

Policy:

In the absence of a shortage of influenza vaccine supply, the Ventura County Health Care Plan (VCHCP) will provide for free annual influenza vaccinations to its members. For continuity of care purposes, it is beneficial for those 65 and older and/or with high risk medical conditions (see list below) to obtain their flu vaccine from their primary care physicians. All VCHCP s may elect to obtain their flu vaccines from their PCPs or at specially designated flu shot clinics.

Procedure:

VCHCP will inform plan members in advance of the times and places of the free flu shot clinics. Certain of the free flu shot clinics are set aside for County employees, while others times are provided for plan members. The number of clinics offered will depend on the available supply of influenza vaccine. Locations of the clinics will be County-wide, with a majority of sites at VCMC Ambulatory Care Clinics. Individuals seeking this service may be requested to show a County of Ventura identification badge or a VCHCP member identification card at the time of service.

Target Groups for Vaccination

Persons at Increased Risk for Complications

Vaccination with inactivated influenza vaccine is recommended for the following persons who are at increased risk for complications from influenza:

- Persons aged ≥ 65 years
- Residents of nursing homes and other chronic-care facilities that house persons of any age who have chronic medical conditions
- Adults and children who have chronic disorders of the pulmonary or cardiovascular systems, including asthma (hypertension is not considered a high-risk condition)
- 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, or immunosuppression (including immunosuppression caused by medications or by human immunodeficiency virus [HIV])
- Adults and children who have any condition (e.g., cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders) that can compromise respiratory function or the handling of respiratory secretions or that can increase the risk for aspiration

- Children and adolescents (aged 6 months to 18 years) who are receiving long-term aspirin therapy and, therefore, might be at risk for experiencing Reye syndrome after influenza infection
- Women who will be pregnant during the influenza season
- Children aged 6 to 23 months
- Persons who are morbidly obese (body-mass index of 40 or greater)
- Persons who have chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, hematological or metabolic disorders (including diabetes mellitus)

Persons Aged 50 to 64 Years

Vaccination is recommended for persons aged 50 to 64 years because this group has an increased prevalence of persons with high-risk conditions.

Persons Who Can Transmit Influenza to Those at High Risk

- Persons who are clinically or subclinically infected can transmit influenza virus to persons at high risk for complications from influenza. Decreasing transmission of influenza from caregivers and household contacts to persons at high risk might reduce influenza-related deaths among persons at high risk

In addition, because children aged 0 to 23 months are at increased risk for influenza-related hospitalization, vaccination is recommended for their household contacts and out-of-home caregivers, particularly for contacts of children aged 0 to 5 months, because influenza vaccines have not been approved by the U.S. Food and Drug Administration (FDA) for use among children aged <6 months.

Health-Care Workers

All health-care workers should be vaccinated against influenza annually. Physicians, nurses, and other workers in both hospital and outpatient-care settings, including medical emergency-response workers (e.g., paramedics and emergency medical technicians), should be vaccinated, as should employees of nursing home and chronic-care facilities who have contact with patients or residents.

Pregnant Women

Because of the increased risk for influenza-related complications, women who will be pregnant during the influenza season should be vaccinated. Vaccination can occur in any trimester. One study of influenza vaccination of approximately 2,000 pregnant women demonstrated no adverse fetal effects associated with influenza vaccine.

Healthy Young Children

Because children aged 6 to 23 months are at substantially increased risk for influenza-related hospitalizations, ACIP recommends vaccination of all children in this age group.

ACIP continues to recommend influenza vaccination of persons aged ≥ 6 months who have high-risk medical conditions.

The current inactivated influenza vaccine is not approved by FDA for use among children aged < 6 months, the pediatric group at greatest risk for influenza-related complications. Vaccinating their household contacts and out-of-home caregivers might decrease the probability of influenza infection among these children.

Persons Infected with HIV

Deterioration of CD4+ T-lymphocyte cell counts or progression of HIV disease have not been demonstrated among HIV-infected persons after influenza vaccination compared with unvaccinated persons. Limited information is available concerning the effect of antiretroviral therapy on increases in HIV RNA levels after either natural influenza infection or influenza vaccination. Because influenza can result in serious illness and because vaccination with inactivated influenza vaccine can result in the production of protective antibody titers, vaccination will benefit HIV-infected persons, including HIV-infected pregnant women.

Breastfeeding Mothers

Influenza vaccine is safe for mothers who are breastfeeding and their infants. Breastfeeding does not adversely affect the immune response and is not a contraindication for vaccination.

Travelers

The risk for exposure to influenza during travel depends on the time of year and destination. In the tropics, influenza can occur throughout the year. In the temperate regions of the Southern Hemisphere, the majority of influenza activity occurs during April through September. In temperate climate zones of the Northern and Southern Hemispheres, travelers also can be exposed to influenza during the summer, especially when traveling as part of large organized tourist groups (e.g., on cruise ships) that include persons from areas of the world where influenza viruses are circulating. Persons at high risk for complications of influenza who were not vaccinated with influenza vaccine during the preceding fall or winter should consider receiving influenza vaccine before travel if they plan to:

- Travel to the tropics
- Travel with organized tourist groups at any time of year
- Travel to the Southern Hemisphere during April through September

General Population

In addition to the groups for which annual influenza vaccination is recommended, physicians should administer influenza vaccine to any person who wishes to reduce the likelihood of becoming ill with influenza or transmitting influenza to others should they become infected (the vaccine can be administered to children aged ≥ 6 months),

depending on vaccine availability. Persons who provide essential community services should be considered for vaccination to minimize disruption of essential activities during influenza outbreaks. Students or other persons in institutional settings (e.g., those who reside in dormitories) should be encouraged to receive vaccine to minimize the disruption of routine activities during epidemics.

Persons Who Should Not Be Vaccinated with Inactivated Influenza Vaccine

Children younger than 6 months of age should not receive influenza vaccination.

Inactivated influenza vaccine should not be administered to persons known to have anaphylactic hypersensitivity to eggs or to other components of the influenza vaccine without first consulting a physician. Persons with acute febrile illness usually should not be vaccinated until their symptoms have abated. However, minor illnesses with or without fever do not contraindicate use of influenza vaccine, particularly among children with mild upper-respiratory-tract infection or allergic rhinitis.

Dosage

Dosage recommendations vary according to age group. Among previously unvaccinated children aged <9 years, 2 doses administered ≥ 1 month apart are recommended for satisfactory antibody responses. If possible, the second dose should be administered before December. If a child aged <9 years receiving vaccine for the first time does not receive a second dose of vaccine within the same season, only 1 dose of vaccine should be administered the following season. Two doses are not required at that time. Among adults, studies have indicated limited or no improvement in antibody response when a second dose is administered during the same season. Even when the current influenza vaccine contains one or more antigens administered in previous years, annual vaccination with the current vaccine is necessary because immunity declines during the year after vaccination. Vaccine prepared for a previous influenza season should not be administered to provide protection for the current season. Because of lack of vaccine efficacy data, ACIP does not recommend that a child receiving influenza vaccine for the first time be given the first dose of vaccine in the spring, followed by the second dose in the autumn of the same year.

It takes 1 to 2 weeks after receiving the vaccination for protective antibodies to form. Influenza vaccines are 70 to 90 % effective in preventing influenza among healthy adults. Among elderly persons or people with chronic conditions, the vaccine may be less effective in preventing disease than in preventing serious complications and death.

For all children, the second dose of a recommended 2-dose series should be administered 4 weeks or more after the initial dose (ACIP, 2010).

Split-virus vaccine is recommended for children younger than 12 years of age; the recommended vaccine dose is 0.25 ml for children aged 6 to 35 months and 0.5 ml for children aged greater than 3 years. Children less than 9 years of age who have not been

vaccinated previously should receive 2 doses of vaccine at least 1 month apart. A 0.5-ml dose of whole or split-virus vaccine is recommended for adolescents and adults.

The FDA has approved a nasal-spray influenza vaccine (FluMist) jointly developed by MedImmune Vaccines Inc. and Wyeth Vaccines. The nasal-spray influenza vaccine is made from a cold-adapted live attenuated virus that is sprayed as an aerosol from a syringe into both nostrils. The FDA originally approved the nasal-spray influenza vaccine only for healthy people ages 5 to 49 years of age, a group for whom influenza vaccination is considered elective. On September 19, 2007, the FDA approved expanding the population for use of the nasal influenza vaccine FluMist to include children between the ages of 2 and 5 years. The FDA currently recommends that individuals considered at high risk for severe cases of the illness -- including those older than age 50, infants ages 6 to 23 months, and patients with chronic conditions such as asthma or diabetes -- continue to receive the injectable version of the vaccine.

The Advisory Committee on Immunization Practices (ACIP) (CDC, 2003) has concluded that nasal-spray influenza vaccine is an acceptable option for persons at average risk for influenza. The ACIP has stated that persons at high risk of influenza should not be immunized with the nasal-spray influenza vaccine. Clinical studies are currently underway to assess the safety and effectiveness of this live attenuated virus vaccine in persons at increased risk of influenza.

Preservative-free influenza vaccine (e.g., FluZone, Aventis Pasteur, Inc. Swiftwater, PA; Afluria, CSL Biotherapies, King of Prussia, PA) does not contain the thimerosal, a mercury-containing preservative. Standard thimerosal-preserved influenza vaccines contain trace amounts of mercury (AAP, 2003). The American Academy of Pediatrics, the American Academy of Family Physicians, the Advisory Committee on Immunization Practices and the U.S. Public Health Service has issued a joint statement advising the removal of thimerosal-containing vaccines from vaccines routinely recommended for infants (AAP, 2000). The joint statement explains that "[w]hile there was no evidence of any harm caused by low levels of thimerosal in vaccines and the risk was only theoretical, this goal was established as a precautionary measure. There is public concern about the health effects of mercury exposure of any sort, and the elimination of mercury from vaccines was judged a feasible means of reducing an infant's total exposure to mercury in a world where other environmental sources of exposure are more difficult or impossible to eliminate (e.g., certain foods)." Other persons who are sensitive to thimerosal should avoid vaccines containing this preservative. Furthermore, the U.S. Public Health Service recommended efforts be made to eliminate or reduce the thimerosal content in vaccines as part of an over-all strategy to reduce mercury exposures from all sources and ACIP and other federal agencies and professional medical organizations continue to support efforts to provide thimerosal preservative-free vaccine options (ACIP, 2008).

Side Effects and Adverse Reactions

When educating patients regarding potential side effects, clinicians should emphasize that 1) inactivated influenza vaccine contains noninfectious killed viruses and cannot cause influenza; and 2) coincidental respiratory disease unrelated to influenza vaccination can occur after vaccination

A. Attachments: None

B. Reviewers: Pat Neumann, & Richard Ashby MD _____ **Date:** Sept 1999

Reviewed/Revised: Cynthia Wilhelmy, MD _____ **Date:** Oct 2005

Committee Review: UM on 10-24-05 QA on 11-15-05

Reviewed/Archived: Albert Reeves, MD _____ Date: Nov 1, 2011

Committee Review: UM on 11/10/11 & QA on 11/22/11

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