	≥ 65 years	60 mcg per 0.7 mL	IM‡	—
IIV4, standard dose, egg based* with MF59 adjuvant					
Fluad Quadrivalent	0.5-mL prefilled syringe	≥ 65 years	15 mcg per 0.5 mL	IM‡	—
IIV3, standard dose, egg based* with MF59 adjuvant					
Fluad	0.5-mL prefilled syringe	≥ 65 years	15 mcg per 0.5 mL	IM‡	—
Recombinant influenza vaccine					
Flublok Quadrivalent	0.5-mL prefilled syringe	≥ 18 years	45 mcg per 0.5 mL	IM‡	—
Live attenuated influenza vaccine, egg based*					
Flumist Quadrivalent	0.2-mL prefilled single-use intranasal sprayer	2 to 49 years	$10^{6.5\text{-}7.5}$ fluorescent focus units per 0.2 mL	Intranasal	—

Note: Vaccination providers should consult prescribing information for 2020-2021 influenza vaccines for the most complete and updated information. Package inserts for U.S.-licensed vaccines are available at https://www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states. Availability of specific products and presentations may change and differ from what is described in this table.

IIV3 = inactivated influenza vaccine, trivalent; IIV4 = inactivated influenza vaccine, quadrivalent; IM = intramuscular.

*—History of anaphylaxis to egg is a contraindication to the use of most inactivated influenza vaccines and live attenuated influenza vaccine. However, the Advisory Committee on Immunization Practices recommends that people with a history of less severe egg allergy receive any influenza vaccine that is appropriate for their age and health status. Patients with reactions to egg involving angioedema, swelling, respiratory distress, lightheadedness, or recurrent emesis or who required epinephrine or another emergency medical intervention and are receiving any vaccine other than standard-dose cell culture–based IIV4 or recombinant influenza vaccine should be vaccinated in a medical setting supervised by a health care professional who is able to recognize and manage severe allergic reactions.

†—The dose volume for Afluria Quadrivalent is 0.25 mL for children 6 to 35 months of age and 0.5 mL for people 3 years and older.

‡—Intramuscularly administered influenza vaccines should be given by needle and syringe only, with the exception of multidose vials of Afluria Quadrivalent, which may be given by the PharmaJet Stratis jet injector for people 18 to 64 years of age. For adults and older children, the recommended site for IM influenza vaccination is the deltoid muscle. The preferred site for infants and young children is the anterolateral aspect of the thigh. Additional guidance regarding site selection and needle length for IM administration is available at https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/dowloads/general-recs.pdf.

§—Fluzone Quadrivalent is licensed for children 6 to 35 months of age as a 0.25- or 0.5-mL dose; however, 0.25-mL prefilled syringes are not available for the 2020-2021 influenza season.

Adapted from Grohskopf LA, Alyanak E, Broder KR, et al. Prevention and control of seasonal influenza with vaccines: recommendations of the Advisory Committee on Immunization Practices—United States, 2020-21 influenza season. MMWR Recomm Rep. *2020;69(8):3.*

fluid and oropharynx, nasopharynx, nose, ear, or other cranial cerebrospinal fluid leak; and cochlear implants. For a full list of vaccine contraindications, see Table 2 at https://www.cdc.gov/mmwr/volumes/69/rr/rr6908a1.htm.

People of all ages are susceptible to seasonal influenza, but vaccination is particularly important for those at increased risk of severe complications or influenza-related hospitalizations, and those who live with or care for such people. When vaccine supply is limited, vaccination efforts should target the following groups:

- Higher-risk people:
  - Adults 50 years and older
  - American Indians/Alaska Natives
  - Children six to 59 months of age
  - Children up to 18 years of age who are receiving aspirin- or salicylate-containing medications (risk of Reye syndrome after influenza virus infection)
  - Immunocompromised people
  - People with a body mass index of 40 kg per m^2 or greater
  - People with chronic pulmonary, cardiovascular, renal, hepatic, neurologic, hematologic, or metabolic disorders other than uncomplicated hypertension
  - Pregnant women
  - Residents of long-term care facilities
- Household contacts and caregivers of higher-risk people
- Health care professionals, including students and staff who could be exposed to infectious agents

Guideline source: Advisory Committee on Immunization Practices

Evidence rating system used? No

Systematic literature search described? No

Guideline developed by participants without relevant financial ties to industry? Yes

Recommendations based on patient-oriented outcomes? Yes

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Available at: https://www.cdc.gov/mmwr/volumes/69/rr/rr6908a1.htm

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