National Center for Immunization & Respiratory Diseases



ACIP Influenza Vaccination Recommendations: Updates for the 2024–25 Season

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Massachusetts Chapter, American Academy of Pediatrics October 8, 2024

Disclosures/Unlabeled Use

- No conflicts to disclose.
- Unlabeled use:
 - A history of severe allergic reaction (e.g., anaphylaxis) to the vaccine or any of its components (which include egg for some vaccines) is a labeled contraindication for most inactivated influenza vaccines (IIVs) and the live attenuated influenza vaccine (LAIV). However, ACIP recommends that persons with egg allergy of any severity should receive any licensed, recommended influenza vaccine that is appropriate for their age and health status (egg based or non-egg based).
 - High-dose (HD-IIV) and adjuvanted (aIIV) inactivated influenza vaccines are approved for persons aged ≥65 years in the United States. However, ACIP recommends that they are acceptable options for solid organ transplant recipients aged 18 through 64 years who are receiving immunosuppressive medication regimens, without a preference over other age-appropriate inactivated (IIVs) or recombinant (RIV) influenza vaccines.

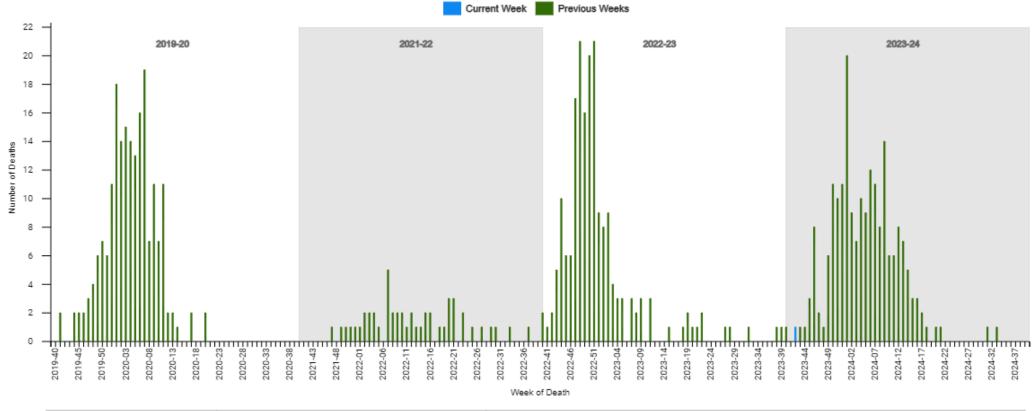
Overview

- 2024-25 ACIP influenza vaccination recommendation updates—what's new this season:
 - All U.S. vaccines are trivalent
 - There are updated recommendations for solid organ transplant recipients
- Overview of some things that haven't changed this season:
 - Timing of vaccination
 - Which children need 2 doses
 - Dose volumes for children ages 6 through 35 months
 - Vaccination of persons with egg allergy
 - Preferred influenza vaccines for those aged 65 years and older
- Administration of influenza and COVID-19 vaccines at the same visit
- For the future—recent FDA approval of FluMist for self- or caregiver administration (not available until 2025-26)





Number of Influenza-Associated Pediatric Deaths by Week of Death



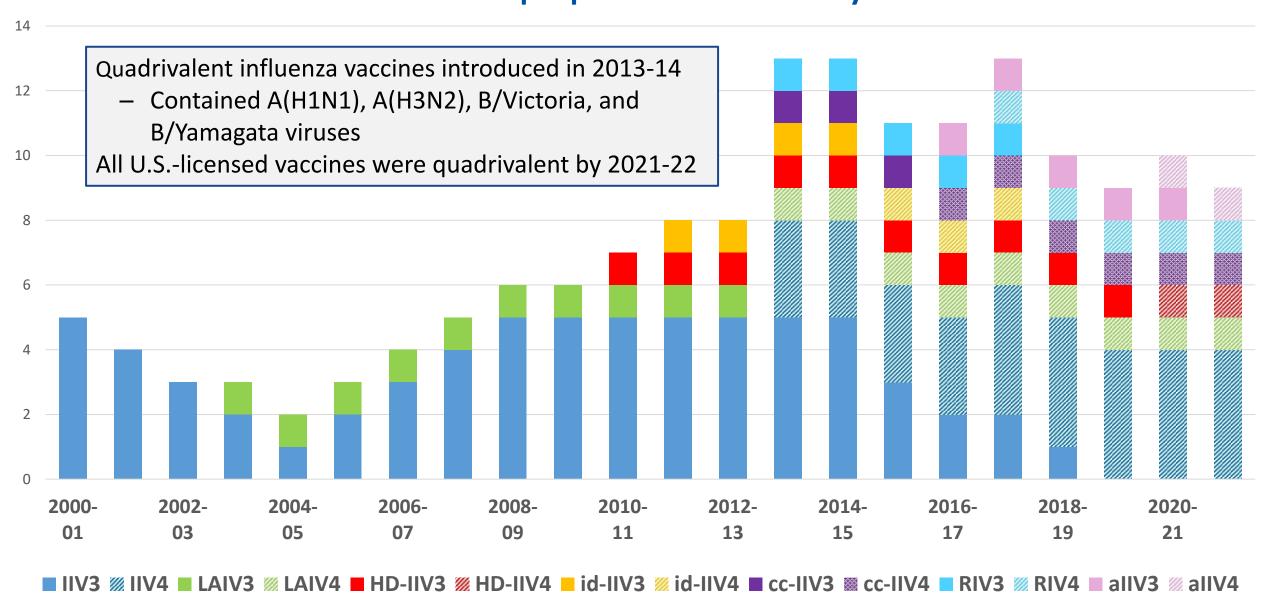
Seasons	Total Deaths	Deaths reported During the Week Ending 28 Sept 2024
2019-20	199	0
2021-22	49	0
2022-23	187	0
2023-24	201	1

ACIP Influenza Vaccination Recommendations: What's New for 2024-25

ACIP Influenza Vaccination Recommendations, 2024-25

- Annual vaccination of all ages 6 months and older who do not have contraindications is recommended
- Vaccination is recommended ideally by the end of October (but should continue as long as influenza viruses are circulating and unexpired vaccine is available)
- Changes for the 2024-25 season include:
 - All U.S.-licensed influenza vaccines are trivalent
 - High-dose and adjuvanted inactivated influenza vaccines are now acceptable options for solid organ transplant recipients aged 18 through 64 years who are receiving immunosuppressive medication regimens, without a preference over other age-appropriate inactivated (IIVs) or recombinant influenza vaccines (RIV)

U.S. Seasonal Influenza Vaccines, 2000-01 through 2021-22 Number of unique products available by season



U.S. Influenza Vaccine Composition, 2024-25

- All influenza vaccines marketed in the United States for the 2024-25 season will be trivalent
- There will be no influenza B/Yamagata component, following no confirmed detections of wild-type influenza B/Yamagata viruses since March 2020
- U.S. influenza vaccine composition for 2024-25 includes an update to the influenza A(H3N2) component:
 - An A/Victoria/4897/2022 (H1N1)pdm09-like virus for egg-based vaccines or an A/Wisconsin/67/2022 (H1N1)pdm09-like virus for cell and recombinant vaccines;
 - An A/Thailand/8/2022 (H3N2)-like virus for egg-based vaccines or an A/Massachusetts/18/2022 (H3N2)-like virus for cell and recombinant vaccines;
 - A B/Austria/1359417/2021 (B/Victoria lineage)-like virus

Influenza Vaccines by Approved Age Indication, United States, 2024–25

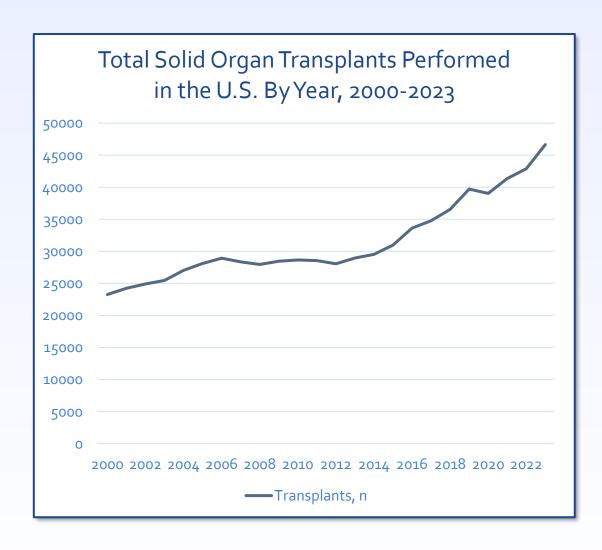
Vaccine type	0 through 6 months	6 through 23 months	2 through 17 years	18 through 49 years	50 through 64 years	≥65 years
Standard-dose, unadjuvanted inactivated (IIV3)			FluLaval (ID Biom	edical of Quebec/	GlaxoSmithKline)	
Cell culture-based inactivated (ccIIV3)			ı	Flucelvax (Seqirus)		
Adjuvanted inactivated (allV3)						Fluad*† (Seqirus)
High-dose inactivated (HD-IIV3)						Fluzone High-Dose*† (Sanofi Pasteur)
Recombinant (RIV3)				(Prot	Flublok* ein Sciences/San	ofi Pasteur)
Live attenuated (LAIV3)						
	Standard-dose, unadjuvanted inactivated (IIV3) Cell culture-based inactivated (ccIIV3) Adjuvanted inactivated (allV3) High-dose inactivated (HD-IIV3) Recombinant (RIV3) Live attenuated	Standard-dose, unadjuvanted inactivated (IIV3) Cell culture-based inactivated (ccIIV3) Adjuvanted inactivated (alIV3) High-dose inactivated (HD-IIV3) Recombinant (RIV3) Live attenuated	Standard-dose, unadjuvanted inactivated (IIV3) Cell culture-based inactivated (ccIIV3) Adjuvanted inactivated (alIV3) High-dose inactivated (HD-IIV3) Recombinant (RIV3) Live attenuated	Standard-dose, unadjuvanted inactivated (IIV3) Cell culture-based inactivated (ccIIV3) Adjuvanted inactivated (alIV3) High-dose inactivated (HD-IIV3) Recombinant (RIV3) Live attenuated Fluation Fluat	Standard-dose, unadjuvanted inactivated (IIV3) Cell culture-based inactivated (ccIIV3) Adjuvanted inactivated (aIIV3) High-dose inactivated (HD-IIV3) Recombinant (RIV3) Live attenuated Months months years Afluria (Seqirus) Fluarix (GlaxoSmithKli FluLaval (ID Biomedical of Quebec/ Fluzone (Sanofi Paste) Flucelvax (Seqirus) (Prot	Standard-dose, unadjuvanted inactivated (IIV3) Cell culture-based inactivated (ccIIV3) Adjuvanted inactivated (alIV3) High-dose inactivated (HD-IIV3) Recombinant (RIV3) Live attenuated Industry (Seqirus) Months Months years years Afluria (Seqirus) Fluarix (GlaxoSmithKline) FluLaval (ID Biomedical of Quebec/GlaxoSmithKline) Fluzone (Sanofi Pasteur) Flucelvax (Seqirus) Flucelvax (Seqirus) Flublok* (Protein Sciences/San

Not approved for age group Egg-based Not egg-based

IIV3=trivalent inactivated influenza vaccine RIV3=trivalent recombinant influenza vaccine LAIV3=trivalent live attenuated influenza vaccine

^{*}Preferred for ages ≥65 years †Acceptable for solid organ transplant recipients 18-64 yrs taking immunosuppressive medications

Solid Organ Transplantation in the United States



U.S. Organ Transplants Performed, 2023					
All	46,632 (100)				
By age group	N (%)				
<18 years	1,916 (4)				
18-64 years	33,610 (72)				
≥65 years	11,104 (24)				
Organ(s)	N (%)				
Kidney	27,332 (59)				
Liver	10,660 (23)				
Heart	4,545 (10)				
Lung	3,026 (6)				
Kidney/pancreas	812 (2)				
Pancreas	102 (0.2)				
Heart/lung	54 (0.1)				

Recommendations for Influenza Vaccination of SOT Recipients

- Prior to this season, ACIP recommended that SOT recipients should receive an age-appropriate inactivated or recombinant influenza vaccine (i.e., an IIV or RIV)
 Live attenuated influenza vaccine (LAIV) is not recommended for immunocompromised populations
- Immunosuppressive regimens might contribute to diminished response to vaccines
- High-dose (HD-IIV) and adjuvanted (aIIV) inactivated influenza vaccines have been studied in SOT recipients
- American Society for Transplantation (AST) states that high-dose or boosted dosing might be preferable post-transplant
- HD-IIV and allV are approved for ages ≥65 years, and might not be covered by insurance when administered to persons under age 65 years

Policy Question

- Should high-dose inactivated, adjuvanted inactivated, and/or recombinant influenza vaccines be recommended as an option for influenza vaccination of solid organ transplant recipients who are younger than the approved age indication?
 - <65 years for high-dose and adjuvanted influenza vaccines</p>
 - <18 years for recombinant influenza vaccine</p>

Population, Intervention, Comparator, and Outcomes

Population	Solid organ transplant recipients aged ≥6 months
Interventions	High-dose (HD-IIV), MF59-djuvanted (aIIV), or recombinant (RIV) trivalent or quadrivalent influenza
	vaccines
Comparator	Single intramuscular dose of trivalent or quadrivalent unadjuvanted standard dose influenza vaccines
Outcomes	Primary outcomes
	Benefits:
	Medically-attended influenza (Critical)
	Influenza-associated hospitalization (Critical)
	 Laboratory-confirmed influenza—immunogenicity data acceptable (Important)
	Harms:
	Transplant rejection or graft failure (Critical)
	 Neuroinflammatory conditions, e.g. GBS, ADEM (Critical)
	Other immune-related adverse events, including new onset or exacerbation of an autoimmune
	condition (Critical)

Study Characteristics (n=9)

- 9 papers describing 9 studies:
 - 8 randomized; 1 cohort
- Vaccines and comparisons:

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HD-IIV3 vs. SD-IIV3
Double-dose vs. single-dose SD-IIV3
alIV3 vs. SD-IIV3
alIV3 vs. HD-IIV3 vs. SD-IIV4
alIV3 (most participants, no comparator)
No papers examining RIV
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- Transplant populations:
 - Kidney 4
 Heart 1
 Mixed 4 (40-80% kidney)

- No papers reported on medicallyattended influenza, neuroinflammatory conditions, or immune-mediated adverse events (all critical outcomes)
- Only one pediatric study (omitted from meta-analysis/GRADE)
- Cohort study excluded from GRADE given small size, lack of a comparison group, and availability of randomized studies
- 7 papers included in GRADE

Summary—Benefits: allV3 vs SD-IIV

Outcome	N studies (n participants)	Pooled RR (95% CI)	GRADE Certainty	Importance
Influenza-associated hospitalization	1 (403)	2.90 (0.12, 70.71)	Low	Critical
Medically-attended influenza	0	-	-	Critical
Lab-confirmed influenza	1 (403)	0.97 (0.43, 2.18)	Moderate	Important
Seroconversion to H1N1	3 (558)	1.37 (1.09, 1.72)	Low	Important
Seroconversion to H ₃ N ₂	3 (558)	1.51 (1.25, 1.82)	Low	Important
Seroconversion to B	3 (558)	1.64 (1.28, 2.11)	Low	Important
Seroprotection to H1N1	3 (558)	1.06 (0.98, 1.14)	Very low	Important
Seroprotection to H ₃ N ₂	3 (558)	1.20 (1.07, 1.33)	Low	Important
Seroprotection to B	3 (558)	1.17 (1.01, 1.34)	Low	Important

Summary—Benefits: HD-IIV3 vs SD-IIV

Outcome	N studies (n participants)	Pooled RR (95% CI)	GRADE Certainty	Importance
Influenza-associated hospitalization	1 (393)	3.05 (0.12, 74.32)	Low	Critical
Medically-attended influenza	0	-	-	Critical
Lab-confirmed influenza	2 (565)	1.09 (0.52, 2.27)	Moderate	Important
Seroconversion to H1N1	2 (554)	2.46 (1.86, 3.27)	Moderate	Important
Seroconversion to H ₃ N ₂	2 (554)	1.67 (1.38, 2.02)	Moderate	Important
Seroconversion to B	2 (554)	1.90 (1.46, 2.46)	Moderate	Important
Seroprotection to H1N1	2 (554)	1.03 (0.95, 1.11)	Low	Important
Seroprotection to H ₃ N ₂	2 (554)	1.13 (1.01, 1.26)	Moderate	Important
Seroprotection to B	2 (554)	1.22 (1.08, 1.38)	Moderate	Important

Summary—Harms

Outcome	Studies (N)	Pooled RR (95% CI)	GRADE Certainty	Importance
allV ₃ vs SD-IIV				
Graft rejection	3 (517)	0.28 (0.06, 1.34)	Moderate	Critical
Neuroinflammatory events	0	-	-	Critical
Other autoimmune events	0	-	-	Critical
HD-IIV ₃ vs SD-IIV				
Graft rejection	3 (579)	1.00 (0.32, 3.06)	Moderate	Critical
Neuroinflammatory events	0	-	-	Critical
Other autoimmune events	0	-	-	Critical

Serious Adverse Event (SAE) Summary

Author/Year	Comparison	Age Group	Transplant type(s)	Sample size	SAEs
Natori 2018	HD-IIV ₃ vs. SD-IIV ₃	≥18 yrs; median 57 yrs	Mixed; 39% renal	162	SAEs not reported; all-cause hospitalizations described: HD-IIV3: 8/87 (9%) ppts. SD-IIV3: 15/85 (18%) ppts.
Mombelli 2018	Double SD-IIV ₃ vs. SD-IIV ₃	≥18 yrs; median 58 yrs	Renal/liver; 80% renal	79	8 SAEs in total study population (both groups). Not stratified by group. None considered related.
Odongo 2022	Double SD-IIV ₃ vs. SD-IIV ₃	18-60 yrs; median 44 yrs	Renal	115	Methods indicate that ppts. were encouraged to report SAEs, but SAEs not described in Results.

Serious Adverse Event (SAE) Summary

Author/Year	Comparison	Age Group	Transplant type(s)	Sample size	SAEs
Kumar 2016	allV ₃ vs. SD-IIV ₃	≥18 yrs; mean 50 yrs	Renal	62	SAEs not reported; all-cause hospitalizations described: HD-IIV3: 3/31 (10%) ppts. SD-IIV3: 3/31 (10%) ppts.
Magnani 2005	allV ₃ vs. SD-llV ₃	adults; mean 55 yrs	Heart	58	Not reported.
Pollok 2004	allV ₃ vs. SD-IIV ₃	≥18 yrs; 18-64 yrs	Renal	95	Not described in detail; stated that there were no notable differences between groups with respect to SAEs.
Mombelli 2024	allV ₃ vs. HD-llV ₃ vs. SD-llV ₄	≥18 yrs; median 58 yrs	Mixed; 68% renal	616	allV3: 28/209 (13%) ppts., none considered related. HD-IIV3: 34/203 (17%) ppts., 1 considered related. SD-IIV4: 48/204 (24%) ppts., none considered related.

Summary of Evidence: allV₃ vs SD-IIV

Outcome	Importance	No. studies	Included in profile	Favored vaccine	Certainty
Benefits	'				
Medically-attended influenza	Critical	0	-	-	-
Influenza-associated hospitalization	Critical	1	Yes	Neither	Low
Laboratory-confirmed influenza	Important	1	Yes	Neither	Moderate
Immunogenicity (surrogate outcome)					
Seroconversion to A(H1N1)	Important	3	Yes	allV ₃	Low
Seroconversion to A(H ₃ N ₂)	Important	3	Yes	allV ₃	Low
Seroconversion to B	Important	3	Yes	allV ₃	Low
Seroprotection to A(H1N1)	Important	3	Yes	Neither	Very Low
Seroprotection to A(H ₃ N ₂)	Important	3	Yes	allV3	Low
Seroprotection to B	Important	3	Yes	allV3	Low
Harms					
Transplant rejection/graft failure	Critical	3	Yes	Neither	Moderate
Neuroinflammatory conditions	Critical	0	-	-	1-
Other immune-mediated adverse events	Critical	0	- /		7-

Summary of Evidence: HD-IIV3 vs SD-IIV

Outcome	Importance	No. studies	Included in profile	Favored vaccine	Certainty
Benefits					
Medically-attended influenza	Critical	0	-		-
Influenza-associated hospitalization	Critical	1	Yes	Neither	Low
Laboratory-confirmed influenza	Important	2	Yes	Neither	Moderate
Immunogenicity (surrogate outcome)					
Seroconversion to A(H1N1)	Important	3	Yes	HD-IIV ₃	Moderate
Seroconversion to A(H ₃ N ₂)	Important	3	Yes	HD-IIV ₃	Moderate
Seroconversion to B	Important	3	Yes	HD-IIV ₃	Moderate
Seroprotection to A(H1N1)	Important	3	Yes	Neither Neither	Low
Seroprotection to A(H ₃ N ₂)	Important	3	Yes	HD-IIV ₃	Moderate
Seroprotection to B	Important	3	Yes	HD-IIV ₃	Moderate
Harms	•				
Transplant rejection/graft failure	Critical	3	Yes	Neither	Moderate
Neuroinflammatory conditions	Critical	0			1-
Other immune-mediated adverse events	Critical	0	- /		7-

Summary of Evidence: allV3 vs HD-IIV

Outcome	Importance	No. studies	Included in profile	Favored vaccine	Certainty
Benefits		•			
Medically-attended influenza	Critical	0	-	-	-
Influenza-associated hospitalization	Critical	1	Yes	Neither	Low
Laboratory-confirmed influenza	Important	1	Yes	Neither	Moderate
Immunogenicity (surrogate outcome)					
Seroconversion to A(H1N1)	Important	1	Yes	HD-IIV ₃	Moderate
Seroconversion to A(H ₃ N ₂)	Important	1	Yes	Neither	Low
Seroconversion to B	Important	1	Yes	Neither	Low
Seroprotection to A(H1N1)	Important	1	Yes	Neither	Low
Seroprotection to A(H ₃ N ₂)	Important	1	Yes	Neither	Low
Seroprotection to B	Important	1	Yes	Neither	Low
Harms	•				
Transplant rejection/graft failure	Critical	1	Yes	Neither	Moderate
Neuroinflammatory conditions	Critical	0	-	-	-
Other immune-mediated adverse events	Critical	0	- /)-

Narrative Summary—Benefits

Benefits:

- No significant differences for either allV3 or HD-IIV3 vs SD-IIV for influenza-associated hospitalizations (Critical/Low certainty) or laboratory-confirmed Influenza (Important/Moderate certainty)
- Some evidence of improved immunogenicity for both allV3 and HD-IIV3 vs SD-IIV (surrogate outcome for laboratory-confirmed influenza [Important]):
 - For seroconversion to all three viral components for both allV₃ (Low certainty) and HD-IIV₃ vs SD-IIV (Moderate certainty).
 - For seroprotection to A(H₃N₂) and B for both allV₃ (Low certainty) and HD-IIV₃ vs SD-IIV (Moderate certainty).
 - Evidence indicating improved GMTs for both allV₃ and HD-IIV₃ vs SD-IIV.
- No data for medically-attended influenza (Critical)
- In the one study which included both allV₃ and HD-IIV₃, there was evidence of better likelihood of seroconversion for H₁N₁ (Important/Moderate certainty), but no significant differences for other viral components or other outcomes

Narrative Summary—Harms

Harms:

- No significant difference in risk of rejection for either allV3 or HD-IIV3 vs SD-IIV (Critical/Moderate certainty)
- No data for neuroinflammatory or other immune mediated adverse events (Critical)
- In the one study which included both aIIV3 and HD-IIV3, there was similarly no significant difference in rate of rejection

Limitations

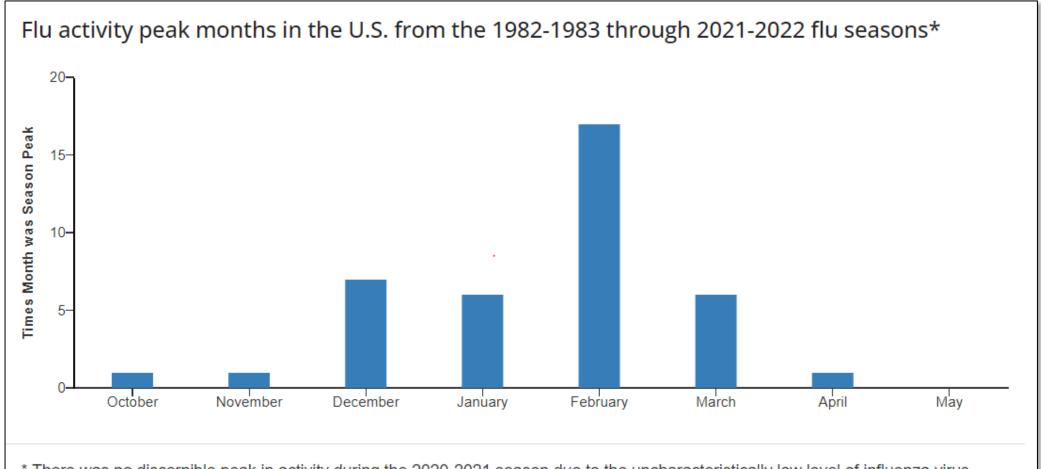
- Few studies; most are small (4 of 7 have <100 participants)</p>
- No direct evidence of relative benefit or either HD-IIV3 or aIIV3 vs SD-IIV
 Only indirect evidence (immunogenicity)
- Variability in timing of immunogenicity endpoints and how they are reported
- No information for critical outcomes of medically-attended influenza, neuroinflammatory conditions, or other immune-mediated events
 - Given study sizes, power probably not adequate
- No evaluations of RIV
- Only one pediatric study

New Language for Vaccination of SOT Recipients

• All persons should receive an age-appropriate influenza vaccine (i.e., one approved for their age), with the exception that solid organ transplant recipients aged 18 through 64 years on immunosuppressive medication regimens may receive either HD-IIV3 or allV3 as an acceptable option (without a preference over other age-appropriate IIV3s or RIV3).

Things That Have Not Changed for 2024-25

Influenza Season Timing—It Varies



^{*} There was no discernible peak in activity during the 2020-2021 season due to the uncharacteristically low level of influenza virus circulation that season.

Waning of Vaccine-Induced Immunity

- Observed in many studies.
 - Variability in rate and degree to which waning occurs across seasons, as well as among different age groups.
 - Most consistently observed among older adults.
 - Noted among children in a few studies.
 - > However, fewer studies provide results for children.
 - In some studies, more pronounced for H3N2 viruses than for H1N1 viruses.
- Variability of results, combined with unpredictability of flu season timing, prevents determination of an ideal time to vaccinate that will generalize across seasons.

Timing of Vaccination

- Vaccination during July and August is not recommended for most groups because of the possible waning of immunity over the course of the influenza season.
- For most persons who need only 1 dose of influenza vaccine for the season,
 vaccination should ideally be offered during September or October.
- However, vaccination should continue after October and throughout the influenza season as long as influenza viruses are circulating and unexpired vaccine is available.

<u>Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2024–25 Influenza Season | MMWR (cdc.gov)</u>

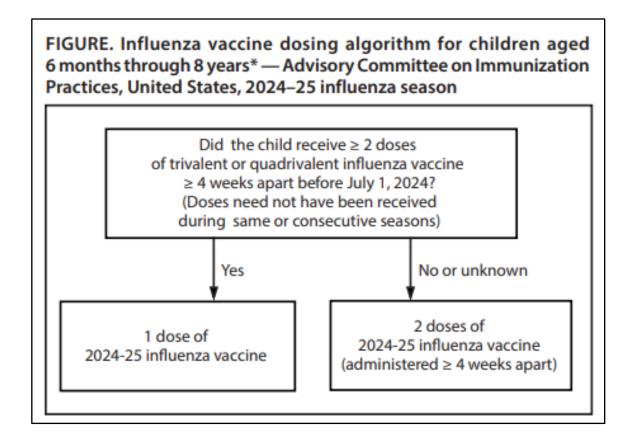
Timing of Vaccination

Considerations for specific groups:

- Most adults (particularly ages ≥65 years) and pregnant persons in 1st or 2nd trimester: July and August should be avoided unless there is concern that vaccination later in the season might not be possible.
- Children who require 2 doses: Should receive first dose as soon as possible (including during July and August, if vaccine is available) to allow the second dose (which must be administered ≥4 weeks later) to be received, ideally, by the end of October.
- **Children who require only 1 dose:** Vaccination during July and August can be considered for children of any age who need only 1 dose of influenza vaccine for the season.
 - Not as much evidence for waning as adults (though there are fewer studies including children).
 - Children in this group might visit healthcare providers in late summer.
- Pregnant persons in 3rd trimester during July/August: Vaccination during July and August can be considered (can reduce risk for influenza illness in infants during the first months after birth).

<u>Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on</u> Immunization Practices — United States, 2024–25 Influenza Season | MMWR (cdc.gov)

Children Aged 6 Months through 8 Years



- Children in this age group who have not had ≥2 doses of trivalent of quadrivalent vaccine before July 1, 2024 or whose vaccination history is not known need 2 doses ≥4 weeks apart for 2024-25.
- The two previous doses need not have been received in the same or consecutive seasons.
- 8-year-olds who need 2 doses should receive the second dose even if they turn age 9 years between dose 1 and dose 2.

<u>Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2024–25 Influenza Season | MMWR (cdc.gov)</u>

Dose Volumes for Injectable Influenza Vaccines for Ages 6 Through 35 Months

- All 5 unadjuvanted, standard-dose IIV3s are approved for ages ≥6 months.
- Still some differences in the dose volumes for 6- through 35-month-olds:

Fluarix: 0.5 mL for all ages ≥6 months

FluLaval: 0.5 mL for all ages ≥6 months

Flucelvax: 0.5 mL for all ages ≥6 months

Fluzone: 0.25 mL or 0.5 mL for 6 through 35 months; 0.5 mL for ≥3 years;

0.25 mL prefilled syringes no longer available

Afluria: 0.25 mL for 6 through 35 months; 0.5 mL for ≥3 years;

0.25 mL prefilled syringes no longer available

Review of Influenza Vaccines in Egg Allergy

- Among 31 studies describing administration of seasonal and monovalent H1N1pdm09 influenza vaccines to people with egg allergy via either full- or split-dose protocols, there were no instances of anaphylaxis.
- Less severe reactions not described as anaphylaxis but involving cardiovascular symptoms, respiratory symptoms, angioedema, or generalized urticaria, or which involved treatment with medications or outpatient/emergency department attention occurred with low frequency (≤1.5%).

Limitations:

- Observational data with no comparison groups.
- Observation time post-vaccination varied (30 min to 2 hours for most studies).
- Data specifically for persons with anaphylaxis to egg were more limited.
 - > Not all studies specified that persons with severe egg allergy were included.
 - > Where included, not all studies reported reactions specifically for this subgroup.

<u>Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on</u> Immunization Practices — United States, 2023–24 Influenza Season | MMWR (cdc.gov)

Egg Allergy Recommendations

Following review of literature concerning safety of flu vaccination in the setting of egg allergy,

- As previously, all people aged ≥6 months with egg allergy should receive influenza vaccine. Any influenza vaccine (egg based or non-egg based) that is otherwise appropriate for the recipient's age and health status can be used.
- New: Following a review of safety data, previous recommendations vaccination setting for those with severe egg allergy have been removed.
- Egg allergy in and of itself necessitates no additional safety measures for influenza vaccination beyond those recommended for any recipient of any vaccine, regardless of severity of previous reaction to egg.
 - All vaccines should be administered in settings in which personnel and equipment needed for rapid recognition and treatment of acute hypersensitivity reactions are available.

Influenza Vaccination of Persons Aged ≥65 Years

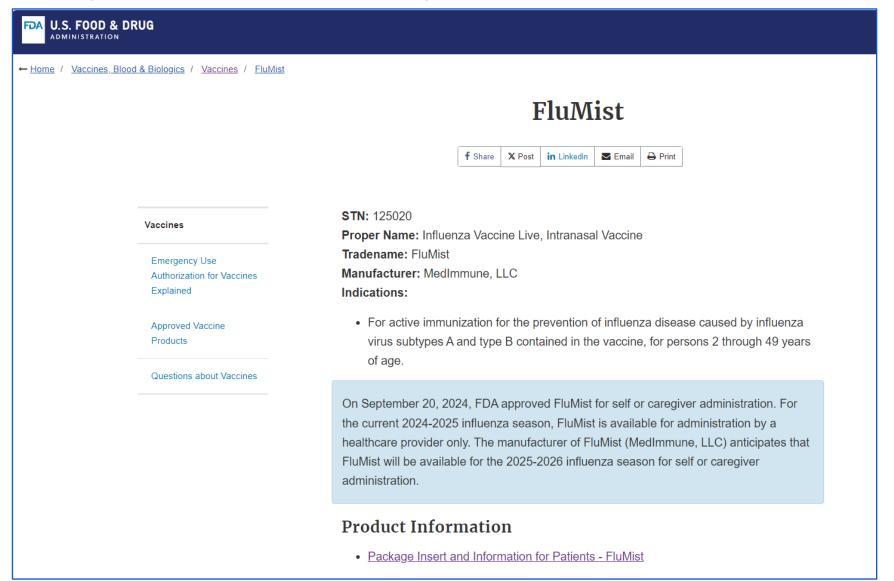
- Adults aged ≥65 years should preferentially receive any one of the following higher dose or adjuvanted influenza vaccines:
 - High-dose inactivated influenza vaccine (HD-IIV3),
 - Recombinant influenza vaccine (RIV3), or
 - Adjuvanted inactivated influenza vaccine (aIIV3).
- If none of these three vaccines is available at an opportunity for vaccine administration, then any other age-appropriate influenza vaccine should be used.

<u>Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2022–23 Influenza Season | MMWR (cdc.gov)</u>

Administration of Influenza and COVID-19 Vaccines at the Same Visit

- COVID-19 and Influenza vaccines may be given at the same visit
 - Especially important for patients with risk factors or if there might not be an opportunity to vaccinate the patient in the near future
- Patients may experience more side effects, like fever and fatigue, however, side effects are usually mild/moderate and last 1-2 days
- If the patient/caregiver prefers to receive these vaccines during different visits, there is no minimum wait period between these vaccines

FDA Approval of FluMist for Self/Caregiver Administration (Anticipated to be available for 2025-26)



FluMist | FDA

Thanks!

Lisa Grohskopf Lgrohskopf@cdc.gov

For more information, contact CDC 1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

