

VACCINATE ADULTS!

Visit www.immunize.org for up-to-date immunization information from the Immunization Action Coalition

Highlighting the latest developments in adult immunization and hepatitis B prevention and screening

Ask the Experts

IAC extends thanks to our experts, William L. Atkinson, MD, MPH, and Andrew T. Kroger, MD, MPH, medical epidemiologists at the National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention (CDC); and Joanna Buffington, MD, MPH, medical epidemiologist, Division of Viral Hepatitis (DVH), CDC; and Linda A. Moyer, RN, IAC consultant, who until her retirement, was an epidemiologist and chief, Education and Training Team, at DVH.

Immunization questions

One morning, our refrigerator thermometer registered 32 degrees F. The vaccine didn't look frozen so we kept using it. Was this okay?

No. If you find that a vaccine has been exposed to an inappropriate temperature, determine the reason for the temperature alteration, mark the vaccine "Do Not Use," and contact the manufacturer or state/local health department to determine if the vaccine can be used.

Where can I obtain standing orders for vaccination?

The Immunization Action Coalition (IAC) has developed suggested standing orders for all vaccines commonly given to children and adults. They are based on CDC's Advisory Committee on Immunization Practices (ACIP) recommendations and are reviewed for technical accuracy by CDC staff. You can find the standing orders and protocols for medical management of vaccine reactions at www.immunize.org/standingorders.

If a person of any age is diagnosed with pertussis, can they forego pertussis vaccination?

If someone has a recent culture-confirmed case of pertussis, he or she may not need immediate immunization against pertussis; however, a vaccine containing pertussis antigen will not be harmful. A person with a culture-confirmed case or a history of pertussis should continue on the routine immunization schedule for future protection against tetanus, diphtheria, and pertussis.

For whom is influenza vaccine now recommended?

CDC recommends annual vaccination for all of the following: (1) all persons age 6 months or older, including all school-aged children, who want to reduce the likelihood of becoming ill with influenza or of transmitting it to others; (2) all persons age 50 years and older; (3) all children age 6 through 59 months; (4) all persons with any of the following conditions: chronic disorder of the pulmonary or cardiovascular system (including asthma), chronic metabolic disease (including diabetes), renal dysfunction, hemoglobinopathy, conditions that place one at risk for aspiration or immunosuppression (including immunosuppression caused by medi-

cations or by HIV), children or adolescents age 6 months through 18 years who are receiving long-term aspirin therapy, and therefore might be at risk for experiencing Reye's syndrome after influenza infection; (5) women who will be pregnant during the influenza season; (6) residents of nursing homes or other chronic-care facilities that house persons of any age who have chronic medical conditions; (7) all persons (such as healthcare personnel, caregivers, or household members) who have contact with, and are therefore likely to transmit influenza to, persons who have high-risk conditions; (8) household contacts or out-of-home caretakers of children age 0 through 59 months or of adults age 50 years or older.

During which month should I start administering influenza vaccine?

You can begin offering vaccine as soon as it becomes available. Planners of mass vaccination programs may want to consider scheduling their efforts after mid-October to increase the probability of having adequate vaccine supplies on hand.

How late in the season can I vaccinate my patients with influenza vaccine?

Influenza activity generally does not peak until February or later. As long as vaccine is available, providers are encouraged to continue vaccinating patients throughout the influenza season, including into the spring months. Because influenza occurs in many areas of the world during the spring and summer, vaccine should be given to travelers who missed vaccination in the preceding fall and winter.

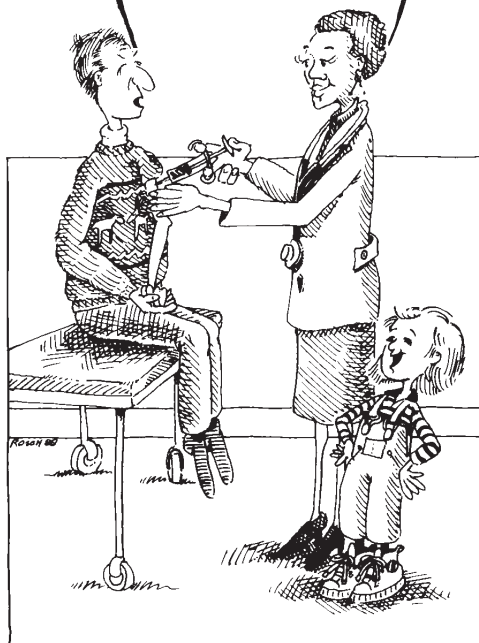
If a person has influenza, when and for how long are they infectious to others?

Adults can be infectious from 1 day before symptoms occur through approximately 5 days after illness onset. Young children can shed virus several

(continued on page 4)

It's January—and you're giving me influenza vaccine? Isn't it too late for the vaccine to do me any good?

A lot of people think that! The fact is, patients benefit from getting vaccinated throughout the influenza season, which can last until April or May.



Artwork courtesy of New York State Department of Health

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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)

Vaccinate Adults!

Online at www.immunize.org/va
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www.hepprograms.org

www.izcoalitions.org

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IAC publishes two free email news services (*IAC Express* and *Hep Express*) and three free print periodicals (*Needle Tips*, *Vaccinate Adults*, and *Vaccinate Women*). To subscribe to any or all of them go to www.immunize.org/subscribe.

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

The Hepatitis B Coalition, a program of IAC, promotes hepatitis B vaccination; HBsAg screening for all pregnant women; testing and vaccination for high-risk groups; and education and treatment for people chronically infected with hepatitis B virus.

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Immunization Action Coalition

Immunization Action Coalition's most popular web sections are newly designed, easy to use

Whether you're a newcomer or a frequent visitor to the Immunization Action Coalition's (IAC's) website for health professionals, www.immunize.org, it's an exciting time to stop by for a visit. IAC is moving forward with a comprehensive redesign of the website. The changes to the layout are designed to make it easier for you to find the breadth of information that is available about childhood, adolescent, and adult immunization. We're redesigning it in such a way that you'll find what you need quickly and come back often.

IAC unveils the new design with some of our most popular web sections: **Vaccine Information Statements**, **Ask the Experts**, and IAC's print and electronic periodicals.

Vaccine Information Statements (VISs)

IAC's most frequently visited web section is the VIS home page, the main stop for thousands of visitors each day. Navigate to www.immunize.org/vis and download

an index of subtopics pertinent to the disease/vaccine, such as schedule, administration, and contraindications, as well as tables and other graphic elements that organize and explain complex information. Ask the Experts Q&As are reviewed annually. To access them, go to www.immunize.org/askexperts.

Periodicals and E-publications

IAC's free print periodicals and e-publications for health professionals are also online and feature the new design. Current issues (and complete archives) are available to share with medical and nursing staff.

Needle Tips: www.immunize.org/nt

Vaccinate Adults: www.immunize.org/va

Vaccinate Women: www.immunize.org/vw

IAC Express: www.immunize.org/express

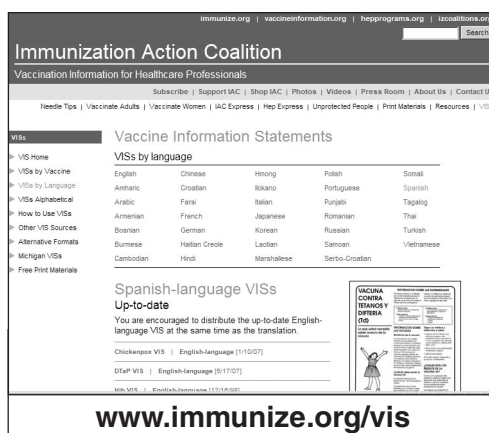
Hep Express: www.hepprograms.org/hepexpress

If you aren't familiar with some of these publications and would like to learn about them, visit the links above. In addition, you can subscribe to all of them (they're free of charge) at www.immunize.org/subscribe.

Future plans for redesign

The next immunize.org web sections "in the works" for redesign are IAC's free print materials section, www.immunize.org/free, and our journal articles section, www.immunize.org/journals. So check back often to see what's new.

Also, make sure you're a subscriber to *IAC Express* so you can stay up to date about what's new at www.immunize.org and in the world of immunization. *IAC Express* is published every Monday and it's free! Subscribe at www.immunize.org/subscribe.



up-to-date VISs in more than 30 languages, including English. All VISs on IAC's site are in ready-to-print (PDF) format. In addition, you'll find instructions from the government about how VISs should be used.

Ask the Experts

Another "hot spot" on immunize.org is the Ask the Experts web section. At www.immunize.org/askexperts, you'll find compilations of more than 1,000 Q&As about immunization and viral hepatitis that have appeared in past issues of IAC's periodicals, *Needle Tips*, *Vaccinate Adults*, and *Vaccinate Women*. The Q&As are written by CDC immunization experts William L. Atkinson, MD, MPH, and Andrew T. Kroger, MD, MPH; and hepatitis expert Joanna Buffington, MD, MPH. The main page now features a disease/vaccine index and offers users

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 St. Paul, Minnesota.

Visit IAC's popular web sections!

Vaccine Information Statements

www.immunize.org/vis

Ask the Experts

www.immunize.org/askexperts

IAC's free periodicals and email news

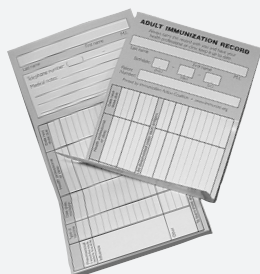
www.immunize.org/subscribe

If you have a website, please link to IAC!

www.immunize.org

www.vaccineinformation.org

Immunization record cards available 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. The three cards list all vaccines recommended for each age. All are printed on durable rip-, smudge-, and water-proof paper. Wallet-sized when folded, the cards are brightly colored to stand out. To view them or for more details, go to www.immunize.org/shop and click on the images.

Buy 1 box (250 cards) for \$35 (first order of a 250-card box comes with a 30-day, money-back guarantee)

Discounts for larger orders: 2 boxes (500 cards) \$65;
3 boxes (750 cards) \$90; 4 boxes (1000 cards) \$110

To order, visit www.immunize.org/shop, or use the order form on page 11.

(To receive sample cards, email your request to admin@immunize.org.)

Do you vaccinate adults or children?

Then your practice needs this training video!



**"Immunization Techniques:
Safe, Effective, Caring"**
developed by
**California Dept. of Public Health
Immunization Branch**

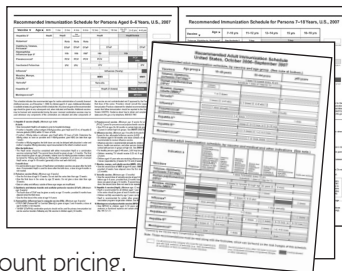
Cost is \$30 for VHS video;
\$35 for DVD.

For 20 or more copies,
contact us for discount
pricing. To order, visit www.immunize.org/shop, or use
the order form on page 11.

Questions? Email admin@immunize.org or call (651) 647-9009.

Laminated adult and child immunization schedules Order them for every exam room

Here are the CDC/AAP/ACOG/ACP-approved immunization schedule for adults and the CDC/AAP/AAPF-approved schedule for children age 0–18 years. Both are laminated for heavy-duty use, complete with essential footnotes, and printed in color for easy reading. The cost is \$5 for each schedule and only \$3 each for five or more copies. For 20 or more copies, contact us for discount pricing.



To order, visit www.immunize.org/shop, or use the order form on page 11.

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days before illness onset and can be infectious for 10 or more days after onset of symptoms. Severely immunocompromised persons can shed virus for weeks or months.

I've heard that almost 75% of people in the U.S. are already recommended for influenza vaccination. Why don't we just have universal influenza vaccination? It would be so much easier than assessing the risk of each patient.

It's true that the number of people who are in the age-based targets (i.e., age 6 through 59 months, age 50 years or older) combined with those age 5–49 years with risk factors or who are household contacts of those with risk factors, amounts to 73% of the U.S. population. Though it may be a few more years before we reach universal influenza vaccination, CDC now recommends vaccination for anyone who wants to reduce the likelihood of becoming ill with influenza or of transmitting it to others. Therefore, you can be comfortable recommending influenza vaccine for all your patients who want to be immune and don't want to spread influenza to others.

Sometimes I am unable to get 10 doses of influenza vaccine out of a 5.0 mL (10-dose) vial. Do you have any suggestions?

Certain vaccine syringes have small hubs where a volume of the vaccine that is withdrawn from the vial collects and is not available to be injected. Syringes without a hub are available; their use results in less vaccine wastage.

I heard about a hospital where more than 95% of employees received influenza vaccine last year. How did they achieve that?

Virginia Mason Medical Center in Seattle, WA, completed 2 years of mandatory employee influenza vaccination, achieving 98% compliance in the 2006–07 year. Toolkits, as well as other materials from a variety of organizations and the presentation on the Virginia Mason program given at the 2007 National Influenza Vaccine Summit, are available at www.preventinfluenza.org/profs_workers.asp.

Does the thimerosal in influenza vaccine pose a risk?

Thimerosal, a very effective preservative, has been used to prevent bacterial contamination in vaccine vials for more than 50 years. It contains a type of mercury known as ethylmercury, which is different from the type of mercury found in fish and seafood (methylmercury). At very high levels, methylmercury can be toxic to people, especially to the neurological development of infants.

In recent years, several large scientific studies have determined that thimerosal in vaccines does not lead to neurologic problems, such as autism. Nonetheless, because we generally try to reduce people's exposure to mercury if at all possible, vaccine manufacturers have voluntarily changed their production methods to produce vaccines that are now free of thimerosal or have only trace amounts. They have done this because it is possible to do, not because there was any evidence that the thimerosal was harmful.

To which patients should I recommend human papillomavirus (HPV) vaccine?

CDC recommends that females age 11–12 years be vaccinated with 3 doses of HPV vaccine. Additionally, HPV vaccine is recommended for all females age 13–26 years who have not been previously vaccinated or who have not completed the full series. The vaccination series can be started as young as age 9 years. Ideally, vaccine should be administered before potential exposure to HPV through sexual contact; however, females who are sexually active or who have had HPV infection or an abnormal Pap test should also be vaccinated. CDC's official recommendations are available at www.cdc.gov/mmwr/pdf/rr/rr56e312.pdf.

What are the dosing intervals when using HPV vaccine?

CDC recommends the second dose be given 2 months after the first, and the third dose be given 6 months after the first. The minimum intervals are 4 weeks between dose 1 and dose 2, and 12 weeks between dose 2 and dose 3. If necessary the series can be completed in 16 weeks.

If a woman has had HPV infection, can she still be vaccinated?

Yes. Women who have evidence of present or past HPV infection and who are younger than age 27 years should be vaccinated. They should be advised that the vaccine will not have a therapeutic effect on existing HPV infection or any cervical lesions.

If a 30-year-old patient insists that she wants to be given HPV vaccine, can I give it to her?

HPV vaccine is not FDA-licensed for use in women older than age 26 years at this time. Studies are currently being conducted in women age 27 years and older. CDC does not recommend the use of this vaccine outside the FDA licensing guidelines; however, many physicians administer this vaccine as off-label use. There is no reason to believe the vaccine would be any less safe for women in this age group than for younger women. Clinicians should decide if the benefit of the vaccine outweighs the hypothetical risk.

When will CDC publish its official recommendations for the use of Zostavax®? Until then, what should I use to guide me?

CDC has posted its provisional recommendations at www.cdc.gov/vaccines/recs/provisional/default.htm. The official recommendations are expected to be published in *MMWR* in early 2008. However, zoster vaccine will be included in the 2007–08 Recommended Adult Immunization Schedule, which CDC plans to release in *MMWR* in October 2007.

Who should receive shingles (zoster) vaccine?

A single dose of zoster vaccine is recommended for adults age 60 years and older whether or not they report a prior episode of herpes zoster. Persons with chronic medical conditions may be vaccinated unless a contraindication or precaution exists for their condition.

Will administering Zostavax prevent post-herpetic neuralgia (PHN)?

In pre-licensure trials, Zostavax was 66.5% effective in preventing PHN. It is also believed to lessen the severity of both shingles and PHN if a person should acquire the disease after vaccination.

Hepatitis A and B

Which adults are recommended to receive hepatitis B vaccine?

CDC recommends that the following groups receive hepatitis B vaccination:

- Sexually active persons who are not in long-term, mutually monogamous relationships
- Sex partners of HBsAg-positive persons
- Persons seeking evaluation or treatment for a sexually transmitted disease
- Men who have sex with men
- Current or recent injection-drug users
- Household contacts of HBsAg-positive persons
- Residents and staff of facilities for developmentally disabled persons
- Healthcare and public safety workers with reasonably anticipated risk for exposure to blood or blood-contaminated body fluids
- Persons with end-stage renal disease, including predialysis, hemo-, peritoneal-, and home-dialysis patients
- International travelers to regions with intermediate or high levels (i.e., $\geq 2\%$ of HBsAg positivity; see Figure 4 in ACIP recommendations). The new recommendations do not specify the length of the trip.
- Persons with chronic liver disease
- Persons with HIV infection
- All other persons who wish to be protected from HBV infection

Acknowledgement of a specific risk factor is NOT a requirement for vaccination. The official CDC recommendations for hepatitis B vaccination of adults are available at www.cdc.gov/mmwr/PDF/rr/rr5516.pdf. For your use, a hepatitis B vaccination screening questionnaire is available from IAC at www.immunize.org/catg.d/2191hepb.pdf. Standing orders for administering hepatitis B vac-

(continued on page 5)

Do you have patients who are HBsAg-positive?

They need medical monitoring, including liver cancer screening; many can benefit from treatment.

The FDA licenses several medications for treatment in the United States.

Consult a liver specialist experienced in the treatment of viral hepatitis for appropriate monitoring guidelines and for help in determining which of your patients might benefit from treatment.

cine to adults are also available from IAC at www.immunize.org/catg.d/p3076.pdf.

What does CDC recommend regarding screening and vaccination of Asian Americans and Pacific Islanders and people from other hepatitis B endemic areas?

All foreign-born people (including immigrants, refugees, asylum seekers, and internationally adopted children) born in Asia, the Pacific Islands, Africa, and other regions with high endemicity of HBV infection should be tested for HBsAg, regardless of vaccination status.

In addition, hepatitis B vaccination is recommended for all children age 0–18 years, and for all unvaccinated adults at risk for HBV infection, as well as for all adults requesting protection from HBV infection.

How do you serologically define chronic HBV infection?

A person is considered to have chronic HBV infection if he or she is (1) HBsAg positive on two occasions at least 6 months apart, or (2) HBsAg positive and IgM class antiHBc (antibody to hepatitis B core antigen) negative on a single blood draw. (An IgM class antiHBc test will be positive for 4–6 months after acute HBV infection.)

Which HBsAg-positive patients should be considered infectious?

All HBsAg-positive persons should be considered infectious, regardless of HBeAg (hepatitis B e antigen) status. (See lab nomenclature on this page for HBeAg definition.)

What is Twinrix® vaccine? Who can receive it?

Twinrix (GlaxoSmithKline) is an inactivated combination vaccine containing both hepatitis A virus (HAV) and HBV antigens. The vaccine contains 720 EL.U. of hepatitis A antigen (half of the Havrix® adult dose) and 20µg of hepatitis B antigen (the full Engerix-B® adult dose). In the U.S., Twinrix is licensed for use in people who are age 18 years or older. It can be administered to persons who are at risk for both hepatitis A and hepatitis B, such as certain international travelers, men who have sex with men, illegal drug users, or to persons who simply want to be immune to both diseases.

Primary immunization consists of 3 doses given intramuscularly on a 0, 1, and 6 month schedule. In March 2007, the FDA also approved a 4-dose schedule for Twinrix. It consists of 3 doses given within 3 weeks, followed by a booster dose at 12

How do I interpret the results of some of the commonly ordered panels of hepatitis B tests?

Tests	Results	Interpretation	Vaccinate?
HBsAg anti-HBc anti-HBs	negative negative negative	susceptible	vaccinate if indicated
HBsAg anti-HBc anti-HBs	negative negative positive with $\geq 10\text{mIU/mL}^*$	immune due to vaccination	no vaccination necessary
HBsAg anti-HBc anti-HBs	negative positive positive	immune due to natural infection	no vaccination necessary
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive positive negative	acutely infected	no vaccination necessary
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive negative negative	chronically infected	no vaccination necessary (may need treatment)
HBsAg anti-HBc anti-HBs	negative positive negative	four interpretations possible†	use clinical judgment

*Postvaccination testing, when it is recommended, should be performed 1–2 months after the last dose of vaccine. Infants born to HBsAg-positive mothers should be tested 3–9 months after the last dose.

1. May be recovering from acute HBV infection
2. May be distantly immune, but the test may not be sensitive enough to detect a very low level of anti-HBs in serum
3. May be susceptible with a false positive anti-HBc
4. May be chronically infected and have an undetectable level of HBsAg present in the serum

months (0, 7 days, 21–30 days, and 12 months). The 4-dose schedule could benefit individuals needing rapid protection from hepatitis A and hepatitis B, such as persons traveling to high-prevalence areas imminently and emergency responders, especially those being deployed to disaster areas overseas.

For which adults is hepatitis A vaccine recommended?

CDC recommends hepatitis A vaccination for all adults who

- travel to areas with increased rates of hepatitis A (everywhere EXCEPT Canada, Australia, New Zealand, Japan, and Western Europe)
- are men who have sex with men
- use either injecting or non-injecting illegal drugs (including “pot”)
- have clotting-factor disorders, such as hemophilia
- have chronic liver disease
- desire immunity to hepatitis A virus infection

Adults should be given 2 doses of hepatitis A vaccine spaced at least 6 months apart. ♦

Hepatitis A and B lab tests

Hepatitis A lab nomenclature

anti-HAV: Antibody to hepatitis A virus. This diagnostic test detects total antibody of both IgG and IgM subclasses of HAV. Its presence indicates either acute or resolved infection.

IgM anti-HAV: IgM antibody subclass of anti-HAV. Its presence indicates a recent infection with HAV (6 mos or less). It is used to diagnose acute hepatitis A.

Hepatitis B lab nomenclature

HBsAg: Hepatitis B surface antigen is a marker of infectivity. Its presence indicates either acute or chronic HBV infection.

anti-HBs: Antibody to hepatitis B surface antigen is a marker of immunity. Its presence indicates an immune response to HBV infection, an immune response to vaccination, or the presence of passively acquired antibody. (It is also known as **HBsAb**, but this abbreviation is best avoided since it is often confused with abbreviations such as HBsAg.)

anti-HBc (total): Antibody to hepatitis B core antigen is a nonspecific marker of acute, chronic, or resolved HBV infection. It is *not* a marker of vaccine-induced immunity. It may be used in prevaccination testing to determine previous exposure to HBV infection. (It is also known as **HBcAb**, but this abbreviation is best avoided since it is often confused with other abbreviations.)

IgM anti-HBc: IgM antibody subclass of anti-HBc. Positivity indicates recent infection with HBV (within the past 6 mos). Its presence indicates acute infection.

HBeAg: Hepatitis B “e” antigen is a marker of a high degree of HBV infectivity, and it correlates with a high level of HBV replication. It is primarily used to help determine the clinical management of patients with chronic HBV infection.

Anti-HBe: Antibody to hepatitis B “e” antigen may be present in an infected or immune person. In persons with chronic HBV infection, its presence suggests a low viral titer and a low degree of infectivity.

HBV-DNA: HBV Deoxyribonucleic acid is a marker of viral replication. It correlates well with infectivity. It is used to assess and monitor the treatment of patients with chronic HBV infection.

Influenza education materials for patients & staff

Free and CDC-reviewed, they're ready for you to download, copy, and use!

Standing Orders for Administering Influenza Vaccine to Adults

Purpose: To reduce morbidity and mortality from influenza by vaccinating all adults who meet the criteria established by the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices.

Policy: Under these standing orders, eligible nurses and other healthcare professionals (e.g., pharmacists), where allowed by state law, may vaccinate patients who meet any of the criteria below.

Procedure:

- Identify adults in need of influenza vaccination based on meeting any of the following criteria:
 - Want to reduce the likelihood of becoming ill with influenza or of transmitting it to others
 - Age 50 years or older
 - Having any of the following conditions:
 - Chronic disorder of the pulmonary or cardiovascular system, including asthma
 - Chronic metabolic disease (e.g., diabetes), renal dysfunction, hemoglobinopathy
 - Chronic medication (HIV)

First do no harm: Protect patients by making sure all staff receive yearly influenza vaccine!

Healthcare employers are not only strongly encouraged to increase their employees' influenza immunization rates, in some instances, their organization's accreditation depends on it! The Centers for Disease Control and Prevention (CDC) publishes recommendations for healthcare settings, and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has established influenza infection control standards.

Big changes have taken place in influenza vaccination of healthcare personnel (HCP). The responsibility for increasing the rates of HCP influenza vaccination is rapidly shifting from the employer to the employee.

What's happened?

At CDC: In February 2006, CDC published "Influenza Vaccination of Healthcare Personnel." These recommendations apply to HCP in acute care hospitals, nursing homes, skilled nursing facilities, physician offices, urgent care centers, and ambulatory clinics, and to persons who provide outpatient clinical and emergency medical services. They were issued jointly by HICPAC (the Healthcare Infection Control Practices Advisory Committee) and ACIP (the Advisory Committee on Immunization Practices). The summary, "Healthcare Infection Control Practices Advisory Committee and ACIP (the Advisory Committee on Immunization Practices) present an interview, 'First Do No Harm: Protect Patients by Making Sure All Staff Receive Yearly Influenza Vaccine!'" is in the right column presents an interview, "First Do No Harm: Protect Patients by Making Sure All Staff Receive Yearly Influenza Vaccine!"

At JCAHO: In January 2007, a new infection control standard of JCAHO (the Joint Commission on Accreditation of Healthcare Organizations) became effective that requires accredited organizations to offer influenza vaccinations to patients, and licensed independent practitioners who have close patient contact. The accreditation requirement for the CR Hospital, Hospital and Long-Term Care programs, to access the standard, see www.jcaho.org/12480 (for critical care) and www.jcaho.org/12482 (for long-term care).

Why is it happening?

The short answer is because influenza rates remain high. Influenza is a leading cause of death and hospitalization in the United States. HCP are infected with influenza. Fever is a common symptom of influenza. HCP have been documented against influenza. ACIP has urged annual immunization against influenza. HCP have been documented against influenza. ACIP has urged annual immunization against influenza. HCP have been documented against influenza. ACIP has urged annual immunization against influenza.

What should facility do?

In the box "healthcare setting influenza"

Practical resources for vaccinating

Centers for Disease Control and Prevention
Real "Influenza Vaccination of Healthcare Personnel" source: www.cdc.gov/immz/pdfr/HCP502.pdf
Access CDC's Influenza web page: www.cdc.gov/flu

National Influenza Vaccine Summit (NIVS)
(Co-sponsored by the American Medical Association and CDC. See the NIVS Healthcare Workers Issue page: www.vaccineinformation.org/flu_workers.asp)

Massachusetts Medical Society
See the "2006 Employee Flu Immunization Campaign Kit" at: www.massmed.org/flu_kit

Source: Adapted from the "Influenza Vaccine Campaign" by the Immunization Action Coalition.

Summary of CDC's HICPAC / ACIP Recommendations

The committees that developed and endorsed these recommendations included persons with expertise in infectious disease, infection control, pediatrics, vaccination, and public health. The recommendations are as follows:

Give these people influenza vaccine!

WHY? This year, influenza is again expected to kill more than 36,000 people in the United States. The Centers for Disease Control and Prevention (CDC) recommends that persons in the following groups receive influenza vaccine. Check the list below and make sure you offer influenza vaccine to all who need or want it.

- ALL persons, including all school-aged children, who wish to reduce their likelihood of becoming ill with influenza or of transmitting influenza to others**
- ALL persons age 50 years and older**
- ALL children age 6-59 months**
- Household contacts and caregivers of children younger than age 5 years, particularly contacts of infants younger than age 6 months**
- Household contacts and caregivers of adults age 50 years and older**
- Healthcare personnel**
Healthcare personnel and others in close contact with persons in high-risk groups should be vaccinated to decrease the risk of transmitting infection to persons for whom influenza could be a serious, life-threatening disease. Those who should be vaccinated include the following:
 - physicians, nurses, receptionists, and other personnel who have contact with patients in hospital or outpatient settings, including medical emergency response workers
 - employees of nursing homes and chronic-care facilities who have contact with patients or residents
 - employees of assisted living and other residences for persons in high-risk groups
 - persons who provide home care to people in high-risk groups
- Other groups to consider**
 - travellers at high risk for influenza complications who were not vaccinated in the previous fall or winter and who plan to travel to the Southern Hemisphere between April and September; to the tropics, or with a large tourist group at any time of year
 - persons who provide essential community services (e.g., firefighters, police)
 - students or other persons in institutional settings (e.g., those who reside in dormitories)
- Persons with certain high-risk medical conditions**
Any person (age 6 months or older) who is at increased risk for complications from influenza because of underlying medical conditions, including:
 - residents of nursing homes and other chronic-care facilities that house persons of any age who have chronic medical conditions
 - children and adults who have chronic disorders of the pulmonary or cardiovascular systems, including asthma
 - children and adults who have chronic metabolic diseases (including diabetes), renal dysfunction, hemoglobinopathies, or immunosuppression (including HIV)
 - children and adults who have conditions that compromise respiratory function or the handling of respiratory secretions or that can increase the risk of aspiration
 - children and adolescents (age 6 months through 18 years) who are receiving long-term aspirin therapy and therefore might be at risk for developing Reye's syndrome after influenza illness
 - all women who will be pregnant during the influenza season
- Household contacts of all high-risk persons listed above**

Persons who should not be vaccinated

Consult the current recommendations from CDC (see source information below) for guidance on contraindications and precautions for use of trivalent inactivated influenza vaccine and live attenuated intranasal influenza vaccine.

Source: "Prevention and Control of Influenza—Recommendations of ACIP" at www.cdc.gov/flu/professionals/vaccination

Technical content reviewed by the Centers for Disease Control and Prevention, August 2007
www.immunize.org/catg.d/p2013.pdf • Item #P2013 (8/07)
www.vaccineinformation.org

Immunization Action Coalition • 1573 Selby Ave. • St. Paul, MN 55104 • (651) 647-9009 • www.immunize.org • www.vaccineinformation.org

For 8-1/2" x 11" copies of the pieces above, visit IAC's website at www.immunize.org/free

1. Standing orders for administering influenza vaccine to adults: www.immunize.org/catg.d/p3074.pdf
2. First do no harm: Protect patients, make sure all staff receive yearly influenza vaccine!: www.immunize.org/catg.d/p2014.pdf
3. Screening questionnaire for injectable influenza vaccination: www.immunize.org/catg.d/p4066.pdf
4. Screening questionnaire for intranasal influenza vaccination: www.immunize.org/catg.d/p4067.pdf
5. Give these people influenza vaccine!: www.immunize.org/catg.d/p2013.pdf

Viral hepatitis education materials for patients and staff

Free and CDC-reviewed, they're ready for you to download, copy, and use!

Hepatitis A & B Vaccines

Be sure your patient gets the correct dose!

Vaccine	Age group	Dose	Volume	# Doses	Dosing interval
Havrix (GlaxoSmithKline)	1-18 yrs	720 ELISA Units	0.5 mL	2	0, 6-12 mos
	19 yrs & older	1440 ELISA Units	1.0 mL	2	0, 6-12 mos
Vaxta (Merck)	1-18 yrs	25 Units	0.5 mL	2	0, 6-18 mos
	19 yrs & older	50 Units	1.0 mL	2	0, 6-18 mos

Recommended dosages and schedules of hepatitis B vaccines

What hepatitis B question is asked over and over again?

Robin, it's been a year since my patient had his first hepatitis B shot. Should I start the series over again?

CLARENCE

Unusual Cases of Hepatitis B Virus Transmission

One reason some parents don't vaccinate their children against the hepatitis B virus (HBV) is their belief that their child has no risk of ever coming in contact with the virus. "My child will never be sexually promiscuous or addicted to drugs! Why does he or she need to be immunized for a moment that this hypothetical parent is right... does this mean that his or her child has no possibility of ever coming in contact with HBV?"

The truth is that transmission of HBV can sometimes occur in unusual ways. Approximately 30% of people newly infected with HBV do not know how they contracted the virus. The following reports of some uncommon methods of HBV transmission illustrate how every unvaccinated person is at some (albeit limited) risk of HBV infection.

Standing Orders for Administering Hepatitis B Vaccine to Adults

Purpose: To reduce morbidity and mortality from hepatitis B virus (HBV) infection by vaccinating all adults who meet the criteria established by the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices.

Policy: Under these standing orders, eligible nurses and other healthcare professionals (e.g., pharmacists), where allowed by state law, may vaccinate adults who meet any of the criteria below.

Procedure:

- Identify adults in need of hepatitis B vaccination based on the following criteria:
 - Age 19 years or older, including nursing home residents
 - Patients with end-stage renal disease
 - Patients with HIV

Should You Be Vaccinated Against Hepatitis B?

A screening questionnaire for adults

Hepatitis B is a serious liver disease caused by the hepatitis B virus (HBV). It is spread through contact with blood or certain body fluids of an infected person. If you get hepatitis B, you may or may not have symptoms. Symptoms can include yellowing of the skin and eyes, nausea, and loss of appetite. Sometimes HBV stays in your body for years and causes long-term liver damage, liver cancer, and death.

The Centers for Disease Control and Prevention (CDC) recommend that all adults aged 19 years and older get vaccinated against hepatitis B. They also recommend hepatitis B vaccination for people in one of the risk groups (listed below) to be vaccinated against hepatitis B. Some people in risk groups should be tested for hepatitis B. If you've been infected with HBV in the past and then get vaccinated, you won't get it again. Talk to your healthcare provider.

Hepatitis B COALITION

Immunization Action Coalition

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www.immunize.org • www.vaccineinformation.org

QUESTIONS FREQUENTLY ASKED ABOUT HEPATITIS B

What is hepatitis B?
Hepatitis B is a serious public health problem that affects people of all ages in the U.S. and around the world. In 2006, an estimated 46,000 people contracted hepatitis B virus (HBV) infection in the U.S. Hepatitis B is caused by a highly infectious virus that attacks the liver and can lead to severe illness, liver damage, and in some cases, death.

The best way to be protected from hepatitis B is to be vaccinated with hepatitis B vaccine, a vaccine used in the U.S. for more than two decades and proved safe and effective.

Who is at risk for HBV infection?
About 5% of people in the U.S. will get infected with HBV sometime during their lives if they are not vaccinated. You might be infected with HBV and not even know it. If you engage in certain activities, your risk might be much higher. You might be at risk if you:

- have a job that exposes you to human blood
- share a household with someone who has chronic (lifelong) HBV infection
- inject drugs
- have sex with a person infected with HBV
- are sexually active but not in a long-term, mutually monogamous relationship
- are a man who has sex with men
- received a blood transfusion before 1975, when excellent blood testing became available
- are a person whose parents were born in Asia, Africa, the Amazon River Basin in South America, the Pacific Islands, Eastern Europe, or the Middle East

How is HBV spread?
HBV is found in the blood of people infected with the virus and certain of their body fluids, such as serum, semen, and vaginal secretions. HBV is not found in sweat, tears, urine, or respiratory secretions. Contact with microscopic amounts of infected blood can cause infection.

Hepatitis B virus can be spread by

- unprotected sex
- injection drug use
- an HBV-infected mother to her child during birth
- contact with blood or open sores of an HBV-infected person
- human bites from an HBV-infected person
- sharing a household with a person with chronic (lifelong) HBV infection
- sharing items such as razors, toothbrushes, or washcloths
- pre-chewing food for babies or sharing chewing gum
- using unsterilized needles in ear- or body-piercing, tattooing, or acupuncture
- using the same immunization needle on more than one person

Hepatitis B virus is NOT spread by

- casual contact, like holding hands
- eating food prepared by an infected person
- kissing or hugging
- sharing silverware, plates, or cups
- visiting an infected person's home
- sneezing or coughing
- breastfeeding

What are the symptoms of hepatitis B?
Most babies and young children who get HBV infection don't look or feel sick at all. About half of adults who get infected don't have any symptoms or signs of the disease. If people do have signs or symptoms, they might experience any or all of the following:

- loss of appetite
- nausea, vomiting
- fever
- weakness, fatigue, inability to work for weeks or months
- abdominal pain
- yellowing of skin and eyes (jaundice)
- joint pain
- cola-colored urine
- clay-colored stools

I'm not in a risk group. How did I get HBV infection?
Many people don't know when or how they got the infection. When they get the results of a blood test indicating they've been infected with HBV, they are taken by surprise. Studies have demonstrated that about 15% of people who acquire hepatitis B are unable to identify a risk factor that explains why they have the disease.

(continued on next page)

For 8-1/2" x 11" copies of the pieces above, visit IAC's website at www.immunize.org/free

1. Hepatitis A and B vaccines: Be sure your patient gets the correct dose!: www.immunize.org/catg.d/p2081.pdf
2. Should you be vaccinated against hepatitis B? A screening questionnaire for adults: www.immunize.org/catg.d/2191hepb.pdf
3. Unusual cases of hepatitis B virus transmission: www.immunize.org/catg.d/p2100nrs.pdf
4. Standing orders for administering hepatitis B vaccine to adults: www.immunize.org/catg.d/p3076.pdf
5. Questions frequently asked about hepatitis B: www.immunize.org/catg.d/p4090.pdf

Summary of Recommendations for Adult Immunization

(Page 1 of 3)

Vaccine name and route	For whom vaccination is recommended	Schedule for vaccine administration (any vaccine can be given with another)	Contraindications and precautions (mild illness is not a contraindication)
Influenza Trivalent inactivated influenza vaccine (TIV) <i>Give IM</i>	<ul style="list-style-type: none"> • All persons wanting to reduce the likelihood of becoming ill with influenza or of spreading it to others. • Persons age 50yrs and older. • Persons with medical problems (e.g., heart disease, lung disease, diabetes, renal dysfunction, hemoglobinopathy, immunosuppression). • Persons with any condition that compromises respiratory function or the handling of respiratory secretions or that can increase the risk of aspiration (e.g., cognitive dysfunction, spinal cord injury, seizure disorder, or other neuromuscular disorder). • Persons living in chronic care facilities. • Persons working or living with at-risk people. • Women who will be pregnant during the influenza season (December–March). • All healthcare personnel and other persons who provide direct care to at-risk people. • Household contacts and out-of-home caregivers of children age 0–59m. • Travelers at risk for complications of influenza who go to areas where influenza activity exists or who may be among people from areas of the world where there is current influenza activity (e.g., on organized tours). • Students or other persons in institutional settings (e.g., dormitory residents). 	<ul style="list-style-type: none"> • Give 1 dose every year in the fall or winter. • Vaccine should be given as soon as it is available and should continue until the supply is depleted. • Continue to give vaccine to unvaccinated adults throughout the influenza season (including when influenza activity is present in the community) and at other times when the risk of influenza exists. 	Contraindication Previous anaphylactic reaction to this vaccine, to any of its components, or to eggs. Precautions <ul style="list-style-type: none"> • Moderate or severe acute illness. • History of Guillain-Barré syndrome (GBS) within 6wks of previous TIV.
Influenza Live attenuated influenza vaccine (LAIV) <i>Give intranasally</i>	<ul style="list-style-type: none"> • All persons wanting to reduce the likelihood of becoming ill with influenza or of spreading it to others. • Healthy, non-pregnant persons age 49yrs and younger who meet any of the criteria listed below. <ul style="list-style-type: none"> - Working or living with at-risk people as listed in the section above. - Healthcare personnel or other persons who provide direct care to at-risk people (except persons in close contact with severely immunosuppressed persons). - Household contacts and out-of-home caregivers of children age 0–59m. - Travelers who may be among people from areas of the world where there is current influenza activity (e.g., on organized tours). - Students or other persons in institutional settings (e.g., dormitory residents). 		Contraindications <ul style="list-style-type: none"> • Previous anaphylactic reaction to this vaccine, to any of its components, or to eggs. • Pregnancy, asthma, reactive airway disease or other chronic disorder of the pulmonary or cardiovascular system; an underlying medical condition, including metabolic disease such as diabetes, renal dysfunction, and hemoglobinopathy; a known or suspected immune deficiency disease or current receipt of immunosuppressive therapy; history of GBS. Precaution Moderate or severe acute illness.
Pneumococcal polysaccharide (PPV) <i>Give IM or SC</i>	<ul style="list-style-type: none"> • Persons age 65yrs and older. • Persons who have chronic illness or other risk factors, including chronic cardiac or pulmonary disease, chronic liver disease, alcoholism, diabetes, CSF leak, as well as people living in special environments or social settings (including Alaska Natives and certain American Indian populations). Those at highest risk of fatal pneumococcal infection are persons with anatomic asplenia, functional asplenia, or sickle cell disease; immunocompromised persons including those with HIV infection, leukemia, lymphoma, Hodgkin's disease, multiple myeloma, generalized malignancy, chronic renal failure, or nephrotic syndrome; persons receiving immunosuppressive chemotherapy (including corticosteroids); those who received an organ or bone marrow transplant; and candidates for or recipients of cochlear implants. 	<ul style="list-style-type: none"> • Routinely given as a 1-time dose; administer if previous vaccination history is unknown. • One-time revaccination is recommended 5yrs later for persons at highest risk of fatal pneumococcal infection or rapid antibody loss (e.g., renal disease) and for persons age 65yrs and older if the 1st dose was given prior to age 65yrs and 5yrs or more have elapsed since the previous dose. 	Contraindication Previous anaphylactic reaction to this vaccine or to any of its components. Precaution Moderate or severe acute illness.

*This document was adapted from the recommendations of the Advisory Committee on Immunization Practices (ACIP). To obtain copies of these recommendations, call the CDC-INFO Contact Center at (800) 232-4636; visit CDC's website at www.cdc.gov/vaccines/pubs/ACIP-list.htm; or visit the Immunization Action

Coalition (IAC) website at www.immunize.org/acip. This table is revised periodically. Visit IAC's website at www.immunize.org/adultrules to make sure you have the most current version.

Summary of Recommendations for Adult Immunization (continued)

(Page 2 of 3)

Vaccine name and route	For whom vaccination is recommended	Schedule for vaccine administration (any vaccine can be given with another)	Contraindications and precautions (mild illness is not a contraindication)
Hepatitis B (HepB) <i>Give IM</i> Brands may be used interchangeably.	<ul style="list-style-type: none"> All persons through age 18yrs. All adults wishing to obtain immunity against hepatitis B virus infection. High-risk persons, including household contacts and sex partners of HBsAg-positive persons; injecting drug users; sexually active persons not in a long-term, mutually monogamous relationship; men who have sex with men; persons with HIV or a recently diagnosed STD; patients receiving hemodialysis and patients with renal disease that may result in dialysis; healthcare personnel and public safety workers who are exposed to blood; clients and staff of institutions for the developmentally disabled; inmates of long-term correctional facilities; and certain international travelers. Persons with chronic liver disease. <p>Note: Provide serologic screening for immigrants from endemic areas. If patient is chronically infected, assure appropriate disease management. Screen sex partners and household members; give HepB at the same visit if not already vaccinated.</p>	<ul style="list-style-type: none"> Three doses are needed on a 0, 1, 6m schedule. Alternative timing options for vaccination include 0, 2, 4m and 0, 1, 4m. There must be 4wks between doses #1 and #2, and 8wks between doses #2 and #3. Overall, there must be at least 16wks between doses #1 and #3. Schedule for those who have fallen behind: If the series is delayed between doses, DO NOT start the series over. Continue from where you left off. <div>For Twinrix® (hepatitis A and B combination vaccine [GSK]) for patients age 18yrs and older only: 3 doses are needed on a 0, 1, 6m schedule. An accelerated schedule can also be used at 0, 7, 21–30d, and a booster at 12m.</div>	<p>Contraindication Previous anaphylactic reaction to this vaccine or to any of its components.</p> <p>Precaution Moderate or severe acute illness.</p>
Hepatitis A (HepA) <i>Give IM</i> Brands may be used interchangeably.	<ul style="list-style-type: none"> All persons wishing to obtain immunity to hepatitis A virus infection. Persons who travel or work anywhere EXCEPT the U.S., Western Europe, New Zealand, Australia, Canada, and Japan. Persons with chronic liver disease, including persons with hepatitis B and C; injecting and non-injecting drug users; men who have sex with men; people with clotting-factor disorders; persons who work with hepatitis A virus in experimental lab settings (not routine medical laboratories); and food handlers when health authorities or private employers determine vaccination to be appropriate. <p>Note: Prevacination testing is likely to be cost effective for persons older than age 40yrs, as well as for younger persons in certain groups with a high prevalence of hepatitis A virus infection.</p>	<div>For Twinrix® (hepatitis A and B combination vaccine [GSK]) for patients age 18yrs and older only: 3 doses are needed on a 0, 1, 6m schedule. An accelerated schedule can also be used at 0, 7, 21–30d, and a booster at 12m.</div> <ul style="list-style-type: none"> Two doses are needed. The minimum interval between doses #1 and #2 is 6m. If dose #2 is delayed, do not repeat dose #1. Just give dose #2. 	<p>Contraindication Previous anaphylactic reaction to this vaccine or to any of its components.</p> <p>Precautions</p> <ul style="list-style-type: none"> Moderate or severe acute illness. Safety during pregnancy has not been determined, so benefits must be weighed against potential risk.
Td, Tdap (Tetanus, diphtheria, pertussis) <i>Give IM</i>	<ul style="list-style-type: none"> All adults who lack a history of a primary series consisting of at least 3 doses of tetanus- and diphtheria-toxoid-containing vaccine. A booster dose of tetanus- and diphtheria-toxoid-containing vaccine may be needed for wound management as early as 5yrs after receiving a previous dose, so consult ACIP recommendations.* Using tetanus toxoid (TT) instead of Td or Tdap is <u>not</u> recommended. In pregnancy, when indicated, give Td or Tdap in 2nd or 3rd trimester. If not administered during pregnancy, give Tdap in immediate postpartum period. <p>For Tdap only:</p> <ul style="list-style-type: none"> All adults younger than age 65yrs who have not already received Tdap. Healthcare personnel who work in hospitals or ambulatory care settings and have direct patient contact and who have not received Tdap. Adults in contact with infants younger than age 12m (e.g., parents, grandparents younger than age 65yrs, childcare providers, healthcare personnel) who have not received a dose of Tdap should be prioritized for vaccination. 	<ul style="list-style-type: none"> For persons who are unvaccinated or behind, complete the primary series with Td (spaced at 0, 1–2m, 6–12m intervals). One-time dose of Tdap may be used for any dose if age 18–64yrs. Give Td booster every 10yrs after the primary series has been completed. For adults age 18–64yrs, a 1-time dose of Tdap is recommended to replace the next Td. Intervals of 2yrs or less between Td and Tdap may be used. <p>Note: The two Tdap products are licensed for different age groups: Adacel™ (sanofi) for use in persons age 11–64yrs and Boostrix® (GSK) for use in persons age 10–18yrs.</p>	<p>Contraindications</p> <ul style="list-style-type: none"> Previous anaphylactic reaction to this vaccine or to any of its components. For Tdap only, history of encephalopathy within 7d following DTP/DTaP. <p>Precautions</p> <ul style="list-style-type: none"> Moderate or severe acute illness. GBS within 6wks of receiving a previous dose of tetanus-toxoid-containing vaccine. Unstable neurologic condition. History of arthus reaction following a previous dose of tetanus- and/or diphtheria-toxoid-containing vaccine, including MCV4. <p>Note: Use of Td/Tdap is not contraindicated in pregnancy. Either vaccine may be given during trimester #2 or #3 at the provider's discretion.</p>
Polio (IPV) <i>Give IM or SC</i>	<p>Not routinely recommended for persons age 18yrs and older.</p> <p>Note: Adults living in the U.S. who never received or completed a primary series of polio vaccine need not be vaccinated unless they intend to travel to areas where exposure to wild-type virus is likely (i.e., India, Pakistan, Afghanistan, and Nigeria). Previously vaccinated adults can receive one booster dose if traveling to polio endemic areas.</p>	<ul style="list-style-type: none"> Refer to ACIP recommendations* regarding unique situations, schedules, and dosing information. 	<p>Contraindication Previous anaphylactic or neurologic reaction to this vaccine or to any of its components.</p> <p>Precautions</p> <ul style="list-style-type: none"> Moderate or severe acute illness. Pregnancy.

Summary of Recommendations for Adult Immunization (continued)

(Page 3 of 3)

Vaccine name and route	For whom vaccination is recommended	Schedule for vaccine administration (any vaccine can be given with another)	Contraindications and precautions (mild illness is not a contraindication)
Varicella (Var) (Chickenpox) <i>Give SC</i>	<ul style="list-style-type: none"> All adults without evidence of immunity. <p>Note: Evidence of immunity is defined as a history of 2 doses of varicella vaccine; born in the U.S. before 1980 (exception: healthcare personnel and pregnant women); a history of varicella disease or herpes zoster based on healthcare provider diagnosis; laboratory evidence of immunity; and/or laboratory confirmation of disease.</p>	<ul style="list-style-type: none"> Two doses are needed. Dose #2 is given 4–8wks after dose #1. If Var and either MMR, LAIV, and/or yellow fever vaccine are not given on the same day, space them at least 28d apart. If the second dose is delayed, do not repeat dose #1. Just give dose #2. 	<p>Contraindications</p> <ul style="list-style-type: none"> Previous anaphylactic reaction to this vaccine or to any of its components. Pregnancy or possibility of pregnancy within 4wks. Persons immunocompromised because of malignancy and primary or acquired cellular immunodeficiency, including HIV/AIDS (although vaccination may be considered if CD4+ T-lymphocyte counts are greater than or equal to 200 cells/μL. See <i>MMWR</i> 2007;56,RR-4). <p>Precautions</p> <ul style="list-style-type: none"> If blood, plasma, and/or immune globulin (IG or VZIG) were given in past 11m, see ACIP statement <i>General Recommendations on Immunization</i>* regarding time to wait before vaccinating. Moderate or severe acute illness. <p>Note: For those on high-dose immunosuppressive therapy, consult ACIP recommendations regarding delay time.*</p>
Meningococcal Conjugate vaccine (MCV4) <i>Give IM</i> Polysaccharide vaccine (MPSV4) <i>Give SC</i>	<ul style="list-style-type: none"> All persons age 11 through 18yrs. College freshmen living in dormitories. Persons with anatomic or functional asplenia or with terminal complement component deficiencies. Persons who travel to or reside in countries in which meningococcal disease is hyperendemic or epidemic (e.g., the “meningitis belt” of Sub-Saharan Africa). Microbiologists routinely exposed to isolates of <i>N. meningitidis</i>. 	<ul style="list-style-type: none"> One dose is needed. If previous vaccine was MPSV4, re-vaccinate after 5yrs if risk continues. Revaccination after MCV4 is not recommended. MCV4 is preferred over MPSV4 for persons age 55yrs and younger, although MPSV4 is an acceptable alternative. 	<p>Contraindication</p> <p>Previous anaphylactic or neurologic reaction to this vaccine or to any of its components, including diphtheria toxoid (for MCV4).</p> <p>Precautions</p> <ul style="list-style-type: none"> Moderate or severe acute illness. For MCV4 only, history of Guillain-Barré syndrome (GBS).
MMR (Measles, mumps, rubella) <i>Give SC</i>	<ul style="list-style-type: none"> Persons born in 1957 or later (especially those born outside the U.S.) should receive at least 1 dose of MMR if there is no serologic proof of immunity or documentation of a dose given on or after the first birthday. Persons in high-risk groups, such as healthcare personnel, students entering college and other post–high school educational institutions, and international travelers, should receive a total of 2 doses. Persons born before 1957 are usually considered immune, but proof of immunity (serology or vaccination) may be desirable for healthcare personnel. Women of childbearing age who do not have acceptable evidence of rubella immunity or vaccination. 	<ul style="list-style-type: none"> One or 2 doses are needed. If dose #2 is recommended, give it no sooner than 4wks after dose #1. If MMR and either Var, LAIV, and/or yellow fever vaccine are not given on the same day, space them at least 28d apart. If a pregnant woman is found to be rubella susceptible, administer MMR postpartum. 	<p>Contraindications</p> <ul style="list-style-type: none"> Previous anaphylactic reaction to this vaccine or to any of its components. Pregnancy or possibility of pregnancy within 4wks. Persons immunocompromised because of cancer, leukemia, lymphoma, immunosuppressive drug therapy, including high-dose steroids or radiation therapy. Note: HIV positivity is NOT a contraindication to MMR except for those who are severely immunocompromised (i.e., CD4+ T-lymphocyte counts are less than 200 cells/μL). <p>Precautions</p> <ul style="list-style-type: none"> If blood, plasma, and/or immune globulin were given in past 11m, see ACIP statement <i>General Recommendations on Immunization</i>* regarding time to wait before vaccinating. Moderate or severe acute illness. History of thrombocytopenia or thrombocytopenic purpura. <p>Note: If PPD (tuberculosis skin test) and MMR are both needed but not given on same day, delay PPD for 4–6wks after MMR.</p>
Human papillomavirus (HPV) <i>Give IM</i>	<p>All previously unvaccinated women through age 26yrs.</p>	<ul style="list-style-type: none"> Three doses are needed on a 0, 2, 6m schedule. The minimum interval between doses #1 and #2 is 4wks, and between #2 and #3 is 12wks. 	<p>Contraindication</p> <p>Previous anaphylactic reaction to this vaccine or to any of its components.</p> <p>Precaution</p> <p>Data on vaccination in pregnancy are limited. Vaccination should be delayed until after completion of the pregnancy.</p>
Zoster (shingles) (Zos) <i>Give SC</i>	<p>ACIP has voted to recommend herpes zoster (shingles) vaccine for all persons age 60yrs and older who do not have contraindications. Provisional recommendations are online at www.cdc.gov/vaccines/recs/provisional/default.htm#acip.</p>		

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Deborah L. Wexler, MD
IAC Executive Director

Dear Readers of *Vaccinate Adults*,

Our colleagues at the Centers for Disease Control and Prevention are asking us to find out precisely how *Vaccinate Adults* influences the delivery of immunization services in the United States. For example, they want us to find out whether you, as a *Vaccinate Adults* reader, not only read about changes in vaccination recommendations in *Vaccinate Adults*, but then implement those changes in your practice. They would like to know that when you copy one of the educational pieces in *Vaccinate Adults*, you then distribute it to an average of 20 patients per week (for example). They need to know what you learn from *Ask the Experts* and how you use our screening questionnaires, our summary of recommendations for adult immunization, our standing orders, our vaccine storage and handling information, and . . . I hope you see what I mean. We really need to hear, for example, if your patients fill

out screening questionnaires, if staff use the recommendations and standing orders when developing policies and procedures, if nurses use our materials in training new staff, and so forth.

To make it as easy as possible for you to send us your input, we have prepared a short online survey that should take no more than ten minutes to complete. To access the survey, please go to www.immunize.org/surveyva and let us know how you incorporate the information in *Vaccinate Adults* into your work. Alternatively, I would love to hear from you by email (deborah@immunize.org) at any time—your feedback is extremely important to the continued success of this periodical.

Deborah L. Wexler, MD

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Thank you, readers!

We greatly appreciate your financial support and your comments and suggestions.

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