Immunization Schedules  
(Adult/Adolescent/Child)

For complete guideline/recommendations, please go to http://www.cdc.gov/vaccines

Access Immunization schedules for all ages including screening forms at OptimHealth.com  
https://www.optimahealth.com/providers/clinical-reference/immunization-schedules

**Please check with your individual Health Plans.  
All Health Plans may not fully cover the costs for all members. **

Guideline History

| Original Approve Date | Adult: 01/97  
|                       | Adolescent: 01/97  
|                       | Pediatric: 08/94  
| Review/Revise Dates  | 08/94, 04/96, 01/97, 01/98, 02/99, 10/99, 05/99, 05/00, 01/01, 05/01, 05/02, 05/03, 06/03, 01/07, 01/08, 01/09, 01/10, 2/11, 2/12, 2/13, 2/14, 2/15, 2/16, 2/17, 2/18, 2/19  
| Next Review Date     | 02/20 |
Summary of Immunization Schedule Changes 2019

Adults Aged 19 Years or Older

**Influenza Vaccination.** In June 2018, ACIP updated recommendations on the use of live attenuated influenza vaccine (LAIV) (FluMist Quadrivalent, AstraZeneca) after two influenza seasons (2016–17 and 2017–18), during which use of LAIV was not recommended in the United States (4). For the 2018–19 season, any licensed influenza vaccine that is recommended for age and health status of the patient may be used. LAIV is an option for adults aged ≤49 years, except those who 1) have immunocompromising conditions, including human immunodeficiency virus (HIV) infection; 2) have anatomic or functional asplenia; 3) are pregnant; 4) have close contact with or are caregivers of severely immunocompromised persons in a protected environment; 5) have received influenza antiviral medications in the previous 48 hours; or 6) have a cerebrospinal fluid leak or a cochlear implant. Adults with a history of Guillain-Barré syndrome within 6 weeks of receipt of a previous dose of influenza vaccine generally should not receive influenza vaccine.

**Hepatitis B Vaccination.** In February 2018, ACIP recommended use of the new single-antigen recombinant hepatitis B vaccine with a novel cytosine-phosphate-guanine 1018 oligodeoxynucleotide adjuvant (Heplisav-B, Dynavax) for prevention of hepatitis B virus infection in adults aged ≥18 years (5). Approved by the Food and Drug Administration in November 2017, Heplisav-B is routinely administered in 2 doses given ≥4 weeks apart. It can be used as a substitute in a 3-dose series with a different hepatitis B vaccine, but a valid 2-dose series requires 2 doses of Heplisav-B with ≥4 weeks between doses. When feasible, a vaccine from the same manufacturer should be used to complete the vaccination series. However, vaccination should not be deferred if the previously administered hepatitis B vaccine is unknown or if a vaccine from the same manufacturer is not available. A pregnant woman with an indication for hepatitis B vaccination should not receive Heplisav-B because no safety data are available on its use during pregnancy.

**Hepatitis A Vaccination.** In October 2018, ACIP recommended adding homelessness as an indication for routine hepatitis A vaccination with a 2-dose series of single-antigen hepatitis A vaccine (Havrix, GlaxoSmithKline; Vaqta, Merck) or a 3-dose series of combination hepatitis A and hepatitis B vaccine (Twinrix, GlaxoSmithKline) (6). Other populations at increased risk for hepatitis A virus infection or severe hepatitis A disease and recommended to receive vaccination include 1) persons with chronic liver disease or clotting factor disorders; 2) travelers in countries with high or intermediate hepatitis A endemicity; 3) persons with close personal contact with an international adoptee in the first 60 days after arrival from a country with high or endemic hepatitis A prevalence; 4) men who have sex with men; 5) persons who use injection or noninjection drugs; and 6) persons who work with hepatitis A virus in a laboratory or with nonhuman primates infected with the virus (7–9). In addition, any person who is not at risk for hepatitis A virus infection but wants protection against it may be vaccinated.
The cover page of the 2019 adult immunization schedule has been simplified and contains the following changes:

- Features a shortened title, provides basic instructions on how to use the adult immunization schedule to systematically identify vaccination needs of adults, and lists routinely recommended vaccines and their standardized abbreviations and trade names.
- Includes web links through which health care providers can download the CDC Vaccine Schedules App and access reference materials on surveillance of vaccine-preventable diseases, including case identification and disease outbreak response.
- Simplifies instructions for reporting suspected cases of reportable vaccine-preventable diseases to local or state health departments and for reporting postvaccination adverse events and serious adverse events to the Vaccine Adverse Event Reporting System; information on the Vaccine Injury Compensation Program; and links to other resources, such as Vaccine Information Statements and recommended vaccines for travelers.

**Table 1. Recommended Adult Immunization Schedule by Age Group.** Table 1 (previously known as Figure 1) describes routine and catch-up vaccination recommendations for adults by age. ACIP recommends routine annual influenza vaccination for all persons aged ≥6 months who do not have contraindications; 1 annual dose of IIV, RIV, or LAIV that is appropriate for age and health status of the vaccine recipient is recommended. Table 1 contains the following change:

- Lists LAIV separately from inactivated influenza vaccine (IIV) (many branded products) and recombinant influenza vaccine (RIV) (Flublok Quadrivalent, Sanofi Pasteur) for adults aged ≤49 years.

**Table 2. Recommended Adult Immunization Schedule by Medical Condition and Other Indications.** Table 2 (previously known as Figure 2) describes indications for which vaccines, if not previously administered, should be administered unless noted otherwise. Table 2 contains the following changes:

- Lists LAIV separately from IIV and RIV.
- Contains two new display colors for some vaccines: orange and pink. Orange indicates “Precaution—vaccine might be indicated if benefit of protection outweighs risk of adverse reaction”; pink indicates “Delay vaccination until after pregnancy if vaccine is indicated.”
- Designates the use of LAIV in pregnant women and immunocompromised adults, including those with HIV infection, as “Contraindicated—vaccine should not be administered because of risk for serious adverse reaction” (red). The risk for associated adverse effects from the use of LAIV in adults with functional or anatomic asplenia or complement deficiencies is not known; however, the use of LAIV in this population has also been designated as “Contraindicated” (red). For adults with end-stage renal disease, heart or lung disease, chronic liver disease, or diabetes, the use of LAIV has been given the “Precaution” (orange) designation.
- Designates the use of serogroup B meningococcal vaccine (MenB) (Bexsero, GlaxoSmithKline; Trumenba, Pfizer) in pregnant women as “Precaution” (orange). MenB should be deferred in pregnant women unless they are at increased risk for serogroup B meningococcal disease and the benefits of vaccination are considered to outweigh potential risks (10).
Maintains the use of meningococcal serogroups A, C, W-135, and Y conjugate vaccine (MenACWY) (Menactra, Sanofi Pasteur; Menveo, GlaxoSmithKline) in pregnant women as “Recommended vaccination for adults with an additional risk factor or another indication” (purple). In contrast to the recommendation to defer administration of MenB vaccine to pregnant women, pregnancy should not preclude the use of MenACWY vaccine if it is otherwise indicated (11).

Designates the use of human papillomavirus (HPV) vaccine (Gardasil 9, Merck) and recombinant zoster vaccine (RZV) (Shingrix, GlaxoSmithKline) in pregnant women as “Delay until after pregnancy” (pink). The use of HPV vaccine is not recommended for pregnant women (12,13). Pregnant women should consider delaying receipt of RZV, if it is indicated, until after pregnancy (14). Live attenuated zoster vaccine (Zostavax, Merck) is contraindicated during pregnancy (15).

Children and Adolescents Aged 18 Years or Younger

Vaccine changes in the 2019 immunization schedule for children and adolescents aged ≤18 years include new or revised ACIP recommendations for hepatitis A vaccine (HepA) (2), hepatitis B vaccine (Hep B) (3), influenza vaccine (4), and tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine (Tdap) (5), as well as clarification of the recommendations for inactivated poliovirus vaccines (IPV).

Cover Page. Changes to the cover page are as follows:

- Guidance on how to use the schedule was added to the top of the document.
- Live attenuated influenza vaccine (LAIV) was added to the vaccine table.
- A Helpful Information section, which includes links to the ACIP recommendations, the General Best Practice Guidelines for Immunization, and the Manual for the Surveillance of Vaccine-Preventable Diseases, has been added.

Table 1. Changes to Table 1 (previously known as Figure 1) are as follows:

- A separate row has been added for LAIV.
- A purple bar has been added to the Hepatitis A (HepA) row at age 6–11 months to represent use in infant travelers.
- Within the Tetanus, diphtheria, & acellular pertussis (Tdap: ≥7 yrs) row, the bar for persons aged 13–18 years has been split into a half green and half purple bar to represent catch-up vaccination and use in pregnant adolescents, respectively.

Table 2. Changes to Table 2 (previously known as Figure 2) are as follows:

- Minor changes to the order in which guidance is presented in the Haemophilus influenzae type b and Pneumococcal conjugate rows were made. The criteria under which no further doses are needed are now presented first, followed by recommendation for those for whom additional doses are indicated.

Table 3. Changes to Table 3 (previously known as Figure 3) are as follows:

- A new pink color has been added to the legend, which represents “Delay vaccination until after pregnancy if vaccine indicated.” This color is used in the pregnancy column for human papillomavirus vaccine.
- The Contraindicated and Precaution for vaccination boxes in the legend have been defined with narrative text.
- A row for LAIV has been added.
- The Pregnancy cell in the meningococcal B vaccine row has been changed to the orange Precaution for vaccination color.

**Notes.** The notes (previously known as footnotes) are presented in alphabetical order rather than linked by numerical superscripts as in previous years. Edits have been made throughout the Notes section to harmonize language between the child and adolescent schedule and the adult immunization schedule, where possible. In addition, the following content changes were made:

- The HepA note was revised to include information regarding the use of combined HepA–HepB vaccine in persons aged ≥18 years. A section for international travel has been added with recommendations for vaccination of travelers aged 6–11 months and unvaccinated travelers aged ≥12 months. Homelessness also has been added as an indication for HepA vaccination.
- The HepB note was revised to include information regarding the use of CpG-adjuvanted HepB vaccine and combination HepA–HepB vaccine in persons aged ≥18 years.
- Within the IPV note, a bullet has been added regarding the use of combination vaccines that contain IPV.
- The Influenza vaccines note has been updated to indicate that LAIV can be used during the 2018–19 influenza season. A Special Situations section has been added with information regarding vaccination of persons with a history of egg allergy and circumstances under which LAIV use is not recommended.
- During mumps and meningococcal disease outbreaks, the Additional Information section at the beginning of the notes directs providers to their state or local health department for information regarding vaccination during an outbreak. Therefore, language regarding the use of measles, mumps, and rubella (MMR) vaccine in the setting of a mumps outbreak or the use of meningococcal (groups A, C, W-135, and Y) conjugate (MenACWY) and meningococcal group B (MenB) vaccines in the setting of meningococcal disease outbreaks has been removed from the MMR and meningococcal vaccine notes.
- The Tdap note has been updated to indicate that those persons who received a dose of Tdap or diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP) at age 7–10 years inadvertently or as part of the catch-up series should still receive the routine dose of Tdap at age 11–12 years. A link to information regarding use of Tdap/tetanus and diphtheria toxoids (Td) for wound prophylaxis also has been added.
Before you vaccinate adults, consider their “H-A-L-O”!

What is H-A-L-O? As shown below, it’s an easy-to-use chart that can help you make an initial decision about vaccinating a patient based on four factors – the patient’s Health condition, Age, Lifestyle, and Occupation.

In some situations, though, you can vaccinate a patient without considering these factors. For example, all adults need a dose of Tdap as well as annual vaccination against influenza, and any adult who wants protection against hepatitis A or hepatitis B can be vaccinated. Note that not all patients who mention one or more H-A-L-O factors will need to be vaccinated. Before you make a definitive decision about vaccinating your patient, it’s important that you refer to the more detailed information found in the Immunization Action Coalition’s “Summary of Recommendations for Adult Immunization,” located at www.immunize.org/catg.d/p2011.pdf or the complete vaccine recommendations of the Centers for Disease Control and Prevention’s Advisory Committee on Immunization Practices (ACIP) at www.cdc.gov/vaccines/hcp/acip-recs/index.html.

H-A-L-O checklist of factors that indicate a possible need for adult vaccination

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Health Factors</th>
<th>Age Factors</th>
<th>Lifestyle Factors</th>
<th>Occupational or other factors</th>
</tr>
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<tr>
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<tr>
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<td>HPV (females)</td>
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<td></td>
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<tr>
<td>HPV (males)</td>
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<td>✔ ✔</td>
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<tr>
<td>IPV</td>
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<td>✔</td>
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<td>Meningococcal ACWY</td>
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<tr>
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<tr>
<td>Zoster</td>
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</tbody>
</table>

 Folks = Vaccination may be indicated depending on degree of immunosuppression

Immunization Action Coalition
Saint Paul, Minnesota • 651-647-9009 • www.immunize.org • www.vaccineinformation.org

Technical content reviewed by the Centers for Disease Control and Prevention
www.immunize.org/catg.d/p3070.pdf • Item #P3070 (4/18)
Resources

Virginia Vaccines for Children (VVFC) Office
800-568-1929 or (804) 864-8055
Vaccine Orders: 1-877-781-VVFC (8832)
Fax: (804) 864-8090
Email VFC@vdh.virginia.gov

Virginia Immunization Information System (VIIS)
Phone: 804-864-8055
Fax: 804-864-8190
Email VIISInfo@vdh.virginia.gov

Selected Drug Manufacturers/Websites

GlaxoSmithKline
1-866-475-8222
www.gskvaccines.com

Merck
1-800-NSC-MERCK or 1-800-637-2590
www.merckvaccines.com

Pfizer
1-800-438-1985 or 1-800-505-4426
www.pfizerpro.com/

Sanofi Pasteur
800-822-2463
www.vaccineshoppe.com

Other Useful Resources

Medicaid Provider Helpline
1-800-552-8627 or 804-786-6273

FAMIS Helpline
1-866-87-FAMIS (32647)

Centers for Disease Control and Prevention (CDC) INFO Contact Center

Call this toll-free number to request information on immunization. The number is (800) 232-4636 (800-CDC-INFO). This is an integrated CDC hotline service. Callers to this number are given several options, one of which is immunization. This line will accommodate English and Spanish. http://www.cdc.gov/vaccines/schedules/index.html

Immunization Action Coalition

The Coalition facilitates communication about the safety, efficacy, and use of vaccines within the broad immunization community of patients, parents, health care organizations, and government health agencies. Telephone number 651-647-9009 • fax 651-647-9131. Visit website at www.immunize.org/vis.

For clinic resources and documenting vaccinations-http://www.immunize.org/clinic/documenting-vaccination.asp

Vaccine Adverse Event Reporting System (VAERS)

The Vaccine Adverse Event Reporting System (VAERS) used to report any clinically significant adverse events following any vaccination. Call VAERS at (800) 822-7967 | Fax VAERS at (877) 721-0366. Guidance on submitting adverse event online, by fax or mail can be found at https://vaers.hhs.gov/esub/index

These Guidelines are promulgated by Sentara Health Plans, Inc. (SHP) as recommendation for the clinical management of specific conditions. Clinical data in a particular case may necessitate or permit deviation from these Guidelines. The SHP Guidelines are institutionally endorsed recommendations and are not intended as a substitute for clinical judgment.