



## Influenza Immunization Program 2021-2022 Update

This season, pharmacists are authorized to vaccinate persons 5 years of age and older who have a valid Saskatchewan Health Card with publicly funded influenza vaccine officially starting 12 Oct 2021 and ending 31 Mar 2022. Children younger than age nine requiring a second dose of vaccine can receive immunization until April 30, 2022. For the first time there was a “soft launch” whereby pharmacies registered for the Influenza Immunization Program (IIP) as of 03 Sep 2021 could begin administering the vaccines 27 Sep 2021.<sup>1</sup>

### Highlights of this year’s Saskatchewan Influenza Immunization Policy (SIIP)<sup>1</sup>:

- For the first time, there was a “soft launch” allowing for some vaccinations to be administered before the official start date.
- The need to increase availability of the influenza vaccine to socially vulnerable populations is stressed.
- Influenza vaccine can be given at the same time as the COVID-19 vaccines.
- The Notification of Vaccine Administration form for children five to eight years of age is **not** required this season as all influenza vaccines administered in pharmacies will be captured in Panorama via a data file from the DPEBB claims system.
- Influenza immunization must be documented into Panorama or the COVID-19 Quick Entry database.
- Influenza vaccine lot numbers will NOT be required to be captured.
- The **Alternate Location** and **Licensed Personal Care Homes** criteria has been expanded and clarified. See details [here](#).
- As was the case last season, and due to the ongoing COVID-19 pandemic, pharmacists are permitted to obtain informed verbal consent for influenza vaccines.
- 2020-2021 wallet cards can continue to be used.
- As before, any unusual, severe, serious or unexpected influenza vaccine adverse events need to be reported using the Public Health Agency of Canada (PHAC) [AEFI form](#). This form has been recently updated and includes the following changes<sup>2</sup>:
  - Section 4a - indicate race and Indigenous status
  - Section 4b - indicate if prior COVID-19 infection and COVID-19 immunization history
  - Section 9b angioedema – distinguishes between visible or client-reported swelling
  - Section 9d
    - ◆ syncope with injury has been added, as syncope alone is not reportable
    - ◆ Kawasaki disease added

## 2021-2022 Influenza Vaccine Information:

### Vaccines funded by the Saskatchewan Ministry of Health for use by pharmacists in the 2021-2022

#### Seasonal Influenza Program<sup>1</sup>:

- Fluzone<sup>®</sup> Quadrivalent multidose vials
- Flulaval<sup>®</sup> Tetra multidose vials
- Fluzone<sup>®</sup> High-Dose Quadrivalent prefilled syringes - for **long term care (LTC) and personal care home (PCH) residents 65 years and older only.**

**Fluzone<sup>®</sup> Quadrivalent** and **Flulaval<sup>®</sup> Tetra** are quadrivalent inactivated influenza vaccines containing 15 mcg of hemagglutinin (HA) protein for each of the two influenza A and two influenza B strains. This season the strains in use are<sup>1,3</sup>:

- A/Victoria/2570/2019 (H1N1)pdm09-like virus;
- A/Cambodia/e0826360/2020 (H3N2)-like virus;
- B/Washington/02/2019 (B/Victoria lineage)-like virus;
- B/Phuket/3073/2013 (B/Yamagata lineage)-like virus

**Fluzone<sup>®</sup> Quadrivalent** and **Flulaval<sup>®</sup> Tetra** are suitable for use in all individuals over the age of 6 months and are safe for use in all stages of pregnancy.<sup>4</sup>

**Fluzone<sup>®</sup> High-Dose Quadrivalent** is new for this season and is replacing the Fluzone<sup>®</sup> High-Dose Trivalent inactivated influenza vaccine. The marketing of the trivalent formulation was discontinued in February 2021 and the National Advisory Committee on Immunization (NACI) has concluded that the quadrivalent product has a comparable safety and immunogenicity profile to the trivalent vaccine.<sup>4</sup>

- Please note that the **dose of the High Dose Quadrivalent formulation (available as prefilled syringe) is 0.7 ml** whereas the dose for the trivalent formulation was 0.5 ml.<sup>4</sup>

Fluzone<sup>®</sup> High-Dose Quadrivalent is a quadrivalent inactivated influenza vaccine containing 60 mcg (HA) protein of the same strains in the Fluzone<sup>®</sup> Quadrivalent and Flulaval<sup>®</sup> Tetra vaccines. It is indicated for use in individuals 65 years and older. This population is at higher risk of mortality and morbidity from influenza (particularly influenza A) and their immune response to influenza vaccines is lower than that of younger people. The available evidence suggests that the high-dose vaccine should provide superior protection in this population, compared with standard dose influenza vaccine. However, evidence is not sufficient for NACI to make a preferential recommendation over standard dose vaccine for adults 65 and older.<sup>4</sup> At this time, **Fluzone<sup>®</sup> High-Dose Quadrivalent is publicly funded for LTC and PCH residents 65 years of age and older only.**<sup>1</sup> Pharmacists may administer Fluzone<sup>®</sup> High-Dose to other people in this age group but would have to order in, pay for and charge for the vaccination; pharmacies will not receive an administration fee from the Ministry for administering this vaccination to those who don't qualify for publicly funded.<sup>1</sup>

**Thimerosal-containing vaccines:** all multidose vials of publicly funded influenza vaccine contain thimerosal. Patients preferring thimerosal-free vaccine need to be referred to Public Health where Fluzone<sup>®</sup> Quadrivalent prefilled syringes will be available.<sup>1</sup> Note that thimerosal is considered safe in pregnancy.<sup>4</sup>

#### Other influenza vaccines:

Pharmacists should still be aware of the other influenza vaccine options. (See Tables 1 and 2 below.) In accordance with the requirements in the [Administration of Drugs by Injection and Other Routes -](#)

[Policies, Standards and Guidelines for Pharmacists](#), pharmacists may need to inform patients of influenza vaccine options in case of vaccine shortage, patient preference, contraindication, or constituent allergy.<sup>5</sup> If a non-funded influenza vaccine is requested, pharmacies may purchase and charge the patient for it as a private sale and service.<sup>1</sup>

### New for 2021-22:

**Flucelvax® Quad (IIV4-cc)** is Canada's first mammalian cell culture-based influenza vaccine. Although this influenza vaccine was approved for use last season, it was not available. It is being marketed now and **will be available for use in the 2021-2022 season.**<sup>4</sup>

- The manufacturing process uses animal cells (Madin-Darby Canine Kidney, or MDCK cells) as a host for growing the influenza viruses instead of fertilized chicken eggs. Cell-culture based influenza vaccines have been available in Europe since 2007 and the United States since 2012.

NACI's research concludes that Flucelvax® Quad has comparable efficacy and safety profile to IIV4-SD and recommends that it **may be considered among the quadrivalent influenza vaccines offered to adults and children nine years of age and older.**<sup>4</sup>

The World Health Organization (WHO) recommends a slightly different combination of influenza strains for cell-based vaccines and Flucelvax® contains the following<sup>3</sup>:

- A/Wisconsin/588/2019 (H1N1)pdm09-like virus 15 micrograms HA
  - A/Cambodia/e0826360/2020 (H3N2)-like virus 15 micrograms HA
  - B/Washington/02/2019-like virus 15 micrograms HA
  - B/Phuket/3073/2013-like virus
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- Advantages of cell-culture based **vaccines**<sup>6</sup>:
    - Not dependent on egg supply.
    - Manufacturing process is faster and there is reduced microbial or chemical contamination due to a closed system of vaccine production.
    - May offer better efficacy due to greater similarity to the influenza viruses in circulation; i.e., no egg-adaptive mutations will occur.
    - May permit faster manufacturing in the event of a pandemic. The cells used to manufacture Flucelvax® are kept frozen and "banked" ensuring an adequate supply is always available for vaccine production.
    - Considered safe for use in pregnancy; no published clinical safety data of cell-culture based influenza vaccines are available but no safety signals have been detected.<sup>6</sup>
  - Disadvantages of Cell-Culture Based<sup>6</sup>:
    - More expensive than other influenza vaccinations.
    - No experience with this product in Canada, though has been used in Europe from 2007-2017 and in the USA since 2012.
    - **Not funded for use in Saskatchewan this influenza season.**<sup>1</sup>

## FAQs:

**Q:** Why are we having a soft launch?

**A:** As per the SIIP<sup>1</sup>:

The provincial goal is to protect targeted populations such as the elderly, the very young, pregnant women and those living with chronic or immune-compromising conditions who are particularly vulnerable to influenza and related complications. These groups should be the priority for the initial vaccine allocation. However, pharmacies can still provide the influenza vaccine to any eligible resident of Saskatchewan 5 years of age and older during this initial phase.

**Q:** Can the COVID-19 vaccines be given at the same time as the influenza vaccines?

**A:** Yes. The Saskatchewan Ministry of Health issued a [directive](#) stating that as of 02 Sep 2021 all Health Canada approved COVID-19 vaccines can be given concomitantly with other vaccines; no intervals are required before or after COVID-19 vaccine administration.<sup>7</sup>

**Q:** Can we vaccinate someone with suspected or confirmed COVID-19 infection?

**A:** NACI recommends deferring vaccination for people with suspected or confirmed COVID-19 and those who are close contacts of a case until they have met criteria for no longer needing quarantine or isolation to avoid exposing healthcare personnel and other patients to the COVID-19 virus. When scheduling or confirming appointments for vaccination, patients should be screened for COVID-19 symptoms and recent exposure.<sup>4</sup>

**Q:** Should the influenza vaccine be administered to those on chemotherapy or immunotherapy?

**A:** Inactivated influenza vaccine is encouraged for individuals with cancer unless medically contraindicated. Please refer to this Saskatchewan Cancer Agency [directive](#), which addresses exceptions and use of influenza vaccines in specific cancer treatments.<sup>8</sup>

Table 1: Influenza Vaccines Available in Canada<sup>4,9</sup>

Vaccine Type <sup>a</sup>	Brand Names	How Supplied	
		Multidose Vial	Prefilled Syringe (Thimerosal-free)
<b>Quadrivalent Standard-Dose Inactivated Influenza Vaccine (IIV4-SD)</b>	Fluzone <sup>®</sup> Quadrivalent <sup>b</sup>	√	√
	Flulaval <sup>®</sup> Tetra <sup>b</sup>	√	x
	Influvac <sup>®</sup> Tetra	x	√
	Afluria <sup>®</sup> Tetra	√	√
<b>Quadrivalent Live Attenuated Influenza Vaccine (LAIV4)</b>	Flumist <sup>®</sup> Quadrivalent	x	√ (single use pre-filled glass sprayer)
<b>Cell-Culture Based Quadrivalent Inactivated Influenza Vaccine (IIV4-cc)</b>	Flucelvax <sup>®</sup> Quad	√	√
<b>High-Dose Quadrivalent Inactivated Influenza Vaccine (IIV4-HD)</b>	Fluzone <sup>®</sup> High-Dose Quadrivalent <sup>c</sup>	x	√
<b>Adjuvanted Inactivated Influenza Vaccine (IIV3-Adj)</b>	Fluad <sup>®</sup> Pediatric	x	√
	Fluad <sup>®</sup>	x	√

a. IIV3-SD and IIV3-HD will not be available in Canada during the 2021-2022 influenza season.<sup>4</sup>  
b. Publicly funded in SK for the 2021-22 influenza season<sup>1</sup>  
c. Publicly funded in SK for the 2021-22 influenza season for residents of long-term care facilities and personal care homes who are 65 years and older.<sup>1</sup>

**Table 2: Alternatives to Quadrivalent Influenza Vaccine (IIV4-SD)<sup>4,9</sup>**

Please note that Fluzone<sup>®</sup> Quadrivalent and Flulaval<sup>®</sup> Tetra are appropriate and indicated for use in all persons over the age of 6 months. Influvac<sup>®</sup> Tetra is indicated for use in ages 3 years and older; Afluria<sup>®</sup> is indicated for ages 5 years and older. See Table 1 for vaccine abbreviation definitions.

Age	Vaccine <sup>a</sup>	Rationale	Comments
6-23 months	IIV3-Adj	IIV4-SD is preferred as higher prevalence of influenza B in this population.	Available as Fludac <sup>®</sup> Pediatric.
2-17 years	LAIV4	LAIV4 is suitable for use in this age group with these exceptions: <ul style="list-style-type: none"> <li>• severe asthma (defined as currently on oral or high-dose inhaled corticosteroids or active wheezing)</li> <li>• having experienced medically attended wheezing in the 7 days prior to vaccination</li> <li>• immune compromising conditions, due to underlying disease, therapy or both <b>excluding</b> those with stable HIV infection<sup>b</sup> on HAART and with adequate immune function.</li> <li>• currently receiving ASA</li> <li>• pregnancy</li> <li>• receipt of an anti-influenza antiviral medication in the previous 48 hours</li> </ul>	Available as Flumist <sup>®</sup> Quadrivalent.  LAIV is administered intranasally and provides an alternative to those who wish to avoid an injection.
	IIV4-cc	Suitable and approved for use in <b>children 9 years of age and older only</b>	Available as Flucelvax <sup>®</sup> Quad.
18-59 years	LAIV4	LAIV4 is suitable for use in this age group with these exceptions: <ul style="list-style-type: none"> <li>• specific chronic health conditions that increase risk of influenza-related complications/hospitalizations<sup>c</sup></li> <li>• pregnancy</li> <li>• health care workers</li> <li>• receipt of an anti-influenza antiviral medication in the previous 48 hours</li> </ul>	Available as Flumist <sup>®</sup> Quadrivalent.  LAIV may be less effective in adults than IIV.  LAIV is administered intranasally and provides an alternative to those who wish to avoid an injection.
	IIV4-cc	Can be used non-preferentially in this age group	Available as Flucelvax <sup>®</sup> Quad.
60-64 years	IIV4-cc	Can be used non-preferentially in this age group	Available as Flucelvax <sup>®</sup> Quad.
≥ 65 years	IIV4-HD	IIV4-HD is preferred in this age group given the increased burden of influenza A and evidence of better efficacy	Available as Fluzone <sup>®</sup> High-Dose Quadrivalent. May cause more injection-site reactions.
	IIV4-cc	Both suitable for use although IIV4-cc gives	Available as Flucelvax <sup>®</sup> Quad.
	IIV3-Adj	extra protection against influenza B.	Available as Fludac <sup>®</sup> . May cause more injection-site reactions.

a. IIV3-SD and IIV3-HD formulations will not be available in Canada during the 2021-2022 influenza season.<sup>4</sup>

b. Stable HIV infection defined as: **receiving** HAART ≥ 4 months; **and** CD4 count ≥ 500/μL if 2–5 years of age, or ≥200/μL if 6–17 years of age (measured within 100 days before administration of LAIV); **and** HIV plasma RNA <10,000 copies/mL (measured within 100 days before administration of LAIV).

c. **cardiac or pulmonary disorders** (includes bronchopulmonary dysplasia, cystic fibrosis, and asthma); **diabetes mellitus and other metabolic diseases; cancer, immune compromising conditions** (due to underlying disease, therapy, or both, such as solid organ transplant or hematopoietic stem cell transplant recipients); **renal disease; anemia or hemoglobinopathy; neurologic or neurodevelopment conditions** (includes neuromuscular, neurovascular, neurodegenerative, neuro-developmental conditions, and seizure disorders [and, for children, includes febrile seizures and isolated developmental delay], but excludes migraines and psychiatric conditions without neurological conditions); **morbid obesity (BMI of 40 and over)**

HAART= highly active antiretroviral therapy



## References

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8. Saskatchewan Cancer Agency. Influenza Immunization Guideline 2021. [cited 27 Oct 2021] Available from: <https://medsasktest.usask.ca/documents/vaccine-preventable-travel/sca-influenza-2021.pdf>
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