State of Alaska Epidemiology **Bulletin**

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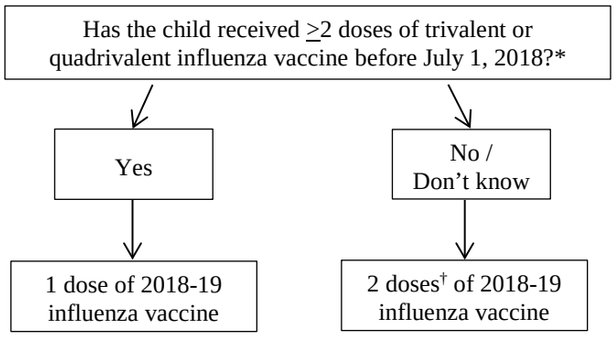
Influenza Vaccines Available During the 2018–19 Season

Recommendations for Vaccination

Routine annual influenza vaccination is recommended for all persons aged ≥6 months who do not have contraindications (Table).[1] Vaccination should occur before onset of the influenza season. Health care providers should begin offering influenza vaccine as soon as it is available and throughout the season.

During the 2018–19 influenza season, 17 different presentations of influenza vaccine will be available for purchase.[1,2] The Alaska Immunization Program will supply four presentations of trivalent or quadrivalent inactivated influenza vaccine (IIV3 or IIV4) this season.[3] Vaccine dosage guidelines for children aged 6 months through 8 years are provided below (Figure).

Figure. Influenza Vaccine Dosing Algorithm for Children Aged 6 Months through 8 Years[1]



**Doses need not have been given in the same or consecutive seasons.*[1]
†Doses should be administered ≥4 weeks apart.[1]

2018–19 Influenza Vaccine Composition

Trivalent vaccines in the United States will contain an A/Michigan/45/2015(H1N1)pdm09-like virus, an A/Singapore/INFIMH-16-0019/2016(H3N2)-like virus, and a B/Colorado/06/2017-like virus (Victoria lineage). Quadrivalent vaccines will contain these three vaccine viruses and a B/Phuket/3073/2013-like virus (Yamagata lineage).[1]

Inactivated Influenza Vaccines (IIV)

Inactivated influenza vaccine contains inactivated viruses and cannot cause influenza. IIVs as a class will include:

- Egg-based, unadjuvanted, and adjuvanted trivalent influenza vaccines (IIV3)
- Egg-based, or cell culture-based (cc) unadjuvanted quadrivalent influenza vaccines (IIV4)

IIVs available in the United States this season include:

- IIV3: Afluria®, and Fluzone® High-Dose.[1]
- IIV4: Afluria®, Fluarix®, FluLaval®, Fluzone®, and Fluzone® Pediatric.[1]
- ccIIV4: Flucelvax®, approved for persons aged ≥4 years.[1]
- aIIV3: Fluad®, approved for persons aged ≥65 years. This vaccine contains adjuvant (a) MF59.[1]

Recombinant Influenza Vaccine (RIV)

RIV4 (Flublok®) is egg-free and uses cell culture technology to produce the active ingredient for influenza vaccination (i.e., the hemagglutinin or HA protein). RIV4 may be used in persons aged ≥18 years, including those with severe egg allergy.[1]

Live-Attenuated Influenza Vaccine (LAIV)

The Advisory Committee on Immunization Practices (ACIP) recommended that LAIV4 (FluMist Quadrivalent, AstraZeneca) be an option during the 2018–19 season.[1,2] The ACIP did not express a preferential recommendation, and the Alaska Immunization Program is not offering LAIV4.

Storage and Handling of Influenza Vaccines

Consult manufacturer packaging information for guidance concerning storage and handling.[1] Influenza vaccines are recommended to be protected from light, stored refrigerated between 2° to 8°C (36° to 46°F) and not frozen.[1]

2018–19 State-Supplied Influenza Vaccines

The Alaska Immunization Program will supply four influenza vaccines: Fluzone® Pediatric, Fluzone®, Fluzone® High-Dose, and Fluarix®.[3]

References

1. Grohskopf LA, Sokolow LZ, Broder KR, Walter EB, Fry AM, Jernigan DB. Prevention and control of seasonal influenza with vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2018–19 influenza season. *MMWR* 2018;67(RR-3):1–20. Available at: https://www.cdc.gov/mmwr/volumes/67/rr/pdfs/rr6703a1-H.pdf
2. Grohskopf LA, Sokolow LZ, Fry AM, Walter EB, Jernigan DB. Update: ACIP Recommendations for the use of quadrivalent live attenuated influenza vaccine (LAIV4) — United States, 2018–19 influenza season. *MMWR* 2018;67:643–45. Available at: https://www.cdc.gov/mmwr/volumes/67/wr/pdfs/mm6722a5-H.pdf
3. Alaska Immunization Program. 2018–19 Influenza Vaccine Choices in VacTrAK. Updated August 31, 2018. Available at: http://dhss.alaska.gov/dph/Epi/iz/Documents/vactrak/docs/VacTrAK_Flu_Vaccines.pdf

Table. Contraindications and Precautions for Influenza Vaccines

	Contraindications	Precautions
IIV	History of severe allergic reaction to any component of the vaccine or after a previous dose of any influenza vaccine.*	Moderate to severe illness. History of Guillain-Barré syndrome within 6 weeks of receipt of influenza vaccine.
RIV	History of severe allergic reaction to any component of the vaccine.*	Moderate to severe illness. History of Guillain-Barré syndrome within 6 weeks of receipt of influenza vaccine.
LAIV	History of severe allergic reaction to any component of the vaccine or after a previous dose of any influenza vaccine.* Concomitant aspirin- or salicylate-containing therapy in children and adolescents. Asthma in children aged 2 through 4 years. Persons who are immunocompromised due to any cause. Close contacts and caregivers of severely immunosuppressed persons. Pregnancy. Receipt of influenza antiviral medications within the previous 48 hours.	Asthma in persons aged ≥5 years and presence of an underlying medical condition. Moderate to severe illness with or without fever. History of Guillain-Barré syndrome within 6 weeks of receipt of influenza vaccine. Other underlying medical conditions that may predispose to complications after wild-type influenza infection.

**History of severe allergic reaction (e.g., anaphylaxis) to egg is a contraindication to the use of IIV and LAIV. However, ACIP recommends that any licensed, recommended, and appropriate vaccine (IIV, RIV, or LAIV) may be administered to persons with egg allergy of any severity.*[1]

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