



**Department of Health and Social Services**

Adam Crum, MSPH, Commissioner  
Anne Zink, MD, Chief Medical Officer

3601 C Street, Suite 540  
Anchorage, Alaska 99503 <http://dhss.alaska.gov/dph/Epi>

**Division of Public Health**

Heidi Hedberg, Director

Local (907) 269-8000  
24 Hour Emergency (800) 478-0084

**Editors:**

Joe McLaughlin, MD, MPH  
Louisa Castrodale, DVM, MPH

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## Influenza Vaccine Recommendations and Administration for the 2021–22 Season

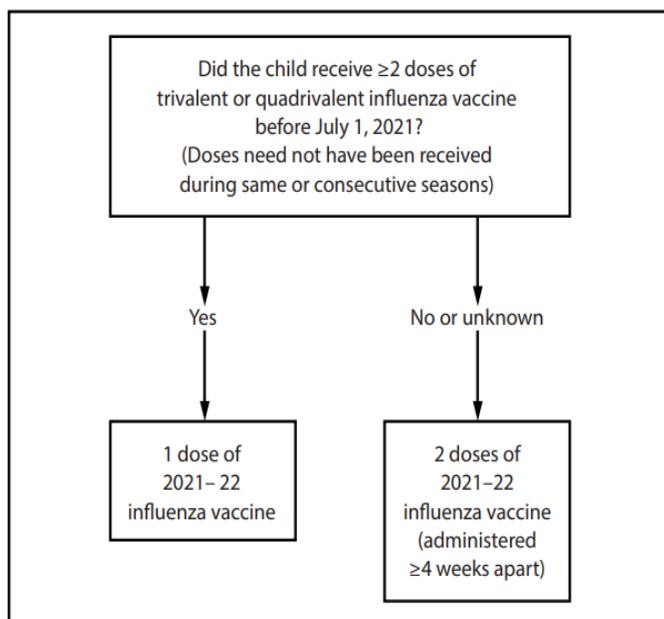
### General Recommendations for Vaccination<sup>1</sup>

- Routine annual influenza vaccination is recommended for all persons aged  $\geq 6$  months who do not have contraindications (see Table on second page).
- No preferential recommendation is made for one influenza vaccine product over another.
- Nine different influenza vaccines will be available during the 2020–21 influenza season.<sup>1,2</sup> The Alaska Immunization Program will supply 7 presentations of quadrivalent influenza vaccine (IIV4) this season.<sup>2</sup>
- Health care providers should consider observing all patients (seated or supine) for 15 minutes after administration of any vaccine to decrease the risk for injury should syncope occur.<sup>1</sup>
- Vaccine dosage guidelines for children aged 6 months through 8 years are the same as the 2020–21 influenza season and are provided below (Figure).

### Timing of Vaccination<sup>1</sup>

- Balancing considerations regarding the onset of the influenza season and concerns that vaccine-induced immunity might wane over time; vaccination is recommended by the end of October.
- For those requiring only one dose for the season, early vaccination is likely to be associated with suboptimal immunity before the end of the influenza season, particularly among older adults.
- Children aged 6 months through 8 years who require two doses (see Figure) should receive their first dose as soon as possible after the vaccine becomes available to allow the second dose (which must be administered  $\geq 4$  weeks later) to be received by the end of October.
- For women in the third trimester of pregnancy, consider vaccination soon after vaccine becomes available.
- Vaccination should continue to be offered as long as influenza viruses are circulating and unexpired vaccine is available.

**Figure. Vaccine Dosing Algorithm for Children Aged 6 Months through 8 Years<sup>1\*</sup>**



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

### Recommendations for Persons with an Egg Allergy<sup>1</sup>

- Persons with a history of egg allergy who have experienced only urticaria (hives) after exposure to egg should receive influenza vaccine. Any licensed, recommended influenza vaccine that is otherwise appropriate for the recipient's age and health status can be used.
- 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 can similarly receive any licensed, recommended influenza vaccine that is otherwise appropriate for their age and health status. If a vaccine other than ccIIV4 or RIV4 is used, the selected vaccine should be administered in an inpatient or outpatient medical setting. Vaccine administration should be supervised by a health care provider able to recognize and manage severe allergic reactions.

### Guidance for Persons at Increased Risk for Severe Illness<sup>1</sup>

Vaccination to prevent influenza is particularly important for persons who are at increased risk for severe illness and complications from influenza and for influenza-related outpatient, emergency department, or hospital visits. These persons include the following:

- All children aged 6 through 59 months;
- All persons aged  $\geq 50$  years;
- Adults and children who have chronic pulmonary (including asthma), cardiovascular (excluding isolated hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders (including diabetes mellitus);
- Persons who are immunocompromised due to any cause (including but not limited to immunosuppression caused by medications or human immunodeficiency virus [HIV] infection);
- Women who are or will be pregnant during the influenza season;
- Children and adolescents (aged 6 months through 18 years) who are receiving aspirin- or salicylate-containing medications and who might be at risk for experiencing Reye-syndrome after influenza virus infection;
- Residents of nursing homes and other long-term care facilities;
- American Indian/Alaska Native people; and
- Persons who are extremely obese (body mass index  $\geq 40$  for adults).

An IIV or RIV4 (as appropriate for the recipient's age) is suitable for persons in all risk groups. LAIV4 is not recommended for some populations; contraindications and precautions to the use of LAIV4 are noted below (Table).

### Influenza Vaccination of Persons with SARS-CoV-2 Infection (COVID-19)<sup>1</sup>

- Because SARS-CoV-2 is a novel coronavirus, clinical experience with influenza vaccination of persons with COVID-19 is limited.
- Those who are in quarantine or isolation for SARS-CoV-2 infection should not be brought to a vaccination setting if doing so could expose others. For those who have moderate or severe COVID-19, vaccination should generally be deferred until they recover. For persons who have mild or asymptomatic COVID-19, further deferral might be considered to avoid confusing COVID-19 illness symptoms

with postvaccination reactions.

- Because recommendations with vaccination of this population might continue to evolve, clinicians should check current CDC guidance for up-to-date information (see: <https://www.cdc.gov/vaccines/pandemic-guidance/index.htm>).

**References**

1. CDC. Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the ACIP — United States, 2021–22 Influenza Season. *MMWR* 2021;70(5):1-28. Available at: <https://www.cdc.gov/mmwr/volumes/70/rr/pdfs/rr7005a1-H.pdf>

2. Alaska Epidemiology *Bulletin*. “Influenza Vaccines Available During the 2021–22 Season”. No. 15, September 10, 2021. Available in the future at: [http://www.epi.alaska.gov/bulletins/docs/b2021\\_15.pdf](http://www.epi.alaska.gov/bulletins/docs/b2021_15.pdf)

*Note: This Bulletin provides summary information only. For complete information, consult the Advisory Committee on Immunization Practices (ACIP) recommendations<sup>1</sup> and vaccine manufacturer package inserts, available at: <http://www.fda.gov/BiologicsBloodVaccines/Vaccines/ApprovedProducts/UCM093833>*

**Table. Contraindications and Precautions<sup>1\*</sup>**

	<b>Contraindications</b>	<b>Precaution</b>
<b>Egg-based IIV4</b>	<ul style="list-style-type: none"> <li>• History of severe allergic reaction to any component of the vaccine,<sup>†</sup> or to a previous dose of any influenza vaccine<sup>§</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Moderate or severe acute illness with or without fever</li> <li>• History Guillain-Barré syndrome within 6 weeks of receipt of influenza vaccine</li> </ul>
<b>ccIIV4</b>	<ul style="list-style-type: none"> <li>• History of severe allergic reaction to a previous dose of any ccIIV or any component of ccIIV<sup>§</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Moderate or severe acute illness with or without fever</li> <li>• History Guillain-Barré syndrome within 6 weeks of receipt of influenza vaccine</li> <li>• History of severe allergic reaction to a previous dose of any other influenza vaccine</li> </ul>
<b>RIV4</b>	<ul style="list-style-type: none"> <li>• History of severe allergic reaction to previous dose of any RIV or any component of RIV4<sup>§</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Moderate or severe acute illness with or without fever</li> <li>• History of Guillain-Barré syndrome within 6 weeks of receipt of influenza vaccine</li> <li>• History of severe allergic reaction to a previous dose of any other influenza vaccine</li> </ul>
<b>LAIV4</b>	<ul style="list-style-type: none"> <li>• History of severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine<sup>†</sup> or to a previous dose of any influenza vaccine<sup>§</sup></li> <li>• Concomitant aspirin or salicylate-containing therapy in children and adolescents<sup>§</sup></li> <li>• 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</li> <li>• 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)</li> <li>• Close contacts and caregivers of severely immunosuppressed persons who require a protected environment</li> <li>• Pregnancy</li> <li>• Persons with active communication between the CSF and the oropharynx, nasopharynx, nose, or ear or any other cranial CSF leak<sup>**</sup></li> <li>• Persons with cochlear implants</li> <li>• 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<sup>††</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Moderate or severe acute illness with or without fever</li> <li>• History of Guillain-Barré syndrome within 6 weeks of receipt of influenza vaccine</li> <li>• Asthma in persons aged ≥5 years</li> <li>• 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])</li> </ul>

**Table Abbreviations:** ACIP = Advisory Committee on Immunization Practices; ccIIV4 = cell culture–based inactivated influenza vaccine; CSF = cerebrospinal fluid; FDA = Food and Drug Administration; IIV3 = inactivated influenza vaccine, trivalent; LAIV4 = live-attenuated influenza vaccine, quadrivalent; RIV4 = recombinant influenza vaccine, quadrivalent.

**Table Footnotes:**

\* 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/vaccines/vaccines-licensed-use-united-states>

† History of severe allergic reaction (e.g., anaphylaxis) to egg is a labeled contraindication to the use of most egg-based 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), if a vaccine other than ccIIV4 or RIV4 is used. Vaccine administered 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 after implantation. Providers might consider consultation with a specialist concerning risk for 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.