State of Alaska Epidemiology Bulletin

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Influenza Vaccine Indications and Administration for the 2007–08 Season

Influenza Vaccine Recommendations
Influenza vaccination is the most effective method for preventing influenza virus infection and its potentially severe complications.[1] The majority of adults develop antibody protection against influenza virus infection within 2 weeks after vaccination. Although immunization efforts focus primarily on vaccination of target groups, including persons at risk for influenza complications and contacts of those persons (Table 1), *influenza vaccine may be administered to any person aged ≥6 months to reduce the likelihood of becoming ill with influenza or transmitting influenza to others.* If the vaccine supply is limited, priority groups for vaccination may be developed.

Table 1. Target Groups for Whom Annual Vaccination is Recommended

- All children aged 6–59 months (i.e., 6 months–4 years)
- All persons aged ≥50 years
- Children and adolescents (aged 6 months–18 years) receiving long-term aspirin therapy who therefore might be at risk for experiencing Reye syndrome after influenza virus infection
- Women who will be pregnant during the influenza season
- Adults and children who have chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, hematological or metabolic disorders (including diabetes mellitus)
- Adults and children who have immunosuppression, including immunosuppression 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
- Health care personnel
- Healthy household contacts (including children) and caregivers of children aged <5 years and adults aged ≥50 years, with particular emphasis on vaccinating contacts of children aged <6 months
- Healthy household contacts (including children) and caregivers of persons with medical conditions that put them at higher risk for severe complications from influenza

Primary Changes and Updates in ACIP 2007 Recommendations
Principal changes include:

- Administer 2 doses of vaccine to children aged 6 months to 8 years who were previously unvaccinated or who received only one dose in their first year of vaccination;
- Health care administrators should include vaccination of health care personnel (HCP) as a quality assurance measure and implement policies to encourage HCP vaccination;
- Offer vaccination throughout the influenza season.

Persons Who Should Not Be Vaccinated

- Persons known to have anaphylactic hypersensitivity to eggs or other components of influenza vaccine (see manufacturer package inserts);
- Persons with moderate to severe acute febrile illness usually should avoid vaccination until their symptoms have abated. (Minor illnesses with or without fever do not contraindicate use of influenza vaccine.)

Types of Influenza Vaccine
Trivalent inactivated influenza vaccine (TIV) and live, attenuated influenza vaccine (LAIV) are available in the United States. Both types of vaccine are efficacious, include the same influenza antigens, and are initially grown in eggs. **During the 2007–08 season, the Alaska Immunization Program will not provide LAIV.** For information on the appropriate use of LAIV, see the July 13, 2007 *MMWR*.[1]

Influenza Vaccine Formulations/ Presentations
During the 2007–08 season, influenza vaccines will be available from several different manufacturers and in different formulations. Health care providers should carefully check the vaccine they use to ensure that the product age group indication includes the age of the person being immunized (Table 2).

Timing of Influenza Vaccination
In any given year, the optimal time to vaccinate patients cannot be determined because influenza seasons vary in their timing and duration. In the United States, localized outbreaks can occur as early as October; however, peak activity has not occurred until January or later for most (>80%) influenza seasons since 1976.

Health care providers should begin offering vaccination soon after vaccine becomes available (preferably by October), and should continue throughout the season. Vaccine administered in December or later, even if influenza activity has already begun, is likely to be beneficial. Because the availability of vaccine in any location cannot be ensured consistently in early fall, persons and institutions planning substantial organized vaccination campaigns should schedule these events after at least mid-October.

Influenza Surveillance
We encourage health care providers to submit clinical specimens from persons with symptoms compatible with influenza to the Alaska State Virology Laboratory (907-474-7017) for free viral culture. 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.

Reference:

1. Prevention and Control of Influenza. Centers for Disease Control and Prevention, MMWR Recommendations and Reports, July 13, 2007/ Vol. 56 (RR-6); 1-542. Available at: http://www.cdc.gov/mmwr/PDF/rr/rr5606.pdf

***A press release will be forthcoming when vaccine is available to the public.**

Table 2. Approved Influenza Vaccines for Different Age Groups — United States, 2007–08 Season

Vaccine*	Brand Name (manufacturer)	Presentation	Age Group	Thimerosal Mercury Content (µg Hg/0.5 mL dose)	# of Doses	Route
TIV	**Fluzone®** (Sanofi Pasteur)	0.25 mL prefilled syringe	6–35 mos	0	1 or 2†	Intramuscular§
		0.5 mL prefilled syringe	≥36 mos	0		
		0.5 mL single dose vial	≥36 mos	0		
		5.0 mL multidose vial	≥6 mos	25		
TIV	**Fluvirin®** (Novartis)	5.0 mL multidose vial	≥4 yrs	24.5	1 or 2†	Intramuscular§
TIV	**Fluarix®** (GlaxoSmithKline)	0.5 mL prefilled syringe	≥18 yrs	<1.0	1	Intramuscular§
TIV	**FluLuval™** (GlaxoSmithKline)	5.0 mL multidose vial	≥18 yrs	25	1	Intramuscular§
LAIV	**FluMist®¶** (MedImmune)	0.2 mL sprayer	5–49 yrs	0	1 or 2**	Intranasal

* TIV: Trivalent Inactivated Influenza Vaccine. LAIV: Live Attenuated Influenza Vaccine.
A 0.5 mL dose of TIV contains 15 µg each of *A/Solomon Islands/3/2006 (H1N1)*-like, *A/Wisconsin/67/2005 (H3N2)*-like, and *B/Malaysia/2506/2004*-like antigens.

† Two doses administered at least 1 month apart are recommended for children aged 6 months–8 years who are receiving TIV for the first time. Those who received only 1 dose in their first year of vaccination should receive 2 doses in the following year.

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

¶ FluMist dosage and storage have *changed*: FluMist is now shipped and should be stored at 35°F-46°F (2°C-8°C). The dose is 0.2 mL, divided equally between each nostril.

**Two doses administered at least 6 weeks apart are recommended for children aged 5–8 years who are receiving LAIV for the first time. Those who received only 1 dose in their first year of vaccination should receive 2 doses in the following year.