Quadrivalent Influenza Vaccine (QIV) Fact Sheet
Revised September 2015

1. What are quadrivalent influenza vaccines?

Quadrivalent influenza vaccines (QIV) protect against the same three strains of influenza virus as the trivalent influenza vaccine (TIV) but also against a 2nd strain of influenza B virus. These vaccines are being gradually introduced in Canada. There are two lineages of influenza B viruses. The quadrivalent influenza vaccines were developed because in the past decade, the influenza B strain component in the available trivalent vaccine(s) has been mismatched to the circulating strain of influenza B in about half of the seasons. While the B strain contained in the trivalent vaccine provides cross protection against the second B influenza virus lineage, the degree of this cross protection is uncertain.

In 2015/16, there are two types of QIV available in Canada

1. Quadrivalent Inactivated Influenza Vaccine (QIIV)
2. Quadrivalent Live Attenuated Influenza Vaccine (LAIV-Q)

2. Are quadrivalent influenza vaccines recommended over trivalent influenza vaccines, and will these be available in the publicly funded program in 2015/16?

The National Advisory Committee on Immunization (NACI) recommends that for children, 6 months to 17 years of age, given the burden of influenza B disease, QIIV should be used. If QIIV is not available, trivalent inactivated influenza vaccines (TIIV) should be used.

NACI does not preferentially recommend quadrivalent influenza products over trivalent influenza products at this time for adults older than 17 years of age. NACI also recommends the use of LAIV-Q for healthy children 2 to 17 years of age who do not have contraindications to this vaccine. However if LAIV-Q is not available, QIIV should be used. For children with underlying conditions or contraindications that preclude the use of LAIV-Q, QIIV should be used.

In all cases if LAIV-Q or QIIV are not immediately available, vaccination should not be delayed and TIIV should be used.

These vaccines are recommended and provided for free in BC in the 2015/16 influenza season for groups of children at high risk of influenza-related complications and other eligible children. This includes all children aged 6 months to less than 5 years, and those up to 17 years with many chronic health conditions. For a complete list of the groups eligible for free influenza vaccine, refer to Section VII of the Communicable Disease Control Immunization Program Manual
For more information regarding the use of QIV vaccines for adult populations in Canada, refer NACI's Statement on Seasonal Influenza Vaccine for 2015-2016

3. Which quadrivalent influenza vaccine products are authorized for use in Canada, in 2015/16?

Fluzone® Quadrivalent, Flulaval® Tetra, and Flumist® Quadrivalent are the three quadrivalent influenza vaccine products authorized for use in Canada. The first two of these are inactivated split-virion vaccines which do not contain an adjuvant and are administered via the IM route. FLUMIST® Quadrivalent is a live attenuated intranasal vaccine. Additional information regarding these products can be found in the respective product monographs:

Fluzone® Quadrivalent (Sanofi Pasteur Inc.)
http://www.sanofipasteur.ca/sites/default/files/sites/default/files/pictures/450-FluzoneQIV-PM-E.pdf

Flulaval Tetra™ (GlaxoSmithKline)
http://www.gsk.ca/english/docs-pdf/product-monographs/FluLaval-Tetra.pdf

Flumist® Quadrivalent (AstraZeneca)
http://www.astrazeneca.ca/en/Our-Medicines/en-Products-AZ

4. Who can receive quadrivalent inactivated influenza vaccine?

QIIV can be administered to individuals six months of age and older. LAIV-Q is licensed for individuals 2-59 years, however in BC it is only publicly funded for children 2-17 years. For further information regarding the publicly-funded use of influenza vaccines in BC, Section VII of the Communicable Disease Control Immunization Program Manual

5. Who should not receive quadrivalent influenza vaccine?

As with TIIV, QIIV cannot be administered to:

- individuals less than six months of age
- those who have had a severe allergic reaction to any QIIV vaccine component or to influenza vaccine
- individuals who have developed Guillain-Barré syndrome within 8 weeks of receipt of a previous dose of influenza vaccine without another cause being identified

In addition to the above contraindications, LAIV-Q should not be administered to

- children under 2 years of age and individuals older than 59 years old; the publicly funded program provides LAIV-Q for those aged 2-17 years only
- those with an egg allergy. Such individuals should receive inactivated influenza vaccine.
- those with severe asthma or active wheezing (on high dose inhaled or oral steroids or medically attended wheezing in the 7 days prior to vaccination).
- those with immunocompromising conditions
- HCWs working with severely immunocompromised individuals
- women who are pregnant
- individuals 2-17 years of age receiving aspirin-containing therapy because of the association of Reye syndrome with aspirin and wild-type influenza infection. It is recommended that aspirin-containing products in children under 18 years of age be delayed for four weeks after receipt of LAIV-Q.

6. Can quadrivalent inactivated influenza vaccine be used for pregnant women?

Yes, QIIV can be administered to pregnant women. However QIIV is not preferentially recommended over TIIV in this population. It is recommended that all pregnant women, at any stage of pregnancy, receive inactivated influenza vaccine. The trivalent influenza vaccine will be available for this indication at no charge in the 2015/16 season**. LAIV-Q is contraindicated in women who are pregnant.**

7. Are quadrivalent influenza vaccines safe?

Yes. These vaccines have undergone the same regulatory approvals as other vaccines approved for use in Canada. The safety profile for quadrivalent influenza products is similar to trivalent influenza products in Phase III trials, with similar rates of adverse events to trivalent formulations.

Quadrivalent products have been used in the US since the 2013/4 season, with no additional findings of risk in post-marketing safety surveillance.

REFERENCES:

National Advisory Committee on Immunization (NACI). An Advisory Committee Statement (ACS). Statement on Seasonal Influenza Vaccine for 2015-2016 [Internet]. Ottawa: Public Health Agency of Canada; 2015. Available from http://www.phac-aspc.gc.ca/naci-ccni/index-eng.php