

VACCINATE ADULTS!

from the Immunization Action Coalition — www.immunize.org

What's In This Issue

16-Year-Old Immunization Platform Highlighted in 2017 U.S. Child/Teen Schedule	1
Ask the Experts:	
CDC Answers Your Questions	1
IAC's Summary of Recommendations for Adult Immunization	4
2017 U.S. Recommended Immunization Schedule for Adults	9
Guide to Contraindications and Precautions for Commonly Used Vaccines	14
New! IAC's Laminated 2017 Immunization Schedule for Adults and Children/Teens	15
Updated! <i>The Vaccine Handbook: A Practical Guide for Clinicians</i>	16
Products You Can Purchase from IAC	17
IAC's Immunization Resources Order Form	18

Ask the Experts

The Immunization Action Coalition extends thanks to our experts, medical officers Andrew T. Kroger, MD, MPH; Candice L. Robinson, MD, MPH; Raymond A. Strikas, MD, MPH, FACP, FIDSA; Jessie Wing, MD, MPH; and nurse educator Donna L. Weaver, RN, MN, all with the National Center for Immunization and Respiratory Diseases at the Centers for Disease Control and Prevention (CDC).

Influenza vaccines

I have a patient who is now 12 weeks pregnant. In September 2016, she received quadrivalent inactivated influenza vaccination (before she was pregnant). Should we give her another dose of 2016–17 influenza vaccine since she was not pregnant at the time of her first dose?
The Advisory Committee on Immunization Practices (ACIP) does not recommend more than one dose of influenza vaccine per season, except for

Immunization questions?

- ▶ Email nipinfo@cdc.gov
- ▶ Call your state health department (phone numbers at www.immunize.org/coordinators)

16-Year-Old Immunization Platform Highlighted in 2017 U.S. Child/Teen Schedule

Editor's note: This article will be of interest to adult medicine providers and others who provide health-care services to adolescents.

On February 10, the Centers for Disease Control and Prevention (CDC) posted its 6-page “Recommended Immunization Schedule for Children and Adolescents Aged 18 Years or Younger” at www.cdc.gov/vaccines/schedules/downloads/child/0-18 yrs-child-combined-schedule.pdf. The publication of this new schedule was accompanied by an article in the *Morbidity and Mortality Weekly Report (MMWR)* titled “ACIP Recommended Immunization Schedule for Children and Adolescents Aged 18 Years or Younger – US, 2017” (www.cdc.gov/mmwr/volumes/66/wr/pdfs/mm6605e1.pdf) describing the changes implemented in the 2017 immunization schedule compared to the 2016 version.

The first change highlighted in the *MMWR* article is the addition of a “16 yrs” age column to Figure 1. (Note: Figure 1 is the multicolored child/teen immunization schedule showing vaccine names along the left side and age columns listed across the top.) Previously, a single column covered the broader “16–18 years” age group. The new “16 yrs” column is further emphasized on the schedule with the addition of a gray background color in the column heading, identical to what exists for two other important vaccination age platforms, i.e., “4–6 years” and “11–12 years.” So we now have three immunization platform visits indicated on the child/teen schedule: 4–6 years, 11–12 years, and 16 years.

Why the 16-Year-Old Column Is Important

The new “16 yrs” column brings much needed attention to the fact that several CDC-recommended vaccinations due to be administered at 16 years of age are

being overlooked by many providers. These include:

- **MenACWY dose #2** – recommended at age 16
- **MenB dose #1** – recommended (category B) at age 16
- **HPV “catch-up”** – needed for those who have not yet completed their series
- **Tdap** – for those who have not yet received the 11–12 year-old dose
- **Influenza vaccine** – recommended seasonally
- **Other vaccines** – the 16-year-old platform provides a “catch-up” opportunity for patients who have fallen behind on other recommended vaccines (e.g., HepA, HepB, varicella).

According to CDC's recently published National Immunization Survey for Adolescents Ages 13–17 Years (www.cdc.gov/mmwr/volumes/65/wr/mm6533a4.htm), only 33% of teens (through age 17 years) have completed MenACWY dose #2, a vaccine recommended at age 16. Our nation has unacceptably low coverage rates for many vaccines recommended for adolescents, including the HPV vaccine series completion. The addition of a 16-year-old platform column provides a distinctive, visible reminder to healthcare professionals (and perhaps their patients/parents) that 16-year-olds are due for the important vaccinations listed above.

This new platform has created a perfect opportunity to consider establishing a 16-year-old vaccination visit in your medical practice. It can serve as an impetus for your staff to improve vaccination rates for 16-year-olds, a reminder to 16-year-olds (and their parents) who look at the schedule to check their need for vaccinations, and as a perfect opportunity to help bring teens in for a visit to receive other essential healthcare services they may be missing.

certain children being vaccinated for the first time. The 2017–18 influenza vaccine may be available near the end of her pregnancy so she can be given a dose of next year's formulation at that time.

A nursing home resident was admitted to the hospital with influenza and treated with oseltamivir. The person is now returned to the nursing home. The residents in the facility are being treated prophylactically with oseltamivir. Should the person who was hospitalized also receive oseltamivir prophylactically?

This is a complicated issue and the exact situation you describe is not addressed in the most recent ACIP recommendations on the use of influenza antiviral drugs. Whether to continue the antiviral

drug depends on why the rest of the people in the facility are being treated. Oseltamivir for treatment of influenza is usually a 5-day course. If there is continued risk of exposure in the facility, it seems reasonable to continue the prophylactic treatment accordingly. The ACIP influenza antiviral guidelines are available at www.cdc.gov/mmwr/pdf/rr/rr6001.pdf.

Pneumococcal vaccines

We have a 19-year-old patient with a history of vasculitis, nephritis, and asthma. She is on azathioprine (Imuran) and is immunosup-

Ask the Experts...continued on page 2 ▶

Vaccinate Adults

online at www.immunize.org/va
Immunization Action Coalition

2550 University Ave. W., Suite 415 North
Saint Paul, MN 55114
Phone: (651) 647-9009
Email: admin@immunize.org
Websites: www.immunize.org
www.vaccineinformation.org
www.immunizationcoalitions.org
www.give2mcv4.org

Vaccinate Adults is a publication of the Immunization Action Coalition (IAC) for healthcare professionals. Content is reviewed by the Centers for Disease Control and Prevention (CDC) for technical accuracy. This publication is supported in part by CDC Grant No. 6NH23IP922550. Content is solely the responsibility of IAC and does not necessarily represent the official views of CDC. ISSN 1526-1824.

Publication Staff

Editor: Deborah L. Wexler, MD
Associate Editors: William L. Atkinson, MD, MPH; Diane C. Peterson
Consulting Editors: Teresa Anderson, DDS, MPH; Marian Deegan, JD

IAC Staff

Chief Strategy Officer:
L.J. (Litjen) Tan, MS, PhD
Associate Director for Research:
Sharon G. Humiston, MD, MPH
Coordinator for Public Health:
Laurel Wood, MPA
Nurse Consultants:
Mary Beth Koslap-Petraco, DNP, PNP-BC,
CPNP; Pat Vranesich, RN, BSN
Coordinator for Hepatitis B Projects:
Lynn Pollock, RN, MSN
Perinatal Hepatitis B Consultant:
Beth Rowe-West, BSN
Policy Consultant: Sarah R. Landry, MA
Senior Admin. for Grants and Leadership:
Julie Murphy, MA
Senior Project Manager: Robin VanOss
Operations Manager: Casey Pauly
Project Administrator: Chrystal Mann

IAC publishes a free email news service (*IAC Express*) and two free periodicals (*Vaccinate Adults* and *Needle Tips*). To subscribe, go to www.immunize.org/subscribe.

IAC, a 501(c)(3) charitable organization, publishes practical immunization information for healthcare professionals to help increase immunization rates and prevent disease.

The Immunization Action Coalition is also supported by

Pfizer Inc., Merck Sharp & Dohme Corp., Sanofi Pasteur, GlaxoSmithKline, Seqirus, AstraZeneca, American Pharmacists Association, Mark and Muriel Wexler Foundation, Herbert and Jeanne Mayer Foundation, and many other generous donors.

IAC maintains strict editorial independence in its publications.

IAC Board of Directors

Stephanie L. Jakim, MD
Olmsted Medical Center
Sheila M. Specker, MD
University of Minnesota
Debra A. Strodtthoff, MD
Amery Regional Medical Center
Deborah L. Wexler, MD
Immunization Action Coalition

Ask the Experts...continued from page 1

pressed. Her rheumatologist recommends she receive pneumococcal conjugate vaccine (PCV13, Prevnar 13, Pfizer) and meningococcal B vaccine. How often should these vaccines be given? Will she require a series of PCV13 doses or just a booster?

For people with iatrogenic immunosuppression, ACIP recommends 1 dose of PCV13 followed by a dose of PPSV23 (Pneumovax, Merck) at least 8 weeks later (see www.cdc.gov/mmwr/pdf/wk/mm6434.pdf, pages 944–7). Meningococcal serogroup B vaccine (MenB) is not specifically recommended for immunosuppressed people. However, people age 16 through 23 years who are not at increased risk may receive routine MenB vaccination (a category B recommendation) of either a 2-dose series of Bexsero (GSK) 4 weeks apart, or a 2-dose series of Trumenba (Pfizer) 6 months apart.

Meningococcal ACWY vaccine

The 2013 ACIP meningococcal ACWY recommendations (www.cdc.gov/mmwr/pdf/rr/rr6202.pdf) list household crowding and both active and passive smoking as risk factors for meningococcal disease. Should I recommend MenACWY vaccine for a nonsmoker living in a crowded household of smokers?

Although second-hand smoke and other environmental conditions have been identified as risk factors for meningococcal disease, ACIP does not include them as indications for MenACWY vaccination. Providers are always free to use their clinical judgment in situations not addressed by ACIP.

We run immunization clinics at the local jail, which has a living arrangement comparable to a college residential hall. In this setting, would you recommend vaccinating incarcerated individuals who are younger than age 22, as is recommended for people living in a college dormitory?

ACIP does not identify incarceration as an indication for meningococcal vaccination. Providers are always free to use their clinical judgment in situations not addressed by ACIP.

If someone received MPSV4 (Menomune; Sanofi) or MenACWY vaccine at age 10 years and a dose of MenACWY before the 16th birthday, will they still need a booster dose at age 16?

Yes, they should receive a booster dose. A booster dose of MenACWY is recommended at 16 through 18 years even if 2 (or more) doses of meningococcal vaccine were received before age 16 years. People age 19 through 21 years who are entering college or are first-year students living in a residence hall, and who have not received a dose of MenACWY on or after age 16 years, should also be vaccinated.

Sanofi is discontinuing the production of Menomune (MPSV4) this year. I administer a lot of travel vaccine doses. Should I now give MenACWY (Menactra or Menveo) off-label to travelers age 56 years and older?

In its 2013 meningococcal recommendations, ACIP recommended off-label use of MenACWY vaccine (not MPSV4) for people age 56 years or older who were vaccinated previously with MenACWY and are recommended for revaccination or for whom multiple doses are anticipated (for example, people with asplenia and microbiologists). The situation of unavailability of MPSV4 is not addressed, but the use of MenACWY vaccine is appropriate when MPSV4 is not available.

Varicella and zoster vaccines

A healthcare worker with no history of chickenpox, and unknown serologic immunity, was exposed to a patient with zoster. She received varicella vaccine two days later. She developed a pruritic maculopapular rash 11 days after vaccination. Is the rash from the vaccine or from her zoster exposure?

The only way to determine whether the rash is caused by wild-type varicella or vaccine virus is to try to isolate virus from the rash and send it to a laboratory that is capable of differentiating wild and vaccine-type virus. This is generally not practical. Given the history, the conservative approach is to assume she has an active case of chickenpox and act according to your infection control guidelines.

I was told by a coworker that varicella vaccine can be stored at refrigerator temperature for up to three days and still be used. Is this true?

According to the manufacturer, unreconstituted varicella vaccine may be stored at refrigerator temperature (2°C to 8°C, 36°F to 46°F) for up to 72 continuous hours prior to reconstitution. Vaccine stored at 2°C to 8°C that is not used within 72 hours of removal from

Ask the Experts...continued on page 3 ►

Subscribe to IAC Express, the Immunization Action Coalition's e-news and information service at www.immunize.org/subscribe

DISCLAIMER: *Vaccinate Adults* is available to all readers free of charge. Some of the information in this issue is supplied to us by the Centers for Disease Control and Prevention in Atlanta, Georgia, and some information is supplied by third-party sources. The Immunization Action Coalition (IAC) has used its best efforts to accurately publish all of this information, but IAC cannot guarantee that the original information as supplied by others is correct or complete, or that it has been accurately published. Some of the information in this issue is created or compiled by IAC. All of the information in this issue is of a time-critical nature, and we cannot guarantee that some of the information is not now outdated, inaccurate, or incomplete. IAC cannot guarantee that reliance on the information in this issue will cause no injury. Before you rely on the information in this issue, you should first independently verify its current accuracy and completeness. IAC is not licensed to practice medicine or pharmacology, and the providing of the information in this issue does not constitute such practice. Any claim against IAC must be submitted to binding arbitration under the auspices of the American Arbitration Association in Saint Paul, Minnesota.

IAC's "Ask the Experts" team from the Centers for Disease Control and Prevention



Andrew T. Kroger,
MD, MPH



Candice L. Robinson,
MD, MPH



Raymond A. Strikas,
MD, MPH, FACP,
FIDSA



Donna L. Weaver,
RN, MN



Jessie Wing,
MD, MPH

Ask the Experts...continued from page 2

+5°F (-15°C) storage should be discarded. See www.merck.com/product/usa/pi_circulars/v/varivax/varivax_pi.pdf.

Hepatitis B vaccine

Some nephrologists give a high dose (40 mcg) of hepatitis B vaccine (2 adult doses of Engerix-B, GSK, or Recombivax HB Dialysis Formulation, Merck) to all patients with renal failure with glomerular filtration rates (GFRs) of less than 30 ml/min even if the patient is not on dialysis. Is this practice advisable?

A higher dose hepatitis B vaccine is recommended for hemodialysis and other immunocompromised persons, so to the extent these patients are immunocompromised, this is within ACIP recommendations (note that "immunocompromised" is not defined in the recommendations). Regardless, this practice is appropriate for several reasons, including that these patients may be starting hemodialysis soon, and because use of the higher dose is not harmful. This is somewhat of a gray area but the clinician can use his/her clinical judgment.

The Vaccine Handbook:
A Practical Guide for Clinicians
Sixth Edition

Free App from IAC!

Visit the Apple iTunes App Store
and download the mobile app today.



Stay current with FREE subscriptions

The Immunization Action Coalition's 2 periodicals, *Vaccinate Adults*, and *Needle Tips*, and our email news service, *IAC Express*, are packed with up-to-date information.

Subscribe to all 3 free publications in one place. It's simple! Go to

www.immunize.org/subscribe

DTap/Tdap/Td vaccine

The tetanus and diphtheria toxoid Tenivac (Td, Sanofi) is not currently available from the manufacturer and may not be available until later in 2017. What are we to do when someone is in need of a Td booster dose?

Although there is a shortage of Tenivac, there is another Td product available. It is produced by MassBiologics and distributed by Grifols USA LLC. More information, including prescribing information for Grifols Td vaccine, can be found at www.GrifolsTdvaccine.com.

If Td is unavailable in the work setting, Tdap should be used in its place whenever Td is indicated (e.g., for 10-year booster dose or wound management). If a person has previously received a dose of Tdap, it is acceptable to give another Tdap dose in place of Td when Td is not available.

Ask the Experts

To find more than **1,000**

Ask the Experts Q&As
answered by CDC experts, visit
[www.immunize.org/
askexperts](http://www.immunize.org/askexperts)

Please encourage your
healthcare professional
colleagues to sign up to
receive IAC Express at
[www.immunize.org/
subscribe](http://www.immunize.org/subscribe).



Advisory Board

Liaisons from Organizations

Bernadette A. Albanese, MD, MPH
Council of State & Territorial Epidemiologists

Stephen L. Cochi, MD, MPH
Nat'l Ctr. for Immun. & Resp. Diseases, CDC

Lacey M. Eden, MS, FNP-C
National Assn. of Pediatric Nurse Practitioners

Neal A. Halsey, MD
Institute for Vaccine Safety, Johns Hopkins Univ.

Claire Hannan, MPH
Association of Immunization Managers

Carol E. Hayes, CNM, MN, MPH
American College of Nurse-Midwives

Gregory James, DO, MPH, FACP
American Osteopathic Association

Samuel L. Katz, MD
Pediatric Infectious Diseases Society

Elyse Olshen Kharbanda, MD, MPH
Society for Adolescent Health and Medicine

Marie-Michèle Leger, MPH, PA-C
American Academy of Physician Assistants

Kimberly Martin
Assn. of State & Territorial Health Officials

Lisa M. McKeown, MPH
Nat'l Assn. of County & City Health Officials

Kathleen M. Neuzil, MD, MPH
American College of Physicians

Paul A. Offit, MD
Vaccine Education Ctr., Children's Hosp. of Phila.

Walter A. Orenstein, MD
Emory Vaccine Center, Emory University

Mitchel C. Rothholz, RPh, MBA
American Pharmacists Association

Thomas N. Saari, MD
American Academy of Pediatrics

Margot L. Savoy, MD, MPH
American Academy of Family Physicians

William Schaffner, MD
Infectious Diseases Society of America

Anne Schuchat, MD
Centers for Disease Control and Prevention

Rhoda Sperling, MD
Amer. College of Obstetricians & Gynecologists

Thomas E. Stenvig, RN, PhD
American Nurses Association

John W. Ward, MD
Division of Viral Hepatitis, NCHSTP, CDC

Patricia N. Whitley-Williams, MD, MPH
National Medical Association

Walter W. Williams, MD, MPH
Nat'l Ctr. for Immun. & Resp. Diseases, CDC

Individuals

Hie-Won L. Hann, MD
Jefferson Medical College, Philadelphia

Mark A. Kane, MD, MPH
Seattle, Washington

Edgar K. Marcuse, MD, MPH
University of Washington School of Medicine

Harold S. Margolis, MD
Taos, New Mexico

Brian J. McMahon, MD
Alaska Native Medical Center, Anchorage

Stanley A. Plotkin, MD
Vaxconsult.com

Gregory A. Poland, MD
Mayo Clinic

Sarah Jane Schwarzenberg, MD
University of Minnesota

Coleman I. Smith, MD
Minnesota Gastroenterology, Minneapolis

Richard K. Zimmerman, MD, MPH
University of Pittsburgh