

2021-22 Seasonal Influenza Vaccine Dose Volumes for Children

Everyone aged 6 months and older should receive flu vaccine every year.

Flu vaccine dose volume is based on the person's **age and the flu vaccine product** that is used.¹ A study in 2016 found that flu vaccine was most frequently involved in reported vaccine errors (20%) and was the most common type of vaccine implicated in age-related vaccine errors.² It is important to prevent flu vaccine administration errors to ensure children are adequately protected against flu.

For children aged **6 through 35 months**, flu vaccine dose volume is **dependent on the product that is administered**. There are multiple licensed inactivated influenza vaccines, quadrivalent (IIV4) available for children aged 6 through 35 months: Afluria® Quadrivalent, FluLaval® Quadrivalent, Fluarix® Quadrivalent, and Fluzone® Quadrivalent. **The cell cultured-based inactivated influenza vaccine (cIIV4) is available for persons aged 2 years and older: Flucelvax® Quadrivalent.**

If You're Using This Vaccine (IIV4)...¹	Dose Volume for Ages 6-35 Months
Afluria (Seqirus)	0.25 mL per dose
Fluarix or FluLaval (GSK)	0.5 mL per dose
Fluzone (Sanofi Pasteur)	0.25 mL OR 0.5 mL per dose *No preference is expressed for either dose volume.
If You're Using This Vaccine (cIIV4)...¹	Dose Volume for Ages 2 Years and Older
Flucelvax (Seqirus)	0.5mL per dose

Refer to the Flu Vaccine Presentation Chart (see footnote 1) for available presentations of each of these vaccines.

For children aged **3 years and older**, dose volume for standard-dose IIV is **0.5 mL regardless of the flu vaccine product** being administered.

If 2 doses of 2021-22 flu vaccine are needed³, the same vaccine product **does not** need to be used for both doses. Use any age-appropriate flu vaccine that is available that day, ensuring you use the correct dose volume for the product you are administering.

Don't miss an opportunity to vaccinate! Dose volume is based on the child's age on the day of vaccine administration. For example:

- If a child is aged **2 years and 11 months** for dose 1, use the above table to determine dose volume based on the **IIV product used**.
- When the child returns 4 weeks later for dose 2 and is **now aged 3 years**, the dose volume is **0.5 mL** regardless of the IIV product used.

For IIV, the needed volume for a child aged 6 through 35 months may be administered from a prefilled syringe containing the appropriate volume (as supplied by the manufacturer), a single-dose vial, or a multi-dose vial.

Further Guidance on Fluzone Quadrivalent:

- NOTE: Fluzone Quadrivalent is approved for children aged 6 through 35 months at either 0.25 mL or 0.5 mL per dose.
- The 0.25-mL prefilled syringe of Fluzone Quadrivalent is not anticipated to be available for the 2021–22 season. If a prefilled syringe of Fluzone Quadrivalent is used for a child in this age group, the dose

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volume will be 0.5 mL per dose.

- Single-dose 0.5 mL vials of Fluzone Quadrivalent **should be used for only 1 dose**. If 0.25 mL is used from a Fluzone Quadrivalent 0.5 mL single-dose vial, then the 0.25 mL remaining in the single-dose vial **must** be discarded.

Examples of how to correct pediatric flu vaccine dose volume administration errors^{4, 5}:

1. A 6-month-old was inadvertently given a 0.25 mL dose of FluLaval/Fluarix rather than the recommended 0.5 mL dose. What should I do?

If the error is recognized on the same clinic day, you can give a second 0.25 mL dose of the product that was used (FluLaval or Fluarix) to correct this vaccine error. If the error is not discovered until the following day, you should revaccinate with a full dose of IIV (0.25 mL of Afluria, 0.5 mL of FluLaval or Fluarix, or either 0.25 mL or 0.5 mL of Fluzone) as soon as possible. Revaccinating the day after the initial substandard dose was administered is safe and recommended if feasible.

2. A 2-year-old was inadvertently given 0.5 mL from an Afluria multi-dose vial rather than the recommended 0.25 mL dose. What should I do?

This is more than an age-appropriate dose. The dose should be counted as valid. Notify the parent/guardian about the error. Ensure that office staff receive education to prevent vaccine administration errors. If the child needs a second dose according to the 2-dose algorithm³, administer an age-appropriate IIV dose (use the table above) 4 weeks later. Alternatively, healthy children aged 2 years and older may receive LAIV4 intranasally.

3. A 5-year-old was inadvertently given a 0.25 mL dose of Afluria rather than the recommended 0.5 mL dose. What should I do?

If the error is recognized on the same clinic day, you can give a second 0.25 mL dose of Afluria to correct this vaccine error. If the error is not discovered until the following day, you should revaccinate the 5-year-old with a 0.5 mL dose of IIV/cIIIV as soon as possible. Revaccinating the day after the initial substandard dose was administered is safe and recommended if feasible. Alternatively, healthy children aged 2 years and older may receive LAIV4 intranasally.

¹ Refer to “2021-22 Seasonal Influenza Vaccine Presentation Chart” at www.michigan.gov/flu.

² Institute for Safe Medication Practices, 7/28/16 located at www.ismp.org/newsletters/acute/acute/showarticle.aspx?id=1144.

³ Refer to “Who Needs 2 Doses of 2021-22 Seasonal Influenza Vaccine” at www.michigan.gov/flu.

⁴ Report all vaccine administration errors to the Vaccine Adverse Event Reporting System (VAERS): <https://vaers.hhs.gov>.

⁵ Contact your local health department or MDHHS regarding the vaccine error, so the status of the error can be determined and marked accordingly in MCIR.

Refer to “Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the ACIP—U.S., 2021-22 Influenza Season,” MMWR Recomm Rep 2021; 70(No. RR-5):1-28, located at www.cdc.gov/vaccines. For more information regarding flu vaccination, refer to www.michigan.gov/flu, www.cdc.gov/vaccines, or www.cdc.gov/mmwr.

For more information on flu vaccine and how to correct vaccine administration errors, visit Immunization Action Coalition’s Ask the Experts influenza page at www.immunize.org/askexperts/experts_inf.asp.