



2021-2022 Influenza Vaccination Recommendations and Guidance on Coadministration with COVID-19 Vaccines

Clinician Outreach and Communication Activity (COCA) Webinar

Thursday, September 9, 2021

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- Instructions on how to earn continuing education will be provided at the end of the call.

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Objectives

At the conclusion of today's session, the participant will be able to accomplish the following—

1. Outline updates on the Advisory Committee on Immunization Practices recommendations for 2021-22 influenza vaccination season.
2. Discuss general influenza vaccination guidance during the COVID-19 pandemic.
3. Describe clinical considerations and best practices for coadministration of influenza vaccines and COVID-19 vaccines.

To Ask a Question

- Using the Zoom Webinar System
 - Click on the “Q&A” button
 - Type your question in the “Q&A” box
 - Submit your question
- If you are a patient, please refer your question to your healthcare provider.
- If you are a member of the media, please direct your questions to CDC Media Relations at 404-639-3286 or email media@cdc.gov.

Today's Presenters

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ACIP Influenza Vaccination Updates for the 2021–22 Season

Lisa Grohskopf, MD, MPH

Influenza Division, NCIRD, CDC

Clinician Outreach and Communication Activity (COCA) Call

September 9, 2021

General Vaccines Types and Abbreviations

IIVs	Inactivated Influenza Vaccine—contain inactivated viruses, and their HAs
cclIV	Cell culture based Inactivated Influenza Vaccine
aIIV	Adjuvanted Inactivated Influenza Vaccine
HD-IIV	High-Dose Inactivated Influenza Vaccine
RIV	Recombinant Influenza Vaccine—contain recombinant HA
LAIV	Live Attenuated Influenza Vaccine—contains live viruses

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)

2021–22 ACIP Influenza Statement

Core recommendation (unchanged):

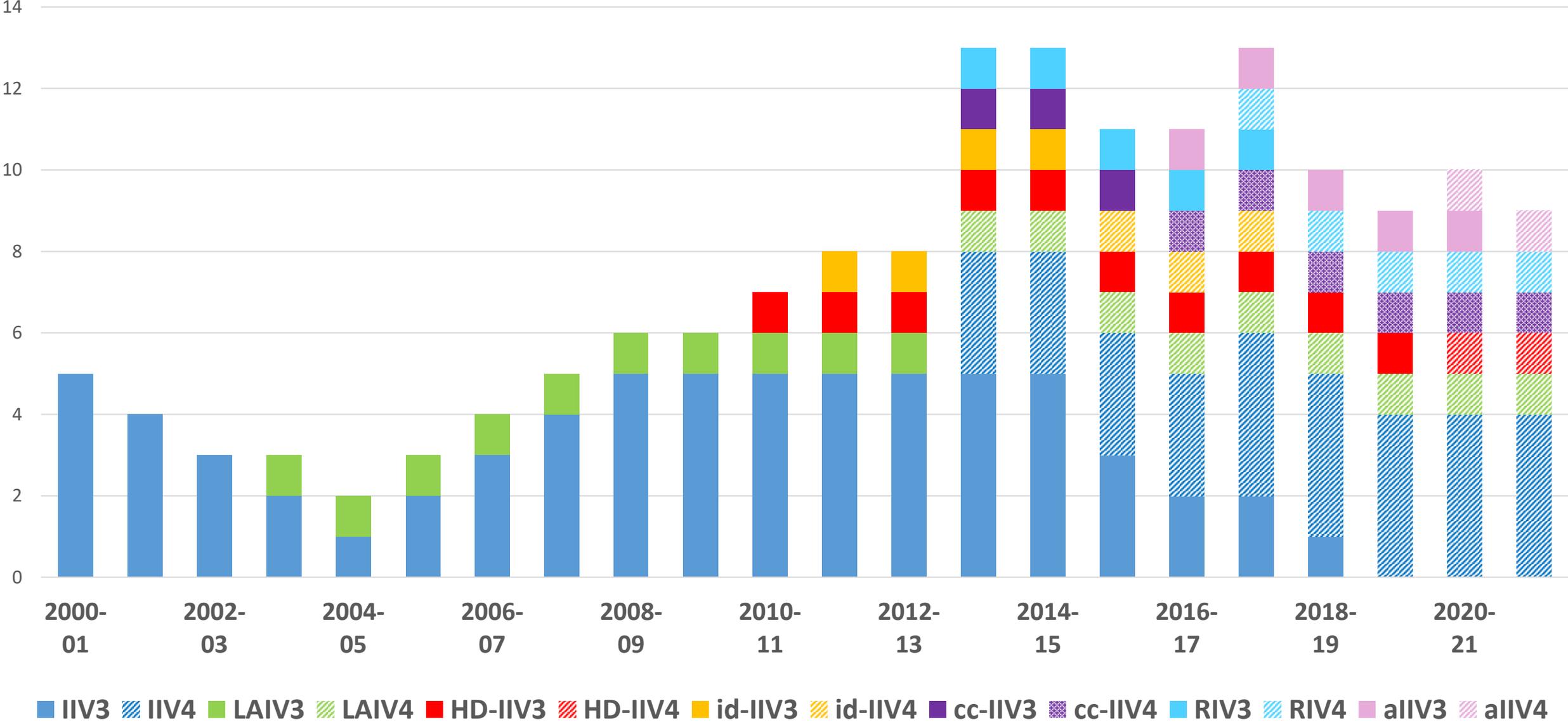
- Annual influenza vaccination is recommended for all persons aged 6 months and older who do not have contraindications.

2021–22 ACIP Influenza Statement

- Published August 27, 2021.
- Updates on the following topics:
 - Influenza vaccines expected to be available for the 2021-22 season.
 - U.S. influenza vaccine viral composition for the 2021-22 season.
 - Change in FDA-approved age indication for Flucelvax Quadrivalent from ≥ 4 years to ≥ 2 years.
 - Timing of Vaccination language.
 - Co-administration of influenza and COVID-19 vaccines.
 - Contraindications and precautions concerning persons with previous severe allergic reaction to influenza vaccines.

U.S. Seasonal Influenza Vaccines Since 2000-2001

Number of unique products available by season



Influenza Vaccines Expected to be Available by Age Indication, United States, 2021–22 Influenza Season

Vaccine type		0 through 6 months	6 through 23 months	2 through 17 years	18 through 49 years	50 through 64 years	≥65 years	
IIV4s	Standard-dose, unadjuvanted inactivated (IIV4)	Not approved for age group	Afluria Quadrivalent Fluarix Quadrivalent FluLaval Quadrivalent Fluzone Quadrivalent					
	Cell culture-based inactivated (cIIV4)	Not approved for age group			Flucelvax Quadrivalent			
	Adjuvanted inactivated (aIIV4)	Not approved for age group						Fluad Quadrivalent
	High-dose inactivated (HD-IIV4)	Not approved for age group						Fluzone High-Dose Quadrivalent
RIV4	Recombinant (RIV4)	Not approved for age group				Flublok Quadrivalent		
LAIV4	Live attenuated (LAIV4)	Not approved for age group			FluMist Quadrivalent	Not approved for age group		

IIV4=quadrivalent inactivated influenza vaccine **RIV4**=quadrivalent recombinant influenza vaccine **LAIV4**=quadrivalent live attenuated influenza vaccine



Not approved for age group



Egg-based



Not egg-based

All vaccines expected for 2021-22 are quadrivalent (i.e., contain hemagglutinin derived from four viruses: one influenza A(H1N1), one influenza A(H3N2), one influenza B/Victoria and one influenza B/Yamagata).

Influenza Vaccine Types—2021-22 U.S. Season

Inactivated Influenza Vaccines (IIV4s)

- Contain inactivated virus (split or subunit)
- Most are egg-based (one is cell culture-based—ccIIV4)
- Most contain 15 mcg of hemagglutinin per virus (one contains 60 mcg per virus—HD-IIV4)
- Most are unadjuvanted (one contains the adjuvant MF59—aIIV4)

Intramuscular Vaccines

Recombinant influenza vaccine (RIV4)

- No viruses used in production
- 45 mcg HA per virus
- Contains HA made through recombinant methods

Live attenuated influenza vaccine (LAIV4)

- Egg-based
- Contains live, attenuated influenza viruses which must replicate in the nasopharynx in order to promote an immune response
 - Attenuated—to not cause clinical illness
 - Cold adapted—grow best at 25°C
 - Temperature sensitive—growth restricted at 37°-39°C
- For ages 2 through 49 years

Intranasal Vaccine

2021–22 Influenza Vaccine Composition

- ***Egg-based IIV4s and LAIV4:***

- An A/Victoria/2570/2019 (H1N1)pdm09-like virus; ^{UPDATED}
- An A/Cambodia/e0826360/2020 (H3N2)-like virus; ^{UPDATED}
- A B/Washington/02/2019 (Victoria lineage)-like virus; and
- A B/Phuket/3073/2013 (Yamagata lineage)-like virus.

- ***Cell-culture-based IIV4 and RIV4:***

- An A/Wisconsin/588/2019 (H1N1)pdm09-like virus; ^{UPDATED}
- An A/Cambodia/e0826360/2020 (H3N2)-like virus; ^{UPDATED}
- A B/Washington/02/2019 (Victoria lineage)-like virus; and
- A B/Phuket/3073/2013 (Yamagata lineage)-like virus.

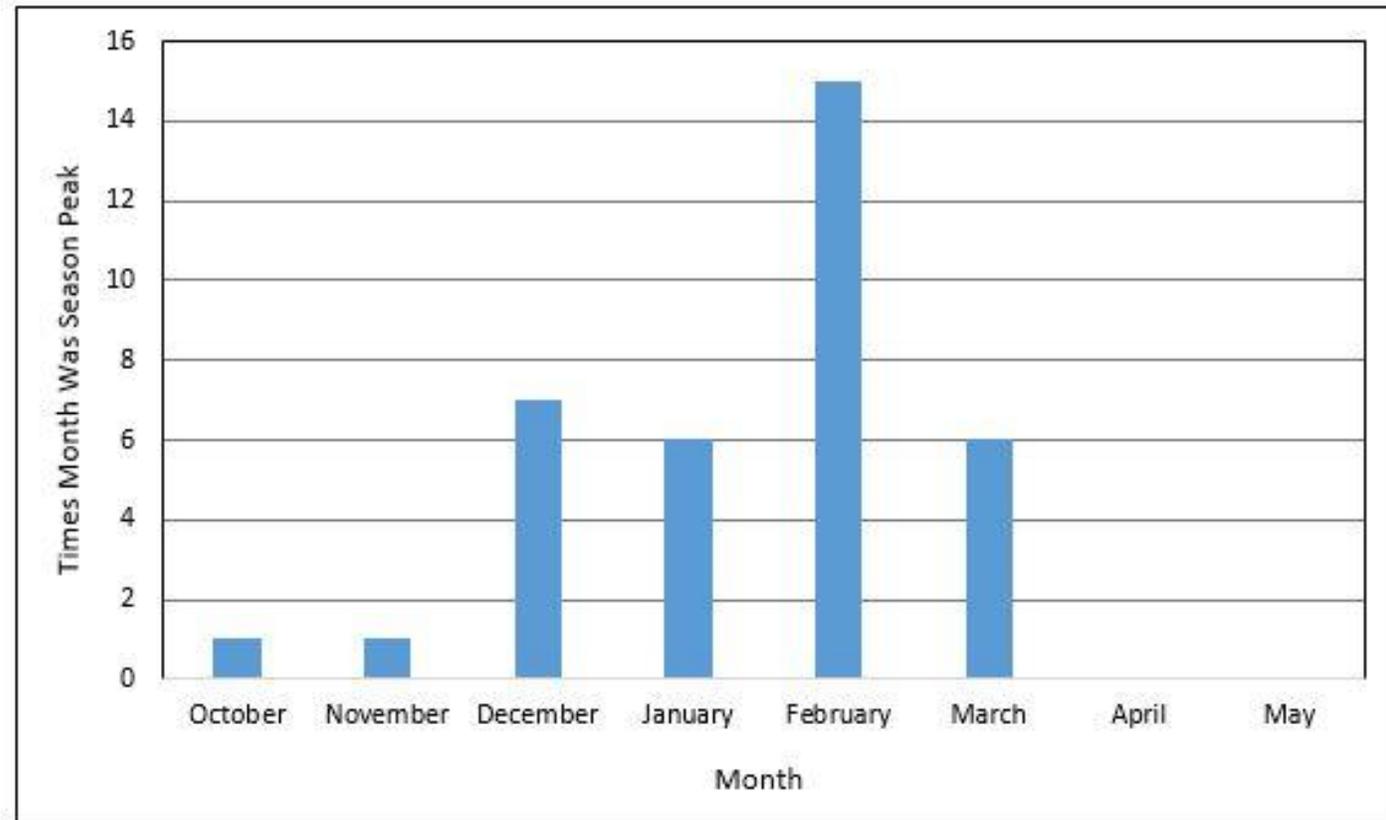
Change in Age Indication for Flucelvax Quadrivalent

Cell culture-based inactivated influenza vaccine (ccIIV4).

- Previously licensed for ages ≥ 4 years; approved in March 2021 for ages ≥ 2 years.
- Change supported by randomized trial conducted among over 4,000 children aged ≥ 2 through < 18 years over three influenza seasons: (Southern Hemisphere 2017 and Northern Hemisphere 2017-18 and 2018-19).
- Overall vaccine efficacy 54.6% (95%CI 45.7—62.1) against RT-PCR or culture-confirmed influenza-associated CDC-defined influenza-like illness.
- New age indication reflected in text and in Table 1 in Statement.

Timing of Influenza Seasons

- Timing of the onset and peak of influenza activity varies from season to season.
- Timing of activity onset can also vary geographically.
- In the United States, localized areas of increased activity occur as early as October.
- Over the 36 seasons between 1982-83 and 2017-18, peak activity occurred in: 



- December 7 (19%) seasons
- January 6 (17%) seasons
- February 15 (42%) seasons
- March 6 (19%) seasons

<https://www.cdc.gov/flu/about/season/flu-season.htm>

Factors Relevant for Timing of Vaccination

- Declines in influenza vaccine effectiveness over the course of the season have been observed in many observational studies.
- Appears to be more pronounced among older adults.
- Less evidence for waning among children.
- Might be more of an issue for H3N2 viruses.
- Other considerations related to timing:
 - Unpredictability of timing of onset and peak of the influenza season.
 - Avoiding missed opportunities to vaccinate.
 - Programmatic constraints.

Guidance for Timing of Vaccination, 2021-22

- For all, vaccination should be offered ideally by the end of October.
- Children who need 2 doses (those aged 6 months through 8 years who have never been vaccinated, who have not received ≥ 2 total doses previously, or whose vaccination history is unknown)—should receive first dose as soon as possible after vaccine is available.
- Children needing one dose can also be vaccinated as soon as vaccine is available.
- Vaccination soon after vaccine becomes available can be considered for pregnant persons in third trimester.
- For non-pregnant adults, July and August should be avoided unless there is concern that later vaccination might not be possible.
- Vaccination should continue throughout the season, as long as influenza viruses are circulating, and unexpired vaccine is available.

Coadministration of Influenza Vaccines with COVID-19 Vaccines

- ACIP influenza statement cites current *Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Approved or Authorized in the United States*:
 - States that COVID-19 vaccines may be administered without regard to timing of other vaccines.
 - Vaccines administered at the same visit should be given at different sites (separated by an inch or more, if possible).
 - If COVID-19 vaccines are given with vaccines that might be more likely to cause a local reaction (e.g., high-dose or adjuvanted influenza vaccines), administer in separate limbs, if possible.
- Notes that providers should check current CDC COVID-19 vaccination guidance for updated information concerning coadministration.

https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fvaccines%2Fcovid-19%2Finfo-by-product%2Fclinical-considerations.html#Coadministration

Contraindications and Precautions

- **Contraindications** are conditions in a recipient that increase the risk for a serious adverse reaction.
 - Vaccine should not be administered in these circumstances.
- **Precautions** are conditions in a recipient that might increase the risk for a serious adverse reaction, might cause diagnostic confusion, or might compromise the ability of the vaccine to produce immunity.
 - In general, vaccinations should be deferred when a precaution is present.
 - However, a vaccination might be indicated in the presence of a precaution if the benefit of protection from the vaccine outweighs the risk for an adverse reaction.
- Contraindications and precautions are listed in vaccine package inserts.
- ACIP recommendations generally follow those listed in the package inserts, though there are some exceptions (e.g., egg allergy).

Allergic Reactions to Influenza Vaccines—Background

- Vaccines (including influenza vaccines) include multiple components that can potentially trigger severe allergic reactions (e.g., anaphylaxis).
- Serious allergic reactions to influenza vaccine are rare.
 - In one Vaccine Safety Datalink (VSD) study¹ the estimated rates of post-vaccination anaphylaxis among cases that involved administration of a single vaccine were:
 - 1.31 cases per million doses for all vaccines.
 - 1.35 cases per million doses for IIV3.

Influenza Vaccine Package Insert Language Concerning Previous Allergic Reactions to Influenza Vaccines

- Egg-based IIV4s and LAIV4: History of severe allergic reaction (e.g., anaphylaxis) **to any component of the vaccine** or to a previous dose of any influenza vaccine.
- cclIV4 and RIV4: History of severe allergic reaction (e.g., anaphylaxis) **to any component** of the vaccine.

Contraindications and Precautions Related to Previous Severe Allergic Reaction to Influenza Vaccines

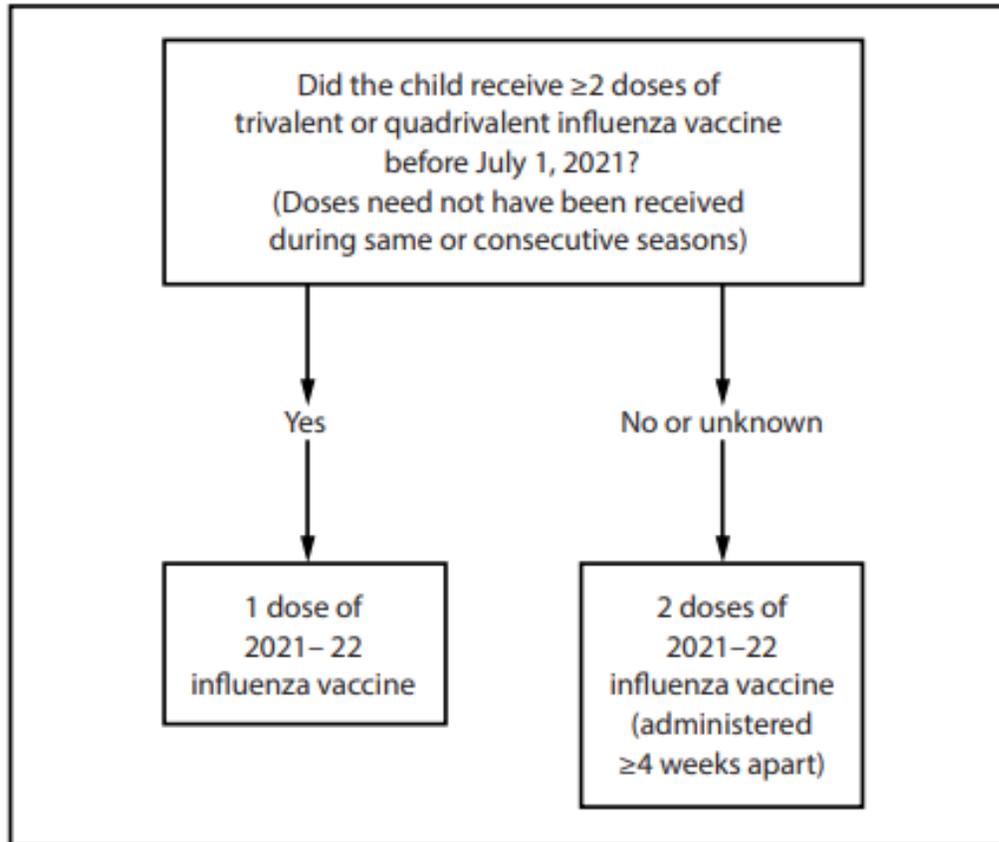
- For egg-based IIV4s and LAIV4: Severe allergic reaction to a previous dose of **any** influenza vaccine is a contraindication.
- For cclIV4: Severe allergic reaction to any cclIV is a contraindication; to any other influenza vaccine (any egg-based IIV, RIV, or LAIV) is a precaution.
- For RIV4: Severe allergic reaction to any RIV is a contraindication; to any other influenza vaccine (any egg-based IIV, cclIV, or LAIV) is a precaution.
- Where a precaution is present, if potential benefit of vaccination is thought to outweigh potential risk of a severe allergic reaction.
 - Vaccination should occur in a medical setting supervised by a provider who can recognize and manage a severe allergic reaction.
 - Providers can also consider consulting an allergist to help identify the vaccine component responsible for the previous reaction.

Contraindications and Precautions Related to Previous Severe Allergic Reaction to Influenza Vaccines

- Stated another way, in the following situations where a precaution exists, ***and*** if potential benefits of vaccination are believed to outweigh risks:
 - For those with previous severe allergic reaction to an egg-based IIV or LAIV, cclIV4 or RIV4 can be considered.
 - For those with previous severe allergic reaction to a cclIV, RIV4 can be considered.
 - For those with previous severe allergic reaction to an RIV, cclIV4 can be considered.
- In each instance, when vaccinating in setting of a precaution:
 - Vaccination should occur in a medical setting supervised by a provider who can recognize and manage a severe allergic reaction.
 - Allergist consultation can also be considered to help identify the component responsible for the previous reaction.
- Importantly, each vaccine is contraindicated in the setting of previous severe allergic reaction to any component of that vaccine.

Vaccination of Specific Populations—Children 6 mos through 8 yrs

FIGURE. Influenza vaccine dosing algorithm for children aged 6 months through 8 years* — Advisory Committee on Immunization Practices, United States, 2021–22 influenza season



* For children aged 8 years who require 2 doses of vaccine, both doses should be administered even if the child turns age 9 years between receipt of dose 1 and dose 2.

- Children in this age group who have not had ≥ 2 doses of trivalent or quadrivalent vaccine before July 1, 2021, or whose vaccination history is not known need 2 doses at least 4 weeks apart for 2021-22.
- Previous doses can be from different/non-consecutive seasons.
- 8-year-olds determined to need 2 doses should receive second even if they turn 9 years between dose 1 and dose 2.

Vaccination of Specific Populations—Pregnant Persons

- Pregnant persons can receive any age-appropriate IIV4 or RIV4.
- LAIV4 not recommended in pregnancy (in general, live vaccines are not recommended for use during pregnancy).
- Vaccination may occur in any trimester.
- Vaccination soon after vaccine is available (July/August) can be considered for pregnant persons in the third trimester, which might provide protection for the infant during the first months of life.

Vaccination of Specific Populations—Egg Allergy

- Most influenza vaccines (except for cclIV4 and RIV4) contain viruses that have been propagated in eggs and might contain trace amounts of egg protein.
- History of severe allergic reaction to vaccine components (including egg, if applicable, is a labeled contraindication in packaged inserts for egg-based vaccines.
- However, ACIP recommends that all persons with egg allergy receive influenza vaccine.
 - Those with a history of severe allergic reaction to egg (any symptom other than hives) should be vaccinated in a medical setting, supervised by a provider who can recognize and manage a severe allergic reaction, if a vaccine other than cclIV4 or RIV4 is used.

Vaccination of Specific Populations—Ages 65 years and Over

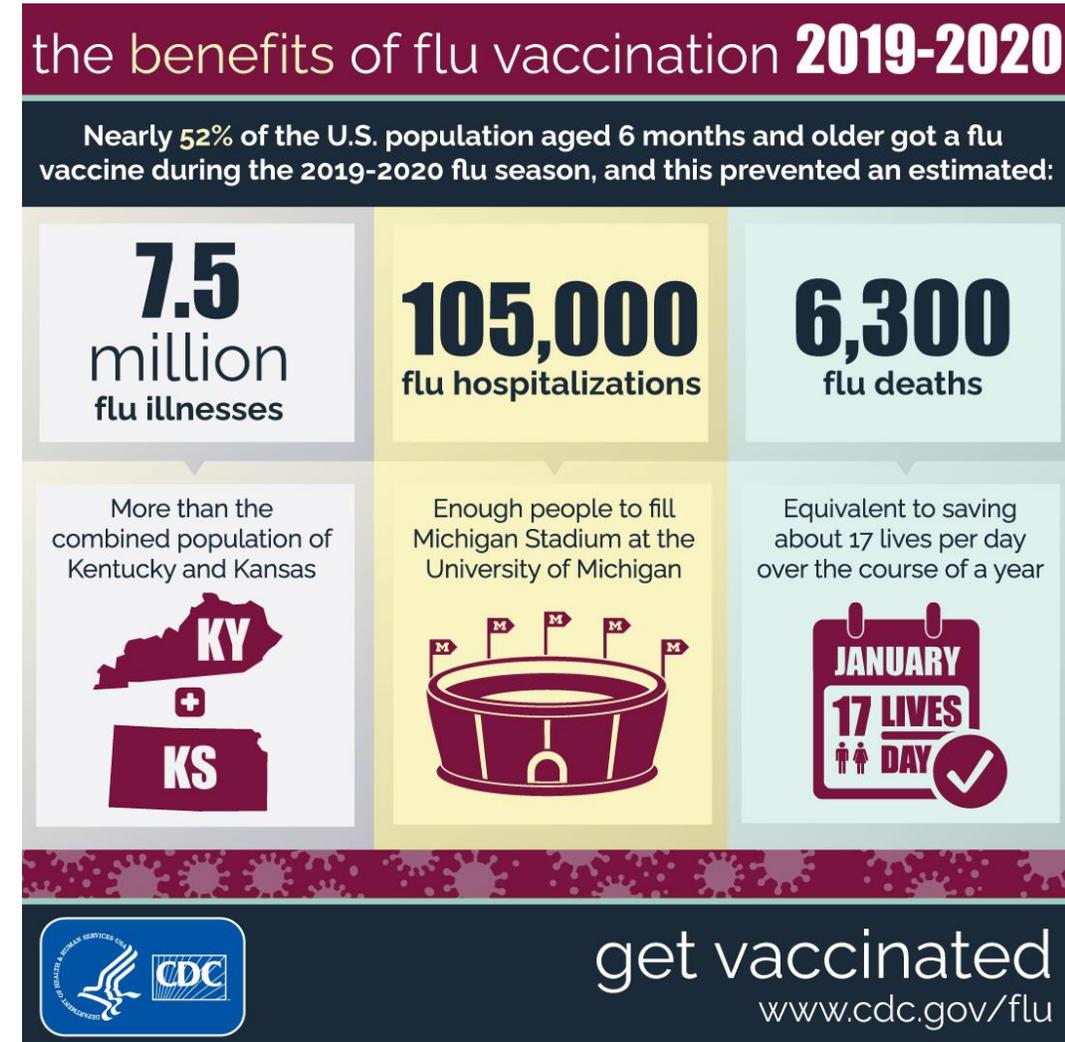
- Increased risk for severe influenza illness; vaccines generally less effective.
- All of the currently available influenza vaccines except LAIV4 are approved for this age group.
- Two available vaccines approved specifically for this age group for 2021-22:
 - **High-dose inactivated influenza vaccine (Fluzone High-dose Quadrivalent)**
 - Contains 4 times the hemagglutinin dose per virus, vs. standard-dose inactivated influenza vaccines.
 - **Adjuvanted inactivated influenza vaccines (Fluad Quadrivalent)**
 - Contain MF59 adjuvant.
- ACIP and CDC make no preferential recommendation for any one vaccine for any age group.

Estimated Benefits of Influenza Vaccination

- Vaccine effectiveness varies, affected by:
 - Season/predominant viruses.
 - Degree of match between circulating and vaccine viruses.
 - Age and immunity of the recipient.
- In a season during which most circulating viruses are similar to those represented in the vaccine, can expect 40%-60% effectiveness overall.
 - Generally better for older children and younger adults than for older adults.
 - Generally better for influenza A(H1N1) and influenza B viruses than influenza A(H3N2) viruses.
 - But, vaccination still provides important benefits even in a season of low overall effectiveness.

Estimated Benefits of Influenza Vaccination

- CDC provides estimates of overall influenza burden and vaccine effectiveness after each season.
- Estimated vaccine effectiveness for 2019-20:
 - 39% overall
- Estimated burden averted through vaccination:
 - 7.5 million illnesses
 - 105,000 hospitalizations
 - 6,300 deaths



Thank you!

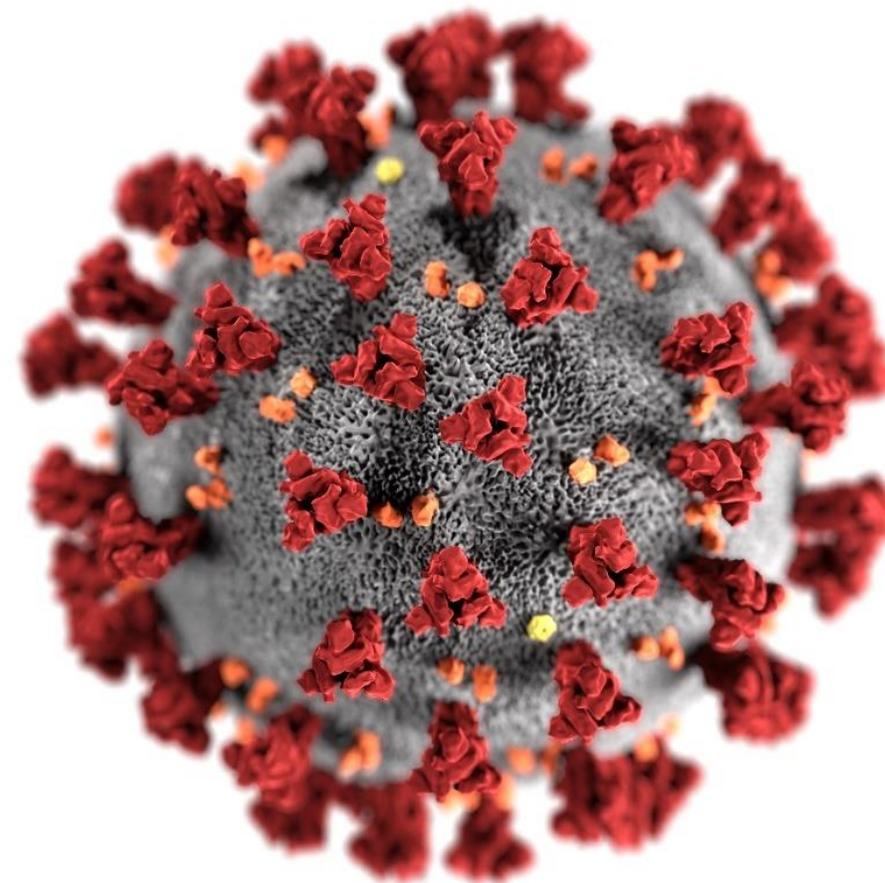
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Vaccine Coadministration

Andrew Kroger, MD, MPH
Immunization Services Division, NCIRD, CDC

Clinician Outreach and Communication Activity (COCA)
Webinar

September 9, 2021



For more information: www.cdc.gov/COVID19

Standards for Adult Immunization Practices | CDC

Immunizing Adult Patients: Standards for Practice

Your patients trust you to give them the best advice on how to protect their health. Vaccine-preventable diseases can result in serious illness, hospitalization, and even death. Make adult vaccination a standard of care in your practice.

Your patients have probably not received all the vaccines they need.

Even though most insurance plans cover the cost of recommended vaccines, adult vaccination rates in the U.S. are extremely low. Each year, tens of thousands of adults needlessly suffer, are hospitalized, and even die as a result of diseases that could be prevented by vaccines.

Your patients may not even realize that they need vaccines.

Many adults don't know which vaccines are recommended for them throughout their lives. Many also report not receiving vaccine recommendations from their healthcare professional.

You can make a difference.

Clinicians are the most valued and trusted source of health information for adults. Research shows that most adults believe vaccines are important and that a recommendation from their healthcare professional is a key predictor of patients getting needed vaccines.



Make Immunization a Standard of Patient Care In Your Practice:

1. ASSESS the immunization status of all your patients at every clinical encounter.

- Stay informed about the latest CDC recommendations for immunization of adults.
- Implement protocols in your office to ensure that patients' vaccine needs are routinely reviewed and patients get reminders about vaccines they need.

2. Strongly RECOMMEND vaccines that your patients need.

- Address patient questions and concerns in clear and understandable language.
- Highlight your positive experiences with vaccination (personal or in your practice).

3. ADMINISTER needed vaccines or REFER your patients to a vaccination provider.

- For vaccines that you stock, make vaccination services as convenient as possible for your patients.
- For vaccines that you don't stock, refer patients to providers in the area that offer vaccination services.

4. DOCUMENT vaccines received by your patients.

- Participate in your state's immunization registry to help your office, your patients, and your patients' other providers know which vaccines your patients have had.
- Follow up to confirm that patients received recommended vaccines that you referred them to get from other immunization providers.

Standards for Adult Immunization Practice emphasize the role of ALL healthcare professionals—whether they provide immunization services or not—in ensuring that adult patients are fully immunized. These standards are published by the National Vaccine Advisory Committee and supported by the Centers for Disease Control and Prevention as well as a number of national medical associations.

DON'T WAIT.
VACCINATE!



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

Timing and Spacing of Vaccine Doses

- General Best Practices: two different vaccines may be given simultaneously (same clinic day)
 - Some exceptions for certain vaccines and certain risk groups
 - PCV13 and Menactra (asplenia, HIV infection)
- General Best Practices: two different vaccines may be given at any interval
 - Some exceptions for certain vaccines and certain risk groups
 - Menactra and DTaP (asplenia, HIV infection, complement component deficiency)
 - Most injectable live vaccine pairs not given on the same day need to be separated by 28 days.
 - Live, attenuated influenza vaccine (LAIV) and another live vaccine not given on the same day need to be separated by 28 days.
 - Yellow fever and another live vaccine (including LAIV) needs to be separated by 30 days.

Timing and Spacing of Vaccine Doses: Guidance with COVID-19 Vaccines, Location on CDC Web Site

- 🏠 COVID-19 Vaccination
 - Product Info by U.S. Vaccine +
 - Clinical Care** —
 - COVID-19 Vaccines
 - Managing Anaphylaxis
 - Myocarditis and Pericarditis Considerations
 - Lab Tests After Severe Allergic Reaction

Clinical Care Considerations for COVID-19 Vaccination

Janssen COVID-19 Vaccine (Johnson & Johnson): Effective April 23, 2021, CDC and FDA recommend that use of the Janssen COVID-19 Vaccine resume in the United States. However, women younger than 50 years old especially should be made aware of a rare risk of blood clots with low platelets following vaccination and the availability of other COVID-19 vaccines where this risk has not been observed. Read the [CDC/FDA statement](#).

Learn more:

- [Safety Monitoring of the Janssen \(Johnson & Johnson\) COVID-19 Vaccine — United States, March–April 2021](#)
- [Anxiety-Related Adverse Event Clusters After Janssen COVID-19 Vaccination — Five U.S. Mass Vaccination Sites, April 2021](#)

Timing and Spacing of Vaccine Doses: Guidance with COVID-19 Vaccines

- COVID-19 vaccines and other vaccines **may be administered without regard to timing**
 - It is not known if the reactogenicity of COVID-19 vaccines is increased with coadministration, including with vaccines known to be more reactogenic, such as adjuvanted vaccines or live vaccines.
- Coadministration considerations
 - Patient is behind or at risk of becoming behind on recommended vaccines
 - Patient's risk of vaccine-preventable disease (e.g., during an outbreak or occupational exposure)
 - Reactogenicity profile of the vaccines
- Extensive experience with non-COVID-19 vaccines indicates immunogenicity and adverse event profiles are generally similar when vaccines are administered simultaneously as when they are administered alone.

Timing and Spacing of Vaccine Doses: Guidance with COVID-19 Vaccines

- Label each syringe.
- Separate injection sites by 1 inch or more, if possible.
- There are no requirements which vaccine is administered first.
- Administer the COVID-19 vaccine and vaccines that may be more likely to cause a local reaction in different limbs, if possible.

[Immunization Administration Resources | CDC](#)

[Interim Clinical Considerations for Use of COVID-19 Vaccines | CDC](#)

YOU CALL THE SHOTS

Vaccine Administration: Intramuscular (IM) Injection Children 7 through 18 years of age

Administer these vaccines by IM injection:

- Haemophilus influenzae type b (Hib)
- Hepatitis A (HepA)
- Hepatitis B (HepB)
- Hepatitis A and hepatitis B (HepA-HepB [18 years of age and older])
- Human papillomavirus (HPV vaccine)

**May also be administered by subcutaneous injection.*

To ensure vaccines are safe and effective:

- Follow aseptic technique.
- Use a new needle and syringe for each injection.

†Gloves are not required unless the person administering the vaccine is likely to come in contact with potentially infectious body fluids or has open lesions on the hands. If worn, perform hand hygiene and change gloves between patients.

1. Use the correct syringe and needle.

- Administer vaccine using either a 1-mL or 3-mL syringe.
- Use a 22- to 25-gauge needle.
- Use the correct needle length based on the patient's gender and weight. For adults, use a 1- to 1.5-inch needle.

2. Identify the injection site.

- Preferred site: Deltoid muscle in the upper arm.
- Use anatomical landmarks to determine the injection site. The deltoid muscle is a large, rounded, triangular shape. Find the acromion process at the end of the shoulder. The injection site will be approximately 2 inches below the bone and above the axillary fold/arm-pit.

3. Administer the vaccine correctly.

- Inject the vaccine into the middle and thickest part of the muscle. Insert the needle at a 90-degree angle and inject all of the vaccine.
- If administering more than one vaccine in the same arm, separate the injection sites by 1 inch if possible.

For additional information, go to CDC's vaccine administration resource library at www.cdc.gov/vaccines/hcp/admin/reso

YOU CALL THE SHOTS

Vaccine Administration: Intramuscular (IM) Injection Adults 19 years of age and older

Administer these vaccines by IM injection:

- Haemophilus influenzae type b (Hib)
- Hepatitis A (HepA)
- Hepatitis B (HepB)
- Hepatitis A and hepatitis B (HepA-HepB)
- Human papillomavirus (HPV vaccine)
- Influenza vaccine, inactivated (IIV)
- Influenza vaccine, recombinant (RIV4)
- Meningococcal conjugate (MenACWY)
- Meningococcal serogroup B (MenB vaccine)
- Pneumococcal conjugate (PCV13)
- Pneumococcal polysaccharide (PPSV23)*
- Tetanus and diphtheria toxoid (Td)
- Tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap)
- Zoster, recombinant (RZV)

**May also be administered by subcutaneous injection.*

To ensure vaccines are safe and effective, it's important to prepare and administer them correctly:

- Follow aseptic technique.
- Use a new needle and syringe for each injection.
- Perform hand hygiene before vaccine preparation, between patients, when changing gloves (if worn), and any time hands become soiled.†

†Gloves are not required unless the person administering the vaccine is likely to come in contact with potentially infectious body fluids or has open lesions on the hands. If worn, perform hand hygiene and change gloves between patients.

1. Use the correct syringe and needle.

- Administer vaccine using either a 1-mL or 3-mL syringe.
- Use a 22- to 25-gauge needle.
- Use the correct needle length based on the patient's gender and weight. For adults, use a 1- to 1.5-inch needle.

<p>1 in (25 mm)</p> <p>Men and women, less than 60 kg* (130 lbs)</p> 	<p>1.5 in (38 mm) OR 1 in (25 mm)</p> <p>Men, 70-118 kg (152-260 lbs)</p> <p>Women, 70-90 kg (152-200 lbs)</p> 	<p>1.5 in (38 mm)</p> <p>Men, greater than 118 kg (>260 lbs)</p> <p>Women, greater than 90 kg (>200 lbs)</p> 	
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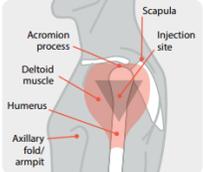
*Some experts recommend a 5/8-inch needle for men and women who weigh less than 60 kg (130 lbs). If used, the skin must be stretched fully and the subcutaneous tissues must not be bunched.

2. Identify the injection site.

- Recommended site: Deltoid muscle in the upper arm.
- Use anatomical landmarks to determine the injection site. The deltoid muscle is a large, rounded, triangular shape. Find the acromion process, which is the bony point at the end of the shoulder. The injection site will be approximately 2 inches below the bone and above the axillary fold/arm-pit.

3. Administer the vaccine correctly.

- Inject the vaccine into the middle and thickest part of the muscle. Insert the needle at a 90-degree angle and inject all of the vaccine in the muscle tissue.
- If administering more than one vaccine in the same arm, separate the injection sites by 1 inch if possible.



For additional information, go to CDC's vaccine administration resource library at www.cdc.gov/vaccines/hcp/admin/resource-library.html



Vaccines Most Likely to Cause a Local Reaction: Use a Separate Limb from Covid-19 Vaccine Limb

- Adjuvanted vaccines: hepatitis A (HepA), hepatitis B (HepB), diphtheria-tetanus-acellular pertussis (DTaP), tetanus-reduced-diphtheria-toxoid-reduced-acellular pertussis (Tdap), Tetanus diphtheria (Td), adjuvanted inactivated influenza vaccine (aIIV), human papillomavirus vaccine (HPV), recombinant zoster vaccine (RZV), serogroup B meningococcal vaccine (MenB), combination DTaP-IPV/Hib (Pentacel), combination DTaP-HepB-IPV (Pediarix), combination DTaP-IPV (Quadracel), combination DTaP-IPV (Kinrix), combination HepA-HepB (Twinrix), combination DTaP-IPV-Hib-HepB (Vaxelis)
- High-dose influenza vaccine (HD-IIV)
- Tetanus-toxoid containing vaccines (all are adjuvanted as above)

Influenza Vaccines Most Likely to Cause a Local Reaction: Use a Separate Limb from Covid-19 Vaccine Limb

- Adjuvanted inactivated influenza vaccine (aIIV)
- High-dose inactivated influenza vaccine (HD-IIV)

One Inch Apart or Separate Limb?

- Use your judgment on the reactogenicity of a vaccine
- Some influenza vaccines (HD-IIV and aIIV – listed on Slide 7) should be administered in a separate limb from Covid-19 vaccines if feasible.
- The deltoid is the preferred site
 - However, the anterolateral thigh may be used as an alternate site

Additional Resources



CDC Resources

Learn more with **CDC's COVID-19 vaccine tools and resources**. Find information for COVID-19 vaccination administration, storage, reporting, patient education, and more.

- COVID-19 vaccination: [COVID-19 Vaccination Clinical and Professional Resources | CDC](#)

COVID-19 Vaccination

Clinical Resources for Each COVID-19 Vaccine

Find information for COVID-19 vaccination administration, storage and handling, reporting, and patient education for each specific vaccine

Product Information by U.S. Vaccine



ACIP
Recommendati



Storage and
Handling



General
Vaccine



Training and
Education

CDC COVID-19 Vaccine Clinical Trainings and Materials

Training and Education



Importance of trained healthcare professionals

A large number of healthcare professionals are needed to support COVID-19 vaccination efforts nationwide. These healthcare professionals are essential to ensuring the American population is vaccinated safely as soon as possible. They play critical roles in proper vaccine storage, handling, preparation, and administration, and they must be prepared to respond to vaccine recipients' questions and concerns. It is important these healthcare professionals receive the training needed to effectively meet the demands of their roles. Training must be ongoing as new COVID-19 vaccines become available and as vaccine recommendations evolve when we learn more about the vaccines and how to improve the vaccination process.

Who needs to be trained	+
Training recommendations	+

Training Required by Professional Qualification

Find the training and core competencies you will need by clicking on your professional qualification below:

Healthcare professionals who have administered vaccine in the last 12 months

Healthcare professionals or retired (past 5 years) physicians, nurses, or practical nurses who are licensed/previously licensed to administer COVID-19 vaccine but have not done so in the last 12 months

Pfizer – BioNTech COVID-19 Vaccine

[Español](#)

Summary of Recent Changes and Updates

Webpage content and individual PDFs are updated when there's new guidance concerning the Pfizer-BioNTech COVID-19 Vaccine. Expand each section below to see a summary of new and updated items.

General Information Updates

+

Preparation and Administration Information Updates

+

Storage and Handling Information Updates

+

[Training and Education for COVID-19 Vaccination | CDC](#)

[Administration Overview for Pfizer-BioNTech COVID-19 Vaccine | CDC](#)

[Administration Overview for Moderna COVID-19 Vaccine | CDC](#)

[Administration Overview for Johnson & Johnson's Janssen COVID-19 Vaccine | CDC](#)

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.

To Ask a Question

- Using the Zoom Webinar System
 - Click on the “Q&A” button
 - Type your question in the “Q&A” box
 - Submit your question
- If you are a patient, please refer your question to your healthcare provider.
- If you are a member of the media, please direct your questions to CDC Media Relations at 404-639-3286 or email media@cdc.gov.

Continuing Education

- All continuing education for COCA Calls is issued online through the CDC Training & Continuing Education Online system at <https://tceols.cdc.gov/>.
- Those who participate in today's COCA Call and wish to receive continuing education please complete the online evaluation by **October 11, 2021**, with the course code **WC2922-090921**. The access code is **COCA090921**.
- Those who will participate in the on-demand activity and wish to receive continuing education should complete the online evaluation between **October 12, 2021**, and **October 12, 2023**, and use course code **WD2922-090921**. The access code is **COCA090921**.
- Continuing education certificates can be printed immediately upon completion of your online evaluation. A cumulative transcript of all CDC/ATSDR CEs obtained through the CDC Training & Continuing Education Online System will be maintained for each user.

Today's COCA Call Will Be Available to View On-Demand

- **When:** A few hours after the live call ends
- **What:** Video recording
- **Where:** On the COCA Call webpage
https://emergency.cdc.gov/coca/calls/2021/callinfo_090921.asp

Upcoming COCA Calls & Additional COVID-19 Resources

- Thursday, September 30 (2-3PM ET): Evaluating and Supporting Patients Presenting With Fatigue Following COVID-19 (*Free CE*)
(https://emergency.cdc.gov/coca/calls/2021/callinfo_093021.asp)
- Subscribe to receive notifications about upcoming COCA calls and other COCA products and services at emergency.cdc.gov/coca/subscribe.asp.
- Share call announcements with colleagues.
- Sign up to receive weekly **COVID-19 Science Updates** by visiting cdc.gov/library/covid19/scienceupdates.html?Sort=Date%3A%3Adesc.

COCA Products & Services



COCA Call Announcements contain all information subscribers need to participate in COCA Calls. COCA Calls are held as needed.



Monthly newsletter that provides information on CDC training opportunities, conference and training resources, the COCA Partner Spotlight, and the Clinician Corner.



As-needed messages that provide specific, immediate action clinicians should take. Contains comprehensive CDC guidance so clinicians can easily follow recommended actions.

COCA Products & Services



Monthly newsletter providing updates on emergency preparedness and response topics, emerging public health threat literature, resources for health professionals, and additional information important during public health emergencies and disasters.



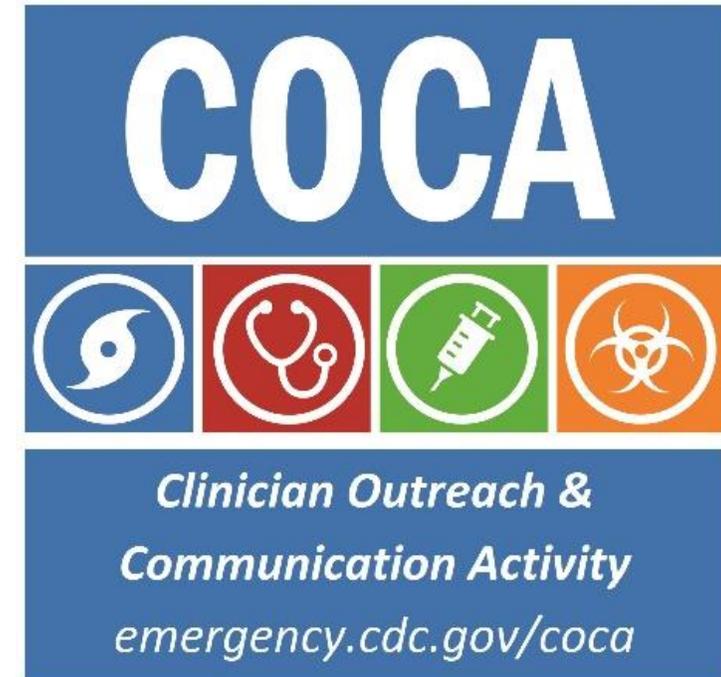
Informs clinicians of new CDC resources and guidance related to emergency preparedness and response. This email is sent as soon as possible after CDC publishes new content.



CDC's primary method of sharing information about urgent public health incidents with public information officers; federal, state, territorial, and local public health practitioners; clinicians; and public health laboratories.

Join COCA's Mailing List

- **Receive information about:**
 - Upcoming COCA Calls
 - Health Alert Network (HAN) messages
 - CDC emergency response activations
 - Emerging public health threats
 - Emergency preparedness and response conferences
 - Training opportunities



emergency.cdc.gov/coca/subscribe.asp

Join Us On Facebook!



The screenshot shows the Facebook profile for COCA (CDC Clinician Outreach and Communication Activity). The profile picture features a diverse group of healthcare professionals. The cover photo shows a group of six people, including doctors and nurses, smiling. The page includes a navigation menu on the left with options like Home, About, Posts, Photos, Events, and Community, along with a 'Create a Page' button. The main content area shows a 'Status' section with a text input field and a 'Posts' section with a recent event announcement. The right sidebar displays the organization's location in Atlanta, Georgia, the number of likes (21,420) and followers (21,217), and a map of the location.

COCA
CDC Clinician Outreach and Communication Activity - COCA ✓
@CDCClinicianOutreachAndCommunicationActivity

Home
About
Posts
Photos
Events
Community
[Create a Page](#)

Liked Following Share ... [Sign Up](#)

Status [COCA](#)
Write something on this Page...

Posts
COCA CDC Clinician Outreach and Communication Activity - COCA shared their event.
October 31 at 1:18pm · 🌐
Clinicians, you can earn FREE CE with this COCA Call! Join us for this COCA Call November 7, 2017 at 2:00PM.

Government Organization in Atlanta, Georgia
Community [See All](#)
👍 21,420 people like this
📡 21,217 people follow this
About [See All](#)
Map showing location in Atlanta, Georgia near Clifton Rd. NE and Houston St.

Thank you for joining us today!



emergency.cdc.gov/coca