



Recommended Childhood and Adolescent Immunization Schedule—United States, 2017

COMMITTEE ON INFECTIOUS DISEASES

The 2017 recommended childhood and adolescent immunization schedules have been approved by the American Academy of Pediatrics, the Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention, the American Academy of Family Physicians, and the American College of Obstetricians and Gynecologists. The schedules are revised annually to reflect current recommendations for the use of vaccines licensed by the US Food and Drug Administration.

The 2017 format of Fig 1 is similar to the 2016 schedule consisting of a single table for persons from birth through 18 years of age. The yellow bars indicate the recommended age range for all children and contain a notation indicating the recommended dose number by age. The green bars indicate the recommended catch-up age. The purple bars designate the range for immunization for certain groups at high risk. The blue bars indicate the range of recommended doses for persons in non-high-risk groups who may receive a vaccine, subject to individual decision-making. The white boxes show the ages at which a vaccine is not recommended routinely. The columns that begin with a gray-shaded box indicate vaccine recommendations for school entry and at adolescent visits. The following specific changes have been made to the 2017 schedule:

- A column has been added for adolescents at 16 years of age. This age group has been separated from 17- to 18-year-olds to emphasize the need for a meningococcal conjugate vaccine (MenACWY) booster dose at age 16.
- Reference to live attenuated influenza vaccine (LAIV) has been removed from the influenza vaccine row.
- A blue bar has been added to the human papillomavirus (HPV) vaccine row at 9 to 10 years to indicate that, even in the absence of a high-risk condition, children may receive HPV vaccine series at this age.

FREE

This document is copyrighted and is property of the American Academy of Pediatrics and its Board of Directors. All authors have filed conflict of interest statements with the American Academy of Pediatrics. Any conflicts have been resolved through a process approved by the Board of Directors. The American Academy of Pediatrics has neither solicited nor accepted any commercial involvement in the development of the content of this publication.

Policy statements from the American Academy of Pediatrics benefit from expertise and resources of liaisons and internal (American Academy of Pediatrics) and external reviewers. However, policy statements from the American Academy of Pediatrics may not reflect the views of the liaisons or the organizations or government agencies that they represent.

The guidance in this statement does not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

All policy statements from the American Academy of Pediatrics automatically expire 5 years after publication unless reaffirmed, revised, or retired at or before that time.

DOI: 10.1542/peds.2016-4007

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Copyright © 2017 by the American Academy of Pediatrics

FINANCIAL DISCLOSURE: The authors have indicated they do not have a financial relationship relevant to this article to disclose.

FUNDING: No potential funding.

POTENTIAL CONFLICT OF INTEREST: The authors have indicated they have no potential conflicts of interest to disclose.

To cite: AAP COMMITTEE ON INFECTIOUS DISEASES. Recommended Childhood and Adolescent Immunization Schedule—United States, 2017. *Pediatrics*. 2017;139(3):e20164007

Figure 2 is the catch-up immunization schedule offering recommendations for children and adolescents who start late or are >1 month behind. As in previous years, the catch-up schedule is divided into sections for children ages 4 months through 6 years and children and adolescents ages 7 through 18 years. No changes have been made to the 2017 catch-up immunization figure. Tables (job aids) are available to assist in the clarification of the recommended use of *Haemophilus influenzae* type b, pneumococcal, and pertussis-containing vaccines as a function of age; the number of doses previously administered; and the time interval since the last dose.

Figure 3 is a new table that addresses which vaccines may be indicated for persons aged 0 through 18 years who have a specific medical indication. This figure indicates vaccines that may be administered during pregnancy or to children and adolescents with an immunocompromising condition; kidney, heart, or liver disease; a cochlear implant; a cerebrospinal fluid leak; asplenia; a complement deficiency; or diabetes. Figure 3 in the childhood/adolescent schedule is similar to Fig 2 in the adult immunization schedule.

Footnotes contain recommendations for routine vaccination, for catch-up vaccination, as well as for vaccination of children and adolescents with high-risk conditions or in special circumstances. Recommendations in the figures should be read with the corresponding footnotes. Changes have been made to the following footnotes:

- Hepatitis B. Updated recommendations reflect that a monovalent birth dose should be administered to all newborns within 24 hours of birth. Revised wording indicates that infants born to hepatitis B surface antigen (HBsAg)-positive mothers should be tested for HBsAg and antibody

to HBsAg at 9 through 12 months (rather than 9 through 18 months).

- *Haemophilus influenzae* type b. Comvax vaccine (Merck, Whitehouse Station, NJ) has been removed because the vaccine is no longer commercially available and all available doses have expired. Hiberix (GlaxoSmithKline Biologicals, Rixensart, Belgium) has been added to the list of vaccines that may be used for a primary vaccination series.
- Pneumococcal conjugate. References to PCV7 vaccine have been removed because all children who may have received PCV7 as part of a primary series have now aged out of the recommendation for pneumococcal vaccine.
- Influenza. Wording has been added to indicate that LAIV is not recommended for the 2016–2017 influenza season.
- Meningococcal ACWY. Recommendations now include vaccination of children with HIV infection.
- Meningococcal B. Wording has been modified to note that persons aged 16 through 23 years may be vaccinated on the basis of clinical discretion. Updated recommendations regarding a 2-dose Trumenba (Wyeth Pharmaceuticals, Philadelphia, PA) schedule have been added.
- Tdap. Revised wording indicates a preference for administration of 1 dose for pregnant adolescents, and this dose should be administered as early as possible in the 27- to 36-week gestational age period. Wording is changed to indicate that for children aged 7 through 10 years who receive Tdap as part of a catch-up series, either Tdap or Td may be administered for the adolescent dose at 11 through 12 years.
- Human papillomavirus. Wording reflects that the number of

recommended doses is based on age at administration of the first dose. Two doses are recommended for persons starting the series before their 15th birthday, whereas 3 doses are recommended for those who start the series on or after their 15th birthday and for persons with certain immunocompromising conditions. 2vHPV (Cervarix ; GlaxoSmithKline Biologicals, Rixensart, Belgium) has been removed from the schedule because this vaccine is no longer available and all available doses expired before January 1, 2017.

In addition to publication of the schedules in this issue of *Pediatrics*, the 2017 version of Figs 1 through 3, the catch-up schedule, the footnotes, and job aids are available at the AAP Web site (https://redbook.solutions.aap.org/selfserve/ssPage.aspx?SelfServeContentId=Immunization_Schedules) and the Centers for Disease Control and Prevention Web site (<https://www.cdc.gov/vaccines/schedules/>). A parent-friendly vaccine schedule for children and adolescents is available at <http://www.cdc.gov/vaccines/schedules/index.html>. An adult immunization schedule is published in February of each year and is available at www.cdc.gov/vaccines.

Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS). Guidance about how to obtain and complete a VAERS form can be obtained at www.vaers.hhs.gov or by calling 800-822-7967. Additional information can be found in the *Red Book* and at *Red Book Online* (<http://aapredbook.aappublications.org/>). Statements from the Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention that contain detailed recommendations for individual vaccines, including recommendations for children with high-risk conditions, are available

at www.cdc.gov/vaccines/pubs/ACIP-list.htm. Information on new vaccine releases, vaccine supplies, and interim recommendations resulting from vaccine shortages and statements on specific vaccines can be found at www.aapredbook.org/news/vaccstatus.shtml and www.cdc.gov/vaccines/pubs/ACIP-list.htm.

COMMITTEE ON INFECTIOUS DISEASE, 2016-2017

Carrie L. Byington, MD, FAAP,
Chairperson

Yvonne A. Maldonado, MD, FAAP,
Vice Chairperson

Elizabeth D. Barnett, MD, FAAP

James D. Campbell, MD, FAAP

H. Dele Davies, MD, MS, MHCM, FAAP

Ruth Lynfield, MD, FAAP

Flor M. Munoz, MD, FAAP

Dawn Nolt, MD, MPH, FAAP

Ann Christine Nyquist, MD, MSPH,
FAAP

Sean O'Leary, MD, MPH, FAAP

Mobeen H. Rathore, MD, FAAP

Mark H. Sawyer, MD, FAAP

William J. Steinbach, MD, FAAP

Tina Q. Tan, MD, FAAP

Theoklis E. Zaoutis, MD, MSCE, FAAP

EX OFFICIO

David W. Kimberlin, MD, FAAP – *Red Book* Editor

Michael T. Brady, MD, FAAP – *Red Book* Associate Editor

Mary Anne Jackson, MD, FAAP – *Red Book* Associate Editor

Sarah S. Long, MD, FAAP – *Red Book* Associate Editor

Henry H. Bernstein, DO, MHCM, FAAP – *Red Book* Online Associate Editor

H. Cody Meissner, MD, FAAP – Visual *Red Book* Associate Editor

LIAISONS

Douglas Campos-Outcalt, MD,
MPA – *American Academy of Family Physicians*

Amanda C. Cohn, MD, FAAP – *Centers for Disease Control and Prevention*

Karen M. Farizo, MD – *US Food and Drug Administration*

Marc Fischer, MD, FAAP – *Centers for Disease Control and Prevention*

Bruce G. Gellin, MD, MPH – *National Vaccine Program Office*

Richard L. Gorman, MD, FAAP – *National Institutes of Health*

Natasha Halasa, MD, MPH, FAAP – *Pediatric Infectious Diseases Society*

Joan L. Robinson, MD – *Canadian Paediatric Society*

Jamie Deseda-Tous, MD – *Sociedad Latinoamericana de Infectologia Pediatrica (SLIPE)*

Geoffrey R. Simon, MD, FAAP – *Committee on Practice Ambulatory Medicine*

Jeffrey R. Starke, MD, FAAP – *American Thoracic Society*

STAFF

Jennifer M. Frantz, MPH

Recommended Childhood and Adolescent Immunization Schedule—United States, 2017

COMMITTEE ON INFECTIOUS DISEASES

Pediatrics 2017;139;

DOI: 10.1542/peds.2016-4007 originally published online February 6, 2017;

Updated Information & Services

including high resolution figures, can be found at:
<http://pediatrics.aappublications.org/content/139/3/e20164007>

Subspecialty Collections

This article, along with others on similar topics, appears in the following collection(s):

Current Policy

http://classic.pediatrics.aappublications.org/cgi/collection/current_policy

Committee on Infectious Diseases

http://classic.pediatrics.aappublications.org/cgi/collection/committee_on_infectious_diseases

Infectious Disease

http://classic.pediatrics.aappublications.org/cgi/collection/infectious_diseases_sub

Permissions & Licensing

Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:

<https://shop.aap.org/licensing-permissions/>

Reprints

Information about ordering reprints can be found online:
<http://classic.pediatrics.aappublications.org/content/reprints>

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since . Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2017 by the American Academy of Pediatrics. All rights reserved. Print ISSN:

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Recommended Childhood and Adolescent Immunization Schedule—United States, 2017

COMMITTEE ON INFECTIOUS DISEASES

Pediatrics 2017;139;

DOI: 10.1542/peds.2016-4007 originally published online February 6, 2017;

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://pediatrics.aappublications.org/content/139/3/e20164007>

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since . Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2017 by the American Academy of Pediatrics. All rights reserved. Print ISSN:

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

