Live intranasal influenza vaccine for BC children and youth in fall 2013

The influenza season is almost upon us, and this fall the BC publicly funded influenza immunization program will be incorporating one new influenza vaccine into the mix: the live attenuated influenza vaccine (LAIV) called FluMist. In BC, this live attenuated vaccine is recommended for children aged 2 to 17 years. The influenza virus strains in FluMist are cold-adapted and replicate efficiently at 25°C, the temperature in the nasopharynx. The vaccine has been shown to provide better protection against influenza than the injectable formulation in both healthy younger children[1,2] and in asthmatic children and teens,[3] and offers the advantage of intranasal administration. The product was approved in Canada in June 2010 and is commercially available. It was used in a pilot project in Vancouver Coastal Health in 2012/13 with favorable acceptance by children, their parents, and immunizers. According to Dr Meena Dawar, medical health officer with Vancouver Coastal Health, use of FluMist in the pilot project resulted in less distress associated with immunization for younger children.

Eligibility for publicly funded influenza vaccine is unchanged from recent years, and can be found in the BC Immunization Manual at www.bccdc.ca/dis-cond/comm-manual/CDManualChap2.htm under Section VII, Biological Products, 2013/2014 Seasonal Trivalent Influenza Vaccine. In BC, influenza vaccine is recommended for healthy children aged 6 to 59 months, and for those with a risk factor aged 5 to 17 years.

LAIV is not approved for use in children under 2 years of age because its use doubled the rates of subsequent transient wheezing. In children aged 6 to 23 months of age, the injectable formulations should be used; this fall these will be mainly Vaxigrip, with some Agriflu. LAIV is interchangeable with the injectable influenza vaccine formulations in children under 9 years old who need two doses for protection within the first season they are immunized.

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Other contraindications include severe asthma, immune compromise, aspirin-containing therapy, anaphylaxis after a prior dose or a component of the vaccine, and Guillain-Barré syndrome associated with influenza vaccine. As well, LAIV production entails growth in eggs and the vaccine is not recommended for egg allergic individuals. In contrast, injectable influenza vaccines may be given to those with mild reactions to eggs such as hives without advance allergy testing.[4]

LAIV is available in 10-dose cartons. Each dose is 0.2 mL and contains $10^{6.5\text{-}7.5}$ fluorescent focus units of live attenuated influenza virus reassortants of each of three seasonal strains. Each dose is contained in an intranasal sprayer that looks like a syringe with a tip protector at one end and a plunger with a dose divider clip at the other end. The dose divider clip is removed after the first half of the vaccine is sprayed into the first nostril, with the remainder sprayed into the second nostril. The recipient does not need to inhale in conjunction with administration.

An important feature of this vaccine compared with other influenza vaccines is the short shelf life—the first lots in BC will expire in mid-January. Providers should order only the quantities that they can use for their pediatric population and use all doses prior to their expiry date.

BCCDC has developed a number of useful resources to assist with use of this vaccine. These are found at http://immunizebc.ca/healthcare-professionals/influenza.

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This article is the opinion of BCCDC and has not been peer reviewed by the BCMJ *Editorial Board.*

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