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VACCINATE WOMEN

A periodical for obstetrician/gynecologists from the Immunization Action Coalition

Highlighting the latest developments in routine immunization and hepatitis B prevention

What's Inside?

Ask the Experts

Editor's note: The Immunization Action Coalition thanks William L. Atkinson, MD, MPH; Eric E. Mast, MD, MPH; and Linda A. Moyer, RN, of the Centers for Disease Control and Prevention (CDC) for answering the following questions for our readers. Dr. Atkinson, medical epidemiologist at the National Immunization Program, serves as a CDC liaison to the Coalition. Dr. Mast is the acting director and Ms. Moyer is an epidemiologist at the Division of Viral Hepatitis.

Influenza vaccine questions

by William L. Atkinson, MD, MPH

I understand that ACOG and the U.S. Public Health Service have expanded their recommendations for influenza vaccination of pregnant women. What are the new recommendations?

In 2004, the recommendations were revised to state that all women who will be pregnant during influenza season should be vaccinated, regardless of their stage of pregnancy. In previous years, the recommendation was to vaccinate all pregnant women who would be in their 2nd or 3rd trimester during the influenza season.

What are the recommendations for vaccination of health care workers against influenza?

All health care workers (HCWs) are recommended to receive annual influenza vaccination. This vaccination is recommended because health care workers can transmit influenza virus to patients, and are at risk of exposure to influenza virus from ill patients. The recommendation includes all employees in a health care setting who come into contact with patients (e.g., physicians, nurses, clerical staff, employees of nursing homes, persons who provide home care). The live attenuated (nasal spray) influenza vaccine (LAIV) may be used in HCWs who are 49 years of age or younger, not pregnant, and are otherwise healthy. LAIV should not be administered to HCWs who are in contact with patients who are severely immunosuppressed during those periods when the patient requires protective isolation.

Hepatitis A and B

by Linda A. Moyer, RN, and Eric E. Mast, MD

What is the possibility of maternal transmission of hepatitis B virus (HBV) when breast-feeding an infant if the mother is HBsAg-positive and has cracked or bleeding nipples?

Although HBsAg can be detected in breast milk, there is no evidence that HBV can be transmitted by breast-feeding. In studies done before hepatitis B vaccine was available, similar rates of mother-to-infant transmission were found among breast-fed and formula-fed infants. These findings indicate that the risk of transmission from breast-feeding is negligible, if any, compared with the high risk of infant exposure to maternal blood and body fluids at birth. More recent studies have shown that among infants receiving postexposure prophylaxis to prevent perinatal HBV infection, there is no increased risk of infection among breast-fed infants.

Babies born to HBV-infected mothers should be immunized with hepatitis B vaccine and hepatitis B immune globulin (HBIG), which will substantially reduce the risk of perinatal transmission. In addition, immunization should protect the infant from modes of postnatal HBV transmission, including possible exposure to HBV from cracked or bleeding nipples during breast-feeding. To prevent cracked and bleeding nipples, all mothers who breast-feed should be instructed on proper nipple care.

Immunization questions?

- Email nipinfo@cdc.gov
- Call CDC's Immunization Information Hotline at (800) 232-2522
- Call your state health dept. (phone numbers at www.immunize.org/coordinators)

Which patients with a sexually transmitted disease need vaccination against hepatitis A and B?

All people seeking or needing treatment for an STD are candidates for hepatitis B vaccination, and certain persons with risk factors (e.g., men who have sex with men and injection-drug users) should be vaccinated against hepatitis A as well.

Who should have an anti-HBs test after receiving hepatitis B vaccination?

It is only necessary to confirm the immune response for persons in the following risk groups:

(continued on page 2)

VACCINATE WOMEN

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The **Immunization Action Coalition,** 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 for all children 0–18 years; HBsAg screening for all pregnant women; testing and vaccination for high-risk groups; and education and treatment for people chronically infected with hepatitis B.

- health care workers who are at risk of exposure to blood or body fluids in the workplace
- infants born to HBsAg-positive mothers
- immunocompromised persons, e.g., dialysis patients, AIDS patients
- sex partners of persons with chronic HBV infection

If postvaccination testing is indicated (for persons other than infants), perform the testing 1–2 months after the last dose of vaccine.

How do I interpret some of the common hepatitis B panel results?

Tests	Results	Interpretation
HBsAg anti-HBc anti-HBs	negative negative negative	susceptible
HBsAg anti-HBc anti-HBs	negative negative positive with ≥10mIU/ml*	immune due to vaccination
HBsAg anti-HBc anti-HBs	negative positive positive	immune due to natural infection
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive positive negative	acutely infected
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive negative negative	chronically infected
HBsAg anti-HBc anti-HBs	negative positive negative	four interpretations possible†

*Postvaccination testing, when it is recommended, should be performed 1–2 months following 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.

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). 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 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 (≤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.

New! A complete guide to vaccinating adults

"Adults Only Vaccination: A Step-by-Step Guide"

157 pages of comprehensive, practical information on ALL aspects of adult immunization

This guide is indispensable for improving vaccination practices wherever adults are immunized. Designed to help integrate immunization services into OB/Gyn settings, family planning clinics, STD clinics, and other health care settings new to vaccination, the guide is equally valuable for settings experienced in vaccine delivery. It presents clear, authoritative information on administering adult vaccines, billing, educating patients, and much more. Included are 2 videos that explain vaccine administration techniques and vaccine handling and storage, a pack of adult immunization record cards, and other useful resources.

Cost for the guide, two videos, and other valuable resources is only $75. Quantity discounts are available. To order online or for more information, visit www.immunize.org/guide To order by fax or mail, use the order form on page 11.

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

Immunization record cards for adults!

Give all your adult patients a permanent vaccination record card from IAC. Printed on rip-proof, smudge-proof, waterproof paper, this durable canary-yellow card is sized to fit in a wallet alongside other important cards. To view the card, visit www.immunize.org/adultizcards/pictures.htm

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

Discounts for larger orders: 2 boxes (500 cards) $55; 3 boxes (750 cards) $75; 4 boxes (1000 cards) $90

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

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

First do no harm. Protect your patients by getting vaccinated against influenza!

Did you get vaccinated against influenza last fall? ☐ **Yes** ☐ **No**
Did you make sure your staff and coworkers did? ☐ **Yes** ☐ **No**

If you answered "no" to either question, you may have harmed the health of your most vulnerable patients. Though health care workers encounter high-risk patients throughout the influenza season, only about one in three of us protects patients by getting immunized. That means two out of three of us contribute to the likelihood of spreading a vaccine-preventable disease that kills 36,000 persons each year in the United States and hospitalizes more than 114,000. None of us went into health care as a profession with the goal of spreading a potentially fatal disease, but spread it we do. Whether we work in medical practices, hospitals, long-term care facilities, home-care sites, or other health settings, unvaccinated health care workers are a recognized cause of influenza outbreaks. Here are two documented instances of outbreaks resulting from influenza virus transmission between health care workers and patients:

- In a neonatal intensive care unit (NICU), 19 infants were infected, six were symptomatic, and one died. Health care workers were the likely source of the spread. Only 15% of NICU staff had been immunized. (Infect Control Hosp Epidemiol. 2000;21[7]:449–54)
- Four cases of influenza A virus infection were reported among patients in a solid organ transplant unit. All were in single rooms, and three had not been visited by relatives between admission and influenza infection. Three nurses among 27 health care workers in the unit also developed influenza. (Transplantation. 2001;72[3]:535–7)

Clearly, influenza kills patients, and unvaccinated health care workers may contribute to this. How has this happened? One reason for the dismally low influenza vaccination rate among health care workers is our inattention to facts about the disease. Many of us have not really absorbed these truths: influenza is a serious disease, we can transmit it to high-risk patients in a variety of settings, and we belong to an occupational group for whom annual influenza vaccination is recommended. Another reason is that we make influenza immunization inconvenient or impossible for ourselves. Many of us don't provide on-site influenza vaccination for staff, and if we do, we often provide these services at inconvenient times and locations. We *must* overcome these obstacles to full vaccination of health care workers—*our patients' lives depend on it.*

If you haven't already established a vaccination program in your health care setting, you should act immediately to start one. Here are some steps you can take now:

Persuade top management to commit to an annual employee vaccination program.

Among the benefits of such programs are better infection control, reduced absenteeism among employees, and better delivery of health care to the patients you serve.

Give a multidisciplinary team responsibility for developing the program.

Make certain employees from all departments are represented in planning and implementing the vaccination program. Don't forget to include housekeeping, dietary, maintenance staff, and others.

Make the vaccination program convenient for all employees.

Take the vaccination services to the employees at their workstations (e.g., by means of a rolling cart). Offer vaccination services at convenient times, including nights and weekends. Administer vaccine under a standing orders protocol. A sample protocol is available from the Immunization Action Coalition at www.immunize.org/catg.d/p3074.pdf

Offer vaccines free of charge to all staff—full-time, part-time, and volunteers.

When the cost barrier is removed, more employees will comply. In addition, many employees will conclude that an employer who pays for vaccination is authentically dedicated to employee and patient health and safety.

Develop campaigns to educate employees.

Use employee newsletters, blast emails, and staff bulletin boards to get the vaccine message out. Make the case for the influenza vaccine's safety and efficacy. Educate employees about their potential to infect patients. Emphasize that major medical organizations—such as CDC, AAP, AAFP, AMA, and other respected groups—recommend annual vaccination of health care workers. Dispel any misinformation employees might have that has been keeping them from getting vaccinated.

Educate health care workers to be advocates for influenza vaccination!

LEAD BY EXAMPLE! A well-vaccinated health care staff demonstrates the importance of vaccination against influenza and attests to the staff's commitment to preserving the health of patients. If health care providers themselves do not get vaccinated, how can we expect patients to?

MOTIVATE! Remember: the strongest motivator for a patient to be vaccinated is a recommendation from their health care provider.

SAVE LIVES! Though the influenza vaccine is safe and effective, the sad fact is many of your patients aren't using it. If you don't lead by example, *you may be part of the problem.*

For more information:

The information on this page is adapted from "Influenza Immunization Among Health Care Workers: A Call to Action," developed by representatives from 24 of the nation's leading professional health and labor organizations, under the direction of the National Foundation for Infectious Diseases. To obtain a copy, go to www.nfid.org

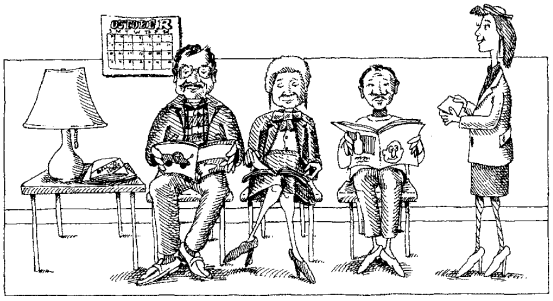
Produced in 2002 by the Massachusetts Medical Society, MassPRO, and the Massachusetts Department of Public Health, the 32-page "Employee Flu Immunization Campaign Kit" includes step-by-step instructions, worksheets, promotional materials, and tips for conducting a successful employee influenza immunization campaign. To access a ready-to-copy (PDF) version of the kit, go to www.massmed.org/pages/flu_kit.pdf

The February 2004 issue of the journal "Infectious Diseases in Children" includes a monograph, "Importance of Vaccinating Health Care Workers Against Influenza." To access the monograph, go to http://idinchildren.com Click on "Monographs" in the left column.

SAVE TIME—COPY THIS
Have patients complete it while they wait

Patient name: _____ Date of birth: ____/____/____
(mo.) (day) (yr.)

Screening Questionnaire for Adult Immunization



For patients: The following questions will help us determine which vaccines you may be given today. If a question is not clear, please ask your health care provider to explain it.

	Yes	No	Don't Know
1. Are you sick today?	☐	☐	☐
2. Do you have allergies to medications, food, or any vaccine?	☐	☐	☐
3. Have you ever had a serious reaction after receiving a vaccination?	☐	☐	☐
4. Do you have cancer, leukemia, AIDS, or any other immune system problem?	☐	☐	☐
5. Do you take cortisone, prednisone, other steroids, or anticancer drugs, or have you had x-ray treatments?	☐	☐	☐
6. During the past year, have you received a transfusion of blood or blood products, or been given a medicine called immune (gamma) globulin?	☐	☐	☐
7. For women: Are you pregnant or is there a chance you could become pregnant during the next month?	☐	☐	☐
8. Have you received any vaccinations in the past 4 weeks?	☐	☐	☐

Form completed by: _____ Date: _____

Form reviewed by: _____ Date: _____

Did you bring your immunization record card with you? yes ☐ no ☐

It is important for you to have a personal record of your vaccinations. If you don't have a record card, ask your health care provider to give you one! Bring this record with you every time you seek medical care. Make sure your health care provider records all your vaccinations on it.

www.immunize.org/catg.d/p4065scr.pdf • Item#P4065 (4/04)

Summary of Recommendations for Adult Immunization

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Adapted from the recommendations of the Advisory Committee on Immunization Practices (ACIP)* by the Immunization Action Coalition, July 2004

Vaccine name and route	For whom it is recommended	Schedule for routine and "catch-up" administration	Precautions and contraindications (mild illness is not a contraindication)
Influenza Trivalent inactivated influenza vaccine (TIV) *Give IM* Live attenuated influenza vaccine (LAIV) *Give intranasally*	• All adults who are 50yrs of age or older. • People 6m–50yrs of age with medical problems (e.g., heart disease, lung disease, diabetes, renal dysfunction, hemoglobinopathies, immunosuppression) and/or people living in chronic-care facilities. • People (≥6m of age) working or living with at-risk people. • Women who will be pregnant during the influenza season. • All health care workers and other persons who provide direct care to at-risk people. • Household contacts and out-of-home caregivers of children ages 0–23m. • 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). • Persons who provide essential community services. • Students or other persons in institutional settings (e.g., those who reside in dormitories). • Anyone wishing to reduce the likelihood of becoming ill with influenza. **Special Notes on the use of influenza vaccines** • Inactivated influenza vaccine may be given to any person ≥6 months of age for whom the vaccine is not contraindicated. Live attenuated influenza vaccine may be given to healthy, non-pregnant persons 5–49 years of age for whom the vaccine is not contraindicated. • Use of inactivated influenza vaccine is preferred for persons in close contact with severely immunosuppressed persons during periods when the immunocompromised person requires a protective environment (e.g., persons with bone marrow transplants).	• Given every year. • October through November is the *optimal* time to receive annual influenza vaccination to maximize protection. • Influenza vaccine may be given at any time during the influenza season (typically December through March) or at other times when the risk of influenza exists. • May give with all other vaccines.	• Previous anaphylactic reaction to this vaccine, to any of its components, or to eggs. • Moderate or severe acute illness. • Do not give live attenuated influenza vaccine to persons ≥50 years of age, pregnant women, or to persons who have: asthma, reactive airway disease or other chronic disorder of the pulmonary or cardiovascular systems; an underlying medical condition, including metabolic diseases such as diabetes, renal dysfunction, and hemoglobinopathies; a known or suspected immune deficiency disease or who are receiving immunosuppressive therapy; a history of Guillain-Barré syndrome. • See Special Notes in columns 2–3 regarding who may not receive LAIV.
Pneumococcal polysaccharide (PPV23) *Give IM or SC*	• Adults who are 65yrs of age or older. • People 2–64yrs of age who have chronic illness or other risk factors, including chronic cardiac or pulmonary diseases, chronic liver disease, alcoholism, diabetes mellitus, CSF leaks, candidate for or recipient of cochlear implant, 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 people 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); and those who received an organ or bone marrow transplant. Pregnant women with high-risk conditions should be vaccinated if not done previously.	• Routinely given as a one-time dose; administer if previous vaccination history is unknown. • One-time revaccination is recommended 5yrs later for people at highest risk of fatal pneumococcal infection or rapid antibody loss (e.g., renal disease) and for people ≥65yrs of age if the 1st dose was given prior to age 65 and ≥5yrs have elapsed since previous dose. • May give with all other vaccines.	• Previous anaphylactic reaction to this vaccine or to any of its components. • Moderate or severe acute illness. **Note:** Pregnancy and breastfeeding are not contraindications to the use of this vaccine.
Hepatitis B (Hep B) *Give IM* Brands may be used interchangeably.	• All adolescents. • High-risk adults, including household contacts and sex partners of HBsAg-positive persons; users of illicit injectable drugs; heterosexuals with more than one sex partner in 6 months; men who have sex with men; people with recently diagnosed STDs; patients receiving hemodialysis and patients with renal disease that may result in dialysis; recipients of certain blood products; health care workers 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. **Note:** Prior serologic testing may be recommended depending on the specific level of risk and/or likelihood of previous exposure. **Note:** In 1997, the NIH Consensus Development Conference, a panel of national experts, recommended that hepatitis B vaccination be given to all anti-HCV positive persons. **Ed. note:** Provide serologic screening for immigrants from endemic areas. When HBsAg-positive persons are identified, offer appropriate disease management. In addition, screen their sex partners and household members and, if found susceptible, vaccinate.	• 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. • May give with all other vaccines. For Twinrix™ (hepatitis A and B combination vaccine [GSK]), three doses are needed on a 0, 1, 6m schedule.	• Previous anaphylactic reaction to this vaccine or to any of its components. • Moderate or severe acute illness. **Note:** Pregnancy and breastfeeding are not contraindications to the use of this vaccine.
Hepatitis A (Hep A) *Give IM* Brands may be used interchangeably.	• People who travel outside of the U.S. (except for Western Europe, New Zealand, Australia, Canada, and Japan). • People with chronic liver disease, including people with hepatitis C; people with hepatitis B who have chronic liver disease; illicit drug users; men who have sex with men; people with clotting-factor disorders; people 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 cost effective. **Note:** Prevaccination testing is likely to be cost effective for persons >40yrs of age as well as for younger persons in certain groups with a high prevalence of hepatitis A virus infection.	• Two doses are needed. • The minimum interval between dose #1 and #2 is 6m. • If dose #2 is delayed, do not repeat dose #1. Just give dose #2. • May give with all other vaccines.	• Previous anaphylactic reaction to this vaccine or to any of its components. • Moderate or severe acute illness. • Safety during pregnancy has not been determined, so benefits must be weighed against potential risk. **Note:** Breastfeeding is not a contraindication to the use of this vaccine.

Summary of Recommendations for Adult Immunization (continued)

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Vaccine name and route	For whom it is recommended	Schedule for routine and "catch-up" administration	Precautions and contraindications (mild illness is not a contraindication)
Td (Tetanus, diphtheria) *Give IM*	• All adolescents and adults. • After the primary series has been completed, a booster dose is recommended every 10yrs. Make sure your patients have received a primary series of 3 doses. • A booster dose as early as 5yrs later may be needed for the purpose of wound management, so consult ACIP recommendations.* • Use Td, not tetanus toxoid (TT), for all indications.	• Give booster dose every 10yrs after the primary series has been completed. • For those who are unvaccinated or behind, complete the primary series (spaced at 0, 1–2m, 6–12m intervals). Don't restart the series, no matter how long since the previous dose. • May give with all other vaccines.	• Previous anaphylactic or neurologic reaction to this vaccine or to any of its components. • Moderate or severe acute illness. **Note:** Pregnancy and breastfeeding are not contraindications to the use of this vaccine.
MMR (Measles, mumps, rubella) *Give SC*	• Adults born in 1957 or later who are ≥18yrs of age (including those born outside the U.S.) should receive at least one dose of MMR if there is no serologic proof of immunity or documentation of a dose given on or after the first birthday. • Adults in high-risk groups, such as health care workers, students entering colleges and other post–high school educational institutions, and international travelers, should receive a total of two doses. • Adults born before 1957 are usually considered immune but proof of immunity may be desirable for health care workers. • All women of childbearing age (i.e., adolescent girls and premenopausal adult women) who do not have acceptable evidence of rubella immunity or vaccination. • Special attention should be given to immunizing women born outside the United States in 1957 or later.	• One or two doses are needed. • If dose #2 is recommended, give it no sooner than 4wks after dose #1. • May give with all other vaccines. • If varicella vaccine and MMR are both needed and are not administered on the same day, space them at least 4wks apart. • If a pregnant woman is found to be rubella-susceptible, administer MMR postpartum.	• Previous anaphylactic reaction to this vaccine or to any of its components. • Pregnancy or possibility of pregnancy within 4 weeks (use contraception). • 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. • 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. **Note:** Breastfeeding is not a contraindication to the use of this vaccine. **Note:** MMR is not contraindicated if a tuberculin skin test (i.e., PPD) was recently applied. If PPD and MMR not given on same day, delay PPD for 4–6wks after MMR.
Varicella (Var) (Chickenpox) *Give SC*	All susceptible adults and adolescents should be vaccinated. It is especially important to ensure vaccination of the following groups: susceptible persons who have close contact with persons at high risk for serious complications (e.g., health care workers and family contacts of immunocompromised persons) and susceptible persons who are at high risk of exposure (e.g., teachers of young children, day care employees, residents and staff in institutional settings such as colleges and correctional institutions, military personnel, adolescents and adults living with children, non-pregnant women of childbearing age, and international travelers who do not have evidence of immunity). **Note:** People with reliable histories of chickenpox (such as self or parental report of disease) can be assumed to be immune. For adults who have no reliable history, serologic testing may be cost effective since most adults with a negative or uncertain history of varicella are immune.	• Two doses are needed. • Dose #2 is given 4–8wks after dose #1. • May give with all other vaccines. • If varicella vaccine and MMR are both needed and are not administered on the same day, space them at least 4wks apart. • If the second dose is delayed, do not repeat dose #1. Just give dose #2.	• Previous anaphylactic reaction to this vaccine or to any of its components. • Pregnancy or possibility of pregnancy within 4 weeks (use contraception). • Persons immunocompromised because of malignancies and primary or acquired cellular immunodeficiency including HIV/AIDS. (See *MMWR* 1999, Vol. 48, No. RR-6.) **Note:** For those on high-dose immunosuppressive therapy, consult ACIP recommendations regarding delay time.* • 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:** Breastfeeding is not a contraindication to the use of this vaccine. **Note:** Manufacturer recommends that salicylates be avoided for 6wks after receiving varicella vaccine because of a theoretical risk of Reye's syndrome.
Polio (IPV) *Give IM or SC*	Not routinely recommended for persons 18yrs of age 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. 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. • May give with all other vaccines.	• Previous anaphylactic or neurologic reaction to this vaccine or to any of its components. • Moderate or severe acute illness. **Note:** Pregnancy and breastfeeding are not contraindications to the use of this vaccine.
Meningococcal *Give SC*	Vaccinate people with risk factors. Discuss disease risk and vaccine availability with college students. Consult ACIP statement* on meningococcal disease (6/30/00) for details.		

* For specific ACIP immunization recommendations, refer to the statements, which are published in *MMWR*. To obtain a complete set of ACIP statements, call (800) 232-2522, or to access individual statements, visit CDC's website: www.cdc.gov/nip/publications/ACIP-list.htm or visit IAC's website: www.immunize.org/acip

This table is revised yearly because of the changing nature of U.S. immunization recommendations. Visit the Immunization Action Coalition's website at www.immunize.org/adultrules to make sure you have the most current version. We extend our thanks to William Atkinson, MD, MPH, from CDC's National Immunization Program, and Linda Moyer, RN, from the Division of Viral Hepatitis, at CDC's National Center for Infectious Diseases for their assistance. This table is published by the Immunization Action Coalition, 1573 Selby Avenue, St. Paul, MN 55104, (651) 647-9009. Email: admin@immunize.org

Standing orders for eight vaccines and anaphylaxis management

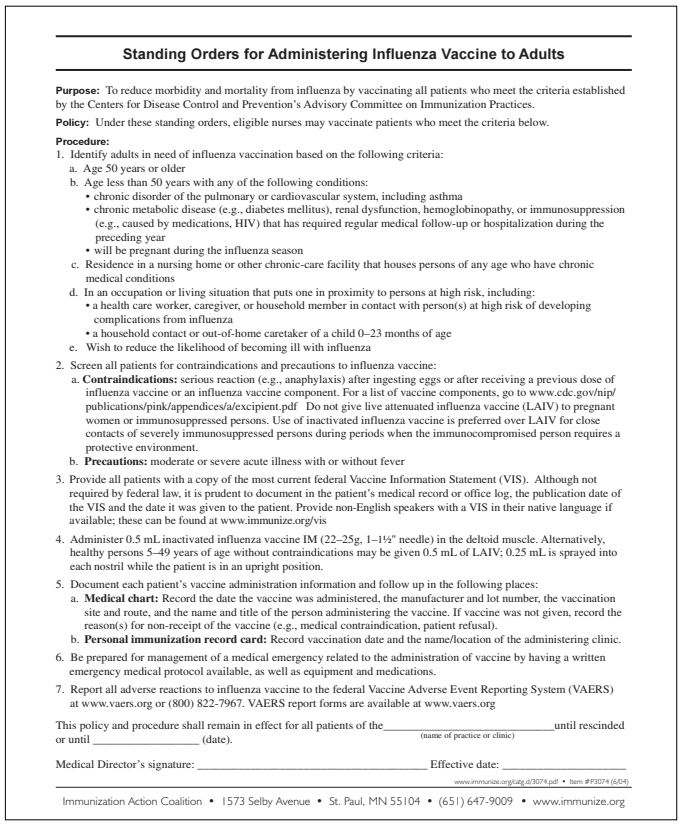
Adapt these protocols for use in your practice or clinic! Following are eight standing orders protocols for administering vaccines commonly given to adults and a companion one for managing anaphylactic reactions to vaccines. They were created by the Immunization Action Coalition (IAC) and reviewed by CDC for technical accuracy.

Full-size versions of each are available on IAC's website at www.immunize.org/free (Scroll down to the section titled "Materials for your clinic staff," and select either the HTML or PDF version of a protocol.) Health care providers can easily adapt the web-text (HTML) version of a protocol to create a new one tailored to their practice or clinic needs. Alternatively, if a protocol meets their needs, providers can use the ready-to-copy (PDF) version without modification. The protocols are also included in IAC's new adult vaccination guide, *Adults Only Vaccination: A Step-by-Step Guide.* For more information about the guide and its accompanying materials, see page 3 of this issue of *VACCINATE WOMEN* or visit www.immunize.org/guide

Excerpt from ACIP statement on standing orders[1]

"Standing orders programs authorize nurses and pharmacists to administer vaccinations according to an institution- or physician-approved protocol without a physician's exam. These programs have documented improved vaccination rates among adults. Standing orders programs can be used in inpatient and outpatient facilities, long-term-care facilities, managed-care organizations, assisted living facilities, correctional facilities, pharmacies, adult workplaces, and home health-care agencies to vaccinate patient, client, resident, and employee populations."

[1]CDC. Use of Standing Orders Programs to Increase Adult Vaccination Rates: Recommendations of the Advisory Committee on Immunization Practices. *MMWR* 2000; 49 (RR01); 21.



Standing Orders for Administering Influenza Vaccine to Adults

Purpose: To reduce morbidity and mortality from influenza by vaccinating all patients 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 may vaccinate patients who meet the criteria below.

Procedure:

1. Identify adults in need of influenza vaccination based on the following criteria:
   a. Age 50 years or older
   b. Age less than 50 years with any of the following conditions:
      • chronic disorder of the pulmonary or cardiovascular system, including asthma
      • chronic metabolic disease (e.g., diabetes mellitus), renal dysfunction, hemoglobinopathy, or immunosuppression (e.g., caused by medications, HIV) that has required regular medical follow-up or hospitalization during the preceding year
      • will be pregnant during the influenza season
   c. Residence in a nursing home or other chronic-care facility that houses persons of any age who have chronic medical conditions
   d. In an occupation or living situation that puts one in proximity to persons at high risk, including:
      • a health care worker, caregiver, or household member in contact with person(s) at high risk of developing complications from influenza
      • a household contact or out-of-home caretaker of a child 0–23 months of age
   e. Wish to reduce the likelihood of becoming ill with influenza
2. Screen all patients for contraindications and precautions to influenza vaccine:
   a. **Contraindications:** serious reaction (e.g., anaphylaxis) after ingesting eggs or after receiving a previous dose of influenza vaccine or an influenza vaccine component. For a list of vaccine components, go to www.cdc.gov/nip/publications/pink/appendices/a/excipient.pdf Do not give live attenuated influenza vaccine (LAIV) to pregnant women or immunosuppressed persons. Use of inactivated influenza vaccine is preferred over LAIV for close contacts of severely immunosuppressed persons during periods when the immunocompromised person requires a protective environment.
   b. **Precautions:** 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). Although not required by federal law, it is prudent to 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 a VIS in their native language if available; these can be found at www.immunize.org/vis
4. Administer 0.5 mL inactivated influenza vaccine IM (22–25g, 1–1½" needle) in the deltoid muscle. Alternatively, healthy persons 5–49 years of age without contraindications may be given 0.5 mL of LAIV; 0.25 mL is sprayed into each nostril while the patient is in an upright position.
5. 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 vaccination date and the name/location of the administering clinic.
6. 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.
7. Report all adverse reactions to influenza vaccine to the federal Vaccine Adverse Event Reporting System (VAERS) at www.vaers.org or (800) 822-7967. VAERS report forms are available at www.vaers.org

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: _____

www.immunize.org/catg.d/3074.pdf • Item #P3074 (6/04)

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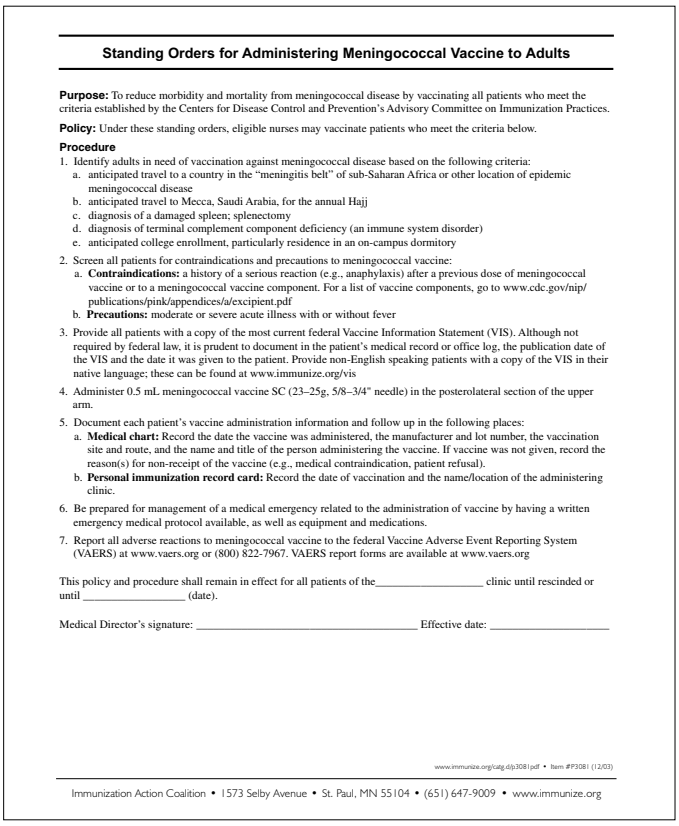

Standing Orders for Administering Meningococcal Vaccine to Adults

Purpose: To reduce morbidity and mortality from meningococcal disease by vaccinating all patients 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 may vaccinate patients who meet the criteria below.

Procedure

1. Identify adults in need of vaccination against meningococcal disease based on the following criteria:
   a. anticipated travel to a country in the "meningitis belt" of sub-Saharan Africa or other location of epidemic meningococcal disease
   b. anticipated travel to Mecca, Saudi Arabia, for the annual Hajj
   c. diagnosis of a damaged spleen; splenectomy
   d. diagnosis of terminal complement component deficiency (an immune system disorder)
   e. anticipated college enrollment, particularly residence in an on-campus dormitory
2. Screen all patients for contraindications and precautions to meningococcal vaccine:
   a. **Contraindications:** a history of a serious reaction (e.g., anaphylaxis) after a previous dose of meningococcal vaccine or to a meningococcal vaccine component. For a list of vaccine components, go to www.cdc.gov/nip/publications/pink/appendices/a/excipient.pdf
   b. **Precautions:** 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). Although not required by federal law, it is prudent to 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 speaking patients with a copy of the VIS in their native language; these can be found at www.immunize.org/vis
4. Administer 0.5 mL meningococcal vaccine SC (23–25g, 5/8–3/4" needle) in the posterolateral section of the upper arm.
5. 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.
6. 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.
7. Report all adverse reactions to meningococcal vaccine to the federal Vaccine Adverse Event Reporting System (VAERS) at www.vaers.org or (800) 822-7967. VAERS report forms are available at www.vaers.org

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

Medical Director's signature: _____ Effective date: _____

www.immunize.org/catg.d/p3081.pdf • Item #P3081 (12/03)

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(continued on page 9)

Standing Orders for Administering Tetanus-Diphtheria Toxoid (Td) to Adults

Purpose: To reduce morbidity and mortality from tetanus and diphtheria by vaccinating all patients 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 may vaccinate patients who meet the criteria below.

Procedure

1. Identify adults in need of vaccination against tetanus and diphtheria based on the following criteria:
   a. lack of documentation of at least three doses of tetanus- and diphtheria-containing toxoids
   b. completion of a three-dose primary series of tetanus- and diphtheria-containing toxoids with the last dose having been given ≥10 years previously
   c. recent deep and dirty wound (e.g., contaminated with dirt, feces, saliva) and lack of evidence of Td dose in previous five years
2. Screen all patients for contraindications and precautions to tetanus and diphtheria (Td) toxoid:
   a. **Contraindications:** a history of a serious reaction (e.g., anaphylaxis) after a previous dose of Td or to a Td toxoid component. For a list of vaccine components, go to www.cdc.gov/nip/publications/pink/appendices/a/excipient.pdf
   b. **Precautions:**
      • history of Guillain-Barre syndrome ≤6 weeks after previous dose of tetanus toxoid-containing product
      • 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 speaking patients with a copy of the VIS in their native language; these can be found at www.immunize.org/vis
4. Administer 0.5 mL Td vaccine IM (22–25g, 1–2" needle) in the deltoid muscle.
5. Provide subsequent doses of Td to adults needing to complete the primary schedule by observing a minimum interval of 4 weeks between the first and second doses, and 6 months between the second 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 Td vaccine to the federal Vaccine Adverse Event Reporting System (VAERS) at www.vaers.org or (800) 822-7967. VAERS report forms are available at www.vaers.org

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

Medical Director's signature: _____ Effective date: _____

www.immunize.org/catg.d/p3078.pdf • Item #P3078 (12/03)

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To access the current ready-to-copy version of this piece, visit www.immunize.org/catg.d/p3078.pdf

Standing Orders for Administering Varicella (Chickenpox) Vaccine to Adults

Purpose: To reduce morbidity and mortality from varicella (chickenpox) by vaccinating all patients 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 may vaccinate patients who meet the criteria below.

Procedure

1. Identify adults in need of varicella (chickenpox) vaccination based on the following criteria:
   a. lack of a personal history or serologic evidence of varicella infection
   b. health-care worker or family contact of an immunocompromised person
   c. living or working in an environment where transmission of varicella zoster virus is likely (e.g., teachers of young children, day care employees, residents and staff members in institutional settings) or can occur (college students, inmates and staff members of correctional institutions, military personnel)
   d. planning to become pregnant in the future
   e. living in a household with children
   f. planning international travel
2. Screen all patients for contraindications and precautions to varicella vaccine:
   a. **Contraindications:**
      • a history of a serious reaction (e.g., anaphylaxis) after a previous dose of varicella vaccine or to a varicella vaccine component. For a list of vaccine components, go to www.cdc.gov/nip/publications/pink/appendices/a/excipient.pdf
      • pregnant now or may become pregnant within 1 month
      • substantial suppression of cellular immunity
   b. **Precautions:**
      • recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product)
      • 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 speaking patients with a copy of the VIS in their native language; these can be found at www.immunize.org/vis
4. Administer 0.5 mL varicella vaccine SC (23–25g, 5/8–3/4" needle) in the posterolateral section of the upper arm.
5. Administer a second dose 4-8 weeks after the first dose.
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 varicella vaccine to the federal Vaccine Adverse Event Reporting System (VAERS) at www.vaers.org or (800) 822-7967. VAERS report forms are available at www.vaers.org

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

Medical Director's signature: _____ Effective date: _____

www.immunize.org/catg.d/p3080.pdf • Item #P3080 (12/03)

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To access the current ready-to-copy version of this piece, visit www.immunize.org/catg.d/p3080.pdf

Standing Orders for Administering Measles, Mumps, & Rubella Vaccine to Adults

Purpose: To reduce morbidity and mortality from measles, mumps, and rubella by vaccinating all patients 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 may vaccinate patients who meet the criteria below.

Procedure

1. Identify adults in need of initial vaccination against measles, mumps, or rubella who were born in 1957 or later with no history of receipt of live, measles-, mumps-, and/or rubella-containing vaccine given at 12 months of age or older or other acceptable evidence of immunity (e.g., laboratory evidence). Combination MMR vaccine is recommended if one or more component is indicated.
2. Identify adults born in 1957 or later in need of a second dose of measles, mumps, and rubella (MMR) vaccine who are either planning to travel internationally, a student in a college, university, technical or vocational school, or a health care worker.
3. Screen all patients for contraindications and precautions to measles, mumps, and rubella (MMR) vaccine:
   a. **Contraindications:**
      • a history of a serious reaction (e.g., anaphylaxis) after a previous dose of MMR vaccine or to an MMR vaccine component. For a list of vaccine components, go to www.cdc.gov/nip/publications/pink/appendices/a/excipient.pdf
      • pregnant now or may become pregnant within 1 month
      • known severe immunodeficiency (e.g., hematologic and solid tumors; congenital immunodeficiency; long-term immunosuppressive therapy, or severely symptomatic HIV infection)
   b. **Precautions:**
      • recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product)
      • history of thrombocytopenia or thrombocytopenic purpura
      • moderate or severe acute illness with or without fever
4. 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 speaking patients with a copy of the VIS in their native language; these can be found at www.immunize.org/vis
5. Administer 0.5 mL MMR vaccine SC (23–25g, 5/8–3/4" needle) in the posterolateral section of the upper arm.
6. For adults in need of second doses of MMR, observe a minimum interval of 4 weeks between the first and second doses.
7. 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.
8. 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.
9. Report all adverse reactions to MMR vaccine to the federal Vaccine Adverse Event Reporting System (VAERS) at www.vaers.org or (800) 822-7967. VAERS report forms are available at www.vaers.org

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

Medical Director's signature: _____ Effective date: _____

www.immunize.org/catg.d/p3079pdf • Item #P3079 (10/03)

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To access the current ready-to-copy version of this piece, visit www.immunize.org/catg.d/p3079.pdf

Standing Orders for Administering Pneumococcal Vaccine to Adults

Purpose: To reduce morbidity and mortality from pneumococcal disease by vaccinating all patients 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 may vaccinate patients who meet the criteria below.

Procedure

1. Identify adults in need of vaccination with pneumococcal polysaccharide vaccine (PPV) based on the following criteria:
   a. Age 65 years or older with no or unknown history of prior receipt of PPV
   b. Age 18–64 years with no or unknown history of prior receipt of PPV and any of the following conditions:
      i. chronic cardiovascular disease (e.g., congestive heart failure, cardiomyopathies)
      ii. chronic pulmonary disease (e.g., emphysema or chronic obstructive pulmonary disease [not asthma])
      iii. diabetes mellitus, alcoholism, chronic liver disease (cirrhosis), or cerebrospinal fluid leaks
      iv. functional or anatomic asplenia (e.g., sickle cell disease, splenectomy)
      v. immunosuppressive conditions (e.g., HIV infection, leukemia, congenital immunodeficiency, Hodgkin's disease, lymphoma, multiple myeloma, generalized malignancy)
      vi. immunosuppressive chemotherapy (e.g., alkylating agents, antimetabolites, long-term systemic corticosteroids)
      vii. organ or bone marrow transplantation
      viii. chronic renal failure or nephrotic syndrome
      ix. candidate for or recipient of cochlear implant
2. Identify adults in need of a second and final dose of PPV if five or more years have elapsed since the previous vaccination and the patient is:
   a. Age 65 years or older and received prior PPV vaccination when less than age 65 years
   b. At highest risk for serious pneumococcal infection and/or likely to have a rapid decline in pneumococcal antibody levels (i.e., categories iv.-viii. above)
3. Screen all patients for contraindications and precautions to PPV vaccine.
   a. **Contraindications:** a history of a serious reaction (e.g., anaphylaxis) after a previous dose of PPV or to a vaccine component. For a list of vaccine components, go to www.cdc.gov/nip/publications/pink/appendices/a/excipient.pdf
   b. **Precautions:** a moderate or severe acute illness with or without fever
4. Provide all patients with a copy of the most current federal Vaccine Information Statement (VIS). Although not required by federal law, it is prudent to 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 speaking patients with a copy of the VIS in their native language, if available. These can be found at www.immunize.org/vis
5. Administer 0.5 mL PPV vaccine either IM (22–25g, 1–2" needle) or SC (23–25g, 5/8–3/4" needle).
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 PPV to the federal Vaccine Adverse Event Reporting System (VAERS) at www.vaers.org or by calling (800) 822-7967. VAERS report forms are available at www.vaers.org

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

Medical Director's signature: _____ Effective date: _____

www.immunize.org/catg.d/p3075.pdf • Item #P3075 (06/04)

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(continued on page 10)

Standing Orders for Administering Hepatitis B Vaccine to Adults

Purpose: To reduce morbidity and mortality from hepatitis B virus (HBV) infection by vaccinating all patients 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 may vaccinate patients who meet the criteria below.

Procedure:

1. Identify adults in need of hepatitis B vaccination based on the following criteria:
   a. Persons less than 19 years of age who have not received the vaccine
   b. Age 19 years or older meeting any of the following criteria:
      - having had more than one sex partner in the previous 6 months, a recently acquired sexually transmitted disease, or recent treatment for a sexually transmitted disease
      - male who has had sex with males
      - injection drug user
      - sex partner or household member of a person who is chronically infected with HBV (including an HBsAg-positive adopted child)
      - at occupational risk of infection through exposure to blood or blood-contaminated body fluid (e.g., health care worker, public safety worker, trainee in a health professional or allied health school)
      - client or staff of an institution for the developmentally disabled
      - hemodialysis patient or patient with early renal failure (who will become a dialysis patient)
      - receiving clotting-factor concentrate
      - planning to travel to or live in a high endemic area of the world for more than 6 months and will have close contact with the local population; also short-term travelers who are likely to have contact with blood (e.g., in a medical setting) or sexual contact with residents of areas with high or intermediate levels of endemic disease
      - housed in a long-term correctional facility
2. Screen all patients for contraindications and precautions to hepatitis B vaccine:
   a. **Contraindications:** 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/nip/publications/pink/appendices/a/excipient.pdf.
   b. **Precautions:** a 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. For persons 20 years of age or older, administer 1.0 mL hepatitis B vaccine IM (22–25g, 1–1½" needle) in the deltoid muscle. For persons 19 years of age or younger, administer 0.5 mL hepatitis B vaccine IM (22–25g, 1–1½" needle) in the deltoid muscle.
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 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.org or by calling (800) 822-7967. VAERS report forms are available at www.vaers.org

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

Medical Director's signature: _____ Effective date: _____

www.immunize.org/catg.d/p3076.pdf • Item #P3076 (10/03)

To access the current ready-to-copy version of this piece, visit www.immunize.org/catg.d/p3076.pdf

Standing Orders for Administering Hepatitis A Vaccine to Adults

Purpose: To reduce morbidity and mortality from the hepatitis A virus (HAV) by vaccinating all patients 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 may vaccinate patients who meet the criteria below.

Procedure

1. Identify adults in need of hepatitis A vaccination based on the following criteria:
   a. anticipated travel to country with intermediate or high endemicity for hepatitis A (i.e., all except the United States, Canada, Japan, Australia, New Zealand, and Western Europe)
   b. men who have sex with men
   c. illegal injection drug use
   d. diagnosis of chronic liver disease
   e. diagnosis of a clotting-factor disorder
   f. employment in a research laboratory requiring work with HAV or HAV-infected primates
2. Screen all patients for contraindications and precautions to hepatitis A vaccine:
   a. **Contraindications:** a history of a serious reaction after a previous dose of hepatitis A vaccine or to a hepatitis A vaccine component. For a list of vaccine components, go to www.cdc.gov/nip/publications/pink/appendices/a/excipient.pdf
   b. **Precautions:** a 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). Although not required by federal law, it is prudent to 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 speaking patients with a copy of the VIS in their native language. These can be found at www.immunize.org/vis
4. For patients less than 19 years of age, administer 0.5 mL hepatitis A vaccine and for patients 19 years of age and older, administer 1.0 mL hepatitis A vaccine. Give vaccine IM (22–25g, 1–2" needle) in the deltoid muscle.
5. Provide a subsequent dose of hepatitis A vaccine to complete each patient's 2-dose schedule by observing a minimum interval of 6 months between the first and second 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 A vaccine to the federal Vaccine Adverse Event Reporting System (VAERS) at www.vaers.org or by calling (800) 822-7967. VAERS report forms are available at www.vaers.org

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

Medical Director's signature: _____ Effective date: _____

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Emergency Medical Protocol for Management of Anaphylactic Reactions in Adults

Supplies Needed

- ☐ Aqueous epinephrine USP, 1:1000, in ampules, prefilled syringes, vials of solution, or an Epi-Pen. If an Epi-Pen is to be stocked, at least three adult Epi-Pens (delivering a single dose of 0.3 mg/0.3 mL) should be available whenever adult immunizations are given.
- ☐ Diphenhydramine (Benadryl) injectable (50 mg/mL solution) and oral in 25 or 50 mg tablets
- ☐ Syringes: 1–3 cc, 22–25g, 1"-1½"-2" needles for epinephrine and diphenhydramine (Benadryl)
- ☐ Adult airways (small, medium and large)
- ☐ Sphygmomanometer (adult and extra-large cuffs) and stethoscope
- ☐ Adult size pocket mask with one-way valve
- ☐ Alcohol swabs
- ☐ Tourniquet
- ☐ Tongue depressors
- ☐ Flashlight with extra batteries (for evaluating the mouth and throat)

Signs and Symptoms of Anaphylactic Reaction

Sudden or gradual onset of generalized itching, erythema (redness), or urticaria (hives); angioedema (swelling of the lips, face, or throat); bronchospasm (wheezing); shortness of breath; shock; abdominal cramping; or cardiovascular collapse.

Treatment in Adults

a. If itching and swelling are confined to the injection site where the vaccination was given, observe patient closely for the development of generalized symptoms.
b. If symptoms are generalized, activate the emergency medical system (EMS; e.g., call 911) and notify the on-call physician. This should be done by a second person, while the primary nurse evaluates and manages the patient.
c. Administer (1:1000) aqueous epinephrine IM, 0.01 mL/kg/dose, 0.3 to 0.5 mL (maximum single dose is 0.5 mL)
d. In addition, for systemic anaphylaxis, administer diphenhydramine 50–100 mg orally or 50–100 mg IM (1–2 mg/kg, 100 mg maximum single dose).
e. Monitor the patient closely until EMS arrives. Perform cardiopulmonary resuscitation (CPR), if necessary, and maintain airway. Keep patient in supine position unless he or she is having breathing difficulty. If breathing is difficult, patient's head may be elevated, provided blood pressure is adequate to prevent loss of consciousness. If blood pressure is low, elevate legs. Monitor blood pressure and pulse every 5 minutes.
f. If EMS has not arrived and symptoms are still present, repeat dose of epinephrine every 10–20 minutes for up to 3 doses, depending on patient's response.
g. Record all vital signs, medications administered to the patient, including the time, dosage, response, and the name of the medical personnel who administered the medication, and other relevant clinical information.
h. Notify the patient's primary care physician.

Sources: American Academy of Pediatrics. Passive Immunization. In: Pickering LK, ed. *Red Book: 2003 Report of the Committee on Infectious Diseases.* 26th ed. Elk Grove Village, IL:American Academy of Pediatrics; 2003:63-66.
American Pharmacists Association, Grabenstein, JD. *Pharmacy-Based Immunization Delivery,* 2002.
Got Your Shots? A Providers Guide to Immunizations in Minnesota, Second Edition, Minnesota Department of Health, 2001:80-82.

These standing orders for the medical management of vaccine reactions in adult patients shall remain in effect for patients of the _____ (name of clinic) until rescinded or until _____ (date).

_____ Medical Director's signature

_____ Effective date

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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 for various reactions that may 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 or antipruritic medication.
	Slight bleeding	Apply an adhesive compress over the injection site.
	Continuous bleeding	Lay 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 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.

(see information on page 2)

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New! Essential Immunization Resources from IAC

Dear *VACCINATE WOMEN* reader,

If you've been a cover-to-cover reader of *VACCINATE WOMEN,* you've probably noticed we've changed the contents of this page. Most noticeably, we no longer list or sell individual copies of our print materials. We took this step because of skyrocketing paper costs and substantial increases in copying and mailing expenses. Our readers will continue to be able to download all of our print materials from our website at www.immunize.org/free These materials are still copyright-free and ready for your immediate use.

Now, onto an exciting new development: We've invested in a high-quality CD creator, and will be producing up-to-the-minute CDs containing **all** IAC print materials in ready-to-print format in English, as well as any translations available in Spanish. In addition, the CD will also include **all** the federal Vaccine Information Statements (VISs) available in English and Spanish. We're offering this Essential Immunization Resource as a special thank-you to IAC partners who choose to contribute $75 or more. Please note that any donor, regardless of the size of the donation, will be mailed a set of our 15 most popular print pieces, such as the "Summary of Recommendations for Adult Immunization" and "Screening Questionnaire for Adult Immunization."

Watch this page in future issues of *VACCINATE WOMEN* as we continue to expand our selection of Essential Immunization Resources. Because of the many requests we've received, we're considering adding resources such as screening questionnaires in pads, laminated copies of essential provider pieces, and quick-reference pocket guides.

We hope these changes will better meet your needs for high-quality, user-friendly immunization tools. As always, we value your feedback. Email us at admin@immunize.org or call (651) 647-9009.

Deborah L. Wexler, MD
Executive Director

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Become IAC's partner in eliminating vaccine-preventable diseases!

Deborah L. Wexler, MD
IAC Executive Director

Dear Colleague,

When you think about what's really necessary to deliver immunization services, what comes to mind? Effective vaccines? Well-trained staff? Another requirement is accurate immunization information. If we are to eliminate vaccine-preventable diseases, clinicians and their patients must have sound, practical, user-friendly information. This is what IAC provides.

In today's economy, with nonprofits receiving less support than in the past, IAC is finding it increasingly difficult to continue making information services widely available. In response, we've made a major change to reduce our printing and mailing expenses.

We've dramatically reduced the number of print materials we mail to donors, and instead are making our materials available more economically on a CD-ROM (see page 11 for more information).

These savings on printing and mailing costs, though significant, are not enough to offset the drop in contributions. *We need financial support from readers of VACCINATE WOMEN to sustain our work.*

If IAC is to continue providing you and the broad immunization community with reliable print and electronic information, we need your support. Please become our partner in eliminating vaccine-preventable diseases—*make a generous contribution to IAC today!*

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Deborah L. Wexler, MD
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