



ACIP Influenza Vaccination Updates for the 2020–21 Season

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Current Issues in Immunization Webinar
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Abbreviations

IIV	Inactivated Influenza Vaccine
ccIIV4	Cell-culture-based inactivated influenza vaccine
aIIV3, aIIV4	Adjuvanted inactivated influenza vaccine
HD-IIV4	High-dose inactivated influenza vaccine
RIV4	Recombinant influenza vaccine
LAIV4	Live, attenuated influenza vaccine

Numbers indicate the number of influenza virus antigens:

3 for trivalent: an A(H1N1), an A(H3N2), and one B (from one lineage)

4 for quadrivalent: an A(H1N1), an A(H3N2), and two Bs (one from each lineage)

2020–21 ACIP Influenza Statement

Core recommendation (unchanged):

- Annual influenza vaccination is recommended for all persons aged 6 months and older who do not have contraindications.

2020–21 ACIP Influenza Statement

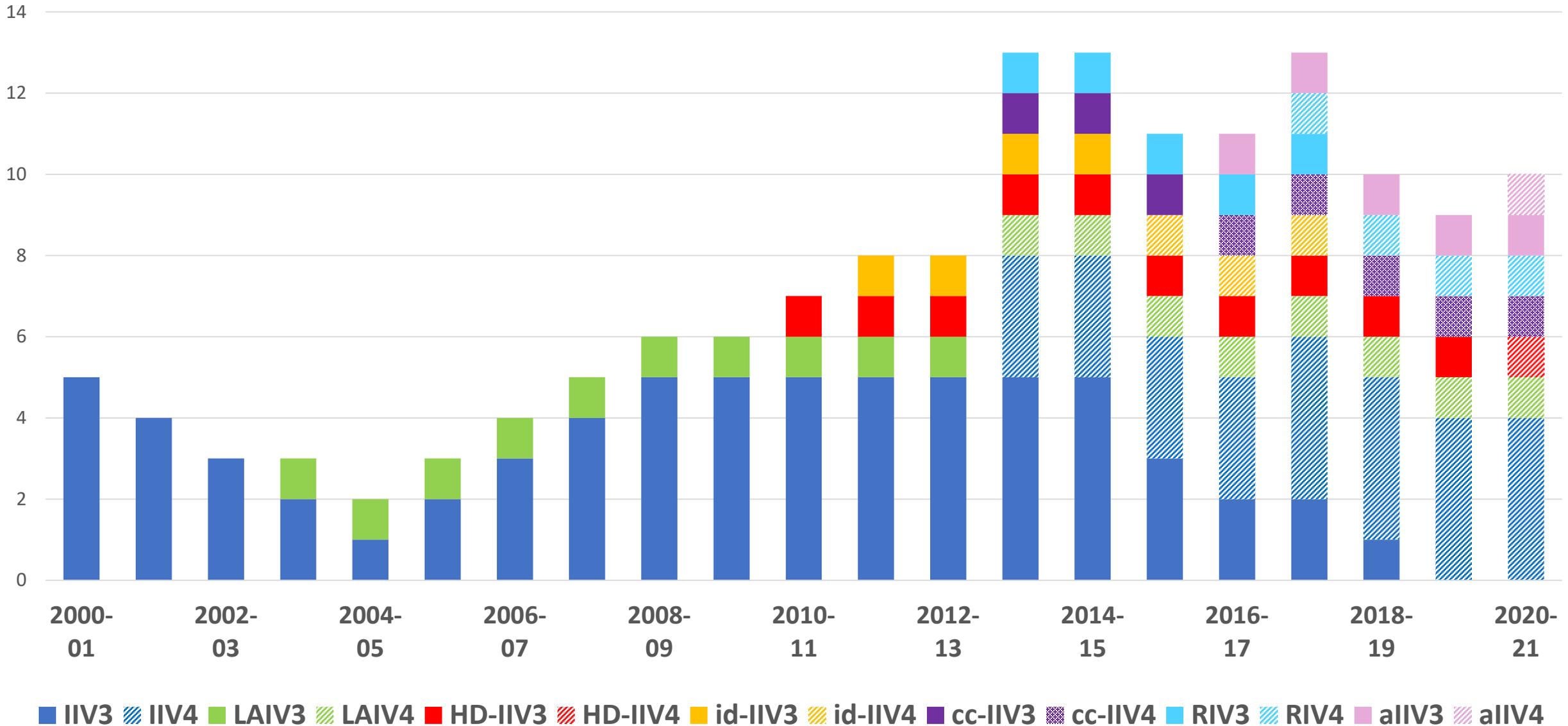
- Primary updates:
 - U.S. influenza vaccine viral composition
 - Addition of two recently licensed vaccines
 - Fluzone High-Dose Quadrivalent
 - Fluad Quadrivalent
 - Live attenuated influenza vaccine and influenza antivirals
 - Discussion and Table of contraindications/precautions
 - Recommendations for persons with severe egg allergy

2020–21 Influenza Vaccine Composition

- ***Egg-based IIVs and LAIV4:***
 - An A/Guangdong-Maonan/SWL1536/2019 (H1N1)pdm09-***like*** virus;
 - An A/Hong Kong/2671/2019 (H3N2)-***like*** virus;
 - A B/Washington/02/2019 (Victoria lineage)-***like*** virus; and
 - (IIV4s and LAIV4) a B/Phuket/3073/2013 (Yamagata lineage)-***like*** virus.
- ***Cell-culture-based IIV4 and RIV4:***
 - An A/Hawaii/70/2019 (H1N1)pdm09-***like*** virus;
 - An A/Hong Kong/45/2019 (H3N2)-***like*** virus;
 - A B/Washington/02/2019 (Victoria lineage)-***like*** virus; and
 - A B/Phuket/3073/2013 (Yamagata lineage)-***like*** virus.

U.S. Seasonal Influenza Vaccines Since 2000-01

Number of unique products available by season



U.S.-Licensed Influenza Vaccines Expected for 2020–21

Vaccine type	6 through 23 mos	2 through 3 yrs	4 through 17 yrs	18 through 49 yrs	50 through 64 yrs	≥65 yrs
IIV4s (egg)	Afluria Quadrivalent Fluarix Quadrivalent FluLaval Quadrivalent Fluzone Quadrivalent					
cIIV4 (cell)			Flucelvax Quadrivalent			
RIV4 (recombinant)				Flublok Quadrivalent		
Adjuvanted aIIV3 (egg)						Fluad
Adjuvanted aIIV4 (egg)						Fluad Quadrivalent NEW
High-dose HD-IIV4 (egg)						Fluzone High-Dose Quadrivalent NEW
LAIV4 (egg)		FluMist Quadrivalent				

- No influenza vaccines are licensed for children under 6 months of age.
- For children 6 through 35 months of age, volume per dose is different than for older persons—refer to PI for dose volumes.
- For many people, there is more than one appropriate vaccine.
- ACIP expresses no preference for any one influenza vaccine over another where more than one is appropriate.
- All are intramuscular except for LAIV4 (intranasal).
- LAIV4 should not be used for some groups, including pregnant women and certain other populations (see ACIP statement).

New Influenza Vaccine Licensures

November 2019:

- Fluzone High-Dose Quadrivalent (Sanofi Pasteur)
 - Licensed for ≥ 65 years
 - 60 mcg hemagglutinin per vaccine virus in a 0.7 mL dose (240 mcg total)
 - Will replace previous trivalent Fluzone High-Dose for 2020–21

February 2020:

- Fluad Quadrivalent (Seqirus)
 - Licensed for ≥ 65 years
 - Contains MF59 adjuvant
 - Will be available in addition to previous trivalent Fluad

HD-IIV3, aIIV3, RIV4 for Older Adults

Studies examining laboratory-confirmed influenza outcomes

Study Year Published Ages	Season(s)	Comparison	Design	N	Relative VE
DiazGranados 2014 ≥65 years	2 2011-12, 2012-13	HD-IIV3 vs SD-IIV3	RCT	~32,000	24.2% (95% CI = 9.7–36.5)
Dunkle 2017 ≥50 years	1 2014-15	RIV4 vs SD-IIV4	RCT	~8,600	30% (95% CI = 10–47)
Van Buynder 2013 ≥65 years	1 2011-12	aIIV3 vs SD-IIV3	observational	227	63% (95% CI = 4–86)

DiazGranados CA et al. NEJM 2014;371(7):635-645

Dunkle LM et al. NEJM 2017;376(25):2427-2436

VanBuynder PG et al. Vaccine 2013;31(51):6122-6128

Influenza Antivirals and LAIV4

- Previous guidance--antivirals from 48 hours before to 2 weeks after administration of LAIV4 may interfere with vaccine
- Newer antivirals peramivir and baloxavir have longer half-lives than oseltamivir and zanamivir.
- Insufficient data available on use of LAIV4 in setting of antiviral use
- Based on half-lives and assuming normal clearance, reasonable to assume interference possible if antivirals are administered within these intervals:

Antiviral	Interval
Oseltamivir and Zanamivir	48 hours before to 2 weeks after LAIV4
Peramivir	5 days before to 2 weeks after LAIV4
Baloxavir	17 days before to 2 weeks after LAIV4

LAIV4 Use in Settings of Asplenia, Cochlear Implant, and Active Cranial Cerebrospinal Fluid (CSF) Leak

- Anatomic and functional asplenia, cochlear implant, and CSF leak discussed last season in section on immunocompromised hosts
- Insufficient data for use in these populations
- Alternative vaccines are available (IIVs, RIV4).
- Added to list of contraindications for LAIV4 in Table 2
 - For cochlear implant, footnote suggests consultation with expert regarding risk for persistent CSF leak, if an injectable vaccine cannot be used.

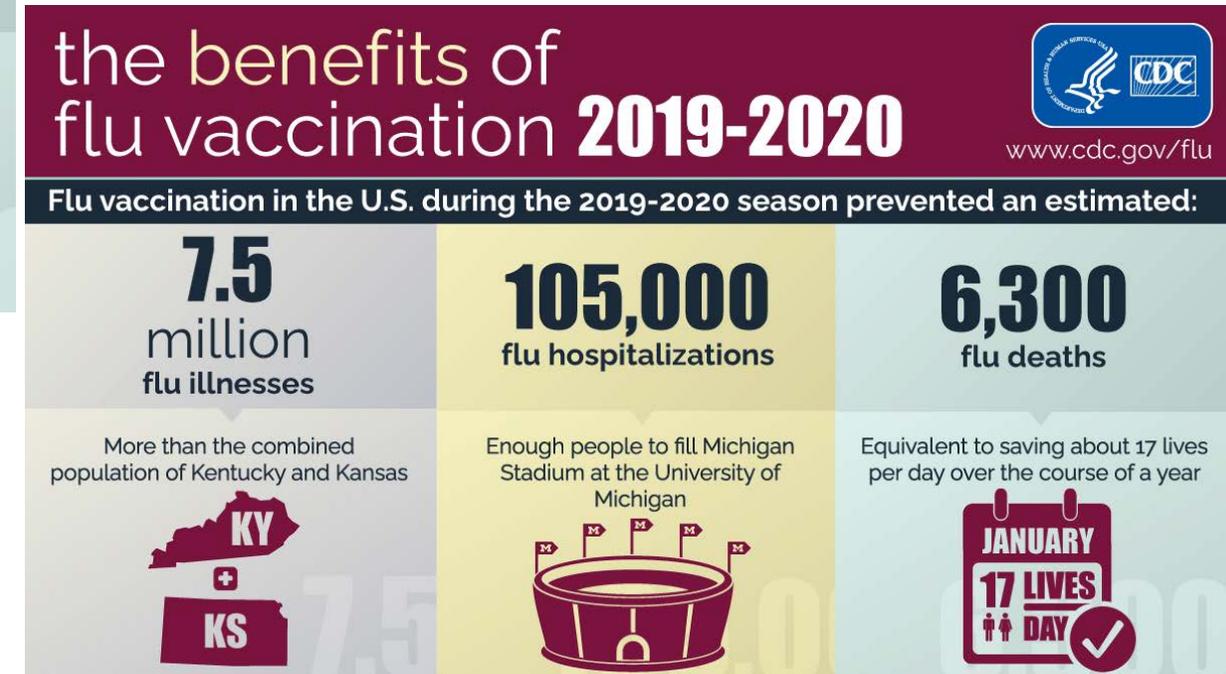
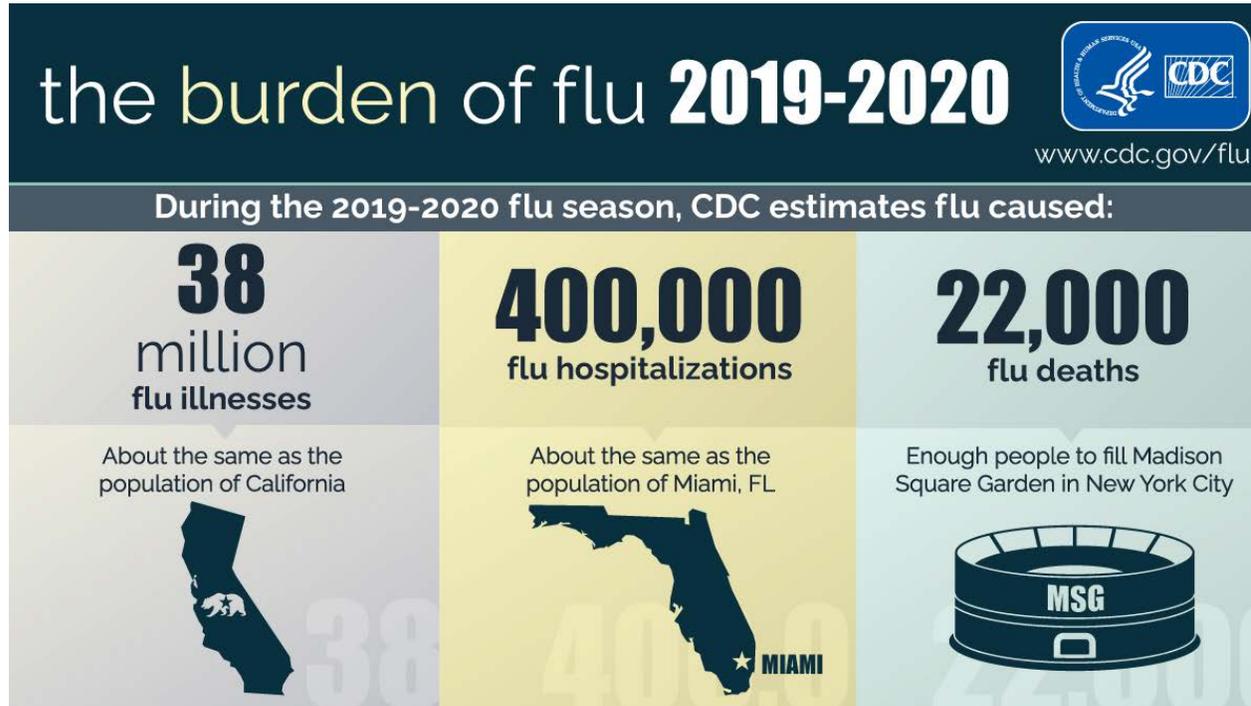
Vaccination of Persons with Egg Allergy

- Language concerning persons with a history of severe allergic reaction to egg (having had any symptom other than hives after egg ingestion) updated for two egg-free vaccines (cclIV4 and RIV4).
- Those with egg allergy of any severity can receive any influenza vaccine otherwise appropriate for age and health status.
- For those with severe egg allergy (any symptom other than hives), if a vaccine ***other than cclIV4 or RIV4*** is selected, it should be administered in an inpatient or outpatient medical setting, supervised by a health care provider who is able to recognize and manage severe allergic reactions.
- However, severe allergic reactions to vaccines can occur at any time, even without history of previous reaction. All vaccine providers should be familiar with the office emergency plan and be certified in cardiopulmonary resuscitation

Influenza Vaccines for Children 6 through 35 mos

- Four IIV4s licensed for this age group
- Dose volumes for this age group differ:
 - *FluLaval Quadrivalent* (IIV4, GSK) 0.5 mL
 - *Fluarix Quadrivalent* (IIV4, GSK) 0.5 mL
 - *Afluria Quadrivalent* (IIV4, Seqirus) 0.25 mL
 - *Fluzone Quadrivalent* (IIV4, Sanofi Pasteur) 0.25 mL **or** 0.5 mL
- Fluzone Quadrivalent 0.25 mL prefilled syringes will not be available for 2020–21

Estimated Benefits of Influenza Vaccination, 2019-20



Considerations for Vaccination of Persons with Suspected or Confirmed COVID-19

- No known risk but limited clinical experience or data
- Those on isolation (at home or otherwise outside of a medical setting) for suspected or confirmed covid-19, or who are on quarantine after an exposure, should **not** go to a vaccination setting for routine vaccinations (including influenza vaccination).
- For those who are **already in** a healthcare or congregate setting, considerations include:
 - Moderate or severe acute illness (+/- fever) is a precaution for all vaccines
 - Further deferral can be considered until the patient is no longer acutely ill, if there is concern that post-vaccination symptoms might cause diagnostic confusion
 - For **asymptomatic**, or those quarantined after an exposure, can vaccinate, however consider deferring vaccination until criteria to end isolation or quarantine are met, again to avoid diagnostic confusion
- Other considerations: presence of risk factors for severe influenza, whether patient can return for vaccination, extent of local influenza circulation
- Check <https://www.cdc.gov/vaccines/pandemic-guidance/index.html> for updated information

Southern Hemisphere Influenza Activity

- Southern Hemisphere influenza activity has been reported at much lower rates than is typical.
- Fewer countries are reporting data, and fewer viruses are being detected in general.
- Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B/Victoria viruses have co-circulated.
- Social distancing and other preventive measures to reduce spread of SARS-CoV-2 may also have helped reduce spread of influenza viruses.
- The COVID-19 pandemic also has influenced health-seeking behaviors and testing priorities and capacities, making interpretation challenging.

Upcoming 2020–21 U.S. Influenza Season

- Unclear what impact ongoing COVID-19 pandemic will have on the upcoming influenza season in the U.S.
 - There may be less influenza than usual because of social distancing and other measures to reduce COVID-19.
 - Influenza viruses and SARS-CoV-2 may co-circulate.
- Coincident circulation of SARS-CoV-2 and influenza could place great burden on health care systems and strain resources
- Vaccination is important tool this season in reducing potential overall burden of acute respiratory illness attributable to influenza

Thank You!

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.

