



Getting a Head Start on Influenza

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While health authorities are planning for global pandemics, the most important protective measure against influenza virus infection is yearly vaccination. October's **Bug of the Month** focuses on protecting yourself and your patients from influenza.

Common cold or influenza?

Influenza and the common cold cause similar respiratory tract symptomatology, however “flu” symptoms are generally worse. It may be virtually impossible to differentiate the common cold from the flu on symptoms alone. Symptoms of Influenza A and B virus infection include:

- fever (lasting three or four days),
- chills,
- cough/sore throat,
- clear nasal discharge,
- headache,
- generalized muscle aching, and
- fatigue and weakness (lasting several weeks).

The incubation period from time of exposure to symptoms is generally one to three days. A person with influenza becomes contagious from one day prior to becoming ill and remains infectious for six to seven days after symptoms develop. Children may remain infectious for > one week.

How does influenza spread?

The influenza viruses spread easily from person to person by:

- contact with infectious respiratory secretions on the skin,
- environmental surfaces (*i.e.*, telephone receiver, tissue, drinking glass), and
- respiratory aerosols.

When a person with influenza coughs or sneezes, the virus travels by droplet spread. These droplets can be propelled up to three feet through the air and deposited on mucous membranes of the nose, mouth, or eyes. Table 1 outlines how the spread of influenza can be prevented in your office.

When does influenza season begin?

Although it appears to vary by region, influenza season generally spans from mid-autumn to early spring.



Table 1

Steps to prevent the spread of influenza

- Immunization of healthcare workers and high-risk patients
- Wash hands between patient contact
- Follow droplet and contact precautions:
 - Masks/eyewear for close contact if splash or spray/contact with respiratory secretion is likely
 - Gloves must be worn for all interactions with patient's respiratory secretions
 - Gloves worn if contamination with infectious material likely
 - Designated patient-care equipment for those in whom influenza is suspected

For the 2003-04 influenza season, laboratory-confirmed activity began in late September and early October on the prairies, early November in Ontario, November through January in British Columbia, and February in Quebec and the Atlantic provinces.

Why the concern about influenza?

Influenza and related complications (*i.e.*, bronchitis, pneumonia, exacerbations of underlying lung disease) are a significant cause of illness, death, hospitalization (especially those over age 75), and absenteeism from work and school.

Who should be vaccinated?

Table 2 lists those who should be vaccinated. Current influenza vaccines can be administered

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to any healthy child, adolescent, or adult without contraindications (*i.e.*, anaphylactic hypersensitivity to eggs [manifesting as hives], angioedema with difficulty breathing, hypotension, and shock).

Protection generally begins two weeks after vaccination and lasts at least six months. The recommended time for influenza vaccination is from October to mid-November. However, local health authorities will best guide you as to when the vaccine is available and when it should be administered.

What are the vaccine's side-effects?

The major side-effects of vaccination include:

- soreness at the injection site,
- low-grade fever and muscle aches, occurring within six to 12 hours of vaccination and lasting one to two days (especially in young adults and those receiving the vaccine for the first time).

Why yearly vaccination?

The influenza virus undergoes minor and major changes which render it unrecognizable to the immune system. Immunity is only raised against the specific virus strains encountered from vaccine or actual influenza infection. The yearly immunization campaigns use vaccines which have been specifically designed to target viruses anticipated to cause influenza in the coming year.

What treatments are available?

Despite extensive research, the majority of available therapy is only for symptomatic relief, including:

- antihistamines, decongestants, cough suppressants, and
- analgesics (acetylsalicylic acid [ASA] and acetaminophen relieve discomfort and fever [children and adolescents should not receive ASA because of the association with Reye's syndrome]).

Antibiotics do not play a role as they are not effective against respiratory tract infections caused by viruses. They may be indicated if bacterial sinusitis, bronchitis, or pneumonia develop as a consequence of influenza.

What about antiviral medications?

Antiviral chemoprophylaxis should not replace annual influenza vaccination. Amantadine is the most frequently used agent for influenza prophylaxis and oseltamavir is the only neuraminidase inhibitor approved by Health Canada for post-exposure prophylaxis. Oseltamavir prevents the replication of both influenza A and B viruses and is only effective in providing chemoprophylaxis for respiratory infections caused by influenza, and not by other viruses. Therefore, it is essential to ensure influenza is causing infections in the community prior to the institution of antiviral chemoprophylaxis. Prophylaxis, with either amantadine or oseltamavir, may be used in those over one year of age for control of influenza outbreaks (Table 3). [CME](#)

References available—contact the *Canadian Journal of CME* @ cme@sta.ca.

Table 2

Who should be vaccinated?

People at high risk:

- Healthy children (aged six to 23 months)
- Adults and children with chronic cardiac or pulmonary disorders
- Residents of personal care homes and other chronic care facilities
- People aged 65 and over
- Adults and children with chronic conditions (*i.e.*, Type 2 diabetes, cancer, immunosuppression, renal disease, anemia, hemoglobinopathy, inflammatory bowel disease, celiac disease, multiple sclerosis, rheumatoid arthritis, lupus, or alcoholism)
- Children and adolescents with conditions treated for long periods with acetylsalicylic acid
- Persons infected with HIV

People who can transmit to those at high risk:

- Hospital employees
- Physician and outpatient clinic employees
- Personal care home employees
- Seniors' recreation centre employees
- Home care employees
- Household contacts of high-risk individuals who either cannot be vaccinated or may respond inadequately to vaccination

Healthy people aged two to 64 years

- Individuals in this group (including pregnant and breastfeeding women) should be encouraged to receive influenza vaccines, even if they are not in a high-risk group

Table 3

Indications for influenza prophylaxis

- Anywhere persons at high risk are exposed
- Household contacts of known influenza A cases
- Healthcare workers and essential community services personnel
- Those in whom influenza vaccination is contraindicated
- Those in whom immune response to the vaccine is expected to be suboptimal or, in those at high risk, of influenza-related complications
- Unvaccinated individuals who provide care in the home for high-risk patients during outbreaks
- Those capable of transmitting influenza to high-risk patients