



## PREVENTION OPPORTUNITIES UNDER THE BIG SKY

### INFLUENZA VACCINE: Montanans, Including Health Care Workers---Get Vaccinated

Influenza is a highly infectious respiratory disease which can cause serious illness for people of any age. Vaccination is the primary method for preventing influenza and its complications. This issue of *Montana Public Health* provides information about this year's vaccine and who should be vaccinated.

**The 2007-2008 Influenza Vaccine:** This year's vaccine contains three strains of influenza virus. The H<sub>1</sub>N<sub>1</sub> strain is new in this year's vaccine while the H<sub>3</sub>N<sub>2</sub> and B strains were also in the 2006-2007 vaccine. Four manufacturers produce FDA-approved vaccine; three provide an inactivated virus vaccine that is administered intramuscularly while the fourth provides a live attenuated vaccine that is administered intranasally. (Table 1)

**Who should be vaccinated?** Anyone older than six months of age should be vaccinated. (Table 2) Immunization providers should offer influenza vaccine and schedule immunization clinics throughout the influenza season (October – May). It is especially important for persons who work in health care settings to be vaccinated.

**Why are we emphasizing vaccinations for health care workers?** Vaccination of a health care worker not only protects the worker, but also protects other health care workers, patients, family members, and other close contacts of the worker. Vaccinating health care workers decreases mortality in nursing homes approximately 40% and staff illness and absenteeism about 50%<sup>(1,2)</sup> Despite this, less than half of health care workers in the U.S. have been vaccinated<sup>(2)</sup> and only 63% of health care personnel in Montana long-term care facilities reported being vaccinated in 2006<sup>(3)</sup>. We urge physicians and other health care workers to set a standard for all Montanans: Get vaccinated. Administrators of health care settings should obtain a signed statement from health care workers who decline vaccination to verify that the vaccine was offered to them.

**Table 1: FDA-approved influenza vaccines, 2007-2008**

Trade Name (manufacturer) <sup>(a)</sup>	Presentation	Age Group (doses)
<i>(Inactivated)</i>		
Fluzone® (Sanofi Pasteur)	0.25 mL prefilled syringe	6-35 mo (1or 2) <sup>(b)</sup>
	0.5 mL prefilled syringe	≥36 mo (1or 2) <sup>(b)</sup>
	0.5 mL vial	≥36 mo (1or 2) <sup>(b)</sup>
	5.0 mL multi-dose vial	≥6 mo (1or 2) <sup>(b)</sup>
	5.0 mL multi-dose vial	≥4 yr (1or 2) <sup>(b)</sup>
Fluvirin™ (Novartis)	5.0 mL multi-dose vial	≥4 yr (1or 2) <sup>(b)</sup>
FLUARIX™ (GlaxoSmithKline)	0.5 mL prefilled syringe	≥18 yr (1)
FluLaval™ (GlaxoSmithKline)	5.0 mL multi-dose vial	≥18 yr (1)
<i>(Live, attenuated)</i>		
FluMist® (MedImmune)	0.2 mL sprayer	2-49 yr <sup>(c)</sup> (1or 2) <sup>(b)</sup>

(a) Use of brand name does not imply endorsement by DPHHS

(b) Two doses administered at least 1 mo apart are recommended for children 6mo to <9yr who are receiving influenza vaccine for the first time. Children <9yr who received only one dose of influenza vaccine in a previous influenza season should receive two doses the following year.

(c) NOTE: Because MT-VFC vaccine supplies were ordered before this product was approved by FDA for 2-4 year olds, VFC funds will not be available for FluMist® for 2-4 year olds this year.

**Table 2: Who should receive influenza vaccine?**

- All children aged 6-59 months
- All pregnant women (at any stage of pregnancy)
- All people age 50 and older
- All people aged 5 to 49, particularly those with chronic medical conditions\*
- All residents of long-term care facilities
- All caregivers and household contacts of persons with chronic medical conditions or children under five years.
- ALL HEALTH CARE WORKERS
- Anyone who wishes to be vaccinated

\*For a list of these chronic medical conditions, see reference 2.

**A good time to offer pneumococcal immunization, too.** Influenza-related deaths result from complications of influenza such as pneumonia, and from exacerbations of underlying medical conditions. Invasive pneumococcal disease is a major reason for pneumonia, especially in persons  $\geq 65$ . An adult pneumococcal vaccine is available. It protects against 23 subtypes of pneumococcus, 88% of the antigens identified in invasive pneumococcal disease. This vaccine is recommended for persons 65 and older, and for persons 2 to 64 with certain high risk conditions.<sup>(2)</sup> This vaccine should be offered to persons in these categories at any time during the year, including influenza season.

#### **Does influenza vaccine protect elderly persons?**

Investigators, including the authors of a recent study in *Lancet Infectious Diseases*<sup>(4)</sup>, have questioned the efficacy of influenza vaccine in elderly persons. These

investigators raise important issues regarding biases in study designs and interpretation of published results. Another recent publication in the *NEJM*<sup>(5)</sup> addresses several of these issues and documents substantial reduction in hospitalizations from pneumonia and deaths from any cause during influenza season. The latter publication assessed the effect of influenza vaccination during ten influenza seasons in three geographically distinct health maintenance organizations. The ACIP recommends influenza vaccination for persons 65 or more in age.

Interestingly, high pneumococcal immunization rates in children may provide secondary protection among persons not directly vaccinated<sup>(6)</sup>, and high influenza vaccination rates in Japanese children were associated with reduced rates of influenza in elderly Japanese.<sup>(7)</sup> We recommend influenza immunization for Montanans older than six months of age.

#### **RECOMMENDATIONS:\***

- Offer influenza vaccination to persons  $\geq 6$  months of age.
- Encourage health care workers to be vaccinated with influenza vaccine
- Offer pneumococcal vaccine to persons 65 and older who have not been previously vaccinated, and to persons with immune system diseases who have not been previously vaccinated.

\*For complete ACIP recommendations, see reference 2.

For more information about influenza, contact the Immunization Section, 406-444-5580.

#### **References:**

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