

FOCUS ON

Vaccines for the 2024-25 Influenza Season



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Purpose

This document is intended to provide an overview of the publicly-funded influenza vaccines that are available in Ontario as part of the [Universal Influenza Immunization Program](#)¹ (UIIP) for the 2024-25 influenza season. It focuses on:

- The standard-dose quadrivalent vaccines (QIV) for individuals six months of age and older.
- The high-dose quadrivalent (QIV-HD) and standard-dose adjuvanted trivalent (TIV-Adj) vaccines available for adults 65 years of age and older only.

Vaccines Available in Ontario for the 2024-25 Influenza Season

Most vaccine products provided through the UIIP this season are quadrivalent inactivated vaccines (QIV), meaning that they contain hemagglutinin antigen (HA) for four influenza strains including an influenza A(H3N2) and A(H1N1) and two influenza B strains, one from each B virus lineage (B/Victoria and B/Yamagata*). The standard-dose QIVs contain 15 mcg of HA for each strain, whereas the high-dose quadrivalent vaccines (QIV-HD) – available only for adults 65 years of age and older – contain 60 mcg of HA for each strain.

*For the 2024-25 northern hemisphere influenza season, the World Health Organization (WHO) has indicated that the inclusion of a B/Yamagata virus in influenza vaccines is no longer necessary since this virus lineage has not been detected globally since March 2020.² The WHO recommends that national authorities transition to trivalent vaccines in their own jurisdictions.²

Canada’s National Advisory Committee on Immunization (NACI) also indicated support for the removal of the B/Yamagata strain from influenza vaccines and a transition to trivalent vaccines, as soon as practically possible.³ Recognizing significant logistical and regulatory challenges with transitioning from quadrivalent to trivalent vaccines, NACI anticipates a gradual transition, with variability in vaccine supply across countries. Quadrivalent vaccines will continue to be supplied to public health programs in Canada for the 2024-25 influenza season and more detailed guidance regarding the change from quadrivalent to trivalent vaccines will be included as part of the 2025-26 NACI seasonal influenza statement.³

In addition to the QIV products, an adjuvanted trivalent inactivated vaccine (TIV-adj) is also provided through the UIIP this season for adults 65 years of age and over, which contains 15 mcg of HA for three influenza strains (i.e., an influenza A(H3N2) and A(H1N1) strain and one influenza B strain from the B/Victoria lineage).

With the exception of one QIV product that is cell-culture based (Flucelvax® Quad), all other vaccine products available through the UIIP for the 2024-25 season are egg-based vaccines. NACI states that egg allergy is not a contraindication for influenza vaccination and individuals with egg protein allergies can receive any age-appropriate influenza product.⁴

The vaccines available through the UIIP for people 6 months of age and older are outlined in [Table 1](#).

Table 1: Vaccines available through the UIIP for the 2024-25 influenza season

Ages	Type of influenza vaccines	Influenza vaccine products
6 months and older	Standard-dose quadrivalent (QIV)	FluLaval Tetra Fluzone® Quadrivalent Flucelvax® Quad
65 years and older	High-dose quadrivalent (QIV-HD)	Fluzone® High-Dose Quadrivalent
65 years and older	Adjuvanted trivalent (TIV-adj)	Fluad®

Influenza Vaccines for Adults 65 Years of Age and Older

Canadian Recommendations Regarding Influenza Vaccines for Adults 65 Years and Older

Any of the available influenza vaccines would be preferable to remaining unvaccinated or requesting individuals to return for vaccine. Therefore, NACI has provided the following recommendation for individual-level decision making for adults 65 years of age and older:

For individual-level decision-making, “IIV-HD [*high-dose inactivated influenza vaccine*], IIV-Adj [*adjuvanted inactivated influenza vaccine*], or RIV [*recombinant influenza vaccine*] should preferentially be offered, when available, over other influenza vaccines for adults 65 years of age and older. If a preferred product is not available, any of the available age-appropriate influenza vaccine should be used.”⁴

Influenza Vaccines Available for Adults 65 Years and Older in Ontario

For the 2024-25 influenza season, one high-dose quadrivalent vaccine (QIV-HD), one standard-dose adjuvanted trivalent vaccine (TIV-adj), and three standard-dose quadrivalent vaccines (QIV) are available in Ontario through the UIIP for adults 65 years of age and older. The recombinant influenza vaccine (RIV) is not being offered through Ontario’s UIIP for the 2024-25 influenza season.

HIGH-DOSE QUADRIVALENT INFLUENZA VACCINE (QIV-HD)

[Fluzone® High-Dose Quadrivalent](#)⁵ (Sanofi Pasteur Limited, Toronto, Ontario) is an egg-based, split virion, quadrivalent inactivated influenza vaccine. Fluzone® High-Dose Quadrivalent contains a high dose of hemagglutinin antigen (60 mcg) for four influenza strains (i.e., influenza A(H3N2), influenza A(H1N1), influenza B/Victoria, and influenza B/Yamagata). In Canada, Fluzone® High-Dose Quadrivalent is authorized for use only in **adults 65 years of age or older**.

- **NOTE:** The recommended dose of Fluzone® High-Dose Quadrivalent is **0.7mL** (compared to 0.5mL for the standard-dose QIVs).

Effectiveness of high-dose inactivated influenza vaccine

A phase 3b-4 randomized controlled trial involving 31,989 adults 65 years of age and older across 126 sites in North America compared the relative efficacy, effectiveness, safety, and immunogenicity of high-dose trivalent inactivated influenza vaccine (TIV-HD) with standard-dose trivalent inactivated influenza vaccine (TIV-SD).⁶ The results demonstrated that after vaccination, the hemagglutination-inhibition (HAI) titres and seroprotection rates (i.e., the percentage of participants with HAI titers $\geq 1:40$) were significantly higher in those receiving TIV-HD.⁶ The authors concluded that in adults 65 years of age and older, TIV-HD provided better protection against laboratory-confirmed influenza illness than TIV-SD.⁶

STANDARD-DOSE ADJUVANTED TRIVALENT INFLUENZA VACCINE (TIV-ADJ)

[Fluad](#)⁷ (Seqirus Inc., Kirkland, Quebec) is an egg-based, surface antigen, trivalent inactivated influenza vaccine that is adjuvanted with MF59C.1 (an oil-in-water emulsion composed of squalene as the oil phase, stabilised with the surfactants polysorbate 80 and sorbitan trioleate, in citrate buffer). Fluad®

contains a standard dose of hemagglutinin antigen (15 mcg) for each of three influenza strains recommended by the WHO.

Effectiveness of standard-dose adjuvanted influenza vaccine

In supplemental guidance on influenza vaccination in adults 65 years of age and older published by NACI in July 2024, NACI stated that overall, the evidence supports adjuvanted inactivated influenza vaccine (IIV-Adj), in addition to high-dose inactivated influenza vaccine (IIV-HD) and recombinant influenza vaccine (RIV), as having increased benefit as compared to standard-dose inactivated influenza vaccine (IIV-SD), with no difference in safety.⁸ NACI summarized that no definitive conclusion can be reached regarding the superiority of any of these vaccines over one another as there is a limited number of studies directly comparing IIV-HD, IIV-Adj, and RIV against each other.⁸ Included in the evidence reviewed by NACI was a systematic review published by the United States' Advisory Committee on Immunization Practices (ACIP), that identified a total of seven studies that directly compared the relative efficacy or effectiveness of IIV-HD to IIV-Adj.⁹ The outcomes of interest included laboratory-confirmed influenza (one RCT), outpatient and/or emergency department visits resulting in a prescription for an antiviral (three observational studies), and influenza-associated hospitalization (four observational studies). The ACIP concluded that overall, these studies did not demonstrate a beneficial protective effect against the outcomes of interest for IIV-HD compared to IIV-Adj.⁹

In addition, a [literature review](#)¹⁰ published by NACI in May 2018 concluded that:

“There is fair evidence that the MF59-adjuvanted Fludax[®] may be effective at reducing the risk of hospitalization for influenza and influenza complications in the elderly compared to unvaccinated individuals (Grade B Evidence);

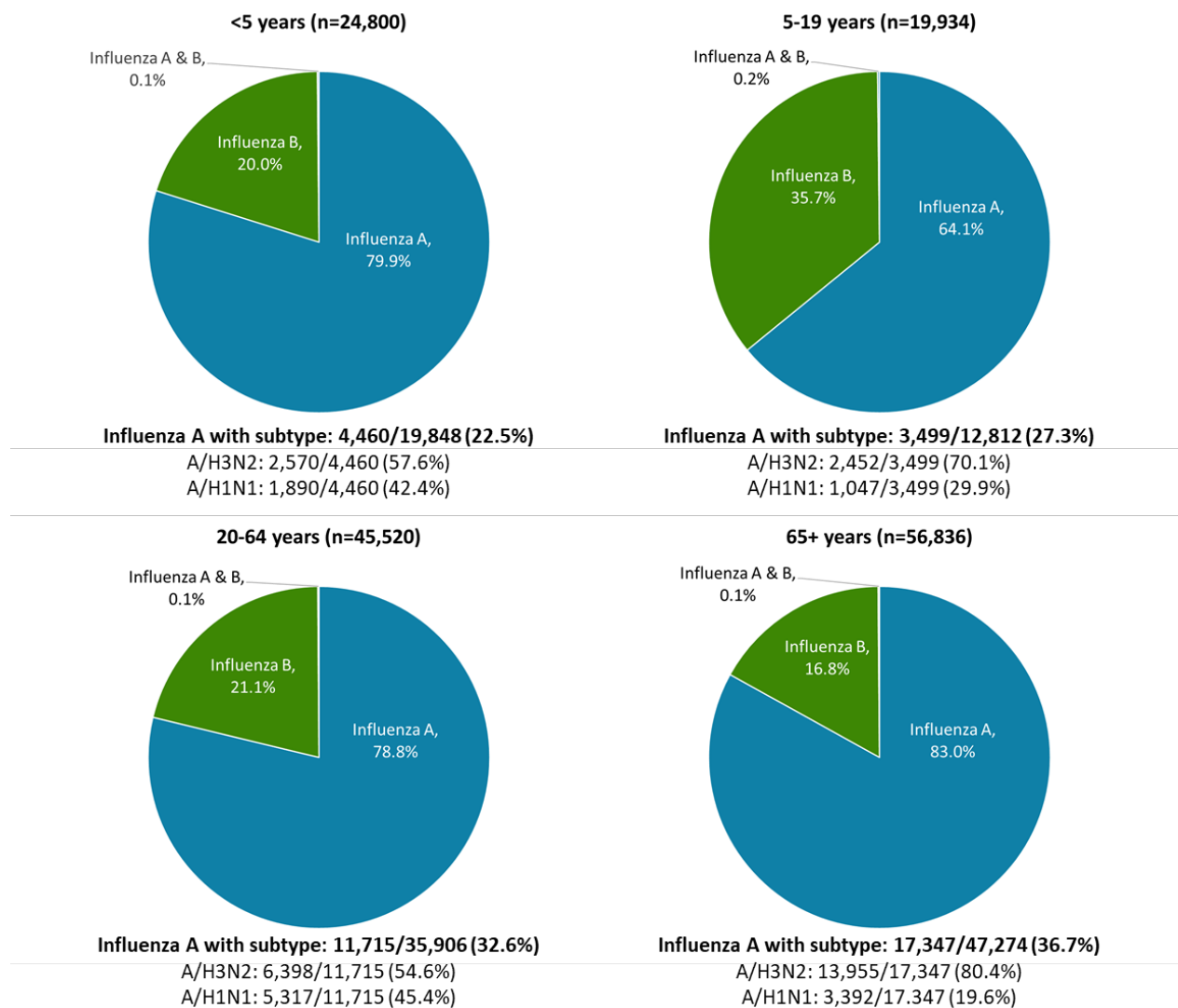
“There is insufficient evidence that Fludax[®] is effective at reducing the risk of hospitalization for influenza and influenza complications in the elderly compared to those who received unadjuvanted trivalent inactivated subunit vaccine (Grade I Evidence).”⁹

Burden of Influenza A (H3N2) Compared to Influenza B

[Figure 1](#) illustrates the proportion of laboratory-confirmed influenza cases by type, sub-type and age reported through Ontario's reportable disease information system (the integrated Public Health Information System (iPHIS)) averaged over twelve influenza seasons (2012–13 to 2023–24, as of July 31, 2024).¹¹ The figure illustrates that the distribution of strains varies by age. In adults 65 years of age and older, 83.0% of strains were influenza A, 16.8% were influenza B, and 0.1% were influenza A and B. Further subtyping of a subset (36.7%) of laboratory confirmed influenza A strains among these older adults showed that 80.4% were A(H3N2) and only 19.6% were influenza A(H1N1). Thus, in adults 65 years of age and older in Ontario, the greatest burden of influenza disease over the past twelve influenza seasons is due to influenza A (H3N2).

Figure 1: Proportion of influenza cases by type and subtype for influenza A, by age group: Ontario, 2012-13 to 2023–24* influenza seasons (*as of July 31, 2024)

This figure contains four pie charts that illustrate the proportion of influenza A and influenza B cases, and the influenza A subtype, for four different age groups (<5 years, 5-19 years, 20-64 years, and 65+ years).



Data source: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) [database]. Toronto, ON: King’s Printer for Ontario; 2024 [data extracted 2024 Jul 31].

Notes: These data only represent laboratory-confirmed influenza cases reported to public health and recorded in iPHIS. Influenza A subtype information was only available for 32.0% of influenza A cases reported during this time period. The possibility of duplicates exists because duplicate sets were not identified and/or excluded unless they were resolved prior to data extraction either at the local or provincial level.

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