



# 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<br>Adolescent: 01/97<br>Pediatric: 08/94   |
| Review/Revise Dates   | 08/94, 04/96, 01/97, 01/98,<br>02/99, 10/99, 05/99, 05/00,<br>01/01, 05/01, 05/02, 05/03,<br>06/03, 01/07, 01/08, 01/09, 1/10, 2/11,<br>2/12, 2/13, 2/14, 2/15, 2/16, 2/17,<br>2/18 |
| Next Review Date      | 02/19   |

# Summary of Immunization Schedule Changes 2018

## Adults Aged 19 Years or Older

- Changes to the newly released 2018 immunization schedules include recommending preferential use of the new, FDA-approved herpes zoster subunit (HZ/su; Shingrix) vaccine over the currently available herpes zoster live (Zostavax) vaccine for adults 50 and older.
- A third dose of measles, mumps and rubella vaccine now is recommended for patients considered to be at-risk during outbreaks
- “Td/Tdap” has been replaced by “Tdap or Td” on Figures 1 and 2 and the text in the indication bar has been revised to “1 dose Tdap, then Td booster every 10 years.”
- **Zoster Vaccination (2).** On October 20, 2017, the Food and Drug Administration approved the use of RZV (SHINGRIX, GlaxoSmithKline [GSK]) for adults aged 50 years or older for the prevention of herpes zoster (shingles) and its complications. On October 25, ACIP recommended the use of 1) RZV among immunocompetent adults aged 50 years or older for the prevention of herpes zoster and related complications, 2) RZV among adults aged 50 years or older who previously received the zoster vaccine live (ZVL) (ZOSTAVAX, Merck and Co.), and 3) either RZV or ZVL for adults aged 60 years or older (RZV is preferred). On October 26, 2017, ACIP recommended the following in the 2018 adult immunization schedule:
  - Administer 2 doses of RZV 2–6 months apart to adults aged 50 years or older regardless of past episode of herpes zoster or receipt of ZVL.
  - Administer 2 doses of RZV 2–6 months apart to adults who previously received ZVL at least 2 months after ZVL.
  - For adults aged 60 years or older, administer either RZV or ZVL (RZV is preferred).
  - The clinical trials for RZV excluded pregnancy and confirmed or suspected immunocompromising conditions that can result from disease (e.g., malignancy, HIV infection) or therapy (e.g., cancer chemotherapy, treatment for autoimmune disorders) (3–6). Therefore, no ACIP recommendation currently exists for use of RZV among pregnant women (health care providers should consider delaying administration of RZV for pregnant women) or adults with immunocompromising conditions, including HIV infection (additional discussions and recommendations by ACIP on the use of RZV in adults with immunocompromising conditions are pending).
  - Consistent with the existing recommended use of ZVL, ACIP recommended RZV for adults who are receiving low-dose (<20 mg/day of prednisone or equivalent) or short-term (<14 days of corticosteroids) immunosuppressive therapy, are anticipating immunosuppression, or have recovered from an immunocompromising illness (7). The clinical trials for RZV did not exclude adults with non-

immunocompromising chronic health conditions (3–6). Therefore, given the safety and effectiveness profiles of other conjugate vaccines recommended for adults (e.g., hepatitis B and pneumococcal vaccines), ACIP recommended that RZV should routinely be used for age-eligible adults with diabetes mellitus; chronic heart, lung, liver, or kidney disease; functional or anatomical asplenia; or complement deficiencies.

- **MMR Vaccination (8).** On 25 October, ACIP updated MMR vaccination recommendations to include the use of a third dose of a mumps virus–containing vaccine for persons previously vaccinated with 2 doses of a mumps virus–containing vaccine who are identified by public health authorities as being a part of a group or population at risk for acquiring mumps because of an outbreak. During a mumps outbreak, persons identified as being at increased risk and who have received  $\leq 2$  doses of mumps virus–containing vaccine or whose mumps vaccination status is unknown should receive 1 dose of MMR. This change is described in the 2018 adult immunization schedule as follows:
  - Administer 1 dose of MMR to adults who previously received  $\leq 2$  doses of mumps virus–containing vaccine and are identified by a public health authority to be at increased risk during a mumps outbreak.
  - Adults without evidence of immunity to mumps (defined as birth before 1957, documentation of receipt of MMR, or laboratory evidence of immunity or disease) are routinely recommended to receive 1 dose of MMR for mumps prevention. However, students in postsecondary educational institutions, international travelers, or household contacts of immunocompromised persons should receive 2 doses of MMR at least 28 days apart. In a mumps outbreak setting, those adults identified by a public health authority to be at risk should receive 1 dose of MMR regardless of whether they previously received 0, 1, or 2 doses of a mumps virus–containing vaccine.
- **Notable Changes to Figures 1 and 2.** The footnotes in the 2018 adult immunization schedule should be used in conjunction with “Figure 1. Recommended immunization schedule for adults aged 19 years or older, by age group” and “Figure 2. Recommended immunization schedule for adults aged 19 years or older by medical condition and other indications.” The footnotes contain additional general information (e.g., dosing intervals for vaccination series) and considerations for special populations (e.g., pregnant women, adults with HIV infection). The footnotes in the adult immunization schedule and the child and adolescent immunization schedule have been harmonized to be more consistent with one another (9). Notable changes in Figures 1 and 2 include the following:
  - In Figures 1 and 2, “ZVL” replaced the term “HZV” (herpes zoster vaccine) that was used in past adult immunization schedules to refer to the live zoster vaccine. A row for RZV was added above the row for ZVL, and a dashed line was used to separate RZV and ZVL rows to denote that the two zoster vaccines are recommended for the same purpose. In the indication bars for RZV, the text stating that RZV is preferred over ZVL has been added when either RZV or ZVL can be used for adults aged 60 years or older.

- In Figures 1 and 2, “Td/Tdap” (tetanus and reduced diphtheria toxoids/tetanus and reduced diphtheria toxoids and acellular pertussis vaccine) has been replaced by “Tdap or Td,” and the text in the indication bar has been revised to “1 dose Tdap, then Td booster every 10 years.” 1 dose of Tdap is recommended for adults who have not previously received Tdap as an adult or child (1 dose of Tdap is routinely recommended at age 11–12 years), except for pregnant women, for whom 1 dose of Tdap is recommended in each pregnancy during the early part of gestational weeks 27–36.
- In Figures 1 and 2, the text in the indication bar for MenACWY (serogroups A, C, W, and Y meningococcal vaccine) has been revised to “1 or 2 doses depending on indication, then a booster dose every 5 years if risk remains.” Adults with functional or anatomical asplenia, persistent complement component deficiencies, or HIV infection should receive 2 doses of MenACWY and be revaccinated every 5 years. One dose of MenACWY is recommended for microbiologists who work with isolates of *Neisseria meningitidis* and travelers in countries with endemic or epidemic meningococcal disease, and a booster dose of MenACWY is indicated every 5 years if the risk remains. One dose of MenACWY is recommended for first-year college students living in residence halls and military recruits. MPSV4 (4-valent meningococcal polysaccharide vaccine) is no longer available and has been removed from the adult immunization schedule.
- In Figure 1, the text in the indication bar for MMR has been changed to “1 or 2 doses depending on indication (if born in 1957 or later).” One dose of MMR is routinely recommended for adults born in 1957 or later who do not have evidence of immunity to measles, mumps, or rubella. However, for students in postsecondary educational institutions, international travelers, and household contacts of immunocompromised persons, 2 doses of MMR administered at least 28 days apart are routinely recommended.
- In Figure 1, the text in the indication bars for human papillomavirus (HPV) vaccine for females and males (10) has been revised to “2 or 3 doses depending on age at series initiation.”

## **Children and Adolescents Aged 18 Years or Younger**

Changes in the 2018 immunization schedules for children and adolescents aged 18 years or younger include new or revised ACIP recommendations for poliovirus (1), influenza (2), and measles, mumps, and rubella vaccines (3), and clarification of the recommendations for rotavirus and pneumococcal vaccines.

### **Changes Affecting Multiple Portions of the Schedule**

Mention of MenHiberix (Hib-MenCY) vaccine has been removed from Figure 1 and Figure 2 and the relevant footnotes (Hib and meningococcal A,C,W,Y). Manufacturing of MenHibrix has been discontinued in the United States and all available doses have expired.

**Cover Page.** Changes to the 2018 figure from the 2017 schedule<sup>†</sup> are as follows:

- A table was added outlining vaccine type, abbreviation, and brand names for vaccines discussed in the child/adolescent immunization schedule.

**Figure 2.** Changes to the 2018 figure from the 2017 schedule are as follows:

- The maximum ages for the first and last doses in the rotavirus vaccination series were added to the rotavirus vaccine row.
- The inactivated poliovirus vaccine rows were edited to clarify the catch-up recommendations for children 4 years of age and older.

**Figure 3.** Changes to the 2018 figure from that in the 2017 schedule are as follows:

- A reference was added to the HIV column of the figure. The reference provides additional information regarding HIV laboratory parameters and use of live vaccines.
- Within the pneumococcal conjugate row, stippling was added to heart disease/chronic lung disease, chronic liver disease, and diabetes columns to clarify that, in some situations, an additional dose of vaccine might be recommended for children with these conditions.

**Footnotes.** The footnotes are presented in a new simplified format. The goal was to remove unnecessary text, preserve all pertinent information, and maintain clarity. This was accomplished by a transition from complete sentences to bullets, removal of unnecessary or redundant language, and formatting changes. In addition to this overall simplification, content changes were made as follows:

- The Hepatitis B vaccine (HepB) footnote was revised to include information regarding vaccination of <2,000-g infants born to hepatitis B virus surface antigen (HBsAg)–negative mothers.
- The poliovirus vaccine footnote was revised to include updated guidance for persons who received oral poliovirus vaccine as part of their vaccination series.
- The influenza vaccine footnote has been updated to indicate that live attenuated influenza vaccine (LAIV) should not be used during the 2017–2018 influenza season. A reference link to the 2017–2018 season influenza recommendations has been added.
- The measles, mumps, and rubella vaccine (MMR) footnote was updated to include guidance regarding the use of a third dose of mumps virus–containing vaccine during a mumps outbreak.
- The meningococcal vaccine footnote has been edited to create separate footnotes for MenACWY and MenB vaccines.

# 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](http://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/pubs/ACIP-list.htm](http://www.cdc.gov/vaccines/pubs/ACIP-list.htm).

## How do I use H-A-L-O?

Though some H-A-L-O factors can be easily determined (e.g., age, pregnancy), you will need to ask your patient about the presence or absence of others. Once you determine which of the factors apply, scan down each column of the chart to see at a glance which vaccinations are possibly indicated.

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

| Vaccine       | H Health Factors  |                          |                                  |                |          |                                      |   |           |            | A Age Factors  | L Lifestyle Factors   |                           |  |  |                        |  | O Occupational or other factors |                  |                   |                     |  |
|---------------|---|--------------------------|----------------------------------|----------------|----------|--------------------------------------|---|-----------|------------|--|-----------------------|---------------------------|--|--|------------------------|--|---------------------------------|------------------|-------------------|---------------------|--|
|               | Pregnant  | Certain chronic diseases | Immunosuppressed (including HIV) | History of STD | Asplenia | Cochlear implant candidate/recipient | Organ transplant (for stem cell transplant, see ACIP’s General Recommendations on Immunization) | CSF leaks | Alcoholism |  | Born outside the U.S. | Men who have sex with men | Not in a long-term, mutually monogamous relationship | User of injecting or non-injecting drugs | International traveler | Close contact of international adoptee | Cigarette smoker                | College students | Healthcare worker | Certain lab workers | Adults in institutional settings (e.g., chronic care, corrections) |
| HepA          |   | ✓                        |                                  |                |          |                                      |   |           |            |  |                       |                           |  | ✓  | ✓                      | ✓                                      |                                 |                  |                   |                     | ✓  |
| HepB          |   | ✓                        | ✓                                | ✓              |          |                                      |   |           |            |  | ✓                     | ✓                         | ✓  | ✓  | ✓                      |  |                                 |                  | ✓                 |                     | ✓  |
| Hib           |   | ✓                        |                                  |                | ✓        |                                      |   |           |            |  |                       |                           |  |  |                        |  |                                 |                  |                   |                     |  |
| HPV (females) |   |                          |                                  |                |          |                                      |   |           |            | Through 26 yrs                                       |                       |                           |  |  |                        |  |                                 |                  |                   |                     |  |
| HPV (males)   |   |                          | ✓                                |                |          |                                      |   |           |            | Routine through 21 yrs; risk-based 22–26 yrs         | ✓                     |                           |  |  |                        |  |                                 |                  |                   |                     |  |
| IPV           |   |                          |                                  |                |          |                                      |   |           |            |  |                       |                           |  | ✓  |                        |  |                                 |                  |                   |                     | ✓  |
| Influenza     | Annual vaccination is recommended for all adults.....▶  |                          |                                  |                |          |                                      |   |           |            |  |                       |                           |  |  |                        |  |                                 |                  |                   |                     |  |
| Meningococcal |   | ✓                        |                                  |                | ✓        |                                      |   |           |            |  |                       |                           |  |  |                        | ✓                                      |                                 | ✓                |                   | ✓                   |  |
| MMR           |   |                          | ?                                |                |          |                                      |   |           |            | Routine 1 dose if born after 1956; 2nd dose for some |                       |                           |  |  | ✓                      |  |                                 | ✓                | ✓                 |                     |  |
| PCV13         |   | ✓                        | ✓                                |                | ✓        | ✓                                    | ✓   | ✓         |            | 65 yrs and older (if not previously vaccinated)      |                       |                           |  |  |                        |  |                                 |                  |                   |                     |  |
| PPSV23        |   | ✓                        | ✓                                |                | ✓        | ✓                                    | ✓   | ✓         | ✓          | 65 yrs and older                                     |                       |                           |  |  |                        | ✓                                      |                                 |                  |                   |                     | ✓  |
| Tdap          | A single dose is recommended for all adults; pregnant women should receive Tdap during each pregnancy.....▶                                       |                          |                                  |                |          |                                      |   |           |            |  |                       |                           |  |  |                        |  |                                 |                  |                   |                     |  |
| Varicella     | Completion of a 2-dose series is recommended for non-pregnant adults through age 59 years who do not have evidence of immunity to varicella.....▶ |                          |                                  |                |          |                                      |   |           |            |  |                       |                           |  |  |                        |  |                                 |                  |                   |                     |  |
| Zoster        |   |                          |                                  |                |          |                                      |   |           |            | 60 yrs and older                                     |                       |                           |  |  |                        |  |                                 |                  |                   |                     |  |

? = Vaccination may be indicated depending on degree of immunosuppression

# 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](mailto:VFC@vdh.virginia.gov)

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

## Selected Drug Manufacturers/Websites

GlaxoSmithKline  
1-866-475-8222  
[www.gskvaccines.com](http://www.gskvaccines.com)

Merck  
1-800-NSC-MERCK or 1-800-637-2590  
[www.merckvaccines.com](http://www.merckvaccines.com)

Pfizer  
1-800-438-1985 or 1-800-505-4426  
[www.pfizerpro.com/](http://www.pfizerpro.com/)

Sanofi Pasteur  
800-822-2463  
[www.vaccineshoppe.com](http://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](http://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