

AN EPIDEMIOLOGY PUBLICATION OF THE PUBLIC HEALTH DIVISION
OREGON DEPARTMENT OF HUMAN SERVICES

MINIMIZING INTERLUDES OF GRIEF: INFLUENZA 2006–2007

Influenzas, avian and pandemic, may be the threats *du jour*, but what never fails to cause an annual epidemic is garden-variety flu. Vaccination not only prevents substantial morbidity and mortality, but may also reduce the opportunity for viral reassortment and a resulting flu pandemic. This issue of the *CD Summary* outlines our most current strategy to fight the flu this year, as recommended by the experts.¹

NEW THIS YEAR

1. The age group of children at increased risk of complications was expanded to 6–59 months.
2. Amantadine and rimantadine should not be used for treatment or prophylaxis, due to widespread resistance.
3. The vaccines will include A/Wisconsin/67/2005 (H3N)-like and B/Malaysia/2506/2004-like contagions (new components) and A/New Caledonia/20/99(H1N1)-like antigens (same as last year).
4. We anticipate that the U.S. will have a record 100 million doses of vaccine this season (17 million more than in any previous season); so tiered timing and prioritization of risk groups should not be needed.

To keep your patients alive and well this season, we recommend the following.

STEP #1

Vaccinate yourself before the flu arrives and does you the disfavor. In addition, vaccinate all other persons who might expose high-risk groups to influenza. Healthy persons aged 5–49 years who are not contacts of *severely*

immunocompromised persons can receive either the live, attenuated influenza virus (LAIV, Flu-Mist®) or the trivalent (inactivated) influenza vaccine (TIV). Contacts of *severely* immunocompromised persons should get TIV, as recipients of LAIV may shed vaccine virions for up to 7 days following administration, and the risk to immunocompromised individuals is not fully known. The following should be vaccinated:

- physicians, nurses and other personnel in home-care, hospital or outpatient settings, including emergency response;
- employees and visitors of nursing homes, chronic-care facilities, assisted living or other such residences who have contact with patients or residents; and
- household contacts and out-of-home caretakers of children 0–59 months of age, *especially those of infants <6 months of age, for whom influenza vaccine has not been approved.*

STEP #2

The following persons at risk of influenza-related complications should be identified, notified when vaccine is available, and

vaccinated in October or early November *with TIV*, regardless of the setting:

- all those ≥65 years of age;
 - residents of nursing homes or chronic-care facilities;
 - those with chronic cardiovascular or pulmonary disease, including asthma or such neuromuscular afflictions as compromise the management of respiratory secretions or increase the risk of aspiration;
 - those with chronic metabolic diseases such as diabetes, renal disease, hemoglobinopathies or immune dysfunction (including immunosuppression caused by medications or infections, including HIV);
 - children <18 years of age who are receiving long-term aspirin therapy (and would therefore be at risk for Reye Syndrome);
 - women who will be pregnant during the influenza season; and
 - children 6–59 months old.
- N.b., LAIV is not recommended for administration to any of these individuals.

STEP #3

Vaccinate others in the community whose work would be seriously affected by influenza

0	Human cases of bird flu in Oregon to date
444	Estimated annual deaths in Oregon attributable to influenza*
36,155	Estimated annual deaths in U.S. attributable to influenza during the 1990s ²
100 Million	Doses expected in U.S. this season
9 years	Age below which two doses are needed for protection
6–59 months	Age group of children for which universal vaccination is recommended
3 years	Age at which the dose of TIV goes from 0.25 to 0.5 ml
5–49 years	Age group for which LAIV may be used
1 inch	Minimum recommended needle length for adults and older children
69%	Proportion of Oregonians ≥65 years of age that got flu vaccine during 2005

*assuming Oregon's rate is equal to the nation's

¹No, we don't mean ourselves, or even our mothers, but the real experts at CDC's Advisory Committee on Immunization Practices (ACIP).



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and pose a risk to others, such as:

- those providing essential community services such as police, fire and rescue, public health, child daycare, etc.;
- students, teachers and others in educational settings, especially those in dormitory residences;
- individuals not vaccinated in the recent fall or winter who plan to travel to the tropics, travel with organized groups at any time of year or travel to the Southern Hemisphere during April–September; and
- individuals who have contact with wild or domestic fowl infected with avian influenza.

TIMING

Schedule your vaccination clinics beginning in October, so as to induce immunity before the flu arrives. However, if vaccine is available in September, don't miss opportunities to use it—like during visits for routine care or hospitalization.

There is no cutoff date for influenza vaccination; it may be administered right up to the expiration date, and as long as flu is still circulating, it's not too late. If influenza is present, you might consider prescribing zanamivir or oseltamivir for the 10–14 days needed to develop immunity after giving *inactivated* vaccine. Don't give antiviral agents for two weeks after administration of LAIV, and don't administer LAIV

within 48 hours of a patient's taking antiviral drugs.

VACCINE ADMINISTRATION Inactivated vaccine

Vaccinate adults and older children in the deltoid muscle using a needle length of ≥ 1 inch to ensure sufficient penetration. Infants and young children should be vaccinated intramuscularly in the anterolateral aspect of the thigh. Doses by age group are as follows:

- 6–35 months old: 0.25 mL
- ≥ 3 years old: 0.5 mL

Among previously unvaccinated children < 9 years old, two doses must be administered ≥ 1 month apart for satisfactory antibody response. Influenza vaccine should not be administered to people who are allergic to eggs or egg protein.

FDA approvals for vaccines do vary, so be sure to use the vaccine appropriate for the patient's age.

Live, attenuated vaccine

FluMist® is approved for intranasal administration to healthy persons aged 5–49 years. Children 5–8 years old need two doses ≥ 6 weeks apart in their first year of vaccination. LAIV is not recommended for any person at elevated risk of influenzal complications or who has had an allergic reaction to eggs to or a previous dose of LAIV. Efficacy is comparable to that of TIV.

ANTIVIRALS

Against influenza, there is no substitute for vaccination; antivi-

ral drugs may be useful adjuncts. Because of high levels of resistance, *amantadine and rimantadine should not be used this season*—either for prophylaxis or for treatment.

The neuraminidase inhibitors zanamivir and oseltamivir are both approved for treatment of uncomplicated influenza (A or B) and for chemoprophylaxis for selected age groups according to Table 2.

Table 2. Approved ages for neuraminidase inhibitors

	Treatment	Prophylaxis
Oseltamivir	≥ 1 year	≥ 1 year
Zanamivir	≥ 7 years	≥ 5 years

ADDITIONAL INFO

The complete recommendations of the ACIP can be found on our website: <http://oregon.gov/DHS/ph/acd/flu/influenza.shtml>. Information about clinics administering vaccine can be obtained by dialing 1-800-SAFENET. Thanks to all who supported our surveillance programs this past season. We will look forward to working with you again this coming season!

REFERENCES

1. CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2006; 55(RR-10):1–48. Available at <http://www.cdc.gov/mmwr/pdf/rr/rr5510.pdf>.
2. Thompson WW, Shay DK, Weintraub E, et al. Mortality associated with influenza and respiratory syncytial virus in the United States. JAMA 2003; 289:179–86.