State of Alaska Epidemiology **Bulletin**

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Bulletin No. 21 September 29, 2006

# 2006-07 Influenza Vaccine: Indications & Administration

## INFLUENZA VACCINE RECOMMENDATIONS

The Advisory Committee on Immunization Practices (ACIP) recommends annual influenza vaccination for persons who are at increased risk for severe illness or complications from influenza, as well as persons who live with or care for persons at high risk for influenza-related complications.[1]

**Table 1: Persons for Whom Annual Vaccination is Recommended**

- Children 6 – 59 months of age
- Women who will be pregnant during the influenza season
- Persons ≥50 years of age
- Children and adolescents (6 months – 18 years of age) who are receiving long-term aspirin therapy and, therefore, might be at risk for experiencing Reye syndrome after influenza infection
- 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 immunodeficiency (including immunodeficiciency caused by medications or by Human Immunodeficiency Virus)
- 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
- Residents of nursing homes and other chronic-care facilities that house persons of any age who have chronic medical conditions
- Persons who live with or care for persons at high risk for influenza-related complications, including healthy household contacts and caregivers of children 0 – 59 months of age
- Health care workers

Additionally, healthcare providers should administer influenza vaccine to any person aged ≥6 months who wishes to reduce the likelihood of becoming ill with influenza or transmitting influenza to others should they become infected. 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., dormitory residents) should be encouraged to receive vaccine to minimize the disruption of routine activities during epidemics.

## PERSONS WHO SHOULD NOT BE VACCINATED

- Persons known to have anaphylactic hypersensitivity to eggs or other components of influenza vaccine.
- Persons with moderate to severe acute febrile illness. (Minor illnesses with or without fever do not contraindicate influenza vaccine.)

## TYPES OF INFLUENZA VACCINE

Both trivalent inactivated influenza vaccine (TIV) and live, attenuated influenza vaccine (LAIV) are available in the U.S. **During the 2006-2007 season, the Alaska Immunization Program will not be providing LAIV.** Both vaccines include the same influenza antigens, and both initially are grown in embryonated hens eggs. For information on the appropriate use of LAIV, providers should consult the July 28, 2006 *MMWR* and the package insert.[1, 2]

## INFLUENZA VACCINE FORMULATIONS/ PRESENTATIONS

During 2006-2007 influenza vaccines will be available from several different manufacturers and in different formulations. Providers should carefully check the vaccine they are using to ensure the product age group indication includes the age of the person being immunized. (See Table 2.) A chart outlining the differences between vaccine types (including photos of each manufacturer's packaging) is available at: http://www.epi.hss.state.ak.us/id/influenza/fluinfo/FluVaxAgeChart.pdf.

## INFLUENZA VACCINE SUPPLY AND TIMING

The annual supply of influenza vaccine and the timing of its distribution cannot be guaranteed in any year. Currently vaccine manufacturers are projecting ~100 million doses will be available during the 2006 – 07 influenza season, and no vaccine shortages are anticipated. However, vaccine manufacturers will be releasing substantial portions of inactivated vaccine late in the influenza season, resulting in the possibility of delays and inconsistent vaccine availability among providers.

Immunization of persons who are at greatest risk for developing complications (Table 1) from influenza remains a priority. However, when vaccine is available, providers should vaccinate any person wishing to reduce the likelihood of becoming ill or transmitting influenza to others. Because peak influenza activity in the United States usually occurs in February, vaccination in November or December is still beneficial. Generally, a person develops protection approximately two weeks after receiving influenza vaccine.

## INFLUENZA SURVEILLANCE

We encourage health care providers to obtain specimens for viral culture from individuals with symptoms compatible with influenza. Only virus isolated by culture can provide specific information about circulating influenza subtypes and strains, and detect novel strains of influenza that may pose a pandemic threat. Viral culture testing is free-of-charge at the State Public Health Laboratory in Fairbanks (907-474-7017).

**References:**

1 Prevention and Control of Influenza. Centers for Disease Control and Prevention, MMWR Recommendations and Reports, July 28, 2006/ Vol. 55 (RR-10); 1-42. Available at: http://www.cdc.gov/mmwr/PDF/rr/rr5510.pdf.

2 Package Insert (Circular), Influenza Virus Vaccine Live, Intranasal, FluMist®, 2006 – 2007 Formula. MedImmune Vaccines, Inc. Available at: http://www.medimmune.com/pdf/products/flumist_pi.pdf

**Table 2: Approved Influenza Vaccines for Different Age Groups – United States, 2006 – 2007 Season**

| Vaccine* | Brand Name (manufacturer) | Dose/Presentation | Age Group | Contains Thimerosal Preservative | # of Doses | Route |
|---|---|---|---|---|---|---|
| TIV | **Fluzone®** (sanofi) | 0.25 mL pre-filled syringe | 6 – 35 mos | no | 1 or 2+ | Intramuscular§ |
| | | 0.5 mL pre-filled syringe | ≥36 mos | no | | |
| | | 0.5 mL single dose vial | ≥36 mos | no | | |
| | | 5.0 mL multi-dose vial | ≥6 mos | yes | | |
| TIV | **Fluvirin®** (Novartis/Chiron) | 5.0 mL multi-dose vial | ≥4 yrs | yes | 1 or 2+ | Intramuscular§ |
| TIV | **Fluarix®** (GlaxoSmithKline) | 0.5 mL pre-filled syringe | ≥18 yrs | no | 1 | Intramuscular§ |
| LAIV | **FluMist®** (MedImmune) | 0.5 mL sprayer | 5 – 49 yrs | no | 1 or 2¶ | Intranasal** |

* TIV – Trivalent Inactivated Influenza Vaccine LAIV – Live Attenuated Influenza Vaccine
A 0.5-mL dose contains 15 µg each of *A/New Caledonia/20/1999 (H1N1)*-like, *A/Wisconsin/67/2005 (H3N2)*-like, and *B/Malaysia/2506/2004*-like Shanghai/361/2002-like antigens. For the *A/Wisconsin/67/2005*-like antigen, manufacturers may use the antigenically equivalent *A/Hiroshima/52/2005* virus, and for the *B/Malaysia/2506/2004*-like antigen, manufacturers may use the antigenically equivalent *B/Ohio/1/2005* virus.

\+ Two doses administered ≥1 month apart are recommended for children aged 6 months – <9 years of age who are receiving influenza vaccine for the first time.

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

¶ Two doses administered at least 6 weeks apart are recommended for children aged 5 – <9 years who are receiving influenza vaccine for the first time.

** One dose equals 0.5 mL, divided equally between each nostril.