

Influenza Immunization Guide for Pharmacists 2015



For more information, visit fightflu.ca and immunize.ca

Updated September 2015



CANADIAN
PHARMACISTS
ASSOCIATION

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PHARMACIENS
DU CANADA



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Disclaimer

Some provinces have legislation that requires that informed consent be obtained from the patient prior to administration of vaccines. Consult your provincial regulatory body for more information.

Introduction

Pharmacists will play a critical role in patient support this influenza season, whether in the role of immunizer, educator or dispenser. Across different provinces and different scopes of practice, the shared goal of pharmacists as primary care providers is to facilitate patient access to care. This necessitates adaptability, as “facilitated access” takes on different meanings for different patients; from appointment-based immunization clinics, to drop-ins, to referrals to immunization resources, each patient will present with unique needs. While it is up to individual pharmacies to determine which of these needs they can accommodate, this guide was designed to be adaptable to most community care settings.

The recommendations found in the guide are based on the National Advisory Committee for Immunization (NACI) Canadian Immunization Guide Chapter on Influenza and **Statement on Seasonal Influenza Vaccine for 2015-2016**. Developed by the Canadian Pharmacists Association (CPhA), in collaboration with Immunize Canada, it is our hope that this guide will provide you with the resources you need to meet the needs of your patients during influenza season. The Influenza References Guide, appended to this document, lists provincial resources that can address province-specific needs and complement this guide.

88% of Canadians trust pharmacists to provide advice on vaccinations

79% of Canadians said they would consider going to their pharmacist for a flu shot or other vaccines.



Conducting an Influenza Immunization Clinic

Suggested Timelines

August to September

- Determine if you have adequate resources to support the delivery of a flu shot clinic. Consider the setting and staff availability.
- If you will be administering the influenza vaccine yourself, schedule the date and time for the vaccination clinic. Ensure that you have all the information and documentation required, including patient consent forms, liability forms, and procedures pertaining to anaphylaxis measures, sharps injuries and cold chain storage.
- If you do not have immunization authority, contact a local nursing agency to set up a date and time for the vaccination clinic (agency to provide dosing charts, patient consent forms and any liability forms and administer vaccinations).

September through flu season

- Identify high-risk patients at the point of prescription pick-up and refills.

September to clinic date

- Encourage patients to make an appointment.
- Place Vaccination Reminder Stickers on all prescription vials and provide Bag Stuffers (templates online) with all prescriptions.
- Conduct telephone consultations with high risk patients — discuss benefits of vaccination and scheduling an appointment, document consultation in your patient records.
- Ensure the adequate number of vaccines has been ordered, and all necessary medical supplies (e.g., gloves, needles, bandages, diphenhydramine, epinephrine) are available.

3 weeks before clinic

- Promote your vaccination clinic.
- Send letters to physicians, local retirement communities and/or all patients in your pharmacy database informing them about the clinic.

2 weeks before clinic

- Place ads in local newspapers and radio; display posters in your pharmacy.
- Ensure sufficient fridge space for vaccine shipment.
- Reconnect with vaccine supplier and nursing agency to confirm vaccine shipment and nurse attendance at clinic.

Mid-October to November

- Run Influenza Vaccination Clinic; document immunizations in your records or as agreed with your local public health agency.

Following year

- Send reminders to all past participants.

Quick Facts About Influenza: The Virus and the Vaccine

The Virus

Influenza (the flu) is a serious, acute respiratory illness that is caused by influenza viruses. It is spread by respiratory droplets from an infected person or by direct contact with contaminated surfaces. Symptoms include sudden onset of headache, chills, cough, fever, loss of appetite, myalgia, fatigue, coryza, sneezing, watery eyes and throat irritation. Nausea, vomiting and diarrhea may also occur, especially in children.

The flu is caused by influenza A and B viruses:

- Influenza A viruses are classified according to two different surface antigens. There are three different human subtypes of the hemagglutinin antigen (H1, H2 and H3) and two subtypes of the neuraminidase antigen (N1 and N2). Recently circulating strains (H3N2) have one H antigen and one N antigen which periodically undergo antigenic drift.
- Influenza B viruses have more stable antigens and so antigenic variation is less frequent but does occur.

Continual antigenic drift of the influenza virus means that a new vaccine, updated yearly with the most current circulating strains, is needed to protect against new infections.

The Vaccine

Antigens from two strains of influenza A and one strain of influenza B are selected based on the three most prevalent influenza strains expected to be circulating that year. Quadrivalent vaccines contain an extra B virus lineage not included in the trivalent vaccine.

Components

A) The Virus

The World Health Organization (WHO) recommends that influenza vaccines for 2015-2016 contain the following strains:

- A/California/7/2009 (H1N1)pdm09-like virus;
- A/Switzerland/9715293/2013 (H3N2)-like virus;
- B/Phuket/3073/2013-like virus (Yamagata lineage)
- **Quadrivalent only:** B/Brisbane/60/2008-like virus (Victoria lineage)

Ten vaccines are authorized for use in Canada: 1) Fluviral®, 2) Vaxigrip®, 3) Agriflu®, 4) Influvac®, 5) Fludac®, 6) Fludac Pediatric™ 7) Fluzone®, 8) FluMist®. 9) Flulaval™ Tetra and 10) Fluzone® Quadrivalent.

Seven of the vaccines are trivalent inactivated vaccines (TIV). An 8th, FluMist®, is a quadrivalent live attenuated influenza vaccine (LAIV). The remaining 2 are quadrivalent inactivated vaccines (QIV).

- Fluviral[®], Vaxigrip[®], Fluzone[®], Flulaval[™] Tetra and Fluzone[®] Quadrivalent are known as split-virus vaccines because they are treated with an organic solvent to remove surface glycoproteins. Split-virus vaccines are less reactive and cause fewer side effects than whole virus vaccines. Fluviral[®], Vaxigrip[®] and Fluzone[®] are trivalent vaccines. Flulaval[™] Tetra and Fluzone[®] Quadrivalent are quadrivalent vaccines. All the split-virus vaccines are administered intramuscularly and are authorized for use in adults and children 6 months of age or older.
- Agriflu[®], Influvac[®], Flud[®] and Flud Pediatric[™] are trivalent, surface antigen, inactivated subunit vaccines. Agriflu[®] is authorized for use in adults and children greater than 6 months of age while Influvac[®] is only for persons 18 years of age or older. Flud[®] on the other hand, is only authorized for persons ≥65 years of age. Flud Pediatric[™] is newly available this year and is authorized for use in children 6–23 months of age. Unlike other vaccines, Flud[®] and Flud Pediatric[™] contain an adjuvant called MF59, which has been shown to increase immunogenicity. The implications of this immunogenicity in terms of clinical efficacy are unknown and require further study.
- FluMist[®] is a LAIV that is administered by intranasal route. FluMist[®] is now only available in the quadrivalent formulation in Canada for the 2015-2016 influenza season. FluMist[®] is authorized for use in persons 2–59 years of age. However, it is not recommended for use in pregnant women or in those with immune compromising conditions. The intranasal route of administration is thought to confer mucosal immunity which may be more important for protection than serum antibodies.

B) The Excipients

- Thimerosal (0.01%) — a preservative that contains mercury (Fluviral[®] and multi-dose formulations of Fluzone[®], Vaxi-grip[®] and Flulaval[™] Tetra)
- Antibiotics — undetectable traces used during production (Vaxigrip[®] and Fluzone[®] have neomycin; Agriflu[®], Flud[®] and Flud Pediatric[™] have neomycin and kanamycin; and Influvac[®] and FluMist[®] have gentamicin)
- Formaldehyde — in each vaccine except FluMist[®].
- The preceding information is summarized in Table 1.

Immunity varies among individuals but generally lasts for 12 months and begins 2 weeks after administration of the vaccine.

Effectiveness of vaccine varies depending on:

- Age and immune status of the recipient
- Amount of influenza activity in the community
- Degree of similarity between the vaccine viral strain and the circulating strain of that season.

Administration

- Intramuscular — (Fluviral[®], Vaxigrip[®], Agriflu[®], Influvac[®], Fluzone[®], Flud[®] and Flud Pediatric[™]) Use a 22–25 gauge needle, 2.2–2.5 cm (7/8–1 inch) for children, 2.5–3.8 cm (1–1½ inch) for adolescents and adults. For persons ≥ 1 year old, inject at a 90° angle into the region of the deltoid muscle.
- Intranasal — (FluMist[®]) A prefilled single use glass sprayer, with one-half of the contents administered into each nostril.

Special Considerations

48 hours pre-vaccination

- Stop antiviral (oseltamivir and zanamivir) before Flumist® administration.

2 weeks post-vaccination

- May commence antiviral administration after Flumist® vaccination.
- Avoid close contact with immunocompromised individuals due to theoretical risk of transmission of live virus after Flumist® administration.
- Vaccine protection (related to humoral antibody levels) is generally reached.

4 weeks post-vaccination

- Administration of second dose for children 2 months — 9 years who have never previously been vaccinated.

Ongoing

- If overlap of Flumist® and antiviral administration occurs within this time frame, re-immunization is required 48 hours after antivirals are stopped.
- First time vaccination for children 2 months — 9 years should be done with 2 regular doses, with administration of each dose separated by a minimum of 4 weeks.

It's a Fact

The influenza vaccine, including LAIV, can be given at the same time as other vaccines, provided that different administration sites and separate needles and syringes are used.

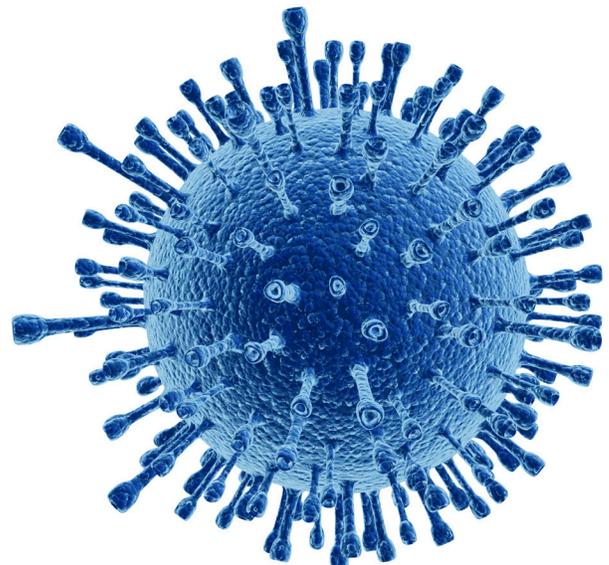


Table 1. Summary of Influenza Vaccinations

| Product | Vaccine Type | Route of Admin. | Authorized ages for use | Preferred age for use† | Antibiotics (TRACES) | Thimerosal | Non-medical ingredients | |
|--------------|-----------------------|---------------------------|-------------------------|------------------------|----------------------|-----------------------|---------------------------|--|
| TRIVALENT | Influvac® | Inactivated - subunit | IM | ≥18 years | ≥18 years | Gentamicin | N | Egg protein Formaldehyde Cetyltrimethylammonium Bromide (CTAB) Polysorbate 80 |
| | Fluviral® | Inactivated - split virus | IM | ≥6 months | ≥6 months | None | Y | Egg protein Formaldehyde Sodium Deoxycholate Sucrose |
| | Agriflu® | Inactivated - subunit | IM | ≥6 months | ≥6 months | Kanamycin Neomycin | N | Egg protein Formaldehyde CTAB Polysorbate 80 |
| | Fluad® | Inactivated - subunit | IM | ≥65 years | ≥65 years | Kanamycin Neomycin | N | Egg protein Formaldehyde CTAB Polysorbate 80 |
| | Fluad Pediatric™ | Inactivated - subunit | IM | 6-23 months | 6-23 months | Kanamycin Neomycin | N | Egg protein Formaldehyde CTAB Polysorbate |
| | Vaxigrip® | Inactivated - split virus | IM | ≥6 months | ≥6 months | Neomycin | Y (multi-dose vials only) | Egg protein Formaldehyde Triton X-100 |
| | FluZone® | Inactivated - split virus | IM | ≥6 months | ≥6 months | Neomycin | Y (multi-dose vials only) | Egg protein Formaldehyde Triton X-100 Gelatin Sucrose |
| QUADRIVALENT | Flulaval™ Tetra | Inactivated - split virus | IM | ≥6 months | ≤17 years | None | Y | α-tocopheryl hydrogen succinate Polysorbate 80 Formaldehyde Ethanol Sodium deoxycholate Ethanol |
| | Fluzone® Quadrivalent | Inactivated - split virus | IM | ≥6 months | ≤17 years | None | N | Egg protein Formaldehyde Triton X-100 |
| | FluMist® | Live attenuated | Intranasal spray | 2-59 years | 2-17 years | Gentamicin | N | Egg protein Gelatin Hydroxylate Sucrose Arginine Monosodium Glutamate |

Table 2: Choice of Seasonal Influenza Vaccine

| Age Group | Choice of Vaccine | Reasoning |
|-----------------------------|--|---|
| Children 6-23 months of age | 1st line: QIV 2nd line: unadjuvanted or adjuvanted TIV | QIV is recommended as first line therapy due to the high burden of influenza B in children. There is currently insufficient efficacy data on adjuvanted TIV compared to unadjuvanted TIV or QIV. There is limited but consistent evidence that adjuvanted TIV is more immunogenic and reactogenic than the unadjuvanted TIV. LAIV is contraindicated in children less than 24 months old due to an increased risk of wheezing. |
| Children 2-17 years of age | Healthy children: 1st line: LAIV 2nd line: QIV 3rd line: TIV | LAIV is recommended as first line based on superior efficacy of trivalent LAIV compared to TIV. This efficacy data applies to the quadrivalent formulation of LAIV since manufacturing processes and immunologic mechanism of the quadrivalent and trivalent LAIV products are the same. QIV is recommended as second line due to the high burden of influenza B disease among children. |
| | Children with immune compromising conditions: 1st line: QIV 2nd line: TIV | LAIV is not recommended for children with immune compromising conditions due to insufficient evidence supporting its use in this group. |
| | Children with severe asthma or medically attended wheezing in the previous 7 days: 1st line: QIV 2nd line: TIV | A study of the trivalent LAIV found increased rates of wheezing among asthmatics aged 6-23 months of age when compared to TIV. No significant difference was observed in children older than 2. NACI recommends against the use of LAIV in severe asthmatics. |
| | Children with other chronic health conditions: 1st line: LAIV or QIV 2nd line: TIV | There is insufficient evidence in this group to recommend LAIV over an inactivated vaccine. Given the burden of influenza B virus among children, a quadrivalent vaccine should be used. |
| Adults 18-59 years of age | Healthy adults: 1st line: LAIV, QIV or TIV | NACI considers all 3 types of vaccines to be acceptable choices unless contraindicated. |
| | Adults with chronic health conditions: 1st line: QIV or TIV | Insufficient evidence to support the use of LAIV in adults with chronic health conditions. |
| Adults 60-64 years of age | With or without chronic health conditions: 1st line: QIV or TIV | NACI considers both QIV and TIV as acceptable choices. |
| Adults ≥65 years of age | 1st line: QIV, TIV or MF59-adjuvanted TIV | NACI considers QIV, TIV and MF59-adjuvanted TIV as acceptable choices |
| Pregnant women | 1st line: QIV or TIV | Insufficient safety data to support the use of LAIV in pregnant women. LAIV is not recommended due to theoretical risk to the fetus from administering a live virus vaccine. LAIV can be administered to breastfeeding women. |

Criteria for Identifying Patients at High Risk of Influenza Complications

People at high risk of influenza-related complications, including:

- Adults (including pregnant women) and children with chronic conditions such as:
 - Cardiovascular disease
 - Respiratory disease (e.g., asthma, COPD)
 - Diabetes or other metabolic disease
 - Cancer, immunodeficiency, immunosuppression (due to underlying disease and/or therapy)
 - Renal disease
 - Persons who are morbidly obese (BMI \geq 40)
 - Anemia or hemoglobinopathy
 - Conditions that compromise the management of respiratory secretions
- Children and adolescents with the following conditions:
 - Neurologic or neurodevelopment conditions including seizure disorders, febrile seizures and isolated developmental delay
 - Undergoing treatment for long periods with acetylsalicylic acid
- All residents of nursing homes or other chronic care facilities
- Seniors aged 65 years or older
- Pregnant women
- Children aged 6–59 months of age
- Aboriginal peoples

People capable of transmitting influenza to those at high risk of complications, including:

- Health care providers in facilities and community settings
- Household contacts of a high-risk person including those \leq 59 months of age
- Members of a household expecting a newborn during influenza season
- Women at all stages of pregnancy or breastfeeding mothers
- Those providing regular child care to children 0–59 months of age
- Those who provide services within closed settings to persons at high risk

| Medications Indicative of High Risk ** | | |
|--|---------------|-------------|
| Amlodipine | Insulin | Salbutamol |
| Clopidogrel | Lisinopril | Verapamil |
| Digoxin | Metformin | Warfarin |
| Diltiazem | Nitroglycerin | Salmeterol |
| Enalapril | Prednisone | Ipratropium |
| Fosinopril | Quinapril | Ritonavir |
| Glyburide | Ramipril | |

** For a more detailed list of medications and conditions indicative of high-risk patients, see Appendix A.

These medications were selected based on frequency of use and indication for high-risk disease; for example, salbutamol was chosen as an indicator for asthma and COPD. This will identify the majority of patients with either condition and will decrease the number of drugs to be searched.

Others:

- People who provide essential community services
- People in direct contact with avian influenza-infected poultry during culling operations
- Travellers even if they are not in the above priority groups
- All Canadians aged 6 months and older who do not have contraindications to the influenza vaccine are encouraged to receive the vaccine even if they are not in the above groups, as they can still benefit from influenza protection.

Who should not be immunized:

- Individuals who developed an anaphylactic reaction to a previous dose of influenza vaccine or to any of the vaccine components (with the exception of egg), or who developed Guillain-Barré Syndrome (GBS) within 6 weeks of influenza vaccination, should not receive a further dose.



It's a Fact

LAIV provides several advantages to children such as needle-free administration.

What to do About Egg Allergies

An egg allergy is no longer considered a contraindication for the TIV or the QIV formulations of the influenza vaccine. After extensive review, NACI concludes that egg-allergic individuals may receive a full dose of TIV or QIV without prior influenza vaccine skin test, regardless of previous severe allergic reactions to eggs. (Please note that this recommendation differs from the product monograph). This vaccine may be given in any settings where vaccines are routinely administered, however, immunizers administering vaccines should be prepared for and have the necessary equipment to respond to a vaccine emergency at all times.

- An extended observation period after the administration of a vaccine is not required for these individuals.
- At present, no data is available to support this recommendation for LAIV (FluMist®), and this vaccine should therefore not be administered to egg allergic individuals.

Storage

- Influenza vaccines should be stored between +2° to +8°C at all times, never frozen, and should remain in the original packaging and protected from light.
- The temperature of the refrigerator should be measured, monitored and recorded for accuracy.
- Check the manufacturer's product leaflet for specific storage instructions.
- Pre-loading vaccines is strongly discouraged, except in clinical and hospital settings where proper labelling and transportation procedures are followed.
- Lyophilized vaccines should be reconstituted immediately before use.
- Disposal of vaccines must be in accordance to local or regional standards. Pharmacies are responsible for purchasing separate sharps containers for flu clinics. The ones supplied by the Health Steward are to be used only by patients at home.



Changes of Note for 2015-2016

LAIV:

- Only the quadrivalent formulation of LAIV (FluMist®) will be available in Canada for the 2015–2016 influenza season.
- During the 2013–2014 influenza season a decrease in the effectiveness of the quadrivalent LAIV was observed in the United States with the H1N1 strain, which was determined to be the result of temperature fluctuation. NACI states that a decrease in efficacy is unlikely to occur in Canada since the manufacturer is required to maintain specified temperatures throughout transport.
- NACI states that LAIV can be administered with, or at any time before or after the administration of any other live attenuated or inactivated vaccine. Alternatively, an inactivated vaccine may be given.

Children 6–23 months of age:

- Given the burden of influenza B disease, QIV is the recommended vaccine in this age group. If QIV is not available, either unadjuvanted or adjuvanted TIV should be administered.
- Fluad Pediatric™ will be available on the Canadian market for use in children 6–23 months of age starting in the 2015-2016 influenza season. Fluad Pediatric™ is an adjuvanted trivalent influenza vaccine administered as a 0.25 mL intramuscular injection.

Children 2–17 years of age:

- NACI recommends that LAIV should be used in children and adolescents aged 2–17 years of age who do not have any contraindications to the vaccine. If LAIV is unavailable, then QIV should be used. If QIV is also unavailable, then TIV should be used.
 - Healthy children: LAIV is the recommended vaccine.
 - Children with immune compromising conditions, which are a contraindication to LAIV: given the burden of influenza B in children, QIV is the recommended vaccine.
 - Children with severe asthma or medically attended wheezing in the previous 7 days: Given the burden of influenza B in children, QIV is the recommended vaccine.
 - Children with cystic fibrosis: LAIV can be administered if the individual is not being treated with immunosuppressive drugs and meets the other criteria for LAIV administration.

Children and adolescents with neurologic or neurodevelopment conditions:

- Now included among the groups for whom influenza vaccination is particularly recommended.

Oculo-respiratory syndrome:

- The definition of oculo-respiratory syndrome has been updated to be consistent with the user guide for reporting adverse events following immunization.

Intanza®:

- Intanza® will no longer be available on the Canadian market.

Influenza Vaccination Administration Checklist

Did I check?

Complete for each vaccination:

Before vaccination:

- Vaccine is indicated according to the recommended immunization schedule
- Vaccine is indicated according to recipient's immunization record
- Chosen dosing schedule is suitable for patient age and risk group

Pre-vaccination counselling:

- Consent was given by the vaccine recipient or guardian
- Vaccine recipient received information regarding risks, side effects, precautions and benefits
- Vaccine recipient has no contraindications or allergies to the vaccine or ingredients, with the exception of an egg allergy
- Vaccine recipient or guardian has an opportunity to ask questions

Vaccine preparation:

- Drug, dose and D.I.N. are correct
- Vaccine has not expired and is devoid of any impurities and/or discolouration
- Vaccine was stored according to the manufacturer's requirements and cold chain procedures
- Vaccine has been appropriately reconstituted and/or mixed
- Emergency kit is readily available (diphenhydramine, epinephrine)

Syringe or needle selection:

- Appropriate needle gauge and length was chosen

Administering the vaccine:

- Recipient has been explained and understands the administration procedure and restraint position
- Vaccine provider washed his or her hands or used an alcohol substitute (e.g., hand sanitizer)
- Vaccine vial and injection site was wiped with a disinfectant (e.g., alcohol wipe)
- Correct route has been chosen (ID, IM, intranasal)
- Vaccine is administered at the correct angle and depth

After vaccination:

- Needle is immediately placed in a designated biohazard sharps container for safe disposal
- Recipient understands the common side effects and how to report adverse events
- Vaccine information (lot #, expiry date, pharmacist name) was documented
- Recipient waits at least 15 minutes (preferably 30 minutes to ensure no anaphylactic reaction) after the vaccination for monitoring
- Any adverse events are documented appropriately

Pharmacist Administration of a Drug by Injection Regulations by Province

Administer a drug by injection Yes Pending No

| Province | Reimbursement | Description | Training* | Additional Information |
|----------|--|---|---|---|
| BC | \$10/injection | Pharmacists can administer IM, SC or TD injections. Pharmacists are restricted to injections and treatment of anaphylaxis for patients ≥5 years old. | Pharmacists must complete the Administration of Injections Certificate Program (offered through BCPhA) with an online pre-study (10 CEUs) and live workshop (7.5 CEUs/1 day) component. | College of Pharmacists of British Columbia British Columbia Pharmacists Association |
| AB | \$20/assessment and administration of injection — a maximum of 2 assessments for the administration of a product by injection may be billed per day per resident | Pharmacists can administer drugs by injections including the flu shot to patients ≥9 years old. Scope does not include influenza vaccinations (injectable or non-injectable) for children under 9. | Pharmacists must: Complete an ACP-approved or a CCCEP Stage 2 accredited program for pharmacist injection training, consisting of a pre-study program (9 CEUs) and a live workshop (7.25 CEUs) or Successfully complete courses or training as part of a faculty of pharmacy curriculum or Hold authorization to administer drugs by injection in another Canadian jurisdiction. | Alberta College of Pharmacists Alberta Pharmacists Association |
| SK | — | Regulation pending. The Saskatchewan College of Pharmacists has submitted legislation contained in Bill 151 for pharmacists to administer drugs by injection and other routes. | Pharmacists must successfully complete a CCCEP Stage 2 accredited training program in addition to the Saskatchewan specific module available from CPDP. | Saskatchewan College of Pharmacists The Pharmacists Association of Saskatchewan |
| MN | \$7/injection | Pharmacists can administer vaccines, including the flu shot, to patients ≥7 years old. | Pharmacists must successfully complete a CCCEP Stage 2 continuing education course on the administration of drugs by injection in addition to the Manitoba Module: Administration of Injections. | College of Pharmacists of Manitoba |
| ON | \$7.50/injection | Pharmacists can provide influenza immunizations (in accordance with UIIP) to patients ≥5 years old. | Pharmacists must complete an OCP-approved course, which have all obtained CCCEP competency mapped accreditation, for pharmacist injection training. | Ontario College of Pharmacists |
| QC | — | Pharmacists can provide injections for demonstration purposes only. | — | — |
| NB | \$12/injection Pharmacists are only reimbursed for administering the flu shot to patients 5-18, ≥65 and those with chronic health conditions | Pharmacists can administer drugs by injection to patients ≥5 years old. | Pharmacists must successfully complete a Society approved education program, which have all obtained CCCEP Stage 2 accreditation, on the administration of injections by IM and SC routes. An additional program must be completed if pharmacists wish to inject via ID or IV routes. | New Brunswick Pharmaceutical Society |
| NS | \$12/injection | Pharmacists can administer drugs by injection (IM or SC) to patients ≥5 years old. | Pharmacists must complete an immunization and injection education and training program approved by Council (e.g. Dalhousie IIATP) and obtain an NSCP Drug Administration by Injection Permit. | Nova Scotia College of Pharmacists Pharmacy Association of Nova Scotia |
| PEI | \$12.36/injection | Pharmacists can administer: A vaccine, including the influenza vaccine, to patients ≥18. The influenza vaccine by means of injection to patients ≥5. The influenza vaccine by intranasal means to patients ≥2. | Pharmacists must successfully complete a CCCEP competency mapped immunization and injection education and training program in addition to holding an Extended Practice Certificate in Drug Administration. | Prince Edward Island College of Pharmacists Prince Edward Island Pharmacists Association |
| NF | \$13/injection | Pharmacists can administer drugs by injection to patients ≥5 and by inhalation to patients ≥2. | Pharmacists must successfully complete a CCCEP Stage 2 accredited education and training program on the administration of injections. | Newfoundland and Labrador Pharmacy Board Newfoundland and Labrador Prescription Drug Program |
| YT | — | — | — | — |
| NT | — | — | — | — |
| NU | — | — | — | — |

Patient FAQ

I have never had a flu shot before. Why should I get one?

- Each year, it is estimated that there are 12,200 hospitalizations and 3,500 deaths in Canada related to influenza infection.
- 10-20% of the population becomes infected every year, with the highest rate found in children 5-9 years of age. However, rates of serious illness and death are highest in young children (<2), the elderly (>65) and those with underlying medical conditions.
- Influenza infection is a primary illness, but it can also lead to secondary complications including viral pneumonia, secondary bacterial pneumonia, and worsening of any underlying medical conditions.
- Immunization has shown to reduce the number of physician visits, hospitalizations and deaths for high-risk individuals ages 18-64, hospitalizations for cardiac disease and stroke in the elderly, and hospitalizations and deaths in diabetic patients ≥18 years of age.

I had the flu shot last year. Why should I get another one this year?

- Immunity diminishes within a year of immunization and re-immunization reinforces optimal protection.
- The new vaccine, updated yearly with the most current circulating strains, is needed to protect against new infections.

I have never had a flu shot before. What are some of the common side effects?

- Injection site soreness is common and can last up to 2 days, but it rarely interferes with normal activities.
- LAIV administration is associated with nasal congestion and runny nose.

I always seem to get sick after the flu shot. Does the flu shot make you sick?

- No, inactivated influenza vaccines do not contain live virus therefore they cannot cause infection. The live attenuated formulation of the vaccine contains weakened, cold adapted and temperature sensitive virus which can only replicate in the nasal cavity and will not infect the lower respiratory tract.

I am pregnant, should I get vaccinated?

- Yes. NACI identifies all pregnant women, no matter what trimester of pregnancy, as high priority recipients. This is due to: "1) risk of influenza-associated morbidity in pregnant women, 2) evidence of adverse neonatal outcomes associated with maternal respiratory hospitalization or influenza during pregnancy, 3) evidence that vaccination of pregnant women protects their newborns from influenza and influenza-related hospitalization, and 4) evidence that infants born during influenza season to vaccinated women are less likely to be premature, small for gestational age, and low birth weight." Studies on the safety of the inactivated influenza vaccine during pregnancy have not shown evidence of harm to the mother or fetus associated with influenza immunization.

I have a latex allergy, is it safe for me to get the flu shot?

- Yes, all influenza vaccines currently available in Canada are considered safe in persons with latex allergies.

I have egg allergies, is it safe for me to get the flu shot?

- Yes, without a prior influenza vaccine skin test, egg allergic individuals may be vaccinated with TIV or QIV, but not LAIV as its safety has not yet been studied.

I have a serious acute illness, should I wait to get my flu shot?

- Yes. Vaccination should be postponed until symptoms have subsided.

I have a minor acute illness, should I wait to get my flu shot?

- No. Minor acute illness does not warrant postponed vaccination, regardless of fever.

Why should I choose the intranasal route?

- Intranasal is thought to develop an immune response that mimics one induced by a natural infection.
- It offers injection-free immunization for children.

I've heard that GBS (Guillain-Barré Syndrome) is associated with the flu shot. What is my risk of GBS?

- In the United States, in the period following seasonal flu vaccination the absolute risk of GBS is about 1 excess case per 1 million vaccines per year.

I have had ORS (oculorespiratory syndrome) before. Can I be re-immunized?

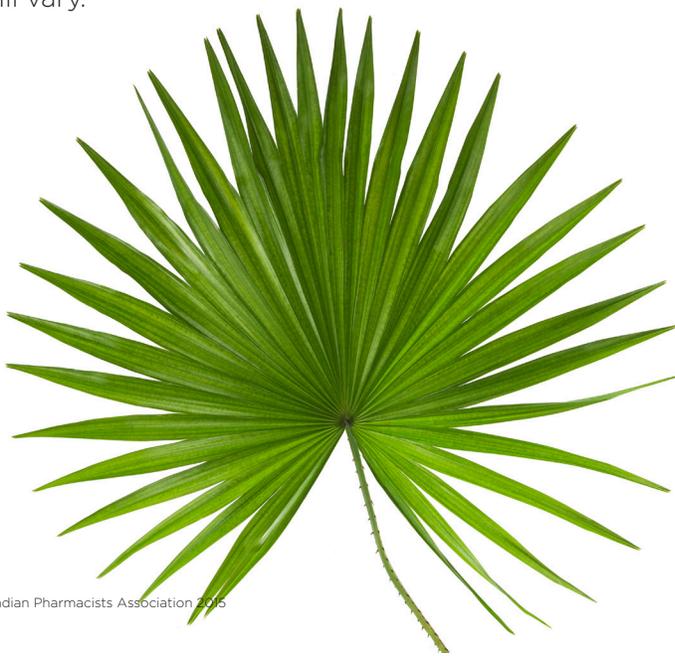
- Yes. Individuals who experienced ORS without lower respiratory tract symptoms may be re-immunized safely. Individuals who did experience lower respiratory tract symptoms should have an expert review before re-immunization.

I care for a high risk individual, but they already got immunized. Do I still need to get immunized?

- Yes. Regardless of the high risk individual's immunization status, any contact of an individual at high risk for influenza-associated complications should be immunized.

I am travelling during flu season. Will my flu shot cover me for infections when I travel?

- Possibly. In the tropics, influenza occurs year round, and specific vaccines prepared for use in the Southern Hemisphere are not available in Canada. The extent to which the recommended vaccine components in the Southern Hemisphere overlap with those available in the Canadian formulations will vary.



In the tropics

... influenza occurs year round, and specific vaccines prepared for use in the Southern Hemisphere are not available in Canada.

APPENDIX A:

Medications Indicative of High Risk Patients

Respiratory Medications

Beclomethasone
 Budesonide
 Cromolyn
 Epinephrine
 Fenoterol
 Fluticasone
 Formoterol
 Ipratropium
 Montelukast
 Nedocromil
 Omalizumab
 Prednisone
 Salbutamol
 Salmeterol
 Terbutaline
 Theophylline
 Tiotropium
 Zafirlukast

Cancer, Immunosuppressive Agents

Azathioprine
 Cyclosporine
 Daclizumab M
 ethotrexate
 Mycophenolate mofetil
 Sirolimus
 Tacrolimus

Corticosteroids

Cortisone acetate
 Dexamethasone
 Hydrocortisone
 Methylprednisolone
 Prednisolone
 Prednisone

Antidiabetic Agents

Acarbose
 Chlorpropamide
 Gliclazide
 Insulins
 Metformin
 Nateglinide
 Pioglitazone
 Repaglinide
 Rosiglitazone
 Tolbutamide

HIV/AIDS, Antiviral Agents

Abacavir
 Amprenavir
 Delavirdine
 Didanosine
 Efavirenz
 Enfuvirtide
 Indinavir
 Lamivudine
 Nelfinavir
 Nevirapine
 Ritonavir/Lopinavir
 Saquinavir
 Stavudine
 Tenofovir
 Tipanavir
 Zalcitabine
 Zidovudine

Other

Acyclovir
 Famciclovir
 Ganciclovir
 Ribavirin

Anemia and Hemoglobinopathy Treatments

Epoetin alfa
 Darbepoetin alfa
 Filgrastim

Cardiovascular Disease Therapies (such as antiarrhythmics)

Beta Blockers
 ACE Inhibitors
 Angiotensin Receptor Blockers
 Calcium Channel Blockers
 Statins
 Other:
 • Amiloride
 • Amiodarone
 • Cholestyramine*
 • Clopidogrel
 • Chlorthalidone
 • Digoxin
 • Dispyramide

- Ethacrynic acid
- Furosemide
- Gemfibrozil*
- Hydrochlorothiazide
- Isosorbide dinitrate
- Metolazone
- Nicotinic acid*
- Nitroglycerin
- Propafenone
- Quinidine
- Spironolactone
- Triamterene

Antimicrobials

Amphotericin B
 Ethambutol
 Fluconazole
 Griseofulvin
 Isoniazid
 Itraconazole
 Ketoconazole
 Nystatin
 Pyrazinamide
 Rifampin
 Streptomycin
 Terbinafine

*as secondary prevention

Please note: This is not an exhaustive list, but a summary of the most commonly used medications for the indicated conditions. Pharmacists must exercise professional judgment when using this list to screen for patients that may require the influenza vaccine.

APPENDIX B:

Influenza Vaccination Resources Guide

Pharmacy Associations with Influenza Resources

British Columbia Pharmacy Association: <http://www.bcpharmacy.ca/seasonal-flu>

Alberta Pharmacists' Association: <http://www.rxa.ca/pharmacy-initiatives/influenza-immunization-program.aspx>

Ontario Pharmacists Association: <https://www.opatoday.com/professional/resources/for-pharmacists/programs/uiip>

Ministry Websites:

British Columbia: <http://www.immunizebc.ca/healthcare-professionals/clinical-resources-influenza>

Alberta: <http://www.albertahealthservices.ca/influenza.asp>

Saskatchewan: <http://www.saskatchewan.ca/residents/health/diseases-and-conditions/influenza>

Manitoba: <http://www.gov.mb.ca/health/flu/pro.html>

Ontario: <http://www.health.gov.on.ca/en/pro/programs/publichealth/flu/>

Quebec: <http://sante.gouv.qc.ca/problemes-de-sante/grippe-influenza/>

New Brunswick: http://www2.gnb.ca/content/gnb/en/departments/ocmoh/for_healthprofessionals/cdc/NBImmunizationGuide.html (1)

http://www2.gnb.ca/content/gnb/en/services/services_renderer.10775.html#serviceDescription (2)

Nova Scotia: <http://novascotia.ca/dhw/CDPC/flu.asp>

Prince Edward island: <http://www.gov.pe.ca/health/index.php3?number=1021145&lang=E>

Newfoundland: http://www.health.gov.nl.ca/health/publichealth/cdc/infoforpros_edu.html

Yukon: <http://www.hss.gov.yk.ca/flu.php>

NW Territories: <http://www.hss.gov.nt.ca/health/diseases-conditions/flu-influenza>

Nunavut: <http://www.gov.nu.ca/health/information/influenza>

For more information, visit fightflu.ca and immunize.ca



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