Indiana Department of Health

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Governor

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State Health Commissioner

CSO-25-04

Statewide Standing Order ("Standing Order") for the Administration of Vaccines by Other Providers

Purpose: To permit eligible providers, as defined by this Standing Order, to administer eligible vaccines as recommended by the latest federal Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices (ACIP) immunization recommendations for individuals who are not less than eleven (11) years of age. This Standing Order is to be used in conjunction with the Statewide Protocol for the Administration of Vaccines by Other Providers ("the Protocol").

Eligible Providers: Individuals who are licensed, certified, or registered by a board (as defined in IC 25-1-9-1) and able to administer immunizations within their scope of practice.

Eligible Recipients: Recipient eligibility is dependent on ACIP General Best Practice Guidelines for Immunization, applicable ACIP Vaccine – Specific Recommendations, and the Protocol. Pursuant to IC 16-9-4-11, any vaccine authorized pursuant to this Standing Order shall not be administered to any persons under the age of eleven (11) years.

Eligible Vaccine: Routine vaccinations recommended by the latest CDC ACIP immunization recommendations to any individual not less than eleven (11) years of age may be administered pursuant this standing order. This does not include non-routine vaccinations such as the yellow fever vaccine.

Procedure:

1. **Patient Consent:**
    a. Before administering an eligible vaccine, the provider must receive consent in accordance with the Protocol.

2. **Provide Vaccine Information Statement:**
    a. Provide all patients with a copy of the most current federal Vaccine Information Statement (VIS). Provide non-English speaking patients with a copy of the VIS in

their native language if one is available and desired. These can be found at www.immunize.org/vis.

3. **Screen for Contraindications and Precautions:**
    a. Prior to the administration of the eligible vaccine, the eligible provider shall screen all patients for contraindications and precautions using an appropriate screening questionnaire as stipulated in the Protocol.

4. **Prepare to Administer Vaccine:**
    a. Choose the needle gauge, needle length, and route of administration according to the ACIP General Best Practice Guidelines for Immunization, the applicable ACIP Vaccine – Specific Recommendations, and the Protocol.

5. **Administration of Vaccine:**
    a. All eligible vaccines should be administered in accordance with the ACIP General Best Practice Guidelines for Immunization, ACIP Vaccine – Specific Recommendations, and the Protocol.

6. **Vaccination Document, Record, and Reporting Requirements:**
    a. The eligible provider shall create a vaccination record for the patient which is to include the information as set forth in the Protocol.
    b. A copy of the patient's vaccination record shall be kept for a period of seven (7) years. A copy shall be made available to the patient and/or patient's provider upon request.
    c. The eligible provider shall report the vaccination of each patient to the immunization data registry maintained by the state department of health under Indiana Code 16-38-5.

7. **Management of Adverse Events**
    a. Per ACIP General Best Practice Guidelines for Immunizations, the patient who is administered a vaccine should be monitored for adverse effects for at least fifteen (15) minutes in the general vicinity of the administering provider.
    b. In the event of an adverse reaction, the administering provider is to follow the procedures for the management of the reaction. The procedures for managing adverse reactions are set forth in the Protocol.
    c. Report all adverse events following the administration of a vaccine to the federal Vaccine Adverse Event Reporting System (VAERS). To submit a VAERS report online (preferred) or to download a writable PDF form, go to https://vaers.hhs.gov/reportevent.html.

Geographic Region: This Standing Order is applicable statewide.

Standing Orders Authorization: This Standing Order is issued pursuant to Indiana Code 16-19-4-11, which allows the State Health Commissioner to issue a standing order that allows providers who are licensed, certified, or registered by a board as defined in Indiana Code 25-1-9-1 to administer or dispense an immunization that is recommended by the federal Centers for Disease Control and Prevention Advisory Committee on Immunization Practices for individuals who are not less than eleven (11) years of age.

This Standing Order shall be reviewed annually by the Indiana Department of Health and revised as needed. This Standing Order is effective January 1 through December 31, 2025.

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Statewide Protocol for the Administration of Vaccines by Other Providers – CSO-25

A. Introduction

This protocol is pursuant to Indiana Code 16-19-4-11 which authorizes the state health commissioner or a designated public health authority who is a licensed prescriber to issue a statewide protocol allowing individuals who are licensed, certified, or registered by a board (as defined in IC 25-1-9-1), and if within the individual's scope of practice, to administer an immunization that is recommended by the federal Centers for Disease Control and Prevention Advisory Committee on Immunization Practices (ACIP) for individuals who are not less than eleven (11) years of age. The protocol outlined below is designed to reduce the morbidity and mortality of vaccine preventable disease by creating a statewide vaccination protocol to allow providers to access the need for, educate patients on, administer, monitor for, and manage adverse effects related to, and document the administration of vaccines.

B. Authorization

Subject to the requirements of this Protocol, eligible providers meeting the qualifications specified in Section C below and applicable law and regulation may:

- determine the immunization needs in accordance with recommendations by the ACIP of the CDC;
- screen all patients for contraindications and precautions for vaccine(s) needed using an appropriate screening questionnaire (see Appendix A-C as examples) and vaccine-specific screening as set forth in other Appendices as stipulated in this protocol;
- administer vaccines according to directions provided in this protocol; and
- administer epinephrine and/or diphenhydramine in response to an adverse reaction following vaccination as delineated in this protocol.

C. Qualifications

- An eligible provider seeking authorization to administer vaccines pursuant to this protocol shall be licensed, certified, or registered by a board (as defined in IC 25-1-9-1) and able to administer immunizations within their scope of practice.

D. Limitations on Immunization

- Any eligible vaccine authorized pursuant to this protocol shall not be administered to any persons under the age of eleven (11) years.

E. Protocol, Facility, and Equipment

- Eligible providers who administer vaccines under this protocol shall review a current copy of this protocol.

F. Patient Consent

Before administering an eligible vaccine to an individual according to this protocol, the provider must receive the consent of one (1) of the following:

- If the individual to whom the vaccine is to be administered is at least eleven (11) years of age but less than eighteen (18) years of age, the parent or legal guardian of the individual.
- If the individual to whom the vaccine is to be administered is at least eighteen (18) years of age but has a legal guardian, the legal guardian of the individual.
- If the individual to whom the vaccine is to be administered is at least eighteen (18) years of age but has no legal guardian, the individual.

A parent or legal guardian who is required to give consent under this subdivision must be present at the time of vaccination or must provide prior written or verbal consent for the administration of the vaccine.

G. Vaccination Record

- A vaccination record (see Appendix D and Appendix E as examples) shall be created for the patient;
- A copy of the patient's vaccination record and notification of vaccination to the patient's primary care provider shall be kept for seven (7) years in accordance with IC 16-39-7-1;
- The vaccination record shall contain the following information as recommended by the ACIP General Best Practice Guidelines for Immunization:
    - Patient's name
    - Patient's date of birth
    - Date the vaccine was administered
    - Vaccine administration route/site
    - Vaccine manufacturer
    - Vaccine lot number
    - Edition date of vaccine immunization schedule (VIS) distributed
    - Date of VIS was distributed to the patient
    - Name and title of the provider who administered the vaccine
    - Address of location vaccine was administered

H. Reporting Requirements

- Providers who administer vaccines under this protocol shall electronically report the vaccination of each patient to the immunization data registry maintained by the state department of health under IC 16-38-5.
    - The following patients shall be excluded from immunization data registry reporting requirements:
        - a written immunization data exception form has been completed and filed in accordance with IC 16-38-5-2; or
    - Pursuant to IC 16-38-5-2, the minimum vaccination data that must be provided are the following:
        - Patient identification number
        - Patient first and last name
        - Patient date of birth
        - Patient address
        - Patient race
        - Patient gender
        - Vaccine for Children program eligibility if the patient is eligible for the Vaccine for Children program
        - Dose at the administration level under the Vaccination for children program, if the patient is eligible for the Vaccine for Children program
        - Vaccination presentation or vaccination code using approved Immunization Information System (IIS) code type
        - Immunization Date administered
        - Lot number of the administered vaccine

      The State department may expand or modify the list of minimum data that must be provided under this section based on Centers for Disease Control Immunization Information System (IIS) minimum field requirements.
- The provider who administers the vaccine shall report vaccination-related adverse events the provider has knowledge of to the Vaccine Adverse Events Reporting Systems (VAERS), the cooperative program for vaccine safety of the Centers for Disease Control and Prevention and the Food and Drug Administration.

I. Management of Adverse Events

- Per ACIP General Best Practice Guidelines for Immunization, the patient who is administered a vaccine should be monitored for adverse effects for at least fifteen (15) minutes in the general vicinity of the administering provider.

- In the event of an adverse reaction, the administering provider is to follow the procedures for the management of the reaction. The procedures for managing adverse reactions are set forth in Appendix F and Appendix G.

J. Vaccines

- Eligible providers who administer vaccines under this protocol shall be authorized to administer any vaccine that is recommended by ACIP in the absence of contraindication to the vaccine.

This protocol shall be reviewed annually by the Indiana Department of Health and revised as needed. This protocol shall remain valid for the duration of the standing order. Appendixes A-L shall be updated as necessary.

Last Reviewed December 17, 2024

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APPENDIX A

Screening Checklist for Contraindications to Vaccines for Children and Teens

PATIENT NAME _____

DATE OF BIRTH _____/_____/_____
month day year

For parents/guardians: The following questions will help us determine which vaccines your child may be given today. If you answer "yes" to any question, it does not necessarily mean your child should not be vaccinated. It just means additional questions must be asked. If a question is not clear, please ask your healthcare provider to explain it.

	yes	no	don't know
1. Is the child sick today?	☐	☐	☐
2. Does the child have allergies to medicine, food, a vaccine component, or latex?	☐	☐	☐
3. Has the child had a serious reaction to a vaccine in the past?	☐	☐	☐
4. Does the child have a long-term health problem with heart, lung (including asthma), kidney, liver, nervous system, or metabolic disease (e.g., diabetes), a blood disorder, no spleen, a cochlear implant, or a spinal fluid leak? Are they taking regular aspirin or salicylate medication?	☐	☐	☐
5. For children age 2 through 4 years: Has a healthcare provider told you that the child had wheezing or asthma in the past 12 months?	☐	☐	☐
6. For babies: Have you ever been told the child had intussusception?	☐	☐	☐
7. Has the child, a sibling, or a parent had a seizure; has the child had a brain or other nervous system problem?	☐	☐	☐
8. Has the child ever been diagnosed with a heart condition (myocarditis or pericarditis) or have they had Multisystem Inflammatory Syndrome (MIS-C) after an infection with the virus that causes COVID-19?	☐	☐	☐
9. Does the child have an immune-system problem such as cancer, leukemia, HIV/AIDS?	☐	☐	☐
10. In the past 6 months, has the child taken medications that affect the immune system such as prednisone, other steroids, or anticancer drugs; drugs to treat rheumatoid arthritis, Crohn's disease, or psoriasis; or had radiation treatments?	☐	☐	☐
11. Does the child's parent or sibling have an immune system problem?	☐	☐	☐
12. In the past year, has the child received immune (gamma) globulin, blood/blood products, or an antiviral drug?	☐	☐	☐
13. Is the child/teen pregnant?	☐	☐	☐
14. Has the child received vaccinations in the past 4 weeks?	☐	☐	☐
15. Has the child ever felt dizzy or faint before, during, or after a shot?	☐	☐	☐
16. Is the child anxious about getting a shot today?	☐	☐	☐

FORM COMPLETED BY _____ DATE _____

FORM REVIEWED BY _____ DATE _____

Did you bring your immunization record card with you? **yes** ☐ **no** ☐

It is important to have a personal record of your child's vaccinations. If you don't have one, ask the child's healthcare provider to give you one with all your child's vaccinations on it. Keep it in a safe place and bring it with you every time you seek medical care for your child. Your child will need this document to enter day care or school, for employment, or for international travel.

Information for Healthcare Professionals about the Screening Checklist for Contraindications to Vaccines (Children and Teens)

Read the information below for help interpreting answers to the screening checklist.
To learn even more, consult the references in ***Note*** *below.*

NOTE: For additional details, see CDC's "Child and Adolescent Immunization Schedule" (www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html) and *General Best Practice Guidelines for Immunization* sections on "Contraindications and Precautions" (www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html) and "Altered Immunocompetence" (www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html). For more details on COVID-19 vaccines, see "Use of COVID-19 Vaccines in the United States: Interim Clinical Considerations" at www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html.

1. **Is the child sick today?** *[all vaccines]*

   There is no evidence that acute illness reduces vaccine effectiveness or safety. However, as a precaution, all vaccines should be delayed until moderate or severe acute illness has improved. Mild illnesses with or without fever (e.g., otitis media, "colds," and diarrhea) and antibiotic use are not contraindications to routine vaccination.

2. **Does the child have allergies to medicine, food, a vaccine component, or latex?** *[all vaccines]*

   Gelatin: If a person has anaphylaxis after eating gelatin, do not give vaccines containing gelatin. **Latex:** An anaphylactic reaction to latex is a contraindication to vaccines with latex as part of the vaccine's packaging (e.g., vial stoppers, prefilled syringe plungers, prefilled syringe caps). For details on latex in vaccine packaging, refer to the package insert (listed at www.fda.gov/vaccines-blood-biologics/vaccines/vaccines-licensed-use-united-states). **COVID-19 vaccine:** History of a severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a COVID-19 vaccine component is a contraindication to use of the same vaccine type. People may receive the alternative COVID-19 vaccine type (either mRNA or protein subunit) if they have a contraindication or an allergy-related precaution to one COVID-19 vaccine type. Allergy-related precautions include history of 1) diagnosed non-severe allergy to a COVID-19 vaccine component; 2) non-severe, immediate (onset less than 4 hours) allergic reaction after a dose of one COVID-19 vaccine type (see **Note**).

   Not contraindications: **Eggs:** ACIP and CDC do not consider egg allergy of any severity to be a contraindication or precaution to any egg-based influenza vaccine. **Injection site reaction** (e.g., soreness, redness, delayed-type local-reaction) to a prior dose or vaccine component is not a contraindication to a subsequent dose or vaccine containing that component.

3. **Has the child had a serious reaction to a vaccine in the past?** *[all vaccines]*
   - Anaphylaxis to a previous vaccine dose or vaccine component is a contraindication for subsequent doses of corresponding vaccines (see question 2).
   - Usually, one defers vaccination when a precaution is present, unless the benefit outweighs the risk (e.g., during an outbreak).
   - A history of encephalopathy within 7 days of DTP/DTaP is a contraindication for further doses of any pertussis-containing vaccine.
   - Other "serious reactions" that this child experienced following vaccination might constitute contraindications or precautions to future doses. See the appendix on vaccine contraindications and precautions in the **Note** section above.

4. **Does the child have a long-term health problem with heart, lung (including asthma), kidney, liver, nervous system, or metabolic disease (e.g., diabetes), a blood disorder, no spleen, a cochlear implant, or a spinal fluid leak? Are they taking regular aspirin or salicylate medication?** *[MMR, MMRV, LAIV, VAR]*

   LAIV is not recommended for children with cerebrospinal fluid leak, anatomic or functional asplenia, cochlear implant, a child age 2 through 4 years with a history of asthma or wheezing, or current aspirin or salicylate-containing medication use. Precautions to LAIV include any underlying health condition that increases the risk of influenza complications (see package insert or CDC schedule for details). **MMR & MMRV:** A history of thrombocytopenia or thrombocytopenic purpura is a precaution to MMR and MMRV. **VAR:** Aspirin use is a precaution to VAR due to the association of aspirin use, chickenpox, and Reye syndrome in children and adolescents.

5. **For children age 2 through 4 years: Has a healthcare provider told you that the child had wheezing or asthma in the past 12 months?** *[LAIV]*

   Children ages 2 through 4 years who had a wheezing episode within the past 12 months should not get LAIV. Give IIV or RIV instead.

6. **For babies: Have you ever been told the child had intussusception?** *[Rotavirus]*

   Infants who have a history of intussusception (i.e., the telescoping of one portion of the intestine into another) should ***not*** be given rotavirus vaccine.

7. **Has the child, a sibling, or a parent had a seizure; has the child had a brain or other nervous system problem?** *[DTaP, Td, Tdap, IIV, LAIV, MMRV, RIV]*

   For patients with stable neurologic disorders (including seizures) unrelated to vaccination, or with a family history of seizures, vaccinate as usual (exception: children with a first degree relative [e.g., parent or sibling] or personal history of seizures generally should receive separate MMR and VAR, not MMRV). **Pertussis-containing vaccines:** DTaP and Tdap are contraindicated in children who have a history of encephalopathy within 7 days following DTP/DTaP. An unstable progressive neurologic problem is a precaution to using DTaP and Tdap. **A history of Guillain-Barré syndrome (GBS):** a) Td/Tdap: GBS within 6 weeks of a tetanus-toxoid vaccine is a precaution; if the decision is made to vaccinate, give Tdap instead of Td; b) all influenza vaccines: GBS within 6 weeks of an influenza vaccine is a precaution; influenza vaccination should generally be avoided unless the benefits outweigh the risks (e.g., for those at higher risk for influenza complications).

8. **Has the child ever been diagnosed with a heart condition (myocarditis or pericarditis) or have they had Multisystem Inflammatory Syndrome (MIS-C) after an infection with the virus that causes COVID-19?**

   Precautions to COVID-19 vaccination include a history of myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vaccine or a history of Multisystem Inflammatory Syndrome (MIS-C). Myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vacine is a precaution: the person should generally not receive additional COVID-19 vaccine. A child with a history of myocarditis or pericarditis unrelated to vaccination may receive a COVID-19 vaccine once the condition has completely resolved. A child with a history of MIS-C may be vaccinated if the condition has fully resolved and it has been at least 90 days since diagnosis. Refer to CDC COVID-19 vaccine guidance for additional considerations for myocarditis, pericarditis, and MIS (see **Note**).

9. **Does the child have an immune-system problem, such as cancer, leukemia, HIV/AIDS?** *[LAIV, MMR, MMRV, Rotavirus, VAR]*

   Live virus vaccines are usually contraindicated in immunocompromised people with exceptions. For example, **MMR** is recommended for asymptomatic HIV-infected patients who are not severely immunosuppressed. **VAR** should be administered (if indicated) to people with isolated humoral immunodeficiency. **LAIV** is contraindicated in immunosuppressed people; give IIV or RIV instead. Infants with severe combined immunodeficiency (SCID) should not be given a live virus vaccine, including **rotavirus vaccine**, but other forms of immunosuppression are a precaution, not a contraindication, to rotavirus vaccine. See "General Best Practice Guidelines: Altered Immunocompetence" at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html.

10. **In the past 6 months, has the child taken medications that affect the immune system such as prednisone, other steroids, or anticancer drugs; drugs to treat rheumatoid arthritis, Crohn's disease, or psoriasis; or had radiation treatments?** *[LAIV, MMR, MMRV, VAR]*

    Live virus vaccines should be postponed until after chemotherapy or long-term high-dose steroid therapy has ended. See **Note** above. Some immune mediator and modulator drugs (especially anti-necrosis factor [TNF] agents) may be immunosuppressive. Avoid live virus vaccines in people taking immunosuppressive drugs. A list of these is in CDC's *Yellow Book* at wwwwnc.cdc.gov/travel/yellowbook/2024/additional-considerations/immunocompromised-travelers.

11. **Does the child's parent or sibling have an immune system problem?** *[MMR, MMRV, VAR]*

    MMR, MMRV, and VAR vaccines should **not** be given to a patient with a family history of congenital or hereditary immunodeficiency in first-degree relatives (e.g., parents, siblings) unless the patient's immune competence has been verified clinically or by a laboratory.

12. **In the past year, has the child received immune (gamma) globulin, blood/blood products, or an antiviral drug?** *[MMR, MMRV, LAIV, VAR]*

    See **Note** (schedule) for antiviral drug information (VAR, LAIV). See "Timing and Spacing of Immunobiologics" (www.cdc.gov/vaccines/hcp/acip-recs/general-recs/timing.html#antibody) for intervals between MMR, VAR, and certain blood/blood products, immune globulin.

13. **Is the child/teen pregnant?** *[HPV, IPV, LAIV, MenB, MMR, MMRV, VAR]*

    Live virus vaccines (e.g., LAIV, MMR, MMRV, VAR) are contraindicated in pregnancy due to the theoretical risk of virus transmission to the fetus. People who could become pregnant and receive a live virus vaccine should be instructed to avoid pregnancy for 1 month after vaccination. **IPV and MenB** should not be given except to those with an elevated risk of exposure during pregnancy. **HepB:** Heplisav-B and PreHevbrio are not recommended during pregnancy, use Engerix-B or Recombivax-HB. **HPV** is not recommended during pregnancy.

14. **Has the child received vaccinations in the past 4 weeks?** *[LAIV, MMR, MMRV, VAR, yellow fever]*

    Children given live virus vaccines, such as those listed above, should wait 28 days before receiving another live virus vaccine (wait 30 days for yellow fever vaccine). Inactivated vaccines may be given at the same time or at any spacing interval.

15. **Has the child ever felt dizzy or faint before, during or after a shot?**

    Fainting (syncope) or dizziness is not a contraindication or precaution to vaccination; it may be an anxiety-related response to any injection. CDC recommends vaccine providers consider observing all patients for 15 minutes after vaccination. See Immunize.org's resource on vaccination and syncope at www.immunize.org/catg.d/p4260.pdf.

16. **Is the child anxious about getting a shot today?**

    Anxiety can lead to vaccine avoidance. Simple steps can ease a patient's anxiety about vaccination. Visit Immunize.org's "Addressing Vaccination Anxiety" clinical resources at www.immunize.org/clinical/topic/addressing-anxiety/

VACCINE ABBREVIATIONS

DTaP = Diphtheria, tetanus, & acellular pertussis vaccine
HPV = Human papillomavirus vaccine
IIV = Inactivated influenza vaccine
ccIIV - cell culture inactivated influenza vaccine
IPV = Inactivated poliovirus vaccine
LAIV = Live attenuated influenza vaccine
MenB = Meningococcal B vaccine
MMR = Measles, mumps, and rubella vaccine
MMRV = MMR+VAR vaccine
RIV = Recombinant influenza vaccine
Td, Tdap = Tetanus, diphtheria, (acellular pertussis) vaccine
VAR = Varicella vaccine

APPENDIX B

Screening Checklist for Contraindications to HPV, MenACWY, MenB, and Tdap Vaccines for Teens

YOUR NAME _____

DATE OF BIRTH ____/____/____
month day year

For parents/guardians: The following questions will help us determine if human papillomavirus (HPV), meningococcal conjugate (MenACWY), meningococcal serogroup B (MenB), and tetanus, diphtheria, and acellular pertussis (Tdap) vaccines may be given to your teen today. If you answer "yes" to any question, it does not necessarily mean your teen should not be vaccinated. It just means additional questions must be asked. If a question is not clear, please ask your healthcare provider to explain it.

	yes	no	don't know
1. Is your teen sick today?	☐	☐	☐
2. Does your teen have allergies to a vaccine component or to latex?	☐	☐	☐
3. Has your teen had a serious reaction to a vaccine in the past?	☐	☐	☐
4. Has your teen had a brain or other nervous system problem?	☐	☐	☐
5. Is your teen pregnant?	☐	☐	☐
6. Has your teen ever felt dizzy or faint before, during, or after a shot?	☐	☐	☐
7. Is your teen anxious about getting a shot?	☐	☐	☐

FORM COMPLETED BY _____ DATE _____

FORM REVIEWED BY _____ DATE _____

Did you bring your teen's immunization record card with you? **yes** ☐ **no** ☐

It is important to have a personal record of your teen's vaccinations. If you don't have one, ask your healthcare provider to give you one with all of your teen's vaccinations on it. Keep it in a safe place and be sure your teen carries it every time he/she seeks medical care. Your teen will likely need this document to enter school or college, for employment, or for international travel.

Information for Healthcare Professionals about the Screening Checklist for Contraindications to HPV, MenACWY, MenB, and Tdap Vaccines for Teens

Are you interested in knowing why we included a certain question on the screening checklist? If so, read the information below. If you want to find out even more, consult the references listed in ***Notes*** *below.*

NOTE: For supporting documentation on the answers given below, go to the specific ACIP vaccine recommendation found at the following website: www.cdc.gov/vaccines/hcp/acip-recs/index.html

1. **Is your teen sick today?** *(HPV, MenACWY, MenB, Tdap.)*

   There is no evidence that acute illness reduces vaccine effectiveness or safety. However, as a precaution, all vaccines should be delayed until moderate or severe acute illness has improved. Mild illnesses with or without fever (such as otitis media, "colds," diarrhea) and antibiotic use are not contraindications to routine vaccination.

2. **Does your teen have allergies to a vaccine component or to latex?V** *(HPV, MenACWY, MenB, Tdap.)*

   Latex: An anaphylactic reaction to latex is a contraindication to vaccines with latex as part of the vaccine's packaging (e.g., vial stoppers, prefilled syringe plungers, prefilled syringe caps). For details on latex in vaccine packaging, refer to the package insert (listed at www.fda.gov/vaccines-blood-biologics/vaccines/vaccines-licensed-use-united-states).

   An injection-site reaction (e.g., soreness, redness, delayed-type local reaction) to a prior vaccine dose or vaccine component, including latex, is not a contraindication to a subsequent dose or vaccine containing that component.

3. **Has your teen had a serious reaction to a vaccine in the past?** *(HPV, MenACWY, MenB, Tdap.)*

   Anaphylaxis to a previous vaccine dose or vaccine component is a contraindication for subsequent doses of corresponding vaccines (see question 2). Usually, one defers vaccination when a precaution is present unless the benefit outweighs the risk (e.g., during an outbreak). **A history of encephalopathy** within 7 days of DTP/DTaP is a contraindication for further doses of any pertussis-containing vaccine, including Tdap.

4. **Has your teen had brain or other nervous system problems?** *(Td/Tdap.)*

   Tdap is contraindicated in teens who have a history of encephalopathy within 7 days following DTP/DTaP. An unstable progressive neurologic problem is a precaution to the use of Tdap. For people with stable neurologic disorders (including seizures) unrelated to vaccination, or for people with a family history of seizures, vaccinate as usual. A history of **Guillain-Barré syndrome** (GBS) within 6 weeks of a tetanus-toxoid vaccine is a precaution; if the decision is made to vaccinate, give Tdap instead of Td.

NOTE: For summary information on contraindications and precautions to vaccines, go to the ACIP's General Best Practice Guidelines for Immunization at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html

5. **Is your teen pregnant?** *(HPV and MenB.)*

   MenB should not be given except to those with an elevated risk of exposure during pregnancy. HPV vaccine is not recommended during pregnancy. Injectable influenza vaccine, COVID-19 vaccine, Tdap, and RSV vaccines are explicitly recommended during pregnancy.

6. **Has your teen ever felt dizzy or faint before, during, or after a shot?**

   Fainting (syncope) or dizziness (presyncope) is not a contraindication or precaution to vaccination. However, for some people these can be a response to vaccination anxiety. People in adolescent and young adult age groups are more likely to experience syncope. CDC recommends that vaccine providers consider observing all patients for 15 minutes after vaccination. This is especially important for people with a pattern of injection-related syncope. For more information about vaccination-related syncope, see www.immunize.org/catg.d/p4260.pdf.

7. **Is your teen anxious about getting a shot?**

   Anxiety can lead to vaccine hesitancy or avoidance. Simple steps can ease a patient's anxiety about vaccination. Visit Immunize.org's "Addressing Vaccination Anxiety" clinical resources at www.immunize.org/clinical/topic/addressing-anxiety.

VACCINE ABBREVIATIONS

DTP = Diphtheria, tetanus, pertussis vaccine
DTaP = Diphtheria, tetanus, (acellular) pertussis vaccine
HPV = Human papillomavirus vaccine
MenB = Meningococcal serogroup B vaccine
MenACWY = Meningococcal serogroups A, C, W, Y
RSV = Respiratory syncytial virus
Td/Tdap = Tetanus, diphtheria, (acellular) pertussis vaccine

APPENDIX C

Screening Checklist for Contraindications to Vaccines for Adults

YOUR NAME _____

DATE OF BIRTH _____/_____/_____
month day year

For patients: The following questions will help us determine which vaccines you may be given today. If you answer "yes" to any question, it does not necessarily mean you should not be vaccinated. It just means we need to ask you more questions. If a question is not clear, please ask your healthcare provider to explain it.

	yes	no	don't know
1. Are you sick today?	☐	☐	☐
2. Do you have allergies to medications, food, a vaccine component, or latex?	☐	☐	☐
3. Have you ever had a serious reaction after receiving a vaccine?	☐	☐	☐
4. Do you have any of the following: a long-term health problem with heart, lung, kidney, or metabolic disease (e.g., diabetes), asthma, a blood disorder, no spleen, a cochlear implant, or a spinal fluid leak? Are you on long-term aspirin therapy?	☐	☐	☐
5. Do you have cancer, leukemia, HIV/AIDS, or any other immune system problem?	☐	☐	☐
6. Do you have a parent, brother, or sister with an immune system problem?	☐	☐	☐
7. In the past 6 months, have you taken medications that affect your immune system, such as prednisone, other steroids, or anticancer drugs; drugs for the treatment of rheumatoid arthritis, Crohn's disease, or psoriasis; or have you had radiation treatments?	☐	☐	☐
8. Have you had a seizure or a brain or other nervous system problem?	☐	☐	☐
9. Have you ever been diagnosed with a heart condition (myocarditis or pericarditis) or have you had Multisystem Inflammatory Syndrome (MIS-A or MIS-C) after an infection with the virus that causes COVID-19?	☐	☐	☐
10. In the past year, have you received immune (gamma) globulin, blood/blood products, or an antiviral drug?	☐	☐	☐
11. Are you pregnant?	☐	☐	☐
12. Have you received any vaccinations in the past 4 weeks?	☐	☐	☐
13. Have you ever felt dizzy or faint before, during, or after a shot?	☐	☐	☐
14. Are you anxious about getting a shot today?	☐	☐	☐

FORM COMPLETED BY _____ DATE _____

FORM REVIEWED BY _____ DATE _____

Did you bring your immunization record card with you? **yes** ☐ **no** ☐

It is important to have a personal record of your vaccinations. If you don't have a personal record, ask your healthcare provider to give you one. Keep this record in a safe place and bring it with you every time you seek medical care. Make sure your healthcare provider records all your vaccinations on it.

Information for Healthcare Professionals about the Screening Checklist for Contraindications to Vaccines for Adults

*Read the information below for help interpreting answers to the screening checklist. To learn even more, consult the references in **Note** below.*

NOTE: For additional details, see CDC's "Adult Immunization Schedule" (www.cdc.gov/vaccines/schedules/hcp/imz/adult.html) and *General Best Practice Guidelines for Immunization* sections on "Contraindications and Precautions" (www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html) and "Altered Immunocompetence" (www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html). For more details on COVID-19 vaccines, see "Use of COVID-19 Vaccines in the United States: Interim Clinical Considerations" at www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html.

1. **Are you sick today?** *[all vaccines]*

   There is no evidence that acute illness reduces vaccine efficacy or safety. However, as a precaution, all vaccines should be delayed until moderate or severe acute illness has improved. Mild illnesses with or without fever (e.g., otitis media, "colds," diarrhea) and antibiotic use are not contraindications to routine vaccination.

2. **Do you have allergies to medications, food, a vaccine ingredient, or latex?** *[all vaccines]*

   Gelatin: If a person has anaphylaxis after eating gelatin, do not give vaccines containing gelatin. **Latex:** An anaphylactic reaction to latex is a contraindication to vaccines with latex as part of the vaccine's packaging (e.g., vial stoppers, prefilled syringe plungers, prefilled syringe caps). For details on latex in vaccine packaging, refer to the package insert (listed at www.fda.gov/vaccines-blood-biologics/vaccines/vaccines-licensed-use-united-states). **COVID-19 vaccine:** History of a severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a COVID-19 vaccine component is a contraindication to use of the same vaccine type. People may receive the alternative COVID-19 vaccine type (either mRNA or protein subunit) if they have a contraindication or an allergy-related precaution to one COVID-19 vaccine type. Allergy-related precautions include history of 1) diagnosed non-severe allergy to a COVID-19 vaccine component; 2) non-severe, immediate (onset less than 4 hours) allergic reaction after a dose of one COVID-19 vaccine type (see **Note**). ***Not contraindications:*** **Eggs:** ACIP and CDC do not consider egg allergy of any severity to be a contraindication or precaution to any egg-based influenza vaccine. **Injection site reaction** (e.g., soreness, redness, delayed-type local-reaction) to a prior dose or vaccine component is not a contraindication to a subsequent dose or vaccine containing that component.

3. **Have you ever had a serious reaction after receiving a vaccine?** *[all vaccines]*
   - Anaphylaxis to a previous vaccine dose or vaccine component is a contraindication for subsequent doses of the vaccine or vaccine component. (See question 2.)
   - Usually, one defers vaccination when a precaution is present unless the benefit outweighs the risk (e.g., during an outbreak).

4. **Do you have any of the following: a long-term health problem with heart, lung, kidney, or metabolic disease (e.g., diabetes), asthma, a blood disorder, no spleen, a cochlear implant, or a spinal fluid leak? Are you on long-term aspirin therapy?** *[MMR, VAR, LAIV]*

   LAIV is not recommended for people with anatomic or functional asplenia, a cochlear implant, or cerebrospinal fluid (CSF) leak. Underlying health conditions that increase the risk of influenza complications such as heart, lung, kidney, or metabolic disease (e.g., diabetes) and asthma are precautions for LAIV. **MMR:** A history of thrombocytopenia or thrombocytopenic purpura is a precaution to MMR. **VAR:** Aspirin use is a precaution to VAR due to the association of aspirin use, wild type varicella infection, and Reye syndrome in children and adolescents.

5. **Do you have cancer, leukemia, HIV/AIDS, or any other immune system problem?** *[LAIV, MMR, VAR]*

   Live virus vaccines are usually contraindicated in immunocompromised people, with exceptions. For example, MMR vaccine is recommended and VAR may be considered for adults with CD4+ T-cell counts of greater than or equal to 200 cells/mcL. See **Note**.

6. **Do you have a parent, brother, or sister with an immune system problem?** *[MMR, VAR]*

   MMR or VAR should not be administered to a patient with congenital or hereditary immunodeficiency in a first-degree relative (e.g., parent, sibling) unless the patient's immune competence has been verified clinically or by a laboratory.

7. **In the past 6 months, have you taken medicines that affect your immune system, such as prednisone, other steroids, or anticancer drugs; drugs for the treatment of rheumatoid arthritis, Crohn's disease, or psoriasis; or have you had radiation treatments?** *[LAIV, MMR, VAR]*

   Live virus vaccines should be postponed until chemotherapy or long-term high-dose steroid therapy concludes. See **Note**. Some immune mediator and modulator drugs (especially anti-tumor necrosis factor [TNF] agents) may be immunosuppressive. Avoid live virus vaccines in people taking immunosuppressive drugs. A list of such drugs appears in CDCs Yellow Book at wwwwnc.cdc.gov/travel/yellowbook/2024/additional-considerations/immunocompromised-travelers.

8. **Have you had a seizure or a brain or other nervous system problem?** *[influenza, Td/Tdap]*

   Tdap: Tdap is contraindicated in people with a history of encephalopathy within 7 days following DTP/DTaP. An unstable progressive neurologic problem is a precaution to using Tdap. For people with stable neurologic disorders (including seizures) unrelated to vaccination, vaccinate as usual. **A history of Guillain-Barré syndrome (GBS):** 1) **Td/Tdap**: GBS within 6 weeks of a tetanus toxoid-containing vaccine is a precaution; if the decision is made to vaccinate, give Tdap instead of Td; 2) **all influenza vaccines**: GBS within 6 weeks of an influenza vaccine is a precaution; influenza vaccination should generally be avoided unless the benefits outweigh the risks (e.g., for those at high risk for influenza complications).

9. **Have you ever been diagnosed with a heart condition (myocarditis or pericarditis) or have you had Multisystem Inflammatory Syndrome (MIS-A or MIS-C) after an infection with the virus that causes COVID-19?**

   Precautions to COVID-19 vaccination include a history of myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vaccine or a history of Multisystem Inflammatory Syndrome (MIS-C or MIS-A). Myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vaccine is a precaution: the patient should generally not receive additional COVID-19 vaccine. A person with a history of myocarditis or pericarditis unrelated to vaccination may receive a COVID-19 vaccine once the condition has completely resolved. A person with a history of MIS-C or MIS-A may be vaccinated if the condition has fully resolved and it has been at least 90 days since diagnosis. Refer to CDC COVID-19 vaccine guidance for additional considerations for myocarditis, pericarditis, and MIS (see **Note**).

10. **In the past year, have you received immune (gamma) globulin, blood/blood products or an antiviral drug?** *[MMR, VAR, LAIV]*

    See **Note** (schedule) for antiviral drug information (VAR, LAIV). See "Timing and Spacing of Immunobiologics" (www.cdc.gov/vaccines/hcp/acip-recs/general-recs/timing.html#antibody) for intervals between MMR, VAR and certain blood/blood products, or immune globulin.

11. **Are you pregnant?** *[HPV, HepB, IPV, LAIV, MenB, MMR, VAR]*

    Live virus vaccines (e.g., LAIV, MMR, VAR) are contraindicated in pregnancy due to the theoretical risk of virus transmission to the fetus. People who could become pregnant and receive a live virus vaccine should be instructed to avoid pregnancy for 1 month after vaccination. **IPV and MenB** should not be given except to those with an elevated risk of exposure during pregnancy. **HepB:** Heplisav-B and PreHevbrio are not recommended during pregnancy, use Engerix-B or Recombivax-HB. **HPV** is not recommended during pregnancy.

12. **Have you received any vaccinations in the past 4 weeks?** *[LAIV, MMR, VAR, yellow fever]*

    People given live virus vaccines, such as those listed above, should wait 28 days before receiving another live virus vaccine (wait 30 days for yellow fever vaccine). Inactivated vaccines may be given at the same time or at any spacing interval.

13. **Have you ever felt dizzy or faint before, during, or after a shot?**

    Fainting (syncope) or dizziness is not a contraindication or precaution to vaccination; it may be an anxiety-related response to any injection. CDC recommends vaccine providers consider observing all patients for 15 minutes after vaccination. See Immunize.org's resource on vaccination and syncope at www.immunize.org/catg.d/p4260.pdf.

14. **Are you anxious about getting a shot today?**

    Anxiety can lead to vaccine avoidance. Simple steps can help a patient's anxiety about vaccination. Visit Immunize.org's "Addressing Vaccination Anxiety" clinical resources at www.immunize.org/handouts.

VACCINE ABBREVIATIONS

HepB = Hepatitis B vaccine
HPV = Human papillomavirus vaccine
IIV = Inactivated influenza vaccine
ccIIV = Cell culture inactivated influenza vaccine
IPV = Inactivated poliovirus vaccine
LAIV = Live attenuated influenza vaccine
MenB = Meningococcal B vaccine
MMR = Measles, mumps, and rubella vaccine
RIV = Recombinant influenza vaccine
Td/Tdap = Tetanus, diphtheria, (acellular pertussis) vaccine
VAR = Varicella vaccine

Vaccine Administration Record for Children and Teens

Before administering any vaccines, give copies of all pertinent Vaccine Information Statements (VISs) to the child's parent or legal representative and make sure they understand the risks and benefits of the vaccine(s). Always provide or update the patient's personal record card.

Patient name _____

Birthdate _____ Chart number _____

PRACTICE NAME AND ADDRESS

Vaccine	Type of Vaccine[1]	Date vaccine given (mo/day/yr)	Funding Source (F,S,P)[2]	Site[3]	Vaccine		Vaccine Information Statement (VIS)		Vaccinator[5] (signature or initials and title)
					Lot #	Mfr.	Date on VIS[4]	Date given[4]	
Hepatitis B[6] (e.g., HepB, DTaP-HepB-IPV, DTaP-IPV-Hib-HepB) Give IM.[7]									
RSV-mAb[8] Give IM.[7]									
Diphtheria, Tetanus, Pertussis[6] (e.g., DTaP, DTaP-HepB-IPV, DTaP-IPV-Hib-HepB, DTaP-IPV/Hib, DTaP-IPV, Tdap, Td) Give IM.[7]									
***Haemophilus influenzae* type b**[6] (e.g., Hib, Hib-DTaP-IPV/Hib, DTaP-IPV-Hib-HepB) Give IM.[7]									
Polio[6] (e.g., IPV, DTaP-HepB-IPV, DTaP-IPV/Hib, DTaP-IPV, DTaP-IPV-Hib-HepB) Give IPV Subcut or IM.[7] Give all others IM.[7]									
Pneumococcal (e.g., PCV13, PCV15, PCV20; PPSV23) Give PCV IM.[7] Give PPSV23 Subcut or IM.[7]									
Rotavirus (RV1, RV5) Give orally (po).									

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Abbreviation	Trade Name and Manufacturer
DTaP	Daptacel (Sanofi); Infanrix (GSK); Tripedia (Sanofi)
DTaP-HepB-IPV	Pediarix (GSK)
DTaP-IPV/Hib	Pentacel (Sanofi)
DTaP-IPV	Kinrix (GSK); Quadracel (Sanofi)
DTaP-IPV-Hib-HepB	Vaxelis (MCM Vaccine)
Tdap	Adacel (Sanofi); Boostrix (GSK)
Td	Tenivac (Sanofi); Tdvax (MA Biological Labs)
HepB (see note #1)	Engerix-B (GSK), Recombivax HB (Merck); Heplisav-B (Dynavax); PreHevbrio (VBI Vaccines) for 18 yrs & older
HepA-HepB	Twinrix (GSK) for teens age 18 yrs & older
Hib	ActHIB (Sanofi), Hiberix (GSK), PedvaxHIB (Merck)
IPV	IPOL (Sanofi)
RSV-mAb	Beyfortus (Sanofi & AstraZeneca)
PCV13; PCV15: PCV20	PCV13: Prevnar 13 (Pfizer); PCV15: Vaxneuvance (Merck); PCV20: Prevnar 20 (Pfizer)
PPSV23	Pneumovax 23 (Merck)
RV1; RV5	RV1: Rotarix (GSK); RV5: RotaTeq (Merck)

How to Complete this Record

1. Record the standard abbreviation (e.g., Tdap) or the trade name for each vaccine (see table at right). Use trade name for HepB if vaccinating an older teen (schedule varies by brand).
2. Record the funding source of the vaccine given as either F (federal), S (state), or P (private).
3. Record the site where vaccine was administered as either RA (right arm), LA (left arm), RT (right thigh), LT (left thigh), or NAS (intranasal).
4. Record the publication date of each VIS as well as the date the VIS is given to the patient.
5. To meet the space constraints of this form and federal requirements for documentation, a healthcare setting should keep a reference list of vaccinators that includes their initials and titles.
6. For combination vaccines, fill in a row for each antigen in the combination.
7. IM is the abbreviation for intramuscular; Subcut is the abbreviation for subcutaneous.
8. RSV monoclonal antibody (mAb) is a passive immunization product, not a vaccine, routinely recommended for seasonal prevention of RSV disease in infants. Record administration in an equivalent manner.

www.immunize.org/catg.d/p2022.pdf

Item #P2022 (9/18/2023)

Vaccine Administration Record for Children and Teens (continued)

Patient name _____

Birthdate _____ Chart number _____

PRACTICE NAME AND ADDRESS

Before administering any vaccines, give copies of all pertinent Vaccine Information Statements (VISs) to the child's parent or legal representative and make sure they understand the risks and benefits of the vaccine(s). Always provide or update the patient's personal record card.

Vaccine	Type of Vaccine[1]	Date vaccine given (mo/day/yr)	Funding Source (F,S,P)[2]	Site[3]	Vaccine		Vaccine Information Statement (VIS)		Vaccinator[5] (signature or initials and title)
					Lot #	Mfr.	Date on VIS[4]	Date given[4]	
Measles, Mumps, Rubella (e.g., MMR, MMRV) Give MMRII and MMRV Subcut or IM; give Priorix Subcut.[6]									
Varicella (e.g., VAR, MMRV) Give Subcut or IM.[6]									
Hepatitis A (HepA) Give IM.[6]									
Meningococcal ACWY (MenACWY) Give IM.[6]									
Meningococcal B (MenB-4C, MenB-FHbp) Give IM.[6]									
Human papillomavirus (HPV) Give IM.[6]									
Influenza (IIV, ccIIV, RIV, LAIV) Give IIV, ccIIV, and RIV IM.[6] Give LAIV NAS.[6]									
COVID-19 (e.g., COV-mRNA; COV-aPS) Give IM.[6]									
Other (e.g., dengue)									

Abbreviation	Trade Name and Manufacturer
MMR	MMR II (Merck); Priorix (GSK)
VAR	Varivax (Merck)
MMRV	ProQuad (Merck)
HepA	Havrix (GSK); Vaqta (Merck)
HepA-HepB	Twinrix (GSK) for teens age 18 and older
MenACWY	MenQuadfi (Sanofi); Menveo (GSK)
MenB-4C (see note #1)	Bexsero (GSK)
MenB-FHbp (see note #1)	Trumenba (Pfizer)
HPV	Gardasil 9 (Merck)
ccIIV (cell culture-based IIV)	Flucelvax (Seqirus) for teens 18 and older
IIV (inactivated influenza vaccine)	Fluarix, FluLaval (GSK); Afluria (Seqirus); Flubok (Sanofi)
LAIV (live attenuated influenza vaccine)	FluMist (AstraZeneca)
RIV (recombinant influenza vaccine)	RIV: Flublok (Sanofi) for teens 18 and older
COV-mRNA (see note #1)	Comirnaty (Pfizer-BioNTech); Spikevax (Moderna)
COV-aPS (see note #1)	Novavax (Novavax)
Other (e.g., dengue)	Dengue vaccine: Dengvaxia (Sanofi)

How to Complete this Record

1. For meningococcal B and COVID-19 vaccines, record the trade name (see table at right); for all other vaccines, record the standard abbreviation (e.g., HPV) or trade name for each vaccine (see table at right).
2. Record the funding source of the vaccine given as either F (federal), S (state), or P (private).
3. Record the site where vaccine was administered as either RA (right arm), LA (left arm), RT (right thigh), LT (left thigh), or NAS (intranasal).
4. Record the publication date of each VIS as well as the date the VIS is given to the patient.
5. To meet the space constraints of this form and federal requirements for documentation, a healthcare setting should keep a reference list of vaccinators that includes their initials and titles.
6. IM is the abbreviation for intramuscular; Subcut is the abbreviation for subcutaneous; NAS is the abbreviation for intranasal.
7. For combination vaccines, fill in a row for each antigen in the combination.

Vaccine Administration Record for Adults

Before administering any vaccines, give the patient copies of all pertinent Vaccine Information Statements (VISs) and make sure they understand the risks and benefits of the vaccine(s). Always provide or update the patient's personal record card.

Patient name _____

Birthdate _____ Chart number _____

PRACTICE NAME AND ADDRESS

Vaccine	Type of Vaccine[1]	Date vaccine given (mo/day/yr)	Funding Source (F,S,P)[2]	Site[3]	Vaccine		Vaccine Information Statement (VIS)		Vaccinator[5] (signature or initials and title)
					Lot #	Mfr.	Date on VIS[4]	Date given[4]	
Tetanus, Diphtheria, Pertussis (e.g., Tdap, Td) Give IM.[3]									
Hepatitis A[6] (e.g., HepA, HepA-HepB) Give IM.[3]									
Hepatitis B[6] (e.g., HepB, HepA-HepB) Give IM.[3]									
Human papillomavirus (HPV) Give IM.[3]									
Measles, Mumps, Rubella (MMR) Give MMRII Subcut or IM; give Priorix Subcut.[3]									
Varicella (VAR) Give Subcut or IM.[3]									
Meningococcal ACWY (MenACWY) Give MenACWY IM.[3]									
Meningococcal B (e.g., MenB-4C, MenB-FHbp) Give MenB IM.[3]									

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Abbreviation	Trade Name and Manufacturer
Tdap	Adacel (Sanofi); Boostrix (GSK)
Td	Tenivac (Sanofi); Tdvax (MA Biological Labs)
HepA	Havrix (GSK); Vaqta (Merck)
HepB (see note #1)	Engerix-B (GSK); Recombivax HB (Merck); Heplisav-B (Dynavax); PreHevbrio (VBI)
HepA-HepB	Twinrix (GSK)
HPV	Gardasil 9 (Merck)
MMR	MMR II (Merck); Priorix (GSK)
VAR	Varivax (Merck)
MenACWY	MenQuadfi (Sanofi); Menveo (GSK)
MenB-4C (see note #1)	Bexsero (GSK)
MenB-FHbp (see note #1)	Trumenba (Pfizer)

How to Complete this Record

1. For hepatitis B and meningococcal B vaccines, record the trade name (see table at right); for all other vaccines, record the standard abbreviation (e.g., Tdap).
2. Record the funding source of the vaccine given as either F (federal), S (state), or P (private).
3. Record the route by which the vaccine was given as either intramuscular (IM), subcutaneous (Subcut), or intranasal (NAS), and also the site where it was administered as either RA (right arm), LA (left arm), RT (right thigh), or LT (left thigh).
4. Record the publication date of each VIS as well as the date the VIS is given to the patient.
5. To meet the space constraints of this form and federal requirements for documentation, a healthcare setting should keep a reference list of vaccinators that includes their initials and titles.
6. For combination vaccines, fill in a row for each antigen in the combination.

Vaccine Administration Record for Adults (continued)

Patient name _____

Birthdate _____ Chart number _____

PRACTICE NAME AND ADDRESS

Before administering any vaccines, give the patient copies of all pertinent Vaccine Information Statements (VISs) and make sure they understand the risks and benefits of the vaccine(s). Always provide or update the patient's personal record card.

Vaccine	Type of Vaccine[1]	Date vaccine given (mo/day/yr)	Funding Source (F,S,P)[2]	Site[3]	Vaccine		Vaccine Information Statement (VIS)		Vaccinator[5] (signature or initials and title)
					Lot #	Mfr.	Date on VIS[4]	Date given[4]	
Pneumococcal conjugate (e.g., PCV13, PCV15, PCV20) Give IM.[3]									
Pneumococcal polysaccharide (e.g., PPSV23) Give IM or Subcut.[3]									
Influenza (IIV, ccIIV, RIV, LAIV) Give IIV, ccIIV, and RIV IM.[3] Give LAIV NAS.[3]									
Zoster (shingles) Give RZV IM.[3]									
COVID-19 (e.g., COV-mRNA; COV-aPS) Give IM.[3]									
Hib Give IM.[3]									
RSV Give IM.[3]									
Other									

Abbreviation	Trade Name and Manufacturer
PCV13, PCV15, PCV20	Prevnar 13 (Pfizer); Vaxneuvance (Merck); Prevnar 20 (Pfizer)
PPSV23	Pneumovax 23 (Merck)
aIIV (adjuvanted inactivated influenza vaccine [IIV])	Fluad (GSK)
ccIIV (cell culture-based IIV)	Flucelvax (Seqirus)
HD-IIV (high-dose IIV)	Fluzone High-Dose (Sanofi)
LAIV (live attenuated influenza vaccine]	FluMist (AstraZeneca)
RIV (recombinant influenza vaccine)	Flublok (Sanofi)
SD-IIV (standard dose IIV)	Fluarix, FluLaval (GSK); Afluria (Seqirus); Fluzone (Sanofi)
RZV (recombinant zoster vaccine)	Shingrix (GSK)
COV-mRNA (see note #1)	Comirnaty (Pfizer-BioNTech); Spikevax (Moderna)
COV-aPS (see note #1)	Novavax (Novavax)
Hib	ActHIB (Sanofi); Hiberix (GSK); PedvaxHib (Merck)
RSV (respiratory syncytial virus vaccine) (see note #1)	Arexvy (GSK); Abrysvo (Pfizer)

How to Complete this Record

1. For RSV and COVID-19 vaccines, record the trade name (see table at right); for all other vaccines, record the standard abbreviation (e.g., RZV) or the trade name for each vaccine (see table at right).
2. Record the funding source of the vaccine given as either F (federal), S (state), or P (private).
3. Record the route by which the vaccine was given as either intramuscular (IM), subcutaneous (Subcut), or intranasal (NAS), and also the site where it was administered as either RA (right arm), LA (left arm), RT (right thigh), or LT (left thigh).
4. Record the publication date of each VIS as well as the date the VIS is given to the patient.
5. To meet the space constraints of this form and federal requirements for documentation, a healthcare setting should keep a reference list of vaccinators that includes their initials and titles.

APPENDIX F

Medical Management of Vaccine Reactions in Children and Teens in a Community Setting

The table below describes steps to take if an adverse reaction occurs after vaccination.

Administering any medicine, including vaccines, can cause an adverse reaction. Always verify container labels to ensure the correct product is being administered. To reduce the risk an adverse reaction, screen patients for vaccine contraindications and precautions before vaccination (see "Screening Checklist for Contraindications to Vaccines for Children and Teens" at www.immunize.org/catg.d/p4060.pdf).

When adverse reactions do occur, they can range from minor (e.g., soreness, itching) to serious (e.g., anaphylaxis). Be prepared.

Vaccinators should know how to recognize allergic reactions, including anaphylaxis. Have a plan and supplies ready to provide appropriate medical care if an event occurs.

REACTION	SIGNS AND SYMPTOMS	MANAGEMENT
Injection site	Soreness, redness, itching, or swelling	Apply a wet cloth to the injection site. Consider giving medication to reduce pain (e.g., Tylenol) or itching (e.g., Benadryl) if needed.
	Slight bleeding	Apply pressure and an adhesive compress over the injection site.
	Continuous bleeding	Place thick layer of gauze pads over site and maintain direct and firm pressure; raise the bleeding injection site (e.g., arm) above the level of the patient's heart.
Psychological fright and syncope (fainting)	Anxiety before injection	Have patient sit or lie down for the vaccination.
	Paleness, sweating, coldness of the hands and feet, nausea, light-headedness, dizziness, weakness, or visual disturbances	Have patient lie flat. Loosen any tight clothing and maintain open airway. Apply cool, damp cloth to patient's face and neck. Keep patient under close observation until full recovery.
	Fall, without loss of consciousness	Check the patient for injury before trying to move the patient. Place patient flat on back with feet elevated.
	Loss of consciousness	Check the patient for injury before trying to move the patient. Place patient flat on back with feet elevated. Call 911 if patient does not recover promptly.
Anaphylaxis	**Skin and mucosal symptoms** such as generalized hives, itching, or flushing; swelling of lips, face, throat, or eyes. **Respiratory symptoms** such as nasal congestion, change in voice, sensation of throat closing, stridor, shortness of breath, wheeze, or cough. **Gastrointestinal symptoms** such as nausea, vomiting, diarrhea, cramping abdominal pain. **Cardiovascular symptoms** such as collapse, dizziness, tachycardia, hypotension.	See next page for details on treating anaphylaxis.

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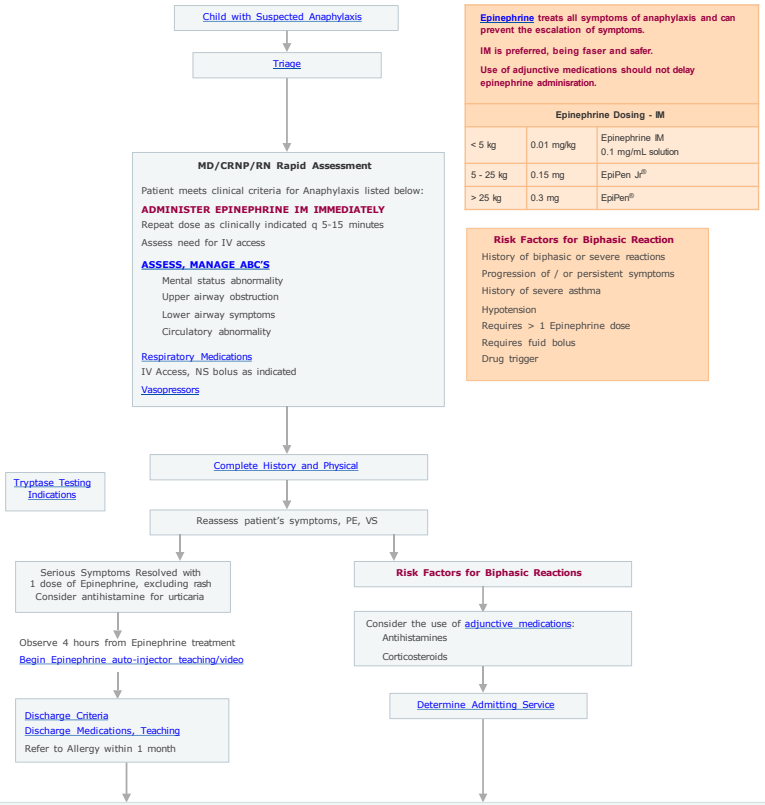
APPENDIX G

Emergency Department Clinical Pathway for Evaluation/Treatment of Children with Anaphylaxis



CLINICAL CRITERIA FOR DIAGNOSING ANAPHYLAXIS

Anaphylaxis is highly likely when ONE of the following 3 criteria are fulfilled, usually within minutes to 2-3 hours following possible allergen exposure

CRITERIA 1	**Acute onset** of an illness with involvement of the skin, mucosal tissue, or both(e.g., generalized hives, pruritis or fushing, swollen lip-tongue-uvula) AND AT LEAST ONE OF THE FOLLOWING Respiratory compromise Reduced BP or associated symptoms of end-organ dysfunction Persisent GI Symptoms, Signifcant abdominal pain and/or signifcant vomiting
CRITERIA 2	Two or more of the following that occur rapidly after exposure to a **LIKELY ALLERGEN** *for that patient*: Involvement of the skin-mucosal tissue Respiratory compromise Reduced BP or associated symptoms Persisent gasrointesinal symptoms
CRITERIA 3	Reduced BP after exposure to **KNOWN ALLERGEN** *for that patient*

Posted: June, 2006
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Children's Hospital of Philadelphia - https://www.chop.edu/clinical-pathway/anaphylaxis-emergent-care-clinical-pathway

APPENDIX H

Medical Management of Vaccine Reactions in Adults in a Community Setting

The table below describes steps to take if an adverse reaction occurs after vaccination.

Administering any medicine, including vaccines, can cause an adverse reaction. Always verify container labels to ensure the correct product is being administered. To reduce the risk of an adverse reaction, screen patients for vaccine contraindications and precautions before vaccination (see "Screening Checklist for Contraindications to Vaccines for Adults" at www.immunize.org/catg.d/p4065.pdf).

When adverse reactions do occur, they can range from minor (e.g., soreness, itching) to serious (e.g., anaphylaxis). Be prepared.

Vaccinators should know how to recognize allergic reactions, including anaphylaxis. Have a plan and supplies ready to provide appropriate medical care if an event occurs.

REACTION	SIGNS AND SYMPTOMS	MANAGEMENT
Injection site	Soreness, redness, itching, or swelling	Apply a wet cloth to the injection site. Consider giving medication to reduce pain (e.g., Tylenol) or itching (e.g., Benadryl) if needed.
	Slight bleeding	Apply pressure and an adhesive compress over the injection site.
	Continuous bleeding	Place thick layer of gauze pads over site and maintain direct and firm pressure. Raise the bleeding injection site (e.g., arm) above the level of the patient's heart.
Psychological fright, presyncope, and syncope (fainting)	Anxiety before injection	Have patient sit or lie down for the vaccination.
	Patient feels "faint" (e.g., light-headed, dizzy, weak, nauseated, or has visual disturbance)	Have patient lie flat. Loosen any tight clothing and maintain open airway. Apply cool, damp cloth to patient's face and neck. Keep patient under close observation until full recovery.
	Fall, without loss of consciousness	Check the patient for injury before trying to move the patient. Place patient flat on back with feet elevated.
	Loss of consciousness	Check the patient for injury before trying to move the patient. Place patient flat on back with feet elevated. Call 911 if patient does not recover promptly.
Anaphylaxis	**Skin and mucosal symptoms** such as generalized hives, itching, or flushing; swelling of lips, face, throat, or eyes. **Respiratory symptoms** such as nasal congestion, change in voice, sensation of throat closing, stridor, shortness of breath, wheeze, or cough. **Gastrointestinal symptoms** such as nausea, vomiting, diarrhea, cramping abdominal pain. **Cardiovascular symptoms** such as collapse, dizziness, tachycardia, hypotension.	See next page for details on treating anaphylaxis.

CONTINUED ON THE NEXT PAGE ▶

Supply List for Managing Anaphylaxis

FIRST-LINE medication

- ☐ **Epinephrine** 1 mg/mL aqueous solution (1:1000 concentration) in prefilled autoinjector or various vials or ampules. At least three epinephrine doses should be available onsite.

OPTIONAL medications: H_1 antihistamines

- ☐ **Diphenhydramine** (e.g., Benadryl) oral, 12.5 mg/5 mL liquid, 25 or 50 mg capsules or tablets

Additional emergency supplies

- ☐ Syringes (1 and 3 mL) and needles (22 and 25 g, 1", 1½", and 2") if needed for epinephrine
- ☐ Alcohol wipes
- ☐ Stethoscope
- ☐ Blood pressure measuring device (with a variety of cuff sizes as needed)
- ☐ Light with extra batteries (for examination of the mouth and throat)
- ☐ A timing device, such as wristwatch, for measuring pulse
- ☐ Cell phone or access to onsite phone
- ☐ CPR rescue mask with one-way valve
- ☐ Oxygen (if available)

See also "Supplies You May Need at an Immunization Clinic" at www.immunize.org/catg.d/p3046.pdf.

REFERENCES

Campbell RL, Kelso JM, Anaphylaxis: Emergency treatment, updated August 4, 2022 in UpToDate, www.uptodate.com/contents/anaphylaxis-emergency-treatment

Kroger A, Bahta L, Long S, Sanchez P. General Best Practice Guidelines for Immunization. Best Practices Guidance of the Advisory Committee on Immunization Practices (ACIP) at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html.

Emergency medical protocol for managing anaphylaxis in adults

1. If itching and swelling are limited to the injection site, observe patient closely for the development of generalized symptoms.
2. If symptoms are generalized, alert the lead clinical healthcare professional on-site and call 911. A healthcare professional should assess the airway, breathing, circulation, and level of consciousness of the patient. Monitor vital signs at 5-minute intervals.
3. **DOSING INFORMATION: The most important therapy in anaphylaxis is epinephrine. There are NO absolute contraindications to epinephrine in the setting of anaphylaxis.**

   a **First-line treatment: EPINEPHRINE is the first-line treatment for anaphylaxis.** Use **epinephrine** in a 1 mg/mL aqueous solution (1:1000 concentration). Administer a 0.3 mg dose IM using an autoinjector in the mid-outer thigh. If using another epinephrine formulation, the recommended dose is 0.01 mg/kg, ranging for adults from 0.3 mg to maximum dose of 0.5 mg. Administer IM, preferably in the mid-outer thigh.

   Epinephrine doses may be repeated 2 additional times at 5–15 minute intervals while waiting for EMS to arrive.

   b **Optional treatment: H_1 ANTIHISTAMINES** relieve itching and urticaria (hives). These medications DO NOT relieve upper or lower airway obstruction, hypotension, or shock. Consider giving diphenhydramine (e.g., Benadryl) for relief of itching and hives. Administer orally 1–2 mg/kg every 4–6 hours, up to a maximum single dose of 100 mg.
4. Monitor blood pressure and pulse every 5 minutes. Perform cardiopulmonary resuscitation (CPR), if necessary, and maintain airway. Keep patient in recumbent position (flat on back) unless he or she is having breathing difficulty. If breathing is difficult, patient's head may be elevated, provided blood pressure is adequate to prevent loss of consciousness. If blood pressure is low, elevate legs.
5. Record the patient's reaction (e.g., hives, anaphylaxis) to the vaccine, all vital signs, medications administered to the patient, including the time, dosage, response, and the name of the medical personnel who administered the medication, and other relevant clinical information.
6. Notify the patient's primary care physician.
7. Report the incident to the Vaccine Adverse Event Reporting System (VAERS) at www.vaers.hhs.gov/reportevent.html.

This policy and procedure shall remain in effect for all patients of the _____ (NAME OF PRACTICE OR CLINIC)

effective _____ (DATE) until rescinded or until _____ (DATE).

Medical Director _____ (PRINT NAME) / _____ (SIGNATURE) _____ (DATE)

United States Vaccine Names

United States Vaccines

Vaccine	Trade Name	Abbreviation	Manufacturer	Route	Doses in Routine Series	Approved Ages	Comments
Adenovirus	Adenovirus Type 4 & Type 7	N/A	Teva Pharmaceutical Industries Ltd.	Oral (2 Tablets)	1	17-50 years	Live: Approved for military populations; not approved for pregnant women
Anthrax	BioThrax®	AVA	Emergent BioSolutions	IM	3	18-65 years	Cell-free filtrate from avirulent strain, Adj.
Cholera	Vaxchora™†	N/A	Emergent BioSolutions	Oral (Liquid)	1	18-64 years	Live Attenuated
DTaP	Daptacel®	DTaP	Sanofi	IM	5	6 weeks-6 years	Inactivated, Adj.
	Infanrix™	DTaP	GlaxoSmithKline	IM	5	6 weeks-6 years	Inactivated, Adj.
DT	N/A (Generic)	DT	Sanofi	IM	5	6 weeks-6 years	Inactivated, Adj.: Use when pertussis is contraindicated
***Haemophilus influenzae type b* (Hib)**	ActHIB®	Hib (PRP-T)	Sanofi	IM	4	2 months-5 years	Inactivated (Tetanus toxoid conjugate)
	Hiberix™	Hib (PRP-T)	GlaxoSmithKline	IM	4	6 weeks- 4 years	Inactivated (Tetanus toxoid conjugate)
	PedvaxHIB®	Hib (PRP-OMP)	Merck	IM	3	2-71 months	Inactivated, Adj. (Meningococcal conjugate)
Hepatitis A	Havrix™	HepA	GlaxoSmithKline	IM	2	Pediatric: 12 months-18 years; Adult: ≥19 years	Inactivated, Adj.
	Vaqta®	HepA	Merck	IM	2	Pediatric: 12 months-18 years; Adult: ≥19 years	Inactivated, Adj.
Hepatitis B	Engerix-B™	HepB	GlaxoSmithKline	IM	3	Pediatric: Birth-19 years Adult: ≥20 years	Recombinant, Adj.
	Recombivax HB®	HepB	Merck	IM	3	Pediatric: Birth-19 years Adult: ≥20 years	Recombinant, Adj.
	Heplisav-B®	HepB	Dynavax Technologies	IM	2	≥18 years	Recombinant, Adj.
Herpes Zoster (Shingles)	Shingrix™	RZV	GlaxoSmithKline	IM	2	≥50 years	Recombinant, Adj.

Vaccine	Trade Name	Abbreviation	Manufacturer	Route	Doses in Routine Series	Approved Ages	Comments
Human Papillomavirus (HPV)	Gardasil® 9	9vHPV	Merck	IM	2 or 3	9-45 years	Recombinant, Adj. ACIP recommends 9-26 years
Influenza*	Afluria Quadrivalent®	IIV4	Seqirus	IM	1 or 2	≥6 months	Inactivated
	Fluad® Quadrivalent	aIIV4	Seqirus	IM	1	≥65 years	Inactivated, Adj.
	Fluarix™ Quadrivalent	IIV4	GlaxoSmithKline	IM	1 or 2	≥6 months	Inactivated
	Flublok® Quadrivalent	RIV4	Sanofi	IM	1	≥18 years	Recombinant, Egg-Free
	Flucelvax® Quadrivalent	ccIIV4	Seqirus	IM	1 or 2	≥2 years	Cell-culture, Egg-free
	FluLaval™ Quadrivalent	IIV4	GlaxoSmithKline	IM	1 or 2	≥6 months	Inactivated
	FluMist® Quadrivalent	LAIV4	AstraZeneca	Intranasal	1 or 2	2-49 years	Live Attenuated
	Fluzone® Quadrivalent	IIV4	Sanofi	IM	1 or 2	≥6 months	Inactivated
	Fluzone® High-Dose Quadrivalent	HD-IIV4	Sanofi	IM	1	≥65 years	Inactivated
Japanese encephalitis	Ixiaro®	JE	Valneva	IM	2	≥2 months	Inactivated, Adj.
Measles, Mumps, Rubella	M-M-R® II	MMR	Merck	SC	2	≥12 months	Live Attenuated
Meningococcal (serogroups A, C, W, and Y)	Menactra®	MenACWY-D	Sanofi	IM	2	9 months-55 years	Inactivated (Polysaccharide diphtheria toxoid conjugate)
	Menquadfi™	MenACWY-TT	Sanofi	IM	2	≥2 years	Inactivated (Polysaccharide tetanus toxoid conjugate)
	Menveo™	MenACWY-CRM	GlaxoSmithKline	IM	2	2 months-55 years	Inactivated (Polysaccharide CRM_{197} conjugate)
Meningococcal (serogroup B)	Trumenba®	MenB-FHbp	Pfizer	IM	2 or 3	10-25 years	Recombinant, Adj.
	Bexsero™	MenB-4C	GlaxoSmithKline	IM	2	10-25 years	Recombinant, Adj.

Vaccine	Trade Name	Abbreviation	Manufacturer	Route	Doses in Routine Series	Approved Ages	Comments
Pneumococcal	Pneumovax® 23	PPSV23	Merck	IM or SC	1	≥2 years	Inactivated Polysaccharide
	Prevnar 13®	PCV13	Pfizer	IM	4 (pediatric) 1 (adult)	Pediatric: ≥6 weeks Adult: >65 years	Inactivated, Adj. (CRM_{197} conjugate)
Polio	Ipol®	IPV	Sanofi	IM or SC	4	≥6 weeks	Inactivated
Rabies	Imovax®	N/A	Sanofi	IM	2-3 (pre-exposure) 4 (post-exposure)	All ages	Inactivated
	RabAvert®	N/A	Bavarian Nordic	IM	2-3 (pre-exposure) 4 (post-exposure)	All ages	Inactivated
Rotavirus	RotaTeq®	RV5	Merck	Oral (Liquid)	3	6-32 weeks	Live, Pentavalent
	Rotarix™	RV1	GlaxoSmithKline	Oral (Liquid)	2	6-24 weeks	Live, Monovalent
Tetanus, (reduced) Diphtheria	Tenivac®	Td	Sanofi	IM	1 (Every 10 years)	≥7 years	Inactivated, Adj.
	TdVax™	Td	Massachusetts Biological Labs	IM	1 (Every 10 years)	≥7 years	Inactivated, Adj.
Tetanus, (reduced) Diphtheria, (reduced) Pertussis	Boostrix™	Tdap	GlaxoSmithKline	IM	1	≥10 years	Inactivated, Adj.
	Adacel®	Tdap	Sanofi	IM	1	10-64 years	Inactivated, Adj.
Typhoid	Typhim Vi®	N/A	Sanofi	IM	1	≥2 years	Inactivated Polysaccharide
	Vivotif®	N/A	Emergent BioSolutions	Oral (Capsules)	4	≥6 years	Live Attenuated
Varicella	Varivax®	VAR	Merck	SC	2	≥12 months	Live Attenuated
Smallpox (Vaccinia)	ACAM2000®	—	Emergent BioSolutions	Percutaneous	1	All ages	Live Attenuated
Smallpox and Monkeypox	JYNNEOS®	—	Bavarian Nordic	SC	2	≥18 years	Live, Non-replicating
Yellow Fever	YF-Vax®	YF	Sanofi	SC	1	≥9 months	Live Attenuated

The abbreviations on this table (Column 3) were standardized jointly by staff of the Centers for Disease Control and Prevention, Advisory Committee on Immunization Practices (ACIP) Work Groups, the editor of the Morbidity and Mortality Weekly Report (MMWR), the editor of Epidemiology and Prevention of Vaccine-Preventable Diseases (the Pink Book), ACIP members, and liaison organizations to the ACIP. These abbreviations are intended to provide a uniform approach to vaccine references used in ACIP Recommendations and Policy Notes published in the MMWR, the Pink Book, and the American Academy of Pediatrics Red Book, and in the U.S. immunization schedules for children, adolescents, and adults. In descriptions of combination vaccines, a hyphen (-) indicates products in which the active components are supplied in their final (combined) form by the manufacturer; a slash (/) indicates products in which active components must be mixed by the user.

"Doses in a Routine Series" (Column 6) reflects doses administered to a healthy patient at the recommended ages. It does not necessarily reflect schedules for patients with health conditions or other high-risk factors, alternative schedules, catch-up schedules, or booster doses not part of an initial series. For some combination vaccines, this column represents the routine number of doses for that product, and not necessarily the total number of doses in a complete series for the components. (For example, Kinrix or Quadracel may be used for only 1 dose of multi-dose DTaP and IPV series.)

"Adj." in the "Comments" column indicates that the vaccine contains an adjuvant.

A hyphen in an age range means "through" (i.e., "6 weeks-6 years" means 6 weeks through 6 years [to the 7th birthday]).

*All influenza vaccines in this table are 2021-2022 northern hemisphere formulations. For the most current recommendations on influenza, see: https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/flu.html

†May be limited in supply as manufacturer has temporarily stopped production

United States Combination Vaccines

Vaccine	Trade Name	Abbreviation	Manufacturer	Route	Doses in Routine Series	Approved Ages	Comments
DTaP, Polio	Kinrix™	DTaP-IPV	GlaxoSmithKline	IM	1	4-6 years	Inactivated, Adj.: Approved as 5th DTaP and 4th IPV.
	Quadracel®	DTaP-IPV	Sanofi	IM	1	4-6 years	Inactivated, Adj.: Approved as 5th DTaP and 4th IPV.
DTaP, hepatitis B, Polio	Pediarix™	DTaP-HepB-IPV	GlaxoSmithKline	IM	3	6 weeks-6 years	Inactivated, Adj.: Approved for 2, 4, 6 month doses.
DTaP, Polio, *Haemophilus* influenzae type b	Pentacel®	DTaP-IPV/Hib	Sanofi	IM	4	6 weeks-4 years	4 Inactivated, Adj.: Approved for 2, 4, 6, 15-18 month doses.
DTaP, Polio, *Haemophilus influenzae* type b, hepatitis B	Vaxelis™	DTaP-IPV-Hib-HepB	Sanofi	IM	3	6 weeks-4 years	Inactivated, Adj.: Approved for 2, 4, 6 month doses.
Hepatitis A, Hepatitis B	Twinrix™	HepA-HepB	GlaxoSmithKline	IM	3	≥18 years	Inactivated/Recombinant, Adj. Pediatric HepA + Adult HepB
Measles, Mumps, Rubella, Varicella	ProQuad®	MMRV	Merck	SC	2	12 months-12 years	Live Attenuated

The abbreviations on this table (Column 3) were standardized jointly by staff of the Centers for Disease Control and Prevention, Advisory Committee on Immunization Practices (ACIP) Work Groups, the editor of the Morbidity and Mortality Weekly Report (MMWR), the editor of Epidemiology and Prevention of Vaccine-Preventable Diseases (the Pink Book), ACIP members, and liaison organizations to the ACIP. These abbreviations are intended to provide a uniform approach to vaccine references used in ACIP Recommendations and Policy Notes published in the MMWR, the Pink Book, and the American Academy of Pediatrics Red Book, and in the U.S. immunization schedules for children, adolescents, and adults. In descriptions of combination vaccines, a hyphen (-) indicates products in which the active components are supplied in their final (combined) form by the manufacturer; a slash (/) indicates products in which active components must be mixed by the user.

"Doses in a Routine Series" (Column 6) reflects doses administered to a healthy patient at the recommended ages. It does not necessarily reflect schedules for patients with health conditions or other high-risk factors, alternative schedules, catch-up schedules, or booster doses not part of an initial series. For some combination vaccines, this column represents the routine number of doses for that product, and not necessarily the total number of doses in a complete series for the components. (For example, Kinrix or Quadracel may be used for only 1 dose of multi-dose DTaP and IPV series.)

"Adj." in the "Comments" column indicates that the vaccine contains an adjuvant.

A hyphen in an age range means "through" (i.e., "6 weeks-6 years" means 6 weeks through 6 years [to the 7th birthday]).

November 2021

Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger

Appendix J

UNITED STATES 2024

Monoclonal antibody	Abbreviation(s)	Trade name(s)
Respiratory syncytial virus monoclonal antibody (Nirsevimab)	**RSV-mAb**	Beyfortus™
Vaccine	**Abbreviation(s)**	**Trade name(s)**
COVID-19	**1vCOV-mRNA**	Comirnaty®/Pfizer-BioNTech COVID-19 Vaccine
		Spikevax®/Moderna COVID-19 Vaccine
	1vCOV-aPS	Novavax COVID-19 Vaccine
Dengue vaccine	**DEN4CYD**	Dengvaxia®
Diphtheria, tetanus, and acellular pertussis vaccine	**DTaP**	Daptacel® Infanrix®
Haemophilus influenzae type b vaccine	**Hib (PRP-T)**	ActHIB® Hiberix® PedvaxHIB®
	Hib (PRP-OMP)	
Hepatitis A vaccine	**HepA**	Havrix® Vaqta®
Hepatitis B vaccine	**HepB**	Engerix-B® Recombivax HB®
Human papillomavirus vaccine	**HPV**	Gardasil 9®
Influenza vaccine (inactivated)	**IIV4**	Multiple
Influenza vaccine (live, attenuated)	**LAIV4**	FluMist® Quadrivalent
Measles, mumps, and rubella vaccine	**MMR**	M-M-R II® Priorix®
Meningococcal serogroups A, C, W, Y vaccine	**MenACWY-CRM**	Menveo®
	MenACWY-TT	MenQuadfi®
Meningococcal serogroup B vaccine	**MenB-4C**	Bexsero®
	MenB-FHbp	Trumenba®
Meningococcal serogroup A, B, C, W, Y vaccine	**MenACWY-TT/ MenB-FHbp**	Penbraya™
Mpox vaccine	**Mpox**	Jynneos®
Pneumococcal conjugate vaccine	**PCV15** **PCV20**	Vaxneuvance™ Prevnar 20®
Pneumococcal polysaccharide vaccine	**PPSV23**	Pneumovax 23®
Poliovirus vaccine (inactivated)	**IPV**	Ipol®
Respiratory syncytial virus vaccine	**RSV**	Abrysvo™
Rotavirus vaccine	**RV1** **RV5**	Rotarix® RotaTeq®
Tetanus, diphtheria, and acellular pertussis vaccine	**Tdap**	Adacel® Boostrix®
Tetanus and diphtheria vaccine	**Td**	Tenivac® Tdvax™
Varicella vaccine	**VAR**	Varivax®
Combination vaccines *(use combination vaccines instead of separate injections when appropriate)*		
DTaP, hepatitis B, and inactivated poliovirus vaccine	**DTaP-HepB-IPV**	Pediarix®
DTaP, inactivated poliovirus, and *Haemophilus influenzae* type b vaccine	**DTaP-IPV/Hib**	Pentacel®
DTaP and inactivated poliovirus vaccine	**DTaP-IPV**	Kinrix® Quadracel®
DTaP, inactivated poliovirus, *Haemophilus influenzae* type b, and hepatitis B vaccine	**DTaP-IPV-Hib-HepB**	Vaxelis®
Measles, mumps, rubella, and varicella vaccine	**MMRV**	ProQuad®

*Administer recommended vaccines if immunization history is incomplete or unknown. Do not restart or add doses to vaccine series for extended intervals between doses. When a vaccine is not administered at the recommended age, administer at a subsequent visit. The use of trade names is for identification purposes only and does not imply endorsement by the ACIP or CDC.

11/16/2023

How to use the child and adolescent immunization schedule

1 Determine recommended vaccine by age **(Table 1)**

2 Determine recommended interval for catch-up vaccination **(Table 2)**

3 Assess need for additional recommended vaccines by medical condition or other indication **(Table 3)**

4 Review vaccine types, frequencies, intervals, and considerations for special situations **(Notes)**

5 Review contraindications and precautions for vaccine types **(Appendix)**

6 Review new or updated ACIP guidance **(Addendum)**

Recommended by the Advisory Committee on Immunization Practices (www.cdc.gov/vaccines/acip) and approved by the Centers for Disease Control and Prevention (www.cdc.gov), American Academy of Pediatrics (www.aap.org), American Academy of Family Physicians (www.aafp.org), American College of Obstetricians and Gynecologists (www.acog.org), American College of Nurse-Midwives (www.midwife.org), American Academy of Physician Associates (www.aapa.org), and National Association of Pediatric Nurse Practitioners (www.napnap.org).

Report

- Suspected cases of reportable vaccine-preventable diseases or outbreaks to your state or local health department
- Clinically significant adverse events to the Vaccine Adverse Event Reporting System (VAERS) at www.vaers.hhs.gov or 800-822-7967

Questions or comments

Contact www.cdc.gov/cdc-info or 800-CDC-INFO (800-232-4636), in English or Spanish, 8 a.m.–8 p.m. ET, Monday through Friday, excluding holidays

Download the CDC Vaccine Schedules app for providers at www.cdc.gov/vaccines/schedules/hcp/schedule-app.html

Helpful information

- Complete Advisory Committee on Immunization Practices (ACIP) recommendations: www.cdc.gov/vaccines/hcp/acip-recs/index.html
- ACIP Shared Clinical Decision-Making Recommendations: www.cdc.gov/vaccines/acip/acip-scdm-faqs.html
- *General Best Practice Guidelines for Immunization* (including contraindications and precautions): www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html
- Vaccine information statements: www.cdc.gov/vaccines/hcp/vis/index.html
- Manual for the Surveillance of Vaccine-Preventable Diseases (including case identification and outbreak response): www.cdc.gov/vaccines/pubs/surv-manual

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

Scan QR code for access to online schedule

CS310020-D

Table 3 Recommended Child and Adolescent Immunization Schedule by Medical Indication, United States, 2024

Always use this table in conjunction with Table 1 and the Notes that follow. Medical conditions are often not mutually exclusive. If multiple conditions are present, refer to guidance in all relevant columns. See Notes for medical conditions not listed.

Vaccine and other immunizing agents	Pregnancy	Immunocompromised (excluding HIV infection)	HIV infection CD4 percentage and count[a]		CSF leak or cochlear implant	Asplenia or persistent complement component deficiencies	Heart disease or chronic lung disease	Kidney failure, End-stage renal disease or on Dialysis	Chronic liver disease	Diabetes
			<15% or <200mm	≥15% and ≥200mm						
RSV-mAb (nirsevimab)		2nd RSV season		1 dose depending on maternal RSV vaccination status, See Notes			2nd RSV season for chronic lung disease (See Notes)	1 dose depending on maternal RSV vaccination status, See Notes		
Hepatitis B										
Rotavirus		SCID[b]								
DTaP/Tdap	DTaP Tdap: 1 dose each pregnancy									
Hib		HSCT: 3 doses	See Notes			See Notes				
Pneumococcal										
IPV										
COVID-19		See Notes								
IIV4										
LAIV4							Asthma, wheezing: 2–4 years[c]			
MMR	*									
VAR	*									
Hepatitis A										
HPV	*	3 dose series. See Notes								
MenACWY										
MenB										
RSV (Abrysvo)	Seasonal administration, See Notes									
Dengue										
Mpox	See Notes									

- Recommended for all age-eligible children who lack documentation of a complete vaccination series
- Not recommended for all children, but is recommended for some children based on increased risk for or severe outcomes from disease
- Recommended for all age-eligible children, and additional doses may be necessary based on medical condition or other indications. See Notes.
- Precaution: Might be indicated if benefit of protection outweighs risk of adverse reaction
- Contraindicated or not recommended *Vaccinate after pregnancy, if indicated
- No Guidance/ Not Applicable

a. For additional information regarding HIV laboratory parameters and use of live vaccines, see the General Best Practice Guidelines for Immunization, "Altered Immunocompetence," at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html and Table 4-1 (footnote J) at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html.

b. Severe Combined Immunodeficiency

c. LAIV4 contraindicated for children 2–4 years of age with asthma or wheezing during the preceding 12 months

Notes

Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2024

For vaccination recommendations for persons ages 19 years or older, see the Recommended Adult Immunization Schedule, 2024.

Additional information

- For calculating intervals between doses, 4 weeks = 28 days. Intervals of ≥4 months are determined by calendar months.
- Within a number range (e.g., 12–18), a dash (–) should be read as "through."
- Vaccine doses administered ≤4 days before the minimum age or interval are considered valid. Doses of any vaccine administered ≥5 days earlier than the minimum age or minimum interval should not be counted as valid and should be repeated as age appropriate. **The repeat dose should be spaced after the invalid dose by the recommended minimum interval.** For further details, see Table 3-2, Recommended and minimum ages and intervals between vaccine doses, in *General Best Practice Guidelines for Immunization* at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/timing.html.
- Information on travel vaccination requirements and recommendations is available at www.cdc.gov/travel/.
- For vaccination of persons with immunodeficiencies, see Table 8-1, Vaccination of persons with primary and secondary immunodeficiencies, in *General Best Practice Guidelines for Immunization* at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html, and Immunization in Special Clinical Circumstances (In: Kimberlin DW, Barnett ED, Lynfield Ruth, Sawyer MH, eds. *Red Book: 2021–2024 Report of the Committee on Infectious Diseases*. 32nd ed. Itasca, IL: American Academy of Pediatrics; 2021:72–86).
- For information about vaccination in the setting of a vaccine-preventable disease outbreak, contact your state or local health department.
- The National Vaccine Injury Compensation Program (VICP) is a no-fault alternative to the traditional legal system for resolving vaccine injury claims. All vaccines included in the child and adolescent vaccine schedule are covered by VICP except dengue, PPSV23, RSV, Mpox and COVID-19 vaccines. Mpox and COVID-19 vaccines are covered by the Countermeasures Injury Compensation Program (CICP). For more information, see www.hrsa.gov/vaccinecompensation or www.hrsa.gov/cicp.

COVID-19 vaccination

(minimum age: 6 months [Moderna and Pfizer-BioNTech COVID-19 vaccines], 12 years [Novavax COVID-19 Vaccine])

Routine vaccination

Age 6 months–4 years

- **Unvaccinated:**
  - 2-dose series of updated (2023–2024 Formula) Moderna at 0, 4-8 weeks
  - 3-dose series of updated (2023–2024 Formula) Pfizer-BioNTech at 0, 3-8, 11-16 weeks
- **Previously vaccinated* with 1 dose of any Moderna:** 1 dose of updated (2023–2024 Formula) Moderna 4-8 weeks after the most recent dose.
- **Previously vaccinated* with 2 or more doses of any Moderna:** 1 dose of updated (2023–2024 Formula) Moderna at least 8 weeks after the most recent dose.
- **Previously vaccinated* with 1 dose of any Pfizer-BioNTech:** 2-dose series of updated (2023–2024 Formula) Pfizer-BioNTech at 0, 8 weeks (minimum interval between previous Pfizer-BioNTech and dose 1: 3-8 weeks).
- **Previously vaccinated* with 2 or more doses of any Pfizer-BioNTech:** 1 dose of updated (2023–2024 Formula) Pfizer-BioNTech at least 8 weeks after the most recent dose.

Age 5–11 years

- **Unvaccinated:** 1 dose of updated (2023–2024 Formula) Moderna or Pfizer-BioNTech vaccine.
- **Previously vaccinated* with 1 or more doses of Moderna or Pfizer-BioNTech:** 1 dose of updated (2023–2024 Formula) Moderna or Pfizer-BioNTech at least 8 weeks after the most recent dose.

Age 12–18 years

- **Unvaccinated:**
  - 1 dose of updated (2023–2024 Formula) Moderna or Pfizer-BioNTech vaccine
  - 2-dose series of updated (2023–2024 Formula) Novavax at 0, 3-8 weeks
- **Previously vaccinated* with any COVID-19 vaccine(s):** 1 dose of any updated (2023–2024 Formula) COVID-19 vaccine at least 8 weeks after the most recent dose.

Special situations

Persons who are moderately or severely immunocompromised**

Age 6 months–4 years

- **Unvaccinated:**
  - 3-dose series of updated (2023–2024 Formula) Moderna at 0, 4, 8 weeks
  - 3-dose series of updated (2023–2024 Formula) Pfizer-BioNTech at 0, 3, 11 weeks.
- **Previously vaccinated* with 1 dose of any Moderna:** 2-dose series of updated (2023–2024 Formula) Moderna at 0, 4 weeks (minimum interval between previous Moderna and dose 1: 4 weeks).
- **Previously vaccinated* with 2 doses of any Moderna:** 1 dose of updated (2023–2024 Formula) Moderna at least 4 weeks after the most recent dose.
- **Previously vaccinated* with 3 or more doses of any Moderna:** 1 dose of updated (2023–2024 Formula) Moderna at least 8 weeks after the most recent dose.
- **Previously vaccinated* with 1 dose of any Pfizer-BioNTech:** 2-dose series of updated (2023–2024 Formula) Pfizer-BioNTech at 0, 8 weeks (minimum interval between previous Pfizer-BioNTech and dose 1: 3 weeks).
- **Previously vaccinated* with 2 or more doses of any Pfizer-BioNTech:** 1 dose of updated (2023–2024 Formula) Pfizer-BioNTech at least 8 weeks after the most recent dose.

Age 5–11 years

- **Unvaccinated:**
  - 3-dose series of updated (2023–2024 Formula) Moderna at 0, 4, 8 weeks
  - 3-dose series updated (2023–2024 Formula) Pfizer-BioNTech at 0, 3, 7 weeks.
- **Previously vaccinated* with 1 dose of any Moderna:** 2-dose series of updated (2023–2024 Formula) Moderna at 0, 4 weeks (minimum interval between previous Moderna and dose 1: 4 weeks).
- **Previously vaccinated* with 2 doses of any Moderna:** 1 dose of updated (2023–2024 Formula) Moderna at least 4 weeks after the most recent dose.
- **Previously vaccinated* with 1 dose of any Pfizer-BioNTech:** 2-dose series of updated (2023–2024 Formula) Pfizer-BioNTech at 0, 4 weeks (minimum interval between previous Pfizer-BioNTech and dose 1: 3 weeks)
- **Previously vaccinated* with 2 doses of any Pfizer-BioNTech:** 1 dose of 2023–2024 Pfizer-BioNTech at least 4 weeks after the most recent dose.

Notes

- **Previously vaccinated* with 3 or more doses of any Moderna or Pfizer-BioNTech:** 1 dose of updated (2023–2024 Formula) Moderna or Pfizer-BioNTech at least 8 weeks after the most recent dose.

Age 12–18 years

- **Unvaccinated:**
  - 3-dose series of updated (2023–2024 Formula) Moderna at 0, 4, 8 weeks
  - 3-dose series of updated (2023–2024 Formula) Pfizer-BioNTech at 0, 3, 7 weeks
  - 2-dose series of updated (2023–2024 Formula) Novavax at 0, 3 weeks
- **Previously vaccinated* with 1 dose of any Moderna:** 2-dose series of updated (2023–2024 Formula) Moderna at 0, 4 weeks (minimum interval between previous Moderna dose and dose 1: 4 weeks).
- **Previously vaccinated* with 2 doses of any Moderna:** 1 dose of updated (2023–2024 Formula) Moderna at least 4 weeks after the most recent dose.
- **Previously vaccinated* with 1 dose of any Pfizer-BioNTech:** 2-dose series of updated (2023–2024 Formula) Pfizer-BioNTech at 0, 4 weeks (minimum interval between previous Pfizer-BioNTech dose and dose 1: 3 weeks).
- **Previously vaccinated* with 2 doses of any Pfizer-BioNTech:** 1 dose of updated (2023–2024 Formula) Pfizer-BioNTech at least 4 weeks after the most recent dose.
- **Previously vaccinated* with 3 or more doses of any Moderna or Pfizer-BioNTech:** 1 dose of any updated (2023–2024 Formula) COVID-19 vaccine at least 8 weeks after the most recent dose.
- **Previously vaccinated* with 1 or more doses of Janssen or Novavax or with or without dose(s) of any Original monovalent or bivalent COVID-19 vaccine:** 1 dose of any updated (2023–2024 Formula) COVID-19 vaccine at least 8 weeks after the most recent dose.

There is no preferential recommendation for the use of one COVID-19 vaccine over another when more than one recommended age-appropriate vaccine is available.

Administer an age-appropriate COVID-19 vaccine product for each dose. For information about transition from age 4 years to age 5 years or age 11 years to age 12 years during COVID-19 vaccination series, see Tables 1 and 2 at www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#covid-vaccines.

Current COVID-19 schedule and dosage formulation available at www.cdc.gov/covidschedule. For more information on Emergency Use Authorization (EUA) indications for COVID-19 vaccines, see www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines

***Note:** Previously vaccinated is defined as having received any Original monovalent or bivalent COVID-19 vaccine (Janssen, Moderna, Novavax, Pfizer-BioNTech) prior to the updated 2023–2024 formulation.

****Note:** Persons who are moderately or severely immunocompromised have the option to receive one additional dose of updated (2023–2024 Formula) COVID-19 vaccine at least 2 months following the last recommended updated (2023–2024 Formula) COVID-19 vaccine dose. Further additional updated (2023–2024 Formula) COVID-19 vaccine dose(s) may be administered, informed by the clinical judgement of a healthcare provider and personal preference and circumstances. Any further additional doses should be administered at least 2 months after the last updated (2023–2024 Formula) COVID-19 vaccine dose. Moderately or severely immunocompromised children 6 months–4 years of age should receive homologous updated (2023–2024 Formula) mRNA vaccine dose(s) if they receive additional doses.

Dengue vaccination (minimum age: 9 years)

Routine vaccination

- Age 9–16 years living in areas with endemic dengue **AND** have laboratory confirmation of previous dengue infection
  - 3-dose series administered at 0, 6, and 12 months
- Endemic areas include Puerto Rico, American Samoa, US Virgin Islands, Federated States of Micronesia, Republic of Marshall Islands, and the Republic of Palau. For updated guidance on dengue endemic areas and pre-vaccination laboratory testing see www.cdc.gov/mmwr/volumes/70/rr/rr7006a1.htm?s_cid=rr7006a1_w and www.cdc.gov/dengue/vaccine/hcp/index.html
- Dengue vaccine should not be administered to children traveling to or visiting endemic dengue areas.

Diphtheria, tetanus, and pertussis (DTaP) vaccination (minimum age: 6 weeks [4 years for Kinrix® or Quadracel®])

Routine vaccination

- 5-dose series (3-dose primary series at age 2, 4, and 6 months, followed by a booster doses at ages 15–18 months and 4–6 years
  - **Prospectively:** Dose 4 may be administered as early as age 12 months if at least 6 months have elapsed since dose 3.
  - **Retrospectively:** A 4th dose that was inadvertently administered as early as age 12 months may be counted if at least 4 months have elapsed since dose 3.

Catch-up vaccination

- Dose 5 is not necessary if dose 4 was administered at age 4 years or older and at least 6 months after dose 3.
- For other catch-up guidance, see Table 2.

Special situations

- **Wound management** in children less than age 7 years with history of 3 or more doses of tetanus-toxoid-containing vaccine: For all wounds except clean and minor wounds, administer DTaP if more than 5 years since last dose of tetanus-toxoid-containing vaccine. For detailed information, see www.cdc.gov/mmwr/volumes/67/rr/rr6702a1.htm.

Haemophilus influenzae type b vaccination (minimum age: 6 weeks)

Routine vaccination

- **ActHIB®, Hiberix®, Pentacel®, or Vaxelis®:** 4-dose series (3-dose primary series at age 2, 4, and 6 months, followed by a booster dose* at age 12–15 months)
  - *Vaxelis® is not recommended for use as a booster dose. A different Hib-containing vaccine should be used for the booster dose.
- **PedvaxHIB®:** 3-dose series (2-dose primary series at age 2 and 4 months, followed by a booster dose at age 12–15 months)

Catch-up vaccination

- **Dose 1 at age 7–11 months:** Administer dose 2 at least 4 weeks later and dose 3 (final dose) at age12–15 months or 8 weeks after dose 2 (whichever is later).
- **Dose 1 at age 12–14 months:** Administer dose 2 (final dose) at least 8 weeks after dose 1.
- **Dose 1 before age 12 months and dose 2 before age 15 months:** Administer dose 3 (final dose) at least 8 weeks after dose 2.
- **2 doses of PedvaxHIB® before age 12 months:** Administer dose 3 (final dose) at age12–59 months and at least 8 weeks after dose 2.
- **1 dose administered at age 15 months or older:** No further doses needed
- **Unvaccinated at age 15–59 months:** Administer 1 dose.

Notes

- **Previously unvaccinated children age 60 months or older who are not considered high risk:** Do not require catch-up vaccination

For other catch-up guidance, see Table 2. Vaxelis® can be used for catch-up vaccination in children less than age 5 years. Follow the catch-up schedule even if Vaxelis® is used for one or more doses. For detailed information on use of Vaxelis® see www.cdc.gov/mmwr/volumes/69/wr/mm6905a5.htm.

Special situations

- **Chemotherapy or radiation treatment:**
  Age 12–59 months
  - Unvaccinated or only 1 dose before age 12 months: 2 doses, 8 weeks apart
  - 2 or more doses before age 12 months: 1 dose at least 8 weeks after previous dose

  Doses administered within 14 days of starting therapy or during therapy should be repeated at least 3 months after therapy completion.
- **Hematopoietic stem cell transplant (HSCT):**
  - 3-dose series 4 weeks apart starting 6 to 12 months after successful transplant, regardless of Hib vaccination history
- **Anatomic or functional asplenia (including sickle cell disease):**
  Age 12–59 months
  - Unvaccinated or only 1 dose before age 12 months: 2 doses, 8 weeks apart
  - 2 or more doses before age 12 months: 1 dose at least 8 weeks after previous dose

  Unvaccinated* persons age 5 years or older
  - 1 dose
- **Elective splenectomy:**
  Unvaccinated* persons age 15 months or older
  - 1 dose (preferably at least 14 days before procedure)
- **HIV infection:**
  Age 12–59 months
  - Unvaccinated or only 1 dose before age 12 months: 2 doses, 8 weeks apart
  - 2 or more doses before age 12 months: 1 dose at least 8 weeks after previous dose

  Unvaccinated* persons age 5–18 years
  - 1 dose
- **Immunoglobulin deficiency, early component complement deficiency:**
  Age 12–59 months
  - Unvaccinated or only 1 dose before age 12 months: 2 doses, 8 weeks apart
  - 2 or more doses before age 12 months: 1 dose at least 8 weeks after previous dose

Unvaccinated* = Less than routine series (through age 14 months) **OR no doses (age 15 months or older)*

Hepatitis A vaccination
(minimum age: 12 months for routine vaccination)

Routine vaccination

- 2-dose series (minimum interval: 6 months) at age 12–23 months

Catch-up vaccination

- Unvaccinated persons through age 18 years should complete a 2-dose series (minimum interval: 6 months).
- Persons who previously received 1 dose at age 12 months or older should receive dose 2 at least 6 months after dose 1.
- Adolescents age 18 years or older may receive the combined HepA and HepB vaccine, **Twinrix®**, as a 3-dose series (0, 1, and 6 months) or 4-dose series (3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months).

International travel

- Persons traveling to or working in countries with high or intermediate endemic hepatitis A (www.cdc.gov/travel/):
  - **Infants age 6–11 months**: 1 dose before departure; revaccinate with 2 doses (separated by at least 6 months) between age 12–23 months.
  - **Unvaccinated age 12 months or older**: Administer dose 1 as soon as travel is considered.

Hepatitis B vaccination
(minimum age: birth)

Routine vaccination

- 3-dose series at age 0, 1–2, 6–18 months **(use monovalent HepB vaccine for doses administered before age 6 weeks)**
  - Birth weight ≥2,000 grams: 1 dose within 24 hours of birth if medically stable
  - Birth weight <2,000 grams: 1 dose at chronological age 1 month or hospital discharge (whichever is earlier and even if weight is still <2,000 grams).
- Infants who did not receive a birth dose should begin the series as soon as possible (see Table 2 for minimum intervals).
- Administration of 4 doses is permitted when a combination vaccine containing HepB is used after the birth dose.
- **Minimum intervals (see Table 2):** when 4 doses are administered, substitute "dose 4" for "dose 3" in these calculations
- **Final (3rd or 4th) dose:** age 6–18 months **(minimum age 24 weeks)**
- **Mother is HBsAg-positive**
  - **Birth dose (monovalent HepB vaccine only):** administer **HepB vaccine** and **hepatitis B immune globulin (HBIG)** (in separate limbs) within 12 hours of birth, regardless of birth weight.
  - **Birth weight <2000 grams:** administer 3 additional doses of HepB vaccine beginning at age 1 month (total of 4 doses)
  - **Final (3rd or 4th) dose:** administer at age 6 months **(minimum age 24 weeks)**
  - Test for HBsAg and anti-HBs at age 9–12 months. If HepB series is delayed, test 1–2 months after final dose. Do not test before age 9 months.
- **Mother is HBsAg-unknown**

  If other evidence suggestive of maternal hepatitis B infection exists (e.g., presence of HBV DNA, HBeAg-positive, or mother known to have chronic hepatitis B infection), manage infant as if mother is HBsAg-positive
  - **Birth dose (monovalent HepB vaccine only):**
    - Birth weight ≥2,000 grams: administer **HepB vaccine** within 12 hours of birth. Determine mother's HBsAg status as soon as possible. If mother is determined to be HBsAg-positive, administer **HBIG** as soon as possible (in separate limb), but no later than 7 days of age.
    - Birth weight <2,000 grams: administer **HepB vaccine** and **HBIG** (in separate limbs) within 12 hours of birth. Administer 3 additional doses of **HepB vaccine** beginning at age 1 month (total of 4 doses)
  - **Final (3rd or 4th) dose:** administer at age 6 months **(minimum age 24 weeks)**
  - If mother is determined to be HBsAg-positive or if status remains unknown, test for HBsAg and anti-HBs at age 9–12 months. If HepB series is delayed, test 1–2 months after final dose. Do not test before age 9 months.

Catch-up vaccination

- Unvaccinated persons should complete a 3-dose series at 0, 1–2, 6 months. See Table 2 for minimum intervals
- Adolescents age 11–15 years may use an alternative 2-dose schedule with at least 4 months between doses (adult formulation **Recombivax HB®** only).
- Adolescents age 18 years may receive:
  - **Heplisav-B®:** 2-dose series at least 4 weeks apart
  - **PreHevbrio®:** 3-dose series at 0, 1, and 6 months
  - Combined HepA and HepB vaccine, **Twinrix®:** 3-dose series (0, 1, and 6 months) or 4-dose series (3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months).

Notes

Special situations

- Revaccination is not generally recommended for persons with a normal immune status who were vaccinated as infants, children, adolescents, or adults.
- **Post-vaccination serology testing and revaccination** (if anti-HBs <10mIU/mL) is recommended for certain populations, including:
  - Infants born to HBsAg-positive mothers
  - Persons who are predialysis or on maintenance dialysis
  - Other immunocompromised persons
  - For detailed revaccination recommendations, see www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/hepb.html.

Note: Heplisav-B and PreHevbrio are not recommended in pregnancy due to lack of safety data in pregnant persons

Human papillomavirus vaccination
(minimum age: 9 years)

Routine and catch-up vaccination

- HPV vaccination routinely recommended at **age 11–12 years (can start at age 9 years)** and catch-up HPV vaccination recommended for all persons through age 18 years if not adequately vaccinated
- 2- or 3-dose series depending on age at initial vaccination:
  - **Age 9–14 years at initial vaccination**: 2-dose series at 0, 6–12 months (minimum interval: 5 months; repeat dose if administered too soon)
  - **Age 15 years or older at initial vaccination**: 3-dose series at 0, 1–2 months, 6 months (minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 12 weeks / dose 1 to dose 3: 5 months; repeat dose if administered too soon)
- No additional dose recommended when any HPV vaccine series **of any valency** has been completed using recommended dosing intervals.

Special situations

- **Immunocompromising conditions, including HIV infection:** 3-dose series, even for those who initiate vaccination at age 9 through 14 years.
- **History of sexual abuse or assault:** Start at age 9 years
- **Pregnancy:** Pregnancy testing not needed before vaccination; HPV vaccination not recommended until after pregnancy; no intervention needed if vaccinated while pregnant

Influenza vaccination
(minimum age: 6 months [IIV], 2 years [LAIV4], 18 years [recombinant influenza vaccine, RIV4])

Routine vaccination

- Use any influenza vaccine appropriate for age and health status annually:
  - **Age 6 months–8 years** who have received **fewer** than 2 influenza vaccine doses before July 1, 2023, or whose influenza vaccination history is unknown: 2 doses, separated by at least 4 weeks. Administer dose 2 even if the child turns 9 years between receipt of dose 1 and dose 2.
  - **Age 6 months–8 years** who have received **at least** 2 influenza vaccine doses before July 1, 2023: 1 dose
  - **Age 9 years or older:** 1 dose
- For the 2023-2024 season, see www.cdc.gov/mmwr/volumes/72/rr/rr7202a1.htm.
- For the 2024–25 season, see the 2024–25 ACIP influenza vaccine recommendations.

Special situations

- **Close contacts (e.g., household contacts) of severely immunosuppressed persons who require a protected environment:** should not receive LAIV4. If LAIV4 is given, they should avoid contact with for such immunosuppressed persons for 7 days after vaccination.

Note: Persons with an egg allergy can receive any influenza vaccine (egg-based and non-egg-based) appropriate for age and health status.

Measles, mumps, and rubella vaccination
(minimum age: 12 months for routine vaccination)

Routine vaccination

- 2-dose series at age 12–15 months, age 4–6 years
- MMR or MMRV* may be administered

Note: For dose 1 in children age 12–47 months, it is recommended to administer MMR and varicella vaccines separately. MMRV* may be used if parents or caregivers express a preference.

Catch-up vaccination

- Unvaccinated children and adolescents: 2-dose series at least 4 weeks apart*
- The maximum age for use of MMRV* is 12 years.

Special situations

- **International travel**
  - **Infants age 6–11 months:** 1 dose before departure; revaccinate with 2-dose series at age 12–15 months (12 months for children in high-risk areas) and dose 2 as early as 4 weeks later.*
  - **Unvaccinated children age 12 months or older:** 2-dose series at least 4 weeks apart before departure*
- In mumps outbreak settings, for information about additional doses of MMR (including 3rd dose of MMR), see www.cdc.gov/mmwr/volumes/67/wr/mm6701a7.htm

***Note:** If MMRV is used, the minimum interval between MMRV doses is 3 months

Meningococcal serogroup A,C,W,Y vaccination
(minimum age: 2 months [MenACWY-CRM, Menveo], 2 years [MenACWY-TT, MenQuadfi]), 10 years [MenACWY-TT/MenB-FHbp, Penbraya])

Routine vaccination

- 2-dose series at age 11–12 years; 16 years

Catch-up vaccination

- Age 13–15 years: 1 dose now and booster at age 16–18 years (minimum interval: 8 weeks)
- Age 16–18 years: 1 dose

Special situations

Anatomic or functional asplenia (including sickle cell disease), HIV infection, persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use:

- **Menveo®***
  - Dose 1 at age 2 months: 4-dose series (additional 3 doses at age 4, 6, and 12 months)
  - Dose 1 at age 3–6 months: 3- or 4-dose series (dose 2 [and dose 3 if applicable] at least 8 weeks after previous dose until a dose is received at age 7 months or older, followed by an additional dose at least 12 weeks later and after age 12 months)
  - Dose 1 at age 7–23 months: 2-dose series (dose 2 at least 12 weeks after dose 1 and after age 12 months)
  - Dose 1 at age 24 months or older: 2-dose series at least 8 weeks apart
- **MenQuadfi®**
  - Dose 1 at age 24 months or older: 2-dose series at least 8 weeks apart

Notes

Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2024

Travel to countries with hyperendemic or epidemic meningococcal disease, including countries in the African meningitis belt or during the Hajj (www.cdc.gov/travel/)**:**

- Children less than age 24 months:
  - **Menveo®* (age 2–23 months)**
    - Dose 1 at age 2 months: 4-dose series (additional 3 doses at age 4, 6, and 12 months)
    - Dose 1 at age 3–6 months: 3- or 4-dose series (dose 2 [and dose 3 if applicable] at least 8 weeks after previous dose until a dose is received at age 7 months or older, followed by an additional dose at least 12 weeks later and after age 12 months)
    - Dose 1 at age 7–23 months: 2-dose series (dose 2 at least 12 weeks after dose 1 and after age 12 months)
- Children age 2 years or older: 1 dose Menveo®* or MenQuadfi®

First-year college students who live in residential housing (if not previously vaccinated at age 16 years or older) or military recruits:

- 1 dose **Menveo®*** or **MenQuadfi®**

Adolescent vaccination of children who received MenACWY prior to age 10 years:

- **Children for whom boosters are recommended** because of an ongoing increased risk of meningococcal disease (e.g., those with complement component deficiency, HIV, or asplenia): Follow the booster schedule for persons at increased risk.
- **Children for whom boosters are not recommended** (e.g., a healthy child who received a single dose for travel to a country where meningococcal disease is endemic): Administer MenACWY according to the recommended adolescent schedule with dose 1 at age 11–12 years and dose 2 at age 16 years.

**Menveo has two formulations: lyophilized and liquid. The liquid formulation should not be used before age 10 years. See www.cdc.gov/vaccines/vpd/mening/downloads/menveo-single-vial-presentation.pdf.*

Note: For MenACWY **booster dose recommendations** for groups listed under "Special situations" and in an outbreak setting and additional meningococcal vaccination information, see www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm.

Children age 10 years or older may receive a single dose of Penbraya™ as an alternative to separate administration of MenACWY and MenB when both vaccines would be given on the same clinic day (see "Meningococcal serogroup B vaccination" section below for more information).

Meningococcal serogroup B vaccination

(minimum age: 10 years [MenB-4C, Bexsero®; MenB-FHbp, Trumenba®; MenACWY-TT/MenB-FHbp, Penbraya™])

Shared clinical decision-making

- **Adolescents not at increased risk** age 16–23 years (preferred age 16–18 years) based on shared clinical decision-making:
  - **Bexsero®:** 2-dose series at least 1 month apart
  - **Trumenba®:** 2-dose series at least 6 months apart (if dose 2 is administered earlier than 6 months, administer a 3rd dose at least 4 months after dose 2)

For additional information on shared clinical decision-making for MenB, see www.cdc.gov/vaccines/hcp/admin/downloads/isd-job-aid-scdm-mening-b-shared-clinical-decision-making.pdf

Special situations

Anatomic or functional asplenia (including sickle cell disease), persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use:

- **Bexsero®:** 2-dose series at least 1 month apart
- **Trumenba®:** 3-dose series at 0, 1–2, 6 months (if dose 2 was administered at least 6 months after dose 1, dose 3 not needed; if dose 3 is administered earlier than 4 months after dose 2, a 4th dose should be administered at least 4 months after dose 3)

Note: Bexsero® and **Trumenba®** are not interchangeable; the same product should be used for all doses in a series.

For MenB **booster dose recommendations** for groups listed under "Special situations" and in an outbreak setting and additional meningococcal vaccination information, see www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm.

Children age 10 years or older may receive a dose of Penbraya™ as an alternative to separate administration of MenACWY and MenB when both vaccines would be given on the same clinic day. For age-eligible children not at increased risk, if Penbraya™ is used for dose 1 MenB, MenB-FHbp (Trumenba) should be administered for dose 2 MenB. For age-eligible children at increased risk of meningococcal disease, Penbraya™ may be used for additional MenACWY and MenB doses (including booster doses) if both would be given on the same clinic day **and** at least 6 months have elapsed since most recent Penbraya™ dose.

Mpox vaccination

(minimum age: 18 years [Jynneos®])

Special situations

- **Age 18 years and at risk for Mpox infection:** 2-dose series, 28 days apart.

  Risk factors for Mpox infection include:
  - Persons who are gay, bisexual, and other MSM, transgender or nonbinary people who in the past 6 months have had:
    - A new diagnosis of at least 1 sexually transmitted disease
    - More than 1 sex partner
    - Sex at a commercial sex venue
    - Sex in association with a large public event in a geographic area where Mpox transmission is occurring
  - Persons who are sexual partners of the persons described above
  - Persons who anticipate experiencing any of the situations described above
- **Pregnancy:** There is currently no ACIP recommendation for Jynneos use in pregnancy due to lack of safety data in pregnant persons. Pregnant persons with any risk factor described above may receive Jynneos.

For detailed information, see: www.cdc.gov/vaccines/acip/meetings/downloads/slides-2023-10-25-26/04-MPOX-Rao-508.pdf

Pneumococcal vaccination

(minimum age: 6 weeks [PCV15], [PCV 20]; 2 years [PPSV23])

Routine vaccination with PCV

- 4-dose series at 2, 4, 6, 12–15 months

Catch-up vaccination with PCV

- Healthy children ages 2–4 years with any incomplete* PCV series: 1 dose PCV
- For other catch-up guidance, see Table 2.

Note: For children **without** risk conditions, PCV20 is not indicated if they have received 4 doses of PCV13 or PCV15 or another age appropriate complete PCV series.

Notes

Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2024

Special situations

Children and adolescents with cerebrospinal fluid leak; chronic heart disease; chronic kidney disease (excluding maintenance dialysis and nephrotic syndrome); chronic liver disease; chronic lung disease (including moderate persistent or severe persistent asthma); cochlear implant; or diabetes mellitus:

Age 2–5 years

- Any incomplete* PCV series with:
  - 3 PCV doses: 1 dose PCV (at least 8 weeks after the most recent PCV dose)
  - Less than 3 PCV doses: 2 doses PCV (at least 8 weeks after the most recent dose and administered at least 8 weeks apart)
- Completed recommended PCV series but have not received PPSV23
  - Previously received at least 1 dose of PCV20: no further PCV or PPSV23 doses needed
  - Not previously received PCV20: administer 1 dose PCV20 OR 1 dose PPSV23 administer at least 8 weeks after the most recent PCV dose.

Age 6–18 years

- Not previously received any dose of PCV13, PCV15, or PCV20: administer 1 dose of PCV15 or PCV20. If PCV15 is used and no previous receipt of PPSV23, administer 1 dose of PPSV23 at least 8 weeks after the PCV15 dose.**
- Received PCV before age 6 years but have not received PPSV23
  - Previously received at least 1 dose of PCV20: no further PCV or PPSV23 doses needed
  - Not previously received PCV20: 1 dose PCV20 OR 1 dose PPSV23 administer at least 8 weeks after the most recent PCV dose.
- Received PCV13 only at or after age 6 years: administer 1 dose PCV20 OR 1 dose PPSV23 at least 8 weeks after the most recent PCV13 dose.
- Received 1 dose PCV13 and 1 dose PPSV23 at or after age 6 years: no further doses of any PCV or PPSV23 indicated.

Children and adolescents on maintenance dialysis, or with immunocompromising conditions such as nephrotic syndrome; congenital or acquired asplenia or splenic dysfunction; congenital or acquired immunodeficiencies; diseases and conditions treated with immunosuppressive drugs or radiation therapy, including malignant neoplasms, leukemias, lymphomas, Hodgkin disease, and solid organ transplant; HIV infection; or sickle cell disease or other hemoglobinopathies:

Age 2–5 years

- Any incomplete* PCV series:
  - 3 PCV doses: 1 dose PCV (at least 8 weeks after the most recent PCV dose)
  - Less than 3 PCV doses: 2 doses PCV (at least 8 weeks after the most recent dose and administered at least 8 weeks apart)
- Completed recommended PCV series but have not received PPSV23
  - Previously received at least 1 dose of PCV20: no further PCV or PPSV23 doses needed
  - Not previously received PCV20: administer 1 dose PCV20 OR 1 dose PPSV23 at least 8 weeks after the most recent PCV dose. If PPSV23 is used, administer 1 dose of PCV20 or dose 2 PPSV23 at least 5 years after dose 1 PPSV23.

Age 6–18 years

- Not previously received any dose of PCV13, PCV15, or PCV20: administer 1 dose of PCV15 or 1 dose of PCV20. If PCV15 is used and no previous receipt of PPSV23, administer 1 dose of PPSV23 at least 8 weeks after the PCV15 dose.**
- Received PCV before age 6 years but have not received PPSV23
  - Previously received at least 1 dose of PCV20: no additional dose of PCV or PPSV23
  - Not previously received PCV20: administer 1 dose PCV20 OR 1 dose PPSV23 at least 8 weeks after the most recent PCV dose. If PPSV23 is used, administer either PCV20 or dose 2 PPSV23 at least 5 years after dose 1 PPSV23.
- Received PCV13 only at or after age 6 years: administer 1 dose PCV20 OR 1 dose PPSV23 at least 8 weeks after the most recent PCV13 dose. If PPSV23 is used, administer 1 dose of PCV20 or dose 2 PPSV23 at least 5 years after dose 1 PPSV23.
- Received 1 dose PCV13 and 1 dose PPSV23 at or after age 6 years: administer 1 dose PCV20 OR 1 dose PPSV23 at least 8 weeks after the most recent PCV13 dose and at least 5 years after dose 1 PPSV23.

**Incomplete series* = Not having received all doses in either the recommended series or an age-appropriate catch-up series. See Table 2 in ACIP pneumococcal recommendations at stacks.cdc.gov/view/cdc/133252

***When both PCV15 and PPSV23 are indicated, administer all doses of PCV15 first. PCV15 and PPSV23 should not be administered during the same visit.*

For guidance on determining which pneumococcal vaccines a patient needs and when, please refer to the mobile app, which can be downloaded here: www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html

Poliovirus vaccination
(minimum age: 6 weeks)

Routine vaccination

- 4-dose series at ages 2, 4, 6–18 months, 4–6 years; administer the final dose on or after age 4 years and at least 6 months after the previous dose.
- 4 or more doses of IPV can be administered before age 4 years when a combination vaccine containing IPV is used. However, a dose is still recommended on or after age 4 years and at least 6 months after the previous dose.

Catch-up vaccination

- In the first 6 months of life, use minimum ages and intervals only for travel to a polio-endemic region or during an outbreak.
- **Adolescents age 18 years known or suspected to be unvaccinated or incompletely vaccinated:** administer remaining doses (1, 2, or 3 IPV doses) to complete a 3-dose primary series.* Unless there are specific reasons to believe they were not vaccinated, most persons aged 18 years or older born and raised in the United States can assume they were vaccinated against polio as children.

Series containing oral poliovirus vaccine (OPV), either mixed OPV-IPV or OPV-only series:

- Total number of doses needed to complete the series is the same as that recommended for the U.S. IPV schedule. See www.cdc.gov/mmwr/volumes/66/wr/mm6601a6.htm?s_%20cid=mm6601a6_w.
- Only trivalent OPV (tOPV) counts toward the U.S. vaccination requirements.
  - Doses of OPV administered before April 1, 2016, should be counted (unless specifically noted as administered during a campaign).
  - Doses of OPV administered on or after April 1, 2016, should not be counted.
  - For guidance to assess doses documented as "OPV," see www.cdc.gov/mmwr/volumes/66/wr/mm6606a7.htm?s_cid=mm6606a7_w.
- For other catch-up guidance, see Table 2.

Notes

Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2024

Special situations

- **Adolescents aged 18 years at increased risk of exposure to poliovirus and completed primary series*:** may administer one lifetime IPV booster

***Note:** Complete primary series consist of at least 3 doses of IPV or trivalent oral poliovirus vaccine (tOPV) in any combination.

For detailed information, see:
www.cdc.gov/vaccines/vpd/polio/hcp/recommendations.html

Respiratory syncytial virus immunization
(minimum age: birth [Nirsevimab, RSV-mAb (Beyfortus™)

Routine immunization

- **Infants born October – March in most of the continental United States***
  - Mother did not receive RSV vaccine OR mother's RSV vaccination status is unknown: administer 1 dose nirsevimab within 1 week of birth in hospital or outpatient setting
  - Mother received RSV vaccine **less than 14 days** prior to delivery: administer 1 dose nirsevimab within 1 week of birth in hospital or outpatient setting
  - Mother received RSV vaccine **at least 14 days** prior to delivery: nirsevimab not needed but can be considered in rare circumstances at the discretion of healthcare providers (see special populations and situations at www.cdc.gov/vaccines/vpd/rsv/hcp/child-faqs.html)
- **Infants born April–September in most of the continental United States***
  - Mother did not receive RSV vaccine OR mother's RSV vaccination status is unknown: administer 1 dose nirsevimab shortly before start of RSV season*
  - Mother received RSV vaccine **less than 14 days** prior to delivery: administer 1 dose nirsevimab shortly before start of RSV season*
  - Mother received RSV vaccine **at least 14 days** prior to delivery: nirsevimab not needed but can be considered in rare circumstances at the discretion of healthcare providers(see special populations and situations at www.cdc.gov/vaccines/vpd/rsv/hcp/child-faqs.html)

Infants with prolonged birth hospitalization** (e.g., for prematurity) discharged October through March should be immunized shortly before or promptly after discharge.

Special situations

- **Ages 8–19 months with chronic lung disease of prematurity requiring medical support (e.g., chronic corticosteroid therapy, diuretic therapy, or supplemental oxygen) any time during the 6-month period before the start of the second RSV season; severe immunocompromise; cystic fibrosis with either weight for length <10th percentile or manifestation of severe lung disease (e.g., previous hospitalization for pulmonary exacerbation in the first year of life or abnormalities on chest imaging that persist when stable)**:**
  - 1 dose nirsevimab shortly before start of second RSV season*
- **Ages 8–19 months who are American Indian or Alaska Native:**
  - 1 dose nirsevimab shortly before start of second RSV season*
- **Age-eligible and undergoing cardiac surgery with cardiopulmonary bypass**:** 1 additional dose of nirsevimab after surgery. For additional details see special populations and situations at www.cdc.gov/vaccines/vpd/rsv/hcp/child-faqs.html

***Note:** While the timing of the onset and duration of RSV season may vary, nirsevimab may be administered October through March in most of the continental United States. Providers in jurisdictions with RSV seasonality that differs from most of the continental United States (e.g., Alaska, jurisdiction with tropical climate) should follow guidance from public health authorities (e.g., CDC, health departments) or regional medical centers on timing of administration based on local RSV seasonality. Although optimal timing of administration is just before the start of the RSV season, nirsevimab may also be administered during the RSV season to infants and children who are age-eligible.

****Note:** Nirsevimab can be administered to children who are eligible to receive palivizumab. Children who have received nirsevimab should not receive palivizumab for the same RSV season.

For further guidance, see www.cdc.gov/mmwr/volumes/72/wr/mm7234a4.htm and www.cdc.gov/vaccines/vpd/rsv/hcp/child-faqs.html

Respiratory syncytial virus vaccination
(RSV [Abrysvo™])

Routine vaccination

- **Pregnant at 32 weeks 0 days through 36 weeks and 6 days gestation from September through January in most of the continental United States*:** 1 dose RSV vaccine (Abrysvo™). Administer RSV vaccine regardless of previous RSV infection.
  - Either maternal RSV vaccination or infant immunization with nirsevimab (RSV monoclonal antibody) is recommended to prevent respiratory syncytial virus lower respiratory tract infection in infants.
- **All other pregnant persons:** RSV vaccine not recommended.

There is currently no ACIP recommendation for RSV vaccination in subsequent pregnancies. No data are available to inform whether additional doses are needed in later pregnancies.

***Note:** Providers in jurisdictions with RSV seasonality that differs from most of the continental United States (e.g., Alaska, jurisdiction with tropical climate) should follow guidance from public health authorities (e.g., CDC, health departments) or regional medical centers on timing of administration based on local RSV seasonality.

Rotavirus vaccination
(minimum age: 6 weeks)

Routine vaccination

- **Rotarix®:** 2-dose series at age 2 and 4 months
- **RotaTeq®:** 3-dose series at age 2, 4, and 6 months
- If any dose in the series is either **RotaTeq®** or unknown, default to 3-dose series.

Catch-up vaccination

- Do not start the series on or after age 15 weeks, 0 days.
- The maximum age for the final dose is 8 months, 0 days.
- For other catch-up guidance, see Table 2.

Notes

Tetanus, diphtheria, and pertussis (Tdap) vaccination
(minimum age: 11 years for routine vaccination, 7 years for catch-up vaccination)

Routine vaccination

- **Age 11–12 years:** 1 dose Tdap (adolescent booster)
- **Pregnancy:** 1 dose Tdap during each pregnancy, preferably in early part of gestational weeks 27–36.

Note: Tdap may be administered regardless of the interval since the last tetanus- and diphtheria-toxoid-containing vaccine.

Catch-up vaccination

- **Age 13–18 years who have not received Tdap:** 1 dose Tdap (adolescent booster)
- **Age 7–18 years not fully vaccinated* with DTaP:** 1 dose Tdap as part of the catch-up series (preferably the first dose); if additional doses are needed, use Td or Tdap.
- **Tdap administered at age 7–10 years:**
  - **Age 7–9 years** who receive Tdap should receive the adolescent Tdap booster dose at age 11–12 years.
  - **Age 10 years** who receive Tdap do not need the adolescent Tdap booster dose at age 11–12 years.
- **DTaP inadvertently administered on or after age 7 years**:
  - **Age 7–9 years**: DTaP may count as part of catch-up series. Administer adolescent Tdap booster dose at age 11–12 years.
  - **Age 10–18 years**: Count dose of DTaP as the adolescent Tdap booster dose.
- For other catch-up guidance, see Table 2.

Special situations

- **Wound management** in persons age 7 years or older with history of 3 or more doses of tetanus-toxoid-containing vaccine: For clean and minor wounds, administer Tdap or Td if more than 10 years since last dose of tetanus-toxoid-containing vaccine; for all other wounds, administer Tdap or Td if more than 5 years since last dose of tetanus-toxoid-containing vaccine. Tdap is preferred for persons age 11 years or older who have not previously received Tdap or whose Tdap history is unknown. If a tetanus-toxoid-containing vaccine is indicated for a pregnant adolescent, use Tdap.
- For detailed information, see www.cdc.gov/mmwr/volumes/69/wr/mm6903a5.htm.

**Fully vaccinated* = 5 valid doses of DTaP OR 4 valid doses of DTaP if dose 4 was administered at age 4 years or older

Varicella vaccination
(minimum age: 12 months)

Routine vaccination

- 2-dose series at age 12–15 months, 4–6 years
- VAR or MMRV may be administered*
- Dose 2 may be administered as early as 3 months after dose 1 (a dose inadvertently administered after at least 4 weeks may be counted as valid)

**Note:* For dose 1 in children age 12–47 months, it is recommended to administer MMR and varicella vaccines separately. MMRV may be used if parents or caregivers express a preference.

Catch-up vaccination

- Ensure persons age 7–18 years without evidence of immunity (see *MMWR* at www.cdc.gov/mmwr/pdf/rr/rr5604.pdf) have a 2-dose series:
  - **Age 7–12 years**: Routine interval: 3 months (a dose inadvertently administered after at least 4 weeks may be counted as valid)
  - **Age 13 years and older**: Routine interval: 4–8 weeks (minimum interval: 4 weeks)
  - The maximum age for use of *MMRV* is 12 years.

Appendix Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2024

Guide to Contraindications and Precautions to Commonly Used Vaccines

Adapted from Table 4-1 in Advisory Committee on Immunization Practices (ACIP) General Best Practice Guidelines for Immunization: Contraindication and Precautions, Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices—United States, 2023–24 Influenza Season | MMWR (cdc.gov), Contraindications and Precautions for COVID-19 Vaccination, and Contraindications and Precautions for JYNNEOS Vaccination

Vaccines and other Immunizing Agents	Contraindicated or Not Recommended[1]	Precautions[2]
COVID-19 mRNA vaccines [Pfizer-BioNTech, Moderna]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a component of an mRNA COVID-19 vaccine[4]	• Diagnosed non-severe allergy (e.g., urticaria beyond the injection site) to a component of an mRNA COVID-19 vaccine[4]; or non-severe, immediate (onset less than 4 hours) allergic reaction after administration of a previous dose of an mRNA COVID-19 vaccine • Myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vaccine • Multisystem inflammatory syndrome in children (MIS-C) or multisystem inflammatory syndrome in adults (MIS-A) • Moderate or severe acute illness, with or without fever
COVID-19 protein subunit vaccine [Novavax]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a component of a Novavax COVID-19 vaccine[4]	• Diagnosed non-severe allergy (e.g., urticaria beyond the injection site) to a component of Novavax COVID-19 vaccine[4]; or non-severe, immediate (onset less than 4 hours) allergic reaction after administration of a previous dose of a Novavax COVID-19 vaccine • Myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vaccine • Multisystem inflammatory syndrome in children (MIS-C) or multisystem inflammatory syndrome in adults (MIS-A) • Moderate or severe acute illness, with or without fever
Influenza, egg-based, inactivated injectable (IIV4)	• Severe allergic reaction (e.g., anaphylaxis) after previous dose of any influenza vaccine (i.e., any egg-based IIV, ccIIV, RIV, or LAIV of any valency) • Severe allergic reaction (e.g., anaphylaxis) to any vaccine component[3] (excluding egg)	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Moderate or severe acute illness with or without fever
Influenza, cell culture-based inactivated injectable (ccIIV4) [Flucelvax Quadrivalent]	• Severe allergic reaction (e.g., anaphylaxis) to any ccIIV of any valency, or to any component[3] of ccIIV4	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Persons with a history of severe allergic reaction (e.g., anaphylaxis) after a previous dose of any egg-based IIV, RIV, or LAIV of any valency. If using ccIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions. May consult an allergist. • Moderate or severe acute illness with or without fever
Influenza, recombinant injectable (RIV4) [Flublok Quadrivalent]	• Severe allergic reaction (e.g., anaphylaxis) to any RIV of any valency, or to any component[3] of RIV4	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Persons with a history of severe allergic reaction (e.g., anaphylaxis) after a previous dose of any egg-based IIV, ccIIV, or LAIV of any valency. If using RIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions. May consult an allergist. • Moderate or severe acute illness with or without fever
Influenza, live attenuated (LAIV4) [Flumist Quadrivalent]	• Severe allergic reaction (e.g., anaphylaxis) after previous dose of any influenza vaccine (i.e., any egg-based IIV, ccIIV, RIV, or LAIV of any valency) • Severe allergic reaction (e.g., anaphylaxis) to any vaccine component[3] (excluding egg) • Children age 2–4 years with a history of asthma or wheezing • Anatomic or functional asplenia • Immunocompromised due to any cause including, but not limited to, medications and HIV infection • Close contacts or caregivers of severely immunosuppressed persons who require a protected environment • Pregnancy • Cochlear implant • Active communication between the cerebrospinal fluid (CSF) and the oropharynx, nasopharynx, nose, ear or any other cranial CSF leak • Children and adolescents receiving aspirin or salicylate-containing medications • Received influenza antiviral medications oseltamivir or zanamivir within the previous 48 hours, peramivir within the previous 5 days, or baloxavir within the previous 17 days	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Asthma in persons age 5 years old or older • Persons with underlying medical conditions other than those listed under contraindications that might predispose to complications after wild-type influenza virus infection, e.g., chronic pulmonary, cardiovascular (except isolated hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders (including diabetes mellitus) • Moderate or severe acute illness with or without fever

1. When a contraindication is present, a vaccine should **NOT** be administered. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization.
2. When a precaution is present, vaccination should generally be deferred but might be indicated if the benefit of protection from the vaccine outweighs the risk for an adverse reaction. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization.
3. Vaccination providers should check FDA-approved prescribing information for the most complete and updated information, including contraindications, warnings, and precautions. See Package inserts for U.S.-licensed vaccines.
4. See package inserts and FDA EUA fact sheets for a full list of vaccine ingredients. mRNA COVID-19 vaccines contain polyethylene glycol (PEG).

Appendix

Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2024

Vaccines and other Immunizing Agents	Contraindicated or Not Recommended[1]	Precautions[2]
Dengue (DEN4CYD)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe immunodeficiency (e.g., hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised) • Lack of laboratory confirmation of a previous Dengue infection	• Pregnancy • HIV infection without evidence of severe immunosuppression • Moderate or severe acute illness with or without fever
Diphtheria, tetanus, pertussis (DTaP)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • For DTaP only: Encephalopathy (e.g., coma, decreased level of consciousness, prolonged seizures) not attributable to another identifiable cause within 7 days of administration of previous dose of DTP or DTaP	• Guillain-Barré syndrome (GBS) within 6 weeks after previous dose of tetanus-toxoid–containing vaccine • History of Arthus-type hypersensitivity reactions after a previous dose of diphtheria-toxoid–containing or tetanus-toxoid–containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus-toxoid-containing vaccine • For DTaP only: Progressive neurologic disorder, including infantile spasms, uncontrolled epilepsy, progressive encephalopathy; defer DTaP until neurologic status clarified and stabilized • Moderate or severe acute illness with or without fever
Haemophilus influenzae type b (Hib)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Less than age 6 weeks	• Moderate or severe acute illness with or without fever
Hepatitis A (HepA)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] including neomycin	• Moderate or severe acute illness with or without fever
Hepatitis B (HepB)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] including yeast • *Pregnancy: Heplisav-B and PreHevbrio are not recommended due to lack of safety data in pregnant persons. Use other hepatitis B vaccines if HepB is indicated[4].*	• Moderate or severe acute illness with or without fever
Hepatitis A-Hepatitis B vaccine (HepA-HepB) [Twinrix]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] including neomycin and yeast	• Moderate or severe acute illness with or without fever
Human papillomavirus (HPV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • *Pregnancy: HPV vaccination not recommended.*	• Moderate or severe acute illness with or without fever
Measles, mumps, rubella (MMR) Measles, mumps, rubella, and varicella (MMRV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe immunodeficiency (e.g., hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised) • Pregnancy • Family history of altered immunocompetence, unless verified clinically or by laboratory testing as immunocompetent	• Recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product) • History of thrombocytopenia or thrombocytopenic purpura • Need for tuberculin skin testing or interferon-gamma release assay (IGRA) testing • Moderate or severe acute illness with or without fever • For MMRV only: Personal or family (i.e., sibling or parent) history of seizures of any etiology
Meningococcal ACWY (MenACWY) MenACWY-CRM [Menveo] MenACWY-TT [MenQuadfi]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • For Men ACWY-CRM only: severe allergic reaction to any diphtheria toxoid—or CRM197—containing vaccine • For MenACWY-TT only: severe allergic reaction to a tetanus toxoid-containing vaccine	• For MenACWY-CRM only: Preterm birth if less than age 9 months • Moderate or severe acute illness with or without fever
Meningococcal B (MenB) MenB-4C [Bexsero] MenB-FHbp [Trumenba]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Pregnancy • For MenB-4C only: Latex sensitivity • Moderate or severe acute illness with or without fever
Meningococcal ABCWY (MenACWY-TT/MenB-FHbp) [Penbraya]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe allergic reaction to a tetanus toxoid-containing vaccine	• Moderate or severe acute illness, with or without fever
Mpox [Jynneos]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Moderate or severe acute illness, with or without fever
Pneumococcal conjugate (PCV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe allergic reaction (e.g., anaphylaxis) to any diphtheria-toxoid-containing vaccine or its component[3]	• Moderate or severe acute illness with or without fever
Pneumococcal polysaccharide (PPSV23)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Moderate or severe acute illness with or without fever
Poliovirus vaccine, inactivated (IPV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Pregnancy • Moderate or severe acute illness with or without fever
RSV monoclonal antibody (RSV-mAb)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[5]	• Moderate or severe acute illness with or without fever
Respiratory syncytial virus vaccine (RSV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Moderate or severe acute illness with or without fever
Rotavirus (RV) RV1 [Rotarix] RV5 [RotaTeq]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe combined immunodeficiency (SCID) • History of intussusception	• Altered immunocompetence other than SCID • Chronic gastrointestinal disease • RV1 only: Spina bifida or bladder exstrophy • Moderate or severe acute illness with or without fever
Tetanus, diphtheria, and acellular pertussis (Tdap) Tetanus, diphtheria (Td)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • For Tdap only: Encephalopathy (e.g., coma, decreased level of consciousness, prolonged seizures) not attributable to another identifiable cause within 7 days of administration of previous dose of DTP, DTaP, or Tdap	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of tetanus-toxoid–containing vaccine • History of Arthus-type hypersensitivity reactions after a previous dose of diphtheria-toxoid–containing or tetanus-toxoid–containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus-toxoid–containing vaccine • For Tdap only: Progressive or unstable neurological disorder, uncontrolled seizures, or progressive encephalopathy until a treatment regimen has been established and the condition has stabilized • Moderate or severe acute illness with or without fever
Varicella (VAR)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe immunodeficiency (e.g., hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised) • Pregnancy • Family history of altered immunocompetence, unless verified clinically or by laboratory testing as immunocompetent	• Recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product) • Receipt of specific antiviral drugs (acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination (avoid use of these antiviral drugs for 14 days after vaccination) • Use of aspirin or aspirin-containing products • Moderate or severe acute illness with or without fever • If using MMRV, see MMR/MMRV for additional precautions

1. When a contraindication is present, a vaccine should NOT be administered. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html
2. When a precaution is present, vaccination should generally be deferred but might be indicated if the benefit of protection from the vaccine outweighs the risk for an adverse reaction. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html
3. Vaccination providers should check FDA-approved prescribing information for the most complete and updated information, including contraindications, warnings, and precautions. Package inserts for U.S.-licensed vaccines are available at www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states.
4. For information on the pregnancy exposure registries for persons who were inadvertently vaccinated with Heplisav-B or PreHevbrio while pregnant, please visit heplisavbpregnancyregistry.com or www.prehevbrio.com/#safety.
5. Full prescribing information for BEYFORTUS (nirsevimab-alip) www.accessdata.fda.gov/drugsatfda_docs/label/2023/761328s000lbl.pdf

Recommended Adult Immunization Schedule
for ages 19 years or older

APPENDIX K

UNITED STATES 2024

Vaccines in the Adult Immunization Schedule*

Vaccine	Abbreviation(s)	Trade name(s)
COVID-19 vaccine	1vCOV-mRNA	Comirnaty®/Pfizer-BioNTech COVID-19 Vaccine Spikevax®/Moderna COVID-19 Vaccine
	1vCOV-aPS	Novavax COVID-19 Vaccine
Haemophilus influenzae type b vaccine	Hib	ActHIB® Hiberix® PedvaxHIB®
Hepatitis A vaccine	HepA	Havrix® Vaqta®
Hepatitis A and hepatitis B vaccine	HepA-HepB	Twinrix®
Hepatitis B vaccine	HepB	Engerix-B® Heplisav-B® PreHevbrio® Recombivax HB®
Human papillomavirus vaccine	HPV	Gardasil 9®
Influenza vaccine (inactivated)	IIV4	Many brands
Influenza vaccine (live, attenuated)	LAIV4	FluMist® Quadrivalent
Influenza vaccine (recombinant)	RIV4	Flublok® Quadrivalent
Measles, mumps, and rubella vaccine	MMR	M-M-R II® Priorix®
Meningococcal serogroups A, C, W, Y vaccine	MenACWY-CRM MenACWY-TT	Menveo® MenQuadfi®
Meningococcal serogroup B vaccine	MenB-4C MenB-FHbp	Bexsero® Trumenba®
Meningococcal serogroup A, B, C, W, Y vaccine	MenACWY-TT/ MenB-FHbp	Penbraya™
Mpox vaccine	Mpox	Jynneos®
Pneumococcal conjugate vaccine	PCV15 PCV20	Vaxneuvance™ Prevnar 20™
Pneumococcal polysaccharide vaccine	PPSV23	Pneumovax 23®
Poliovirus vaccine	IPV	Ipol®
Respiratory syncytial virus vaccine	RSV	Arexvy® Abrysvo™
Tetanus and diphtheria toxoids	Td	Tenivac® Tdvax™
Tetanus and diphtheria toxoids and acellular pertussis vaccine	Tdap	Adacel® Boostrix®
Varicella vaccine	VAR	Varivax®
Zoster vaccine, recombinant	RZV	Shingrix

*Administer recommended vaccines if vaccination history is incomplete or unknown. Do not restart or add doses to vaccine series if there are extended intervals between doses. The use of trade names is for identification purposes only and does not imply endorsement by the ACIP or CDC.

2/29/2024

How to use the adult immunization schedule

1. Determine recommended vaccinations by age **(Table 1)**
2. Assess need for additional recommended vaccinations by medical condition or other indication **(Table 2)**
3. Review vaccine types, dosing frequencies and intervals, and considerations for special situations **(Notes)**
4. Review contraindications and precautions for vaccine types **(Appendix)**
5. Review new or updated ACIP guidance **(Addendum)**

Recommended by the Advisory Committee on Immunization Practices (www.cdc.gov/vaccines/acip) and approved by the Centers for Disease Control and Prevention (www.cdc.gov), American College of Physicians (www.acponline.org), American Academy of Family Physicians (www.aafp.org), American College of Obstetricians and Gynecologists (www.acog.org), American College of Nurse-Midwives (www.midwife.org), American Academy of Physician Associates (www.aapa.org), American Pharmacists Association (www.pharmacist.com), and Society for Healthcare Epidemiology of America (www.shea-online.org).

Report

- Suspected cases of reportable vaccine-preventable diseases or outbreaks to the local or state health department
- Clinically significant adverse events to the Vaccine Adverse Event Reporting System at www.vaers.hhs.gov or 800-822-7967

Questions or comments

Contact www.cdc.gov/cdc-info or 800-CDC-INFO (800-232-4636), in English or Spanish, 8 a.m.–8 p.m. ET, Monday through Friday, excluding holidays.

Download the CDC Vaccine Schedules app for providers at www.cdc.gov/vaccines/schedules/hcp/schedule-app.html.

Helpful information

- Complete Advisory Committee on Immunization Practices (ACIP) recommendations: www.cdc.gov/vaccines/hcp/acip-recs/index.html
- ACIP Shared Clinical Decision-Making Recommendations: www.cdc.gov/vaccines/acip/acip-scdm-faqs.html
- *General Best Practice Guidelines for Immunization* www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html
- Vaccine information statements: www.cdc.gov/vaccines/hcp/vis/index.html
- Manual for the Surveillance of Vaccine-Preventable Diseases (including case identification and outbreak response): www.cdc.gov/vaccines/pubs/surv-manual

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

Scan QR code for access to online schedule

CS310021-D

Table 1 Recommended Adult Immunization Schedule by Age Group, United States, 2024

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years
COVID-19	1 or more doses of updated (2023–2024 Formula) vaccine (See Notes)			
Influenza inactivated (IIV4) or **Influenza recombinant** (RIV4)	1 dose annually			
or	or			
Influenza live, attenuated (LAIV4)	1 dose annually			
Respiratory Syncytial Virus (RSV)	Seasonal administration during pregnancy. See Notes.			≥60 years
Tetanus, diphtheria, pertussis (Tdap or Td)	1 dose Tdap each pregnancy; 1 dose Td/Tdap for wound management (see notes)			
	1 dose Tdap, then Td or Tdap booster every 10 years			
Measles, mumps, rubella (MMR)	1 or 2 doses depending on indication (if born in 1957 or later)			For healthcare personnel, see notes
Varicella (VAR)	2 doses (if born in 1980 or later)		2 doses	
Zoster recombinant (RZV)	2 doses for immunocompromising conditions (see notes)		2 doses	
Human papillomavirus (HPV)	2 or 3 doses depending on age at initial vaccination or condition	27 through 45 years		
Pneumococcal (PCV15, PCV20, PPSV23)				See Notes
				See Notes
Hepatitis A (HepA)	2, 3, or 4 doses depending on vaccine			
Hepatitis B (HepB)	2, 3, or 4 doses depending on vaccine or condition			
Meningococcal A, C, W, Y (MenACWY)	1 or 2 doses depending on indication, see notes for booster recommendations			
Meningococcal B (MenB)	2 or 3 doses depending on vaccine and indication, see notes for booster recommendations			
	19 through 23 years			
***Haemophilus influenzae* type b** (Hib)	1 or 3 doses depending on indication			
Mpox				

Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of immunity

Recommended vaccination for adults with an additional risk factor or another indication

Recommended vaccination based on shared clinical decision-making

No recommendation/ Not applicable

Table 2 Recommended Adult Immunization Schedule by Medical Condition or Other Indication, United States, 2024

Always use this table in conjunction with Table 1 and the Notes that follow. Medical conditions or indications are often not mutually exclusive. If multiple medical conditions or indications are present, refer to guidance in all relevant columns. See Notes for medical conditions or indications not listed.

VACCINE	Pregnancy	Immunocompromised (excluding HIV infection)	HIV infection CD4 percentage and count		Men who have sex with men	Asplenia, complement deficiency	Heart or lung disease	Kidney failure, End-stage renal disease or on dialysis	Chronic liver disease; alcoholism[a]	Diabetes	Healthcare Personnel[b]
			<15% or <200mm^3	≥15% and ≥200mm^3							
COVID-19		See Notes									
IIV4 or RIV4	1 dose annually										
LAIV4					1 dose annually if age 19–49 years		1 dose annually if age 19–49 years				
RSV	Seasonal administration. See Notes	See Notes				See Notes					
Tdap or Td	Tdap: 1 dose each pregnancy	1 dose Tdap, then Td or Tdap booster every 10 years									
MMR	*										
VAR	*		See Notes								
RZV		See Notes									
HPV	*	3 dose series if indicated									
Pneumococcal											
HepA											
Hep B	See Notes									Age ≥ 60 years	
MenACWY											
MenB											
Hib		HSCT: 3 doses[c]				Asplenia: 1 dose					
Mpox	See Notes				See Notes						See Notes

Recommended for all adults who lack documentation of vaccination, **OR** lack evidence of immunity

Not recommended for all adults, but recommended for some adults based on either age **OR** increased risk for or severe outcomes from disease

Recommended based on shared clinical decision-making

Recommended for all adults, and additional doses may be necessary based on medical condition or other indications. See Notes.

Precaution: Might be indicated if benefit of protection outweighs risk of adverse reaction

Contraindicated or not recommended
*Vaccinate after pregnancy, if indicated

No Guidance/ Not Applicable

a. Precaution for LAIV4 does not apply to alcoholism.

b. See notes for influenza; hepatitis B; measles, mumps, and rubella; and varicella vaccinations.

c. Hematopoietic stem cell transplant.

Notes Recommended Adult Immunization Schedule for Ages 19 Years or Older, United States, 2024

For vaccination recommendations for persons ages 18 years or younger, see the Recommended Child and Adolescent Immunization Schedule, 2024: www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html

Additional Information

- For calculating intervals between doses, 4 weeks = 28 days. Intervals of ≥4 months are determined by calendar months.
- Within a number range (e.g., 12–18), a dash (–) should be read as "through."
- Vaccine doses administered ≤4 days before the minimum age or interval are considered valid. Doses of any vaccine administered ≥5 days earlier than the minimum age or minimum interval should not be counted as valid and should be repeated. **The repeat dose should be spaced after the invalid dose by the recommended minimum interval.** For further details, see Table 3-2, Recommended and minimum ages and intervals between vaccine doses, in *General Best Practice Guidelines for Immunization* at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/timing.html.
- Information on travel vaccination requirements and recommendations is available at www.cdc.gov/travel/.
- For vaccination of persons with immunodeficiencies, see Table 8-1, Vaccination of persons with primary and secondary immunodeficiencies, in *General Best Practice Guidelines for Immunization* at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html
- For information about vaccination in the setting of a vaccine-preventable disease outbreak, contact your state or local health department.
- The National Vaccine Injury Compensation Program (VICP) is a no-fault alternative to the traditional legal system for resolving vaccine injury claims. All vaccines included in the adult immunization schedule except PPSV23, RSV, RZV, Mpox, and COVID-19 vaccines are covered by the National Vaccine Injury Compensation Program (VICP). Mpox and COVID-19 vaccines are covered by the Countermeasures Injury Compensation Program (CICP). For more information, see www.hrsa.gov/vaccinecompensation or www.hrsa.gov/cicp.

COVID-19 vaccination

Routine vaccination

Age 19 years or older

- **Unvaccinated:**
  - 1 dose of updated (2023–2024 Formula) Moderna or Pfizer-BioNTech vaccine
  - 2-dose series of updated (2023–2024 Formula) Novavax at 0, 3–8 weeks
- **Previously vaccinated* with 1 or more doses of any COVID-19 vaccine:** 1 dose of any updated (2023–2024 Formula) COVID-19 vaccine administered at least 8 weeks after the most recent COVID-19 vaccine dose.

Special situations

Persons who are moderately or severely immunocompromised**

- **Unvaccinated:**
  - 3-dose series of updated (2023–2024 Formula) Moderna at 0, 4, 8 weeks
  - 3-dose series of updated (2023–2024 Formula) Pfizer-BioNTech at 0, 3, 7 weeks
  - 2-dose series of updated (2023–2024 Formula) Novavax at 0, 3 weeks
- **Previously vaccinated* with 1 dose of any Moderna:** 2-dose series of updated (2023–2024 Formula) Moderna at 0, 4 weeks (minimum interval between previous Moderna dose and dose 1: 4 weeks)
- **Previously vaccinated* with 2 doses of any Moderna:** 1 dose of updated (2023–2024 Formula) Moderna at least 4 weeks after most recent dose.
- **Previously vaccinated* with 1 dose of any Pfizer-BioNTech:** 2-dose series of updated (2023–2024 Formula) Pfizer-BioNTech at 0, 4 weeks (minimum interval between previous Pfizer-BioNTech dose and dose 1: 3 weeks).
- **Previously vaccinated* with 2 doses of any Pfizer-BioNTech:** 1 dose of updated (2023–2024 Formula) Pfizer-BioNTech at least 4 weeks after most recent dose.
- **Previously vaccinated* with 3 or more doses of any Moderna or Pfizer-BioNTech:** 1 dose of any updated (2023–2024 Formula) COVID-19 vaccine at least 8 weeks after the most recent dose.
- **Previously vaccinated* with 1 or more doses of Janssen or Novavax with or without dose(s) of any Original monovalent or bivalent COVID-19 vaccine:** 1 dose of any updated (2023–2024 Formula) of COVID-19 vaccine at least 8 weeks after the most recent dose.

There is no preferential recommendation for the use of one COVID-19 vaccine over another when more than one recommended age-appropriate vaccine is available.

Current COVID-19 vaccine information available at www.cdc.gov/covidschedule. For information on Emergency Use Authorization (EUA) indications for COVID-19 vaccines, see www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines.

***Note:** Previously vaccinated is defined as having received any Original monovalent or bivalent COVID-19 vaccine (Janssen, Moderna, Novavax, Pfizer-BioNTech) prior to the updated 2023–2024 formulation.

****Note:** Persons who are moderately or severely immunocompromised have the option to receive one additional dose of updated (2023–2024 Formula) COVID-19 vaccine at least 2 months following the last recommended updated (2023–2024 Formula) COVID-19 vaccine dose. Further additional updated (2023–2024 Formula) COVID-19 vaccine dose(s) may be administered, informed by the clinical judgement of a healthcare provider and personal preference and circumstances. Any further additional doses should be administered at least 2 months after the last updated (2023–2024 Formula) COVID-19 vaccine dose.

Notes

Haemophilus influenzae type b vaccination

Special situations

- **Anatomical or functional asplenia (including sickle cell disease):** 1 dose if previously did not receive Hib vaccine; if elective splenectomy, 1 dose preferably at least 14 days before splenectomy.
- **Hematopoietic stem cell transplant (HSCT):** 3-dose series 4 weeks apart starting 6–12 months after successful transplant, regardless of Hib vaccination history.

Hepatitis A vaccination

Routine vaccination

- **Any person who is not fully vaccinated and requests vaccination** (identification of risk factor not required): 2-dose series HepA (Havrix 6–12 months apart or Vaqta 6–18 months apart [minimum interval: 6 months]) or 3-dose series HepA-HepB (Twinrix at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 5 months])

Special situations

- **Any person who is not fully vaccinated and who is at risk for hepatitis A virus infection:** 2-dose series HepA or 3-dose series HepA-HepB as above. Risk factors for hepatitis A virus infection include:
  - **Chronic liver disease** (e.g., persons with hepatitis B, hepatitis C, cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, alanine aminotransferase [ALT] or aspartate aminotransferase [AST] level greater than twice the upper limit of normal)
  - **HIV infection**
  - **Men who have sex with men**
  - **Injection or noninjection drug use**
  - **Persons experiencing homelessness**
  - **Work with hepatitis A virus** in research laboratory or with nonhuman primates with hepatitis A virus infection
  - **Travel in countries with high or intermediate endemic hepatitis A** (HepA-HepB [Twinrix] may be administered on an accelerated schedule of 3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months)
  - **Close, personal contact with international adoptee** (e.g., household or regular babysitting) in first 60 days after arrival from country with high or intermediate endemic hepatitis A (administer dose 1 as soon as adoption is planned, at least 2 weeks before adoptee's arrival)
  - **Pregnancy** if at risk for infection or severe outcome from infection during pregnancy
  - **Settings for exposure,** including health care settings targeting services to injection or noninjection drug users or group homes and nonresidential day care facilities for developmentally disabled persons (individual risk factor screening not required)

Hepatitis B vaccination

Routine vaccination

- **Age 19 through 59 years:** complete a 2- or 3- or 4-dose series
  - 2-dose series only applies when 2 doses of Heplisav-B* are used at least 4 weeks apart
  - 3-dose series Engerix-B, PreHevbrio*, or Recombivax HB at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 8 weeks / dose 1 to dose 3: 16 weeks])
  - 3-dose series HepA-HepB (Twinrix at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 5 months])
  - 4-dose series HepA-HepB (Twinrix) accelerated schedule of 3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months

*__Note:__ Heplisav-B and PreHevbrio are not recommended in pregnancy due to lack of safety data in pregnant persons.

- **Age 60 years or older without** known risk factors for hepatitis B virus infection **may** receive a HepB vaccine series.
- **Age 60 years or older with** known risk factors for hepatitis B virus infection **should** receive a HepB vaccine series.
- **Any adult age 60 years of age or older** who requests HepB vaccination should receive a HepB vaccine series.
  - **Risk factors for hepatitis B virus infection include:**
    - **Chronic liver disease** e.g., persons with hepatitis C, cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, alanine aminotransferase (ALT) or aspartate aminotransferase (AST) level greater than twice the upper limit of normal
    - **HIV infection**
    - **Sexual exposure risk** e.g., sex partners of hepatitis B surface antigen (HBsAg)-positive persons, sexually active persons not in mutually monogamous relationships, persons seeking evaluation or treatment for a sexually transmitted infection, men who have sex with men
    - **Current or recent injection drug use**
    - **Percutaneous or mucosal risk for exposure to blood** e.g., household contacts of HBsAg-positive persons, residents and staff of facilities for developmentally disabled persons, health care and public safety personnel with reasonably anticipated risk for exposure to blood or blood-contaminated body fluids; persons on maintenance dialysis (including in-center or home hemodialysis and peritoneal dialysis), persons who are predialysis, and patients with diabetes*
    - **Incarceration**
    - **Travel in countries with high or intermediate endemic hepatitis B**

*__Age 60 years or older with diabetes:__ Based on shared clinical decision making, 2-, 3-, or 4-dose series as above.

Notes Recommended Adult Immunization Schedule for Ages 19 Years or Older, United States, 2024

Special situations

- **Patients on dialysis:** complete a 3- or 4-dose series
  - 3-dose series Recombivax HB at 0, 1, 6 months (Note: Use Dialysis Formulation 1 mL = 40 mcg)
  - 4-dose series Engerix-B at 0, 1, 2, and 6 months (Note: Use 2 mL dose instead of the normal adult dose of 1 mL)

Human papillomavirus vaccination

Routine vaccination

- **All persons up through age 26 years:** 2- or 3-dose series depending on age at initial vaccination or condition
  - **Age 9–14 years at initial vaccination and received 1 dose or 2 doses less than 5 months apart:** 1 additional dose
  - **Age 9–14 years at initial vaccination and received 2 doses at least 5 months apart:** HPV vaccination series complete, no additional dose needed
  - **Age 15 years or older at initial vaccination:** 3-dose series at 0, 1–2 months, 6 months (minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 12 weeks / dose 1 to dose 3: 5 months; repeat dose if administered too soon)
- No additional dose recommended when any HPV vaccine series of any valency has been completed using the recommended dosing intervals.

Shared clinical decision-making

- **Adults age 27–45 years:** Based on shared clinical decision-making, complete a 2-dose series (if initiated age 9-14 years) or 3-dose series (if initiated ≥15 years)

For additional information on shared clinical decision-making for HPV; see www.cdc.gov/vaccines/hcp/admin/downloads/isd-job-aid-scdm-hpv-shared-clinical-decision-making-hpv.pdf

Special situations

- **Age ranges recommended above for routine and catch-up vaccination or shared clinical decision-making also apply in special situations**
  - **Immunocompromising conditions, including HIV infection**: 3-dose series, even for those who initiate vaccination at age 9 through 14 years.
  - **Pregnancy**: Pregnancy testing is not needed before vaccination. HPV vaccination is not recommended until after pregnancy. No intervention needed if inadvertently vaccinated while pregnant.

Influenza vaccination

Routine vaccination

- **Age 19 years or older:** 1 dose any influenza vaccine appropriate for age and health status annually.
  - **Age 65 years or older:** Any one of quadrivalent high-dose inactivated influenza vaccine (HD-IIV4), quadrivalent recombinant influenza vaccine (RIV4), or quadrivalent adjuvanted inactivated influenza vaccine (aIIV4) is preferred. If none of these three vaccines are available, then any other age-appropriate influenza vaccine should be used.
- For the 2023–2024 season, see www.cdc.gov/mmwr/volumes/72/rr/rr7202a1.htm
- For the 2024–2025 season, see the 2024–2025 ACIP influenza vaccine recommendations.

Special situations

- **Close contacts (e.g., caregivers, healthcare workers) of severely immunosuppressed persons who require a protected environment:** should not receive LAIV4. If LAIV4 is given, they should avoid contact with/caring for such immunosuppressed persons for 7 days after vaccination.

Note: Persons with an egg allergy can receive any influenza vaccine (egg-based and non-egg based) appropriate for age and health status.

Measles, mumps, and rubella vaccination

Routine vaccination

- **No evidence of immunity to measles, mumps, or rubella:** 1 dose
  - **Evidence of immunity:** Born before 1957 (except for health care personnel, see below), documentation of receipt of MMR vaccine, laboratory evidence of immunity or disease (diagnosis of disease without laboratory confirmation is not evidence of immunity)

Special situations

- **Pregnancy with no evidence of immunity to rubella:** MMR contraindicated during pregnancy; after pregnancy (before discharge from health care facility), 1 dose
- **Nonpregnant persons of childbearing age with no evidence of immunity to rubella:** 1 dose
- **HIV infection with CD4 percentages ≥15% and CD4 count ≥200 cells/mm^3 for at least 6 months and no evidence of immunity to measles, mumps, or rubella:** 2-dose series at least 4 weeks apart; MMR contraindicated for HIV infection with CD4 percentage <15% or CD4 count <200 cells/mm^3
- **Severe immunocompromising conditions:** MMR contraindicated
- **Students in postsecondary educational institutions, international travelers, and household or close, personal contacts of immunocompromised persons with no evidence of immunity to measles, mumps, or rubella:** 2-dose series at least 4 weeks apart if previously did not receive any doses of MMR or 1 dose if previously received 1 dose MMR
- **In mumps outbreak settings,** for information about additional doses of MMR (including 3rd dose of MMR), see www.cdc.gov/mmwr/volumes/67/wr/mm6701a7.htm

Notes

- **Health care personnel:**
  - **Born before 1957 with no evidence of immunity to measles, mumps, or rubella:** Consider 2-dose series at least 4 weeks apart for protection against measles or mumps or 1 dose for protection against rubella
  - **Born in 1957 or later with no evidence of immunity to measles, mumps, or rubella:** 2-dose series at least 4 weeks apart for protection against measles or mumps or at least 1 dose for protection against rubella

Meningococcal vaccination

Special situations for MenACWY

- **Anatomical or functional asplenia (including sickle cell disease), HIV infection, persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use:** 2-dose series MenACWY (Menveo or MenQuadfi) at least 8 weeks apart and revaccinate every 5 years if risk remains
- **Travel in countries with hyperendemic or epidemic meningococcal disease, or microbiologists routinely exposed to *Neisseria meningitidis*:** 1 dose MenACWY (Menveo or MenQuadfi) and revaccinate every 5 years if risk remains
- **First-year college students who live in residential housing (if not previously vaccinated at age 16 years or older) or military recruits:** 1 dose MenACWY (Menveo or MenQuadfi)
- For MenACWY **booster dose recommendations** for groups listed under "Special situations" and in an outbreak setting (e.g., in community or organizational settings, or among men who have sex with men) and additional meningococcal vaccination information, see www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm

Shared clinical decision-making for MenB

- **Adolescents and young adults age 16–23 years (age 16–18 years preferred) not at increased risk for meningococcal disease:** Based on shared clinical decision-making, 2-dose series MenB-4C (Bexsero) at least 1 month apart or 2-dose series MenB-FHbp (Trumenba) at 0, 6 months (if dose 2 was administered less than 6 months after dose 1, administer dose 3 at least 4 months after dose 2); MenB-4C and MenB-FHbp are not interchangeable (use same product for all doses in series).

For additional information on shared clinical decision-making for MenB, see www.cdc.gov/vaccines/hcp/admin/downloads/isd-job-aid-scdm-mening-b-shared-clinical-decision-making.pdf

Special situations for MenB

- **Anatomical or functional asplenia (including sickle cell disease), persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use, or microbiologists routinely exposed to *Neisseria meningitidis*:** 2-dose primary series MenB-4C (Bexsero) at least 1 month apart or 3-dose primary series MenB-FHbp (Trumenba) at 0, 1–2, 6 months (if dose 2 was administered at least 6 months after dose 1, dose 3 not needed; if dose 3 is administered earlier than 4 months after dose 2, a fourth dose should be administered at least 4 months after dose 3); MenB-4C and MenB-FHbp are not interchangeable (use same product for all doses in series); 1 dose MenB booster 1 year after primary series and revaccinate every 2–3 years if risk remains.
- **Pregnancy:** Delay MenB until after pregnancy unless at increased risk and vaccination benefits outweigh potential risks.
- For MenB **booster dose recommendations** for groups listed under "Special situations" and in an outbreak setting (e.g., in community or organizational settings and among men who have sex with men) and additional meningococcal vaccination information, see www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm

Note: MenB vaccines may be administered simultaneously with MenACWY vaccines if indicated, but at a different anatomic site, if feasible.

Adults may receive a single dose of Penbraya as an alternative to separate administration of MenACWY and MenB when both vaccines would be given on the same clinic day. For adults not at increased risk, if Penbraya is used for dose 1 MenB, MenB-FHbp (Trumenba) should be administered for dose 2 MenB. For adults at increased risk of meningococcal disease, Penbraya may be used for additional MenACWY and MenB doses (including booster doses) if both would be given on the same clinic day **and** at least 6 months have elapsed since most recent Penbraya dose.

Mpox vaccination

Special situations

- **Any person at risk for Mpox infection:** 2-dose series, 28 days apart.

  Risk factors for Mpox infection include:
  - Persons who are gay, bisexual, and other MSM, transgender or nonbinary people who in the past 6 months have had:
    - A new diagnosis of at least 1 sexually transmitted disease
    - More than 1 sex partner
    - Sex at a commercial sex venue
    - Sex in association with a large public event in a geographic area where Mpox transmission is occurring
  - Persons who are sexual partners of the persons described above
  - Persons who anticipate experiencing any of the situations described above

Notes

- **Pregnancy:** There is currently no ACIP recommendation for Jynneos use in pregnancy due to lack of safety data in pregnant persons. Pregnant persons with any risk factor described above may receive Jynneos.
- **Healthcare personnel:** Except in rare circumstances (e.g. no available personal protective equipment), healthcare personnel who do not have any of the sexual risk factors described above should not receive Jynneos.

  For detailed information, see: www.cdc.gov/vaccines/acip/meetings/downloads/slides-2023-10-25-26/04-MPOX-Rao-508.pdf

Pneumococcal vaccination

Routine vaccination

- **Age 65 years or older who have:**
  - **Not previously received a dose of PCV13, PCV15, or PCV20 or whose previous vaccination history is unknown:** 1 dose PCV15 OR 1 dose PCV20.
    - If PCV15 is used, administer 1 dose PPSV23 at least 1 year after the PCV15 dose (may use minimum interval of 8 weeks for adults with an immunocompromising condition,* cochlear implant, or cerebrospinal fluid leak).
  - **Previously received only PCV7:** follow the recommendation above.
  - **Previously received only PCV13:** 1 dose PCV20 OR 1 dose PPSV23.
    - If PCV20 is selected, administer at least 1 year after the last PCV13 dose.
    - If PPSV23 is selected, administer at least 1 year after the last PCV13 dose (may use minimum interval of 8 weeks for adults with an immunocompromising condition,* cochlear implant, or cerebrospinal fluid leak).
  - **Previously received only PPSV23:** 1 dose PCV15 OR 1 dose PCV20. Administer either PCV15 or PCV20 at least 1 year after the last PPSV23 dose.
    - If PCV15 is used, no additional PPSV23 doses are recommended.
  - **Previously received both PCV13 and PPSV23 but NO PPSV23 was received at age 65 years or older:** 1 dose PCV20 OR 1 dose PPSV23.
    - If PCV20 is selected, administer at least 5 years after the last pneumococcal vaccine dose.
    - If PPSV23 is selected, see dosing schedule at www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf.
  - **Previously received both PCV13 and PPSV23, AND PPSV23 was received at age 65 years or older:** Based on shared clinical decision-making, 1 dose of PCV20 at least 5 years after the last pneumococcal vaccine dose.
- For guidance on determining which pneumococcal vaccines a patient needs and when, please refer to the mobile app, which can be downloaded here: www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html.

Special situations

- **Age 19–64 years with certain underlying medical conditions or other risk factors** who have:**
  - **Not previously received a PCV13, PCV15, or PCV20 or whose previous vaccination history is unknown:** 1 dose PCV15 OR 1 dose PCV20.
    - If PCV15 is used, administer 1 dose PPSV23 at least 1 year after the PCV15 dose (may use minimum interval of 8 weeks for adults with an immunocompromising condition,* cochlear implant, or cerebrospinal fluid leak).
  - **Previously received only PCV7:** follow the recommendation above.
  - **Previously received only PCV13:** 1 dose PCV20 OR 1 dose PPSV23.
    - If PCV20 is selected, administer at least 1 year after the PCV13 dose.
    - If PPSV23 is selected, see dosing schedule at www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf
  - **Previously received only PPSV23:** 1 dose PCV15 OR 1 dose PCV20. Administer either PCV15 or PCV20 at least 1 year after the last PPSV23 dose.
    - If PCV15 is used, no additional PPSV23 doses are recommended.
  - **Previously received PCV13 and 1 dose of PPSV23:** 1 dose PCV20 OR 1 dose PPSV23.
    - If PCV20 is selected, administer at least 5 years after the last pneumococcal vaccine dose.
    - If PPSV23 is selected, see dosing schedule at www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf
- For guidance on determining which pneumococcal vaccines a patient needs and when, please refer to the mobile app which can be downloaded here: www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html

***Note:** Immunocompromising conditions include chronic renal failure, nephrotic syndrome, immunodeficiencies, iatrogenic immunosuppression, generalized malignancy, HIV infection, Hodgkin disease, leukemia, lymphoma, multiple myeloma, solid organ transplant, congenital or acquired asplenia, or sickle cell disease or other hemoglobinopathies.

****Note:** Underlying medical conditions or other risk factors include alcoholism, chronic heart/liver/lung disease, chronic renal failure, cigarette smoking, cochlear implant, congenital or acquired asplenia, CSF leak, diabetes mellitus, generalized malignancy, HIV infection, Hodgkin disease, immunodeficiencies, iatrogenic immunosuppression, leukemia, lymphoma, multiple myeloma, nephrotic syndrome, solid organ transplant, or sickle cell disease or other hemoglobinopathies.

Poliovirus vaccination

Routine vaccination

- **Adults known or suspected to be unvaccinated or incompletely vaccinated:** administer remaining doses (1, 2, or 3 IPV doses) to complete a 3-dose primary series.* Unless there are specific reasons to believe they were not vaccinated, most adults who were born and raised in the United States can assume they were vaccinated against polio as children.

Notes Recommended Adult Immunization Schedule for Ages 19 Years or Older, United States, 2024

Special situations

- **Adults at increased risk of exposure to poliovirus who completed primary series*:** may administer one lifetime IPV booster

***Note:** Complete primary series consists of at least 3 doses of IPV or trivalent oral poliovirus vaccine (tOPV) in any combination.

For detailed information, see: www.cdc.gov/vaccines/vpd/polio/hcp/recommendations.html

Respiratory syncytial virus vaccination

Routine vaccination

- **Pregnant at 32 weeks 0 days through 36 weeks and 6 days gestation from September through January in most of the continental United States*:** 1 dose RSV vaccine (Abrysvo™). Administer RSV vaccine regardless of previous RSV infection.
  - Either maternal RSV vaccination or infant immunization with nirsevimab (RSV monoclonal antibody) is recommended to prevent respiratory syncytial virus lower respiratory tract infection in infants.
- **All other pregnant persons:** RSV vaccine not recommended

There is currently no ACIP recommendation for RSV vaccination in subsequent pregnancies. No data are available to inform whether additional doses are needed in later pregnancies.

Special situations

- **Age 60 years or older:** Based on shared clinical decision-making, 1 dose RSV vaccine (Arexvy® or Abrysvo™). Persons most likely to benefit from vaccination are those considered to be at increased risk for severe RSV disease.** For additional information on shared clinical decision-making for RSV in older adults, see www.cdc.gov/vaccines/vpd/rsv/downloads/provider-job-aid-for-older-adults-508.pdf

For further guidance, see www.cdc.gov/mmwr/volumes/72/wr/mm7229a4.htm

***Note:** Providers in jurisdictions with RSV seasonality that differs from most of the continental United States (e.g., Alaska, jurisdiction with tropical climate) should follow guidance from public health authorities (e.g., CDC, health departments) or regional medical centers on timing of administration based on local RSV seasonality. Refer to the 2024 Child and Adolescent Immunization Schedule for considerations regarding nirsevimab administration to infants.

****Note:** Adults age 60 years or older who are at increased risk for severe RSV disease include those with chronic medical conditions such as lung diseases (e.g., chronic obstructive pulmonary disease, asthma), cardiovascular diseases (e.g., congestive heart failure, coronary artery disease), neurologic or neuromuscular conditions, kidney disorders, liver disorders, hematologic disorders, diabetes mellitus, and moderate or severe immune compromise (either attributable to a medical condition or receipt of immunosuppressive medications or treatment); those who are considered to be frail; those of advanced age; those who reside in nursing homes or other long-term care facilities; and those with other underlying medical conditions or factors that a health care provider determines might increase the risk of severe respiratory disease.

Tetanus, diphtheria, and pertussis vaccination

Routine vaccination

- **Previously did not receive Tdap at or after age 11 years*:** 1 dose Tdap, then Td or Tdap every 10 years

Special situations

- **Previously did not receive primary vaccination series for tetanus, diphtheria, or pertussis:** 1 dose Tdap followed by 1 dose Td or Tdap at least 4 weeks later, and a third dose of Td or Tdap 6–12 months later (Tdap is preferred as first dose and can be substituted for any Td dose), Td or Tdap every 10 years thereafter.
- **Pregnancy:** 1 dose Tdap during each pregnancy, preferably in early part of gestational weeks 27–36.
- **Wound management:** Persons with 3 or more doses of tetanus-toxoid-containing vaccine: For clean and minor wounds, administer Tdap or Td if more than 10 years since last dose of tetanus-toxoid-containing vaccine; for all other wounds, administer Tdap or Td if more than 5 years since last dose of tetanus-toxoid-containing vaccine. Tdap is preferred for persons who have not previously received Tdap or whose Tdap history is unknown. If a tetanus-toxoid-containing vaccine is indicated for a pregnant woman, use Tdap. For detailed information, see www.cdc.gov/mmwr/volumes/69/wr/mm6903a5.htm

***Note:** Tdap administered at age 10 years may be counted as the adolescent dose recommended at age 11–12 years

Varicella vaccination

Routine vaccination

- **No evidence of immunity to varicella:** 2-dose series 4–8 weeks apart if previously did not receive varicella-containing vaccine (VAR or MMRV [measles-mumps-rubella-varicella vaccine] for children); if previously received 1 dose varicella-containing vaccine, 1 dose at least 4 weeks after first dose.
  - **Evidence of immunity:** U.S.-born before 1980 (except for pregnant persons and health care personnel [see below]), documentation of 2 doses varicella-containing vaccine at least 4 weeks apart, diagnosis or verification of history of varicella or herpes zoster by a health care provider, laboratory evidence of immunity or disease.

Special situations

- **Pregnancy with no evidence of immunity to varicella:** VAR contraindicated during pregnancy; after pregnancy (before discharge from health care facility), 1 dose if previously received 1 dose varicella-containing vaccine or dose 1 of 2-dose series (dose 2: 4–8 weeks later) if previously did not receive any varicella-containing vaccine, regardless of whether U.S.-born before 1980.

- **Health care personnel with no evidence of immunity to varicella:** 1 dose if previously received 1 dose varicella-containing vaccine; 2-dose series 4–8 weeks apart if previously did not receive any varicella-containing vaccine, regardless of whether U.S.-born before 1980.
- **HIV infection with CD4 percentages ≥15% and CD4 count ≥200 cells/mm^3 with no evidence of immunity:** Vaccination may be considered (2 doses 3 months apart); VAR contraindicated for HIV infection with CD4 percentage <15% or CD4 count <200 cells/mm^3
- **Severe immunocompromising conditions:** VAR contraindicated.

Zoster vaccination

Routine vaccination

- **Age 50 years or older*:** 2-dose series recombinant zoster vaccine (RZV, Shingrix) 2–6 months apart (minimum interval: 4 weeks; repeat dose if administered too soon), regardless of previous herpes zoster or history of zoster vaccine live (ZVL, Zostavax) vaccination.

***Note:** Serologic evidence of prior varicella is not necessary for zoster vaccination. However, if serologic evidence of varicella susceptibility becomes available, providers should follow ACIP guidelines for varicella vaccination first. RZV is not indicated for the prevention of varicella, and there are limited data on the use of RZV in persons without a history of varicella or varicella vaccination.

Special situations

- **Pregnancy:** There is currently no ACIP recommendation for RZV use in pregnancy. Consider delaying RZV until after pregnancy.
- **Immunocompromising conditions (including persons with HIV regardless of CD4 count)**:** 2-dose series recombinant zoster vaccine (RZV, Shingrix) 2–6 months apart (minimum interval: 4 weeks; repeat dose if administered too soon). For detailed information, see www.cdc.gov/shingles/vaccination/immunocompromised-adults.html

****Note:** If there is no documented history of varicella, varicella vaccination, or herpes zoster, providers should refer to the clinical considerations for use of RZV in immunocompromised adults aged ≥19 years and the ACIP varicella vaccine recommendations for further guidance: www.cdc.gov/mmwr/volumes/71/wr/mm7103a2.htm

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Contraindications and Precautions to Commonly Used Vaccines

Adapted from Table 4-1 in Advisory Committee on Immunization Practices (ACIP) General Best Practice Guidelines for Immunization: Contraindication and Precautions, Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices—United States, 2023–24 Influenza Season | MMWR (cdc.gov), Contraindications and Precautions for COVID-19 Vaccination, and Contraindications and Precautions for Jynneos Vaccination

Vaccines and Other Immunizing Agents	Contraindicated or Not Recommended[1]	Precautions[2]
COVID-19 mRNA vaccines [Pfizer-BioNTech, Moderna]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a component of an mRNA COVID-19 vaccine[4]	• Diagnosed non-severe allergy (e.g., urticaria beyond the injection site) to a component of an mRNA COVID-19 vaccine[4]; or non-severe, immediate (onset less than 4 hours) allergic reaction after administration of a previous dose of an mRNA COVID-19 vaccine • Myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vaccine • Multisystem inflammatory syndrome in children (MIS-C) or multisystem inflammatory syndrome in adults (MIS-A) • Moderate or severe acute illness, with or without fever
COVID-19 protein subunit vaccine [Novavax]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a component of a Novavax COVID-19 vaccine[4]	• Diagnosed non-severe allergy (e.g., urticaria beyond the injection site) to a component of Novavax COVID-19 vaccine[4]; or non-severe, immediate (onset less than 4 hours) allergic reaction after administration of a previous dose of a Novavax COVID-19 vaccine • Myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vaccine • Multisystem inflammatory syndrome in children (MIS-C) or multisystem inflammatory syndrome in adults (MIS-A) • Moderate or severe acute illness, with or without fever
Influenza, egg-based, inactivated injectable (IIV4)	• Severe allergic reaction (e.g., anaphylaxis) after previous dose of any influenza vaccine (i.e., any egg-based IIV, ccIIV, RIV, or LAIV of any valency) • Severe allergic reaction (e.g., anaphylaxis) to any vaccine component[3] (excluding egg)	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Moderate or severe acute illness with or without fever
Influenza, cell culture-based inactivated injectable (ccIIV4) [Flucelvax Quadrivalent]	• Severe allergic reaction (e.g., anaphylaxis) to any ccIIV of any valency, or to any component[3] of ccIIV4	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Persons with a history of severe allergic reaction (e.g., anaphylaxis) after a previous dose of any egg-based IIV, RIV, or LAIV of any valency. If using ccIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions. May consult an allergist. • Moderate or severe acute illness with or without fever
Influenza, recombinant injectable (RIV4) [Flublok Quadrivalent]	• Severe allergic reaction (e.g., anaphylaxis) to any RIV of any valency, or to any component[3] of RIV4	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Persons with a history of severe allergic reaction (e.g., anaphylaxis) after a previous dose of any egg-based IIV, ccIIV, or LAIV of any valency. If using RIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions. May consult an allergist. • Moderate or severe acute illness with or without fever
Influenza, live attenuated (LAIV4) [Flumist Quadrivalent]	• Severe allergic reaction (e.g., anaphylaxis) after previous dose of any influenza vaccine (i.e., any egg-based IIV, ccIIV, RIV, or LAIV of any valency) • Severe allergic reaction (e.g., anaphylaxis) to any vaccine component[3] (excluding egg) • Anatomic or functional asplenia • Immunocompromised due to any cause including, but not limited to, medications and HIV infection • Close contacts or caregivers of severely immunosuppressed persons who require a protected environment • Pregnancy • Cochlear implant • Active communication between the cerebrospinal fluid (CSF) and the oropharynx, nasopharynx, nose, ear, or any other cranial CSF leak • Received influenza antiviral medications oseltamivir or zanamivir within the previous 48 hours, peramivir within the previous 5 days, or baloxavir within the previous 17 days.	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Asthma in persons aged 5 years or older • Persons with underlying medical conditions (other than those listed under contraindications) that might predispose to complications after wild-type influenza virus infection [e.g., chronic pulmonary, cardiovascular (except isolated hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders (including diabetes mellitus)] • Moderate or severe acute illness with or without fever

1. When a contraindication is present, a vaccine should NOT be administered. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization.
2. When a precaution is present, vaccination should generally be deferred but might be indicated if the benefit of protection from the vaccine outweighs the risk for an adverse reaction. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization.
3. Vaccination providers should check FDA-approved prescribing information for the most complete and updated information, including contraindications, warnings, and precautions. See Package inserts for U.S.-licensed vaccines.
4. See package inserts and FDA EUA fact sheets for a full list of vaccine ingredients. mRNA COVID-19 vaccines contain polyethylene glycol (PEG).

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Vaccine	Contraindicated or Not Recommended[1]	Precautions[2]
Haemophilus influenzae type b (Hib)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Moderate or severe acute illness with or without fever
Hepatitis A (HepA)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] including neomycin	• Moderate or severe acute illness with or without fever
Hepatitis B (HepB)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] including yeast • *Pregnancy: Heplisav-B and PreHevbrio are not recommended due to lack of safety data in pregnant persons. Use other hepatitis B vaccines if HepB is indicated*[4]	• Moderate or severe acute illness with or without fever
Hepatitis A-Hepatitis B vaccine (HepA-HepB) [Twinrix]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] including neomycin and yeast	• Moderate or severe acute illness with or without fever
Human papillomavirus (HPV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • *Pregnancy: HPV vaccination not recommended*	• Moderate or severe acute illness with or without fever
Measles, mumps, rubella (MMR)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe immunodeficiency (e.g., hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised) • Pregnancy • Family history of altered immunocompetence, unless verified clinically or by laboratory testing as immunocompetent	• Recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product) • History of thrombocytopenia or thrombocytopenic purpura • Need for tuberculin skin testing or interferon-gamma release assay (IGRA) testing • Moderate or severe acute illness with or without fever
Meningococcal ACWY (MenACWY) (MenACWY-CRM) [Menveo] (MenACWY-TT) [MenQuadfi]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • For MenACWY-CRM only: severe allergic reaction to any diphtheria toxoid–or CRM197–containing vaccine • For MenACWY-TT only: severe allergic reaction to a tetanus toxoid-containing vaccine	• Moderate or severe acute illness with or without fever
Meningococcal B (MenB) MenB-4C [Bexsero] MenB-FHbp [Trumenba]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Pregnancy • For MenB-4C only: Latex sensitivity • Moderate or severe acute illness with or without fever
Meningococcal ABCWY (MenACWY-TT/MenB-FHbp) [Penbraya]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe allergic reaction to a tetanus toxoid-containing vaccine	• Moderate or severe acute illness, with or without fever
Mpox [Jynneos]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Moderate or severe acute illness, with or without fever
Pneumococcal conjugate (PCV15, PCV20)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe allergic reaction (e.g., anaphylaxis) to any diphtheria-toxoid–containing vaccine or to its vaccine component[3]	• Moderate or severe acute illness with or without fever
Pneumococcal polysaccharide (PPSV23)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Moderate or severe acute illness with or without fever
Poliovirus vaccine, inactivated (IPV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Pregnancy • Moderate or severe acute illness with or without fever
Respiratory syncytial virus vaccine (RSV)	• Severe allergic reaction (e.g., anaphylaxis) to a vaccine component	• Moderate or severe acute illness with or without fever
Tetanus, diphtheria, and acellular pertussis (Tdap) Tetanus, diphtheria (Td)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • For Tdap only: Encephalopathy (e.g., coma, decreased level of consciousness, prolonged seizures), not attributable to another identifiable cause, within 7 days of administration of previous dose of DTP, DTaP, or Tdap	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of tetanus-toxoid–containing vaccine • History of Arthus-type hypersensitivity reactions after a previous dose of diphtheria-toxoid– containing or tetanus-toxoid–containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus-toxoid–containing vaccine • Moderate or severe acute illness with or without fever • For Tdap only: Progressive or unstable neurological disorder, uncontrolled seizures, or progressive encephalopathy until a treatment regimen has been established and the condition has stabilized
Varicella (VAR)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe immunodeficiency (e.g., hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised) • Pregnancy • Family history of altered immunocompetence, unless verified clinically or by laboratory testing as immunocompetent	• Recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product) • Receipt of specific antiviral drugs (acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination (avoid use of these antiviral drugs for 14 days after vaccination) • Use of aspirin or aspirin-containing products • Moderate or severe acute illness with or without fever
Zoster recombinant vaccine (RZV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Moderate or severe acute illness with or without fever • Current herpes zoster infection

1. When a contraindication is present, a vaccine should NOT be administered. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html
2. When a precaution is present, vaccination should generally be deferred but might be indicated if the benefit of protection from the vaccine outweighs the risk for an adverse reaction. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html
3. Vaccination providers should check FDA-approved prescribing information for the most complete and updated information, including contraindications, warnings, and precautions. Package inserts for U.S.-licensed vaccines are available at www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states.
4. For information on the pregnancy exposure registries for persons who were inadvertently vaccinated with Heplisav-B or PreHevbrio while pregnant, please visit heplisavbpregnancyregistry.com/ or www.prehevbrio.com/#safety.

Addendum Recommended Adult Immunization Schedule for Ages 19 Years or Older, United States, 2024

In addition to the recommendations presented in the previous sections of this immunization schedule, ACIP has approved the following recommendations by majority vote since October 26, 2023. The following recommendations have been adopted by the CDC Director and are now official. Links are provided if these recommendations have been published in *Morbidity and Mortality Weekly Report (MMWR)*.

Vaccines	Recommendations	Effective Date of Recommendation*
COVID-19	• ACIP recommends persons ≥65 years of age should receive an additional dose of 2023–2024 Formula COVID-19 vaccine. • For detailed information, see: www.cdc.gov/covidschedule	February 28, 2024

*The effective date is the date when the CDC director adopted the recommendation and when the ACIP recommendation became official.

Appendix L: Travel Vaccine Resource

The CDC Travelers' Health resource for individuals seeking immunizations for international travel. This is a resource only. Non-routine travel vaccines are not covered by this standing order.