## Influenza Vaccine

## **Quadrivalent Inactivated**

Implementation: September 2022

## Rationale for Update:

• Updated Product Monographs and the influenza strains included in the vaccine.

Please consult the Product Monograph <sup>1,2</sup> for further information about the vaccine.		
	Fluzone® Quadrivalent	FluLaval® Tetra
Manufacturer	Sanofi Pasteur Inc.	GlaxoSmithKline Inc.
Licensed use	Six months of age and older	
Off-license use	None	
Indications for use of provincially funded vaccine	Individuals six months of age and older who are living, working, going to school, or visiting Alberta.	
Influenza strains for 2022-2023 season	<ul> <li>an A/Victoria/2570/2019 (H1N1)pdm09-like virus;<sup>1,2,3</sup></li> <li>an A/Darwin/9/2021 (H3N2)-like virus;<sup>1,2,3</sup></li> <li>a B/Austria/1359417/2021 (B/Victoria lineage)-like virus;<sup>1,2,3</sup> and</li> <li>a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus.<sup>1,2,3</sup></li> </ul>	
Dose	0.5 mL <sup>1,2,4</sup>	
Route	Intramuscular injection	
Schedule	Fluzone® Quadrivalent	FluLaval® Tetra
	6 months to 8 years of age:	
Contraindications	<ul> <li>Known severe hypersensitivity to any component of the vaccine with the exception of egg<sup>4</sup> (see Precautions below).</li> <li>Anaphylactic or other allergic reaction to a previous dose of influenza vaccine.<sup>1,2,4</sup></li> <li>Avoiding subsequent immunization of individuals known to have had Guillain-Barré Syndrome (GBS) within six weeks of a previous influenza immunization is prudent at this time.<sup>1,2,4</sup> However, the potential risk of GBS recurrence associated with influenza vaccine must be balanced against the risk of GBS associated with influenza infection itself and the other benefits of influenza immunization.<sup>1,2,4</sup> The relative and attributable risks of GBS after seasonal influenza immunization are lower than those after influenza illness.<sup>5</sup></li> </ul>	



Egg-allergic individuals may be immunized against influenza using inactivated vaccine	
<ul> <li>Egg-allergic individuals may be immunized against influenza using inactivated vaccine without a prior influenza vaccine skin test and with the full dose of vaccine, irrespective of a past severe reaction to egg.<sup>4</sup> Egg-allergic vaccine recipients should be kept under observation for 30 minutes following the administration of inactivated influenza vaccine.</li> </ul>	
<ul> <li>Expert review of the risks and benefits of influenza immunization should be sought for individuals who previously experienced severe lower respiratory symptoms (wheeze, chest tightness, difficulty breathing) within 24 hours of influenza immunization, an apparent significant allergic reaction to the vaccine or any other symptoms (e.g., throat constriction or difficulty swallowing) that raise concern regarding the safety of re-immunization.<sup>4</sup> This advice may be obtained from the local Medical Officer of Health or other experts in infectious disease, allergy, immunology and/or public health or any combination of these specialties.<sup>4</sup></li> </ul>	
<ul> <li>Individuals who have experienced oculorespiratory syndrome (ORS) including those with a severe presentation (bilateral red eyes, cough, sore throat, hoarseness, facial swelling) but without lower respiratory tract symptoms, may be safely re-immunized.<sup>4</sup> Advice of an expert should be sought before immunizing individuals who experienced ORS with lower respiratory tract symptoms.<sup>4</sup></li> </ul>	
<ul> <li>Although influenza vaccine can inhibit the clearance of warfarin and theophylline, clinical studies have not shown any adverse effects attributable to these drugs in people receiving influenza vaccine.<sup>4</sup></li> </ul>	
See Product Monographs	
For co-administration with COVID-19 vaccines, refer to the "Administration with Other Products" section in the relevant COVID-19 vaccine biological page.	
Inactivated influenza immunization is recommended for all pregnant individuals, at any stage of pregnancy, due to the risk of influenza related morbidity. <sup>4</sup> The safety of inactivated influenza vaccine during pregnancy has been reviewed and has not shown evidence of harm to the pregnant individual or fetus. <sup>4</sup>	
Breastfeeding individuals should be immunized.	
<ul> <li>1992 (approx.) - Influenza vaccine split virus Influenza split virus vaccine first used in Canada in approximately 1992. (Fluviral® &amp; Vaxigrip®)</li> <li>2009-10 - Influenza vaccine for H1N1 Pandemic universal program for everyone six months of age and older.</li> </ul>	
<ul> <li>2009-10 - Influenza seasonal vaccine universal program to include all Albertans six months of age and older.</li> <li>2015-08-12 - Influenza Vaccines 2015-2016 season: Fluad® (all Albertans aged 65 years and older.), Flumist® Quadrivalent, Fluviral®, Influvac® (This is the vaccine of choice for adults 18 to 64 years of age).</li> <li>2016-08-29 - Influenza vaccines 2016-2017 season: Fluzone®, Fluad®, Flumist®</li> <li>2017-07 - Influenza Vaccines 2017-2018 season: Fluzone®, Fluad®.</li> <li>2018-08 - Influenza Vaccines 2018-2019 season: Fluzone®, Flulaval® Tetra.</li> <li>2019 - Influenza Vaccines 2019-2020 season: Fluzone®, Flulaval® Tetra.</li> <li>2020 - Influenza Vaccines 2020-2021 season: Fluzone®, FluLaval® Tetra, Alfuria® Tetra, Trivalent Fluzone® HD (65 years of age and older who reside in long term care beds).</li> <li>2021 - Influenza Vaccines 2021-2022 season: Fluzone®, FluLaval® Tetra, Alfuria® Tetra, Fluzone® HD (65 years of age and older)</li> <li>2022 - Influenza Vaccines 2022-2023 season: Fluzone®, FluLaval® Tetra, Fluzone® HD (65 years of age and older)</li> </ul>	



## References

- <sup>1</sup> Sanofi Pasteur Inc. (2022). Fluzone<sup>®</sup> Quadrivalent. Influenza virus vaccine quadrivalent types A and B (Split Virion). <u>Product Monograph</u>.
- <sup>2</sup> GlaxoSmithKline Inc. (2022). Flulaval®Tetra. Quadrivalent Influenza Vaccine (Split Virion, Inactivated). *Product Monograph*.
- <sup>3</sup> World Health Organization. (2022). Recommended composition of influenza virus vaccines for use in the 2022-2023 northern hemisphere influenza season. Retrieved from: <a href="https://www.who.int/publications/m/item/recommended-composition-of-influenza-virus-vaccines-for-use-in-the-2022-2023-northern-hemisphere-influenza-season">https://www.who.int/publications/m/item/recommended-composition-of-influenza-virus-vaccines-for-use-in-the-2022-2023-northern-hemisphere-influenza-season</a>
- <sup>4</sup> National Advisory Committee on Immunization. (2022). Statement on seasonal influenza vaccine for 2022-2023. <a href="https://www.canada.ca/en/public-health/services/publications/vaccines-immunization/canadian-immunization-guide-statement-seasonal-influenza-vaccine-2022-2023.html">https://www.canada.ca/en/public-health/services/publications/vaccines-immunization/canadian-immunization-guide-statement-seasonal-influenza-vaccine-2022-2023.html</a>
- <sup>5</sup> Kwong, J. C., Vasa, P. P., Campitelli, S. H., et al. (2013). <u>Risk of Guillain-Barré syndrome after seasonal influenza vaccination and influenza health-care encounter: a self-controlled study</u>. *Lancet Infectious Disease*, *13*, 769-76.

