IMPORTANT REMINDER: All providers must revalidate the Medical Assistance (MA) enrollment of each service location every 5 years. Providers should log into PROMISe to check the revalidation dates of each service location and submit revalidation applications at least 60 days prior to the revalidation dates. Enrollment (revalidation) applications may be found at: https://www.dhs.pa.gov/providers/Providers/Pages/PROMISe-Enrollment.aspx.

PURPOSE:

The purpose of this bulletin is to issue the U.S. Department of Health and Human Services’ Centers for Disease Control and Prevention’s (CDC) Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023.


SCOPE:

This bulletin applies to all providers enrolled in the MA Program who administer immunizations and provide services in the Fee-for-Service and managed care delivery systems.

BACKGROUND/DISCUSSION:

As stated in 55 Pa. Code § 1241.42(2), the Department of Human Services (Department) is authorized to issue immunization guidelines based on recommendations of recognized medical organizations involved in children’s health care. To ensure that children and adolescents enrolled in MA receive immunizations that conform to nationally recognized standards, the Department is updating its immunization guidelines to conform to the

COMMENTS AND QUESTIONS REGARDING THIS BULLETIN SHOULD BE DIRECTED TO:

The appropriate toll-free number for your provider type.

Visit the Office of Medical Assistance Programs website at https://www.dhs.pa.gov/providers/Providers/Pages/Health%20Care%20for%20Providers/Contact-Information-for-Providers.aspx.
Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023 (2023 Immunization Schedule).

Providers are to follow the attached 2023 Immunization Schedule, which is comprised of three tables and a series of related notes. The three tables are as follows:

- Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023 (Table 1);
- Recommended Catch-up Immunization Schedule for Children and Adolescents Who Start Late or Who Are More than 1 Month Behind, United States, 2023 (Table 2); and
- Recommended Child and Adolescent Immunization Schedule by Medical Indication, United States, 2023 (Table 3).

The 2023 Immunization Schedule includes new or updated Advisory Committee on Immunization Practices (ACIP) recommendations for influenza vaccine, pneumococcal conjugate vaccine, measles, mumps, and rubella vaccine (MMR), and COVID-19 vaccine. See Morbidity and Mortality Weekly Report Volume 72, February 10, 2023, which can be found at: https://www.cdc.gov/mmwr/volumes/72/wr/pdfs/mm7206a1-H.pdf.

The 2023 Immunization Schedule and ACIP guidance also include clarification of the recommendations for dengue vaccine, hepatitis A vaccine (HepA), hepatitis B vaccine (HepB), human papillomavirus vaccine (HPV), meningococcal serogroups A, C, W, Y vaccine (MenACWY), meningococcal serogroup B vaccine (MenB), inactivated poliovirus vaccine (IPV), and varicella vaccine.

As explained in the Morbidity and Mortality Weekly Report Volume 72, February 10, 2023, the overall appearance of the 2023 Immunization Schedule has been updated. These changes are in all portions of the immunization schedule, including the cover page, routine immunization schedule (Table 1), catch-up schedule (Table 2), medical indications for each vaccine (Table 3), the vaccine notes, and the appendix. The changes identified by ACIP are set forth below:

- **Cover Page**
  - COVID-19 vaccines, 15-valent pneumococcal conjugate vaccine (PCV15), and a newly licensed MMR (Priorix) have all been added to the table of vaccine abbreviations and trade names.

- **Table 1 (Routine Immunization Schedule)**
  - **COVID-19 row:** A new row has been added with the columns for age 6 months–18 years highlighted in yellow to indicate the recommended age for COVID-19 vaccination. The overlying text “2- or 3-dose primary series and booster (See Notes)” has also been added.
  - **Pneumococcal conjugate row:** PCV15 has been added.
  - **IPV row:** The overlying text “See Notes” has been added to the column for persons aged 17–18 years prompting health care providers to review the Notes...
• Table 2 (Catch-Up Immunization Schedule)
  o Pneumococcal conjugate row: Language for the minimum interval between doses 3 and 4 has been revised to clarify when a fourth dose is indicated. The text now reads “This dose is only necessary for children aged 12–59 months regardless of risk, or aged 60–71 months with any risk, who received 3 doses before age 12 months.”

• Table 3 (Immunization by Medical Indication Schedule)
  o COVID-19 row: A new row was added to summarize COVID-19 vaccination recommendations by medical conditions or other indications. The overlying text “See Notes” has been added to both HIV infection and immunocompromised status (excluding HIV infection) columns prompting providers to review specific recommendations for these populations.

• Vaccine Notes

The notes for each vaccine are presented in alphabetical order. Edits have been made throughout the Notes section to harmonize language between the child and adolescent immunization schedule and the adult immunization schedule to the greatest extent possible.

  o Additional information: The text for injury compensation was revised to include the Countermeasures Injury Compensation Program for COVID-19 vaccines.
  o COVID-19: A new section was added to provide additional details on the use of COVID-19 vaccines. The routine vaccination section describes the recommendations for primary series in the general population, and the special situations section describes the recommendations for primary series in persons who are moderately or severely immunocompromised. For booster dose vaccination in all populations, and guidance for Janssen (Johnson & Johnson) COVID-19 vaccine recipients, hyperlinks are included referring health care providers to the latest guidance. In addition, hyperlinks to the current COVID-19 vaccination schedules, use of COVID-19 preexposure prophylaxis in persons who are moderately or severely immunocompromised, as well as Emergency Use Authorization indications for COVID-19 vaccines, have been added.
  o Dengue: A new bullet was added to clarify that dengue vaccine should not be administered to children traveling to or visiting endemic dengue areas.
  o HepB: The language in the routine vaccination section was revised to highlight the recommendations for infants born to mothers who have received positive test results for hepatitis B surface antigen (HBsAg), or whose HBsAg status is unknown. In addition, the catch-up vaccination section was updated to include Heplisav-B and PreHevbrio vaccines for persons aged 18 years.
Influenza: The note has been updated to reflect the recommendations for the 2022–23 influenza season. Language was added to the “Special situations” section to clarify that live attenuated influenza vaccine should not be administered to close contacts of immunosuppressed persons who require a protected environment. In addition, the language for persons with egg allergy with symptoms other than hives was moved from the appendix to the “Special situations” section.

MMR: The “Special situations” section was updated to include recommendations for additional MMR doses in a mumps outbreak setting.

MenACWY: Language clarifying that the newly licensed Menveo one-vial (all liquid) formulation should not be administered before age 10 years was added.

MenB: The “Special situations” section was updated to include the recommendations for situations in which the second or third dose of Trumenba is administered earlier or later than the recommended minimum interval. If the second dose is administered ≥6 months after the first dose, then the third dose is not needed. If the third dose is administered earlier than 4 months after the second dose, a fourth dose should be administered ≥4 months after the third dose.

Pneumococcal: The routine vaccination, catch-up vaccination, and “Special situations” sections have been updated with the recommendations for use of PCV15. In addition, language was added stating that 13-valent pneumococcal conjugate vaccine (PCV13) and PCV15 can be used interchangeably in both healthy children and those with any risk for invasive pneumococcal disease. In addition, a hyperlink to the CDC app that can be used to determine a patient’s pneumococcal vaccination needs has been included.

Poliovirus: A new “Special situations” section was created to describe the use of IPV in persons aged 18 years who are at increased risk for exposure to polioviruses.

Appendix (Contraindications and Precautions)

The column header was changed from “Contraindications” to “Contraindicated or Not recommended.”

Influenza (egg-based) row: In the precautions for egg-based inactivated and live attenuated vaccines, the language for persons with egg allergy with symptoms other than hives has been moved to the Notes section.

Dengue row: Language was added stating that lack of laboratory confirmation of previous dengue virus infection is a contraindication.

HepB row: Language was added to the contraindicated or not recommended column stating that Heplisav-B and PreHevbrio are not recommended during pregnancy; other HepB products should be used if vaccination is indicated. A footnote providing information on the pregnancy exposure registries for persons who were inadvertently vaccinated with Heplisav-B or PreHevbrio while pregnant was added.
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## Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger

### Vaccines in the Child and Adolescent Immunization Schedule*

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Abbreviation(s)</th>
<th>Trade name(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COVID-19</td>
<td>1vCOV-mRNA</td>
<td>Comirnaty®/Pfizer-BioNTech COVID-19 Vaccine</td>
</tr>
<tr>
<td></td>
<td>2vCOV-mRNA</td>
<td>Pfizer-BioNTech COVID-19 Vaccine, Bivalent</td>
</tr>
<tr>
<td></td>
<td>1vCOV-APS</td>
<td>Novavax COVID-19 Vaccine</td>
</tr>
<tr>
<td>Tetanus, diphtheria, and acellular pertussis vaccine</td>
<td>DTap</td>
<td>Daptacel®/Infanrix®</td>
</tr>
<tr>
<td>Diphtheria, tetanus vaccine</td>
<td>DT</td>
<td>No trade name</td>
</tr>
<tr>
<td>Haemophilus influenza type b vaccine</td>
<td>Hib (PRP-T)</td>
<td>ActHIB®</td>
</tr>
<tr>
<td></td>
<td>Hib (PRP-OMP)</td>
<td>Hibrix®</td>
</tr>
<tr>
<td></td>
<td>HepA</td>
<td>Havrix®</td>
</tr>
<tr>
<td></td>
<td>HepB</td>
<td>Engerix-B®/Recombivax HB®</td>
</tr>
<tr>
<td>Vaccines against hepatitis A</td>
<td>HepA</td>
<td>HAVrix®</td>
</tr>
<tr>
<td></td>
<td>HepB</td>
<td>Engerix-B®/Recombivax HB®</td>
</tr>
<tr>
<td>Human papillomavirus vaccine</td>
<td>HPV</td>
<td>Gardasil 9®</td>
</tr>
<tr>
<td>Influenza vaccine (inactivated)</td>
<td>IIV4</td>
<td>Multiple</td>
</tr>
<tr>
<td>Influenza vaccine (live, attenuated)</td>
<td>LAIV4</td>
<td>FluMist®/Quadivalent</td>
</tr>
<tr>
<td>Measles, mumps, and rubella vaccine</td>
<td>MMR</td>
<td>M-M-R II®/Priorix®</td>
</tr>
<tr>
<td>Meningococcal serogroups A, C, W, Y vaccine</td>
<td>MenACWY-D</td>
<td>Menactra®</td>
</tr>
<tr>
<td></td>
<td>MenACWY-CRM</td>
<td>Menveo®</td>
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<tr>
<td></td>
<td>MenACWY-TT</td>
<td>MenQuadri®</td>
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<tr>
<td></td>
<td>MenB-4C</td>
<td>Bensero®</td>
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<td></td>
<td>MenB-FHbp</td>
<td>Trumenba®</td>
</tr>
<tr>
<td>Pneumococcal conjugate vaccine</td>
<td>PCV13</td>
<td>Prevnar 13®/Vaxneuvax™</td>
</tr>
<tr>
<td>Pneumococcal polysaccharide vaccine</td>
<td>PCV15</td>
<td>Prevnar 13®/Vaxneuvax™</td>
</tr>
<tr>
<td>Poliovirus vaccine (inactivated)</td>
<td>PPSV23</td>
<td>Pneumovax 23®</td>
</tr>
<tr>
<td>Rotavirus vaccine</td>
<td>RV1</td>
<td>Rotarix®</td>
</tr>
<tr>
<td></td>
<td>RV5</td>
<td>RotaTeq®</td>
</tr>
<tr>
<td>Tetanus, diphtheria, and acellular pertussis vaccine</td>
<td>Tdap</td>
<td>Adacel®/Boostrix®</td>
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<tr>
<td></td>
<td>Td</td>
<td>Tenivac®/Tdvax®</td>
</tr>
<tr>
<td>Varicella vaccine</td>
<td>VAR</td>
<td>Varivax®</td>
</tr>
</tbody>
</table>

### 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)

### 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 (800-232-4363), in English or Spanish, 8 a.m.–8 p.m. ET, Monday through Friday, excluding holidays

### Helpful information
- Complete Advisory Committee on Immunization Practices (ACIP) recommendations: www.cdc.gov/vaccines/hcp/acip-recs/index.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

### Recommended by...
Table 1: Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023

These recommendations must be read with the notes that follow. For those who fall behind or start late, provide catch-up vaccination at the earliest opportunity as indicated by the green bars.

To determine minimum intervals between doses, see the catch-up schedule (Table 2).

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Birth</th>
<th>1 mo</th>
<th>2 mos</th>
<th>4 mos</th>
<th>6 mos</th>
<th>9 mos</th>
<th>12 mos</th>
<th>15 mos</th>
<th>18 mos</th>
<th>19–23 mos</th>
<th>2–3 yrs</th>
<th>4–6 yrs</th>
<th>7–10 yrs</th>
<th>11–12 yrs</th>
<th>13–15 yrs</th>
<th>16 yrs</th>
<th>17–18 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis B (HepB)</td>
<td>1st</td>
<td></td>
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<tr>
<td>Rotavirus (RV): RV1 (2-dose series),</td>
<td>1st</td>
<td>2nd</td>
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<td>RV5 (3-dose series)</td>
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<tr>
<td>Diphtheria, tetanus, acellular pertussis</td>
<td>1st</td>
<td>2nd</td>
<td>3rd</td>
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<td>DTaP &lt;7 yrs</td>
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<td>4th</td>
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<td>Haemophilus influenza type b (Hib)</td>
<td>1st</td>
<td>2nd</td>
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<td>Pneumococcal conjugate (PCV13, PCV15)</td>
<td>1st</td>
<td>2nd</td>
<td>3rd</td>
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<tr>
<td>Inactivated poliovirus (IPV &lt;18 yrs)</td>
<td>1st</td>
<td>2nd</td>
<td>3rd</td>
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<tr>
<td>COVID-19 (1vCOV-mRNA, 2vCOV-mRNA, 1vCOV-aPS)</td>
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<td>Influenza (IIV4)</td>
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<td>Annual vaccination 1 or 2 doses</td>
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<td>Influenza (LAIV4)</td>
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<td>Annual vaccination 1 dose only</td>
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<td>Measles, mumps, rubella (MMR)</td>
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<td>Annual vaccination 1 or 2 doses</td>
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<td>Varicella (VAR)</td>
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<td>Annual vaccination 1 dose only</td>
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<td>Hepatitis A (HepA)</td>
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<td>2-dose series, See Notes</td>
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<td>Tetanus, diphtheria, acellular pertussis</td>
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<td>1 dose</td>
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<td>(Tdap ≥7 yrs)</td>
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<td>Human papillomavirus (HPV)</td>
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<tr>
<td>Meningococcal (MenACWY-D ≥9 mos,</td>
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<tr>
<td>MenACWY-CRM ≥2 mos, MenACWY-TT ≥2 years)</td>
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<tr>
<td>Meningococcal B</td>
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<tr>
<td>(MenB-4C, MenB-FHbp)</td>
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<tr>
<td>Pneumococcal polysaccharide (PPSV23)</td>
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<td>See Notes</td>
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<tr>
<td>Dengue (DEN4CYD; 9-16 yrs)</td>
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<td>Seropositive in endemic dengue areas (See Notes)</td>
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</tbody>
</table>

- Range of recommended ages for all children
- Range of recommended ages for catch-up vaccination
- Range of recommended ages for certain high-risk groups
- Recommended vaccination can begin in this age group
- Recommended vaccination based on shared clinical decision-making
- No recommendation/not applicable
### Table 2

**Recommended Catch-up Immunization Schedule for Children and Adolescents Who Start Late or Who Are More than 1 Month Behind, United States, 2023**

The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child’s age. *Always use this table in conjunction with Table 1 and the Notes that follow.*

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Minimum Age for Dose 1</th>
<th>Dose 1 to Dose 2</th>
<th>Minimum Interval Between Doses</th>
<th>Dose 3 to Dose 4</th>
<th>Dose 4 to Dose 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Children age 4 months through 6 years</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Birth</td>
<td>4 weeks</td>
<td>8 weeks and at least 16 weeks after first dose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotavirus</td>
<td>6 weeks</td>
<td>4 weeks</td>
<td>4 weeks maximum age for final dose is 8 months, 0 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diphtheria, tetanus, and acellular pertussis type b</td>
<td>6 weeks</td>
<td>4 weeks</td>
<td>6 months 6 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haemophilus influenzae type b</td>
<td>6 weeks</td>
<td>No further doses needed if first dose was administered at age 15 months or older.</td>
<td>No further doses needed if previous dose was administered at age 15 months or older.</td>
<td>8 weeks (as final dose)</td>
<td></td>
</tr>
<tr>
<td>Pneumococcal conjugate</td>
<td>6 weeks</td>
<td>No further doses needed for healthy children if first dose was administered at age 24 months or older.</td>
<td>No further doses needed for healthy children if previous dose was administered at age 24 months or older.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inactivated poliovirus</td>
<td>6 weeks</td>
<td>4 weeks</td>
<td>4 weeks if current age is &lt;4 years 6 months (as final dose) if current age is 4 years or older</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles, mumps, rubella</td>
<td>12 months</td>
<td>4 weeks</td>
<td>6 months (minimum age 4 years for final dose)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td>12 months</td>
<td>3 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>12 months</td>
<td>6 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meningococcal ACWY</td>
<td>2 months MenACWY-CRM 9 months MenACWY-D 2 years MenACWY-TT</td>
<td>8 weeks See Notes See Notes</td>
<td>See Notes</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Minimum Age for Dose 1</th>
<th>Dose 1 to Dose 2</th>
<th>Minimum Interval Between Doses</th>
<th>Dose 3 to Dose 4</th>
<th>Dose 4 to Dose 5</th>
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</thead>
<tbody>
<tr>
<td><strong>Children and adolescents age 7 through 18 years</strong></td>
<td></td>
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<tr>
<td>Meningococcal ACWY</td>
<td>Not applicable (N/A)</td>
<td>8 weeks</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Tetanus, diphtheria; tetanus, diphtheria, and acellular pertussis</td>
<td>7 years</td>
<td>4 weeks</td>
<td>4 weeks if first dose of DTaP/DT was administered before the 1st birthday 6 months (as final dose) if first dose of DTaP/DT or Tdap/Td was administered at or after the 1st birthday</td>
<td>6 months if first dose of DTaP/DT was administered before the 1st birthday</td>
<td></td>
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<tr>
<td>Human papillomavirus</td>
<td>9 years</td>
<td>Routine dosing intervals are recommended.</td>
<td></td>
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<tr>
<td>Hepatitis A</td>
<td>N/A</td>
<td>6 months</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Hepatitis B</td>
<td>N/A</td>
<td>4 weeks</td>
<td>8 weeks and at least 16 weeks after first dose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inactivated poliovirus</td>
<td>N/A</td>
<td>4 weeks</td>
<td>6 months A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months after the previous dose.</td>
<td></td>
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<tr>
<td>Measles, mumps, rubella</td>
<td>N/A</td>
<td>4 weeks</td>
<td></td>
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<tr>
<td>Varicella</td>
<td>N/A</td>
<td>3 months if younger than age 13 years. 4 weeks if age 13 years or older</td>
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<tr>
<td>Dengue</td>
<td>9 years</td>
<td>6 months</td>
<td></td>
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<tr>
<td>VACCINE</td>
<td>INDICATION</td>
<td>IMMUNOCOMPROMISED STATUS</td>
<td>HIV INFECTION CD4+ COUNT</td>
<td>KIDNEY FAILURE, END-STAGE RENAL DISEASE</td>
<td>HEART DISEASE OR CHRONIC LUNG DISEASE</td>
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<tr>
<td>Hepatitis B</td>
<td>Pregnancy</td>
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<tr>
<td>Rotavirus</td>
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<tr>
<td>Diphtheria, tetanus, and acellular pertussis (DTaP)</td>
<td>Rotavirus</td>
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<tr>
<td>Haemophilus influenzae type b</td>
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<tr>
<td>Pneumococcal conjugate</td>
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<tr>
<td>Inactivated poliovirus</td>
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<tr>
<td>COVID-19</td>
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<tr>
<td>Influenza (IV4)</td>
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<tr>
<td>Influenza (LAIV4)</td>
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<tr>
<td>Measles, mumps, rubella</td>
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<tr>
<td>Varicella</td>
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<tr>
<td>Hepatitis A</td>
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<tr>
<td>Tetanus, diphtheria, and acellular pertussis (Tdap)</td>
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<tr>
<td>Human papillomavirus</td>
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<tr>
<td>Meningococcal ACWY</td>
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<tr>
<td>Meningococcal B</td>
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<tr>
<td>Pneumococcal polysaccharide</td>
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<tr>
<td>Dengue</td>
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</tbody>
</table>

**Table Notes:***

- 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](http://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](http://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html).
- SCID: Severe Combined Immunodeficiency
- LAIV4 contraindicated for children 2–4 years of age with asthma or wheezing during the preceding 12 months.
For vaccination recommendations for persons ages 19 years or older, see the Recommended Adult Immunization Schedule, 2023.

**Additional information**
- Consult relevant ACIP statements for detailed recommendations at [www.cdc.gov/vaccines/hcp/acip-recs/index.html](http://www.cdc.gov/vaccines/hcp/acip-recs/index.html).
- 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](http://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/](http://www.cdc.gov/travel/).
- 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, and COVID-19 vaccines. COVID-19 vaccines that are authorized or approved by the FDA are covered by the Countermeasures Injury Compensation Program (CICP). For more information, see [www.hrsa.gov/vaccinecompensation](http://www.hrsa.gov/vaccinecompensation) or [www.hrsa.gov/cicp](http://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**
- **Primary series:**
  - **Age 6 months–4 years:** 2-dose series at 0, 4–8 weeks (Moderna) or 3-dose series at 0, 3–8, 11–16 weeks (Pfizer-BioNTech)
  - **Age 5–11 years:** 2-dose series at 0, 4–8 weeks (Moderna) or 2-dose series at 0, 3–8 weeks (Pfizer-BioNTech)
  - **Age 12–18 years:** 2-dose series at 0, 4–8 weeks (Moderna) or 2-dose series at 0, 3–8 weeks (Novavax, Pfizer-BioNTech)
  - For [booster dose recommendations](http://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html) see [www.cdc.gov/vaccines/hcp/index.html](http://www.cdc.gov/vaccines/hcp/index.html)

**Special situations**

**Persons who are moderately or severely immunocompromised**
- **Primary series:**
  - **Age 6 months–4 years:** 3-dose series at 0, 4, 8 weeks (Moderna) or 3-dose series at 0, 3, 11 weeks (Pfizer-BioNTech)
  - **Age 5–11 years:** 3-dose series at 0, 4, 8 weeks (Moderna) or 3-dose series at 0, 3, 7 weeks (Pfizer-BioNTech)
  - **Age 12–18 years:** 3-dose series at 0, 4, 8 weeks (Moderna) or 2-dose series at 0, 3 weeks (Novavax) or 3-dose series at 0, 3, 7 weeks (Pfizer-BioNTech)
- For [booster dose](http://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html) see [www.cdc.gov/vaccines/hcp/index.html](http://www.cdc.gov/vaccines/hcp/index.html)
- For [pre-exposure prophylaxis](http://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html) (monoclonal antibodies) may be considered to complement COVID-19 vaccination. See [www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#immunocompromised](http://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#immunocompromised)
- For [Janssen COVID-19 Vaccine recipients](http://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html)

**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?cid=rr7006a1_w](http://www.cdc.gov/mmwr/volumes/70/rr/rr7006a1.htm?cid=rr7006a1_w) and [www.cdc.gov/dengue/vaccine/hcp/index.html](http://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 at age 2, 4, 6, 15–18 months, 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](http://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 age 12–15 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 age 12–59 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.
- **Previously unvaccinated children 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.

**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

**Elective splenectomy:**
- Unvaccinated persons age 5 years or older
  - 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

**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.
- 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 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.

**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.
- 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.

- 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
- 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 (preferably at least 14 days before procedure)
- 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)

Notes
Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023
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)
- Interrupted schedules: If vaccination schedule is interrupted, the series does not need to be restarted.
- No additional dose recommended when any HPV vaccine series has been completed using the 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:
  - 2 doses, separated by at least 4 weeks, for children age 6 months–8 years who have received fewer than 2 influenza vaccine doses before July 1, 2022, or whose influenza vaccination history is unknown (administer dose 2 even if the child turns 9 between receipt of dose 1 and dose 2)
  - 1 dose for children age 6 months–8 years who have received at least 2 influenza vaccine doses before July 1, 2022
  - 1 dose for all persons age 9 years or older

Special situations

- Egg allergy, hives only: Any influenza vaccine appropriate for age and health status annually
- Egg allergy with symptoms other than hives (e.g., angioedema, respiratory distress) or required epinephrine or another emergency medical intervention: Any influenza vaccine appropriate for age and health status may be administered. If using egg-based IIV4 or LAIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions.
- Severe allergic reaction (e.g., anaphylaxis) to a vaccine component or a previous dose of any influenza vaccine: see Appendix listing contraindications and precautions
- Close contacts (e.g., caregivers, healthcare personnel) of severely immunosuppressed persons who require a protected environment: these persons should not receive LAIV4. If LAIV4 is given, they should avoid contact with/ caring for such immunosuppressed persons for 7 days after vaccination.

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.
- Minimum interval between MMRV doses: 3 months
Notes

Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023

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/ww/mm6701a7.htm

• Anatomic or functional asplenia, sickle cell disease, or HIV infection:
  - Age 9–23 months: Not recommended
  - Age 24 months or older: 2-dose series at least 8 weeks apart
  - Menactra® must be administered at least 4 weeks after completion of PCV series.

• MenQuadfi®
  - Dose 1 at age 24 months or older: 2-dose series at least 8 weeks apart

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 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)
  - Menactra® (age 9–23 months)
    - 2-dose series (dose 2 at least 12 weeks after dose 1; dose 2 may be administered as early as 8 weeks after dose 1 in travelers)

• Menactra® (age 9–23 months)
  - Children age 2 years or older: 1 dose Menveo®, Menactra®, 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®, Menactra®, 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.

Meningococcal serogroup B vaccination (minimum age: 10 years [MenB-4C, Bexsero®; MenB-FHbp, Trumenba®])

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)

Anatomical situations

• Anatomical or functional asplenia, sickle cell disease, 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)

  - Menactra®
    - Persistent complement component deficiency or complement inhibitor use:
      - Age 9–23 months: 2-dose series at least 12 weeks apart
      - Age 24 months or older: 2-dose series at least 8 weeks apart

  - 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)

• Menactra® must be administered at least 4 weeks after completion of PCV series.

Note: Menactra® should be administered either before or at the same time as DTaP. MenACWY may be administered simultaneously with MenB vaccines if indicated, but at a different anatomic site, if feasible.

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.
Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023

Pneumococcal vaccination
(minimum age: 6 weeks [PCV13], [PCV15], 2 years [PPSV23])

**Routine vaccination with PCV**
- 4-dose series at 2, 4, 6, 12–15 months

**Catch-up vaccination with PCV**
- Healthy children age 24–59 months with any incomplete* PCV series: 1 dose PCV
- For other catch-up guidance, see Table 2.

**Note:** PCV13 and PCV15 can be used interchangeably for children who are healthy or have underlying conditions. PCV15 is not indicated for children who have received 4 doses of PCV13 or another age appropriate complete PCV13 series.

**Special situations**

**Underlying conditions below: When both PCV and PPSV23 are indicated, administer PCV first. PCV and PPSV23 should not be administered during the same visit.**

**Chronic heart disease (particularly cyanotic congenital heart disease and cardiac failure); chronic lung disease (including asthma treated with high-dose, oral corticosteroids); diabetes mellitus:**

**Age 2–5 years**
- Any incomplete* series with:
  - 3 PCV doses: 1 dose PCV (at least 8 weeks after any prior PCV dose)
  - Less than 3 PCV doses: 2 doses PCV (8 weeks after the most recent dose and administered 8 weeks apart)
- No history of PPSV23: 1 dose PPSV23 (at least 8 weeks after completing all recommended PCV doses)

**Age 6–18 years**
- Any incomplete* series with PCV: no further PCV doses needed
- No history of PPSV23: 1 dose PPSV23 (at least 8 weeks after completing all recommended PCV doses)

**Cerebrospinal fluid leak, cochlear implant:**

**Age 2–5 years**
- Any incomplete* series with:
  - 3 PCV doses: 1 dose PCV (at least 8 weeks after any prior PCV dose)
  - Less than 3 PCV doses: 2 doses PCV (8 weeks after the most recent dose and administered 8 weeks apart)
- No history of PPSV23: 1 dose PPSV23 (at least 8 weeks after completing all recommended PCV doses)

**Age 6–18 years**
- Any incomplete* series with:
  - 3 PCV doses: 1 dose PCV (at least 8 weeks after any prior PCV dose)
  - Less than 3 PCV doses: 2 doses PCV (8 weeks after the most recent dose and administered 8 weeks apart)
- No history of PPSV23: 1 dose PPSV23 (at least 8 weeks after completing all recommended PCV doses)

*Incomplete series = Not having received all doses in either the recommended series or an age-appropriate catch-up series

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/vdp/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.
- IPV is not routinely recommended for U.S. residents age 18 years or older.

**Series containing oral polio 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_cid=mm6601a6_w.
- Only trivalent OPV (tOPV) counts toward the U.S. vaccination requirements.
  - Doses of OPV administered before April 1, 2016, should not 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.

**Special situations**

- Adolescents aged 18 years at increased risk of exposure to poliovirus with:
  - No evidence of a complete polio vaccination series (i.e., at least 3 doses): administer remaining doses (1, 2, or 3 doses) to complete a 3-dose series
  - Evidence of completed polio vaccination series (i.e., at least 3 doses): may administer one lifetime IPV booster

For detailed information, see: www.cdc.gov/vaccines/vdp/polio/hcp/recommendations.html
Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023

### 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.

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

**Routine vaccination**
- Adolescents age 11–12 years: 1 dose Tdap
- Pregnancy: 1 dose Tdap during each pregnancy, preferably in early part of gestational weeks 27–36.
- Tdap may be administered regardless of the interval since the last tetanus- and diphtheria-toxoid-containing vaccine.

**Catch-up vaccination**
- Adolescents age 13–18 years who have not received Tdap: 1 dose Tdap, then Td or Tdap booster every 10 years
- Persons 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:
  - Children age 7–9 years who receive Tdap should receive the routine Tdap dose at age 11–12 years.
  - Children age 10 years who receive Tdap do not need the routine Tdap dose at age 11–12 years.
- DTaP inadvertently administered on or after age 7 years:
  - Children age 7–9 years: DTaP may count as part of catch-up series. Administer routine Tdap dose at age 11–12 years.
  - Children age 10–18 years: Count dose of DTaP as the adolescent Tdap booster.
- 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.
# 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 available at [www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html](http://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html) and ACIP's Recommendations for the Prevention and Control of 2022-23 seasonal influenza with Vaccines available at [www.cdc.gov/mmwr/volumes/71/rr/rr7101a1.htm](http://www.cdc.gov/mmwr/volumes/71/rr/rr7101a1.htm).

For COVID-19 vaccine contraindications and precautions see [www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#contraindications](http://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#contraindications)

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Contraindicated or Not Recommended 1</th>
<th>Precautions 2</th>
</tr>
</thead>
</table>
| 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 ccIIV4, 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 aged 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. [www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html](http://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](http://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](http://www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states)
### Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Contraindicated or Not Recommended</th>
<th>Precautions</th>
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<tbody>
<tr>
<td>Dengue (DENACDY)</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component&lt;br&gt;• 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)&lt;br&gt;• Lack of laboratory confirmation of a previous Dengue infection</td>
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<tr>
<td>Diphtheria, tetanus, pertussis (DTaP) &lt;br&gt;Tetanus, diphtheria (DT)</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component&lt;br&gt;• 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</td>
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<tr>
<td>Hoemophilus influenzae type b (Hib)</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component&lt;br&gt;• For Hibrix, ActHib, and PedvaxHib only: History of severe allergic reaction to dry natural latex&lt;br&gt;• Less than 6 age weeks</td>
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<tr>
<td>Hepatitis A (HepA)</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component&lt;br&gt;• Includes neomycin&lt;br&gt;• Pregnancy: Hepatitis A vaccine is contraindicated in the presence of HIV infection</td>
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<tr>
<td>Hepatitis B (HepB)</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component&lt;br&gt;• Includes neomycin&lt;br&gt;• Pregnancy: Hepatitis B vaccine is contraindicated in the presence of HIV infection</td>
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<tr>
<td>Human papillomavirus (HPV)</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component&lt;br&gt;• Includes neomycin and yeast&lt;br&gt;• Pregnancy: HPV vaccination not recommended.</td>
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<tr>
<td>Measles, mumps, rubella (MMR) &lt;br&gt;Measles, mumps, rubella, and varicella (MMRV)</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component&lt;br&gt;• 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)</td>
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<tr>
<td>Meningococcal ACWY (MenACWY) &lt;br&gt;MenACWY-CRM (Menveo®), MenACWY-D (Menactra®) &lt;br&gt;MenACWY-TT (MenQuadri®)</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component&lt;br&gt;• Includes neomycin and yeast&lt;br&gt;• Pregnancy</td>
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<tr>
<td>Meningococcal B (MenB) &lt;br&gt;[MenB-4C (Bexsero®); MenB-EhrP (Trumeno®)]</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component</td>
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<tr>
<td>Pneumococcal conjugate (PCV)</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component&lt;br&gt;• Includes neomycin and yeast&lt;br&gt;• Pregnancy: PCV is contraindicated in the presence of HIV infection</td>
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<tr>
<td>Pneumococcal polysaccharide (PPSV23)</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component&lt;br&gt;• Includes neomycin and yeast&lt;br&gt;• Pregnancy: PPSV23 is contraindicated in the presence of HIV infection</td>
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<tr>
<td>Poliovirus vaccine, inactivated (IPV)</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component&lt;br&gt;• Includes neomycin and yeast&lt;br&gt;• Pregnancy</td>
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<tr>
<td>Rotavirus (RV) [RV1 (Rotarix®), RV3 (RotaTeq®)]</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component&lt;br&gt;• Includes neomycin and yeast&lt;br&gt;• Pregnancy: Rotavirus vaccine is contraindicated in the presence of HIV infection</td>
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<tr>
<td>Tetanus, diphtheria, and acellular pertussis (Tdap) &lt;br&gt;Tetanus, diphtheria (Td)</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component&lt;br&gt;• Includes neomycin and yeast&lt;br&gt;• Pregnancy: Tetanus, diphtheria and acellular pertussis vaccine is contraindicated in the presence of HIV infection</td>
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<tr>
<td>Varicella (VAR)</td>
<td>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component&lt;br&gt;• 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)&lt;br&gt;• Pregnancy&lt;br&gt;• History of altered immunocompetence, unless verified clinically or by laboratory testing as immunocompetent</td>
<td></td>
</tr>
</tbody>
</table>

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. CDC, 2023. [www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html](http://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. CDC, 2023. [www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html](http://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](http://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 Hepatitis B or PreHevbrio while pregnant, please visit [heplisavbpregnancyregistry.com](http://heplisavbpregnancyregistry.com) or [www.prehevbrio.com](http://www.prehevbrio.com).