Date: September 15, 2021

To: Physicians, Pharmacists, Infection Preventionists, Long-Term Care Facilities, Local Health Departments, Tribal Health Clinics, Federally Qualified Health Centers, Visiting Nurse Agencies, and other immunization providers

From: James H. Conway, MD, FAAP
Wisconsin Chapter of the American Academy of Pediatrics

Jonathan L. Temte, MD, PhD
Chair, Wisconsin Council on Immunization Practices

Ryan Westergaard, MD, PhD, MPH
State Epidemiologist for Communicable Diseases

Re: The 2021-2022 Advisory Committee on Immunization Practices (ACIP) recommendations for the prevention and control of seasonal influenza with vaccines

Promote Influenza Vaccination
Influenza and SARS-CoV-2 viruses are expected to circulate at the same time during the upcoming 2021-2022 influenza season. In this context, vaccination against influenza will be more important than ever to decrease the overall impact of respiratory illnesses by reducing influenza-associated illnesses, hospitalizations, and deaths, and reducing the burden on the health care system.

During the COVID-19 pandemic, reducing the overall burden of respiratory illnesses is important to protect vulnerable populations at risk for severe illness, the health care system, and other critical infrastructure. Thus, health care providers should offer influenza vaccine by the end of October and should use every opportunity during the influenza vaccination season to administer influenza vaccines to all medically-eligible persons.

Vaccination should be deferred for persons with suspected or confirmed COVID-19, regardless of whether they have symptoms, until they have met the criteria to discontinue their isolation in order to diminish risk of spread to others at sites of vaccination. Continue to offer seasonal influenza vaccine as long as influenza viruses are circulating and to schedule immunization clinics throughout the influenza season into 2022 because influenza was detected among Wisconsin residents during 31 weeks of 2020 (the most current year for which we have complete data).

Safe Delivery of Vaccine

- How and where people receive their influenza vaccine may need to change due to the COVID-19 pandemic. For example, clinics could consider drive-through or curbside delivery of vaccine in order to maintain physical distancing and should use appropriate personal protective equipment while administering vaccines. Walk-in influenza vaccine clinics may need to be replaced with scheduled times to comply with local social distancing requirements.
- The Centers for Disease Control and Prevention has released Vaccination Guidance During a Pandemic. This guidance is intended to help immunization providers in a variety of clinical and
alternative settings with the safe administration of vaccines during the COVID-19 pandemic. This
guidance will be continually reassessed and updated based on the evolving epidemiology of
COVID-19 in the United States.

- The Centers for Disease Control and Prevention has also released Guidance for Planning
  Vaccination Clinics Held at Satellite, Temporary, or Off-Site Locations.

The full ACIP Recommendations
The 2021-2022 ACIP recommendations for the prevention and control of seasonal influenza with
vaccines were formally issued on August 27, 2021. This document can be downloaded from the MMWR
website at: https://www.cdc.gov/mmwr/volumes/70/rr/rr7005a1.htm.

Updated ACIP information regarding recommendations or vaccine supply and timing of distribution of
influenza vaccine that affect the target groups will be made available, as needed. The 2021-2022 Vaccine
Information Statements are also available.

It is important to be aware of the current recommendations and to periodically visit the CDC website for
additional information and updates. Access to updated or supplemental information is often necessary
throughout the influenza season and the months leading up to it. The CDC and other public health
agencies will assess the vaccine supply on a continuing basis throughout the manufacturing period and
will inform both providers and the general public in the event of substantial delays or inadequate supply.

Vaccines available during the 2021-2022 season are (Table 1):

- Quadrivalent inactivated influenza vaccine (IIV4)
  - Sanofi Pasteur (Fluzone Quadrivalent)
  - GlaxoSmithKline (Fluarix Quadrivalent)
  - GlaxoSmithKline (Flulaval Quadrivalent)
  - Seqirus (Afluria Quadrivalent)
  - Sanofi Pasteur (Fluzone High-Dose Quadrivalent)

- Quadrivalent cell-culture based influenza vaccine (ccIIV4): Seqirus (Flucelvax Quadrivalent)

- Live-attenuated influenza vaccine, quadrivalent (LAIV4): AstraZeneca (FluMist Quadrivalent)

- Adjuvanted inactivated influenza vaccine, quadrivalent (aIIV4): Seqirus (Fluad Quadrivalent)

- Recombinant hemagglutinin (HA) influenza vaccine (RIV4): Sanofi Pasteur (Flublok Quadrivalent),
  for persons with egg allergy of any severity

Vaccination of all persons aged ≥6 months continues to be recommended. Not all influenza vaccines are
likely to be uniformly available in any given practice setting or geographic locality. Vaccination should
not be delayed to obtain a specific product when an appropriate one is already available. To avoid missed
opportunities for vaccination, providers should offer vaccination during routine health care visits and
hospitalizations when vaccine is available. See Table 2 for a list of contraindications and precautions to
receipt of influenza vaccine.

In the event of a shortfall in production or a delay in the delivery of an adequate supply of vaccine, you
will be notified of any official prioritization of high-risk groups. If such an event should occur, a
Prioritization Plan will be distributed. If needed, this plan will provide a sequence of prioritization for you
to follow to assure that high-risk individuals receive their influenza vaccinations first. Because the annual
supply and timing of distribution of influenza vaccine cannot be guaranteed, we continue to stress the
importance of local partnerships. The recent history of vaccine delivery delays and shortages emphasizes
the need for local coalitions to help coordinate redistribution and administration of influenza vaccine.

HealthMap Vaccine Finder may be used to identify a location (e.g., clinic or community pharmacy) to
receive influenza vaccine: http://flushot.healthmap.org/.
The 2021-2022 ACIP Recommendations include five principal updates:

1. All seasonal influenza vaccines available in the United States for the 2021-2022 season are expected to be quadrivalent.

Quadrivalent egg-based vaccine will contain:
- A/Victoria/2570/2019 (H1N1)pdm09-like virus (updated).
- A/Cambodia/e0826360/2020 (H3N2)-like virus (updated).
- B/Washington/02/2019 (B/Victoria lineage)-like virus.
- B/Phuket/3073/2013-like (Yamagata lineage) virus.

Cell culture-based or recombinant vaccine will contain:
- A/Wisconsin/588/2019 (H1N1)pdm09-like virus (updated).
- A/Cambodia/e0826360/2020 (H3N2)-like virus (updated).
- B/Washington/02/2019 (B/Victoria lineage)-like virus.
- B/Phuket/3073/2013-like (Yamagata lineage) virus.

2. The approved age indication for the cell culture-based influenza vaccine, Flucelvax Quadrivalent (ccIIV4), has been expanded from ages ≥4 years to ages ≥2 years.

3. Current guidance for the use of COVID-19 vaccines indicates that these vaccines can be coadministered with other vaccines, including influenza vaccines.

4. Guidance concerning timing of vaccination has been modified. For women in the third trimester of pregnancy, vaccination soon after vaccine becomes available can now be considered. As in previous seasons, children who need 2 doses of influenza vaccine administered ≥4 weeks apart (those aged 6 months through 8 years who have never received a lifetime total of ≥2 doses) are recommended to receive the first dose as soon as possible after vaccine becomes available. For nonpregnant adults, early vaccination (i.e., in July and August) should be avoided unless there is concern that later vaccination might not be possible.

5. Contraindications and precautions to the use of ccIIV4 and RIV4 have been modified, specifically with regard to persons with a history of severe allergic reaction (e.g., anaphylaxis) to an influenza vaccine.
- A history of severe allergic reaction (e.g., anaphylaxis) to a previous dose of any egg-based IIV, LAIV, or RIV of any valency is a precaution to use of ccIIV4.
- A history of a severe allergic reaction (e.g., anaphylaxis) to a previous doses of any egg-based IIV, ccIIV, or LAIV of any valency is a precaution to use of RIV4.
- Use of ccIIV4 and RIV4 in such instances should occur in an inpatient or outpatient medical setting under supervision of a provider who can recognize and manage a severe allergic reaction; providers can also consider consulting with an allergist to help identify the vaccine component responsible for the reaction.
- For ccIIV4, history of severe allergic reaction (e.g., anaphylaxis) to any ccIIV of any valency or any component of ccIIV4 is a contraindication to future use of ccIIV4.
- For RIV4, history of a severe allergic reaction (e.g., anaphylaxis) to any RIV of any valency or any component of RIV4 is a contraindication to future use of RIV4.

Influenza vaccination of children aged 6 months through 8 years

1. All children aged 6 months through 8 years who are recommended to receive two doses this season should receive their first dose as soon as possible after vaccine becomes available; these children should receive the second dose ≥4 weeks later (Figure 1). This practice increases the opportunity for both doses to be administered during the same influenza season and before the onset of influenza activity.

Influenza vaccination of pregnant women

1. Vaccination during pregnancy has been demonstrated to protect infants from influenza, including infants aged <6 months for whom no influenza vaccines are currently licensed. Specifically, infants
born to vaccinated women had a 63% reduction in laboratory-confirmed influenza illness during the first six months of life (2,3).

2. The ACIP, the American College of Obstetricians and Gynecologists (ACOG), and the American Academy of Family Physicians (AAFP) recommend that all women who are pregnant or who might be pregnant during the upcoming influenza season receive IIV because of an increased risk of serious illness and complications from influenza. LAIV is not recommended for use during pregnancy.

3. Information about influenza vaccination during pregnancy and guidance on how to address concerns that patients may have about influenza vaccination is available at: https://www.cdc.gov/flu/professionals/vaccination/vaccination-possible-safety-signal.html

Influenza vaccination of persons with a history of egg allergy
For the 2021-2022 influenza season, ACIP recommends the following:

1. Persons with a history of egg allergy who have experienced only hives after exposure to egg should receive influenza vaccine. Any licensed, recommended and age-appropriate influenza vaccine (i.e., any IIV4, RIV4 or LAIV4) that is otherwise appropriate for the recipient’s age and health status may be used.

2. Persons who report having had reactions to egg involving symptoms other than urticaria (e.g., angioedema or swelling, respiratory distress, lightheadedness, or recurrent vomiting) or who required epinephrine or another emergency medical intervention may similarly receive any licensed, recommended influenza vaccine (i.e., any IIV4, RIV4, or LAIV4) that is otherwise appropriate for their age and health status. If a vaccine other than cIIV4 or RIV4 is used, the selected vaccine should be administered in an inpatient or outpatient medical setting (including but not necessarily limited to hospitals, clinics, health departments, and physician offices). Vaccine administration should be supervised by a health care provider who is able to recognize and manage severe allergic reactions.

If you have any questions, please call the Regional Immunization Program Representative in your area:

<table>
<thead>
<tr>
<th>Name</th>
<th>Office Location</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stacey Moyer</td>
<td>Eau Claire Regional Office</td>
<td>608-266-9316</td>
</tr>
<tr>
<td>Susan Nelson</td>
<td>Green Bay Regional Office</td>
<td>920-448-5231</td>
</tr>
<tr>
<td>Wilmot Valhmu</td>
<td>Madison Central Office</td>
<td>608-266-0008</td>
</tr>
<tr>
<td>Monica Thakur</td>
<td>Milwaukee Regional Office</td>
<td>414-227-3995</td>
</tr>
<tr>
<td>Christie Oestreich</td>
<td>Rhinelander Regional Office</td>
<td>715-365-2709</td>
</tr>
</tbody>
</table>
References


TABLE 1. Influenza vaccines, by formulation—United States, 2021-2022 influenza season*

<table>
<thead>
<tr>
<th>Trade name</th>
<th>Manufacturer</th>
<th>Presentation</th>
<th>Mercury (from thimerosal) (µg/0.5 mL)</th>
<th>Age indication</th>
<th>Route</th>
<th>HA (IIVs and RIV4) or virus count (LAIV4) for each vaccine virus (per dose)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inactivated influenza vaccine, quadrivalent (IIV4), standard dose, egg based†</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Afluria Quadrivalent</td>
<td>Seqirus</td>
<td>0.25 mL PFS³</td>
<td>--</td>
<td>6–35 mos³</td>
<td>IM³</td>
<td>7.5 µg/0.25 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.5 mL PFS³</td>
<td>--</td>
<td>≥3 yrs³</td>
<td>IM³</td>
<td>15 µg/0.5 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.0 mL MDV³</td>
<td>24.5</td>
<td>≥6 mos³ (needle/ injector)</td>
<td>IM³</td>
<td>15 µg/0.5 mL</td>
</tr>
<tr>
<td>Fluarix Quadrivalent</td>
<td>GlaxoSmithKline</td>
<td>0.5 mL PFS</td>
<td>--</td>
<td>≥6 mos</td>
<td>IM³</td>
<td>15 µg/0.5 mL</td>
</tr>
<tr>
<td>Flulaval Quadrivalent</td>
<td>GlaxoSmithKline</td>
<td>0.5 mL PFS</td>
<td>--</td>
<td>≥6 mos</td>
<td>IM³</td>
<td>15 µg/0.5 mL</td>
</tr>
<tr>
<td>Fluzone Quadrivalent</td>
<td>Sanofi Pasteur</td>
<td>0.5 mL PFS²</td>
<td>--</td>
<td>≥6 mos²</td>
<td>IM³</td>
<td>15 µg/0.5 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.5 mL SDV²</td>
<td>--</td>
<td>≥6 mos²</td>
<td>IM³</td>
<td>15 µg/0.5 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.0 mL MDV²</td>
<td>25</td>
<td>≥6 mos²</td>
<td>IM³</td>
<td>15 µg/0.5 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.5 µg/0.25 mL</td>
</tr>
<tr>
<td><strong>Inactivated influenza vaccine, cell culture-based quadrivalent (ccIIV4), standard dose</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Flucelvax Quadrivalent</td>
<td>Seqirus</td>
<td>0.5 mL PFS</td>
<td>--</td>
<td>≥2 yrs</td>
<td>IM³</td>
<td>15 µg/0.5 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.0 mL MDV</td>
<td>25</td>
<td>≥2 yrs</td>
<td>IM³</td>
<td>15 µg/0.5 mL</td>
</tr>
<tr>
<td><strong>Adjuvanted inactivated influenza vaccine, quadrivalent (aIIV4), standard dose, egg based†</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluad</td>
<td>Seqirus</td>
<td>0.5 mL PFS</td>
<td>--</td>
<td>≥65 yrs</td>
<td>IM³</td>
<td>15 µg/0.5 mL</td>
</tr>
<tr>
<td><strong>Inactivated influenza vaccine, quadrivalent (HD-IIV4), high dose, egg based†</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Fluzone High-Dose</td>
<td>Sanofi Pasteur</td>
<td>0.7 mL PFS</td>
<td>--</td>
<td>≥65 yrs</td>
<td>IM³</td>
<td>60 µg/0.7 mL</td>
</tr>
<tr>
<td><strong>Recombinant influenza vaccine, quadrivalent (RIV4)</strong></td>
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</tr>
<tr>
<td>FluBlok Quadrivalent</td>
<td>Sanofi Pasteur</td>
<td>0.5 mL PFS</td>
<td>--</td>
<td>≥18 yrs</td>
<td>IM³</td>
<td>45 µg/0.5 mL</td>
</tr>
<tr>
<td><strong>Live attenuated influenza vaccine, quadrivalent (LAIV4), egg based†</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>FluMist Quadrivalent</td>
<td>AstraZeneca</td>
<td>0.2 mL prefilled single-use intranasal sprayer</td>
<td>--</td>
<td>2–49 yrs</td>
<td>NAS</td>
<td>10⁶.5–7.5 fluorescent focus units/0.2 mL</td>
</tr>
</tbody>
</table>

Abbreviations: ACIP = Advisory Committee on Immunization Practices; FDA = Food and Drug Administration; HA = hemagglutinin; IIV4 = inactivated influenza vaccine, quadrivalent; IM = intramuscular; LAIV4 = live attenuated influenza vaccine, quadrivalent; MDV = multidose vial; NAS = intranasal; PFS = prefilled syringe; RIV4 = recombinant influenza vaccine, quadrivalent; SDV = single-dose vial.

* Vaccination providers should consult FDA-approved prescribing information for 2021–22 influenza vaccines for the most complete and updated information, including (but not limited to) indications, contraindications, warnings, and precautions. Package inserts for U.S.-licensed vaccines are available at [https://www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states](https://www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states). Availability and characteristics of specific products and presentations might change and/or differ from what is described in this table and in the text of this report.

† History of severe allergic reaction (e.g., anaphylaxis) to egg is a labeled contraindication to the use of most IIVs and LAIV4. However, ACIP recommends that persons with a history of egg allergy may receive any licensed, recommended influenza vaccine that is otherwise appropriate for their age and health status. Those who report having had reactions to egg involving symptoms other than urticaria (e.g., angioedema or swelling, respiratory distress, lightheadedness, or recurrent emesis) or who required epinephrine or another emergency medical
intervention should be vaccinated in an inpatient or outpatient medical setting (including, but not necessarily limited to, hospitals, clinics, health departments, and physician offices) supervised by a health care provider who is able to recognize and manage severe allergic reactions, if a vaccine other than ccIIIV4 or RIV4 is used.

The dose volume for Afluria Quadrivalent is 0.25 mL for children aged 6 through 35 months and 0.5 mL for persons aged ≥3 years.

IM-administered influenza vaccines should be given by needle and syringe only, with the exception of the MDV presentation of Afluria Quadrivalent, which may alternatively be given by the PharmaJet Stratis jet injector for persons aged 18 through 64 years only. For adults and older children, the recommended site for intramuscular 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 intramuscular administration is available in the ACIP General Best Practice Guidelines for Immunization, available at https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/downloads/general-recs.pdf.

Fluzone Quadrivalent is currently licensed for ages 6 through 35 months at either 0.25 mL or 0.5 mL per dose; however, 0.25-mL prefilled syringes are not expected to be available for the 2021–22 influenza season. If a prefilled syringe of Fluzone Quadrivalent is used for a child in this age group, the dose volume will be 0.5 mL per dose.

TABLE 2. Contraindications and precautions to the use of influenza vaccines—United States, 2021-2022 influenza season*

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Contraindications</th>
<th>Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egg-based IIV4s</td>
<td>History of severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine or to a previous dose of any influenza vaccine (i.e., any egg-based IIV, ccIIV, RIV, or LAIV)§</td>
<td>Moderate or severe acute illness with or without fever History of Guillain-Barré syndrome within 6 weeks of receipt of influenza vaccine</td>
</tr>
<tr>
<td>ccIIV4</td>
<td>History of severe allergic reaction (e.g., anaphylaxis) to a previous dose of any ccIIV or any component of ccIIV4§</td>
<td>Moderate or severe acute illness with or without fever History of Guillain-Barré syndrome within 6 weeks of receipt of influenza vaccine History of severe allergic reaction to a previous dose of any other influenza vaccine (i.e., any egg-based IIV, RIV, or LAIV)¶</td>
</tr>
<tr>
<td>RIV4</td>
<td>History of severe allergic reaction (e.g., anaphylaxis) to a previous dose of any RIV or any component of RIV4§</td>
<td>Moderate or severe acute illness with or without fever History of Guillain-Barré syndrome within 6 weeks of receipt of influenza vaccine History of severe allergic reaction to a previous dose of any other influenza vaccine (i.e., any egg-based IIV, ccIIV, or LAIV)¶</td>
</tr>
<tr>
<td>LAIV</td>
<td>History of severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine or to a previous dose of any influenza vaccine (i.e., any egg-based IIV, ccIIV, RIV, or LAIV)§ Concomitant aspirin or salicylate-containing therapy in children and adolescents§ Children aged 2 through 4 years who have received a diagnosis of asthma or whose parents or caregivers report that a health care provider has told them during the preceding 12 months that their child had wheezing or asthma or whose medical record indicates a wheezing episode has occurred during the preceding 12 months Children and adults who are immunocompromised due to any cause, including but not limited to immunosuppression caused by medications, congenital or acquired immunodeficiency states, HIV infection, anatomic asplenia, or functional asplenia (e.g., due to sickle-cell anemia) Close contacts and caregivers of severely immunosuppressed persons who require a protected environment Pregnancy Persons with active communication between the CSF and the oropharynx, nasopharynx, nose, or ear or any other cranial CSF leak Persons with cochlear implants**</td>
<td>Moderate or severe acute illness with or without fever History of Guillain-Barré syndrome within 6 weeks of receipt of influenza vaccine Asthma in persons aged ≥5 years Other underlying medical conditions that might predispose to complications after wild-type influenza infection (e.g., chronic pulmonary, cardiovascular [except isolated hypertension], renal, hepatic, neurologic, hematologic, or metabolic disorders [including diabetes mellitus])</td>
</tr>
</tbody>
</table>
Receipt of influenza antiviral medication within the previous 48 hours for oseltamivir and zanamivir, previous 5 days for peramivir, and previous 17 days for baloxavir††

**Abbreviations:** ACIP = Advisory Committee on Immunization Practices; ccIIV = cell culture–based inactivated influenza vaccine (any valency); ccIIV4 = cell culture–based inactivated influenza vaccine, quadrivalent; CSF = cerebrospinal fluid; FDA = Food and Drug Administration; IIV = inactivated influenza vaccine (any valency); IIV4 = inactivated influenza vaccine, quadrivalent; LAIV = live attenuated influenza vaccine (any valency); LAIV4 = live attenuated influenza vaccine, quadrivalent; RIV = recombinant influenza vaccine (any valency); RIV4 = recombinant influenza vaccine, quadrivalent.

* When a contraindication is present, a vaccine should not be administered. When a precaution is present, vaccination should generally be deferred but might be indicated if the benefit of protection from the vaccine outweighs the risk for an adverse reaction (see ACIP General Best Practice Guidelines for Immunization, available at [https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html](https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html)). Vaccination providers should check FDA-approved prescribing information for 2021–22 influenza vaccines for the most complete and updated information, including (but not limited to) indications, contraindications, warnings, and precautions. Package inserts for U.S.-licensed vaccines are available at [https://www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states](https://www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states).

† Although a history of severe allergic reaction (e.g., anaphylaxis) to egg is a labeled contraindication to the use of egg-based IIV4s and LAIV4, ACIP recommends that persons with a history of egg allergy may receive any licensed, recommended influenza vaccine that is otherwise appropriate for their age and health status. Those who report having had reactions to egg involving symptoms other than urticaria (e.g., angioedema or swelling, respiratory distress, lightheadedness, or recurrent emesis) or who required epinephrine or another emergency medical intervention should be vaccinated in an inpatient or outpatient medical setting (including but not necessarily limited to hospitals, clinics, health departments, and physician offices), if a vaccine other than ccIIV4 or RIV4 is used. Vaccine administration should be supervised by a health care provider who is able to recognize and manage severe allergic reactions.

‡ Labeled contraindication noted in package insert.

¶ If administered, vaccination should occur in a medical setting and should be supervised by a health care provider who can recognize and manage severe allergic reactions. Providers can consider consultation with an allergist in such cases, to assist in identification of the component responsible for the allergic reaction.

** Age-appropriate injectable vaccines are recommended for persons with cochlear implant due to the potential for CSF leak, which might exist for some period of time after implantation. Providers might consider consultation with a specialist concerning risk of persistent CSF leak if an age-appropriate inactivated or recombinant vaccine cannot be used.

†† Use of LAIV4 in context of influenza antivirals has not been studied; however, interference with activity of LAIV4 is biologically plausible, and this possibility is noted in the package insert for LAIV4. In the absence of data supporting an adequate minimum interval between influenza antiviral use and LAIV4 administration, the intervals provided are based on the half-life of each antiviral. The interval between influenza antiviral receipt and LAIV4 for which interference might potentially occur might be further prolonged in the presence of medical conditions that delay medication clearance (e.g., renal insufficiency). Influenza antivirals might also interfere with LAIV4 if initiated within 2 weeks after vaccination. Persons who receive antivirals during the period starting with the specified time before receipt of LAIV4 through 2 weeks after receipt of LAIV4 should be revaccinated with an age-appropriate IIV or RIV4.
FIGURE 1. Influenza vaccine dosing algorithm for children aged 6 months through 8 years* – Advisory Committee on Immunization Practices, United States, 2021-2022 influenza season

* For children aged 8 years who require 2 doses of vaccine, both doses should be administered even if the child turns age 9 years between receipt of dose 1 and dose 2.