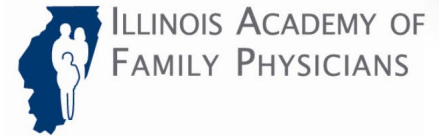


Influenza Vaccination Recommendations for the 2021-2022 Season

CME NEWSLETTER FOR SOUTHERN ILLINOIS PHYSICIANS FROM THE



October 2021

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The AAFP Vaccine Science Fellowship is supported by an unrestricted grant from Merck Sharp & Dohme Corp.

Learning Objectives:

- Summarize the ACIP recommendation updates for the 2021-2022 influenza season
- State reasons for the importance of influenza vaccinations during the COVID-19 pandemic
- Describe background information on the process involved in deciding on influenza virus vaccine composition

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Speaker & Faculty Disclosures

Anne Schneider, DO, disclosed that she has an AAFP Vaccine Science fellowship. The AAFP Vaccine Science Fellowship is supported by an unrestricted grant from Merck Sharp & Dohme Corp. Sharon Smaga, MD, (Reviewer) & IAFP staff members Kate Valentine and Sara Ortega disclosed no relevant financial relationship or interest with a proprietary entity producing, marketing, reselling, or distributing health care goods or services.

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The Centers for Disease Control and Prevention has released its recommendations for influenza vaccination for the 2021-2022 season. The CDC's Advisory Committee on Immunization Practices (ACIP) published their guidance in the August 27th edition of the CDC's Morbidity and Mortality Weekly Review (MMWR). Their findings updated the 2020-2021 recommendations regarding the use of influenza vaccines.

This newsletter will summarize the ACIP recommendation updates for the 2021-2022 influenza season, including background information on the process involved in deciding on influenza virus vaccine composition. It will highlight reasons for the importance of influenza vaccinations during the COVID-19 pandemic. Some helpful hints for physicians when addressing and encouraging influenza vaccination to patients are included.

The ACIP released their annual publication entitled, "Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the ACIP, United States, 2021-2022 Influenza Season". The committee continues to recommend annual influenza vaccination for those aged ≥ 6 months who do not have contraindications to vaccination. Any licensed and age-appropriate vaccine should be used, and ACIP makes no preference when more than one influenza vaccine type is available ⁽¹⁾.

The report's main updates include: the types and compositions of influenza vaccines available for the 2021-2022 season; changes in the approved age for one of the influenza vaccines offered this season; guidance on administering influenza vaccine during the COVID-19 pandemic; recommendations on timing of administration of influenza vaccine; and an update on contraindications and precautions to the influenza vaccine ⁽¹⁾.

Adolescent flu vaccination rate for all of Illinois was 7.8% and in Southern IL was 5.8%.

(IDPH County adolescent coverage level report as of November 24, 2021. Data from IL VFC and CHIP children plus any private doses that providers)

All influenza vaccines offered during the 2021-2022 season will be quadrivalent ⁽¹⁾. The World Health Organization (WHO) makes recommendations for the composition of Northern

Hemisphere influenza vaccines each year. These recommendations are made based off surveillance data gathered through the Global Influenza Surveillance and Response System (GISRS) which consists of various Influenza Centers, WHO member states, and WHO reference labs ⁽²⁾. GISRS labs gather information on relatedness of viruses and identify genetic changes in circulating influenza viruses that might affect protection conferred by a vaccine. They look at modelling studies that forecast virus fitness, which demonstrates the likelihood of any emerging groups of viruses becoming more prevalent in the upcoming months. GISRS labs test for the development of antiviral resistance in influenza virus ⁽²⁾. The Global Influenza Vaccine Effectiveness (GIVE) Collaboration provides information on influenza vaccine effectiveness. GISRS also considers the potential availability of vaccines, particularly egg-based vaccines due to the need for those vaccines to be able to replicate well in eggs. And they look at how well antibodies from vaccinated people react with recently circulating influenza viruses. All this information is taken into consideration by WHO when determining influenza virus that will be advised to be included in the influenza vaccines for the upcoming season ⁽²⁾.

In February 2021 WHO met and released their recommendations for the composition of influenza vaccines for the 2021-2022 season. The Food and Drug Administration (FDA) then met to review the WHO recommendations and made a final decision on the composition of upcoming licensed influenza virus vaccines available in the United States.

For the 2021-2022 influenza season, each quadrivalent licensed influenza virus vaccine will contain hemagglutinin from the following FDA recommended influenza virus strains, which is congruent with WHO recommendations ⁽³⁾:

For egg-based influenza vaccines:

- an A/Victoria/2570/2019 (H1N1) pdm09-like virus.
- an A/Cambodia/e0826360/2020 (H3N2)-like virus.
- a B/Washington/02/2019- like virus (B/Victoria lineage).
- a B/Phuket/3073/2013-like virus (B/Yamagata lineage).

For cell- or recombinant based influenza vaccines:

- an A/Wisconsin/588/2019 (H1N1) pdm09-like virus.
- an A/Cambodia/e0826360/2020 (H3N2)-like virus.
- a B/Washington/02/2019- like virus (B/Victoria lineage).
- a B/Phuket/3073/2013-like virus (B/Yamagata lineage) ^(3,4).

The following tables, taken directly from the CDC's "Summary: Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP)- United States, 2021-2022" include the influenza vaccines that will be available for the 2021-2022 season and age indications ⁽⁵⁾:

Table 1: Inactivated Influenza Vaccines (IIV4s) and Recombinant Influenza Vaccine (RIV4)

Trade name <i>Manufacturer</i>	Available presentations	Approved age indications	Volume per dose by age group
Quadrivalent IIVs (IIV4s)–Standard-dose–Egg-based (15 µg HA per virus component in 0.5 mL; 7.5 µg HA per virus component in 0.25 mL)			
Afluria Quadrivalent <i>Seqirus</i>	0.25 mL prefilled syringe	6 through 35 mos	6 through 35 mos–0.25 mL ≥3 yrs–0.5 mL
	0.5 mL prefilled syringe	≥3 yrs	
	5.0 mL multi-dose vial*	≥6 mos (needle/syringe) 18 through 64 yrs (jet injector)	
Fluarix Quadrivalent <i>GlaxoSmithKline</i>	0.5 mL prefilled syringe	≥6 mos	≥6 mos–0.5 mL
FluLaval Quadrivalent <i>GlaxoSmithKline</i>	0.5 mL prefilled syringe	≥6 mos	≥6 mos–0.5 mL
Fluzone Quadrivalent <i>Sanofi Pasteur</i>	0.5 mL prefilled syringe	≥6 mos	6 through 35 mos–0.25 mL or 0.5 mL ≥3 yrs–0.5 mL
	0.5 mL single-dose vial	≥6 mos	
	5.0 mL multi-dose vial*	≥6 mos	
Quadrivalent IIV (ccIIV4)–Standard-dose–Cell culture-based (15 µg HA per virus component in 0.5 mL)			
Flucelvax Quadrivalent <i>Seqirus</i>	0.5 mL prefilled syringe	≥2 yrs	≥2 yrs–0.5 mL
	5.0 mL multi-dose vial*	≥2 yrs	
Quadrivalent IIV (HD-IIV4)–High dose–Egg-based (60 µg HA per virus component in 0.7 mL)			
Fluzone High-Dose Quadrivalent <i>Sanofi Pasteur</i>	0.7 mL prefilled syringe	≥65 yrs	≥65 yrs–0.7 mL
Adjuvanted quadrivalent IIV4 (aIIV4)–Standard-dose with MF59 adjuvant – Egg-based (15 µg HA per virus component in 0.5 mL)			
Fluad Quadrivalent <i>Seqirus</i>	0.5 mL prefilled syringe	≥65 yrs	≥65 yrs–0.5 mL
Quadrivalent RIV (RIV4) - Recombinant HA (45 µg HA per virus component in 0.5 mL)			
Flublok Quadrivalent <i>Sanofi Pasteur</i>	0.5 mL prefilled syringe	≥18 yrs	≥18 yrs–0.5 mL

*Contains thimerosal as a preservative agent.

Table 2: Live Attenuated Influenza Vaccine (LAIV4)

Trade Name <i>Manufacturer</i>	Available presentations	Approved age indication	Volume per dose
Quadrivalent LAIV (LAIV4) - Egg-based (contains $10^{6.5-7.5}$ fluorescent focus units/0.2 mL)			
FluMist Quadrivalent <i>AstraZeneca</i>	0.2 mL prefilled single use intranasal sprayer	2 through 49 yrs	0.1 mL each nostril (0.2 mLtotal)

A labeling change for one of the influenza vaccines that will be available for the 2021-2022 influenza season was included in the ACIP report. In March 2021, the FDA approved a label change for Flucelvax Quadrivalent influenza vaccine. Flucelvax was initially approved for use in 2016 for ages ≥ 4 years. It is now approved for use in ages ≥ 2 years ⁽¹⁾. This FDA approved age indication change was deemed appropriate based off a randomized clinical efficacy trial that involved 4514 children age ≥ 2 through < 18 years over three influenza seasons. This study demonstrated vaccine efficacy of 60.8% for all viral strains. Adverse events were similar amongst the influenza vaccine and control group ⁽¹⁾.

The COVID-19 pandemic is expected to continue during the 2021-2022 influenza season.

As a result, ACIP updated their influenza vaccination recommendations to include guidance on administration of influenza vaccination during the pandemic.

Specifically, the CDC guidelines state that the COVID vaccine may be given at the same time as any other vaccination, including the influenza vaccine (6). There is no data available on this topic yet, and the ACIP recommendations note there may be a potential for increased reactogenicity when influenza and COVID vaccines are given at the same time. ACIP recommends administering each in different limbs, if possible, when giving quadrivalent adjuvanted inactivated influenza vaccine (aIIV4) or quadrivalent high dose inactivated influenza vaccine (HD-IIV4) because these tend to cause more frequent local reactions than other influenza vaccine types ⁽¹⁾. ACIP also encourages physicians to continue to consult the CDC web site as more knowledge is gained on this topic.

In most situations, ACIP recommends persons with current COVID-19 illness defer influenza vaccination until they are no longer contagious ⁽¹⁾. ACIP makes this decision taking into consideration risk for exposing virus

The average completion rate of the childhood series for all Illinois counties is 68.2%, whereas the 30 counties in Southern IL rate is 66.4%.

(IDPH county childhood coverage level report as of November 24, 2021. Data from IL VFC and CHIP children plus any private doses that providers)

“ACIP recommends persons with current COVID-19 illness defer influenza vaccination until they are no longer contagious ⁽¹⁾”

that causes COVID-19 if bringing a person in to be vaccinated. They recommend considering the likelihood the person would be able to receive the influenza vaccine in the future, the severity of the illness, and the concern for post-vaccination symptoms complicating the clinical picture ⁽¹⁾. As with other vaccines, ACIP recommends delaying influenza vaccination for those who are actively experiencing moderate to severe symptoms ⁽⁷⁾.

In their report, the ACIP discusses timing of administration of influenza vaccines. While ACIP cites various reasons why an optimal time to vaccinate has not been established, they do recommend, in general, vaccination by the end of October ⁽¹⁾. Observational studies have demonstrated vaccine-induced immunity wanes over influenza season, particularly in older adults. For example, the Hospitalized Adult Influenza Vaccine Effectiveness Network (HAIVEN) found that vaccine effectiveness dropped by 8%-9% per month for all adults and 10%-11% per month for persons aged ≥65 years during the 2015-2016 through 2018-2019 influenza seasons ⁽¹⁾. This study involved 3016 participants and demonstrated waning vaccine effectiveness across influenza A (H3N2), influenza A (H1N1) pdm09, and influenza B/Yamagata. Specifically, decreased vaccine effectiveness in preventing influenza-associated hospitalizations was demonstrated ⁽⁸⁾.

As many as
45 million
Americans get
sick with the flu
each year.

GetMyFluShot.org



For non-pregnant adults, influenza vaccination should not occur during July and August to limit the potential for lack of immunity towards the end of the influenza season, unless later vaccination might not be able to occur ⁽¹⁾.

Decrease in vaccine-induced immunity has not been clearly demonstrated in children. Therefore, the ACIP recommends children, ages 6 months through 8 years, who require two doses of vaccine- those who have not previously received ≥ 2 doses of influenza vaccine, or whose vaccination history is unknown-should receive their first dose as soon as vaccine is available ⁽¹⁾. This is to ensure the second dose, required ≥ 4 weeks later, be administered by the end of October. For children who do not require 2 doses of influenza vaccine, ACIP states vaccination may still occur as soon as vaccine is available.



For pregnant women in their third trimester, vaccination may be considered as soon as vaccine becomes available to reduce influenza illness in their infants while they are too young to receive the vaccine themselves ⁽¹⁾.

The ACIP report does discuss the importance of optimizing influenza vaccination by offering vaccination at any time, ideally prior to the start of the season, but throughout influenza season. The report notes providers should try to avoid missed opportunities by offering vaccination during routine health care visits as well as hospitalizations.

The report includes information on contraindications and precautions to administration of the influenza vaccine. There have been changes made in the recommendations for use of quadrivalent cell culture-based inactivated influenza vaccine (ccIIV4) and quadrivalent recombinant influenza vaccine (RIV4). For persons who have had a severe allergic reaction to an influenza vaccine that is egg-based- IIV, live attenuated influenza vaccine (LAIV), or RIV, whether trivalent or quadrivalent, there is now a precaution for use of ccIIV4 in these persons ⁽¹⁾. There is now a precaution listed for use of RIV4, for anyone with previous severe allergic reaction to an egg-based- IIV, ccIIV, or LAIV, trivalent or quadrivalent vaccine. ACIP recommends weighing the risks and benefits, and when the situation arises where use of ccIIV4 or RIV4 in these persons is recommended, administration of the vaccine should occur in a setting where severe allergic reactions can be recognized and managed effectively ⁽¹⁾.

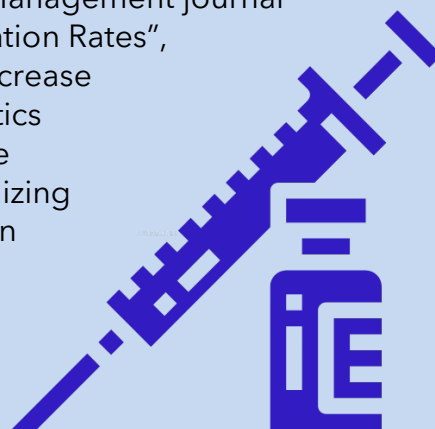
Administration of ccIIV4 is contraindicated for person with history of severe allergic reaction to any ccIIV of any valency or any component of ccIIV4. The same is true for RIV4 for persons with history of severe allergic reaction to any RIV of any valency or any component of RIV4 ⁽¹⁾.

Discussion

During the 2020-2021 influenza season in the United States, the CDC reports that out of 818,939 respiratory specimens tested, there were 1675 respiratory specimens that were positive for influenza virus ⁽⁹⁾. The 2020-2021 influenza season influenza vaccination rate was similar to the previous season at 50%-55% of adults. 4.1% fewer children received influenza vaccines during the 2020-2021 influenza season compared to the 2019-2020 season ⁽⁹⁾.

There is expectation that the incidence of influenza will increase in the 2021-2022 influenza season compared to the 2020-2021 season. Schools are back to in-person learning, fewer people are working from home, and while there are still some states with mask mandates, social distancing is, for the most part, no longer being followed. Focusing on influenza vaccination to mitigate the upcoming influenza season's burden is of the utmost importance, arguably more so during the COVID-19 pandemic. It is vital to reduce hospitalizations due to influenza to limit already stressed hospital systems and health care workers. Reducing influenza cases by increasing influenza vaccination rates will reduce school and work disruption due to needing to test for COVID-19 if symptoms are present.

Authors of an article published in the AAFP's Family Practice Management journal entitled, "Back to Basics: Five Steps to Better Influenza Vaccination Rates", discuss strategies they utilized that allowed their practice to increase their influenza vaccination rates from 66% to 82%. The key tactics include: naming an employee in the office an influenza vaccine champion; using standing orders for influenza vaccines; optimizing documentation for example, when an influenza vaccine is given elsewhere or a patient declines the vaccine, providing regular reminders to patients and providers regarding influenza vaccination; and giving ongoing evaluation and feedback on the practice's performance ⁽¹⁰⁾.



"How to Talk to Reluctant Patients About the Flu Shot" also published in FPM, recommends physicians use the "Ask-Tell-Ask" framework, a technique that is used in motivational interviewing. In the case of vaccines, if the patient initially declines influenza vaccination, the physician "asks" the patient to explain their reasoning. The physician then "asks" the patient if they can provide them with more information regarding the vaccine. In an open and respectful way, the physician then "tells" by responding to the patient's reasons. Finally, the physician "asks" if the patient would then like to receive the influenza vaccine ⁽¹¹⁾. Future newsletters will dive further into techniques to increase vaccine confidence as well as discuss cultural information and misinformation regarding vaccines.

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Citations

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