August 2012 (content current as of August 13)

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Adult Immunization . . . We've got to do better!

Following is a snapshot of 2010 U.S. adult vaccination coverage for five routinely recommended vaccines:

- Among adults age 19–64 years for whom Tdap status specifically could be assessed, Tdap vaccination coverage was 8.2%.¹
- Among adults age 60 years and older, zoster (shingles) vaccination coverage was 14.4%.¹
- Among women age 19–26 years, reported receipt of 1 or more doses of HPV vaccine was 20.7%.¹
- Among adults age 18 years and older, influenza vaccination coverage during the 2010–11 influenza season was 40.5%.²
- Among adults age 65 years and older, pneumococcal vaccination coverage was 59.7% overall, with notable racial and ethnic disparities. Non-Hispanic whites of this age group had higher vaccination coverage (63.5%) compared with Hispanics (39%), non-Hispanic blacks (46.2%), and non-Hispanic Asians (48.2%).¹

Annually, vaccine-preventable diseases claim the lives of approximately 50,000 U.S. adults. Obviously, healthcare providers need to substantially improve adult vaccination to reduce the serious consequences of disease.

Successful vaccination programs need to (1) educate potential vaccine recipients; (2) develop publicity to promote vaccination; (3) increase access to vaccination services in medical offices and

complementary settings such as workplaces and pharmacies; (4) use reminder-recall systems, (5) implement standing orders programs for vaccination; and (6) assess practice-level vaccination rates and provide feedback to staff members.

What can healthcare settings do to implement adult vaccination programs that contain the elements listed above? Practical online information is available on the Immunization Action Coalition's new compilation of Adult Immunization Resources at www.immunize.org/adult-vaccination. The 8-page listing provides access to numerous documents on clinic operations, provider and patient education, Medicare and CMS, office operations, policy, and provider and pharmacy training.

Developed for presentation at the first National Adult Immunization Summit (NAIS; held in May 2012), the listing is the initial step in creating a searchable database of adult immunization resources, which will be housed on IAC's website. The database will include resources and tools used by NAIS adult immunization partners to improve adult vaccination coverage.

Ask the Experts

IAC extends thanks to our experts, medical epidemiologist Andrew T. Kroger, MD, MPH; nurse educator Donna L. Weaver, RN, MN; and medical officer Iyabode Akinsanya-Beysolow, MD, MPH. All are with the National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention (CDC).

Immunization questions?

- Call the CDC-INFO Contact Center at (800) 232-4636 or (800) CDC-INFO
- Email nipinfo@cdc.gov
- Call your state health dept. (phone numbers at www.immunize.org/coordinators)

Immunization questions

Pneumococcal polysaccharide vaccine (PPSV23) is recommended for all adults who smoke. Are there recommendations for those who use smokeless tobacco products (e.g., chewing tobacco)?

No. ACIP does not identify people who use smokeless tobacco products as being at increased risk for pneumococcal disease or as being in a risk group for vaccination.

Now that FDA has licensed Prevnar 13 (PCV13; Pfizer) for adults, does ACIP have recommendations for its use?

To date, ACIP has not made recommendations for routine use of PCV13 for adults; however, at its June 2012 meeting, ACIP voted to recommend administering 1 dose of PCV13 to adults age 19 and older who are at highest risk for invasive pneumococcal disease. This includes adults who are immunosuppressed and those with functional or anatomic asplenia, renal disease, CSF leak, and cochlear implants. ACIP voted to recommend that when healthcare providers vaccinate highest-risk patients who have never received a pneumococcal vaccine, the provider administer PCV13 first, then follow with a dose of pneumococcal polysaccharide vaccine (PPSV23) 8 weeks later, and follow

(continued on page 5)

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¹ CDC. Adult Vaccination Coverage—United States, 2010. *MMWR* 2012;61;66–71.

² CDC. Final state-level influenza vaccination coverage estimates for the 2010–11 season—United States, National Immunization Survey and Behavioral Risk Factor Surveillance System, August 2010 through May 2011.

Needle Tips

online at www.immunize.org/nt

Immunization Action Coalition

1573 Selby Avenue, Suite 234 Saint Paul, MN 55104 Phone: (651) 647-9009 Fax: (651) 647-9131 Email: admin@immunize.org Websites: www.immunize.org www.vaccineinformation.org www.izcoalitions.org

Needle Tips is a publication of the Immunization Action Coalition (IAC) written for health 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. U38IP000589. The content is solely the responsibility of IAC and does not necessarily represent the official views of CDC. ISSN 1944-2017.

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publishes practical immunization information for health professionals to help increase immunization rates and prevent disease.

The Immunization Action Coalition is also supported by

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IAC Express Celebrates 15 Years and 1000 Issues Dedicated to Delivering Important Immunization News Directly to Your Email In-Box

Since its first issue was published 15 years ago on November 14, 1997, *IAC Express*, IAC's weekly email immunization news service for healthcare professionals, has been keeping readers up to date on all aspects of immunization. On July 3, 2012, IAC staff celebrated publishing and delivering 1000 issues of *IAC Express* to the email in-boxes of healthcare professionals in the United States and around the world (see photo inset).

Timely, accurate, and clinically relevant immunization information is the hallmark of *IAC Express*. In the past 15 years, the publication has informed readers about 104 vaccine recommendations from CDC's Advisory Committee on Immunization Practices (ACIP) and 84 vaccine product licensures from the

Food and Drug Administration. We've also notified professionals about new staff-education materials and patient handouts, Vaccine Information Statements (VISs), journal articles and newsletters, conferences and educational opportunities, and more.

As evidence of the expansion of online information related to immunization in the past decade, the number of articles published annually in *IAC Express* has grown from 122 in 1998 to 697 in 2011. Subscribership has increased from 332 in 1997 to nearly 46,000 today.

SPECIAL EDITIONS OF IAC EXPRESS

In addition to publishing a weekly issue, IAC has distributed more than 100 special editions of *IAC Express*. The most popular special editions are "Ask the Experts" and those featuring Unprotected People reports.

NEW LOOK! NEW DAY OF DELIVERY!

On December 27, 2011, IAC began publishing *IAC Express* in an attractive, user-friendly format suitable for mobile devices. Weekly issues are now sent on Tuesdays, rather than on Mondays.



Bottom row: Diane Peterson, Casey Pauly, Mary Quirk; Back row: Julie Murphy, Dale Thompson, Teresa Anderson, Janelle Anderson, Deborah Wexler, Mike Franey, Robin VanOss. Not pictured: Sheila Franey.

Top 5 Reasons to Become a Subscriber

- 1. Keep current with the latest ACIP recommendations, VIS statements, and vaccine licensures
- 2. Access tools to help train staff on vaccine administration techniques and procedures
- 3. Locate tools on the proper storage and handling of vaccines
- 4. Find tools to screen for vaccine contraindications and precautions
- 5. Access the latest handouts to improve communication with parents/patients about immunization, including vaccine safety

Not yet a subscriber? We suggest you subscribe to *IAC Express*. It's free! Once you complete the sign-up form at www.immunize.org/subscribe, you'll start receiving weekly issues and special editions in your email in-box.

DISCLAIMER: *Needle Tips* 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 puplied by ubters 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 bound the submitted to binding arbitration under the auspices of the American Arbitration Association in Saint Paul, Minnesota.

^{2012!} Laminated child and adult immunization schedules Order one of each for every exam room

Here are the ACIP/AAP/AAFP-approved immunization schedule for people ages 0 through 18 years and the ACIP/AAFP/ACOG/ACNM-approved schedule for adults. Both are laminated and washable for heavy-duty use, complete with essential footnotes, and printed in color for easy reading. The cost is \$7.50 for each schedule and only \$5.50 each for five or more copies.



To order, visit www.immunize.org/shop, or use the order form on page 17. For 20 or more copies, contact us for discount pricing: admininfo@immunize.org

Wallet-sized immunization record cards for all ages: For children & teens, for adults, and for a lifetime!



Now you can give any patient a permanent vaccination record card designed specifically for their age group: child & teen, adult, or lifetime. These brightly colored cards are printed on durable rip-, smudge-, and water-proof paper. To view the cards or for more details, go to www.immunize.org/shop and click on the images.

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"Immunization Techniques — Best Practices with Infants, Children, and Adults"



The California Department of Public Health, Immunization Branch, updated its award-winning training video, "Immunization Techniques: Best Practices with Infants, Children, and Adults." The 25-minute DVD can be used to train new employees and to refresh the skills of experienced staff on administering injectable, oral, and nasal-spray vaccines to children, teens, and adults. Make sure your healthcare setting has the 2010 edition!

The cost is \$17 each for 1–9 copies; \$10.25 each for 10–24 copies; \$7 each for 25–49 copies; \$5.75 each for 50–99 copies.

To order, visit www.immunize.org/shop, or use the order form on page 17. For 100 or more copies, contact us for discount pricing: admininfo@immunize.org

For healthcare settings in California, contact your local health department immunization program for a free copy.

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Individuals

Hie-Won L. Hann, MD Jefferson Medical College, Philadelphia, PA Mark A. Kane, MD, MPH Consultant, Seattle, WA Edgar K. Marcuse, MD, MPH University of Washington School of Medicine Brian J. McMahon, MD Alaska Native Medical Center, Anchorage, AK Stanley A. Plotkin, MD Vaxconsult.com Gregory A. Poland, MD Mayo Clinic, Rochester, MN Sarah Jane Schwarzenberg, MD University of Minnesota Coleman I. Smith, MD Minnesota Gastroenterology, Minneapolis, MN Richard K. Zimmerman, MD, MPH University of Pittsburgh

Vaccine Highlights *Recommendations, schedules, and more*

Editor's note: The information in Vaccine Highlights is current as of August 13, 2012.

The next ACIP meetings

A committee of 15 national experts, the Advisory Committee on Immunization Practices (ACIP) advises CDC on the appropriate use of vaccines. ACIP meets three times a year in Atlanta; meetings are open to the public. The next two meetings will be held on Oct. 24–25, 2012, and Feb. 20–21, 2013. For more information, visit www.cdc.gov/ vaccines/recs/acip.

ACIP periodically issues public health recommendations on the use of vaccines. Clinicians who vaccinate should have a current set for reference. Published in the *Morbidity and Mortality Weekly Report (MMWR)*, ACIP recommendations are easily available. Here are sources:

- Download them from links on IAC's website: www.immunize.org/acip.
- Download them from CDC's website: www. cdc.gov/vaccines/pubs/acip-list.htm.

VIS news

On July 2, CDC released two VISs for 2012–13 influenza vaccine: one for trivalent inactivated influenza vaccine (TIV; injectable) and one for live attenuated influenza vaccine (LAIV; nasal spray). To access the VIS for TIV, go to www.immunize. org/vis/flu_inactive.pdf. To access the VIS for LAIV, go to www.immunize.org/vis/flu_live.pdf.

On May 29, CDC released an updated VIS for typhoid vaccine. CDC recommends that providers start using the updated VIS immediately when planning to administer typhoid vaccine. To access it, go to www.immunize.org/vis/typhoid.pdf.

Tdap vaccine news

On June 29, CDC published recommendations titled "Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid, and Acellular Pertussis (Tdap) Vaccine in Adults Aged 65 Years and Older." CDC recommends that all adults age 19 years and older who have not yet received a dose of Tdap receive a one-time dose. Tdap should be administered regardless of interval since last tetanus or diphtheria toxoid-containing vaccine. After receive Td for routine booster immunization against tetanus and diphtheria according to previously published guidelines. To obtain the recommendations, go to www.cdc.gov/mmwr/pdf/wk/mm6125.pdf (pages 468–470).

PCV13 vaccine news

At its June 2012 meeting, ACIP voted to recommend administering 1 dose of pneumococcal conjugate vaccine (PCV13) to adults age 19 and older who are at highest risk for invasive pneumococcal disease. This includes adults who are immunosuppressed and those with functional for anatomic asplenia, renal disease, CSF leaks, and cochlear implants. See pages 1 and 5 of "Ask the Experts" for additional information.

To date, ACIP has not issued recommendations for routine use of PCV13 for adults. ACIP recommendations become CDC recommendations once they are accepted by director of CDC and the Secretary of Health and Human Services and are published in *MMWR*.

FDA news

On June 14, FDA issued a press release announcing that it had approved MenHibrix [GlaxoSmith-Kline], a combination vaccine licensed for use in infants and children age 6 weeks through 18 months, for the prevention of invasive disease caused by *Neisseria meningitidis* serogroups C and Y and *Haemophilus influenzae* type b. To read the press release, go to: www.fda.gov/NewsEvents/ Newsroom/PressAnnouncements/ucm308350.htm.

CDC news

On June 1, CDC published *Summary of Notifiable Diseases—United States, 2010.* It contains the official statistics, in tabular and graphic form, for the reported occurrences of nationally notifiable infectious diseases in 2010. To access it, go to www. cdc.gov/mmwr/PDF/wk/mm5953.pdf.

On July 6, CDC published MMWR Recommendations and Reports titled Updated CDC Recommendations for the Management of Hepatitis B Virus–Infected Health-Care Providers and Students. The primary goal of the recommendations is to promote patient safety while providing risk management and practice guidance to hepatitis B virus-infected healthcare providers and students, particularly those performing exposure-prone procedures such as certain types of surgery. To obtain a copy of the recommendations, go to www.cdc. gov/mmwr/pdf/rr/rr61t03.pdf.

Vaccine shortage

On April 25, CDC updated its Current Vaccine Shortages & Delays web section with information that supply of sanofi pasteur's Pentacel (combination DTaP-IPV/Hib) vaccine and Daptacel (DTaP)



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vaccine is reduced. It is anticipated to remain so throughout summer 2012.

Sanofi's single-antigen IPV (Ipol) and Hib (ActHIB) vaccines are in sufficient supply to address historic usage of Pentacel. Supply of GlaxoSmithKline's single-antigen DTaP (Infanrix) and combination (Kinrix; DTaP-IPV) vaccines is currently sufficient to address anticipated supply gaps for DTaP-containing products. Access CDC's continuing vaccine supply information at www.cdc.gov/vaccines/vac-gen/shortages.

On May 11, CDC published "Guidance for Vaccinating Children during the 2012 Pentacel and Daptacel Shortage." It includes sample schedules that show how to use single- component and combination vaccines when vaccinating children who have already received 1, 2, or 3 doses of Pentacel. Access the guidance document at www. cdc.gov/vaccines/vac-gen/shortages/downloads/ pentacel-guidance.pdf.

AAP news

On June 8, the American Academy of Pediatrics (AAP) published *Red Book: 2012 Report of the Committee on Infectious Diseases.* On June 15, AAP released *Red Book Online*, an electronic version of the newly revised and updated book. Access to most online content requires a subscription. To find out more about the *Red Book* and place an order, go to: http://aapredbook.aappublications. org/site/about/.

(continued on next page)

Vaccine Highlights . . . continued from page 4

HHS news

On June 5, the Office of Inspector General of the U.S. Department of Health and Human Services (HHS) released a report titled Vaccines for Children Program: Vulnerabilities in Vaccine Management. For a two-week period in 2011, the Inspector General's office conducted site visits at the practice locations of 45 Vaccines for Children (VFC) providers and independently measured the providers' vaccine storage unit temperatures. Although the majority of storage temperatures were within the required ranges, VFC vaccines stored by 76 percent of the 45 selected providers were exposed to inappropriate temperatures for at least 5 cumulative hours during the two-week monitoring period. Access a report summary at http://oig.hhs.gov/oei/reports/oei-04-10-00430. asp. The complete report is available at http://oig. hhs.gov/oei/reports/oei-04-10-00430.pdf.

New Handouts and Web Sections from the Immunization Action Coalition

IAC developed the following handouts and web sections for healthcare staff and/or the general public. Download, print, and distribute them freely.

- Meningococcal Vaccination Recommendations by Age and/or Risk Factor www.immunize.org/catg.d/p2018.pdf
- Current Dates of Vaccine Information Statements
- www.immunize.org/catg.d/p2029.pdf
- Tips for Locating Old Immunization Records www.immunize.org/catg.d/p3065.pdf
- Keep Your Kids Safe Get Them Vaccinated Every Fall or Winter! English / Spanish / Arabic / Chinese
- H3N2v Influenza Outbreak Information www.immunize.org/influenza/h3n2v
- Cocooning and Tdap Vaccination
 www.immunize.org/cocooning
- The Vaccine Handbook www.immunize.org/vaccine-handbook
- Technically Speaking www.immunize.org/technically-speaking
- Pharmacists and Immunization www.immunize.org/pharmacists

To access all IAC's handouts (more than 250), go to www.immunize.org/handouts

Ask the Experts . . . continued from page 1

with a second dose of PPSV23 5 years later. For highest-risk patients who have already received PPSV23, ACIP voted to recommend that healthcare professionals wait 1 year since the previous dose of PPSV23 before giving PCV13 to avoid interference between the vaccines. More detail will be included when *MMWR* publishes the recommendations.

I am confused about which adults to vaccinate with Tdap vaccine and which product to use. Please help!

CDC published updated recommendations on Tdap vaccination for adults in *MMWR* on June 29, 2012, pages 468–470. ACIP recommends that ALL adults age 19 years and older who have not yet received a dose of Tdap receive a single dose. Tdap should be administered regardless of interval since the last tetanus- or diphtheria-toxoid–containing vaccine (e.g., Td). After receiving Tdap, people should receive Td every 10 years for routine booster immunization against tetanus and diphtheria, according to previously published guidelines.

Providers should not miss an opportunity to vaccinate adults age 65 and older with Tdap. Therefore, providers may administer any Tdap vaccine they have available. When feasible, providers should administer Boostrix (Tdap; GSK) to adults age 65 and older as it is licensed for this age group. Adacel (Tdap; sanofi) is licensed for use in people age 11 through 64. However, ACIP concluded that

Needle Tips correction policy

If you find an error, please notify us immediately by sending an email message to admin@immunize.org. We publish notification of significant errors in our email announcement service, *IAC Express*. Be sure you're signed up for this service. To subscribe, visit www.immunize.org/subscribe. either vaccine administered to a person age 65 or older is immunogenic and will provide protection. A dose of either vaccine is considered valid.

When a tetanus-toxoid-containing vaccine is needed for wound management in a person who has not previously received Tdap, the use of Tdap is preferred over Td.

Is there guidance for pertussis protection for an adult who cannot receive the tetanus portion of the Tdap vaccine because of allergy?

Usually, an "allergy" to tetanus toxoid is anecdotal and not a true anaphylactic reaction to modern tetanus toxoid. Patients often claim to be allergic to tetanus toxoid because of (1) an exaggerated local reaction (which is not an allergy) or (2) a reaction to a tetanus vaccine received many years ago (probably serum sickness from equine tetanus antitoxin). A history of one of these events is not a contraindication to modern tetanus toxoid, Td, or Tdap.

Only an allergist-confirmed anaphylactic allergy to tetanus toxoid should be accepted as a valid contraindication to a modern tetanus-toxoid–containing product. A person who has an allergistconfirmed anaphylactic allergy to tetanus toxoid has no recourse for pertussis vaccination because no single-antigen pertussis vaccine is licensed for use in the United States.

Who should get a second dose of Tdap vaccine?

Currently, no one is recommended to receive more than 1 dose of Tdap. In the future, ACIP will discuss the need for administering additional doses of Tdap and the timing of revaccinating people who have received Tdap previously.

Why do we vaccinate pregnant women against influenza when it is not recommended to vaccinate infants younger than age 6 months? ACIP has recommended vaccinating pregnant women with inactivated influenza vaccine (TIV) for a number of years. Pregnant women are a highrisk group for complications, hospitalization, and even death from influenza because of the increased physiologic strain of pregnancy on their heart, lungs, and immune system. Vaccination can occur in any trimester, including the first.

Influenza vaccine is not recommended for children younger than age 6 months because it is not

(continued on page 18)

Now Available! 2012 Edition The Vaccine Handbook: A Practical Guide for Clinicians by Gary S. Marshall, MD

www.immunize.org/vaccine-handbook



Vaccinations for Adults You're never too old to get immunized!

Getting immunized is a lifelong, life-protecting job. Don't leave your healthcare provider's office without making sure you've had all the vaccinations you need.

Copy this for your patients

Vaccine	Do you need it?
Hepatitis A (HepA)	<i>Maybe.</i> You need this vaccine if you have a specific risk factor for hepatitis A virus infection* or simply want to be protected from this disease. The vaccine is usually given in 2 doses, 6–18 months apart.
Hepatitis B (HepB)	<i>Maybe.</i> You need this vaccine if you have a specific risk factor for hepatitis B virus infection* or simply want to be protected from this disease. The vaccine is given in 3 doses, usually over 6 months.
Human papillomavirus (HPV)	<i>Maybe.</i> You need this vaccine if you are a woman age 26 years or younger or a man age 21 years or younger. Men age 22 through 26 years with a risk condition* also need vaccination. Any other man age 22 through 26 who wants to be protected from HPV may receive it, too. The vaccine is given in 3 doses over 6 months.
Influenza	Yes! You need a dose every fall (or winter) for your protection and for the protection of others around you.
Measles, mumps, rubella (MMR)	<i>Maybe.</i> You need at least 1 dose of MMR if you were born in 1957 or later. You may also need a 2nd dose.*
Meningococcal (MCV4, MPSV4)	<i>Maybe.</i> You need this vaccine if you have one of several health conditions, or if you are 19–21 and a first-year college student living in a residence hall and you either have never been vaccinated or were vaccinated before age 16.*
Pneumococcal (PPSV23, PCV13)	Maybe. You need 1 dose of PPSV23 at age 65 years (or older) if you've never been vaccinated or you were previously vaccinated at least 5 years ago when you were younger than age 65 years. You also need 1–2 doses if you smoke cigarettes or have certain chronic health conditions. Some adults with certain high risk conditions also need vaccination with PCV13. Talk to your healthcare provider to find out if you need this vaccine.*
Tetanus, diphtheria, whooping cough (pertussis) (Tdap, Td)	Yes! All adults need to get a 1-time dose of Tdap vaccine (the adult whooping cough vaccine). After that, you need a Td booster dose every 10 years. Consult your healthcare provider if you haven't had at least 3 tetanus- and diphtheria-containing shots sometime in your life or have a deep or dirty wound.
Varicella (Chickenpox)	<i>Maybe.</i> If you've never had chickenpox or were vaccinated but received only 1 dose, talk to your healthcare provider to find out if you need this vaccine.*
Zoster (shingles)	Maybe. If you are age 60 years or older, you should get a 1-time dose of this vaccine now.

*Consult your healthcare provider to determine your level of risk for infection and your need for this vaccine.

Are you planning to travel outside the United States? If so, you may need additional vaccines. The Centers for Disease Control and Prevention (CDC) provides information to assist travelers and their healthcare providers in deciding which vaccines, medications, and other measures are necessary to prevent illness and injury during international travel. Visit CDC's website at www.cdc.gov/travel or call 800-CDC-INFO (800-232-4636). You may also consult a travel clinic or your healthcare provider.





Technical content reviewed by the Centers for Disease Control and Prevention 1573 Selby Avenue • Saint Paul, Minnesota 55104 • 651-647-9009 www.immunize.org • www.vaccineinformation.org www.immunize.org/catg.d/p4030.pdf • Item #P4030 (8/12)

nize.org www.immun

Two Vaccination Handouts for High-Risk Adults

These newly designed patient handouts show which vaccines are recommended for adults with HIV or hepatitis C infection

	The table below shows which vaccinations you should have HIV infection. Make sure you and your healthcare provider	to protect your health keep your vaccination	n if you have s up to date.	
Vaccine	Do you need it?			
Hepatitis A (HepA)	Maybe. You need this vaccine if you have a specific risk factor for hepatitis A virus infection* or simply want to be protected from this disease. The vaccine is usually given in 2 doses, 6 months apart.		or simply rt.	
Hepatitis B (HepB)	Yes! Because you are HIV positive, you are at higher risk for hepatitis a series of hepatitis B vaccinations, you need 3 doses of this vaccine earlier but didn't complete it, you can simply continue from where the if you need screening blood tests for hepatitis B.	s B virus infection. If you e. If you started the 3-dose u loft off Ack your boolther	haven't had series are erwider	
Human papil- Iomavirus (HPV)	Maybe. You should be vaccinated against HPV if you are age 26 in 3 doses over 6 months.	Vaccina	tions for Adults with Her	
Influenza	Yes! You need a flu shot every fall (or winter) for your protection a	This table shows which vaccinations you should ha		
Measles, mumps, rubella (MMR)	Maybe. Most adults are already protected because they got MM mumps, and rubella as children. If you weren't previously vaccin no HIV symptoms or only mild symptoms, you need at least 1 d severe symptoms from HIV, you should not receive MMR. If you care provider right away. If you get measles, you are at risk of de of your HIV infection.	hepatitis C. Make sure you and your healthcare provide		
		Vaccine	Do you need it?	
		Hepatitis A	Yes! Your chronic liver disease puts you at risk for serious co	
Meningococcal	Maybe. Because of your HIV infection, you may be at increased i	(HepA)	usually spaced 6 months apart.	
(living in a residence hall and you either have never been vaccina you also need this vaccine. Talk to your healthcare provider abou	Hepatitis B (HepB)	Yes! Because of your chronic liver disease, you need to be va hepatitis B vaccinations, you need 3 doses of this vaccine. If	
Pneumococcal (PCV13, PPSV23)	Yes! Vaccination with both types of pneumococcal vaccine is rec infection. If you haven't been vaccinated with both of these vacc provider about how to schedule these vaccines. If you were your vaccinated with PPSV23 and you are 65 years or older now, you provided at least 5 years have passed since your previous dose.		didn't complete it, you can simply continue from where you if you need screening blood tests for hepatitis B.	
		Human Maybe. You need this vaccine if you are a woman a younger. Men age 22 through 26 years with a risk c age 27 through 26 who wants to be protected from		
Tetanus, diphtheria, whooping cough	Yes! All adults need to get a 1-time dose of Tdap vaccine (the ad you need a Td booster dose every 10 years. Consult your healthc	(11.4)	is given in 3 doses over 6 months.	
(pertussis) (Tdap, Td)	3 tetanus- and diphtheria-containing shots sometime in your life	Influenza	Yes! You need a dose every fall (or winter) for your protection a	
Varicella (Chickenpox)	Maybe. Most adults are already protected because they had chick adult born in the U.S. in 1980 or later, have no HIV symptoms or chickenpox or the vaccine, you can be vaccinated with this 2-dose	Measles, mumps, rubella (MMR)	Maybe. You need at least 1 dose of MMR if you were born in second dose.*	
Zoster (shingles)	Maybe. This vaccine is recommended for adults age 60 years an any symptoms of HIV, you should not be vaccinated. Talk to you	Meningococcal (MCV4, MPSV4)	Maybe. You need this vaccine if you have one of several health and a first-year college student living in a residence hall and were vaccinated before age 16.	
Consult your health	care provider to determine your level of risk for infection and your nee	Pneumococcal	Yes! This vaccine is specifically recommended for you because	

Are you planning to travel outside the United States? If so, you may need addition and Prevention (CDC) provides information to assist travelers and their healthcare provide and other measures are necessary to prevent illness and injury during international travel. call 800-CDC-INFO (800-232-4636). You may also consult a travel clinic or your healthcare



iewed by the Centers for Disease Co 1573 Selby Avenue · Saint Paul, Minnesota 55104 · 651-647-9009 www.immunize.org • www.vaccineinformation.org ze.org/catg.d/p4041.pdf • Item #P4041 (8/12)

patitis C Infection

protect your health if you have keep your vaccinations up to date.

Hepatitis A (HepA)	Yes! Your chronic liver disease puts you at risk for serious complications if you get infected with the hepatitis A virus. If you've never been vaccinated against hepatitis A, you need 2 doses of this vaccine, usually spaced 6 months apart.
Hepatitis B (HepB)	Yes! Because of your chronic liver disease, you need to be vaccinated. If you haven't had a series of hepatitis B vaccinations, you need 3 doses of this vaccine. If you started the 3-dose series earlier but didn't complete it, you can simply continue from where you left off. Ask your healthcare provider if you need screening blood tests for hepatitis B.
Human papillomavirus (HPV)	Maybe. You need this vaccine if you are a woman age 26 years or younger or a man age 21 years or younger. Men age 22 through 26 years with a risk condition* also need vaccination. Any other man age 22 through 26 who wants to be protected from HPV may receive this vaccine, too. The vaccine is given in 3 doses over 6 months.
Influenza	Yes! You need a dose every fall (or winter) for your protection and for the protection of others around you.
Measles, mumps, rubella (MMR)	Maybe. You need at least 1 dose of MMR if you were born in 1957 or later. You may also need a second dose.*
Meningococcal (MCV4, MPSV4)	Maybe. You need this vaccine if you have one of several health conditions* or if you are age 19–21 years and a first-year college student living in a residence hall and you either have never been vaccinated or were vaccinated before age 16.
Pneumococcal polysaccharide (PPSV23)	Yes! This vaccine is specifically recommended for you because of your chronic liver disease. If you haven't been vaccinated, you should get 1 dose now. You need a second dose when you are age 65 years or older, provided at least 5 years have passed since your first dose.
Tetanus, diphtheria, whooping cough (pertussis) (Tdap, Td)	Yes! You should get a 1-time dose of Tdap vaccine (the adult whooping cough vaccine). After that you need a Td booster dose every 10 years. Consult your healthcare provider if you haven't had at least 3 tetanus- and diphtheria-containing shots sometime in your life or if you have a deep or dirty wound.
Varicella (Chickenpox)	Maybe. If you've never had chickenpox, never were vaccinated, or were vaccinated but received only 1 dose, talk to your healthcare provider about getting this vaccine.*
Zoster (shingles)	Maybe. If you are age 60 years or older, you should get a 1-time dose of this vaccine now.

*Consult your healthcare provider to determine your level of risk for infection and your need for this vaccine.

For more information about hepatitis C, call the CDC-INFO Contact Center at 800-CDC-INFO (800-232-4636), or visit www.cdc.gov/hepatitis

Are you planning to travel outside the United States? If so, you may need additional vaccines. The Centers for Disease Control and Prevention (CDC) provides information to assist travelers and their healthcare providers in deciding which vaccines, medications, and other measures are necessary to prevent illness and injury during international travel. Visit CDC's website at www.cdc.gov/travel or call 800-CDC-INFO (800-232-4636). You may also consult a travel clinic or your healthcare provider.



ewed by the Cen 1573 Selby Avenue • Saint Paul, Minnesota 55104 • 651-647-9009 www.immunize.org • www.vaccineinformation.org e.org/catg.d/p4042.pdf . Item #P4042 (8/12)

Vaccinations for Adults with HIV Infection: www.immunize.org/catg.d/P4041.pdf Vaccinations for Adults with Hepatitis C Infection: www.immunize.org/catg.d/P4042.pdf

How to Administer IM and SC Vaccine Injections to Adults

Intramuscular (IM) Injections

Administer these vaccines via IM route

Tetanus, diphtheria (Td), or with pertussis (Tdap); hepatitis A; hepatitis B; human papillomavirus (HPV); trivalent inactivated influenza (TIV); pneumococcal conjugate (PCV13); and quadrivalent meningococcal conjugate (MCV4). Administer polio (IPV) and pneumococcal polysaccharide vaccine (PPSV23) either IM or SC.

Injection site

Give in the central and thickest portion of the deltoid—above the level of the armpit and below the acromion (see the diagram).

Needle size

22–25 gauge, 1–1¹/₂" needle (see note at right)

Needle insertion

- Use a needle long enough to reach deep into the muscle.
- Insert the needle at a 90° angle to the skin with a quick thrust.
- Separate two injections given in the same deltoid muscle by a minimum of 1".



Note: A $\frac{5}{7}$ " needle is sufficient in adults weighing less than 130 lbs (<60 kg) for IM injection in the deltoid muscle **only** if the subcutaneous tissue is not bunched and the injection is made at a 90-degree angle; a 1" needle is sufficient in adults weighing 130–152 lbs (60–70 kg); a 1–1½" needle is recommended in women weighing 152–200 lbs (70–90 kg) and men weighing 152–260 lbs (70–118 kg); a 1½" needle is recommended in women weighing more than 200 lbs (90 kg) or men weighing more than 260 lbs (more than 118 kg).

Subcutaneous (SC) Injections

Administer these vaccines via SC route

MMR, varicella, meningococcal polysaccharide (MPSV4), and zoster (shingles). Administer polio (IPV) and pneumococcal polysaccharide vaccine (PPSV23) either SC or IM.

Injection site

Give in fatty tissue over the triceps (see the diagram).

Needle size

23-25 gauge, 5/8" needle

Needle insertion

- Pinch up on the tissue to prevent injection into the muscle. Insert the needle at a 45° angle to the skin.
- Separate two injections given in the same area of fatty tissue by a minimum of 1".

45° angle skin subcutaneous tissue muscle acromion SC injection site (shaded area) elbow

Adapted by the Immunization Action Coalition, courtesy of the Minnesota Department of Health

Technical content reviewed by the Centers for Disease Control and Prevention.

Administering Vaccines to Adults: Dose, Route, Site, and Needle Size

Vaccine	Dose	Route	
Hangditin A (Han A)	≤18 yrs: 0.5 mL	DA	
Hepatius A (HepA)	≥19 yrs: 1.0 mL	1111	
	≤19 yrs: 0.5 mL	IM	
Hepatitis B HepB)	≥20 yrs: 1.0 mL		
HepA-HepB (Twinrix)	≥18 yrs: 1.0 mL	IM	
Human papillomavirus (HPV)	0.5 mL	IM	
Influenza, live attenuated (LAIV)	0.2 mL (0.1 mL into each nostril)	Intranasal spray	
Influenza, trivalent inactivated (TIV), including Fluzone High-Dose	0.5 mL	IM	
Influenza (TIV) Fluzone Intradermal, for ages 18 through 64 years	0.1 mL	Intradermal	
Measles, Mumps, Rubella (MMR)	0.5 mL	SC	
Meningococcal, conjugate (MCV4)	0.5 mL	IM	
Meningococcal, polysaccharide (MPSV4)	0.5 mL	SC	
Pneumococcal, conjugate (PCV13)	0.5 mL	IM	
Dramma a cost - class a charida (DDSV)	0.5	IM	
Pheumococcai, polysaccharide (PPSV)	0.3 mL	SC	
Tetanus, Diphtheria (Td) with Pertussis (Tdap)	0.5 mL	IM	
Varicella (VAR)	0.5 mL	SC	
Zoster (Zos)	0.65 mL	SC	

Injection Site and Needle Size		
Subcutaneous (SC) injection		
Use a 23–25 gauge, ⁵ / ₈ ", needle. Inject in fatty tissue over triceps.		
Intramuscular (IM) injection		
Use a 22–25 gauge needle. Inject in deltoid muscle of arm. Choose the needle length as indicated below:		
Gender/Weight	Needle Length	
Male or female less than 130 lbs	5%"*-1"	
Female 130–200 lbs	1-11/2"	
Male 130–260 lbs		
Female 200+ lbs	11/ "	
Male 260+ lbs	11/2	

*A 5/s" needle may be used for patients weighing less than 130 lbs (<60 kg) for IM injection in the deltoid muscle <u>only</u> if the subcutaneous tissue is not bunched and the injection is made at a 90-degree angle.



Note: Always refer to the package insert included with each biologic for complete vaccine administration information. CDC's Advisory Committee on Immunization Practices (ACIP) recommendations for the particular vaccine should be reviewed as well. Access the ACIP recommendations at www.immunize.org/acip.

Technical content reviewed by the Centers for Disease Control and Prevention

www.immunize.org/catg.d/p3084.pdf • Item #P3084 (7/12)

9

Copy this for your patients

Hepatitis A, B, and C: Learn the Differences

	-		
	Hepatitis A caused by the hepatitis A virus (HAV)	Hepatitis B caused by the hepatitis B virus (HBV)	Hepatitis C caused by the hepatitis C virus (HCV)
How is it spread?	HAV is found in the feces (poop) of people with hepatitis A and is usually spread by close personal contact (including sex or living in the same household). It can also be spread by eating food or drinking water contaminated with HAV and by traveling internationally where HAV infection is occurring.	HBV is found in blood and certain body fluids. The virus is spread when blood or body fluid from an infected person enters the body of a person who is not immune. HBV is spread through having unprotected sex with an infected person, sharing needles or "works" when shooting drugs, exposure to needlesticks or sharps on the job, or from an infected mother to her baby during birth. Exposure to infected blood in ANY situation can be a risk for transmission.	HCV is found in blood and certain body fluids. The virus is spread when blood or body fluid from an HCV- infected person enters another person's body. HCV is spread through sharing needles or "works" when shoot- ing drugs, through exposure to needlesticks or sharps on the job, or sometimes from an infected mother to her baby during birth. It is possible to transmit HCV during sex, but it is not common.
Who should be vaccinated?	 People who wish to be protected from HAV infection All children at age 1 year (12–23 months) Men who have sex with men Users of street drugs (injecting and non-injecting) People who travel or work in any area of the world except the U.S., Canada, Western Europe, Japan, New Zealand, and Australia People who will have close personal contact with an international adoptee, from a country where HAV infection is common, during the first 60 days following the adoptee's arrival in the U.S. People with chronic liver disease, including HCV People working with HAV in a laboratory People with clotting factor disorders (e.g., hemophilia) 	 All infants, children, and teens ages 0–18 years Any adult who wants to be protected from HBV infection Sexually active people who are not in long-term, mutually monogamous relationships Men who have sex with men People seeking evaluation or treatment for a sexually transmitted disease Healthcare or public safety workers who might be exposed to blood or body fluids Residents and staff of facilities for developmentally disabled people Adults under 60 years of age with diabetes Dialysis and pre-dialysis patients People in close personal contact (i.e., household or sexual) with someone who has chronic HBV infection Current or recent injection-drug users Travelers to regions of the world where hepatitis B is common (Asia, Africa, the Amazon Basin in South America, the Pacific Islands, Eastern Europe, or the Middle East); People with chronic liver disease 	There is no vaccine to prevent HCV. Testing for HCV is recommended for the following groups of people. • Injecting drug users • Recipients of clotting factors made before 1987 • Hemodialysis patients • Recipients of blood or solid organ transplants before 1992 • Infants born to HCV-infected mothers • People with undiagnosed abnormal liver test results Although HCV is not commonly spread through sex, Individuals having sex with multiple partners or with an infected steady partner may be at increased risk of HCV infection.
mptoms	Viral hepatitis symptoms are similar no matter which type of hepatitis you have. If symptoms occur, you might experience any or all of the following: jaundice (yellowing) the skin and whites of the eyes), fever, loss of appetite, fatigue, dark urine, joint pain, abdominal pain, diarrhea, nausea, and vomiting. Very rarely, a recently acquired of viral hepatitis can cause liver failure and death. Sometimes in these instances, a liver transplant (if a liver is available) can save a life. Note: For all types of viral hepatites are less common in children than in adults, and for people of any age with HCV infection, they are less likely to experience symptoms.		rience any or all of the following: jaundice (yellowing of usea, and vomiting. Very rarely, a recently acquired case lable) can save a life. Note: For all types of viral hepatitis, ikely to experience symptoms.
Syl	Incubation period: 15 to 50 days, aver- age 28 days	Incubation period: 60 to 150 days, average 90 days	Incubation period: 14 to 180 days, average 45 days
Chronic infection	There is no chronic infection. Once you have had HAV infection, you cannot get it again. About 15 out of 100 people infected with HAV will have prolonged illness or relapsing symptoms over a 6–9 month period.	Chronic infection occurs in up to 90% of infants infected at birth; in about 30% of children infected at ages 1–5 years; and less than 5% of people infected after age 5 years. In the U.S., 2,000 to 4,000 people die each year from hepatitis B. Death from chronic liver disease occurs in 15%–25% of chronically infected people People who have chronic HBV infection have a much higher risk of liver failure and liver cancer.	Chronic infection occurs in 75%–85% of newly infected people and 70% of chronically infected people go on to develop chronic liver disease. In the U.S., an estimated 8–10,000 people die each year from HCV. People who have chronic HCV infection have a much higher risk of liver failure and liver cancer. Chronic HCV-related liver disease is the leading cause for liver transplant.
What treatment helps?	 There is no treatment for HAV other than supportive care. Avoid alcohol. It can worsen liver disease. 	 People with chronic HBV infection should have a medical evaluation for liver disease every 6–12 months. Several antiviral medications are currently licensed for the treatment of individuals with chronic HBV. These drugs are effective in preventing serious liver problems in up to 40% of patients, but the drugs do not get rid of the virus. Liver transplant is the last resort, but livers are not always available. Avoid alcohol. It can worsen liver disease. There is no medication to treat recently acquired HBV infection. 	 People with chronic HCV infection should have a medical evaluation for liver disease every 6–12 months. There are drugs licensed for the treatment of individuals with chronic HCV infection. Combination therapy is currently the treatment of choice and can eliminate the virus in approximately 40–50% of patients with genotype 1 (the most common genotype in the U.S.). Get vaccinated against hepatitis A and B. Avoid alcohol. It can worsen liver disease. There is no medication for the treatment of recently acquired HCV infection.
How is it prevented?	 Get vaccinated! Safe and effective vaccines to prevent HAV infection have been available in the U.S. since 1995. Always wash your hands with soap and wa- ter after using the toilet, changing a diaper, and before preparing or eating food. For a recent exposure to someone with HAV or if travel is soon (leaving in less than 2 weeks) to an area of the world where hepatitis A is common, see your healthcare provider about your need for hepatitis A vac- cine or a dose of immune globulin (IG). 	 Get vaccinated! Hepatitis B vaccination is the best protection. Three shots are usually given over a period of six months. Whenever a woman is pregnant, she should be tested for hepatitis B (HBsAg blood test); infants born to HBV-infected mothers should be given HBIG (hepatitis B immune globulin) and vaccine within 12 hours of birth. Tell your sex partner(s) to get vaccinated too, and always follow "safer sex" practices (e.g., using condoms). 	 There is no vaccine to prevent HCV infection. HCV can be spread by sex, but this is not common. If you are not in a mutually monogamous relation- ship, use latex condoms correctly and every time to prevent the spread of sexually transmitted diseases. (The efficacy of latex condoms in preventing HCV infection is unknown, but their proper use may reduce transmission.) In addition to getting hepatitis A vac- cine, you should also get hepatitis B vaccine.

www.immunize.org/catg.d/p4075.pdf • Item #P4075 (6/12)

Meningococcal Vaccination Recommendations This table summarizes the recommendations by Age and/or Risk Factor

This table summarizes the recommendations of CDC's Advisory Committee on Immunization Practices for the use of meningococcal vaccine.

MCV4 = Menactra (sanofi) and Menveo (Novartis) MCV4-D = Menactra MPSV = Menomune (sanofi)

TARGETED GROUP BY AGE AND/OR RISK FACTOR	PRIMARY DOSE(S)	BOOSTER DOSE(S)	
People ages 11 through 18 years	Give 1 dose of MCV4, preferably at age 11 or 12 years ¹	Give booster at age 16 years if primary dose given at age 12 years or younger	
		Give booster at age 16 through 18 years if primary dose given at age 13 through 15 years ²	
People age 19 through 21 years who are in college and living in residence halls	Give 1 dose of MCV4 ¹ if not previously vaccinated	Give booster if previous dose given at age younger than 16 years	
Certain travelers, people present during outbreaks caused by a vaccine serogroup, ³ and other people with prolonged increased risk for exposure (e.g., travelers to or residents of countries where meningococcal disease is hyperendemic or epidemic and microbiologists routinely working with <i>Neisseria meningitidis</i>)			
• for age 9 through 23 months	Give 2 doses of MCV4-D, 3 months apart ⁴	If risk continues, give initial booster after 3 years, followed by boosters every 5 years	
■ for age 2 through 55 years	Give 1 dose of MCV4 ¹	Boost every 5 years with MCV4 ^{5,6}	
• for age 56 years and older	Give 1 dose of MPSV	Boost every 5 years with MPSV ⁶	
People with persistent complement component deficiencies, ⁷ or functional or anatomic asplenia			
• for age 9 through 23 months with persistent complement component deficiencies only (<i>does not</i> <i>include children with functional</i> <i>or anatomic asplenia</i>)	Give 2 doses of MCV4-D, 3 months apart	Give booster after 3 years, followed by boosters every 5 years	
• for age 2 through 55 years	Give 2 doses of MCV4, 2 months apart ⁸	Boost every 5 years with MCV4 ^{5,9}	
• for age 56 years and older	Give 1 dose of MPSV	Boost every 5 years with MPSV ⁹	

FOOTNOTES

- 1. If the person is HIV-positive, give 2 doses, 2 months apart.
- 2. The minimum interval between doses of MCV4 is 8 weeks.
- 3. Seek advice of local public health authority to determine if vaccination is recommended.
- 4. If a child age 9 through 23 months will enter an endemic area in less than 3 months, give doses as close as 2 months apart.
- 5. If primary dose(s) given when younger than age 7 years, give initial booster after 3 years, followed by boosters every 5 years.
- 6. Boosters are recommended if the person remains at increased risk.
- 7. Persistent complement component deficiencies include C5-C9, properdin, factor H, and factor D.
- 8. Children with functional or anatomic asplenia should complete a PCV13 vaccine series before vaccination with MCV4; if MCV4-D is to be given, vaccinate at least 4 weeks following last dose of PCV13.
- 9. If the person received a 1-dose primary series, give booster at the earliest opportunity, then boost every 5 years.

Technical content reviewed by the Centers for Disease Control and Prevention

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www.immunize.org/catg.d/p2018.pdf • Item #P2018 (8/12)

CDC Information for Health Care Professionals about Adolescent Vaccines



Find this document and other CDC resources at www.cdc.gov/vaccines/who/teens/for-hcp.html

CDC Handouts for Parents about Vaccines for Preteens and Teens



Download these CDC fact sheets and additional resources—some in Spanish and other languages—at www.cdc.gov/vaccines/who/teens/products/print-materials.html

In the battle against whooping cough, she needs more than cute.

> She needs the safe, proven protection of vaccines. Giving her the recommended immunizations by age two is the best way to protect her from 14 serious childhood diseases, like whooping cough and measles. For more reasons to vaccinate, talk to your child's doctor or go to http://www.cdc.gov/vaccines or call 1-800-CDC-INFO.

Immunization. Power to Protect.



U.S. Department of Health and Human Services Centers for Disease Control and Prevention



American Academy of Pediatrics DEDICATED TO THE HEALTH OF ALL CHILDREN





Vaccines. Defend him against 14 serious childhood diseases, like measles and whooping cough, with the safe, proven protection of vaccines. Giving him the recommended immunizations by age two is the best way to protect him. For more reasons to vaccinate, talk to your child's doctor or go to http://www.cdc.gov/vaccines or call 1-800-CDC-INFO.

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American Academy of Pediatrics DEDICATED TO THE HEALTH OF ALL CHILDREN



Current Dates of Vaccine Information Statements (VISs) as of July 2, 2012

Check your supply of VISs against this list. If you have outdated VISs, get current versions at www.immunize.org/vis

Adenovirus7/14/11	MMRV5/21/10
Anthrax	Meningococcal10/14/11
Chickenpox3/13/08	Multi-vaccine9/18/08
DTaP5/17/07	PCV134/16/10
Hib12/16/98	PPSV10/6/09
Hepatitis A10/25/11	Polio11/8/11
Hepatitis B2/2/12	Rabies10/6/09
HPV-Cervarix5/3/11	Rotavirus12/6/10
HPV-Gardasil2/22/12	Shingles10/6/09
Influenza7/2/12	Td/Tdap1/24/12
Japanese enceph12/7/11	Typhoid5/29/12
MMR4/20/12	Yellow fever3/30/11

www.immunize.org/catg.d/p2029.pdf

Immunization Action Coalition

Item #P2029 (7/I2)

5/21/10

Current Dates of Vaccine Information Statements (VISs) as of July 2, 2012

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MMRV

Adenovirus
Anthrax
Chickenpox3/13/08
DTaP5/17/07
Hib12/16/98
Hepatitis A10/25/11
Hepatitis B2/2/12
HPV-Cervarix5/3/11
HPV-Gardasil2/22/12
Influenza7/2/12
Japanese enceph12/7/11
MMR4/20/12

Meningococcal10/14/11
Multi-vaccine9/18/08
PCV134/16/10
PPSV10/6/09
Polio11/8/11
Rabies10/6/09
Rotavirus12/6/10
Shingles10/6/09
Td/Tdap1/24/12
Typhoid5/29/12
Yellow fever3/30/11

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DTaP5/17/07	PCV134/16/10
Hib12/16/98	PPSV10/6/09
Hepatitis A 10/25/11	Polio11/8/11
Hepatitis B2/2/12	Rabies10/6/09
HPV-Cervarix5/3/11	Rotavirus12/6/10
HPV-Gardasil2/22/12	Shingles10/6/09
Influenza7/2/12	Td/Tdap1/24/12
Japanese enceph12/7/11	Typhoid5/29/12
MMR4/20/12	Yellow fever3/30/11

www.immunize.org/catg.d/p2029.pdf

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Current Dates of Vaccine Information Statements (VISs) as of July 2, 2012

Check your supply of VISs against this list. If you have outdated VISs, get current versions at www.immunize.org/vis

Adenovirus7/14/11	MM
Anthrax	Mei
Chickenpox3/13/08	Mu
DTaP5/17/07	PC
Hib12/16/98	PP
Hepatitis A 10/25/11	Pol
Hepatitis B2/2/12	Rat
HPV-Cervarix5/3/11	Rot
HPV-Gardasil2/22/12	Shi
Influenza7/2/12	Td/
Japanese enceph12/7/11	Тур
MMR4/20/12	Yel

MMRV5/21/10
Meningococcal10/14/11
Multi-vaccine9/18/08
PCV134/16/10
PPSV10/6/09
Polio11/8/11
Rabies10/6/09
Rotavirus12/6/10
Shingles10/6/09
Td/Tdap1/24/12
Typhoid5/29/12
Yellow fever3/30/11

www.immunize.org/catg.d/p2029.pdf

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Item #P2029 (7/12)

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Andrew T. Kroger, MD, MPH

approved for this age group. In addition, there are data that indicate that vaccinated pregnant women pass maternal antibodies to the fetus in the last few weeks of pregnancy; this helps protect the young infant against influenza. Vaccinating pregnant women thus protects women, their unborn babies, and their babies after birth.

A child received a 0.25 mL dose of inactivated influenza vaccine (TIV) at age 34 months. She is scheduled to return for the second dose at age 36 months. Should she receive a 0.25 mL dose or a 0.5 mL dose?

She should receive a 0.5 mL dose of TIV. Always administer the volume of vaccine appropriate to the age of the patient when the patient presents at the clinic for the dose.

If Cervarix (HPV2; GSK) is inadvertently administered to a male, does the dose need to be repeated with Gardasil (HPV4; Merck)?

Yes. Cervarix is recommended for use only in females. There is no minimum interval between the invalid dose of Cervarix and the dose of Gardasil.

ACIP recommends routine vaccination of males age 11-12 years with HPV4 administered as a 3-dose series. The vaccination series can be started at age 9 years. Vaccination with HPV4 is also recommended for males age 13 through 21 years who have not been vaccinated previously or who have not completed the 3-dose series. Males age 22 through 26 years may be vaccinated with HPV4; ACIP specifically recommends routine vaccination with HPV4 through age 26 years for immunocompromised males and men who have sex with men if they have not been vaccinated previously or have not completed the 3-dose series.

Is it safe to give the shingles vaccine (Zostavax; Merck) to patients age 60 years and older who have had a splenectomy? I am concerned because it's a live virus vaccine.

Yes, it is safe. Asplenic people can get all vaccines indicated. Immunosuppression is not a consideration unless the patient has other health issues or is undergoing treatments that suppress the immune system. A patient's response to shingles vaccination should not be affected by the lack of a functioning spleen.

If a healthcare worker does not have a history of varicella vaccination or disease but has had a clinically diagnosed case of shingles, does she or he still need varicella vaccination? No. A healthcare provider's diagnosis or verification of a history of shingles is acceptable

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evidence of immunity to varicella. According to ACIP, acceptable evidence of varicella immunity in healthcare personnel includes (1) documentation of 2 doses of varicella vaccine given at least 28 days apart, (2) history of varicella or herpes zoster based on physician diagnosis, (3) laboratory evidence of immunity, or (4) laboratory confirmation of disease.

ACIP recommends that adolescents who receive the first dose of meningococcal conjugate vaccine (MCV4) at age 13-15 years receive a one-time booster dose at age 16-18 years. Given how hard it is to get teens into a medical office, is it okay to give the doses close together if the opportunity arises? For example, if a patient got the first dose at age 15, and then came back for a sports physical at age 16, could we give the second dose of MCV4 then or should we try to space it out as far as possible (age 18)?

If the first dose is given at age 13 through 15 years, you can give the booster dose as early as age 16 years, with a minimum interval of 8 weeks from the previous dose. So, even if the patient got vaccinated at age 15 years 11 months, you could wait at least 8 weeks and then give the booster at age 16 years 1 month (or later) if you chose to do so.

A 12-year-old patient new to our clinic brought immunization records from her previous clinic. Her records show that she received Menomune (meningococcal polysaccharide vaccine; MPSV4; sanofi) when she was age 11. Is this considered adequate coverage for the 11–12

year-old dose? Can we wait until she is 16 to give the meningococcal conjugate vaccine (MCV4) dose?

The answer to both of your questions is yes. You can count the MPSV4 dose as valid. Although MCV4 is preferred, MPSV4 is licensed for this age group, and a dose of either vaccine (i.e., MCV4 or MPSV4) at age 10 or older is considered valid. Just make sure the second dose is MCV4.

Can you switch brands of rabies vaccine to complete the 4-dose series?

Yes. The two rabies vaccines licensed for use in the United States are interchangeable.

To submit an "Ask the Experts" question ... You can email your questions about immunization to us at admin@immunize.org. IAC will respond to your inquiry. Because we receive hundreds of emails each month, we cannot guarantee that we will use your question in "Ask the Experts." IAC works with CDC to compile new Q&As for our publications based on commonly asked questions. Most of the questions are thus a composite of several inquiries.

To receive "Ask the Experts" Q&As by email, subscribe to the Immunization Action Coalition's news service, IAC Express. Special "Ask the Experts" issues are published five times per year.

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