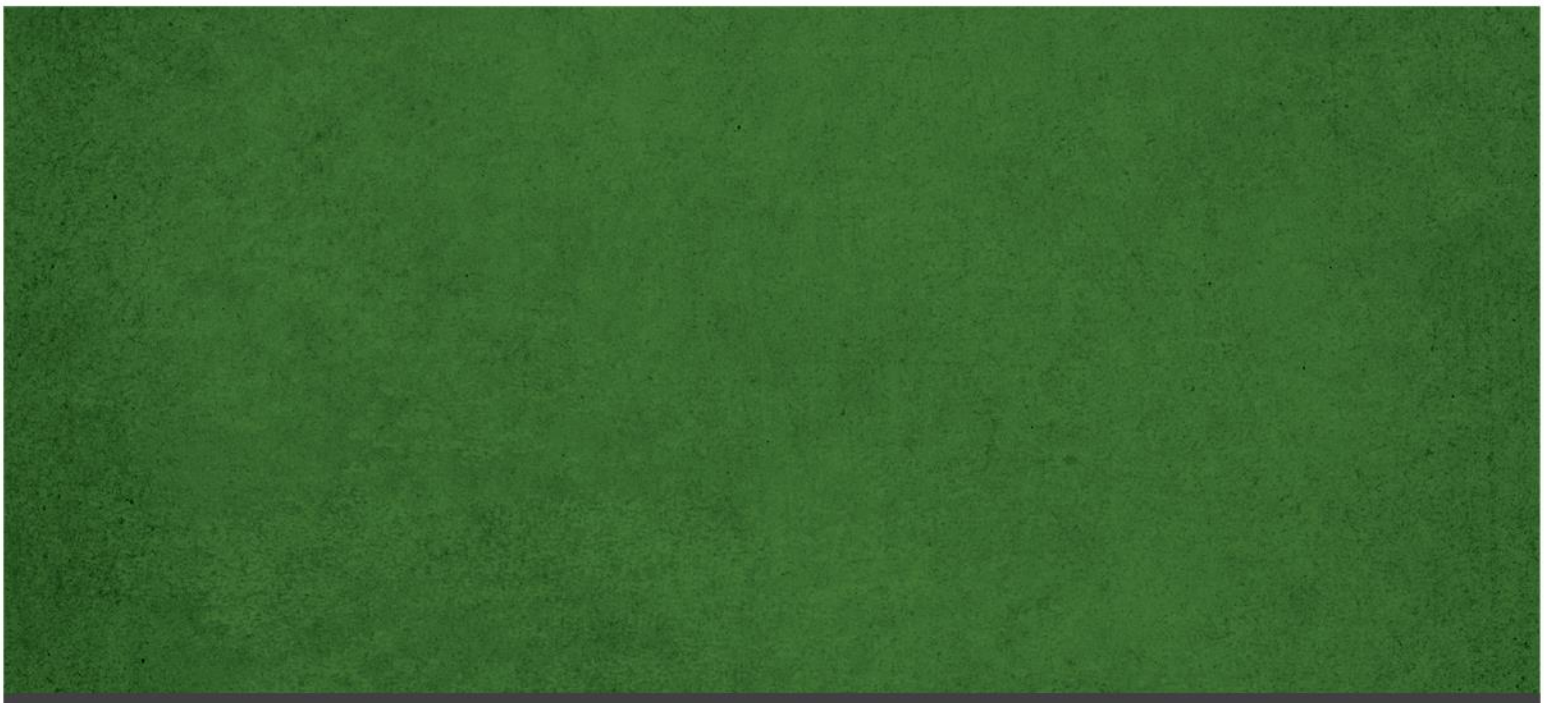
An Advisory Committee Statement (ACS)

National Advisory Committee on Immunization (NACI)

Addendum to the NACI Statement on Seasonal Influenza Vaccine for 2024-2025 – Transition from Quadrivalent to Trivalent Influenza Vaccines



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Addendum à la déclaration du CCNI sur le vaccin antigrippal saisonnier pour 2024-25 – Transition des vaccins antigrippaux quadrivalents aux trivalents

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Preamble

The National Advisory Committee on Immunization (NACI) is an External Advisory Body that provides the Public Health Agency of Canada (PHAC) with independent, ongoing and timely medical, scientific, and public health advice in response to questions from PHAC relating to immunization.

In addition to burden of disease and vaccine characteristics, PHAC has expanded the mandate of NACI to include the systematic consideration of programmatic factors in developing evidence-based recommendations to facilitate timely decision-making for publicly funded vaccine programs at provincial and territorial levels.

The additional factors to be systematically considered by NACI include: economics, ethics, equity, feasibility, and acceptability. Not all NACI statements will require in-depth analyses of all programmatic factors. While systematic consideration of programmatic factors will be conducted using evidence-informed tools to identify distinct issues that could impact decision-making for recommendation development, only distinct issues identified as being specific to the vaccine or vaccine-preventable disease will be included.

This statement contains NACI's independent advice and recommendations, which are based upon the best current available scientific knowledge. This document is being disseminated for information purposes. People administering the vaccine should also be aware of the contents of the relevant product monograph. Recommendations for use and other information set out herein may differ from that set out in the product monographs of the Canadian manufacturers of the vaccines. Manufacturer(s) have sought approval of the vaccines and provided evidence as to its safety and efficacy only when it is used in accordance with the product monographs. NACI members and liaison members conduct themselves within the context of PHAC's Policy on Conflict of Interest, including yearly declaration of potential conflict of interest.

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I. Background

In September 2023, the World Health Organization (WHO) released recommendations for the 2024 Southern Hemisphere influenza season, endorsing the exclusion of the B/Yamagata lineage antigen from influenza vaccine formulations due to the global absence of circulating B/Yamagata viruses since March 2020[1]. This recommendation was repeated in February 2024 for the 2024-2025 Northern Hemisphere influenza season[2]. In March 2024, the United States (US) Food and Drug Administration (FDA) Vaccines and Related Biological Products Advisory Committee (VRBPAC) decided to exclude B/Yamagata in their strain recommendations for the 2024-2025 Northern Hemisphere influenza season and transition to trivalent influenza vaccines for the 2024-2025 season[3]. In the same month, the European Medicines Agency (EMA) in the European Union (EU) also recommended the removal of B/Yamagata from all live-attenuated influenza vaccines (LAIVs) ideally for the 2024-2025 season, with a transition to trivalent composition for all other influenza vaccines to be completed by the 2025-2026 season[4].

Historically, quadrivalent influenza vaccines containing strains from both influenza B lineages (B/Victoria and B/Yamagata) have been in use in Canada since the 2014-2015 seasonal influenza vaccination campaign to provide broader protection against circulating influenza B viruses. Children experience a higher burden of disease due to influenza B infection compared to other age groups, and quadrivalent formulations have previously been preferentially recommended for children in Canada to provide more protection against B strains. All seasonal influenza vaccines currently available in Canada are quadrivalent, other than adjuvanted vaccines, which are available only in trivalent formulations. Further information on characteristics of influenza vaccines available for use in Canada is available in Appendix B of the 2024-2025 Influenza Seasonal Statement[5].

The objective of this advisory committee supplemental statement is to describe anticipated updates to influenza vaccine formulations, acknowledging and highlighting:

1) the new WHO, US FDA VRPBAC, and EU EMA recommendations to remove the B/Yamagata strain from vaccine formulations;
2) the public health implications; and
3) the resultant changes to the National Advisory Committee on Immunization (NACI) seasonal influenza guidance.

II. Epidemiology

Seasonal influenza epidemics in humans are caused by both influenza A and B viruses, with influenza A more prevalent overall. However, influenza B can still represent a considerable burden of disease in Canada, where in some seasons, it can account for up to 44% of reported laboratory detections[6]. There is also evidence of increased burden of disease due to influenza B among children and adolescents compared with adults[6-8]. In Canada and globally, between 2012 and 2017, B/Yamagata viruses caused a larger proportion of influenza B infections than B/Victoria, but in the two years prior to the COVID-19 pandemic, the B/Victoria lineage started becoming dominant[9]. As of March 2020, following the onset of the COVID-19 pandemic and implementation of measures to reduce the transmission of SARS-CoV-2, there have been no confirmed detections of naturally circulating B/Yamagata lineage viruses worldwide, including in Canada. Furthermore, no isolates of suspected B/Yamagata have been identified in Canada.

Sporadic specimens reported to yield B/Yamagata in other countries can either be linked to individuals recently vaccinated with live-attenuated influenza vaccine (LAIV) or errors in lineage determination upon investigation[9-11].

III. Public Health Implications

Currently, there is no public health risk from B/Yamagata viruses, but continued surveillance of viral circulation is crucial to inform influenza-prevention policies in the context of any future public health risk, though unlikely, that B/Yamagata viruses may pose.

There is a theoretical risk of reintroduction of B/Yamagata viruses through sustained production and use of vaccines containing this antigen. Although LAIV virus can be shed and detected after vaccination, the potential risk of the B/Yamagata lineage reverting to the wild-type strain and being reintroduced into humans is largely theoretical. Based on current epidemiological data, there is global expert consensus that B/Yamagata virus strains should be removed from influenza vaccine formulations and that manufacturing should transition to trivalent vaccines exclusively. However, it is important to note that the use of any influenza vaccine, including both trivalent and quadrivalent formulations of LAIV, remains effective, immunogenic, and safe for the individual being vaccinated.

IV. Authorized Vaccines and Supply in Canada

For the 2024-2025 influenza season in Canada, vaccine availability is anticipated to remain unchanged. Quadrivalent formulations will continue to be supplied for public programs. No trivalent formulations will be available for standard dose or high dose inactivated influenza vaccines (IIV-SD, IIV-HD) or LAIV, while adjuvanted inactivated influenza vaccines (IIV-Adj) will remain trivalent and continue to be available in Canada. A listing of influenza vaccines currently authorized for use in Canada is available in Appendix B of the 2024-2025 Influenza Seasonal Statement[5].

V. Use of Seasonal Influenza Vaccines

Changes to current recommendations

- NACI recommends that any age-appropriate quadrivalent or trivalent influenza vaccine should be used for individuals 6 months of age and older who do not have contraindications or precautions.
    - Both quadrivalent and trivalent formulations are clinically safe, and effective.
    - B/Yamagata lineage viruses have not been detected globally since March 2020.
    - Following this change in epidemiology, expert groups have endorsed the exclusion of the B/Yamagata component from influenza vaccine formulations, in alignment with WHO's recommendations for the 2024-2025 Northern Hemisphere season.
- Quadrivalent vaccines were previously preferred for children due to the additional protection conferred by the presence of components from both influenza B lineages. NACI no longer has a preference between quadrivalent and trivalent influenza vaccine formulations for children.

Additional information

- NACI emphasizes that influenza vaccination is the best way to prevent severe influenza disease, and all seasonal influenza vaccines continue to be safe and effective. For more information, please refer to the 2024-2025 Influenza Seasonal Statement[5].
- Going forward, NACI supports the removal of the B/Yamagata strain from influenza vaccines and the transition to trivalent influenza vaccines, in alignment with public health and regulatory agencies globally, as soon as practically possible. Recognizing the significant logistical implications and potential complexities involved from a regulatory perspective, a gradual transition to trivalent vaccines is anticipated, with variability in vaccine supply across countries.
- A more detailed update to the guidance regarding the change from quadrivalent to trivalent influenza vaccines, which will also reflect changes to the availability of vaccine formulations, will appear in the 2025-2026 Influenza Seasonal Statement.
- Continued epidemiological and virological monitoring of influenza virus, investigation of any reports of B/Yamagata detection, and continued assessment of programmatic factors remains important, as does clear and transparent communication of updated recommendations.

List of Abbreviations

EMA	European Medicines Agency
EU	European Union
FDA	Food and Drug Administration
IIV-Adj	Adjuvanted inactivated influenza vaccines
IIV-HD	High dose inactivated influenza vaccines
IIV-SD	Standard dose inactivated influenza vaccines
LAIV	Live-attenuated influenza vaccines
NACI	National Advisory Committee on Immunization
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2
US	United States
VRBPAC	Vaccines and Related Biological Products Advisory Committee
WHO	World Health Organization

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