

Guidance on Use of Antiviral Drugs given Potential Low Vaccine Effectiveness for the 2017-18 Influenza Season

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Influenza vaccine is recommended annually to reduce the influenza-associated disease burden, particularly among those at [high risk](#) of serious influenza complications. However, a potential for low vaccine effectiveness (VE) has been identified for the 2017-18 influenza season. To address that concern, the following antiviral drug recommendations have been revised (see changes in bold) from the [AMMI Canada Foundation Document](#).

The influenza type/subtype that will dominate during the northern hemisphere's 2017-18 season cannot be reliably determined in advance. However, epidemics due to influenza A(H3N2) viruses are typically associated with greater disease burden—especially among elderly adults—and with more long term care facility outbreaks. Influenza A(H3N2) subtype viruses dominated during the southern hemisphere's recent (severe) 2017 epidemic and also during the northern hemisphere's prior 2016-17 epidemic. If A(H3N2) viruses also predominate during the northern hemisphere's 2017-18 season, there is the potential for low vaccine effectiveness (VE), warranting consideration of adjunct protective measures including antiviral drugs.

The 2017-18 season's influenza vaccine for the northern hemisphere contains the same A/Hong Kong/4801/2014(H3N2) strain as was used in 2016-17 and as was also used in the southern hemisphere's 2016 and 2017 influenza vaccines. In recent months, A(H3N2) viruses have continued to evolve genetically. The majority of A(H3N2) viruses recently characterized are [antigenically distinct](#) from the [egg-adapted vaccine strain](#) that has also acquired [mutations](#) during egg-based production that [may limit VE](#).

VE for the A(H3N2) component of the 2017-18 influenza vaccine is expected to be low (<40%) based on 2016-17 estimates from [US](#) and [Canadian](#) surveillance networks. Vaccine protection may be even lower given more recent findings from the [southern hemisphere](#) (Australia) indicating that the 2017 VE for A(H3N2) was <20%, even among non-elderly individuals, and with suggestion of lower VE in those serially vaccinated in both 2016 and 2017. VE may be better if A(H1N1)pdm09 or influenza B viruses instead predominate during the northern hemisphere's 2017-18 season, but even then VE may not exceed [50-60%](#).

Most people will fully recover from influenza illness without medical intervention or antiviral treatment. However, in the event of a predominant A(H3N2) epidemic for which 2017-18 VE may be lower, adjunct protective measures should be considered to minimize the disease burden in those at high risk of serious influenza complications. In addition to other measures recommended by public health authorities (e.g. social distancing, hand washing), adjustment to antiviral drug recommendations may also be warranted, as summarized below.

Recommendations (adapted and abbreviated) for the 2017-18 season:

- Antiviral (oseltamivir or zanamivir) treatment may be considered for individuals at [high risk](#) of serious influenza complications (hospitalization or death) **regardless of whether they received the 2017-18 season's influenza vaccine.**
- Where influenza is reasonably suspected on clinical grounds, antiviral treatment of high-risk individuals should not await the diagnostic test result and should be initiated as soon as possible, ideally within the first 12 to 24 hours of influenza-like illness (ILI) onset, irrespective of influenza vaccination status. Effectiveness is reduced when treatment is initiated >48 hours after illness onset but may be considered at clinician discretion.
- Clinicians may consider personalized plans for timely antiviral drug access and use for patients at highest risk of serious influenza complications (in particular, elderly adults and people of any age with cardio-pulmonary conditions or severe immunodeficiency states). Where appropriate, this may include advance prescriptions to be filled and initiated for chemoprophylaxis or treatment in relation to an ILI that is likely due to influenza.
- Antiviral chemoprophylaxis for the control of influenza outbreaks in healthcare facilities may, at the discretion of the local Medical Health Officer, include staff in addition to patients or residents. Where considered, **such offer to staff should be regardless of whether they received the 2017-18 season's influenza vaccine.**
- For dosage regimens and further details, please refer to the AMMI Canada [Foundation Document](#). Note that amantadine should not be used for treatment or prophylaxis because of resistance issues.

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