



PHYSICIANS' BULLETIN

September 1999

"Focusing on Families as Our Customers"

No. 420

1999-2000 Flu Immunization Recommendations Issued

Note: Medicare B reimburses for influenza vaccines.

The recommended vaccine for the coming flu season contains protection against A/Beijing/262/95-like (H1N1), A/Sydney/5/97-like (H3N2), and B/Beijing/184/93-like hemagglutinin antigens. For the B/Beijing/184/93-like antigen, U.S. manufacturers will use the antigenically equivalent strain B/Yamanishi/166/98 because of its growth properties and because it is representative of currently circulating B viruses. Although the current vaccine can contain one or more antigens used in previous years, immunity declines during the year following vaccination. Therefore, a history of vaccination for the previous season does not preclude the need to be revaccinated.

Influenza vaccine is strongly recommended for anyone ≥6 months of age who, because of age or underlying medical condition, is at increased risk for complications of influenza. Health care workers and others (including household members) in close contact with high-risk groups also should be vaccinated. See groups below.

Groups at Increased Risk

Specifically, the following groups should be encouraged to receive protection:

1. Persons ≥65 years of age (County Health and Human Services will follow California legislative guidelines and provide state-supplied vaccine to persons ≥60 years);

2. Residents of nursing homes and other chronic-care facilities;
3. Adults and children with chronic disorders of the pulmonary or cardiovascular systems, including asthma;
4. Adults and children who have required regular medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies (including anemia) or immunosuppression (including immunosuppression caused by medications);
5. Women who will be in the second or third trimester of pregnancy during the influenza season; and,
6. Children and teenagers (6 months to 18 years) who are receiving long-term aspirin therapy.

High-Risk Persons <65 Years of Age

Despite the numerous demonstrated benefits of influenza vaccination for high-risk persons, it is estimated that less than 30% of high-risk persons under the age of 65 are vaccinated each year. Increasing vaccination coverage among these high-risk groups now is the highest priority for expanding influenza vaccine use.

Groups That Can Transmit Influenza to Persons at High Risk

The following groups also should be

encouraged to receive vaccine:

1. Physicians, nurses and other personnel in both hospital and outpatient care settings;
2. Employees of nursing homes and chronic-care facilities who have contact with patients or residents;
3. Employees of assisted living and other residences for persons in high-risk groups;
4. Providers of home health care to persons at high risk (e.g., visiting nurses, volunteer workers); and,
5. Household members (including children) of persons in high-risk groups.

Other Groups

Because influenza can result in serious illness and complications and because influenza vaccination can result in the production of protective antibody titers, vaccination will benefit many HIV-infected patients, including HIV-infected pregnant women. Many experts consider influenza vaccination safe during any stage of pregnancy. Influenza vaccine does not affect the safety of breastfeeding for mothers or infants. Breastfeeding does not adversely affect immune response and is not a contraindication for vaccination. Influenza vaccine is appropriate for travelers, particularly those planning to travel to the tropics or travel as part of large organized tourist groups any time of the year, and also for persons traveling to the

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Southern Hemisphere from April through September. Persons who provide essential community services should be considered for vaccination to minimize disruption of essential activities during influenza outbreaks. Additionally, anyone who wishes to reduce his or her risk of becoming ill with influenza can be immunized.

Who Should Not Be Immunized

1. Persons known to have anaphylactic hypersensitivity to eggs (see Side Effects below). However, those who also are at higher risk for complications of influenza may benefit from vaccine after appropriate allergy evaluation and desensitization.
2. Adults with acute febrile illnesses usually should not be vaccinated until their symptoms have abated. However, minor illnesses with or without fever should not contraindicate flu vaccine, particularly among children with a mild upper respiratory tract infection or allergic rhinitis.

Side Effects and Adverse Reactions

When educating patients about potential side effects, clinicians should emphasize that: a) influenza vaccine contains only noninfectious killed viruses, it cannot cause influenza; and b) respiratory disease after vaccination is coincidental and unrelated to influenza vaccination. The most frequent side effect of vaccination is soreness at the vaccination site that lasts up to 2 days. These local reactions generally are mild and rarely interfere with the ability to conduct usual daily activities. In addition, two types of systemic reactions have occurred:

- Fever, malaise, myalgia, and other systemic symptoms can occur following vaccination and most often affect persons who have had no exposure to the influenza virus antigens in the vaccine (e.g., young

children). These reactions begin 6 to 12 hours after vaccination and can persist for 1 or 2 days. Recent placebo controlled trials suggest that among elderly persons and healthy young adults, split-virus influenza vaccine is not associated with higher rates of systemic symptoms (e.g., fever, malaise, myalgia, and headache) when compared with placebo injections.

- Immediate, presumably allergic, reactions (such as hives, angioedema, allergic asthma, or systemic anaphylaxis) rarely occur after influenza vaccination. These reactions probably result from sensitivity to some vaccine component, most likely residual egg protein. The protocol for vaccination developed by Murphy and Strunk (*Journal of Pediatrics* 1985; 106:931-3) may be considered for patients with egg allergies and medical conditions that place them at increased risk of influenza infection or its complications.

Timing of Influenza Vaccine Activities

Beginning each September (when vaccine for the upcoming influenza season becomes available) persons at high risk who are seen by health-care providers for routine care or as a result of hospitalization should be offered influenza vaccine. Opportunities to vaccinate persons at high risk for complications of influenza should not be missed.

Physicians should note that the optimal time for organized vaccination campaigns for persons in high-risk groups is the period from the beginning of October through mid-November. In the United States, influenza activity generally peaks between late December and early March. High levels of influenza activity occur infrequently in the contiguous 48 states before December.

Administering vaccine too far in advance of the influenza season should be avoided in facilities, such as nursing homes, because antibody levels might begin to decline within a few months of vaccination. Vaccination programs can be undertaken as soon as current vaccine is available if regional influenza activity is expected to begin earlier than December.

Children <9 years of age who have not been vaccinated previously should receive two doses of vaccine at least 1 month apart to maximize the likelihood of a satisfactory antibody response to all three vaccine antigens. The second dose should be administered before December, if possible. Vaccine should be offered to both children and adults up to and even after influenza virus activity is documented in a community.

Amantadine and Rimantadine, Antiviral Agents for Influenza A

These two chemically related drugs interfere with the replication cycle of type A (but not type B) influenza

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The *Physicians' Bulletin* is published on an as-needed basis by the County of San Diego Health and Human Services Agency to provide updated information on health issues of concern to San Diego County's medical community.

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Recommended Influenza Vaccine* Dose By Age, 1999-2000

Age Group #	Product †	Dosage	No. of Doses	Route §
6-35 months	Split virus only	0.25 mL	1 or 2 ¶	IM **
3-8 years	Split virus only	0.50 mL	1 or 2 ¶	IM
9-12 years	Split virus only	0.50 mL	1	IM
>12 years	Whole or split virus	0.50 mL	1	IM

* Contains 15µg each of A/Beijing/262/95-like (H1N1), A/Sydney/5/97-like (H3N2), and B/Beijing/184/93-like hemagglutinin antigens in each 0.5mL. For the B/Beijing/184/93-like antigen, U.S. manufacturers will use the antigenically equivalent strain B/Yamanishi/166/98 because of its growth properties. Manufacturers include: Connaught Laboratories, Inc. (Fluzone® whole or split); Medeva Pharma, Ltd., (Fluvirin™ purified surface antigen vaccine); Parkedale Pharmaceuticals, Inc. (Fluogen® split); and Wyeth-Ayerst Laboratories (Flushield™ split). For further product information call Connaught, (800) 822-2463; Medeva, (800) 234-5535; Parkedale, (888) 358-6436; or Wyeth-Ayerst, (800) 358-7443.

Simultaneous administration at separate sites of influenza, pneumococcal, Td or childhood vaccines should not lessen immunogenicity or enhance adverse reactions.

† Because of the lower potential for causing febrile reactions, only split-virus vaccines should be used for children. They may be labeled as "split," "subvirion," or "purified-surface-antigen" vaccine. Immunogenicity and side effects of split- and whole-virus vaccines are similar among adults when administered at the recommended dosage.

§ For adults and older children, the recommended site of vaccination is the deltoid muscle. The preferred site for infants and young children is the anterolateral aspect of the thigh.

¶ Two doses administered at least 1 month apart are recommended for children <9 years of age who are receiving influenza vaccine for the first time.

** Intramuscular.

viruses. They can be used prophylactically or therapeutically. As with all drugs, they may cause adverse reactions in some persons.

Prophylactic Use: When administered prophylactically to healthy adults or children before and throughout the epidemic period, both drugs are approximately 70-90 percent effective in preventing illness caused by naturally occurring strains of type A influenza viruses.

Therapeutic Use: In otherwise healthy adults, amantadine and rimantadine can reduce the severity and duration of signs and symptoms of influenza A illness when administered within 48 hours of illness onset.

The current guidelines for antiviral agents, including a recommended dosage chart, are in the April 30, 1999, *Morbidity and Mortality Weekly Report (MMWR)* on influenza. See "Resources" below.

FDA recently approved a new antiviral inhalant, zanamivir, for use in decreasing symptoms with influenza A and B in uncomplicated cases. It

may be available by November, 1999. Nasal inhalant vaccine, on the other hand, will not be available this season.

Influenza- and Immunization-Related Resources

The Centers for Disease Control & Prevention's 1999 report, *Prevention & Control of Influenza, Recommendations of the Advisory Committee on Immunization Practices (ACIP)*, (*MMWR* Volume 48, No. RR-4) includes information on the disease, vaccine, and related issues, such as the use (including a recommended dosage chart) of antiviral agents amantadine and rimantadine in preventing and treating influenza. **For a copy of the *Prevention & Control of Influenza* report, please call (619) 692-8661.**

The following is a list of World Wide Web sites for accessing information and promotional materials on influenza, influenza vaccine and related topics:

www.cdc.gov/ncidod/diseases/flu/fluivirus.htm: In addition to the CDC's influenza reports mentioned

above, this site contains pneumococcal vaccine educational materials and weekly influenza surveillance reports beginning in October. This site has a wide variety of links to other sites with fact sheets for providers and patients.

www.cmri-ca.org/flu.shtml: California Medical Review, Inc., the Medicare quality assurance organization, provides specific information on Medicare billing, including roster billing. "Immunization Tip Sheets for Providers" detail how to promote and organize flu and pneumococcal vaccines in different settings. Free pamphlets and posters for California Medicare providers can be ordered via Web, phone (877-363-5555) or fax (877-364-5555). There are also many links to other sites with pertinent information.

www.sdchip.org: This site contains information about Community Health Improvement Partners (CHIP), a collaboration of health care organizations, providers and community groups working in San Diego County to increase awareness of and respon-

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siveness to community health needs. In the coming weeks, the site will promote the 1-800 number for influenza and pneumococcal clinic information. Also, the site will have downloadable flu and pneumococcal information in English and 7 other languages, and links to other immunization-related sites.

Influenza Vaccine Campaign Offers Opportunity to Provide Other Needed Adult Vaccines

Seniors and others at high risk of complications from influenza visit medical care providers each fall to receive influenza vaccine. Medical care providers should use this opportunity to evaluate these adults for other needed vaccines as well.

Pneumococcal polysaccharide vaccine is effective against the 23 most common strains of *Streptococcus Pneumoniae*, a bacterial pathogen that causes illness and death among the elderly and among persons who have certain medical conditions. Annual cases of invasive pneumococcal infections in the United States include 500,000 cases of pneumonia, 3000 cases of meningitis and 50,000 cases of bacteremia. The pneumococcal vaccine is recommended for persons age 65 and over. It is also recommended for anyone age 2 years and over with chronic illness, asplenia, or immune compromising conditions. Complete information and the "one time revaccination recommendations" are available in the Centers for Disease Control & Prevention's April, 1997 report, *Prevention of Pneumococcal Disease, Recommendations of the Advisory Committee on Immunization Practices (ACIP)*. This document is available on the CDC website noted in [Influenza and Immunization Related Resources](#) or by calling the Immunization Program at 619 692-8661.

Tetanus-diphtheria (Td) vaccine status should also be reviewed. The combination vaccine, Td, is the

vaccine recommended. Plain "Tetanus Toxoid" without the diphtheria component is seldom indicated. Td boosters are given every ten years once the primary series of three doses has been received. Some seniors may have never received even the basic series since routine Td immunization began about 50 years ago.

Measles, mumps and rubella combination vaccine (MMR) is advised for anyone born since 1957 and two doses are advised for most persons.

Varicella vaccine is also advised for those who do not have a history of chickenpox disease.

Hepatitis B vaccine is recommended for those at risk.

Physicians are urged to capitalize on office visits by those at risk for influenza to provide all needed vaccines. To receive a free chart on adult vaccine recommendations, call the Immunization Program at (619) 692-8661.

Strategies for Physicians and Health Care Providers

Vaccines are a vital part of preventive care and should be routinely done by providers in office/outpatient facilities providing ongoing care. Successful vaccination programs combine:

- 1) education for health care workers;
- 2) education and publicity targeted toward the potential recipients;
- 3) a plan for identifying persons at high risk, usually by medical record review; and
- 4) efforts to remove administrative and financial barriers.

Staff in physicians' offices, community health centers, employee health clinics, hemodialysis centers, hospital specialty-care clinics and outpatient rehabilitation programs should identify and label the medical records

of patients who should receive vaccine. Patients in high-risk groups who do not have regularly scheduled visits during the fall should be reminded by mail or telephone of the need for vaccination.

Staff in acute health care facilities such as emergency rooms and walk-in clinics should offer vaccine to persons in high-risk groups or provide written information on why, where, and how to obtain the vaccine.

Fliers containing information about sites offering low cost vaccines and the importance of flu vaccine are available calling the Immunization Program at (619) 692-8661.

Local Immunization Survey Results

In July, 1998, a countywide adult survey was conducted by the County Immunization Program to evaluate local immunization coverage rates for our senior population aged 65 years and older. Using a random digit dial (RDD) survey methodology, a total of 763 eligible households were identified and 511 surveys were completed (252 households either declined to participate or could not complete the interview). The response rate was 67%.

The study found that in San Diego County, reported rates of immunization against influenza (77%), pneumococcal disease (67%) and appropriate tetanus immunization (60%) were higher than the reported percentages for California and the nation as a whole. (see chart on page 5)

The average age of respondents was 75 years (range 65-93 years) with an age distribution that matches that of the County population as a whole. More women (59.9%, 306/511) responded than men (40.1%, 205/511), which over-represents females compared to 1997 estimates for San Diego County (1.03:1 women:men).

The vast majority of respondents, 98.8%, stated that they had a regular

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doctor or were currently enrolled in a health plan.

The distribution of the survey sample by race/ethnicity was similar, though not identical, to that of the county for individuals over age 65, with 84% (417/495) white, 6.9% (34/495) Hispanic, 1.8% (9/495) black and 8% (44/495) other groups.

Influenza Vaccine: The majority (88.6%, 451/509) of the respondents stated that they had received at least one in-fluenza vaccination in their lifetime. Seventy-seven percent of respondents (384/500) specified having received an influenza vaccine within the last 12 months. The majority (65%, 324/498) indicated that they had received an influenza vaccine every year for the past five years.

The most frequently cited reason for not getting flu vaccine during past 5 years or never having flu vaccine was that the respondent felt healthy, never got sick and felt no need for the vaccine.

Ninety-four percent of respondents (476/505) stated that their health plans or doctors offered the flu vaccines. Of these, 78% (373/476) indicated that they had no copay or fee for the

flu vaccines. However, 21.6% (96/445) reported that they went somewhere other than to their regular doctor or health plan to get the vaccines. Of those who went elsewhere to be immunized against influenza, 48.5% (47/97) reported going to public health centers or clinics in the community, and 21.6% (21/97) to health fairs. Reasons for going elsewhere were mostly related to issues of convenience (47.3%, 44/93), with “too expensive” (16.1%, 15/93), and “went with friend or family” (15.1%, 14/93) as the second and third most frequently cited motivations.

Only 57% percent of respondents (288/508) had ever received a personal recommendation to get the flu shot; these most frequently named their doctors and health plans as the source of the recommendation. Survey respondents felt the most useful source of verbal information about flu shots was a talk with their doctor (56.7%, 334/589).

Pneumococcal vaccine: The majority (67.0%, 322/480) of the respondents stated that they had received a pneumococcal immunization. Seventy-five percent (377/505) stated that their health plan or doctor offered the

pneumococcal vaccine. Of those, seventy-eight percent (294/376) indicated that they had no co-pay requirement or fee for the pneumococcal vaccine, and the majority stated that their doctor had recommended that they receive the vaccine (68.7%, 226/329). Twenty-nine percent of respondents (97/329) stated that they had received the pneumococcal vaccine at their own request.

Tetanus vaccine: The majority (82.9%, 405/488) of respondents reported having been immunized against tetanus; however, only 60.0% (275/458) reported having received any tetanus vaccine within the last ten years.

Seventy-one percent of respondents (359/505) stated that their health plans or doctors offered the tetanus vaccine. Of those that reported having received tetanus vaccine, 80% (288/359) indicated that they had no co-pay requirement or fee for this vaccine. The majority of responses to the question about the reason for getting the shot were that it was part of the responders’ routine health care (45.3%, 181/400). Injury and travel were the second (34%, 136/400) and third (11.8%, 47/400) most common answers.

