Volume 7 – Number 1

June 2008
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VACCINATE WOMEN

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

Highlighting the latest developments in routine immunization and hepatitis B prevention for obstetrician-gynecologists

What's Inside?

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.

General vaccine questions

We operate an acute care hospital and commonly give vaccinations to our employees and patients. Are we required to use Vaccine Information Statements (VISs), or does that apply only to patients seen in outpatient settings?

VISs must be given to all persons, including adults, before administering HPV, Td, Tdap, MMR, varicella, hepatitis A, hepatitis B, meningococcal, influenza, or polio vaccine. Current VISs are available from the CDC's website at www.cdc.gov/vaccines/pubs/vis and from the Immunization Action Coalition's (IAC) website at www.immunize.org/vis. You'll also find many VIS translations on IAC's site.

Which vaccines are recommended to be given postpartum to mothers of newborns before hospital discharge?

The following vaccines are recommended for new mothers before they leave the hospital: (1) women who have not previously been vaccinated with Tdap need 1 dose to protect their newborn; (2) women who did not receive influenza vaccination during pregnancy need to be vaccinated if it is still influenza vaccination season (through May); (3) women who tested susceptible to rubella on prenatal testing need MMR vaccine if they don't have a documented dose of MMR in their medical record; (4) women who are not immune to chickenpox need 2 doses of varicella vaccine, dose #1 before hospital discharge and dose #2 given 4–8 weeks after dose #1.

Sometimes I have to give 3 vaccines like Tdap, HepA, and HepB at the same visit. Can I put them in the same syringe?

No! Individual vaccines for adults should never be mixed in the same syringe.

After an adult has either been infected with or exposed to pertussis, is vaccination with Tdap recommended, and if so when?

Yes. Adults who have a history of pertussis disease generally should receive Tdap according to the routine recommendation. In the U.S., two Tdap products are licensed for use. Adacel® (sanofi pasteur) is licensed for use in persons age 11–64 years, and Boostrix® (GlaxoSmithKline), is licensed for persons age 10–18 years. This practice is recommended because the duration of protection induced by pertussis disease is unknown (waning might begin as early as 7 years after infection) and because diagnosis of pertussis can be difficult to confirm, particularly with tests other than culture for *B. pertussis.* Administering pertussis vaccine to persons with a history of pertussis presents no theoretical risk. For details, visit CDC's published recommendations on this topic at www.cdc.gov/mmwr/PDF/rr/rr5517.pdf (pages 24–25).

Can a booster dose of Tdap be given to persons age 65 years and older?

No brand of Tdap is approved by FDA for persons age 65 years and older. ACIP does not recommend off-label use of Tdap for this age group. However, a clinician may choose to administer Tdap to a person age 65 years or older if both patient and clinician agree that the benefit of Tdap outweighs the risk of a local adverse event.

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)

Should I test women for varicella (chickenpox) immunity at their first prenatal visit?

Test pregnant women who lack either (1) documentation of receipt of 2 doses of varicella vaccine or (2) healthcare-provider diagnosis or verification of varicella or herpes zoster (shingles) disease. Women who are not immune should begin the 2-dose vaccination series immediately postpartum.

How is varicella transmitted and for how long is it contagious?

Chickenpox spreads from person to person by direct contact or through the air by coughing or sneezing. It is highly contagious. It can also be spread through direct contact with fluid from a blister of a person infected with chickenpox, or from direct contact with a sore from a person with

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Vaccinate Women

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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.

shingles. People with chickenpox are infectious for at least 6–7 days after the appearance of spots and until all lesions are crusted over.

What are the CDC-recommended dosing intervals when using human papillomavirus (HPV) vaccine?
CDC recommends dose #2 be given 2 months after dose #1, and dose #3 be given 6 months after dose #1. The minimum interval between doses #1 and #2 is 4 weeks, and the minimum interval between doses #2 and #3 is 12 weeks. Overall, there must be an interval of at least 24 weeks between doses #1 and #3.

A patient received a dose of HPV vaccine before she knew she was pregnant. What should I tell her?
HPV vaccine has not been causally associated with adverse outcomes of pregnancy or adverse events to the developing fetus. However, data on vaccination during pregnancy are limited. If a woman is found to be pregnant after initiating the vaccination series, delay completion of the series until after the pregnancy. If a dose is administered during pregnancy, there is no indication for intervention. Merck, the vaccine's manufacturer, has established a registry of women who were vaccinated with HPV during pregnancy. You or your pregnant patients should report an exposure to HPV vaccine; call (800) 986-8999. More information on HPV vaccination during pregnancy is available in the package insert at www.merck.com/product/usa/pi_circulars/g/gardasil/gardasil_pi.pdf.

Can a woman who is breastfeeding receive HPV vaccine?
Yes.

Can HPV vaccine be administered at the same time as other vaccines?
Yes, it can.

Are pap smears still necessary for women who receive HPV vaccine?
Yes. Vaccinated women still need to see their healthcare provider for periodic cervical cancer screening. The vaccine does NOT provide protection against all types of HPV that cause cervical cancer, so even vaccinated women will still be at risk for some cancers from HPV.

Is the history of an abnormal pap a contraindication to the HPV vaccine series?
No. Even a woman found to be infected with a strain of HPV that is present in the vaccine could receive protection from the other 3 strains in the vaccine.

Do women whose sexual preference is women need HPV vaccine?
Eligibility for HPV vaccine is not determined by sexual preference. The vaccine is recommended for all females age 11–12 years, and catch-up vaccination for all females age 13–26 years as long as there are no contraindications (e.g., pregnancy). Though most HPV transmission occurs with sexual intercourse, the virus can be transmitted through sexual activity that does not involve penetration. It rarely can be transmitted through non-sexual routes, e.g., mother to newborn at time of birth.

If a dose of HPV vaccine is significantly delayed, do I need to start the series over?
No, do not restart the series. Just pick up where the patient left off and complete the series.

If a woman starts the HPV vaccine series at age 26 years and will turn 27 before completing it, can the vaccine be given after the 27th birthday?
HPV doses #1 and #3 must be at least 24 weeks apart. The series should be completed, even if this means that the series is completed after a woman turns 27.

Can someone who has experienced an episode of shingles be vaccinated with zoster (shingles) vaccine?
Yes. Shingles vaccine is routinely recommended for all persons age 60 years and older who do not have contraindications.

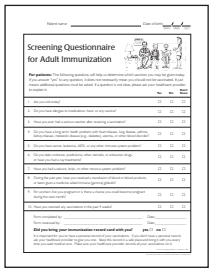
Can you give zoster vaccine to persons younger than age 60?
FDA has licensed the vaccine only for persons age 60 years and older. CDC does not recommend off-label use of shingles vaccine among persons younger than 60 years.

When administering zoster vaccine, how much of the reconstituted vaccine should be given?
For single-dose vials, the entire volume of reconstituted vaccine should be administered.

People are picking up zoster vaccine at local pharmacies and transporting it to the physician's office to be given. Should this vaccine be given?
Zoster vaccine must be stored at freezer temperature at all times. If the vaccine has been out of the freezer for

(continued on page 10)

Big timesaver! A screening questionnaire for vaccine contraindications in convenient pads of 100 tear-off sheets!

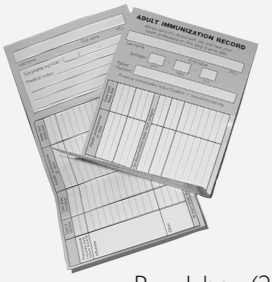

Screening Questionnaire for Adult Immunization

Save valuable staff time and make sure your patients are fully screened by using this simple 1-page questionnaire. Patients respond to questions by checking off "yes" and "no" boxes while waiting to be seen. Staff reviews answers during the visit. Priced at $16 per 100-sheet pad, price drops to $12 each for 2 pads, $11 each for 3 pads, $10 each for 4–9 pads. Keep pads at the receptionist's desk, the nurses' station, and in every exam room. To view the pads or for more details, visit IAC's website at www.immunize.org/shop.

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

For 10 or more pads, contact us for discount pricing at admininfo@immunize.org or call (651) 647-9009.

Immunization record cards available for all ages— For adults, for children & teens, and for a lifetime!



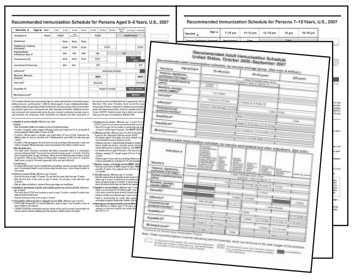
Now you can give your patients a permanent vaccination record card designed specifically for their age group: adult, child & teen, or lifetime. The three cards list all vaccines recommended for each age. The cards are printed on durable rip-, smudge-, and water-proof paper. Wallet-sized when folded, the cards are brightly colored to stand out. To view the cards 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 $32.50 each; 3 boxes $30 each; 4 boxes $27.50 each

To order, visit www.immunize.org/shop, or use the order form on page 11. To receive sample cards, email your request to admininfo@immunize.org.

Laminated adult or child immunization schedules Order one of each for every exam room

Here are the CDC/AAFP/ACOG/ACP-approved schedule for adults and the CDC/AAP/AAFP-approved schedule for people ages 0–18 years. Both are laminated for heavy-duty use, complete with essential footnotes, and printed in color for easy reading. The cost is $6 for each schedule and only $4 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.

Hepatitis B Facts: Testing and Vaccination

Who should be vaccinated?

The following persons should receive routine hepatitis B vaccination, according to the Centers for Disease Control and Prevention (CDC):

Routine vaccination:

- All newborns at birth prior to hospital discharge
- All children and teens ages 0 through 18 years
- All persons who wish to be protected from hepatitis B virus (HBV) infection. CDC states it is not necessary for the patient to disclose a risk factor to receive hepatitis B vaccine.

Persons who are at risk for sexual exposure:

- Sexually active persons who are not in long-term, mutually monogamous relationships
- Sex partners of HBsAg-positive persons
- Persons seeking evaluation or treatment for an STD
- Men who have sex with men

Persons at risk for infection by percutaneous or mucosal exposure to blood:

- Current or recent injection-drug users
- Household contacts of HBsAg-positive persons
- Residents and staff of facilities for developmentally challenged 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 and those receiving dialysis

Others:

- Travelers to areas with moderate or high rates of HBV infection
- Persons with chronic (life-long) liver disease
- Persons with HIV infection

Refugees, immigrants, and adoptees from countries where HBV infection is endemic should be screened. Adults should discuss their need or desire for hepatitis B vaccination with their healthcare providers.

For certain people at risk, postvaccination testing is recommended. Consult ACIP recommendations for details (see references).

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.

Screening before vaccination

Serologic testing prior to vaccination may be undertaken based on your assessment of your patient's level of risk and your or your patient's need for definitive information (see information in the left column). If you decide to test, draw the blood first, and then give the first dose of vaccine at the same office visit. Vaccination can then be continued, if needed, based on the results of the tests. If you are not sure who needs hepatitis B screening, consult your state or local health department.

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 ≥10mIU/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

*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

Managing chronic HBV infection

When you identify a patient who is chronically infected with HBV, make sure you consult a specialist knowledgeable in the treatment of liver disease so your patient's care is optimized. Chronically infected persons need medical evaluation every 6–12 mos to assess the status of their liver health and their need for antiviral therapy, as well as to screen for liver cancer. In addition, persons with chronic HBV infection should be educated about their disease and how to protect others.

Household members and sex partners should be tested for HBV infection and given the first dose of hepatitis B vaccine at the same visit. (Vaccinating a person who has already been infected will do no harm). If testing indicates HBV susceptibility, complete the hepatitis B vaccination series. If testing indicates HBV infection, consultation and further care with a physician knowledgeable about chronic hepatitis B is needed.

References

1. A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the U.S.: Recommendations of the ACIP, Part 1: Immunization of Infants, Children and Adolescents, *MMWR,* Dec. 23, 2005, Vol. 54(RR-16)
2. A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the U.S.: Recommendations of the ACIP, Part II: Immunization of Adults, *MMWR,* Dec. 8, 2006, Vol. 55(RR-16)

www.immunize.org/catg.d/p2110.pdf • Item #P2110 (2/08)

Vaccine Administration Record for Adults

Patient name: _____

Birthdate: _____

Chart number: _____

Before administering any vaccines, give the patient copies of all pertinent Vaccine Information Statements (VISs) and make sure he/she understands the risks and benefits of the vaccine(s). Update the patient's personal record card or provide a new one whenever you administer vaccine.

Vaccine	Type of Vaccine[1] (generic abbreviation)	Date given (mo/day/yr)	Source (F,S,P)[2]	Site[3]	Vaccine		Vaccine Information Statement		Signature/ initials of vaccinator
					Lot #	Mfr.	Date on VIS[4]	Date given[4]	
Tetanus, Diphtheria, Pertussis (e.g., Td, Tdap) Give IM.									
Hepatitis A[5] (e.g., HepA, HepA-HepB) Give IM.									
Hepatitis B[5] (e.g., HepB, HepA-HepB) Give IM.									
Human papillomavirus (HPV) Give IM.									
Measles, Mumps, Rubella (MMR) Give SC.									
Varicella (Var) Give SC.									
Pneumococcal, polysaccharide (PPV) Give SC or IM.									
Meningococcal (e.g., MCV4, conjugate; MPSV4, polysaccharide) Give MCV4 IM. Give MPSV4 SC.									
Zoster (Zos) Give SC.									
Influenza (e.g., TIV, inactivated; LAIV, live, attenuated) Give TIV IM. Give LAIV IN.									
Other									
Other									

1. Record the generic abbreviation for the type of vaccine given (e.g., PPV, HepA-HepB), *not* the trade name.
2. Record the source of the vaccine given as either F (Federally-supported), S (State-supported), or P (supported by Private insurance or other Private funds).
3. Record the site where vaccine was administered as either RA (Right Arm), LA (Left Arm), RT (Right Thigh), LT (Left Thigh), IN (Intranasal).
4. Record the publication date of each VIS as well as the date it is given to the patient.
5. For combination vaccines, fill in a row for each separate antigen in the combination.

Technical content reviewed by the Centers for Disease Control and Prevention, February 2008.

www.immunize.org/catg.d/p2023.pdf • Item #P2023 (2/08)

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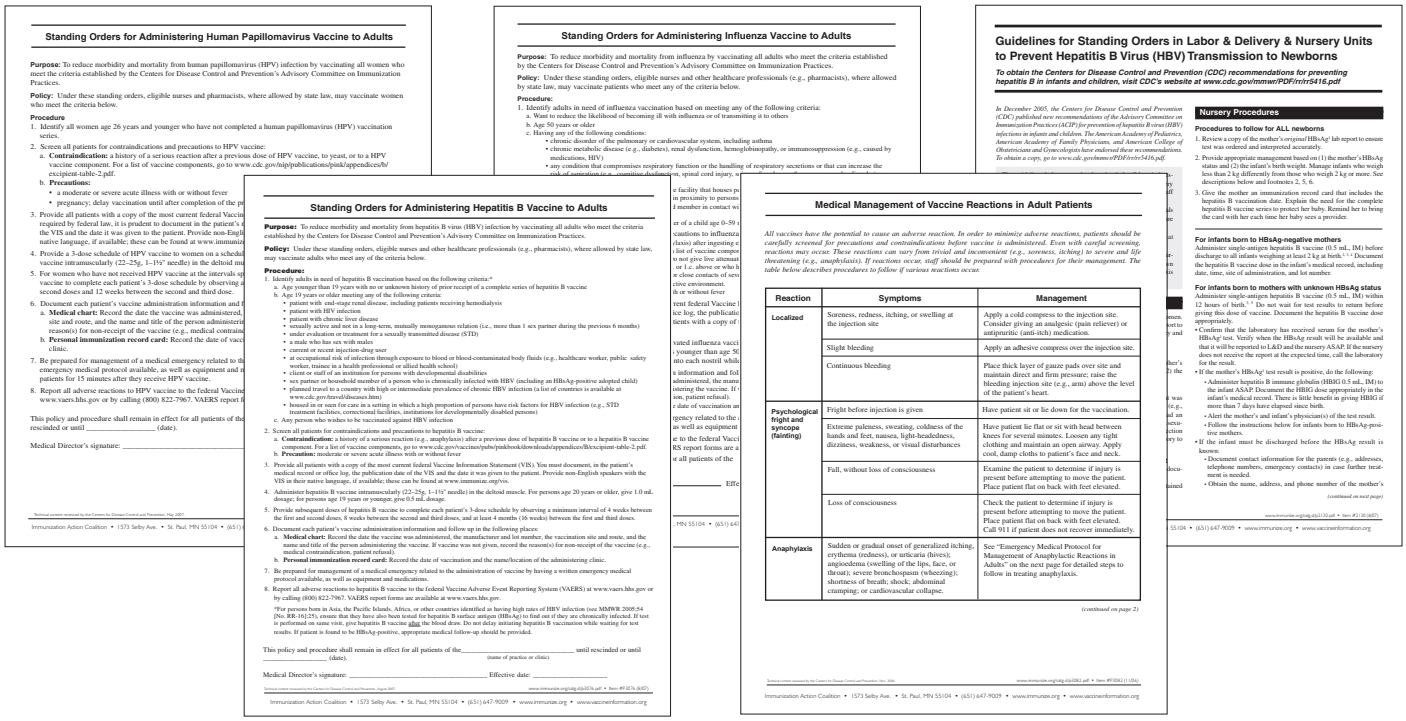
Standing orders for administering vaccines

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



Standing Orders for Administering Human Papillomavirus Vaccine to Adults

Purpose: To reduce morbidity and mortality from human papillomavirus (HPV) infection by vaccinating all women 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 pharmacists, where allowed by state law, may vaccinate women who meet the criteria below.

Procedure

1. Identify all women age 26 years and younger who have not completed a human papillomavirus (HPV) vaccination series.
2. Screen all patients for contraindications and precautions to HPV vaccine:
   a. **Contraindication:** a history of a serious reaction after a previous dose of HPV vaccine, to yeast, or to a HPV vaccine component. For a list of vaccine components, go to www.cdc.gov/nip/publications/pink/appendices/b/excipient-table-2.pdf.
   b. **Precautions:**
      • a moderate or severe acute illness with or without fever
      • pregnancy; delay vaccination until after completion of the pr
3. Provide all patients with a copy of the most current federal Vaccin required by federal law, it is prudent to document in the patient's r the VIS and the date it was given to the patient. Provide non-Engli native language, if available; these can be found at www.immuniz
4. Provide a 3-dose schedule of HPV vaccine to women on a schedul vaccine intramuscularly (22–25g, 1–1½" needle) in the deltoid mu
5. For women who have not received HPV vaccine at the intervals sp vaccine to complete each patient's 3-dose schedule by observing a second doses and 12 weeks between the second and third dose.
6. Document each patient's vaccine administration information and f
   a. **Medical chart:** Record the date the vaccine was administered, site and route, and the name and title of the person administeri reason(s) for non-receipt of the vaccine (e.g., medical contrain
   b. **Personal immunization record card:** Record the date of vacc clinic.
7. Be prepared for management of a medical emergency related to th emergency medical protocol available, as well as equipment and m patients for 15 minutes after they receive HPV vaccine.
8. Report all adverse reactions to HPV vaccine to the federal Vaccine www.vaers.hhs.gov or by calling (800) 822-7967. VAERS report f

This policy and procedure shall remain in effect for all patients of the _____ until rescinded or until _____ (date).

Medical Director's signature: _____

Technical content reviewed by the Centers for Disease Control and Prevention, May 2007.

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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:

1. Identify adults in need of influenza vaccination based on meeting any of the following criteria:
   a. Want to reduce the likelihood of becoming ill with influenza or of transmitting it to others
   b. Age 50 years or older
   c. 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, or immunosuppression (e.g., caused by medications, HIV)
      • any condition that compromises respiratory function or the handling of respiratory secretions or that can increase the risk of aspiration (e.g., cognitive dysfunc

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:

1. Identify adults in need of hepatitis B vaccination based on the following criteria:*
   a. Any younger than 19 years with no or unknown history of prior receipt of a complete series of hepatitis B vaccine
   b. Age 19 years or older meeting any of the following criteria:
      • patient with end-stage renal disease, including patients receiving hemodialysis
      • patient with HIV infection
      • patient with chronic liver disease
      • sexually active and not in a long-term, mutually monogamous relation (i.e., more than 1 sex partner during the previous 6 months)
      • under evaluation or treatment for a sexually transmitted disease (STD)
      • a male who has sex with males
      • current or recent injection-drug user
      • at occupational risk of infection through exposure to blood or blood-contaminated body fluids (e.g., healthcare worker, public safety worker, trainee in a health professional or allied health school)
      • client or staff of an institution for persons with developmental disabilities
      • sex partner or household member of a person who is chronically infected with HBV (including an HBsAg-positive adopted child)
      • planned travel to a country with high or intermediate prevalence of chronic HBV infection (a list of countries is available at www.cdc.gov/travel/diseases.htm)
      • housed in or seen for care in a setting in which a high proportion of persons have risk factors for HBV infection (e.g., STD treatment facilities, correctional facilities, institutions for developmentally disabled persons)
   c. Any person who wishes to be vaccinated against HBV infection
2. Screen all patients for contraindications and precautions to hepatitis B vaccine:
   a. **Contraindication:** a history of a serious reaction (e.g., anaphylaxis) after a previous dose of hepatitis B vaccine or to a hepatitis B vaccine component. For a list of vaccine components, go to www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/excipient-table-2.pdf.
   b. **Precaution:** moderate or severe acute illness with or without fever
3. Provide all patients with a copy of the most current federal Vaccine Information Statement (VIS). You must document, in the patient's medical record or office log, the publication date of the VIS and the date it was given to the patient. Provide non-English speakers with the VIS in their native language, if available; these can be found at www.immunize.org/vis.
4. Administer hepatitis B vaccine intramuscularly (22–25g, 1–1½" needle) in the deltoid muscle. For persons age 20 years or older, give 1.0 mL dosage; for persons age 19 years or younger, give 0.5 mL dosage.
5. Provide subsequent doses of hepatitis B vaccine to complete each patient's 3-dose schedule by observing a minimum interval of 4 weeks between the first and second doses, 8 weeks between the second and third doses, and at least 4 months (16 weeks) between the first and third doses.
6. Document each patient's vaccine administration information and follow up in the following places:
   a. **Medical chart:** Record the date the vaccine was administered, the manufacturer and lot number, the vaccination site and route, and the name and title of the person administering the vaccine. If vaccine was not given, record the reason(s) for non-receipt of the vaccine (e.g., medical contraindication, patient refusal).
   b. **Personal immunization record card:** Record the date of vaccination and the name/location of the administering clinic.
7. Be prepared for management of a medical emergency related to the administration of vaccine by having a written emergency medical protocol available, as well as equipment and medications.
8. Report all adverse reactions to hepatitis B vaccine to the federal Vaccine Adverse Event Reporting System (VAERS) at www.vaers.hhs.gov or by calling (800) 822-7967. VAERS report forms are available at www.vaers.hhs.gov.

*For persons born in Asia, the Pacific Islands, Africa, or other countries identified as having high rates of HBV infection (see MMWR 2005;54 [No. RR-16]:25), ensure that they have also been tested for hepatitis B surface antigen (HBsAg) to find out if they are chronically infected. If test is performed on same visit, give hepatitis B vaccine after the blood draw. Do not delay initiating hepatitis B vaccination while waiting for test results. If patient is found to be HBsAg-positive, appropriate medical follow-up should be provided.

This policy and procedure shall remain in effect for all patients of the _____ until rescinded or until _____ (date).
(name of practice or clinic)

Medical Director's signature: _____ Effective date: _____

Technical content reviewed by the Centers for Disease Control and Prevention, August 2007.

www.immunize.org/catg.d/p3074.pdf • Item #P3074 (8/07)

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Guidelines for Standing Orders in Labor & Delivery & Nursery Units to Prevent Hepatitis B Virus (HBV) Transmission to Newborns

To obtain the Centers for Disease Control and Prevention (CDC) recommendations for preventing hepatitis B in infants and children, visit CDC's website at www.cdc.gov/mmwr/PDF/rr/rr5416.pdf

In December 2005, the Centers for Disease Control and Prevention (CDC) published new recommendations of the Advisory Committee on Immunization Practices (ACIP) for prevention of hepatitis B virus (HBV) infections in infants and children. The American Academy of Pediatrics, American Academy of Family Physicians, and American College of Obstetricians and Gynecologists have endorsed these recommendations. To obtain a copy, go to www.cdc.gov/mmwr/PDF/rr/rr5416.pdf.

Nursery Procedures

Procedures to follow for ALL newborns

1. Review a copy of the mother's *original* HBsAg+ lab report to ensure test was ordered and interpreted accurately.
2. Provide appropriate management based on (1) the mother's HBsAg status and (2) the infant's birth weight. Manage infants who weigh less than 2 kg differently from those who weigh 2 kg or more. See descriptions below and footnotes 2, 5, 6.
3. Give the mother an immunization record card that includes the hepatitis B vaccination date. Explain the need for the complete hepatitis B vaccine series to protect her baby. Remind her to bring the card with her each time her baby sees a provider.

For infants born to HBsAg-negative mothers

Administer single-antigen hepatitis B vaccine (0.5 mL, IM) before discharge to all infants weighing at least 2 kg at birth.[1,2,5] Document the hepatitis B vaccine dose in the infant's medical record, including date, time, site of administration, and lot number.

For infants born to mothers with unknown HBsAg status

Administer single-antigen hepatitis B vaccine (0.5 mL, IM) within 12 hours of birth.[1,2] Do not wait for test results to return before giving this dose of vaccine. Document the hepatitis B vaccine dose appropriately.

- Confirm that the laboratory has received serum for the mother's HBsAg+ test. Verify when the HBsAg result will be available and that it will be reported to L&D and the nursery ASAP. If the nursery does not receive the report at the expected time, call the laboratory for the result.
- If the mother's HBsAg+ test result is positive, do the following:
  - Administer hepatitis B immune globulin (HBIG) 0.5 mL, IM) to the infant ASAP. Document the HBIG dose appropriately in the infant's medical record. There is little benefit in giving HBIG if more than 7 days have elapsed since birth.
  - Alert the mother's and infant's physician(s) of the test result.
  - Follow the instructions below for infants born to HBsAg-positive mothers.
- If the infant must be discharged before the HBsAg result is known:
  - Document contact information for the parents (e.g., addresses, telephone numbers, emergency contacts) in case further treatment is needed.
  - Obtain the name, address, and phone number of the mother's

(continued on next page)

www.immunize.org/catg.d/p3102.pdf • Item #P3102 (1/08)

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Medical Management of Vaccine Reactions in Adult Patients

All vaccines have the potential to cause an adverse reaction. In order to minimize adverse reactions, patients should be carefully screened for precautions and contraindications before vaccine is administered. Even with careful screening, reactions may occur. These reactions can vary from trivial and inconvenient (e.g., soreness, itching) to severe and life threatening (e.g., anaphylaxis). If reactions occur, staff should be prepared with procedures for their management. The table below describes procedures to follow if various reactions occur.

Reaction	Symptoms	Management
Localized	Soreness, redness, itching, or swelling at the injection site	Apply a cold compress to the injection site. Consider giving an analgesic (pain reliever) or antipruritic (anti-itch) medication.
	Slight bleeding	Apply an adhesive compress over the injection site.
	Continuous bleeding	Place thick layer of gauze pads over site and maintain direct and firm pressure; raise the bleeding injection site (e.g., arm) above the level of the patient's heart.
Psychological fright and syncope (fainting)	Fright before injection is given	Have patient sit or lie down for the vaccination.
	Extreme paleness, sweating, coldness of the hands and feet, nausea, light-headedness, dizziness, weakness, or visual disturbances	Have patient lie flat or sit with head between knees for several minutes. Loosen any tight clothing and maintain an open airway. Apply cool, damp cloths to patient's face and neck.
	Fall, without loss of consciousness	Examine the patient to determine if injury is present before attempting to move the patient. Place patient flat on back with feet elevated.
	Loss of consciousness	Check the patient to determine if injury is present before attempting to move the patient. Place patient flat on back with feet elevated. Call 911 if patient does not recover immediately.
Anaphylaxis	Sudden or gradual onset of generalized itching, erythema (redness), or urticaria (hives); angioedema (swelling of the lips, face, or throat); severe bronchospasm (wheezing); shortness of breath; shock; abdominal cramping; or cardiovascular collapse.	See "Emergency Medical Protocol for Management of Anaphylactic Reactions in Adults" on the next page for detailed steps to follow in treating anaphylaxis.

(continued on page 2)

Technical content reviewed by the Centers for Disease Control and Prevention, Nov. 2006.

www.immunize.org/catg.d/p3082.pdf • Item #P3082 (1/08)

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For child and adult vaccines, visit www.immunize.org/standingorders

Vaccine	Children/Teens	Adults
Diphtheria, tetanus, acellular pertussis—DTaP	✔	
Haemophilus influenzae type b—Hib	✔	
Hepatitis A—HepA	✔	✔
Hepatitis B—HepB	✔	✔
Human papillomavirus—HPV	✔	✔
Inactivated poliovirus—IPV	✔	
Influenza, inactivated and live intranasal—TIV, LAIV	✔	✔
Measles, mumps, rubella—MMR	✔	✔
Meningococcal, conjugate and polysaccharide—MCV4, MPSV	✔	✔
Pneumococcal conjugate—PCV	✔	
Pneumococcal polysaccharide—PPV	✔	✔
Rotavirus—Rota	✔	
Tetanus-diphtheria toxoids and pertussis—Td, Tdap	✔	✔
Varicella (chickenpox)—Var	✔	✔
Zoster (shingles)—Zos		*coming soon*
Medical Management of Vaccine Reactions	✔	✔
Labor & Delivery and Nursery Orders		
Guidelines for Standing Orders in Labor & Delivery and Nursery Units to Prevent Hepatitis B Virus Transmission to Newborns	✔	✔

Summary of Recommendations for Adult Immunization

Adapted from the recommendations of the Advisory Committee on Immunization Practices (ACIP)* by the Immunization Action Coalition, April 2008

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) *Give IM* ——— Live attenuated influenza vaccine (LAIV) *Give intranasally*	**Note:** LAIV may not be given to some of the persons listed below; see contraindications listed in far right column. • All persons who want to reduce the likelihood of becoming ill with influenza or of spreading it to others. • Persons age 50yrs and older. [TIV only] • Persons with medical problems (e.g., heart disease, lung disease, diabetes, renal dysfunction, hemoglobinopathy, immunosuppression). [TIV only] • 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). [TIV only] • Persons living in chronic care facilities. [TIV only] • Persons who work or live with high-risk people. • Women who will be pregnant during the influenza season (December–spring). [If currently pregnant, TIV only] • All healthcare personnel and other persons who provide direct care to high-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). [TIV only] • Students or other persons in institutional settings (e.g., residents of dormitories or correctional facilities).	• Give 1 dose every year in the fall or winter. • Begin vaccination services as soon as vaccine is available and 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. • If 2 or more of the following live virus vaccines are to be given—LAIV, MMR, Var, and/or yellow fever vaccine—they should be given on the same day. If they are not, space them by at least 28d.	**Contraindications** • Previous anaphylactic reaction to this vaccine, to any of its components, or to eggs. • For LAIV only, age 50 years or older, 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. **Precautions** • Moderate or severe acute illness. • For TIV only, history of Guillain-Barré syndrome (GBS) within 6wks of previous TIV. • For LAIV only, history of GBS within 6wks of a previous influenza vaccination.
Pneumococcal poly-saccharide (PPV) *Give IM or SC*	• 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, including persons who - have anatomic asplenia, functional asplenia, or sickle cell disease - have an immunocompromising condition, including HIV infection, leukemia, lymphoma, Hodgkin's disease, multiple myeloma, generalized malignancy, chronic renal failure, or nephrotic syndrome - are receiving immunosuppressive chemotherapy (including corticosteroids) - have received an organ or bone marrow transplant - are candidates for or recipients of cochlear implants.	• Give 1 dose if unvaccinated or if previous vaccination history is unknown. • Give a 1-time revaccination at least 5yrs after 1st dose to persons - age 65yrs and older if the 1st dose was given prior to age 65yrs - at highest risk of fatal pneumococcal infection or rapid antibody loss (see the 3rd bullet in the box to left for listings of persons at highest risk)	**Contraindication** Previous anaphylactic reaction to this vaccine or to any of its components. **Precaution** Moderate or severe acute illness.
Zoster (shingles) (Zos) *Give SC*	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.		

*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.

Technical content reviewed by the Centers for Disease Control and Prevention, April 2008.

www.immunize.org/catg.d/p2011.pdf • Item #P2011 (4/08)

Summary of Recommendations for Adult Immunization (continued)

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) *Give IM* Brands may be used interchangeably.	• 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; persons seeking evaluation or treatment for an 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. **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.	• Give 3 doses on a 0, 1, 6m schedule. • Alternative timing options for vaccination include 0, 2, 4m and 0, 1, 4m. • There must be at least 4wks between doses #1 and #2, and at least 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. For Twinrix® (hepatitis A and B combination vaccine [GSK]) for patients age 18yrs and older only: give 3 doses on a 0, 1, 6m schedule. An alternative schedule can also be used at 0, 7, 21–30d, and a booster at 12m.	**Contraindication** Previous anaphylactic reaction to this vaccine or to any of its components. **Precaution** Moderate or severe acute illness.
Hepatitis A (HepA) *Give IM* Brands may be used interchangeably.	• 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; injecting and non-injecting drug users; men who have sex with men; people who receive clotting-factor concentrates; 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. **Note:** Prevaccination 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.	• Give 2 doses. • The minimum interval between doses #1 and #2 is 6m. • If dose #2 is delayed, do not repeat dose #1. Just give dose #2.	**Contraindication** Previous anaphylactic reaction to this vaccine or to any of its components. **Precautions** • 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) *Give IM*	• All adults who lack written documentation 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 not 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. **For Tdap only:** • 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.	• 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. **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.	**Contraindications** • Previous anaphylactic reaction to this vaccine or to any of its components. • For Tdap only, history of encephalopathy within 7d following DTP/DTaP. **Precautions** • 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. **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.
Polio (IPV) *Give IM or SC*	Not routinely recommended for persons age 18yrs and older. **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.	• Refer to ACIP recommendations* regarding unique situations, schedules, and dosing information.	**Contraindication** Previous anaphylactic or neurologic reaction to this vaccine or to any of its components. **Precautions** • Moderate or severe acute illness. • Pregnancy.

Summary of Recommendations for Adult Immunization (continued)

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) *Give SC*	• All adults without evidence of immunity. **Note:** Evidence of immunity is defined as written documentation of 2 doses of varicella vaccine; born in the U.S. before 1980 (exceptions: 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.	• Give 2 doses. • Dose #2 is given 4–8wks after dose #1. • If the second dose is delayed, do not repeat dose #1. Just give dose #2. • If 2 or more of the following live virus vaccines are to be given—LAIV, MMR, Var, and/or yellow fever vaccine—they should be given on the same day. If they are not, space them by at least 28d.	**Contraindications** • 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 *MMWR* 2007;56,RR-4). **Precautions** • If blood, plasma, and/or immune globulin (IG or VZIG) were given in past 11m, see ACIP statement *General Recommendations on Immunization** regarding time to wait before vaccinating. • Moderate or severe acute illness. **Note:** For those on high-dose immunosuppressive therapy, consult ACIP recommendations regarding delay time.*
Meningococcal Conjugate vaccine (MCV4) *Give IM* — Polysaccharide vaccine (MPSV) *Give SC*	• All persons age 11 through 18yrs. • College freshmen living in a dormitory. • 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 *N. meningitidis.*	• Give 1 dose. • If previous vaccine was MPSV, revaccinate after 5yrs if risk continues. • Revaccination after MCV4 is not recommended. • MCV4 is preferred over MPSV for persons age 55yrs and younger, although MPSV is an acceptable alternative.	**Contraindication** Previous anaphylactic or neurologic reaction to this vaccine or to any of its components, including diphtheria toxoid (for MCV4). **Precautions** • Moderate or severe acute illness. • For MCV4 only, history of Guillain-Barré syndrome (GBS).
MMR (Measles, mumps, rubella) *Give SC*	• 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.	• Give 1 or 2 doses (see criteria in 1st and 2nd bullets in box to left). • If dose #2 is recommended, give it no sooner than 4wks after dose #1. • If a pregnant woman is found to be rubella susceptible, administer MMR postpartum. • If 2 or more of the following live virus vaccines are to be given—LAIV, MMR, Var, and/or yellow fever vaccine—they should be given on the same day. If they are not, space them by at least 28d.	**Contraindications** • 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). **Precautions** • If blood, plasma, and/or immune globulin were given in past 11m, see ACIP statement *General Recommendations on Immunization** regarding time to wait before vaccinating. • Moderate or severe acute illness. • History of thrombocytopenia or thrombocytopenic purpura. **Note:** If PPD (tuberculosis skin test) and MMR are both needed but not given on same day, delay PPD for 4–6wks after MMR.
Human papillomavirus (HPV) *Give IM*	All previously unvaccinated women through age 26yrs.	• Give 3 doses on a 0, 2, 6m schedule. • There must be at least 4wks between doses #1 and #2 and at least 12wks between doses #2 and #3. Overall, there must be at least 24wks between doses #1 and #3.	**Contraindication** Previous anaphylactic reaction to this vaccine or to any of its components. **Precaution** Data on vaccination in pregnancy are limited. Vaccination should be delayed until after completion of the pregnancy.

more than 30 minutes, it should not be used unless a state health department or Merck has authorized its use.

Hepatitis B and A

It takes our hospital more than 24 hours for the lab to return the HBsAg test result on our labor and delivery patients. How can the newborns be managed if the HBsAg status of the mothers is not known?

There are EIA-licensed HBsAg assays that do have a rapid turn-around; however, if you are unable to convince your lab to use such assays or if you cannot switch labs to do so, you should do the following:

- Order an HBsAg assay stat. Verify when the test result will be available and that it will be reported to the newborn nursery ASAP. If the nursery doesn't receive the report at the expected time, the nursery should call the lab for the result.

Healthcare professionals who provide hospital care for a newborn whose mother's HBsAg status is unknown should be sure to do the following:

- Follow the perinatal hepatitis B vaccination recommendations based on a mother with unknown HBsAg status. Make sure to give the first dose of single-antigen hepatitis B vaccine to infants of mothers of unknown status within 12 hours of birth. For preterm infants weighing less than 2 kg (4.4 lb), give HBIG plus hepatitis B vaccine within 12 hours of birth. Do not wait for the HBsAg test result before proceeding with hepatitis B vaccination since ALL newborns are recommended to receive hepatitis B vaccine at birth.
- If a positive maternal HBsAg test result is received from the laboratory, give the infant HBIG as soon as possible (no later than age 7 days) and complete the vaccine series according to the vaccination schedule for infants born to HBsAg-positive mothers. If the mother's HBsAg test result is negative, follow the routine vaccination recommendations for subsequent doses.
- Communicate the infant's vaccination record (and HBIG record, if any) and the mother's HBsAg status to both the infant's and mother's healthcare professionals. Follow-up case management is critical for an infant whose mother's HBsAg test result was unknown or positive.
- Contact the perinatal hepatitis B program at the local or state health department immediately when the hospital identifies an HBsAg-positive mother or when an infant is born to an HBsAg-positive mother or a mother whose status is unknown at the time of discharge.

To obtain a copy of the ACIP hepatitis B recommendations for infants, children, and teens, published in December 2005, go to www.cdc.gov/mmwr/PDF/rr/rr5416.pdf.

When I see a patient in my practice with an STD such as chlamydia, trichomonas, or genital warts, do I need to administer hepatitis B vaccine? What if it's a pregnant woman?

These women should be vaccinated. Hepatitis B vaccine is recommended for all previously unvaccinated persons with a current or recent history of an STD. Pregnancy is not a contraindication for hepatitis B vaccination.

I understand that the hepatitis B vaccination recommendations for travel outside the U.S. changed in 2006. Would you please review what has changed?

Hepatitis B vaccination is recommended for international travel of any duration to areas that have high or intermediate levels of hepatitis B virus (HBV) endemicity. The previous recommendation qualified the length of stay. For specific CDC information about the travel destinations for which hepatitis B vaccination is recommended, go to wwwn.cdc.gov/travel/yellowBookCh4-HepB.aspx.

Who should receive hepatitis B postvaccination testing after receiving hepatitis B vaccination?

Postvaccination testing is recommended for the following groups: healthcare and public safety workers at increased risk of continued exposure to blood on the job; immune compromised persons; and needle-sharing and sex partners of HBsAg-positive persons. Testing should be performed 1–2 months after the last dose of vaccine. For infants born to HBsAg-positive mothers, postvaccination testing is recommended 1–2 months after completion of at least 3 doses of a licensed hepatitis B vaccine series (i.e., at age 9–18 months, generally at the next well-child visit). Testing should not be performed before age 9 months or within 4 weeks of the most recent vaccine dose.

What are the new recommendations for postexposure prophylaxis for hepatitis A?

The new CDC recommendations, published in October 2007 (www.cdc.gov/mmwr/preview/mmwrhtml/mm5641a3.htm), state that hepatitis A vaccine is preferred over immune globulin (IG) for postexposure prophylaxis for healthy persons age 12 months–40 years who have recently been exposed to hepatitis A virus (HAV) and who have not previously received hepatitis A vaccine. Previously, IG was preferred. Persons age 12 months to 40 years should receive a single dose of single-antigen hepatitis A vaccine or immune globulin (0.02 mL/kg) as soon as possible after exposure. For persons older than 40 years, IG is preferred, although vaccine can be used if IG is unavailable. It is important to note that IG should be given within 2 weeks of exposure to HAV. IG should also be used for children younger than age 12 months, immunocompromised persons, persons who have chronic liver disease or other chronic medical conditions, and persons for whom vaccine is contraindicated.

What are the new recommendations for vaccination of travelers to protect them from HAV infection?

Editor's note: The following answer replaces the originally published incorrect answer. The new answer was posted online August 5, 2008.

The new recommendations (www.cdc.gov/mmwr/preview/mmwrhtml/mm5641a3.htm) state that (1) hepatitis A vaccine is recommended for healthy susceptible persons ages 1 through 40 years who travel to or work in regions where hepatitis A is endemic and (2) hepatitis A vaccine should be given as soon as travel is considered, but it can be given any time prior to departure. For optimal protection, persons older than age 40 years, immunocompromised persons, and persons with diagnosed chronic liver disease or other chronic medical conditions, if departure will take place within two weeks, should also receive IG simultaneously with the first dose of hepatitis A vaccine but at a different anatomic injection site. For travelers younger than age 1 year, IG alone is recommended because hepatitis A vaccine is not licensed for use in this age group. Hepatitis A is endemic in all regions except the United States, Western Europe, New Zealand, Australia, Canada, and Japan. ◆

Essential Immunization Resources from IAC

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		1 pad–$16; 2 pads–$12 each; 3 pads–$11 each; 4-9 pads–$10 each	
____	R4065	Adult immunization screening questionnaire	$_____
____	R4060	Child/teen immunization screening questionnaire.....	$_____

Laminated Immunization Schedules (details p. 3; call for discounts on bulk orders)

____	R2009	Adult schedule: 1-4 copies–$6 each; 5-19 copies–$4 each	$_____
____	R2008	Child/teen schedule: 1-4 copies–$6 each; 5-19 copies–$4 each	$_____

Patient Immunization Record Cards (details p. 3; call for discounts on bulk orders)

250 cards/box; 1 box–$35; 2 boxes–$32.50 each; 3 boxes–$30 each; 4 boxes–$27.50 each

____	R2005	Adult immunization record cards	$_____
____	R2004	Lifetime immunization record cards	$_____
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____	D2020	DVD: Immunization Techniques: Safe, Effective, Caring	$10.50	_____
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