POLICY STATEMENT Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of all Children

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

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

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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.

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